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**VIA HAND DELIVERY**
March 10, 2010

Ms. Erin Brittain, Project Manager
Voluntary Remediation Program
Office of Land Quality
Indiana Department of Environmental Management
100 North Senate Avenue, Room 1101
Indianapolis, IN 46206

Re: Remediation System Evaluation Report from October through December 2009
Former General Motors Corporation
Allison Gas Turbine Division, Plant 10
Indianapolis, Indiana
IDEM VRP #6991004
KERAMIDA Project No. 2829E

Dear Ms. Brittain:

This letter transmits two (2) hard copies and one (1) electronic copy of the Remediation System Evaluation Report from October through December 2009 for the above referenced facility. If you require additional information or clarification, please do not hesitate to contact us.

Sincerely,
KERAMIDA Inc.

Andrew A. Gremos, L.P.G., C.H.M.M.
Senior Vice President, Land Services

Enclosures
cc: Mr. Bob Lewis, Genuine Parts Company
Ms. Madonna McGrath, Baker & Daniels
Mr. William Berry, American Art Clay Company, Inc.
Mr. Greg Zumbaugh, EnviroForensics

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# REMEDIATION SYSTEM EVALUATION REPORT
# OCTOBER THROUGH DECEMBER 2009
# FORMER GENERAL MOTORS CORPORATION
# ALLISON GAS TURBINE DIVISION, PLANT 10
# 700 NORTH OLIN AVENUE
# INDIANAPOLIS, INDIANA
# IDEM VRP #6991004
# KERAMIDA PROJECT NO. 2829E

Submitted to:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
Ms. Erin Brittain, Project Manager
Voluntary Remediation Program
Office of Land Quality
100 North Senate Avenue, Room 1101
Indianapolis, Indiana 46204

Submitted for:

**GENUINE PARTS COMPANY**
Mr. Bob Lewis
Environmental, Safety and DOT Compliance Manager
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Submitted by:

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Senior Vice President, Investigation Services

March 10, 2010

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Submitted by:

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Indianapolis, Indiana 46202
(317)685-6600

March 10, 2010

## EXECUTIVE SUMMARY

KERAMIDA Inc. was contracted by the Genuine Parts Company to design and implement remediation to mitigate groundwater contamination at the former General Motors Corporation, Allison Gas Turbine Division, Plant 10 (Site) located at 700 North Olin Avenue, Indianapolis, Indiana. This report documents information collected during remediation activities from October through December 2009 and evaluates remediation performance.

The East System was shut down on January 30, 2006. Groundwater volatile organic compound (VOC) concentrations in MW-150 have remained below their respective Indiana VRP Tier II Non-Residential Cleanup Goals for the 16$^{th}$ quarter, following the shut down of active remediation.

On August 29, 2006, extraction wells, sparging points, monitoring wells MW-132, 147A and 148 and process piping associated with the Northwest System were abandoned and removed as soil removal activities were conducted in this area. Monitoring wells MW-132R, 147AR and 148R were subsequently installed and sampled following excavation activities. Current concentrations of VOCs in groundwater are below Indiana VRP Tier II Non-Residential Cleanup Goals, except for vinyl chloride in MW-148R.

The Southwest System has been effective as shown by performance data, vapor recovery, and the reduction of groundwater VOC concentrations. An additional 3.09 pounds of VOC vapors have been recovered, for a total of 169.52 pounds. For the 5$^{th}$ consecutive quarter, groundwater VOC concentrations are below the Indiana VRP Tier II Non-Residential Cleanup Goals.

Quarterly on and off-Site groundwater monitoring occurred in November 2009. Both the shallow and deep groundwater continues to flow toward the south. All groundwater concentrations are within historical values, except for Total Chromium in MW-150.

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## ATTACHMENTS

1. October through December 2009 - Operation & Maintenance Logs
2. October 2009 - Operational Data Log
3. October through December 2009 - Vapor Analytical Reports and Discharge Calculations
4. October 2009 - Phytoremediation System Inspection Checklist
5. November 2009 - Groundwater Sample Information Sheets
6. November 2009 - Groundwater Analytical Report

# REMEDIATION SYSTEM EVALUATION REPORT
# OCTOBER THROUGH DECEMBER 2009
# FORMER GENERAL MOTORS CORPORATION
# ALLISON GAS TURBINE DIVISION, PLANT 10
# INDIANAPOLIS, INDIANA
# IDEM VRP #6991004
# KERAMIDA PROJECT NO. 2829E

## 1.0 INTRODUCTION

KERAMIDA Inc. (KERAMIDA) was contracted by the Genuine Parts Company (Genuine Parts) to design and implement remediation to mitigate identified groundwater contamination at the former General Motors Corporation, Allison Gas Turbine Division (AGT) Plant 10 in Indianapolis, Indiana (Site). Regulatory closure of the Site is being administered through the Indiana Department of Environmental Management (IDEM) Voluntary Remediation Program (VRP). The purpose of this report is to evaluate the progress of the implemented Final Remediation Work Plan (Final RWP) at the Site as modified/approved in the IDEM's Modified RWP Approval letter, dated March 22, 2005. This report summarizes the following information:

- Site Background
- Contaminants of concern and cleanup criteria
- Design and installation of the remediation system
- Remediation system monitoring plan
- Implementation and monitoring of the remediation system, including general operation & maintenance and performance data, operational parameters, evaluation and recommendations/future activities for each remediation system.

## 2.0 SITE BACKGROUND

The subject property is located at 700 North Olin Avenue, Indianapolis, Marion County, Indiana (see Figure 1). The property is the former Site of the General Motors Corporation, Allison Gas Turbine Division (AGT) Plant 10. Between 1956 and 1973, BHT Corporation (BHT) operated the facility for carburetor and brake re-manufacturing. General Motors purchased the property from BHT in 1973 and used the facility for warehousing obsolete machines, tooling, and fixtures until the mid-1980s, at which time the property became part of the AGT Division. BHT became part of Genuine Parts, through acquisition and merger, subsequent to the sale of the property to General Motors. AGT continued to use the facility for warehousing until December 1993 when

the property was sold to the Allison Engine Company (AEC). AEC sold the facility to Associated Properties, Inc. in 1998. Associated Properties, Inc. sold the facility to American Art Clay Company, Inc. in 2002, who is the current property owner. Maps showing salient Site features are presented in Figure 2 – Site Map and Figure 3 - Expanded Site Map.

## 3.0 CONTAMINANTS OF CONCERN AND CLEANUP CRITERIA

Identified contaminants of concern (COC) requiring in-situ remediation include volatile organic compounds (VOC) such as trichloroethene (TCE) and daughter products. Polynuclear aromatic hydrocarbons (PAHs) and three metals (cadmium, chromium, and lead) were other COC but have been addressed by previously completed remediation activities. Indiana VRP Tier II Non-Residential Cleanup Goals for on-Site soil and groundwater and Indiana VRP Tier II Residential Cleanup Goals for off-Site soil and groundwater were used as screening levels to complete Site investigation activities. Two primary source areas of contamination were identified on-Site and are referred to as the eastern source area and the western source area. A small anomalous area of TCE occurrence was also noted in groundwater to the east of the Site across Olin Avenue. A complete summary of on- and off-Site investigation activities were documented in Section 4.0 of the Final RWP dated and submitted to the IDEM on August 16, 2004.

Using the results of the human health and ecological screenings, documented in Sections 4.6 and 5.0 of the Final RWP, the Indiana VRP Tier II Non-Residential Cleanup Goals for subsurface soil and groundwater were selected as the cleanup criteria for Site soils and groundwater (Section 6.0 of Final RWP). Per the IDEM Modified RWP Approval letter, the Indiana VRP Tier II Residential Cleanup Goals are the current cleanup criteria for VOCs in off-Site groundwater attributable to the Site. Because potable water is provided to the area by municipal water supply and the Site vicinity is located in a Marion County No Well Zone, which restricts the installation of water supply wells, the potential for exposure to impacted groundwater is limited.

Off-Site VOC reduction will be monitored for a period of seven years. Should the off-Site concentrations of the VOCs attributable to the Site be reduced to their respective Indiana VRP Tier II Residential Cleanup Goals during the seven year monitoring period, then remediation will be considered complete following four quarters of confirmation sampling. During the seven-year monitoring period, Genuine Parts will work on the establishment of further institutional

control(s) (IC) acceptable to the IDEM that are more restrictive than the current Marion County No Well Zone. If further IC(s) acceptable to the IDEM are secured prior to the end of the seven-year monitoring period, then monitoring will continue during that period to confirm an Indiana VRP Tier III Closure using plume stability. However, if off-Site groundwater cleanup below the Indiana VRP Tier II Residential Cleanup Goals is not achieved or more restrictive IC(s) acceptable to the IDEM cannot be secured, all during the seven-year monitoring period, then an alternate remedy will be identified and implemented.

## 4.0 REMEDIATION SYSTEM OVERVIEW

Overall remediation consists of source area Air Sparge/Soil Vapor Extraction (AS/SVE) Systems and a Phytoremediation System. The AS/SVE Systems were installed to address groundwater VOC contamination in the eastern and western source areas. The AS/SVE Systems were installed from May 2000 through July 2001 and became operational in July 2001. The Phytoremediation System was installed along the entire southern property boundary of the Site in September 2000 to further mitigate groundwater VOC contamination. A complete summary of the selection, design, and installation of the remediation system was documented in Section 8.2 of the Final RWP. The Final RWP also identified a plan to extend the western source area AS/SVE System to remediate a VOC soil "hot spot." Expansion included the installation of the four nested SVE wells, associated subsurface piping, and their connection to the AS/SVE System during the period of August 25 through September 18, 2003. The expansion is documented in Section 8.3 of the Final RWP.

As a protective measure, the east off-Site TCE contaminated area is being remediated by reductive dechlorination to health protective levels. Reductive dechlorination is enhancing the naturally occurring processes of degradation. Natural reductive dechlorination takes place in most subsurface systems due to the presence of microbes, which break down the contaminants to harmless constituents. The goal of reductive dechlorination is to enhance the natural processes by the addition of a food source for the microbes. This food source usually consists of a substance with high carbon content. Reductive dechlorination is ideally suited for sites where chlorinated solvents are present and where field indications suggest that natural attenuation is already taking place. A corn syrup injection system was installed in March 2004 after a bench-scale "microcosm" test was completed determining appropriate dosing concentrations. A full

description of the reductive dechlorination process, injection system installation, and the microcosm study is documented in Section 8.2 of the Final RWP.

## 4.1 AS / SVE SYSTEM

AS/SVE Systems were designed and constructed in phases to aggressively reduce the two separate VOC groundwater plumes on-Site, control off-Site migration, and reduce concentrations in the VOC soil "hot spot." The AS/SVE System consists of a total of 44 air sparging and 35 soil vapor extraction wells. The AS/SVE System is separated into two western treatment units (Northwest & Southwest Systems) and one eastern treatment unit (East System). Each treatment unit is serviced by separate equipment. The equipment for the two western treatment units is housed in one enclosure/trailer. The equipment for the eastern treatment unit is housed in a separate enclosure/trailer. The following table summarizes the AS/SVE System and its associated components:

| Components | Northwest System | Southwest System | East System |
|---|---|---|---|
| SVE Wells | SVE – 1 through 7 | SVE-8 through 17 & 28s/d, 29s/d, 31s/d, and 32s/d | SVE-18 through 27 |
| ASV's and Corresponding AS Wells | ASV-1 (AS-1 to 4)<br>ASV-2 (AS-5 to 7)<br>ASV-3 (AS-8 to 10) | ASV-4 (AS-11 to 14)<br>ASV-5 (AS-15 to 19)<br>ASV-6 (AS-20 to 24)<br>ASV-7 (AS-25 to 29) | ASV-8 (AS-30 to 35)<br>ASV-9 (AS-36 to 40)<br>ASV-10 (AS-41 to 44) |

**ASV = Air Sparging Vault**

A layout of the AS/SVE System can be found on Figure 4 - Remediation System Layout with Utilities and Figure 5 - Supplemental Remediation System Layout in "Hot Spot."

## 4.2 PHYTOREMEDIATION SYSTEM

Phytoremediation is the use of various plants to remediate environmental media. Phytoremediation has been proven to be effective in the remediation of soil, sediment, groundwater, and surface water contaminated with organic and inorganic chemicals. Phytoremediation applications clean up contaminated media by degrading, extracting, containing, and/or immobilizing the contaminants. In September 2000, phytoremediation was incorporated as part of the Remediation System. It is composed of two staggered rows of hybrid poplar trees, on 5-foot centers, that line the entire southern property boundary. The purpose is to further control the off-Site migration of groundwater COC. Spacing between the rows is a

minimum of 8 feet. A layout of the phytoremediation design in place along the southern property boundary can be found on Figure 4 - Remediation System Layout with Utilities.

### 4.3 EAST OFF-SITE AREA BIOREMEDIATION SYSTEM

The east off-Site TCE contaminated area is being remediated by reductive dechlorination. The corn syrup injection system consists of two permanent injection wells, IW-1 and IW-2 installed near MW-163 and in the right of way on the west side of Olin Avenue, on the centerline of Walnut Street. The injection system also consists of ten temporary injection points, all located within the TCE contaminated area. MW-173 was installed approximately 30 feet southeast of existing MW-163 to monitor the treatment process. Existing MW-151 and 156 are used as downgradient sentry wells to monitor the extent of the plume. Permanent well locations are depicted on Figure 3 - Expanded Site Map.

## 5.0 REMEDIATION SYSTEM MONITORING PLAN

A brief summary of the remediation system monitoring plan is described in this section. A complete summary of the remediation system monitoring plan is documented in Section 8.4 of the Final RWP. Also, please refer to Section 9.0 Operation and Maintenance Plan and the Quality Assurance Project Plan found as Attachment 7 in the Final RWP for complete details.

### 5.1 AS/SVE SYSTEMS

Weekly Site visits have been made to monitor the AS/SVE Systems operation, to collect performance indicators, and to conduct routine maintenance. Monthly effluent vapor samples have been collected from each SVE blower and submitted for laboratory analysis for VOCs.

The AS/SVE Systems began operating in July 2001. A description of these systems and monitoring details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report.

### 5.2 PHYTOREMEDIATION SYSTEM

Monthly inspections are conducted during the growing season and quarterly inspections are conducted throughout the dormant period of each year. The growing season for the Site is from April through October. If any trees show signs of distress, disease, or other abnormalities,

corrective actions are taken. Inspection details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report.

Leaf tissue and transpiration gas sampling and analysis for VOCs, from three randomly selected trees, are to be conducted in June and September of each year to coincide with the early and late stages of the growing season. The results of tissue and gas sampling and analysis are used to evaluate the physical and chemical mechanisms at work in the remediation system, the potential for risk to ecological receptors from exposure to COC-containing plant tissues, and potential COC concentrations released to ambient air in the remediation area. Monitoring details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report.

## 5.3 SELECTIVE ON-SITE GROUNDWATER MONITORING

The 25th round of quarterly on-Site groundwater monitoring was conducted in November 2009 from seven monitoring wells: MW-10-1R, 132R, 133R, 147AR, 148R, 150 and 153. Samples were analyzed in the field for pH, dissolved oxygen, temperature, specific conductivity, and reduction/oxidation (redox) potential. Samples collected for laboratory analysis were analyzed for VOCs at Data Quality Objective (DQO) Level II. The analytical results will aid in the evaluation of progress being made by the remediation system. Monitoring details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report. See Figure 6, Groundwater Monitoring Plan for locations of monitoring wells.

Once the analytical results for all seven monitoring wells from four consecutive quarterly groundwater sampling events display asymptotic behavior near or drops below the Indiana VRP Tier II Non-Residential Closure Goals for VOCs, the remediation system will be shut down and selective monitoring will end.

## 5.4 ON-SITE GROUNDWATER MONITORING

The 8th round of annual on-Site groundwater monitoring was conducted in November 2009 from 11 monitoring wells: MW-10-1R, 132R, 133R 135, 145, 146, 148R, 150, 152, 153 and 154. Samples will be analyzed in the field for pH, dissolved oxygen, temperature, specific conductivity, and redox potential. Samples collected for laboratory analysis will be analyzed for VOCs, PAHs, cadmium, total chromium and lead at DQO Level II. The analytical results will be used to evaluate the status of the on-Site attainment of the Indiana VRP Tier II Non-Residential Closure Goals for VOCs, PAHs, cadmium, total chromium, and lead. Monitoring

details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report. See Figure 6 - Groundwater Monitoring Plan for locations of monitoring wells.

Once the remediation system has been shut down as described in Section 5.3, sampling will change from annual to quarterly events and samples will be analyzed at a DQO Level IV for groundwater confirmation purposes. Once the analytical results in all 11 monitoring wells from four consecutive quarterly groundwater sampling events display asymptotic behavior near or drops below the Indiana VRP Tier II Non-Residential Closure Goals for VOCs, PAHs, cadmium, total chromium and lead, on-Site remedial objectives will be attained and the IDEM will be petitioned for on-Site closure.

## 5.5 ON AND OFF-SITE GROUNDWATER MONITORING

The 25th round of quarterly on and off-Site groundwater monitoring was conducted in November 2009 from 22 monitoring wells: MW-10-1R, 132R, 146, 148R, 150, 151, 152, 153, 156, 157, 160, 161, 164, 165S, 165D, 166S, 166D, 167S, 167D, 169S, 169D, and 302. Samples were analyzed in the field for pH, dissolved oxygen, temperature, specific conductivity, and redox potential. Samples collected for laboratory analysis were analyzed for VOC at DQO Level IV. The analytical results will aid in the evaluation of off-Site natural attenuation and plume stability. Monitoring details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report. See Figure 6 - Groundwater Monitoring Plan for locations of monitoring wells.

Off-Site VOC concentrations are being monitored quarterly for a seven-year period. Should the off-Site concentrations of the VOCs attributable to the Site be reduced to their respective Indiana VRP Tier II Residential Cleanup Goals during the seven year monitoring period, then remediation will be considered complete following four quarters of confirmation sampling. During the seven-year monitoring period, Genuine Parts will work on the establishment of further institutional control(s) (IC) acceptable to the IDEM that are more restrictive than the current Marion County No Well Zone. If further IC(s) acceptable to the IDEM are secured prior to the end of the seven-year monitoring period, then monitoring will continue during that period to confirm an Indiana VRP Tier III Closure using plume stability. However, if off-Site groundwater cleanup below the Indiana VRP Tier II Residential Cleanup Goals is not achieved or more restrictive IC(s) acceptable to the IDEM cannot be secured, all during the seven-year monitoring period, then an alternate remedy will be identified and implemented.

## 5.6 EAST OFF-SITE AREA BIOREMEDIATION GROUNDWATER MONITORING

The 28th round of east off-Site area bioremediation groundwater monitoring was conducted in November 2009 from six monitoring wells: IW-1, IW-2, MW-151, 156, 163, and MW-173. Samples were analyzed in the field for pH, dissolved oxygen, temperature, specific conductivity, and redox potential. Samples collected for laboratory analysis were analyzed for VOCs and total organic carbon (TOC) by EPA Method 415.1 at DQO Level II. Monitoring details are provided in Section 6.0 Implementation and Monitoring of Remediation System of this report. See Figure 6 - Groundwater Monitoring Plan for locations of monitoring wells. The analytical results from the groundwater sampling from these wells will be used to evaluate the progress of the east off-Site area bioremediation system.

# 6.0 IMPLEMENTATION AND MONITORING OF REMEDIATION SYSTEM

The project goal is to ensure continued operation of the groundwater remediation system and to maintain and operate it in the most efficient manner possible.

## 6.1 AS/SVE SYSTEMS

Operational parameters and performance data, maintenance activities, operational evaluation, and recommendations/future activities for each on-Site source area of the AS/SVE System are detailed below. O&M Logs from October through November 2009 are provided in Attachment 1 and Operational Logs with performance data are provided in Attachment 2.

### 6.1.1 East System

As discussed in Section 6.1.1 of the Remediation System Evaluation Report, October through December 2005, dated February 14, 2006, KERAMIDA shut down the East System on January 30, 2006. This was based on four consecutive quarters of groundwater VOC concentrations below Indiana VRP Tier II Non-Residential Cleanup Goals. Monitoring of groundwater VOC concentrations was conducted in December 2006/January 2007. As discussed in Section 6.4.1 East System and Associated Monitoring Wells, for the 16th quarter, following the shut down of active remediation, all groundwater VOC concentrations are below the Indiana VRP Tier II Non-Residential Cleanup Goals in MW-150.

KERAMIDA will continue to conduct quarterly groundwater monitoring activities as described in Section 5.3 Selective On-Site Groundwater Monitoring.

### 6.1.2 Northwest System

As discussed in Section 6.1.2 of the Remediation System Evaluation Report, January through March 2004, dated June 29, 2004, the Northwest System was shut down in late December 2003. Prior to the shut down, historical analytical results of the monitoring wells associated with the Northwest System were reviewed. For the third consecutive quarter, all concentrations were below the Indiana VRP Tier II Non-Residential Cleanup Goals. Because of the trend at the Northwest System and the need to continually operate the Southwest System, the Northwest System was shut down and vacuum application to its SVE wells was then re-directed through the Southwest System SVE blower on December 29, 2003. This configuration was operational from the re-starting of the Southwest System on December 30, 2003 through August 29, 2006.

Operation of the Northwest System SVE wells through the Southwest System SVE blower ended when extraction wells SVE-1 through 7, sparging points AS-1 through 7, monitoring wells MW-132, 147A and 148 and process piping associated with the Northwest System were abandoned and removed as excavation activities were conducted in this area. These activities are detailed in a Remedial Assessment and Soil Excavation Report dated July 23, 2007. Replacement monitoring wells MW-132R, 147AR and 148R were installed and developed following excavation activities on October 10 and 11, 2006.

As discussed in Section 6.4.2 Northwest System and Associated Monitoring Wells, groundwater VOC concentrations are below the Indiana VRP Tier II Non-Residential Cleanup Goals, except for VC in MW-148R.

KERAMIDA will continue to conduct quarterly groundwater monitoring activities as described in Section 5.3 Selective On-Site Groundwater Monitoring.

### 6.1.3 Southwest System

Operation and Performance

The Southwest System began operating in July 2001 and through December 29, 2009, the SVE blower has operated for 57,362 hours and the AC unit has operated for 54,111 hours. The system operated 93% of the time from October through December 2009.

Various operational and performance data were collected during these O&M visits. The data collected were documented on the O&M and Operational Logs. Tasks completed during the O&M visits are as follows:

- Weekly operational measurements from AS and SVE systems.
- Monthly collection of effluent vapor samples for VOC analysis.
- Adjustments to the applied vacuum and pressures at the vapor extraction and air sparging points were completed to optimize performance.
- A performance data collection event (October 20, 2009) to collect observed, applied, and induced vacuum and pressures and groundwater mounding. These performance data were collected at various vapor extraction wells, air sparging points, and monitoring points.
- Quarterly collection of groundwater samples for VOC analysis from monitoring wells, MW-133R and 153 was completed in November 2009.

The data from the 2001 and 2002 operational and performance data collection events were used to determine optimal operating conditions and associated system performance for the Southwest System. The design operating conditions, and associated system performance were determined by pilot-scale testing; therefore, optimal operating conditions and performance were established based on the evaluation of actual full-scale system conditions and performance. The data collected during the current monitoring period were compared to both the design and optimal operating conditions and performance. The following table summarizes design, optimal and current operating conditions and associated system performance information.

| Parameter | Design Conditions and Performance | Optimal Conditions and Performance | Current Conditions and Performance |
|---|---|---|---|
| SVE Wells | 45 inches of $H_2O$ vacuum/well<br>28 foot Radius of Influence (ROI) | 15-20 inches of $H_2O$<br>25 foot ROI | 8-inches of $H_2O$<br>25 foot ROI |
| SVE Blower | 70 inches of $H_2O$ vacuum at inlet<br>1,000cfm of influent air flow | 35-40 inches of $H_2O$<br>200-250cfm | 13-16 inches of $H_2O$<br>1,000cfm |
| AS Wells | 10psi at 10cfm/well<br>20 foot ROI | 5psi at 5cfm/well<br>20-foot ROI | 8psi at 5-8cfm/well<br>20 foot ROI |
| Air Compressor | 100psi at outlet (40psi at regulator) | 100psi at outlet (25-30psi at regulator) | 105-110psi at outlet (40psi at regulator) |

A layout of each AS/SVE System with current AS and SVE ROI information is provided in Figure 4 - Remediation System Layout with Utilities.

Southwest System vapor discharge rates, for each vapor sampling event, were determined by using vapor sampling analytical data and flow measurements taken from the effluent stack. Time periods were determined based on the occurrence of vapor sampling events with associated SVE operational hours. Using these data, KERAMIDA estimates 3.09 pounds of VOC vapors have been removed from the subsurface by the Southwest System during the current monitoring period. Copies of VOC vapor discharge calculations and analytical reports are provided in Attachment 3.

As discussed in Section 4.0 Remediation System Overview, the Final RWP also identified a plan to extend the western source area AS/SVE System to remediate a VOC soil "hot spot." Expansion included the installation of the four nested SVE wells, associated subsurface piping, and their connection to the AS/SVE System during the period of August 25 through September 18, 2003. This configuration was operational through August 29, 2006. Operation through these four nested SVE wells ended when they were abandoned and removed as excavation activities were conducted in this area. These activities are detailed in a Remedial Assessment and Soil Excavation Report dated July 23, 2007.

Maintenance Activities

The system went down due to high water several times during the past quarter. Following each high water shut down event, the SVE blower knock-out was drained and the SVE blower and/or SVE wells were adjusted to minimize water production.

In early-November 2009, the valves within the coalescing filters for the AC unit were replaced. The original valves were clogging open causing air to be discharged into the air compressor room. And in early-December 2009, the AC units' motor bearings were replaced per the maintenance schedule.

Evaluation

Differences between the designed, optimal, and actual conditions and performance of the SVE portion of the Southwest System are evident. The design calls for an applied vacuum per well of 45 inches of $H_2O$ column to induce a ROI of approximately 28 feet. Optimal conditions indicate a significantly lower applied vacuum/well of 15-20 inches of $H_2O$ column, resulting in an ROI of approximately 25 feet, while current conditions result in the same ROI using an applied vacuum of approximately 8-inches of $H_2O$ column. The spacing between SVE wells is approximately 30-40 feet, thus providing an overlap of actual ROIs. The SVE blower is operating at a significantly lower vacuum and flow than designed; this is partially a result of SVE blower throttling and subsurface conditions.

Differences also are evident between the designed, optimal, and actual conditions and performance of the AS portion of the Southwest System. The design calls for an injection of 10 cubic feet per minute (cfm) of air at pressure of 10 pounds per square inch (psi) to achieve a ROI of approximately 20 feet. Optimal conditions indicate an injection of 5 cfm at 5 psi also can achieve an ROI of approximately 20 feet. Current conditions indicate a ROI of approximately 20 feet is achieved at an injection rate of 6 cfm at 8 psi. The spacing between AS wells is approximately 25-30 feet, providing an overlap of actual ROIs. The AC unit is operating as designed; however, because of lower injection rates, the pressure has been set lower.

The purpose of the remediation system is the treatment of VOC-impacted groundwater. Vapor discharge data and calculations indicate that 3.09 pounds of VOC vapors have been removed from the subsurface by the Southwest System during the current monitoring period with a total of 169.52 pounds of VOC vapors removed since initiation in July 2001. This low vapor recovery was expected because of the low dissolved VOC concentrations in the groundwater.

Monitoring of groundwater VOC concentrations was conducted in June 2009. The reduction of these concentrations is a direct means of evaluating remediation progress. As discussed in

Section 6.4.3 Southwest System and Associated Monitoring Wells, for the 5th consecutive quarter, groundwater VOC concentrations are below Indiana VRP Tier II Non-Residential Cleanup Goals.

Recommendations

KERAMIDA recommends the continued operation of the Southwest System to remediate VOC-impacted groundwater.

### 6.1.4 Liquid Waste Management

Liquid wastes were generated by the drainage of condensate from the vapor extraction blower knock-outs and during groundwater sampling. A 400-gallon poly tank was used to store these liquids. Liquid Waste Removal, Inc. of Indianapolis, Indiana, removes and hauls condensate and groundwater generated for treatment/disposal at Perma-Fix located in Dayton, Ohio, in accordance with applicable federal, state, and local regulations. A total of 7,365-gallons of condensate waters have been disposed of since start-up in July 2001.

## 6.2 PHYTOREMEDIATION SYSTEM

KERAMIDA continued conducting inspections during the current monitoring period. The October 2009 inspection indicated the need to replace some dead trees. Previous quarter inspections indicated the need for replanting of some of the poplar trees due to Beaver activity. There were 40-50 trees with damage. A&T Wildlife Management Service, an Indiana Department of Natural Resources approved trapping company, was able to trap and remove a lone beaver from the Site. The September 2009 inspection indicated that the majority of the damaged trees were growing back from around their stumps, therefore, KERAMIDA will wait until Spring 2010 to determine how many dead and beaver damaged trees will need to be replaced. A copy of the October inspection can be found as Attachment 4.

## 6.3 EAST OFF-SITE AREA BIOREMEDIATION SYSTEM

Four full-scale injections have been implemented. The first was conducted from July 19 through 21, 2004, the second on October 19, 2004, the third on October 24 and 25, 2006 and the fourth on December 10 and 11, 2007. Prior to and following these injection events, groundwater monitoring was conducted from permanent injection wells IW-1 and 2, and monitoring wells MW-151, 156, 163, and 173.

In July 2004, approximately 1,800 gallons of tap water with 1,000 milligrams per liter (mg/L) TOC from corn syrup were injected into the subsurface via injection wells IW-1 and 2 and 10 push-probe points. This volume and concentration were chosen as sufficient to achieve the target concentration of corn syrup across the entire treatment area of 120 feet by 30 feet. The injections were performed under minimal pressures (<5 pounds per square inch, psi).

In October 2004, based on results of groundwater monitoring data (July 2004 injection event), approximately 1,800 gallons of tap water with 10,000 mg/L TOC from corn syrup were injected into the subsurface via IW-1 and 2. This volume and concentration were chosen to provide a longer retention time for the corn syrup in the remediation area. The injections were again carried out under minimal pressures (<5 psi).

In October 2006, based on results of groundwater monitoring data indicating slowed reductive dechlorination rates, a third injection was completed. Approximately 1,800 gallons of tap water with 10,000 mg/L TOC from corn syrup were injected into the subsurface via IW-1 and 2. The injections were again carried out under minimal pressures (<5 psi).

Based on results of groundwater monitoring following the October 2006 injection event, a fourth injection was completed in December 2007. Approximately 1,800 gallons of tap water with 10,000 mg/L TOC from corn syrup were injected into the subsurface via IW-1 and two temporary injection wells (TIW-1 & 2). TIW-1 was located approximately 15-feet west of IW-1 and TIW-2 was located approximately 30-feet north and east of MW-173. Each point was injected with 600 gallons of the mixture.

## 6.4 SELECTIVE ON-SITE GROUNDWATER MONITORING

KERAMIDA conducted the quarterly collection of groundwater samples for field parameters and VOC analyses in November 2009 from MW-132R, 133R, 147AR, 148R, 150 and 153. Groundwater samples were collected from these on-Site monitoring wells using low-flow sampling equipment. All analytical results were compared to their respective Indiana VRP Tier II Non-Residential Cleanup Goals. Field parameter data are documented on Groundwater Sample Information Sheets provided in Attachment 5. Historical and current groundwater elevations were tabulated and can be found in Table 1 – Water Level Data Summary. A copy of the current laboratory analytical report is provided in Attachment 6. Current and historical

analytical results for each system and its associated monitoring wells are evaluated in the following sections.

### 6.4.1 East System and Associated Monitoring Wells

MW-150 and MW-10-1R are associated with the eastern impacted groundwater plume that the East System was designed to remediate. For the 20th consecutive quarter and the 16th quarter, following the shut down of active remediation, all groundwater VOC concentrations are below the Indiana VRP Tier II Non-Residential Cleanup Goals in MW-150. A sample from MW-10-1R was not obtained as it had been buried under wood debris. The well has since been located and will be sampled during the next quarterly groundwater sampling event. Current and historical analytical results were tabulated and can be found in Table 2a – Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L).

### 6.4.2 Northwest System and Associated Monitoring Wells

MW-132R, MW-147AR, and MW-148R are associated with the western impacted groundwater plume that the Northwest System is designed to remediate. Current concentrations of VOCs in groundwater are below Indiana VRP Tier II Non-Residential Cleanup Goals, except for VC in MW-148R. Current and historical analytical results were tabulated and can be found in Table 2a – Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L).

### 6.4.3 Southwest System and Associated Monitoring Wells

MW-133R and MW-153 are associated with the western impacted groundwater plume that the Southwest System is designed to remediate. For the 5th consecutive quarter, groundwater VOC concentrations are below the Indiana VRP Tier II Non-Residential Cleanup Goals. Current and historical analytical results were tabulated and can be found in Table 2a – Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L).

## 6.5 ON-SITE GROUNDWATER MONITORING

KERAMIDA conducted the annual collection of groundwater samples for field parameters and VOCs, PAHs, cadmium, total chromium, and lead analyses in November 2009 from MW-132R, 133R, 135, 145, 146, 148R, 150, 152, 153, and 154. Groundwater samples were collected from these on-Site monitoring wells using low flow sampling equipment. All groundwater concentrations are within historical values, except for Total Chromium in MW-150.

Field parameter data are documented on Groundwater Sample Information Sheets provided in Attachment 5. Historical and current groundwater elevations were tabulated and can be found in Table 1 – Water Level Data Summary. Current and historical analytical results were tabulated and can be found in Table 2a – Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L), Table 3 - Shallow Monitoring Well Groundwater Analytical Results for PAHs (μg/L), and Table 4 - Shallow Monitoring Well Groundwater Analytical Results for Metals (μg/L). A copy of the current laboratory analytical report is provided in Attachment 6.

## 6.6 ON AND OFF-SITE GROUNDWATER MONITORING

KERAMIDA conducted the quarterly collection of groundwater samples for field parameters and VOC analyses in November 2009 from MW-132R, 146, 148R, 150, 151, 152, 153, 156, 157, 160, 161, 164, 165S, 165D, 166S, 166D, 167S, 167D, 169S, 169D, and 302. Groundwater samples were collected from these monitoring wells using low flow sampling equipment. All groundwater concentrations are within historical values.

Field parameter data are documented on Groundwater Sample Information Sheets provided in Attachment 5. Historical and current groundwater elevations were tabulated and can be found in Table 1 – Water Level Data Summary. Current and historical analytical results were tabulated and can be found in Table 2a - Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L) and Table 2b - Deep Monitoring Well Groundwater Analytical Results for VOCs (μg/L). A copy of the current laboratory analytical report is provided in Attachment 6.

Groundwater level data from the November 2009 sampling event is included within Table 1 – Water Level Data Summary. Shallow and deep groundwater level data from the gauging event, indicate that groundwater was flowing in a southerly direction, as depicted on Figure 7 - Groundwater Potentiometric Surface Map - Shallow Wells, November 2009 and Figure 8 - Groundwater Potentiometric Surface Map - Deep Wells, November 2009.

## 6.7 EAST OFF-SITE AREA BIOREMEDIATION GROUNDWATER MONITORING

KERAMIDA conducted the collection of groundwater samples for field parameters and VOC and TOC analyses in November 2009 from IW-1, IW-2, MW-151, 156, 163, and MW-173. Groundwater samples were collected from these monitoring wells using low flow sampling equipment. Historical and current field parameter data were tabulated and can be found in Table 5 - East Off-Site Bioremediation Field Parameter and Select Groundwater Analytical Results.

Current field parameter data was documented on Groundwater Sample Information Sheets provided in Attachment 5. Historical and current groundwater elevations were tabulated and can be found in Table 1 – Water Level Data Summary. Current and historical analytical results were tabulated and can be found in Table 2a - Shallow Monitoring Well Groundwater Analytical Results for VOCs (μg/L), and Table 5 - East Off-Site Bioremediation Field Parameter and Select Groundwater Analytical Results. Copies of the current laboratory analytical reports are provided in Attachment 6.

## 7.0 USE OF REPORT

This report has been prepared for the exclusive use of the Client and persons or organizations to whom the Client wishes to make this report available. This report and the findings, conclusions and recommendations contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, or used by or relied upon by any other party, without the prior written consent of KERAMIDA.

## 8.0 LIMITATIONS

This report was prepared in accordance with KERAMIDA contractual guidelines set forth for remediation services. KERAMIDA's professional opinions contained herein are based upon the operation, maintenance, and monitoring/sampling conducted by KERAMIDA personnel during the operation of the remediation system. No other warranty is given or implied by this report.

# TABLES

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| **Shallow Wells** | | | | | | | |
| MW10-1 | 714.04 | -- | 7-17 | -- | 7/14/1995 | 14.07 | 699.97 |
| | | | | | 9/11/1995 | 14.25 | 699.79 |
| | | | | | 2/5/1997 | 12.75 | 701.29 |
| | | | | | 11/22/1999 | 14.53 | 699.51 |
| | | | | | 2/28/2000 | 14.37 | 699.67 |
| | 713.71 | 712.30 | 7-17 | 705.30-695.30 | 11/7/2000 | 14.62 | 699.09 |
| | | | | | 7/24/2001 | 14.40 | 699.31 |
| | | | | | 1/30/2002 | 14.25 | 699.46 |
| | | | | | 7/19/2002 | 13.45 | 700.26 |
| | | | | | 5/7/2003 | 11.21 | 699.36 |
| MW-10-1R | 714.00 | 711.75 | 7-17 | 704.75-694.75 | 12/3/2003 | 14.35 | 699.65 |
| | | | | | 3/3/2004 | 14.40 | 699.60 |
| | | | | | 3/10/2004 | 11.73 | 702.27 |
| | | | | | 6/2/2004 | 14.31 | 699.69 |
| | | | | | 12/20/2004 | 10.40 | 703.60 |
| | | | | | 3/16/2005 | 14.26 | 699.74 |
| | | | | | 6/13/2005 | 14.34 | 699.66 |
| | | | | | 9/21/2005 | 15.35 | 698.65 |
| | | | | | 12/5/2005 | 15.31 | 698.69 |
| | | | | | 1/30/2006 | 14.50 | 699.50 |
| | | | | | 3/13/2006 | 13.40 | 700.60 |
| | | | | | 6/12/2006 | 14.50 | 699.50 |
| | | | | | 10/13/2006 | 14.94 | 699.06 |
| | | | | | 12/20/2006 | 14.43 | 699.57 |
| | | | | | 3/19/2007 | 13.20 | 700.80 |
| | | | | | 7/2/2007 | 14.58 | 699.42 |
| | | | | | 9/6/2007 | 15.07 | 698.93 |
| | | | | | 11/27/2007 | 15.10 | 698.90 |
| | | | | | 3/19/2008 | 14.25 | 699.75 |
| | | | | | 5/28/2008 | 14.15 | 699.85 |
| | | | | | 9/22/2008 | 14.80 | 699.20 |
| | | | | | 12/1/2008 | 15.09 | 698.91 |
| | | | | | 3/11/2009 | 14.66 | 699.34 |
| | | | | | 6/16/2009 | 13.22 | 700.78 |
| | | | | | 9/14/2009 | 15.01 | 698.99 |
| | | | | | 11/2/2009 | Well broke 7' down | |
| MW-132 | 712.17 | -- | 10-20 | -- | 7/14/1995 | 11.39 | 700.78 |
| | | | | | 9/11/1995 | 11.49 | 700.68 |
| | | | | | 2/5/1997 | 10.25 | 701.92 |
| | | | | | 2/26/1997 | 11.17 | 701.00 |
| | | | | | 11/22/1999 | 12.15 | 700.02 |
| | | | | | 2/28/2000 | 10.76 | 701.41 |
| | 712.19 | 712.70 | 10-20 | 702.70-692.70 | 11/7/2000 | dry | NA |
| | 712.22 | 712.57 | 10-20 | 702.57-692.57 | 7/24/2001 | 11.72 | 700.50 |
| | | | | | 1/30/2002 | 11.97 | 700.25 |
| | | | | | 7/22/2002 | 11.98 | 700.24 |
| | | | | | 5/7/2003 | 11.35 | 700.87 |
| | | | | | 12/3/2003 | 11.72 | 700.50 |
| | | | | | 3/10/2004 | 11.46 | 700.76 |
| | | | | | 6/2/2004 | 11.09 | 701.13 |
| | | | | | 9/14/2004 | 12.50 | 699.72 |
| | | | | | 12/20/2004 | 11.95 | 700.27 |
| | | | | | 3/16/2005 | 11.75 | 700.47 |
| | | | | | 6/13/2005 | 11.51 | 700.71 |
| | | | | | 9/21/2005 | 11.90 | 700.32 |
| | | | | | 12/5/2005 | 12.35 | 699.87 |
| | | | | | 1/30/2006 | 11.55 | 700.67 |
| | | | | | 3/13/2006 | 9.65 | 702.57 |
| | | | | | 6/12/2006 | 11.61 | 700.61 |
| MW-132R | 711.74 | 712.12 | 9.5-19.5 | 702.62-692.62 | 10/13/2006 | 11.81 | 699.93 |
| | | | | | 12/20/2006 | 11.24 | 700.50 |
| | | | | | 3/19/2007 | 9.91 | 701.83 |
| | | | | | 7/2/2007 | 11.61 | 700.13 |
| | | | | | 9/6/2007 | 11.93 | 699.81 |
| | | | | | 11/27/2007 | 11.73 | 700.01 |

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| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-132R (cont'd.) | 711.74 | 712.12 | 9.5-19.5 | 702.62-692.62 | 3/19/2008 | 11.00 | 700.74 |
| | | | | | 5/28/2008 | 11.10 | 700.64 |
| | | | | | 9/22/2008 | 11.84 | 699.90 |
| | | | | | 12/1/2008 | 11.90 | 699.84 |
| | | | | | 3/11/2009 | 12.50 | 699.24 |
| | | | | | 6/16/2009 | 10.34 | 701.40 |
| | | | | | 9/14/2009 | 12.03 | 699.71 |
| | | | | | 11/2/2009 | 11.25 | 700.49 |
| MW-133 | 708.79 | -- | 8-18 | -- | 9/11/1995 | 8.84 | 699.95 |
| | | | | | 2/5/1997 | 7.29 | 701.50 |
| | | | | | 11/22/1999 | 8.34 | 700.45 |
| | | | | | 2/28/2000 | 8.61 | 700.18 |
| | 708.83 | 709.10 | 8-18 | 701.10-691.10 | 11/7/2000 | NA | |
| MW-133R | 709.03 | -- | 7-17 | -- | 12/4/2003 | 9.76 | 699.27 |
| | | | | | 3/10/2004 | 9.19 | 699.84 |
| | | | | | 6/2/2004 | 8.95 | 700.08 |
| | | | | | 9/14/2004 | 9.93 | 699.10 |
| | | | | | 12/20/2004 | 9.74 | 699.29 |
| | | | | | 3/16/2005 | 9.39 | 699.64 |
| | | | | | 6/13/2005 | 9.29 | 699.74 |
| | | | | | 9/21/2005 | 9.74 | 699.29 |
| | | | | | 12/5/2005 | 9.34 | 699.69 |
| | | | | | 1/30/2006 | 9.15 | 699.88 |
| | | | | | 3/13/2006 | 7.85 | 701.18 |
| | | | | | 6/12/2006 | 9.15 | 699.88 |
| | | | | | 10/13/2006 | 9.93 | 699.10 |
| | | | | | 12/20/2006 | 9.40 | 699.63 |
| | | | | | 3/19/2007 | 7.09 | 701.94 |
| | | | | | 7/2/2007 | 9.81 | 699.22 |
| | | | | | 9/6/2007 | 10.25 | 698.78 |
| | | | | | 11/27/2007 | 9.77 | 699.26 |
| | | | | | 3/19/2008 | 9.22 | 699.81 |
| | | | | | 5/28/2008 | 9.00 | 700.03 |
| | | | | | 9/22/2008 | 9.62 | 699.41 |
| | | | | | 12/1/2008 | 10.24 | 698.79 |
| | | | | | 3/11/2009 | 9.68 | 699.35 |
| | | | | | 6/16/2009 | 5.87 | 703.16 |
| | | | | | 9/14/2009 | 10.22 | 698.81 |
| | | | | | 11/2/2009 | 9.51 | 699.52 |
| MW-135 | 713.69 | -- | 10-20 | -- | 7/14/1995 | 13.26 | 700.43 |
| | | | | | 9/11/1995 | 13.66 | 700.03 |
| | | | | | 2/5/1997 | 11.96 | 701.73 |
| | | | | | 2/26/1997 | 12.47 | 701.22 |
| | | | | | 11/22/1999 | 14.20 | 699.49 |
| | | | | | 2/28/2000 | 14.05 | 699.64 |
| | 713.70 | 714.10 | 10-20 | 704.10-694.10 | 11/7/2000 | 14.12 | 699.58 |
| | | | | | 6/20/2001 | 13.85 | 699.85 |
| | | | | | 7/24/2001 | 13.67 | 700.03 |
| | | | | | 1/30/2002 | 13.80 | 699.90 |
| | | | | | 7/15/2002 | 12.05 | 701.65 |
| | | | | | 12/3/2003 | 13.01 | 700.69 |
| | | | | | 3/10/2004 | 12.97 | 700.73 |
| | | | | | 6/2/2004 | 12.35 | 701.35 |
| | | | | | 9/14/2004 | 13.62 | 700.08 |
| | | | | | 12/20/2004 | 13.40 | 700.30 |
| | | | | | 3/16/2005 | 12.56 | 701.14 |
| | | | | | 6/13/2005 | 12.86 | 700.84 |
| | | | | | 9/21/2005 | 13.83 | 699.87 |
| | | | | | 12/5/2005 | 12.42 | 701.28 |
| | | | | | 1/30/2006 | 13.35 | 700.35 |
| | | | | | 3/13/2006 | 12.00 | 701.70 |
| | | | | | 6/12/2006 | 12.60 | 701.10 |
| | | | | | 10/13/2006 | 13.71 | 699.99 |
| | | | | | 12/20/2006 | 13.04 | 700.66 |

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| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-135 (cont'd.) | 713.70 | 714.10 | 10-20 | 704.10-694.10 | 3/19/2007 | 11.57 | 702.13 |
| | | | | | 7/2/2007 | 13.02 | 700.68 |
| | | | | | 9/6/2007 | 13.79 | 699.91 |
| | | | | | 11/27/2007 | 14.17 | 699.53 |
| | | | | | 3/19/2008 | 12.88 | 700.82 |
| | | | | | 5/28/2008 | 12.32 | 701.38 |
| | | | | | 9/22/2008 | 13.31 | 700.39 |
| | | | | | 12/1/2008 | 13.91 | 699.79 |
| | | | | | 3/11/2009 | 13.44 | 700.26 |
| | | | | | 6/16/2009 | 11.49 | 702.21 |
| | | | | | 9/14/2009 | 13.51 | 700.19 |
| | | | | | 11/2/2009 | 13.35 | 700.35 |
| MW-145 | 707.90 | -- | 18-28 | -- | 7/14/1995 | 8.85 | 699.05 |
| | | | | | 9/11/1995 | 8.85 | 699.05 |
| | | | | | 2/5/1997 | 7.43 | 700.47 |
| | | | | | 11/22/1999 | 9.10 | 699.80 |
| | | | | | 2/28/2000 | 8.62 | 699.28 |
| | 707.94 | 709.00 | 18-28 | 691.00-681.00 | 11/7/2000 | 8.74 | 699.20 |
| | | | | | 6/21/2001 | 8.82 | 699.12 |
| | 707.98 | 708.64 | 18-28 | 690.64-680.64 | 7/24/2001 | 8.78 | 699.20 |
| | | | | | 1/30/2002 | 8.05 | 699.93 |
| | | | | | 7/22/2002 | 8.89 | 699.09 |
| | | | | | 12/4/2003 | 8.85 | 699.13 |
| | | | | | 3/10/2004 | 8.93 | 699.05 |
| | | | | | 6/2/2004 | 8.51 | 699.47 |
| | | | | | 9/14/2004 | 9.39 | 698.59 |
| | | | | | 12/20/2004 | 9.09 | 698.89 |
| | | | | | 3/16/2005 | 8.90 | 699.08 |
| | | | | | 9/21/2005 | 9.00 | 698.98 |
| | | | | | 12/5/2005 | 9.45 | 698.53 |
| | | | | | 1/30/2006 | 8.40 | 699.58 |
| | | | | | 3/13/2006 | 7.70 | 700.28 |
| | | | | | 6/12/2006 | 8.80 | 699.18 |
| | | | | | 10/13/2006 | 9.22 | 698.76 |
| | | | | | 12/20/2006 | 8.91 | 699.07 |
| | | | | | 3/19/2007 | 7.40 | 700.58 |
| | | | | | 7/2/2007 | 9.20 | 698.78 |
| | | | | | 9/6/2007 | 9.51 | 698.47 |
| | | | | | 11/27/2007 | 8.95 | 699.03 |
| | | | | | 3/19/2008 | 8.51 | 699.47 |
| | | | | | 5/28/2008 | 8.86 | 699.12 |
| | | | | | 9/22/2008 | 9.45 | 698.53 |
| | | | | | 12/1/2008 | 9.40 | 698.58 |
| | | | | | 9/14/2009 | 9.64 | 698.34 |
| | | | | | 11/2/2009 | 8.93 | 699.05 |
| MW-146 | 708.67 | -- | 15-25 | -- | 7/14/1995 | 9.41 | 699.26 |
| | | | | | 9/11/1995 | 9.44 | 699.23 |
| | | | | | 2/5/1997 | 7.95 | 700.72 |
| | | | | | 11/22/1999 | 9.73 | 698.94 |
| | | | | | 2/28/2000 | 9.91 | 698.76 |
| | | | | | 11/7/2000 | 8.95 | 699.76 |
| | | | | | 6/21/2001 | 9.48 | 699.23 |
| | | | | | 7/24/2001 | 9.51 | 699.20 |
| | | | | | 1/30/2002 | 9.31 | 699.40 |
| | | | | | 7/15/2002 | 10.09 | 698.62 |
| | | | | | 12/3/2003 | 9.5 | 699.21 |
| | | | | | 12/19/2003 | 9.5 | 699.21 |
| | | | | | 3/10/2004 | 9.46 | 699.21 |
| | | | | | 6/2/2004 | 9.12 | 699.55 |
| | | | | | 12/20/2004 | 9.76 | 698.91 |
| | | | | | 3/16/2005 | 9.46 | 699.21 |
| | | | | | 6/13/2005 | 9.34 | 699.33 |
| | | | | | 9/21/2005 | 9.45 | 699.22 |
| | | | | | 12/5/2005 | 8.44 | 700.23 |
| | | | | | 1/30/2006 | 9.20 | 699.47 |
| | | | | | 3/13/2006 | 8.40 | 700.27 |
| | | | | | 6/12/2006 | 9.48 | 699.19 |

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**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-146 (cont'd.) | 708.67 | -- | 15-25 | -- | 10/13/2006 | 9.89 | 698.78 |
| | | | | | 12/20/2006 | 9.56 | 699.11 |
| | | | | | 3/19/2007 | 8.38 | 700.29 |
| | | | | | 7/2/2007 | 9.71 | 698.96 |
| | | | | | 9/6/2007 | 10.06 | 698.61 |
| | | | | | 11/27/2007 | 9.81 | 698.86 |
| | | | | | 3/19/2008 | 9.23 | 699.44 |
| | | | | | 5/28/2008 | 9.32 | 699.35 |
| | | | | | 9/22/2008 | 10.01 | 698.66 |
| | | | | | 12/1/2008 | 9.98 | 698.69 |
| | | | | | 3/11/2009 | 9.68 | 698.99 |
| | | | | | 6/19/2009 | 8.75 | 699.92 |
| | | | | | 9/14/2009 | 10.27 | 698.40 |
| | | | | | 11/2/2009 | 9.66 | 699.01 |
| MW-147 | 711.88 | -- | 20-30 | -- | 7/14/1995 | 11.09 | 700.79 |
| | | | | | 9/11/1995 | 11.20 | 700.68 |
| | | | | | 2/5/1997 | 9.91 | 701.97 |
| | | | | | 11/22/1999 | 11.49 | 700.39 |
| | | | | | 2/28/2000 | 11.44 | 700.44 |
| | 711.53 | 711.60 | 20-30 | 691.60-681.60 | 11/7/2000 | 11.40 | 700.13 |
| MW-147A | 711.61 | 712.07 | 20-30 | 692.07-682.07 | 6/21/2001 | 12.46 | 699.15 |
| | | | | | 7/24/2001 | 11.22 | 700.39 |
| | | | | | 1/30/2002 | 11.34 | 700.27 |
| | | | | | 7/22/2002 | 11.06 | 700.55 |
| | | | | | 5/7/2003 | 11.50 | 700.11 |
| | | | | | 12/3/2003 | 11.14 | 700.47 |
| | | | | | 3/10/2004 | 10.79 | 700.82 |
| | | | | | 6/2/2004 | 10.45 | 701.16 |
| | | | | | 9/14/2004 | 11.76 | 699.85 |
| | | | | | 12/20/2004 | 11.35 | 700.26 |
| | | | | | 3/16/2005 | 11.19 | 700.42 |
| | | | | | 6/13/2005 | 11.98 | 699.63 |
| | | | | | 9/21/2005 | 11.33 | 700.28 |
| | | | | | 12/5/2005 | 11.66 | 699.95 |
| | | | | | 1/30/2006 | 10.89 | 700.72 |
| | | | | | 3/13/2006 | 9.00 | 702.61 |
| MW-147AR | 711.71 | 712.03 | 20-30 | 692.03-682.03 | 10/13/2006 | 11.70 | 700.01 |
| | | | | | 12/20/2006 | 11.19 | 700.52 |
| | | | | | 3/19/2007 | 9.85 | 701.86 |
| | | | | | 7/2/2007 | 11.59 | 700.12 |
| | | | | | 9/6/2007 | 12.00 | 699.71 |
| | | | | | 11/27/2007 | 11.70 | 700.01 |
| | | | | | 3/19/2008 | 10.95 | 700.76 |
| | | | | | 5/28/2008 | 11.00 | 700.71 |
| | | | | | 9/22/2008 | 11.89 | 699.82 |
| | | | | | 12/1/2008 | 11.81 | 699.90 |
| | | | | | 3/11/2009 | 11.43 | 700.28 |
| | | | | | 6/16/2009 | 10.27 | 701.44 |
| | | | | | 9/14/2009 | 11.95 | 699.76 |
| | | | | | 11/2/2009 | 11.21 | 700.50 |
| MW-148 | 711.00 | -- | 10.5-25.5 | -- | 7/14/1995 | 10.43 | 700.57 |
| | | | | | 9/11/1995 | 10.50 | 700.50 |
| | | | | | 2/5/1997 | 8.25 | 702.75 |
| | | | | | 2/26/1997 | 10.15 | 700.85 |
| | | | | | 11/22/1999 | 11.50 | 699.50 |
| | | | | | 2/28/2000 | 10.36 | 700.64 |
| | 711.04 | 712.00 | 10.5-25.5 | 701.50-686.50 | 11/7/2000 | 10.90 | 700.14 |
| | | | | | 6/21/2001 | 10.73 | 700.31 |
| | 711.07 | 712.00 | 10.5-25.5 | 701.50-686.50 | 7/24/2001 | 10.55 | 700.52 |
| | | | | | 1/30/2002 | 10.73 | 700.34 |
| | | | | | 7/22/2002 | 11.31 | 699.76 |
| | | | | | 5/7/2003 | 11.25 | 699.82 |
| | | | | | 12/3/2003 | 10.31 | 700.76 |
| | | | | | 3/10/2004 | 10.16 | 700.91 |
| | | | | | 6/2/2004 | 10.11 | 700.96 |
| | | | | | 9/14/2004 | 11.40 | 699.67 |
| | | | | | 12/20/2004 | 11.02 | 700.05 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-148 (cont'd.) | 711.07 | 712.00 | 10.5-25.5 | 701.50-686.50 | 3/16/2005 | 10.89 | 700.18 |
| | | | | | 6/13/2005 | 10.65 | 700.42 |
| | | | | | 9/21/2005 | 10.82 | 700.25 |
| | | | | | 12/5/2005 | 10.71 | 700.36 |
| | | | | | 1/30/2006 | 10.53 | 700.54 |
| | | | | | 3/13/2006 | 8.70 | 702.37 |
| | | | | | 6/12/2006 | 10.80 | 700.27 |
| MW-148R | 711.44 | 711.94 | 10.5-25.5 | 701.44-686.44 | 10/13/2006 | 11.71 | 699.73 |
| | | | | | 12/20/2006 | 11.17 | 700.27 |
| | | | | | 3/19/2007 | 9.66 | 701.78 |
| | | | | | 7/2/2007 | 11.57 | 699.87 |
| | | | | | 9/6/2007 | 11.90 | 699.54 |
| | | | | | 11/27/2007 | 11.55 | 699.89 |
| | | | | | 3/19/2008 | 10.94 | 700.50 |
| | | | | | 5/28/2008 | 11.00 | 700.44 |
| | | | | | 9/22/2008 | 11.75 | 699.69 |
| | | | | | 12/1/2008 | 11.73 | 699.71 |
| | | | | | 3/11/2009 | 11.36 | 700.08 |
| | | | | | 6/16/2009 | 10.33 | 701.11 |
| | | | | | 9/14/2009 | 11.95 | 699.49 |
| | | | | | 11/2/2009 | 11.17 | 700.27 |
| MW-150 | 712.93 | -- | 4-19 | -- | 9/11/1995 | 13.30 | 699.63 |
| | | | | | 2/5/1997 | 11.75 | 701.18 |
| | | | | | 11/22/1999 | 13.57 | 699.36 |
| | | | | | 2/28/2000 | 13.50 | 699.43 |
| | 712.90 | 713.30 | 4-19 | 709.30-694.30 | 11/7/2000 | 13.80 | 699.10 |
| | | | | | 6/20/2001 | 13.51 | 699.39 |
| | 712.96 | 713.38 | 4-19 | 709.38-694.38 | 7/24/2001 | 12.88 | 700.08 |
| | | | | | 1/30/2002 | 13.76 | 699.20 |
| | | | | | 7/19/2002 | 12.18 | 700.78 |
| | | | | | 5/7/2003 | 11.85 | 701.11 |
| | | | | | 12/3/2003 | 12.85 | 700.11 |
| | | | | | 3/3/2004 | 12.28 | 700.68 |
| | | | | | 3/10/2004 | 13.00 | 699.96 |
| | | | | | 6/2/2004 | 12.17 | 700.79 |
| | | | | | 9/14/2004 | 13.35 | 699.61 |
| | | | | | 12/20/2004 | 13.65 | 699.31 |
| | | | | | 3/16/2005 | 11.31 | 701.65 |
| | | | | | 6/13/2005 | 13.11 | 699.85 |
| | | | | | 9/21/2005 | 12.66 | 700.30 |
| | | | | | 12/5/2005 | 13.12 | 699.84 |
| | | | | | 1/30/2006 | 13.20 | 699.76 |
| | | | | | 3/13/2006 | 12.10 | 700.86 |
| | | | | | 6/12/2006 | 12.55 | 700.41 |
| | | | | | 10/13/2006 | 11.42 | 701.54 |
| | | | | | 12/20/2006 | 12.87 | 700.09 |
| | | | | | 3/19/2007 | 11.59 | 701.37 |
| | | | | | 7/2/2007 | 12.98 | 699.98 |
| | | | | | 9/6/2007 | 13.57 | 699.39 |
| | | | | | 11/27/2007 | 13.78 | 699.18 |
| | | | | | 3/19/2008 | 12.11 | 700.85 |
| | | | | | 5/28/2008 | 12.33 | 700.63 |
| | | | | | 9/22/2008 | 13.21 | 699.75 |
| | | | | | 12/1/2008 | 13.64 | 699.32 |
| | | | | | 3/11/2009 | 13.22 | 699.74 |
| | | | | | 6/16/2009 | 11.65 | 701.31 |
| | | | | | 9/14/2009 | 13.40 | 699.56 |
| | | | | | 11/2/2009 | 13.13 | 699.83 |
| MW-151 | 712.96 | -- | 5-20 | -- | 7/14/1995 | 13.93 | 699.03 |
| | | | | | 9/11/1995 | 14.04 | 698.92 |
| | | | | | 2/5/1997 | 12.80 | 700.16 |
| | | | | | 11/22/1999 | 13.97 | 698.99 |
| | | | | | 2/28/2000 | 13.94 | 699.02 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-151 (cont'd.) | 712.93 | 713.20 | 5-20 | 708.20-693.20 | 11/7/2000 | 14.15 | 698.78 |
| | | | | | 6/20/2001 | 13.98 | 698.95 |
| | | | | | 7/24/2001 | 13.88 | 699.05 |
| | | | | | 1/30/2002 | 13.80 | 699.13 |
| | | | | | 7/18/2002 | 13.46 | 699.47 |
| | | | | | 12/4/2003 | 13.85 | 699.08 |
| | | | | | 3/3/2004 | 13.72 | 699.21 |
| | | | | | 6/2/2004 | 13.44 | 699.49 |
| | | | | | 7/16/2004 | 13.98 | 698.95 |
| | | | | | 8/16/2004 | 14.25 | 698.68 |
| | | | | | 9/14/2004 | 14.41 | 698.52 |
| | | | | | 10/18/2004 | 14.29 | 698.64 |
| | | | | | 11/19/2004 | 14.21 | 698.72 |
| | | | | | 12/20/2004 | 14.15 | 698.78 |
| | | | | | 1/24/2005 | 10.85 | 702.08 |
| | | | | | 3/16/2005 | 13.70 | 699.23 |
| | | | | | 6/13/2005 | 12.82 | 700.11 |
| | | | | | 9/21/2005 | 14.05 | 698.88 |
| | | | | | 12/5/2005 | 13.12 | 699.81 |
| | | | | | 1/30/2006 | 13.70 | 699.23 |
| | | | | | 3/13/2006 | 13.00 | 699.93 |
| | | | | | 6/12/2006 | 13.75 | 699.18 |
| | | | | | 10/13/2006 | 14.30 | 698.63 |
| | | | | | 11/21/2006 | 13.77 | 699.16 |
| | | | | | 12/20/2006 | 13.95 | 698.98 |
| | | | | | 1/19/2007 | 12.71 | 700.22 |
| | | | | | 3/19/2007 | 12.71 | 700.22 |
| | | | | | 9/6/2007 | 14.50 | 698.43 |
| | | | | | 11/27/2007 | 14.40 | 698.53 |
| | | | | | 3/19/2008 | 13.65 | 699.28 |
| | | | | | 5/28/2008 | 13.66 | 699.27 |
| | | | | | 9/22/2008 | 14.33 | 698.60 |
| | | | | | 12/1/2008 | 14.48 | 698.45 |
| | | | | | 3/11/2009 | 14.11 | 698.82 |
| | | | | | 6/16/2009 | 13.12 | 699.81 |
| | | | | | 9/14/2009 | 15.66 | 697.27 |
| | | | | | 11/2/2009 | 13.06 | 699.87 |
| MW-152 | 713.06 | -- | 5-20 | -- | 7/14/1995 | 13.45 | 699.61 |
| | | | | | 9/11/1995 | 13.57 | 699.49 |
| | | | | | 2/5/1997 | 12.21 | 700.85 |
| | | | | | 2/26/1997 | 12.92 | 700.14 |
| | | | | | 11/22/1999 | 13.90 | 699.16 |
| | | | | | 2/28/2000 | 13.38 | 699.68 |
| | 712.93 | 713.20 | 5-20 | 708.20-693.20 | 11/7/2000 | 13.84 | 699.09 |
| | | | | | 6/20/2001 | 13.64 | 699.29 |
| | | | | | 7/24/2001 | 13.54 | 699.39 |
| | | | | | 1/30/2002 | 13.46 | 699.47 |
| | | | | | 7/15/2002 | 12.89 | 700.04 |
| | | | | | 12/3/2003 | 13.31 | 699.62 |
| | | | | | 3/10/2004 | 13.30 | 699.63 |
| | | | | | 6/2/2004 | 12.79 | 700.14 |
| | | | | | 9/14/2004 | 14.01 | 698.92 |
| | | | | | 12/20/2004 | 13.67 | 699.26 |
| | | | | | 3/6/2005 | 13.29 | 699.64 |
| | | | | | 6/13/2005 | 13.21 | 699.72 |
| | | | | | 9/21/2005 | 13.86 | 699.07 |
| | | | | | 12/5/2005 | 13.32 | 699.61 |
| | | | | | 1/30/2006 | 13.30 | 699.63 |
| | | | | | 3/13/2006 | 12.25 | 700.68 |
| | | | | | 6/12/2006 | 13.30 | 699.63 |
| | | | | | 10/13/2006 | 13.98 | 698.95 |
| | | | | | 12/20/2006 | 13.84 | 699.09 |
| | | | | | 3/19/2007 | 12.31 | 700.62 |
| | | | | | 7/2/2007 | 13.70 | 699.23 |
| | | | | | 9/6/2007 | 14.18 | 698.75 |
| | | | | | 11/27/2007 | 14.01 | 698.92 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-152 (cont'd.) | 712.93 | 713.20 | 5-20 | 708.20-693.20 | 3/19/2008 | 13.32 | 699.61 |
| | | | | | 5/28/2008 | 13.23 | 699.70 |
| | | | | | 9/22/2008 | 13.95 | 698.98 |
| | | | | | 12/1/2008 | 14.12 | 698.81 |
| | | | | | 3/11/2009 | 13.79 | 699.14 |
| | | | | | 6/16/2009 | 12.68 | 700.25 |
| | | | | | 9/14/2009 | 14.22 | 698.71 |
| | | | | | 11/2/2009 | 13.67 | 699.26 |
| MW-153 | 711.64 | 709.31 | 4.5-19.5 | 704.81-689.81 | 7/14/1995 | 11.77 | 699.87 |
| | | | | | 9/11/1995 | 11.76 | 699.88 |
| | | | | | 2/5/1997 | 9.78 | 701.86 |
| | | | | | 2/26/1997 | 11.14 | 700.50 |
| | | | | | 11/22/1999 | 12.25 | 699.39 |
| | | | | | 2/28/2000 | 11.26 | 700.38 |
| | | | | | 11/7/2000 | 12.15 | 699.52 |
| | | | | | 6/21/2001 | 11.95 | 699.72 |
| | | | | | 7/24/2001 | 11.92 | 699.75 |
| | | | | | 1/30/2002 | 11.83 | 699.84 |
| | | | | | 7/22/2002 | 11.82 | 699.85 |
| | | | | | 12/3/2003 | 12.36 | 699.31 |
| | | | | | 3/10/2004 | 11.44 | 700.20 |
| | | | | | 6/2/2004 | 11.49 | 700.15 |
| | | | | | 9/14/2004 | 12.81 | 698.83 |
| | | | | | 12/20/2004 | 12.68 | 698.96 |
| | | | | | 3/16/2005 | 10.76 | 700.88 |
| | | | | | 6/13/2005 | 8.98 | 702.66 |
| | | | | | 9/21/2005 | 12.16 | 699.48 |
| | | | | | 12/5/2005 | 9.21 | 702.43 |
| | | | | | 1/30/2006 | 12.70 | 698.94 |
| | | | | | 3/13/2006 | 11.25 | 700.39 |
| | | | | | 6/12/2006 | 11.90 | 699.74 |
| | | | | | 10/13/2006 | 12.79 | 698.85 |
| | | | | | 12/20/2006 | 12.07 | 699.57 |
| | | | | | 3/19/2007 | 10.18 | 701.46 |
| | | | | | 7/2/2007 | 12.47 | 699.17 |
| | | | | | 9/6/2007 | 13.07 | 698.57 |
| | | | | | 11/27/2007 | 12.29 | 699.35 |
| | | | | | 3/19/2008 | 12.30 | 699.34 |
| | | | | | 5/28/2008 | 13.00 | 698.64 |
| | | | | | 9/22/2008 | 11.46 | 700.18 |
| | | | | | 12/1/2008 | 12.65 | 698.99 |
| | | | | | 3/11/2009 | 11.98 | 699.66 |
| | | | | | 6/16/2009 | 11.42 | 700.22 |
| | | | | | 9/14/2009 | 13.83 | 697.81 |
| | | | | | 11/2/2009 | 12.05 | 699.59 |
| MW-154 | 714.22 | -- | 5-20 | -- | 7/14/1995 | 13.31 | 700.91 |
| | | | | | 9/11/1995 | 13.42 | 700.80 |
| | | | | | 2/5/1997 | 12.17 | 702.05 |
| | | | | | 2/26/1997 | 13.07 | 701.15 |
| | | | | | 11/22/1999 | 14.11 | 700.11 |
| | | | | | 2/28/2000 | 13.38 | 700.84 |
| | 714.26 | 711.60 | 5-20 | 706.60-691.60 | 11/7/2000 | 14.02 | 700.24 |
| | | | | | 6/21/2001 | 13.79 | 700.47 |
| | | | | | 7/24/2001 | 13.77 | 700.49 |
| | | | | | 1/30/2002 | 13.88 | 700.38 |
| | | | | | 7/22/2002 | 13.37 | 700.89 |
| | | | | | 12/3/2003 | 13.57 | 700.69 |
| | | | | | 3/10/2004 | 13.41 | 700.85 |
| | | | | | 6/2/2004 | 13.44 | 700.82 |
| | | | | | 9/14/2004 | 14.25 | 700.01 |
| | | | | | 12/20/2004 | 13.51 | 700.75 |
| | | | | | 3/16/2005 | 13.64 | 700.62 |
| | | | | | 6/13/2005 | 13.35 | 700.91 |
| | | | | | 9/21/2005 | 13.82 | 700.44 |
| | | | | | 12/5/2005 | 14.15 | 700.11 |
| | | | | | 1/30/2006 | 13.45 | 700.81 |
| | | | | | 3/13/2006 | 11.50 | 702.76 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-154 (cont'd.) | 714.26 | 711.60 | 5-20 | 706.60-691.60 | 6/12/2006 | 13.40 | 700.86 |
| | | | | | 10/13/2006 | 14.10 | 700.16 |
| | | | | | 12/20/2006 | 13.61 | 700.65 |
| | | | | | 3/19/2007 | 12.31 | 701.95 |
| | | | | | 7/2/2007 | 13.98 | 700.28 |
| | | | | | 9/6/2007 | 14.29 | 699.97 |
| | | | | | 11/27/2007 | 14.11 | 700.15 |
| | | | | | 3/19/2008 | 13.32 | 700.94 |
| | | | | | 5/28/2008 | 13.45 | 700.81 |
| | | | | | 9/22/2008 | 14.15 | 700.11 |
| | | | | | 12/1/2008 | 14.25 | 700.01 |
| | | | | | 3/11/2009 | 13.86 | 700.40 |
| | | | | | 6/16/2009 | 12.71 | 701.55 |
| | | | | | 9/14/2009 | 14.34 | 699.92 |
| | | | | | 11/2/2009 | 13.65 | 700.61 |
| MW-156 | 711.69 | 712.05 | 5-20 | 707.05-692.05 | 9/11/1995 | 12.21 | 699.48 |
| | | | | | 2/5/1997 | 10.65 | 701.04 |
| | | | | | 11/22/1999 | 12.52 | 699.17 |
| | | | | | 2/28/2000 | 12.41 | 699.28 |
| | | | | | 11/7/2000 | 12.66 | 699.06 |
| | | | | | 6/20/2001 | 12.43 | 699.29 |
| | | | | | 7/24/2001 | 12.35 | 699.37 |
| | | | | | 1/30/2002 | 12.25 | 699.47 |
| | | | | | 7/18/2002 | 11.46 | 700.26 |
| | | | | | 12/4/2003 | 11.97 | 699.75 |
| | | | | | 3/10/2004 | 11.82 | 699.87 |
| | | | | | 6/2/2004 | 11.48 | 700.21 |
| | | | | | 7/16/2004 | 12.09 | 699.60 |
| | | | | | 8/16/2004 | 12.36 | 699.33 |
| | | | | | 9/14/2004 | 12.55 | 699.14 |
| | | | | | 10/18/2004 | 12.54 | 699.15 |
| | | | | | 11/19/2004 | 12.40 | 699.29 |
| | | | | | 12/20/2004 | 12.40 | 699.29 |
| | | | | | 1/24/2005 | 10.65 | 701.04 |
| | | | | | 3/16/2005 | 11.77 | 699.92 |
| | | | | | 6/13/2005 | 11.61 | 700.08 |
| | | | | | 9/21/2005 | 12.42 | 699.27 |
| | | | | | 12/5/2005 | 12.71 | 698.98 |
| | | | | | 1/30/2006 | 12.10 | 699.59 |
| | | | | | 3/13/2006 | 11.15 | 700.54 |
| | | | | | 6/12/2006 | 11.70 | 699.99 |
| | | | | | 10/13/2006 | 12.51 | 699.18 |
| | | | | | 11/21/2006 | 11.87 | 699.82 |
| | | | | | 12/20/2006 | 12.09 | 699.60 |
| | | | | | 1/19/2007 | 10.53 | 701.16 |
| | | | | | 3/19/2007 | 10.76 | 700.93 |
| | | | | | 7/2/2007 | 12.10 | 699.59 |
| | | | | | 9/6/2007 | 12.63 | 699.06 |
| | | | | | 11/27/2007 | 12.70 | 698.99 |
| | | | | | 3/19/2008 | 11.82 | 699.87 |
| | | | | | 5/28/2008 | 11.60 | 700.09 |
| | | | | | 9/22/2008 | 12.35 | 699.34 |
| | | | | | 12/1/2008 | 12.70 | 698.99 |
| | | | | | 3/11/2009 | 12.31 | 699.38 |
| | | | | | 6/19/2009 | 10.95 | 700.74 |
| | | | | | 9/14/2009 | 12.57 | 699.12 |
| | | | | | 11/2/2009 | 12.21 | 699.48 |
| MW-157 | 711.30 | -- | 5-20 | -- | 2/5/1997 | 10.71 | 700.59 |
| | | | | | 2/26/1997 | 11.14 | 700.16 |
| | | | | | 2/28/2000 | 12.40 | 698.90 |
| | 711.27 | 711.50 | 5-20 | 706.50-691.50 | 11/7/2000 | 12.55 | 698.72 |
| | | | | | 6/21/2001 | 12.34 | 698.93 |
| | | | | | 7/24/2001 | 12.17 | 699.10 |
| | | | | | 1/30/2002 | 12.18 | 699.09 |
| | | | | | 7/19/2002 | 11.10 | 700.17 |
| | | | | | 12/4/2003 | 11.80 | 699.47 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-157 (cont'd.) | 711.27 | 711.50 | 5-20 | 706.50-691.50 | 3/3/2004 | 10.62 | 700.65 |
| | | | | | 3/10/2004 | 11.66 | 699.61 |
| | | | | | 6/2/2004 | 12.94 | 698.33 |
| | | | | | 9/14/2004 | 12.57 | 698.70 |
| | | | | | 12/20/2004 | 12.19 | 699.08 |
| | | | | | 3/16/2005 | 11.57 | 699.70 |
| | | | | | 6/13/2005 | 11.67 | 699.60 |
| | | | | | 9/21/2005 | 12.35 | 698.92 |
| | | | | | 6/12/2006 | 11.60 | 699.67 |
| | | | | | 10/13/2006 | 12.42 | 698.85 |
| | | | | | 12/20/2006 | 11.81 | 699.46 |
| | | | | | 3/19/2007 | 10.59 | 700.68 |
| | | | | | 7/2/2007 | 11.95 | 699.32 |
| | | | | | 9/6/2007 | 12.53 | 698.74 |
| | | | | | 11/27/2007 | 12.81 | 698.46 |
| | | | | | 3/19/2008 | 11.73 | 699.54 |
| | | | | | 5/28/2008 | 11.34 | 699.93 |
| | | | | | 9/22/2008 | 12.18 | 699.09 |
| | | | | | 12/1/2008 | 12.63 | 698.64 |
| | | | | | 3/12/2009 | 12.20 | 699.07 |
| | | | | | 9/14/2009 | 12.31 | 698.96 |
| | | | | | 11/2/2009 | 12.15 | 699.12 |
| MW-159 | | | | | 2/28/2000 | 11.19 | 698.81[3] |
| | 710.00 | 710.40 | NA | NA | 11/7/2000 | 11.47 | 698.53 |
| | | | | | 6/21/2001 | 11.43 | 698.57 |
| | | | | | 7/24/2001 | 11.36 | 698.64 |
| | | | | | 1/30/2002 | 11.22 | 698.78 |
| | | | | | 7/19/2002 | 12.13 | 697.87 |
| | | | | | 3/10/2004 | 12.15 | 697.85 |
| | | | | | 6/2/2004 | 11.94 | 698.06 |
| | | | | | 9/21/2005 | 12.20 | 697.80 |
| | | | | | 1/30/2006 | 11.90 | 698.10 |
| | | | | | 3/15/2006 | 11.35 | 698.65 |
| | | | | | 6/12/2006 | 12.40 | 697.60 |
| | | | | | 10/13/2006 | 14.69 | 695.31 |
| | | | | | 12/20/2006 | 17.32 | 692.68 |
| | | | | | 3/19/2007 | 11.13 | 698.87 |
| | | | | | 7/2/2007 | 12.67 | 697.33 |
| | | | | | 9/6/2007 | 12.53 | 697.47 |
| | | | | | 11/27/2007 | 12.50 | 697.50 |
| | | | | | 3/19/2008 | 11.88 | 698.12 |
| | | | | | 5/28/2008 | 12.28 | 697.72 |
| | | | | | 9/22/2008 | 13.00 | 697.00 |
| | | | | | 12/1/2008 | 12.83 | 697.17 |
| | | | | | 3/11/2009 | 12.32 | 697.68 |
| | | | | | 6/16/2009 | 11.89 | 698.11 |
| | | | | | 9/14/2009 | 12.97 | 697.03 |
| | | | | | 11/2/2009 | 12.46 | 697.54 |
| MW-160 | 701.1[2] | 701.35[2] | 3-13 | 698.35-688.35 | 11/7/2000 | 2.17 | 698.93 |
| | | | | | 6/21/2001 | 1.95 | 699.15 |
| | | | | | 7/24/2001 | 2.16 | 698.94 |
| | | | | | 1/30/2002 | 1.78 | 699.32 |
| | | | | | 7/17/2002 | 2.31 | 698.79 |
| | | | | | 12/4/2003 | 2.58 | 698.52 |
| | | | | | 3/10/2004 | 2.55 | 698.55 |
| | | | | | 6/4/2004 | 2.26 | 698.84 |
| | | | | | 9/14/2004 | 2.70 | 698.40 |
| | | | | | 12/20/2004 | 2.60 | 698.50 |
| | | | | | 3/16/2005 | 2.66 | 698.44 |
| | | | | | 6/13/2005 | 2.68 | 698.42 |
| | | | | | 9/23/2005 | 2.62 | 698.48 |
| | | | | | 12/5/2005 | 3.02 | 698.08 |
| | | | | | 1/30/2006 | 1.90 | 699.20 |
| | | | | | 4/5/2006 | 3.10 | 698.00 |
| | | | | | 6/12/2006 | 2.72 | 698.38 |
| | | | | | 10/13/2006 | 2.78 | 698.32 |
| | | | | | 12/20/2006 | 2.50 | 698.60 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-160 (cont'd.) | 701.1[2] | 701.35[2] | 3-13 | 698.35-688.35 | 3/19/2007 | 1.73 | 699.37 |
| | | | | | 7/2/2007 | 0.89 | 700.21 |
| | | | | | 9/6/2007 | 3.07 | 698.03 |
| | | | | | 11/27/2007 | 2.42 | 698.68 |
| | | | | | 3/19/2008 | Under Water | |
| | | | | | 5/28/2008 | 2.65 | 698.45 |
| | | | | | 9/22/2008 | 3.13 | 697.97 |
| | | | | | 12/1/2008 | 2.70 | 698.40 |
| | | | | | 3/11/2009 | 2.83 | 698.27 |
| | | | | | 3/13/2009 | 2.83 | 698.27 |
| | | | | | 11/2/2009 | Full of Mud | |
| MW-161 | 702.99[2] | 703.38[2] | 3-13 | 700.38-690.38 | 11/7/2000 | 4.01 | 698.98 |
| | | | | | 6/21/2001 | 3.69 | 699.30 |
| | | | | | 7/24/2001 | 4.02 | 698.97 |
| | | | | | 1/30/2002 | 3.58 | 699.41 |
| | | | | | 7/18/2002 | 4.17 | 698.82 |
| | | | | | 12/4/2003 | 3.10 | 699.89 |
| | | | | | 3/10/2004 | 1.07 | 701.92 |
| | | | | | 6/4/2004 | 2.83 | 700.16 |
| | | | | | 9/14/2004 | 4.20 | 698.79 |
| | | | | | 12/20/2004 | 4.26 | 698.73 |
| | | | | | 3/16/2005 | 4.06 | 698.93 |
| | | | | | 6/13/2005 | 4.81 | 698.18 |
| | | | | | 9/23/2005 | 4.00 | 698.99 |
| | | | | | 12/5/2005 | 4.71 | 698.28 |
| | | | | | 1/30/2006 | 3.60 | 699.39 |
| | | | | | 4/5/2006 | 4.90 | 698.09 |
| | | | | | 6/12/2006 | 4.32 | 698.67 |
| | | | | | 10/13/2006 | 4.38 | 698.61 |
| | | | | | 12/20/2006 | 4.11 | 698.88 |
| | | | | | 3/19/2007 | 1.07 | 701.92 |
| | | | | | 7/2/2007 | 1.75 | 701.24 |
| | | | | | 9/6/2007 | 4.82 | 698.17 |
| | | | | | 11/27/2007 | 2.02 | 700.97 |
| | | | | | 3/19/2008 | Under Water | |
| | | | | | 5/28/2008 | 4.15 | 698.84 |
| | | | | | 9/22/2008 | 4.50 | 698.49 |
| | | | | | 12/1/2008 | 4.30 | 698.69 |
| | | | | | 3/13/2009 | 4.26 | 698.73 |
| | | | | | 6/19/2009 | 3.77 | 699.22 |
| | | | | | 11/2/2009 | 4.08 | 698.91 |
| MW-163 | 712.36 | 712.90 | 10-20 | 702.90-692.90 | 11/7/2000 | 13.15 | 699.21 |
| | | | | | 6/20/2001 | 12.83 | 699.53 |
| | | | | | 7/24/2001 | 12.95 | 699.41 |
| | | | | | 1/30/2002 | 12.83 | 699.53 |
| | | | | | 7/18/2002 | 11.22 | 701.14 |
| | | | | | 7/16/2004 | 12.03 | 700.33 |
| | | | | | 8/16/2004 | 11.83 | 700.53 |
| | | | | | 10/18/2004 | 12.64 | 699.72 |
| | | | | | 11/19/2004 | 12.12 | 700.24 |
| | | | | | 12/20/2004 | 11.67 | 700.69 |
| | | | | | 1/24/2005 | 9.95 | 702.41 |
| | | | | | 3/16/2005 | 11.25 | 701.11 |
| | | | | | 6/13/2005 | 10.98 | 701.38 |
| | | | | | 9/21/2005 | 11.80 | 700.56 |
| | | | | | 12/5/2005 | 11.54 | 700.82 |
| | | | | | 1/30/2006 | 11.65 | 700.71 |
| | | | | | 3/13/2006 | 10.75 | 701.61 |
| | | | | | 6/12/2006 | 11.33 | 701.03 |
| | | | | | 10/13/2006 | 12.18 | 700.18 |
| | | | | | 11/21/2006 | 11.19 | 701.17 |
| | | | | | 12/20/2006 | 11.54 | 700.82 |
| | | | | | 1/19/2007 | 10.11 | 702.25 |
| | | | | | 3/22/2007 | 10.35 | 702.01 |
| | | | | | 7/2/2007 | 11.50 | 700.86 |
| | | | | | 9/6/2007 | 12.13 | 700.23 |
| | | | | | 11/27/2007 | 12.65 | 699.71 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-163 (cont'd.) | 712.36 | 712.90 | 10-20 | 702.90-692.90 | 3/19/2008 | 11.00 | 701.36 |
| | | | | | 5/28/2008 | 10.95 | 701.41 |
| | | | | | 9/22/2008 | 11.50 | 700.86 |
| | | | | | 12/1/2008 | 12.24 | 700.12 |
| | | | | | 3/11/2009 | 11.72 | 700.64 |
| | | | | | 6/16/2009 | 10.23 | 702.13 |
| | | | | | 9/14/2009 | 12.01 | 700.35 |
| | | | | | 11/2/2009 | 11.21 | 701.15 |
| MW-164 | 718.56 | 719.35 | 16-26 | 703.35-693.35 | 11/7/2000 | 19.87 | 695.69 |
| | | | | | 6/21/2001 | 19.67 | 698.89 |
| | | | | | 7/24/2001 | 19.47 | 696.09 |
| | | | | | 1/30/2002 | 19.45 | 699.11 |
| | | | | | 7/19/2002 | 17.97 | 700.59 |
| | | | | | 12/5/2003 | 18.75 | 699.81 |
| | | | | | 3/3/2004 | 18.56 | 700.00 |
| | | | | | 3/10/2004 | 18.60 | 699.96 |
| | | | | | 6/2/2004 | 19.52 | 699.04 |
| | | | | | 9/14/2004 | 19.42 | 699.14 |
| | | | | | 12/20/2004 | 19.28 | 699.28 |
| | | | | | 3/16/2005 | 18.29 | 700.27 |
| | | | | | 6/13/2005 | 18.78 | 699.78 |
| | | | | | 9/21/2005 | 19.60 | 698.96 |
| | | | | | 12/5/2005 | 18.82 | 699.74 |
| | | | | | 1/30/2006 | 19.50 | 699.06 |
| | | | | | 3/13/2006 | 18.45 | 700.11 |
| | | | | | 6/12/2006 | 19.50 | 699.06 |
| | | | | | 10/13/2006 | 19.39 | 699.17 |
| | | | | | 12/20/2006 | 18.80 | 699.76 |
| | | | | | 3/19/2007 | 17.54 | 701.02 |
| | | | | | 7/2/2007 | 18.84 | 699.72 |
| | | | | | 9/6/2007 | 19.53 | 699.03 |
| | | | | | 11/27/2007 | 20.02 | 698.54 |
| | | | | | 3/19/2008 | 18.75 | 699.81 |
| | | | | | 5/28/2008 | 18.15 | 700.41 |
| | | | | | 9/22/2008 | 19.06 | 699.50 |
| | | | | | 12/1/2008 | 19.61 | 698.95 |
| | | | | | 3/11/2009 | 19.24 | 699.32 |
| | | | | | 6/16/2009 | 17.43 | 701.13 |
| | | | | | 9/14/2009 | 19.16 | 699.40 |
| | | | | | 11/2/2009 | 19.21 | 699.35 |
| MW-165S | 712.54 | 712.88 | 10-20 | 702.88-692.88 | 6/21/2001 | 13.80 | 698.74 |
| | | | | | 7/24/2001 | 13.71 | 698.83 |
| | | | | | 1/30/2002 | 13.52 | 699.02 |
| | | | | | 7/18/2002 | 13.82 | 698.72 |
| | | | | | 12/5/2003 | 13.56 | 698.98 |
| | | | | | 3/10/2004 | 13.93 | 698.61 |
| | | | | | 6/2/2004 | 13.69 | 698.85 |
| | | | | | 9/14/2004 | 14.49 | 698.05 |
| | | | | | 12/20/2004 | 14.20 | 698.34 |
| | | | | | 3/16/2005 | 13.97 | 698.57 |
| | | | | | 6/13/2005 | 13.29 | 699.25 |
| | | | | | 9/21/2005 | 13.90 | 698.64 |
| | | | | | 12/5/2005 | 14.35 | 698.19 |
| | | | | | 1/30/2006 | 13.60 | 698.94 |
| | | | | | 3/13/2006 | 13.00 | 699.54 |
| | | | | | 6/12/2006 | 13.95 | 698.59 |
| | | | | | 10/13/2006 | 18.35 | 694.19 |
| | | | | | 12/20/2006 | 13.94 | 698.60 |
| | | | | | 3/19/2007 | 12.82 | 699.72 |
| | | | | | 7/2/2007 | 14.43 | 698.11 |
| | | | | | 9/6/2007 | 14.07 | 698.47 |
| | | | | | 11/27/2007 | 15.13 | 697.41 |
| | | | | | 3/19/2008 | 13.55 | 698.99 |
| | | | | | 5/28/2008 | 13.93 | 698.61 |
| | | | | | 9/22/2008 | 14.63 | 697.91 |
| | | | | | 12/1/2008 | 14.45 | 698.09 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-165S (cont'd.) | 712.54 | 712.88 | 10-20 | 702.88-692.88 | 3/11/2009 | 13.99 | 698.55 |
| | | | | | 6/16/2009 | 13.56 | 698.98 |
| | | | | | 9/14/2009 | 14.59 | 697.95 |
| | | | | | 11/2/2009 | 14.09 | 698.45 |
| MW-166S | 712.99 | 713.38 | 10-20 | 703.38-693.38 | 7/24/2001 | 14.32 | 698.67 |
| | | | | | 1/30/2002 | 14.32 | 698.67 |
| | | | | | 7/18/2002 | 14.41 | 698.58 |
| | | | | | 12/19/2003 | 14.69 | 698.30 |
| | | | | | 3/10/2004 | 14.61 | 698.38 |
| | | | | | 6/2/2004 | 14.28 | 698.71 |
| | | | | | 9/14/2004 | 15.24 | 697.75 |
| | | | | | 12/20/2004 | 14.92 | 698.07 |
| | | | | | 3/16/2005 | 14.56 | 698.43 |
| | | | | | 6/13/2005 | 13.98 | 699.01 |
| | | | | | 9/21/2005 | 14.75 | 698.24 |
| | | | | | 12/5/2005 | 15.00 | 697.99 |
| | | | | | 1/30/2006 | 14.30 | 698.69 |
| | | | | | 3/13/2006 | 13.60 | 699.39 |
| | | | | | 6/12/2006 | 14.55 | 698.44 |
| | | | | | 10/13/2006 | 14.89 | 698.10 |
| | | | | | 12/20/2006 | 14.54 | 698.45 |
| | | | | | 3/19/2007 | 13.39 | 699.60 |
| | | | | | 7/2/2007 | 15.14 | 697.85 |
| | | | | | 9/6/2007 | 15.14 | 697.85 |
| | | | | | 11/27/2007 | 14.25 | 698.74 |
| | | | | | 3/19/2008 | 14.28 | 698.71 |
| | | | | | 5/28/2008 | 14.50 | 698.49 |
| | | | | | 9/22/2008 | 15.31 | 697.68 |
| | | | | | 12/1/2008 | 15.52 | 697.47 |
| | | | | | 3/11/2009 | 14.78 | 698.21 |
| | | | | | 6/16/2009 | 13.96 | 699.03 |
| | | | | | 9/14/2009 | 15.40 | 697.59 |
| | | | | | 11/2/2009 | 14.88 | 698.11 |
| MW-167S | 716.25 | 716.55 | 12-22 | 704.55-694.55 | 6/21/2001 | 17.99 | 698.26 |
| | | | | | 7/24/2001 | 17.81 | 698.44 |
| | | | | | 1/30/2002 | 17.90 | 698.35 |
| | | | | | 7/17/2002 | 17.74 | 698.51 |
| | | | | | 12/4/2003 | 18.12 | 698.13 |
| | | | | | 3/10/2004 | 18.00 | 698.25 |
| | | | | | 6/2/2004 | 17.71 | 698.54 |
| | | | | | 9/14/2004 | 18.75 | 697.50 |
| | | | | | 12/20/2004 | 18.39 | 697.86 |
| | | | | | 3/16/2005 | 17.95 | 698.30 |
| | | | | | 6/13/2005 | 18.20 | 698.05 |
| | | | | | 9/21/2005 | 18.50 | 697.75 |
| | | | | | 12/5/2005 | 17.20 | 699.05 |
| | | | | | 1/30/2006 | 18.00 | 698.25 |
| | | | | | 3/13/2006 | 17.10 | 699.15 |
| | | | | | 6/12/2006 | 17.90 | 698.35 |
| | | | | | 10/13/2006 | 18.83 | 697.42 |
| | | | | | 12/20/2006 | 17.90 | 698.35 |
| | | | | | 3/19/2007 | 16.98 | 699.27 |
| | | | | | 7/2/2007 | 18.64 | 697.61 |
| | | | | | 9/6/2007 | 18.92 | 697.33 |
| | | | | | 11/27/2007 | 18.81 | 697.44 |
| | | | | | 3/19/2008 | 17.73 | 698.52 |
| | | | | | 5/28/2008 | 17.82 | 698.43 |
| | | | | | 9/22/2008 | 18.82 | 697.43 |
| | | | | | 12/1/2008 | 19.00 | 697.25 |
| | | | | | 3/11/2009 | 18.33 | 697.92 |
| | | | | | 6/16/2009 | 17.13 | 699.12 |
| | | | | | 9/14/2009 | 18.87 | 697.38 |
| | | | | | 11/2/2009 | 18.41 | 697.84 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-168S | 715.71 | 716.12 | 12-22 | 704.12-694.12 | 6/21/2001 | 17.66 | 698.05 |
| | | | | | 7/24/2001 | 17.60 | 698.11 |
| | 714.79 | 715.06 | 12-22 | 703.06-693.06 | 1/30/2002 | 17.06 | 697.73 |
| | | | | | 7/18/2002 | 17.39 | 697.4 |
| | | | | | 3/10/2004 | 17.43 | 697.36 |
| | | | | | 6/2/2004 | 17.33 | 697.46 |
| | | | | | 9/14/2004 | 18.18 | 696.61 |
| | | | | | 3/16/2005 | 17.41 | 697.38 |
| | | | | | 6/13/2005 | 17.12 | 697.67 |
| | | | | | 9/21/2005 | 17.7 | 697.09 |
| | | | | | 12/5/2005 | 18.02 | 696.77 |
| | | | | | 1/30/2006 | 17.39 | 697.40 |
| | | | | | 3/13/2006 | 16.21 | 698.58 |
| | | | | | 6/12/2006 | 16.34 | 698.45 |
| | | | | | 10/13/2006 | 18.12 | 696.67 |
| | | | | | 12/20/2006 | 17.54 | 697.25 |
| | | | | | 3/19/2007 | 16.52 | 698.27 |
| | | | | | 7/2/2007 | 18.08 | 696.71 |
| | | | | | 9/6/2007 | 17.51 | 697.28 |
| | | | | | 11/27/2007 | 17.8 | 696.99 |
| | | | | | 3/19/2008 | 16.18 | 698.61 |
| | | | | | 5/28/2008 | 17.44 | 697.35 |
| | | | | | 9/22/2008 | 18.30 | 696.49 |
| | | | | | 12/1/2008 | 18.20 | 696.59 |
| | | | | | 3/11/2009 | 17.68 | 697.11 |
| | | | | | 6/16/2009 | 16.82 | 697.97 |
| | | | | | 9/14/2009 | 18.31 | 696.48 |
| | | | | | 11/2/2009 | 17.73 | 697.06 |
| MW-169S | 715.95 | 716.25 | 15-25 | 701.25-691.25 | 1/30/2002 | 19.75 | 696.20 |
| | | | | | 7/17/2002 | 18.91 | 697.04 |
| | | | | | 12/4/2003 | 19.72 | 696.23 |
| | | | | | 3/10/2004 | 19.47 | 696.48 |
| | | | | | 6/2/2004 | 19.56 | 696.39 |
| | | | | | 9/14/2004 | 20.50 | 695.45 |
| | | | | | 12/20/2004 | 20.05 | 695.90 |
| | | | | | 3/16/2005 | 18.91 | 697.04 |
| | | | | | 6/13/2005 | 20.01 | 695.94 |
| | | | | | 9/21/2005 | 20.62 | 695.33 |
| | | | | | 12/5/2005 | 20.50 | 695.45 |
| | | | | | 1/30/2006 | 19.80 | 696.15 |
| | | | | | 3/13/2006 | 19.35 | 696.60 |
| | | | | | 6/12/2006 | 19.30 | 696.65 |
| | | | | | 10/13/2006 | 20.49 | 695.46 |
| | | | | | 12/20/2006 | 19.32 | 696.63 |
| | | | | | 3/19/2007 | 18.62 | 697.33 |
| | | | | | 7/2/2007 | 20.09 | 695.86 |
| | | | | | 9/6/2007 | 20.72 | 695.23 |
| | | | | | 11/27/2007 | 20.31 | 695.64 |
| | | | | | 3/19/2008 | 19.00 | 696.95 |
| | | | | | 5/28/2008 | 19.15 | 696.80 |
| | | | | | 9/22/2008 | 20.48 | 695.47 |
| | | | | | 12/1/2008 | 20.05 | 695.90 |
| | | | | | 3/11/2009 | 19.86 | 696.09 |
| | | | | | 6/16/2009 | 18.12 | 697.83 |
| | | | | | 9/14/2009 | 20.37 | 695.58 |
| | | | | | 11/2/2009 | 20.39 | 695.56 |
| MW-170S | 717.40 | 717.77 | 17-27 | 700.77-690.77 | 1/30/2002 | 20.45 | 696.95 |
| | | | | | 7/17/2002 | 19.35 | 698.05 |
| | | | | | 3/10/2004 | 20.19 | 697.21 |
| | | | | | 6/2/2004 | 20.76 | 696.64 |
| | | | | | 9/14/2004 | 21.23 | 696.17 |
| | | | | | 12/20/2004 | 20.85 | 696.55 |
| | | | | | 6/15/2005 | 20.68 | 696.72 |
| | | | | | 9/21/2005 | 21.47 | 695.93 |
| | | | | | 12/5/2005 | 22.31 | 695.09 |
| | | | | | 1/30/2006 | 20.60 | 696.80 |
| | | | | | 3/13/2006 | 20.10 | 697.30 |
| | | | | | 6/12/2006 | 19.90 | 697.50 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-170S (cont'd.) | 717.40 | 717.77 | 17-27 | 700.77-690.77 | 10/13/2006 | 21.20 | 696.20 |
| | | | | | 12/20/2006 | 19.98 | 697.42 |
| | | | | | 3/19/2007 | 18.83 | 698.57 |
| | | | | | 7/2/2007 | 20.97 | 696.43 |
| | | | | | 9/6/2007 | 21.55 | 695.85 |
| | | | | | 11/27/2007 | 15.27 | 702.13 |
| | | | | | 3/19/2008 | 19.60 | 697.80 |
| | | | | | 5/28/2008 | 19.70 | 697.70 |
| | | | | | 9/22/2008 | 21.20 | 696.20 |
| | | | | | 12/1/2008 | 21.78 | 695.62 |
| | | | | | 3/11/2009 | 20.57 | 696.83 |
| | | | | | 6/16/2009 | 18.62 | 698.78 |
| | | | | | 9/14/2009 | 21.11 | 696.29 |
| | | | | | 11/2/2009 | 21.13 | 696.27 |
| MW-171S | 711.83 | 712.19 | 12-22 | 700.19-690.19 | 1/30/2002 | 15.29 | 696.54 |
| | | | | | 7/17/2002 | 15.02 | 696.81 |
| | | | | | 3/10/2004 | 15.14 | 696.69 |
| | | | | | 12/20/2004 | 15.55 | 696.28 |
| | | | | | 9/21/2005 | 15.68 | 696.15 |
| | | | | | 12/5/2005 | 15.42 | 696.41 |
| | | | | | 10/13/2006 | 16.33 | 695.50 |
| | | | | | 3/19/2007 | 14.29 | 697.54 |
| | | | | | 11/27/2007 | 15.27 | 696.56 |
| | | | | | 9/22/2008 | 16.05 | 695.78 |
| | | | | | 12/1/2008 | 16.10 | 695.73 |
| | | | | | 3/11/2009 | 15.56 | 696.27 |
| | | | | | 6/16/2009 | 14.58 | 697.25 |
| | | | | | 9/14/2009 | 16.06 | 695.77 |
| | | | | | 11/2/2009 | 15.61 | 696.22 |
| MW-172S | 716.23 | 716.58 | 15-25 | 701.58-691.58 | 9/4/2002 | 20.45 | 695.78 |
| | | | | | 3/10/2004 | 19.61 | 696.62 |
| | | | | | 6/2/2004 | 19.78 | 696.45 |
| | | | | | 9/14/2004 | 20.93 | 695.30 |
| | | | | | 12/20/2004 | 20.24 | 695.99 |
| | | | | | 3/16/2005 | 18.95 | 697.28 |
| | | | | | 6/13/2005 | Abandoned | |
| MW-173 | 713.23 | 713.61 | 8-18 | 705.61-695.61 | 3/3/2004 | 12.72 | 700.51 |
| | | | | | 7/16/2004 | 12.99 | 700.24 |
| | | | | | 8/16/2004 | 13.06 | 700.17 |
| | | | | | 10/18/2004 | 13.56 | 699.67 |
| | | | | | 11/19/2004 | 13.38 | 699.85 |
| | | | | | 12/20/2004 | 13.45 | 699.78 |
| | | | | | 1/24/2005 | 10.55 | 702.68 |
| | | | | | 3/16/2005 | 12.21 | 701.02 |
| | | | | | 6/13/2005 | 12.85 | 700.38 |
| | | | | | 9/21/2005 | 13.50 | 699.73 |
| | | | | | 12/5/2005 | 12.81 | 700.42 |
| | | | | | 1/30/2006 | 13.30 | 699.93 |
| | | | | | 3/13/2006 | 12.30 | 700.93 |
| | | | | | 6/12/2006 | 12.60 | 700.63 |
| | | | | | 10/13/2006 | 13.59 | 699.64 |
| | | | | | 11/21/2006 | 12.96 | 700.27 |
| | | | | | 12/20/2006 | 13.03 | 700.20 |
| | | | | | 1/19/2007 | 11.28 | 701.95 |
| | | | | | 3/19/2007 | 11.68 | 701.55 |
| | | | | | 7/2/2007 | 13.09 | 700.14 |
| | | | | | 9/6/2007 | 13.74 | 699.49 |
| | | | | | 11/27/2007 | 14.02 | 699.21 |
| | | | | | 3/19/2008 | 12.87 | 700.36 |
| | | | | | 5/28/2008 | 12.36 | 700.87 |
| | | | | | 9/22/2008 | 13.35 | 699.88 |
| | | | | | 12/1/2008 | 13.88 | 699.35 |
| | | | | | 3/11/2009 | 13.50 | 699.73 |
| | | | | | 6/16/2009 | 11.73 | 701.50 |
| | | | | | 9/14/2009 | 13.57 | 699.66 |
| | | | | | 11/2/2009 | 13.38 | 699.85 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| IW-1 | 712.54 | 712.95 | 10.5-15.5 | 702.45-697.45 | 3/3/2004 | 11.78 | 700.76 |
| | | | | | 7/16/2004 | 12.11 | 700.43 |
| | | | | | 8/16/2004 | 12.05 | 700.49 |
| | | | | | 10/18/2004 | 12.37 | 700.17 |
| | | | | | 11/19/2004 | 12.29 | 700.25 |
| | | | | | 12/20/2004 | 12.02 | 700.52 |
| | | | | | 1/24/2005 | 10.11 | 702.43 |
| | | | | | 3/16/2005 | 11.31 | 701.23 |
| | | | | | 6/13/2005 | 11.12 | 701.42 |
| | | | | | 9/21/2005 | 11.90 | 700.64 |
| | | | | | 12/5/2005 | 10.12 | 702.42 |
| | | | | | 1/30/2006 | 11.80 | 700.74 |
| | | | | | 3/13/2006 | 10.80 | 701.74 |
| | | | | | 6/12/2006 | 11.45 | 701.09 |
| | | | | | 10/13/2006 | 12.19 | 700.35 |
| | | | | | 11/21/2006 | 11.35 | 701.19 |
| | | | | | 12/20/2006 | 11.70 | 700.84 |
| | | | | | 1/19/2007 | 10.18 | 702.36 |
| | | | | | 3/22/2007 | 10.45 | 702.09 |
| | | | | | 7/2/2007 | 11.82 | 700.72 |
| | | | | | 9/6/2007 | 12.29 | 700.25 |
| | | | | | 11/27/2007 | 12.53 | 700.01 |
| | | | | | 3/19/2008 | 11.20 | 701.34 |
| | | | | | 5/28/2008 | 11.12 | 701.42 |
| | | | | | 9/22/2008 | 11.70 | 700.84 |
| | | | | | 12/1/2008 | 12.41 | 700.13 |
| | | | | | 3/11/2009 | 11.93 | 700.61 |
| | | | | | 6/16/2009 | 10.44 | 702.10 |
| | | | | | 9/14/2009 | 12.17 | 700.37 |
| | | | | | 11/2/2009 | 11.43 | 701.11 |
| IW-2 | 712.83 | 713.27 | 12-17 | 701.27-696.27 | 3/3/2004 | 12.23 | 700.60 |
| | | | | | 7/16/2004 | 12.70 | 700.13 |
| | | | | | 8/16/2004 | 13.10 | 699.73 |
| | | | | | 10/18/2004 | 13.25 | 699.58 |
| | | | | | 11/19/2004 | 13.05 | 699.78 |
| | | | | | 12/20/2004 | 13.20 | 699.63 |
| | | | | | 1/24/2005 | 10.03 | 702.80 |
| | | | | | 3/16/2005 | 12.19 | 700.64 |
| | | | | | 6/13/2005 | 11.98 | 700.85 |
| | | | | | 9/21/2005 | 13.06 | 699.77 |
| | | | | | 12/5/2005 | 11.72 | 701.11 |
| | | | | | 1/30/2006 | 12.90 | 699.93 |
| | | | | | 3/13/2006 | 11.85 | 700.98 |
| | | | | | 6/12/2006 | 12.20 | 700.63 |
| | | | | | 10/13/2006 | 13.18 | 699.65 |
| | | | | | 11/21/2006 | 12.56 | 700.27 |
| | | | | | 12/20/2006 | 12.62 | 700.21 |
| | | | | | 1/19/2007 | 10.98 | 701.85 |
| | | | | | 3/19/2007 | 11.29 | 701.54 |
| | | | | | 7/2/2007 | 12.67 | 700.16 |
| | | | | | 9/6/2007 | 13.34 | 699.49 |
| | | | | | 11/27/2007 | 13.59 | 699.24 |
| | | | | | 3/19/2008 | 13.45 | 699.38 |
| | | | | | 5/28/2008 | 12.06 | 700.77 |
| | | | | | 9/22/2008 | 12.95 | 699.88 |
| | | | | | 12/1/2008 | 13.47 | 699.36 |
| | | | | | 3/11/2009 | 13.02 | 699.81 |
| | | | | | 6/16/2009 | 11.31 | 701.52 |
| | | | | | 9/14/2009 | 13.12 | 699.71 |
| | | | | | 11/2/2009 | 12.90 | 699.93 |

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**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| **Deep Wells** | | | | | | | |
| MW-165D | 712.34 | 712.78 | 42-47 | 670.78-665.78 | 1/30/2002 | 13.33 | 699.01 |
| | | | | | 7/18/2002 | 13.66 | 698.68 |
| | | | | | 12/5/2003 | 13.51 | 698.83 |
| | | | | | 3/10/2004 | 13.71 | 698.63 |
| | | | | | 6/2/2004 | 13.49 | 698.85 |
| | | | | | 9/14/2004 | 14.29 | 698.05 |
| | | | | | 12/20/2004 | 14.00 | 698.34 |
| | | | | | 3/16/2005 | 13.78 | 698.56 |
| | | | | | 6/13/2005 | 13.10 | 699.24 |
| | | | | | 9/21/2005 | 13.75 | 698.59 |
| | | | | | 12/5/2005 | 14.20 | 698.14 |
| | | | | | 1/30/2006 | 13.45 | 698.89 |
| | | | | | 3/13/2006 | 12.80 | 699.54 |
| | | | | | 6/12/2006 | 13.73 | 698.61 |
| | | | | | 9/26/2006 | 14.04 | 698.30 |
| | | | | | 12/20/2006 | 13.72 | 698.62 |
| | | | | | 3/19/2007 | 12.62 | 699.72 |
| | | | | | 7/2/2007 | 14.25 | 698.09 |
| | | | | | 9/6/2007 | 13.92 | 698.42 |
| | | | | | 11/27/2007 | 14.90 | 697.44 |
| | | | | | 3/19/2008 | 13.35 | 698.99 |
| | | | | | 5/28/2008 | 13.79 | 698.55 |
| | | | | | 9/22/2008 | 14.35 | 697.99 |
| | | | | | 12/1/2008 | 14.30 | 698.04 |
| | | | | | 3/11/2009 | 13.79 | 698.55 |
| | | | | | 6/16/2009 | 13.32 | 699.02 |
| | | | | | 9/14/2009 | 14.40 | 697.94 |
| | | | | | 11/2/2009 | 13.88 | 698.46 |
| MW-166D | 712.76 | 713.04 | 46-51 | 666.04-661.04 | 1/30/2002 | 14.10 | 698.66 |
| | | | | | 7/18/2002 | 14.08 | 698.68 |
| | | | | | 1/6/2004 | 13.03 | 699.73 |
| | | | | | 3/10/2004 | 14.35 | 698.41 |
| | | | | | 6/2/2004 | 14.09 | 698.67 |
| | | | | | 9/14/2004 | 15.02 | 697.74 |
| | | | | | 12/20/2004 | 14.73 | 698.03 |
| | | | | | 3/16/2005 | 14.36 | 698.40 |
| | | | | | 6/13/2005 | 14.22 | 698.54 |
| | | | | | 9/21/2005 | 14.55 | 698.21 |
| | | | | | 12/5/2005 | 15.15 | 697.61 |
| | | | | | 1/30/2006 | 14.36 | 698.40 |
| | | | | | 3/13/2006 | 13.35 | 699.41 |
| | | | | | 6/12/2006 | 14.32 | 698.44 |
| | | | | | 9/26/2006 | 14.74 | 698.02 |
| | | | | | 12/20/2006 | 14.34 | 698.42 |
| | | | | | 3/19/2007 | 13.60 | 699.16 |
| | | | | | 7/4/2007 | 14.90 | 697.86 |
| | | | | | 9/6/2007 | 14.92 | 697.84 |
| | | | | | 11/27/2007 | 14.05 | 698.71 |
| | | | | | 3/19/2008 | 14.07 | 698.69 |
| | | | | | 5/28/2008 | 14.30 | 698.46 |
| | | | | | 9/22/2008 | 15.09 | 697.67 |
| | | | | | 12/1/2008 | 15.20 | 697.56 |
| | | | | | 3/11/2009 | 14.56 | 698.20 |
| | | | | | 6/16/2009 | 13.75 | 699.01 |
| | | | | | 9/14/2009 | 15.18 | 697.58 |
| | | | | | 11/2/2009 | 14.66 | 698.10 |
| MW-167D | 716.25 | 716.60 | 28-33 | 688.60-683.60 | 1/30/2002 | 17.90 | 698.35 |
| | | | | | 7/17/2002 | 17.73 | 698.52 |
| | | | | | 12/4/2003 | 18.18 | 698.07 |
| | | | | | 3/10/2004 | 18.04 | 698.21 |
| | | | | | 6/2/2004 | 17.72 | 698.53 |
| | | | | | 9/14/2004 | 18.79 | 697.46 |
| | | | | | 12/20/2004 | 18.47 | 697.78 |

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**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-167D (cont'd.) | 716.25 | 716.60 | 28-33 | 688.60-683.60 | 3/16/2005 | 17.85 | 698.40 |
| | | | | | 6/13/2005 | 18.24 | 698.01 |
| | | | | | 9/21/2005 | 18.53 | 697.72 |
| | | | | | 12/5/2005 | 18.32 | 697.93 |
| | | | | | 1/30/2006 | 18.00 | 698.25 |
| | | | | | 3/13/2006 | 17.20 | 699.05 |
| | | | | | 6/12/2006 | 17.92 | 698.33 |
| | | | | | 9/26/2006 | 18.51 | 697.74 |
| | | | | | 12/20/2006 | 17.97 | 698.28 |
| | | | | | 3/19/2007 | 17.10 | 699.15 |
| | | | | | 7/2/2007 | 18.73 | 697.52 |
| | | | | | 9/6/2007 | 18.98 | 697.27 |
| | | | | | 11/27/2007 | 18.89 | 697.36 |
| | | | | | 3/19/2008 | 17.85 | 698.40 |
| | | | | | 5/28/2008 | 17.96 | 698.29 |
| | | | | | 9/22/2008 | 18.95 | 697.30 |
| | | | | | 12/1/2008 | 19.20 | 697.05 |
| | | | | | 3/11/2009 | 18.51 | 697.74 |
| | | | | | 6/16/2009 | 17.28 | 698.97 |
| | | | | | 9/14/2009 | 19.05 | 697.20 |
| | | | | | 11/2/2009 | 18.64 | 697.61 |
| MW-168D | 714.71 | 715.09 | 26-31 | 689.09-684.09 | 1/30/2002 | 17.00 | 697.71 |
| | | | | | 7/18/2002 | 17.27 | 697.44 |
| | | | | | 6/2/2004 | 17.28 | 697.43 |
| | | | | | 9/14/2004 | 18.15 | 696.56 |
| | | | | | 12/20/2004 | 17.81 | 696.90 |
| | | | | | 3/16/2005 | 16.38 | 698.33 |
| | | | | | 6/13/2005 | 26.21 | 688.50 |
| | | | | | 9/21/2005 | 17.70 | 697.01 |
| | | | | | 12/5/2005 | 20.22 | 694.49 |
| | | | | | 1/30/2006 | 17.50 | 697.21 |
| | | | | | 3/13/2006 | 16.35 | 698.36 |
| | | | | | 6/12/2006 | 16.33 | 698.38 |
| | | | | | 9/26/2006 | 17.93 | 696.78 |
| | | | | | 12/20/2006 | 17.39 | 697.32 |
| | | | | | 3/19/2007 | 16.39 | 698.32 |
| | | | | | 7/2/2007 | 17.99 | 696.72 |
| | | | | | 9/6/2007 | 17.83 | 696.88 |
| | | | | | 11/27/2007 | 17.82 | 696.89 |
| | | | | | 3/19/2008 | 17.12 | 697.59 |
| | | | | | 5/28/2008 | 17.38 | 697.33 |
| | | | | | 9/22/2008 | 18.25 | 696.46 |
| | | | | | 12/1/2008 | 18.30 | 696.41 |
| | | | | | 3/11/2009 | 17.59 | 697.12 |
| | | | | | 6/16/2009 | 16.92 | 697.79 |
| | | | | | 9/14/2009 | 18.22 | 696.49 |
| | | | | | 11/2/2009 | 17.73 | 696.98 |
| MW-169D | 715.23 | 716.23 | 32-37 | 684.23-679.23 | 1/30/2002 | 19.65 | 695.58 |
| | | | | | 7/17/2002 | 18.82 | 696.41 |
| | | | | | 12/4/2003 | 19.66 | 695.57 |
| | | | | | 3/10/2004 | 19.41 | 695.82 |
| | | | | | 6/2/2004 | 19.52 | 695.71 |
| | | | | | 9/14/2004 | 20.45 | 694.78 |
| | | | | | 12/20/2004 | 20.10 | 695.13 |
| | | | | | 3/16/2005 | 18.93 | 696.30 |
| | | | | | 6/13/2005 | 20.00 | 695.23 |
| | | | | | 9/21/2005 | 20.63 | 694.60 |
| | | | | | 12/5/2005 | 20.62 | 694.61 |
| | | | | | 1/30/2006 | 19.83 | 695.40 |
| | | | | | 3/13/2006 | 19.33 | 695.90 |
| | | | | | 6/12/2006 | 19.24 | 695.99 |
| | | | | | 9/26/2006 | 20.39 | 694.84 |
| | | | | | 12/20/2006 | 19.30 | 695.93 |
| | | | | | 3/19/2007 | 18.26 | 696.97 |
| | | | | | 7/2/2007 | 20.19 | 695.04 |
| | | | | | 9/6/2007 | 20.80 | 694.43 |
| | | | | | 11/27/2007 | 20.38 | 694.85 |

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**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
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**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-169D (cont'd.) | 715.23 | 716.23 | 32-37 | 684.23-679.23 | 3/19/2008 | 18.93 | 696.30 |
| | | | | | 5/28/2008 | 19.10 | 696.13 |
| | | | | | 9/22/2008 | 20.48 | 694.75 |
| | | | | | 12/1/2008 | 21.05 | 694.18 |
| | | | | | 3/11/2009 | 19.91 | 695.32 |
| | | | | | 6/16/2009 | 18.15 | 697.08 |
| | | | | | 9/14/2009 | 20.41 | 694.82 |
| | | | | | 11/2/2009 | 20.45 | 694.78 |
| MW-170D | 717.34 | 717.76 | 34-39 | 683.76-678.76 | 1/30/2002 | 20.40 | 696.94 |
| | | | | | 7/17/2002 | 19.29 | 698.05 |
| | | | | | 3/10/2004 | 20.13 | 697.21 |
| | | | | | 6/2/2004 | 20.21 | 697.13 |
| | | | | | 9/14/2004 | 21.17 | 696.17 |
| | | | | | 12/20/2004 | 20.78 | 696.56 |
| | | | | | 6/15/2005 | 20.63 | 696.71 |
| | | | | | 9/21/2005 | 21.40 | 695.94 |
| | | | | | 12/5/2005 | 21.21 | 696.13 |
| | | | | | 1/30/2006 | 20.90 | 696.44 |
| | | | | | 3/13/2006 | 20.00 | 697.34 |
| | | | | | 6/12/2006 | 19.80 | 697.54 |
| | | | | | 9/26/2006 | 21.02 | 696.32 |
| | | | | | 12/20/2006 | 19.92 | 697.42 |
| | | | | | 3/19/2007 | 18.79 | 698.55 |
| | | | | | 7/2/2007 | 20.70 | 696.64 |
| | | | | | 9/6/2007 | 21.51 | 695.83 |
| | | | | | 11/27/2007 | 21.26 | 696.08 |
| | | | | | 3/19/2008 | 19.52 | 697.82 |
| | | | | | 5/28/2008 | 19.66 | 697.68 |
| | | | | | 9/22/2008 | 20.14 | 697.20 |
| | | | | | 12/1/2008 | 21.80 | 695.54 |
| | | | | | 3/11/2009 | 20.49 | 696.85 |
| | | | | | 6/16/2009 | 18.54 | 698.80 |
| | | | | | 9/14/2009 | 21.05 | 696.29 |
| | | | | | 11/2/2009 | 21.11 | 696.23 |
| MW-171D | 711.88 | 712.15 | 44-49 | 668.15-663.15 | 1/30/2002 | 15.73 | 696.15 |
| | | | | | 7/17/2002 | 15.16 | 696.72 |
| | | | | | 3/10/2004 | 15.51 | 696.37 |
| | | | | | 12/20/2004 | 15.98 | 695.90 |
| | | | | | 9/21/2005 | 16.20 | 695.68 |
| | | | | | 12/5/2005 | 16.23 | 695.65 |
| | | | | | 6/12/2006 | 15.48 | 696.40 |
| | | | | | 9/26/2006 | 16.21 | 695.67 |
| | | | | | 3/19/2007 | 14.45 | 697.43 |
| | | | | | 11/27/2007 | 16.50 | 695.38 |
| | | | | | 3/19/2008 | 15.25 | 696.63 |
| | | | | | 5/28/2008 | 15.46 | 696.42 |
| | | | | | 9/22/2008 | 16.41 | 695.47 |
| | | | | | 12/1/2008 | 16.68 | 695.20 |
| | | | | | 3/11/2009 | 15.92 | 695.96 |
| | | | | | 6/16/2009 | 14.73 | 697.15 |
| | | | | | 9/14/2009 | 16.39 | 695.49 |
| | | | | | 11/2/2009 | 16.13 | 695.75 |
| MW-172D | 716.03 | 716.53 | 33-38 | 683.53-678.53 | 9/4/2002 | 20.17 | 695.86 |
| | | | | | 3/10/2004 | 19.43 | 696.60 |
| | | | | | 6/2/2004 | 19.61 | 696.42 |
| | | | | | 9/14/2004 | 20.57 | 695.46 |
| | | | | | 12/20/2004 | 20.14 | 695.89 |
| | | | | | 3/16/2005 | 18.71 | 697.32 |
| | | | | | 6/13/2005 | Abandoned | |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-301 | 712.75 | -- | 45-50 | -- | 2/5/1997 | 11.75 | 701.00 |
| | | | | | 11/22/1999 | 13.77 | 698.98 |
| | | | | | 2/28/2000 | 13.50 | 699.25 |
| | 712.75 | 713.20 | 45-50 | 668.20-663.20 | 11/7/2000 | 13.76 | 698.99 |
| | | | | | 6/20/2001 | 13.57 | 699.18 |
| | | | | | 7/24/2001 | 13.59 | 699.16 |
| | | | | | 1/30/2002 | 13.31 | 699.44 |
| | | | | | 7/18/2002 | 12.78 | 699.97 |
| | | | | | 3/10/2004 | 13.74 | 699.01 |
| | | | | | 6/2/2004 | 13.11 | 699.64 |
| | | | | | 9/14/2004 | 13.79 | 698.96 |
| | | | | | 12/20/2004 | 13.29 | 699.46 |
| | | | | | 3/16/2005 | 11.89 | 700.86 |
| | | | | | 6/13/2005 | 13.51 | 699.24 |
| | | | | | 9/21/2005 | 13.63 | 699.12 |
| | | | | | 12/5/2005 | 13.45 | 699.30 |
| | | | | | 1/30/2006 | 13.10 | 699.65 |
| | | | | | 3/13/2006 | 12.00 | 700.75 |
| | | | | | 6/12/2006 | 13.56 | 699.19 |
| | | | | | 9/26/2006 | 13.50 | 699.25 |
| | | | | | 12/20/2006 | 13.21 | 699.54 |
| | | | | | 3/19/2007 | 11.99 | 700.76 |
| | | | | | 9/6/2007 | 13.83 | 698.92 |
| | | | | | 11/27/2007 | 13.31 | 699.44 |
| | | | | | 3/19/2008 | 13.00 | 699.75 |
| | | | | | 5/28/2008 | 12.09 | 700.66 |
| | | | | | 9/22/2008 | 13.57 | 699.18 |
| | | | | | 12/1/2008 | 13.78 | 698.97 |
| | | | | | 3/11/2009 | 13.46 | 699.29 |
| | | | | | 6/16/2009 | 12.34 | 700.41 |
| | | | | | 9/14/2009 | 13.75 | 699.00 |
| | | | | | 11/2/2009 | 13.38 | 699.37 |
| MW-302 | 711.54 | -- | 45-55 | -- | 2/5/1997 | 11.26 | 700.28 |
| | | | | | 2/26/1997 | 12.33 | 699.21 |
| | | | | | 11/22/1999 | 13.26 | 698.28 |
| | | | | | 2/28/2000 | 12.70 | 698.84 |
| | 711.60 | 709.60 | 45-55 | 664.60-654.60 | 11/7/2000 | 13.00 | 698.60 |
| | | | | | 6/21/2001 | 12.99 | 698.61 |
| | | | | | 7/24/2001 | 12.82 | 698.78 |
| | | | | | 1/30/2002 | 12.61 | 698.99 |
| | | | | | 7/22/2002 | 12.90 | 698.7 |
| | | | | | 3/10/2004 | 12.93 | 698.67 |
| | | | | | 6/2/2004 | 12.68 | 698.92 |
| | | | | | 9/14/2004 | 13.56 | 698.04 |
| | | | | | 12/20/2004 | 12.24 | 699.36 |
| | | | | | 3/16/2005 | 13.08 | 698.52 |
| | | | | | 6/13/2005 | 12.98 | 698.62 |
| | | | | | 9/21/2005 | 12.95 | 698.65 |
| | | | | | 12/5/2005 | 13.02 | 698.58 |
| | | | | | 1/30/2006 | 11.50 | 700.10 |
| | | | | | 3/13/2006 | 12.00 | 699.60 |
| | | | | | 6/12/2006 | 13.00 | 698.60 |
| | | | | | 9/26/2006 | 13.29 | 698.31 |
| | | | | | 12/20/2006 | 12.98 | 698.62 |
| | | | | | 3/19/2007 | 11.85 | 699.75 |
| | | | | | 7/2/2007 | 13.48 | 698.12 |
| | | | | | 9/6/2007 | 13.66 | 697.94 |
| | | | | | 11/27/2007 | 13.31 | 698.29 |
| | | | | | 3/19/2008 | 12.20 | 699.40 |
| | | | | | 5/28/2008 | 12.35 | 699.25 |
| | | | | | 9/22/2008 | 13.60 | 698.00 |
| | | | | | 12/1/2008 | 13.56 | 698.04 |

**Table 1**
**Water Level Data Summary**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Monitoring Well ID | TOC Elevation [1] (feet amsl) | Ground Elevation[1] (feet amsl) | Screen Interval (feet bgs) | Screen Depth (feet amsl) | Date Gauged | DTW (feet) | GW Elevation (feet amsl) |
|---|---|---|---|---|---|---|---|
| MW-302 (cont'd.) | 711.60 | 709.60 | 45-55 | 664.60-654.60 | 3/11/2009 | 13.12 | 698.48 |
| | | | | | 6/16/2009 | 11.89 | 699.71 |
| | | | | | 9/14/2009 | 13.17 | 698.43 |
| | | | | | 11/2/2009 | 12.48 | 699.12 |

[1]For wells surveyed more than once, subsequent survey information is listed with the first gauging event following the survey.
[2]Survey data from 3-6-02 were used to calculate all groundwater and screen elevations.
[3]Survey data from 11-7-00 were used to calculate the groundwater elevation.
amsl - above mean sea level
BGS - below ground surface
DTW - depth to water
GW - groundwater
NA Information is not available
SW - surface water
TOC - top of well casing

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-10-1 | 3/28/1994 | 7-17 | NA | NA | NA | 160* | 160* | NA | NA | 880 | NA | <100 |
| | 10/5/1994 | | NA | NA | NA | ND | ND | NA | NA | 1,600 | NA | NA |
| | 7/14/1995 | | W5070191-13 | <5.0 | <5.0 | 190 | 5.9 | <5.0 | <5.0 | 1,800 | NA | <10 |
| | 2/5/1997 | | W7020074-01 | <5.0 | <5.0 | 120 | <5.0 | <5.0 | <5.0 | 810 | NA | <10 |
| | 11/23/1999 | | 253788 | <5.0 | <5.0 | 180 | 8.3 | <10 | <5.0 | 1,000 | <5.0 | <5.0 |
| | 11/23/1999 | | 253812 | <5.0 | <5.0 | 190 | 9.2 | <10 | <5.0 | 1,100 | <5.0 | <5.0 |
| | 2/29/2000 | | 260586 | <5.0 | <5.0 | 160 | 6.5 | <10 | <5.0 | 960 | <5.0 | <5.0 |
| | 11/8/2000 | | 280650 | <5.0 | <5.0 | 200 | 7.6 | <10 | <5.0 | 1,100 | <5.0 | <2.0 |
| | 7/19/2002 | | 324157 | <5.0 | <5.0 | 99 | <5.0 | <10 | <5.0 | 540 | <5.0 | <2.0 |
| | 7/19/2002 | | 324158 | <5.0 | <5.0 | 94 | <5.0 | <10 | <5.0 | 650 | <5.0 | <2.0 |
| | 5/7/2003 | | 842918 | <1.0 | <1.0 | 60.9 | 2.6 | <5.0 | <1.0 | 305 | <1.0 | <1.0 |
| | 8/22/2003 | | 872595 | <1.0 | <1.0 | 101 | 3.2 | <5.0 | <1.0 | 450 | <1.0 | <1.0 |
| MW-10-1R | 12/03/2003 | 7-17 | 503002107 | <5.0 | <5.0 | 48 | <5.0 | <5.0 | <5.0 | 220 | <5.0 | <2.0 |
| | 12/03/2003 | | 503002115 | <5.0 | <5.0 | 44 | <5.0 | <5.0 | <5.0 | 240 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237240 | <5.0 | <5.0 | 58 | <5.0 | <5.0 | <5.0 | 230 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237257 | <5.0 | <5.0 | 53 | <5.0 | <5.0 | <5.0 | 230 | <5.0 | <2.0 |
| | 6/4/2004 | | 503492829 | <5.0 | <5.0 | 74 | <5.0 | <5.0 | <5.0 | 400 | <5.0 | <2.0 |
| | 6/4/2004 | | 503492928 | <5.0 | <5.0 | 59 | <5.0 | <5.0 | <5.0 | 290 | <5.0 | <2.0 |
| | 9/15/2004 | | A675212 | <1.0 | <1.0 | 99 | 2.9 | <1.0 | <1.0 | 500 | <1.0 | <1.0 |
| | 9/15/2004 | | A675213 | <1.0 | <1.0 | 97 | 2.8 | <1.0 | <1.0 | 490 | <1.0 | <1.0 |
| | 12/22/2004 | | A685836 | <1.0 | <1.0 | 85 | 4.5 | <1.0 | <1.0 | 540 | <1.0 | <1.0 |
| | 12/22/2004 | | A685823 | <1.0 | <1.0 | 96 | 3.9 | <1.0 | <1.0 | 520 | <1.0 | <1.0 |
| | 3/16/2005 | | A693396 | <1.0 | <1.0 | 18 | <1.0 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 3/16/2005 | | A693397 | <1.0 | <1.0 | 19 | <1.0 | <1.0 | <1.0 | 140 | <1.0 | <1.0 |
| | 6/15/2005 | | A702987 | <1.0 | <1.0 | 15 | <1.0 | <1.0 | <1.0 | 83 | <1.0 | <1.0 |
| | 6/15/2005 | | A702999 | <1.0 | <1.0 | 17 | <1.0 | <1.0 | <1.0 | 91 | <1.0 | <1.0 |
| | 9/22/2005 | | A713013 | <1.0 | <1.0 | 12.7 | <1.0 | <1.0 | <1.0 | 68.7 | <1.0 | <1.0 |
| | 9/22/2005 | | A713014 | <1.0 | <1.0 | 12.6 | <1.0 | <1.0 | <1.0 | 68.8 | <1.0 | <1.0 |
| | 12/7/2005 | | A721022 | <1.0 | <1.0 | 9.2 | <1.0 | <1.0 | <1.0 | 100 | <1.0 | <1.0 |
| | 12/7/2005 | | A721023 | <1.0 | <1.0 | 13 | <1.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 3/14/2006 | | A728644 | <1.0 | <1.0 | 6.6 | <1.0 | <1.0 | <1.0 | 64 | <1.0 | <1.0 |
| | 3/14/2006 | | A728645 | <1.0 | <1.0 | 6.4 | <1.0 | <1.0 | <1.0 | 59 | <1.0 | <1.0 |
| | 6/14/2006 | | A737758 | <1.0 | <1.0 | 3.7 | <1.0 | <1.0 | <1.0 | 62 | <1.0 | <1.0 |
| | 6/14/2006 | | A737759 | <1.0 | <1.0 | 6.1 | <1.0 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 9/29/2006 | | A747976 | <10 | <10 | 15 | <10 | 23 | <10 | 160 | <10 | <10 |
| | 9/29/2006 | | A747977 | <10 | <10 | 16 | <10 | 16 | <10 | 210 | <10 | <10 |
| | 12/20/2006 | | A756766 | <10 | <10 | 14 | <10 | <10 | <10 | 150 | <10 | <10 |
| | 12/20/2006 | | A756767 | <10 | <10 | 13 | <10 | <10 | <10 | 150 | <10 | <10 |
| | 3/22/2007 | | A764734 | <1.0 | <1.0 | 3.1 | <1.0 | <1.0 | <1.0 | 41 | <1.0 | <1.0 |
| | 3/22/2007 | | A764735 | <1.0 | <1.0 | 3.7 | <1.0 | <1.0 | <1.0 | 45 | <1.0 | <1.0 |
| | 7/2/2007 | | A775739 | <1.0 | <1.0 | 63 | 5.0 | <1.0 | <1.0 | 170 | <1.0 | 2.9 |
| | 9/6/2007 | | A781783 | <5.0 | <5.0 | 130 | 12 | <5.0 | <5.0 | 260 | <5.0 | 6.0 |
| | 9/6/2007 | | A781784 | <1.0 | <1.0 | 110 | 11 | <1.0 | <1.0 | 230 | <1.0 | 6.1 |
| | 11/29/2007 | | A790675 | <1.0 | <1.0 | 150 | 12 | <1.0 | <1.0 | 250 | <1.0 | 4.2 |
| | 11/29/2007 | | A790676 | <1.0 | <1.0 | 150 | 12 | <1.0 | <1.0 | 250 | <1.0 | 4.9 |
| | 3/20/2008 | | A803418 | <1.0 | <1.0 | 3.4 | <1.0 | <1.0 | <1.0 | 18 | <1.0 | <1.0 |
| | 3/20/2008 | | A803419 | <1.0 | <1.0 | 4.6 | <1.0 | <1.0 | <1.0 | 23 | <1.0 | <1.0 |
| | 5/30/2008 | | A812362 | <1.0 | <1.0 | 20 | 4.1 | <1.0 | <1.0 | 38 | <1.0 | <1.0 |
| | 5/30/2008 | | A812363 | <1.0 | <1.0 | 21 | 4.7 | <1.0 | <1.0 | 40 | <1.0 | <1.0 |
| | 9/23/2008 | | A824665 | <1.0 | <1.0 | 110 | 14 | <1.0 | <1.0 | 190 | <1.0 | 2.0 |
| | 9/23/2008 | | A824666 | <1.0 | <1.0 | 97 | 14 | <1.0 | <1.0 | 170 | <1.0 | 2.2 |
| | 12/3/2008 | | A832808 | <1.0 | <1.0 | 120 | 15 | 1.3B | <1.0 | 200 | <1.0 | <1.0 |
| | 12/3/2008 | | A832809 | <1.0 | <1.0 | 110 | 14 | <1.0 | <1.0 | 200 | <1.0 | 1.0 |
| | 3/12/2009 | | A841802 | <1.0 | <1.0 | 150 | 16 | <1.0 | <1.0 | 250 | <1.0 | <1.0 |
| | 3/12/2009 | | A841803 | <1.0 | <1.0 | 130 | 15 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| | 6/19/2009 | | A850609 | <1.0 | <1.0 | 7.5 | 3.4 | <1.0 | <1.0 | 57 | <1.0 | <1.0 |
| | 6/19/2009 | | A850612 | <1.0 | <1.0 | 7.2 | 3.4 | <1.0 | <1.0 | 58 | <1.0 | <1.0 |
| | 9/15/2009 | | A858550 | <1.0 | <1.0 | 150 | 19 | <1.0 | <1.0 | 340 | <1.0 | 2.1 |
| | 9/15/2009 | | A858554 | <1.0 | <1.0 | 160 | 18 | <1.0 | <1.0 | 330 | <1.0 | 2.1 |
| MW-132 | 9/1992 | 10-20 | NA | NA | NA | 1,500* | 1,500* | NA | NA | 280 | NA | 1,200 |
| | 5/27/1993 | | 69681 | <20 | <20 | 2,400 | <20 | <200 | <20 | 1,900 | NA | <100 |
| | 7/14/1995 | | W5070191-09 | <5.0 | <5.0 | 5,100 | 15 | <5.0 | <5.0 | 1,700 | NA | 600 |
| | 2/5/1997 | | W7020074-02 | <120 | <120 | 65,000 | <120 | <120 | <120 | 15,000 | NA | <250 |
| | 11/23/1999 | | 253791 | <5.0 | <5.0 | 990 | 18 | <10 | <5.0 | 270 | <5.0 | 580 |
| | 2/28/2000 | | 260589 | <5.0 | <5.0 | 23,000 | 330 | <10 | 13 | 2,900 | <5.0 | 13 |
| | 7/22/2002 | | 324190 | <5.0 | <5.0 | 270 | 11 | <10 | <5.0 | 110 | <5.0 | <2.0 |
| | 5/7/2003 | | 842913 | <1.0 | <1.0 | 63.6 | 1 | <5.0 | <1.0 | 28.7 | <1.0 | <1.0 |
| | 8/22/2003 | | 872596 | <1.0 | <1.0 | 136 | 4.4 | <5.0 | <1.0 | 40.9 | <1.0 | <1.0 |
| | 8/22/2003 | | 872597 | <1.0 | <1.0 | 146 | 4.5 | <5.0 | <1.0 | 40.9 | <1.0 | <1.0 |
| | 12/03/2003 | | 503002123 | <5.0 | <5.0 | 9 | <5.0 | <5.0 | <5.0 | 23 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237166 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 9.3 | <5.0 | <2.0 |
| | 6/4/2004 | | 503492647 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 12 | <5.0 | <2.0 |
| | 9/15/2004 | | A675220 | <1.0 | <1.0 | 32 | 4.5 | <1.0 | <1.0 | 15 | <1.0 | <1.0 |
| | 12/21/2004 | | A685833 | <1.0 | <1.0 | 60 | 7.1 | <1.0 | <1.0 | 16 | <1.0 | 1.7 |
| | 3/16/2005 | | A693388 | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 | <1.0 | 7.8 | <1.0 | <1.0 |
| | 6/14/2005 | | A702985 | <1.0 | <1.0 | 12 | 3.0B | <1.0 | <1.0 | 14 | <1.0 | <1.0 |
| | 9/22/2005 | | A713003 | <1.0 | <1.0 | 15.1 | 2.92 | <1.0 | <1.0 | 10.5 | <1.0 | <1.0 |
| | 12/6/2005 | | A721014 | <1.0 | <1.0 | 23 | 4.5 | <1.0 | <1.0 | 15 | <1.0 | <1.0 |
| | 3/13/2006 | | A728632 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/12/2006 | | A737743 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.5 | <1.0 | <1.0 |
| MW-132R | 10/13/2006 | 10-20 | A749072 | <1.0 | <1.0 | 73 | 2.3 | <1.0 | <1.0 | 62 | <1.0 | 1.4 |
| | 12/20/2006 | | A756757 | <1.0 | <1.0 | 39 | 1.7 | <1.0 | <1.0 | 41 | <1.0 | 6.8 |
| | 3/21/2007 | | A764752 | <1.0 | <1.0 | 6.5 | <1.0 | <1.0 | <1.0 | 15 | <1.0 | <1.0 |
| | 7/2/2007 | | A775730 | <1.0 | <1.0 | 15 | <1.0 | <1.0 | <1.0 | 29 | <1.0 | <1.0 |
| | 9/6/2007 | | A781774 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/28/2007 | | A790667 | <1.0 | <1.0 | 29 | 3.2 | <1.0 | <1.0 | 73 | <1.0 | <1.0 |
| | 3/19/2008 | | A803409 | <1.0 | <1.0 | 14 | <1.0 | <1.0 | <1.0 | 20 | <1.0 | 2.0 |
| | 5/29/2008 | | A812348 | <1.0 | <1.0 | 6.4 | <1.0 | <1.0 | <1.0 | 15 | <1.0 | <1.0 |
| | 9/23/2008 | | A824659 | <1.0 | <1.0 | 5.1 | <1.0 | <1.0 | <1.0 | 24 | <1.0 | <1.0 |
| | 12/2/2008 | | A832827 | <1.0 | <1.0 | 25 | 2.1 | <1.0 | <1.0 | 44 | <1.0 | 4.3 |
| | 3/12/2009 | | A841805 | <1.0 | <1.0 | 3.8 | <1.0 | <1.0 | <1.0 | 13 | <1.0 | <1.0 |
| | 6/18/2009 | | A850595 | <1.0 | <1.0 | 5.3 | <1.0 | <1.0 | <1.0 | 17 | <1.0 | <1.0 |
| | 9/15/2009 | | A858537 | <1.0 | <1.0 | 9.1 | <1.0 | <1.0 | <1.0 | 26 | <1.0 | <1.0 |
| | 11/3/2009 | | A864527 | <1.0 | <1.0 | 9.8 | 1.8 | <1.0 | <1.0 | 33 | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-133 | 9/1992 | 8-18 | NA | NA | NA | **81*** | **81*** | NA | NA | **47** | NA | <10 |
| | 5/27/1993 | | 69680 | <1.0 | <1.0 | **56** | **1.4** | <10 | <1.0 | **24** | NA | **5.3** |
| | 9/11/1995 | | W5090134-01 | <5.0 | <5.0 | **70** | <5.0 | <5.0 | <5.0 | **23** | NA | <10 |
| | 2/5/1997 | | W7020074-03 | <5.0 | <5.0 | **100** | <5.0 | <5.0 | <5.0 | **53** | NA | <10 |
| | 11/23/1999 | | 253798 | <5.0 | <5.0 | **130** | <5.0 | <10 | <5.0 | **57** | <5.0 | **7** |
| | 2/28/2000 | | 260596 | <5.0 | <5.0 | **170** | <5.0 | <10 | <5.0 | **110** | <5.0 | **6.7** |
| MW-133R | 12/04/2003 | 8-18 | 503002131 | <5.0 | <5.0 | **49** | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **3.5** |
| | 3/11/2004 | | 503237208 | <5.0 | <5.0 | **32** | <5.0 | <5.0 | <5.0 | **5.3** | <5.0 | <2.0 |
| | 6/4/2004 | | 503492704 | <5.0 | <5.0 | **39** | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 9/15/2004 | | A675216 | <1.0 | <1.0 | **100** | **4.4** | <1.0 | <1.0 | **1.9** | <1.0 | **2.6** |
| | 12/21/2004 | | A685830 | <1.0 | <1.0 | **67** | **3.4** | <1.0 | <1.0 | **1.7** | <1.0 | <1.0 |
| | 3/16/2005 | | A693394 | <1.0 | <1.0 | **22** | **1.8** | **1.3** | <1.0 | **1.0** | <1.0 | <1.0 |
| | 6/15/2005 | | A702990 | <1.0 | <1.0 | **33** | **2.1B** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| | 9/22/2005 | | A713008 | <1.0 | <1.0 | **41** | **2.73** | <1.0 | <1.0 | **1.37** | <1.0 | <1.0 |
| | 12/7/2005 | | A721020 | <1.0 | <1.0 | **45** | **3.7** | <1.0 | <1.0 | **1.7** | <1.0 | <1.0 |
| | 3/14/2006 | | A728641 | <1.0 | <1.0 | **23** | **1.8** | <1.0 | <1.0 | **1.8** | <1.0 | <1.0 |
| | 6/13/2006 | | A737755 | <1.0 | <1.0 | **25** | **2.3** | <1.0 | <1.0 | **1.7** | <1.0 | <1.0 |
| | 9/29/2006 | | A747979 | <1.0 | <1.0 | **36** | **3.8** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 |
| | 12/20/2006 | | A756762 | <1.0 | <1.0 | **28** | **3.3** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 |
| | 3/22/2007 | | A764731 | <1.0 | <1.0 | **6.6** | **1.9** | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| | 7/2/2007 | | A775733 | <1.0 | <1.0 | **3.5** | **2** | <1.0 | <1.0 | **2.2** | <1.0 | <1.0 |
| | 9/6/2007 | | A781780 | <1.0 | <1.0 | **9** | **3.1** | <1.0 | <1.0 | **3.1** | <1.0 | <1.0 |
| | 11/29/2007 | | A790671 | <1.0 | <1.0 | **5.3** | **2.1** | <1.0 | <1.0 | **2.7** | <1.0 | <1.0 |
| | 3/19/2008 | | A803415 | <1.0 | <1.0 | **2.1** | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| | 5/29/2008 | | A812353 | <1.0 | <1.0 | **2** | **1.6** | <1.0 | <1.0 | **2.4** | <1.0 | <1.0 |
| | 9/23/2008 | | A824661 | <1.0 | <1.0 | **5.1** | **1.3** | <1.0 | <1.0 | **4.8** | <1.0 | <1.0 |
| | 12/3/2008 | | A832804 | <1.0 | <1.0 | **4.6** | **2.0** | <1.0 | <1.0 | **3.9** | <1.0 | <1.0 |
| | 3/11/2009 | | A841815 | <1.0 | <1.0 | **2.4** | **1.2** | <1.0 | <1.0 | **2.1** | <1.0 | <1.0 |
| | 6/18/2009 | | A850594 | <1.0 | <1.0 | **3.4** | **2.1** | <1.0 | <1.0 | **3.6** | <1.0 | <1.0 |
| | 9/15/2009 | | A858543 | <1.0 | <1.0 | **2.7** | **2** | <1.0 | <1.0 | **6.0** | <1.0 | <1.0 |
| | 11/4/2009 | | A864532 | <1.0 | <1.0 | **3.1** | **1.6** | <1.0 | <1.0 | **4.2** | <1.0 | <1.0 |
| MW-135 | 9/1992 | 10-20 | NA | NA | NA | <5 | <5 | NA | NA | <5.0 | NA | <10 |
| | 9/1992 | | NA | NA | NA | <5 | <5 | NA | NA | <5.0 | NA | <10 |
| | 5/27/1993 | | 69679 | <1.0 | <1.0 | <1.0 | <1.0 | <10 | <1.0 | <1.0 | NA | <5.0 |
| | 7/14/1995 | | W5070191-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 2/5/1997 | | W7020074-04 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253802 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 2/29/2000 | | 260574 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280651 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/20/2001 | | 296393 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/15/2002 | | 324015 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/04/2003 | | 503002149 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 12/21/2004 | | A685832 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/8/2005 | | A721032 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/21/2006 | | A756769 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/3/2007 | | A775747 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/29/2007 | | A790677 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/3/2008 | | A832811 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/4/2009 | | A864537 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-145 | 6/4/1993 | 17.5-27.5 | 69941 | <5 | <5 | **440** | <5 | <50 | <5 | **9.8** | NA | <20 |
| | 7/14/1995 | | W5070191-10 | <5.0 | <5.0 | **530** | <5.0 | <5 | <5.0 | **5.6** | NA | **12** |
| | 2/5/1997 | | W7020074-05 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **43** | NA | <10 |
| | 11/23/1999 | | 253799 | <5.0 | <5.0 | **770** | **14** | <10 | <5.0 | <5.0 | <5.0 | **28** |
| | 11/23/1999 | | 253813 | <5.0 | <5.0 | **850** | **13** | <10 | <5.0 | <5.0 | <5.0 | **31** |
| | 2/29/2000 | | 260597 | <5.0 | <5.0 | **850 E** | **8.7 E** | <10 | <5.0 | <5.0 | <5.0 | **36 E** |
| | 11/8/2000 | | 280652 | <5.0 | <5.0 | **710** | <5.0 | <10 | <5.0 | <5.0 | <5.0 | **18** |
| | 6/21/2001 | | 296418 | <5.0 | <5.0 | **630** | **5.5** | <10 | <5.0 | <5.0 | <5.0 | **170** |
| | 7/22/2002 | | 324184 | <5.0 | <5.0 | **460** | **7.8** | <10 | <5.0 | <5.0 | <5.0 | **36** |
| | 12/04/2003 | | 503002453 | <5.0 | <5.0 | **650** | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **14** |
| | 12/21/2004 | | A685829 | <1.0 | <1.0 | **460** | **6.0** | <1.0 | <1.0 | <1.0 | <1.0 | **6.3** |
| | 12/8/2005 | | A721034 | <1.0 | <1.0 | **150** | **5.2** | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** |
| | 12/20/2006 | | A756763 | <10 | <10 | **200** | <10 | <10 | <10 | <10 | <10 | <10 |
| | 7/2/2007 | | A775734 | <1.0 | <1.0 | **220** | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | **7.7** |
| | 11/29/2007 | | A790672 | <1.0 | <1.0 | **150** | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | **5.6** |
| | 12/3/2008 | | A832805 | <1.0 | <1.0 | **39** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **6.1** |
| | 11/4/2009 | | A864533 | <1.0 | <1.0 | **50** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **5.4** |
| MW-146 | 6/4/1993 | 15-25 | 69942 | **1.4** | <1.0 | <1.0 | <1.0 | <10 | <1.0 | **83** | NA | <5 |
| | 7/14/1995 | | W5070191-11 | <5.0 | <5.0 | <5.0 | <5.0 | <5 | <5.0 | **52** | NA | <10 |
| | 2/5/1997 | | W7020074-06 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **43** | NA | <10 |
| | 11/23/1999 | | 253800 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | **69** | <5.0 | <5.0 |
| | 2/29/2000 | | 260572 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | **67** | <5.0 | <5.0 |
| | 11/8/2000 | | 280684 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | **70** | <5.0 | <2.0 |
| | 6/21/2001 | | 296419 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | **62** | <5.0 | <2.0 |
| | 7/15/2002 | | 324017 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | **24.3** | <1.0 | <1.0 |
| | 12/03/2003 | | 503002461 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **42** | <5.0 | <2.0 |
| | 3/11/2004 | | 503237216 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **50** | <5.0 | <2.0 |
| | 6/4/2004 | | 503492738 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **46** | <5.0 | <2.0 |
| | 9/15/2004 | | A675214 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **52** | <1.0 | <1.0 |
| | 12/21/2004 | | A685828 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **74** | <1.0 | <1.0 |
| | 3/16/2005 | | A693395 | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | <1.0 | **50** | <1.0 | <1.0 |
| | 6/13/2005 | | NS | | | | | | | | | |
| | 9/22/2005 | | A713010 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **43.2** | <1.0 | <1.0 |
| | 12/8/2005 | | A721033 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **78** | <1.0 | <1.0 |
| | 3/14/2006 | | A728643 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **47** | <1.0 | <1.0 |
| | 6/14/2006 | | A737757 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **34** | <1.0 | <1.0 |
| | 9/29/2006 | | A747978 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **51** | <1.0 | <1.0 |
| | 12/20/2006 | | A756765 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **42** | <1.0 | <1.0 |
| | 3/22/2007 | | A764732 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **36** | <1.0 | <1.0 |
| | 7/2/2007 | | A775738 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **41** | <1.0 | <1.0 |
| | 9/6/2007 | | A781781 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **58** | <1.0 | <1.0 |
| | 11/29/2007 | | A790674 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **53** | <1.0 | <1.0 |
| | 3/19/2008 | | A803417 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 | **55** | <1.0 | <1.0 |
| | 5/29/2008 | | A812355 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **43** | <1.0 | <1.0 |
| | 9/23/2008 | | A824664 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **46** | <1.0 | <1.0 |
| | 12/3/2008 | | A832807 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **68** | <1.0 | <1.0 |
| | 3/13/2009 | | A841830 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **43** | <1.0 | <1.0 |
| | 6/19/2009 | | A850608 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **28** | <1.0 | <1.0 |
| | 9/15/2009 | | A858551 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **50** | <1.0 | <1.0 |
| | 11/4/2009 | | A864535 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **45** | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [(1)] | | | | 0.289[(2)] | 7 | 70 | 128[(2)] | 6.30[(2)] | 5 | 5 | 13.7[(2)] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [(1)] | | | | 46.1[(2)] | 7 | 1,022 | 2,040[(2)] | 381[(2)] | 56.1 | 260 | 5,110[(2)] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-147 | 6/4/1993 | 20-30 | 69943 | <1.0 | <1.0 | **140** | <1.0 | <10 | <1.0 | **39** | NA | **42** |
| | 7/14/1995 | | W5070191-08 | <5.0 | <5.0 | <5.0 | <5.0 | <5 | <5.0 | <5.0 | NA | <10 |
| | 2/5/1997 | | W7020074-07 | <5.0 | <5.0 | **95** | <5.0 | <5.0 | <5.0 | **51** | NA | <10 |
| | 11/23/1999 | | 253790 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 2/28/2000 | | 260588 | <5.0 | <5.0 | **7.3** | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280685 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| MW-147A | 6/21/2001 | 20-30 | 296409 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/22/2002 | | 324189 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 5/7/2003 | | 842912 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 8/22/2003 | | 872598 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/03/2003 | | 503002578 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237158 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/4/2004 | | 503492597 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 9/15/2004 | | A675219 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/22/2004 | | A685820 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/16/2005 | | A693392 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/14/2005 | | A702984 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/22/2005 | | A713025 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/7/2005 | | A721015 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/13/2006 | | A728631 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/12/2006 | | A737742 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-147AR | 10/13/2006 | 20-30 | A749071 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/20/2006 | | A756756 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/21/2007 | | A764751 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/2/2007 | | A775728 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/6/2007 | | A781775 | <1.0 | <1.0 | **19** | **1.1** | <1.0 | <1.0 | **36** | <1.0 | **2.4** |
| | 11/28/2007 | | A790678 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/19/2008 | | A803408 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/29/2008 | | A812347 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/23/2008 | | A824658 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| | 12/2/2008 | | A832838 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/12/2009 | | A841810 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/18/2009 | | A850596 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/15/2009 | | A858538 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/3/2009 | | A864526 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-148 | 6/4/1993 | 10.5-25.5 | 69944 | <80 | <80 | **19,000** | <80 | <800 | <80 | **4,900** | NA | **490** |
| | 7/14/1995 | | W5070191-07 | <5.0 | <5.0 | **1,400** | **12** | <5 | <5.0 | **410** | NA | **92** |
| | 2/5/1997 | | W7020074-08 | <5.0 | <5.0 | **73** | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253792 | <5.0 | **5.2** | **1,200** | **24** | <10 | <5.0 | **310** | <5.0 | **200** |
| | 2/28/2000 | | 260583 | <5.0 | <5.0 | **1,200** | **11** | <10 | <5.0 | **300** | <5.0 | **180** |
| | 2/28/2000 | | 260568 | <5.0 | <5.0 | **1,600** | **20** | <10 | <5.0 | **400** | <5.0 | **270** |
| | 11/8/2000 | | 280686 | <5.0 | <5.0 | **440** | <5.0 | <10 | <5.0 | **190** | <5.0 | **35** |
| | 11/8/2000 | | 280687 | <5.0 | <5.0 | **450** | <5.0 | <10 | <5.0 | **160** | <5.0 | **39** |
| | 6/21/2001 | | 296407 | <5.0 | <5.0 | **1,100** | **10** | <10 | <5.0 | **340** | <5.0 | **50** |
| | 6/21/2001 | | 296408 | <5.0 | <5.0 | **1,100** | **11** | <10 | <5.0 | **360** | <5.0 | **50** |
| | 7/22/2002 | | 324188 | <5.0 | <5.0 | **360** | **19** | <10 | <5.0 | **170** | <5.0 | <2.0 |
| | 5/7/2003 | | 842914 | <1.0 | <1.0 | **23.1** | **1.7** | <5.0 | <1.0 | **56.5** | <1.0 | <1.0 |
| | 8/22/2003 | | 872599 | <1.0 | <1.0 | **50.6** | **1.9** | <5.0 | <1.0 | **80.5** | <1.0 | <1.0 |
| | 12/03/2003 | | 503002479 | <5.0 | <5.0 | **30** | <5.0 | <5.0 | <5.0 | **100** | <5.0 | <2.0 |
| | 3/11/2004 | | 503237174 | <5.0 | <5.0 | **34** | <5.0 | <5.0 | <5.0 | **20** | <5.0 | <2.0 |
| | 6/4/2004 | | 503492654 | <5.0 | <5.0 | **35** | <5.0 | <5.0 | <5.0 | **6.4** | <5.0 | **2.6** |
| | 9/16/2004 | | A675221 | <1.0 | <1.0 | **36** | **1.8** | <1.0 | <1.0 | **5.6** | <1.0 | **5.7** |
| | 12/21/2004 | | A685831 | <1.0 | <1.0 | **38** | **2.5** | <1.0 | <1.0 | **26** | <1.0 | **3.7** |
| | 3/16/2005 | | A693389 | <1.0 | <1.0 | **41** | **2.4** | <1.0 | <1.0 | **2.1** | <1.0 | **5.7** |
| | 6/14/2005 | | A702986 | <1.0 | <1.0 | **38** | **2.0B** | <1.0 | <1.0 | **6.5** | <1.0 | **9.4** |
| | 9/22/2005 | | A713004[3] | <1.0 | <1.0 | **79.9** | **5.49** | <1.0 | <1.0 | **68.8** | <1.0 | **61.6** |
| | 12/7/2005 | | A721016 | <1.0 | <1.0 | **93** | **8.3** | <1.0 | <1.0 | **100** | <1.0 | **120** |
| | 3/13/2006 | | A728633 | <1.0 | <1.0 | **200** | **14** | <1.0 | <1.0 | **200** | <1.0 | **120** |
| | 6/12/2006 | | A737744 | <1.0 | <1.0 | **32** | **1.4** | <1.0 | <1.0 | **14** | <1.0 | **4.8** |
| MW-148R | 10/13/2006 | 10.5-25.5 | A749073 | <1.0 | <1.0 | **1,000** | **42** | <1.0 | <1.0 | **180** | <1.0 | **140** |
| | 12/20/2006 | | A756758 | <10 | <10 | **520** | **22** | <10 | <10 | **100** | <10 | **43** |
| | 3/21/2007 | | A764753 | <1.0 | <1.0 | **11** | **1.4** | <1.0 | <1.0 | **30** | <1.0 | <1.0 |
| | 7/2/2007 | | A775731 | <1.0 | <1.0 | **330** | **23** | <1.0 | <1.0 | **68** | <1.0 | **30** |
| | 9/6/2007 | | A781776 | <10 | <10 | **130** | **16** | <10 | <10 | **530** | <10 | <10 |
| | 11/29/2007 | | A790668 | <1.0 | <1.0 | **1,000** | **77** | <1.0 | <1.0 | **220** | <1.0 | **33** |
| | 3/19/2008 | | A803411 | <1.0 | <1.0 | **130** | **10** | <1.0 | <1.0 | **32** | <1.0 | **4.2** |
| | 5/29/2008 | | A812349 | <10 | <10 | **160** | **13** | <10 | <10 | **82** | <10 | **10** |
| | 9/23/2008 | | A824660 | <10 | <10 | **580** | **70** | <10 | <10 | **57** | <10 | **44** |
| | 12/2/2008 | | A832800 | <1.0 | **1.4** | **840** | **80** | <1.0 | <1.0 | **130** | <1.0 | **91** |
| | 3/12/2009 | | A841804 | <1.0 | **1.1** | **630** | **47** | <1.0 | <1.0 | **170** | <1.0 | **39** |
| | 6/19/2009 | | A850602 | <1.0 | <1.0 | **8.1** | **1.1** | <1.0 | <1.0 | **44** | <1.0 | <1.0 |
| | 9/15/2009 | | A858545 | <1.0 | **1.3** | **530** | **54** | <1.0 | <1.0 | **88** | <1.0 | **100** |
| | 11/3/2009 | | A864528 | <1.0 | <1.0 | **480** | **39** | <1.0 | <1.0 | **110** | <1.0 | **48** |
| MW-150 | 7/17/1995 | 4-19 | W5070229-01 | <5.0 | <5.0 | **6.7** | <5.0 | <5.0 | <5.0 | **65** | NA | <10 |
| | 2/5/1997 | | W7020074-09 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **86** | NA | <10 |
| | 11/23/1999 | | 253803 | <5.0 | <5.0 | **14** | <5.0 | <10 | <5.0 | **130** | <5.0 | <5.0 |
| | 2/29/2000 | | 260575 | <5.0 | <5.0 | **13** | <5.0 | <10 | <5.0 | **120** | <5.0 | <5.0 |
| | 11/8/2000 | | 280688 | <5.0 | <5.0 | **14** | <5.0 | <10 | <5.0 | **86** | <5.0 | <2.0 |
| | 6/20/2001 | | 296390 | <5.0 | <5.0 | **28** | <5.0 | <10 | <5.0 | **200** | <5.0 | <2.0 |
| | 7/19/2002 | | 324159 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | **30** | <5.0 | <2.0 |
| | 5/7/2003 | | 842917 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | **37.1** | <1.0 | <1.0 |
| | 8/22/2003 | | 872600 | <1.0 | <1.0 | **1.7** | <1.0 | <5.0 | <1.0 | **56.1** | <1.0 | <1.0 |
| | 12/03/2003 | | 503002529 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **14** | <5.0 | <2.0 |
| | 3/11/2004 | | 503237232 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **20** | <5.0 | <2.0 |
| | 6/4/2004 | | 503492753 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **12** | <5.0 | <2.0 |
| | 9/15/2004 | | A675211 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 | <1.0 | **23** | <1.0 | <1.0 |
| | 12/21/2004 | | A685827 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **37** | <1.0 | <1.0 |
| | 3/16/2005 | | A693386 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **15** | <1.0 | <1.0 |
| | 6/15/2005 | | A702988 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **9.7** | <1.0 | <1.0 |
| | 9/26/2005 | | A713023 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **11** | <1.0 | <1.0 |
| | 12/7/2005 | | A721030 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **12** | <1.0 | <1.0 |
| | 3/15/2006 | | A728646 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **6.8** | <1.0 | <1.0 |
| | 6/14/2006 | | A737760 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.5** | <1.0 | <1.0 |
| | 9/27/2006 | | A747975 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **3.2** | <1.0 | <1.0 |
| | 12/21/2006 | | A756770 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **3.2** | <1.0 | <1.0 |
| | 3/22/2007 | | A764738 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.1** | <1.0 | <1.0 |
| | 7/3/2007 | | A775748 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.8** | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-150 | 9/7/2007 | 4-19 | A781791 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 |
| (cont'd.) | 11/29/2007 | | A790705 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.4 | <1.0 | <1.0 |
| | 3/20/2008 | | A803420 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.8 | <1.0 | <1.0 |
| | 5/29/2008 | | A812356 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.2 | <1.0 | <1.0 |
| | 9/23/2008 | | A824667 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 8.3 | <1.0 | <1.0 |
| | 12/3/2008 | | A832810 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.3 | <1.0 | <1.0 |
| | 3/12/2009 | | A841827 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.1 | <1.0 | <1.0 |
| | 6/19/2009 | | A850604 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.9 | <1.0 | <1.0 |
| | 9/16/2009 | | A858565 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 7.0 | <1.0 | <1.0 |
| | 11/4/2009 | | A864536 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 7.3 | <1.0 | <1.0 |
| MW-151 | 7/14/1995 | 5-20 | W5070191-03 | <5.0 | <5.0 | 74 | 7.4 | <5 | <5.0 | <5.0 | NA | <10 |
| | 2/6/1997 | | W7020074-13 | <5.0 | <5.0 | 20 | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253809 | <5.0 | <5.0 | 35 | 5.2 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 2/29/2000 | | 260579 | <5.0 | <5.0 | 45 | 6.3 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280689 | <5.0 | <5.0 | 54 | 6.8 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/20/2001 | | 296398 | <5.0 | <5.0 | 46 | 6.5 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/18/2002 | | 324114 | <1.0 | <1.0 | 6.4 | <1.0 | <5.0 | <1.0 | 2.2 | <1.0 | <1.0 |
| | 12/04/2003 | | 503002586 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 5.4 | <5.0 | <5.0 |
| | 3/3/2004 | | 503207532 | NA | NA | NA | NA | NA | NA | 6.4 | NA | NA |
| | 6/4/2004 | | 503492951 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 11 | < 5.0 | < 2.0 |
| | 7/16/2004 | | A669501 | <1.0 | <1.0 | 3.1 | 3.8 | <1.0 | <1.0 | 5.1 | <1.0 | <1.0 |
| | 8/16/2004 | | A671802 | <1.0 | <1.0 | 2.6 | 4.1 | 1.2 | <1.0 | 5.4 | <1.0 | <1.0 |
| | 9/14/2004 | | A675210 | <1.0 | <1.0 | 3.0 | 4.0 | <1.0 | <1.0 | 5.7 | <1.0 | <1.0 |
| | 10/18/2004 | | A678047 | <1.0 | <1.0 | 3.1 | 5.3 | <1.0 | <1.0 | 5.4 | <1.0 | <1.0 |
| | 11/19/2004 | | A681814 | <1.0 | <1.0 | 3.5 | 5.7 | <1.0 | <1.0 | 4.7 | <1.0 | <1.0 |
| | 12/21/2004 | | A685816 | <1.0 | <1.0 | 4.1 | 5 | <1.0 | <1.0 | 6.4 | <1.0 | <1.0 |
| | 1/24/2005 | | A688376 | <1.0 | <1.0 | 3.3 | 2.7 | <1.0 | <1.0 | 5.0 | <1.0 | <1.0 |
| | 3/16/2005 | | A693384 | <1.0 | <1.0 | 3.6 | 3.1 | <1.0 | <1.0 | 5.3 | <1.0 | <1.0 |
| | 6/14/2005 | | A702981 | <1.0 | <1.0 | 2.8 | 3.7B | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 |
| | 9/23/2005 | | A713017 | <1.0 | <1.0 | 3.23 | 2.47 | <1.0 | <1.0 | 4.57 | <1.0 | <1.0 |
| | 12/7/2005 | | A721026 | <1.0 | <1.0 | 4.6 | 3.2 | <1.0 | <1.0 | 4.8 | <1.0 | <1.0 |
| | 3/15/2006 | | A728652 | <1.0 | <1.0 | 3.4 | 1.5 | <1.0 | <1.0 | 4.8 | <1.0 | <1.0 |
| | 6/14/2006 | | A737762 | <1.0 | <1.0 | 2.6 | 1.6 | <1.0 | <1.0 | 4.6 | <1.0 | <1.0 |
| | 9/27/2006 | | A747965 | <1.0 | <1.0 | 3.6 | 1.6 | <1.0 | <1.0 | 6.6 | <1.0 | <1.0 |
| | 11/21/2006 | | A753698 | <1.0 | <1.0 | 3.5 | 1.7 | <1.0 | <1.0 | 7.4 | <1.0 | <1.0 |
| | 12/21/2006 | | A756776 | <1.0 | <1.0 | 3.5 | 1.9 | <1.0 | <1.0 | 6.5 | <1.0 | <1.0 |
| | 1/19/2007 | | A758754 | <1.0 | <1.0 | 2.2 | 1.1 | <1.0 | <1.0 | 6.0 | <1.0 | <1.0 |
| | 1/19/2007 | | A758756 | <1.0 | <1.0 | 2.0 | 1.4 | <1.0 | <1.0 | 5.8 | <1.0 | <1.0 |
| | 3/23/2007 | | A764757 | <1.0 | <1.0 | 1.6 | 1.2 | <1.0 | <1.0 | 4.2 | <1.0 | <1.0 |
| | 9/6/2007 | | A781786 | <1.0 | <1.0 | 2.7 | 1.7 | <1.0 | <1.0 | 7.6 | <1.0 | <1.0 |
| | 11/30/2007 | | A790717 | <1.0 | <1.0 | 2.9 | 1.8 | <1.0 | <1.0 | 8.3 | <1.0 | <1.0 |
| | 3/20/2008 | | A803427 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.7 | <1.0 | <1.0 |
| | 5/30/2008 | | A812366 | <1.0 | <1.0 | 1.6 | <1.0 | <1.0 | <1.0 | 6.1 | <1.0 | <1.0 |
| | 9/24/2008 | | A824676 | <1.0 | <1.0 | 1.8 | 1.2 | <1.0 | <1.0 | 9.1 | <1.0 | <1.0 |
| | 12/3/2008 | | A832817 | <1.0 | <1.0 | 2.1 | 1.7 | <1.0 | <1.0 | 7.8 | <1.0 | <1.0 |
| | 3/13/2009 | | A841808 | <1.0 | <1.0 | 1.8 | 1.4 | <1.0 | <1.0 | 5.1 | <1.0 | <1.0 |
| | 6/18/2009 | | A850592 | <1.0 | <1.0 | 2.0 | 1.6 | <1.0 | <1.0 | 6.2 | <1.0 | <1.0 |
| | 9/16/2009 | | A858563 | <1.0 | <1.0 | 1.7 | 1.6 | <1.0 | <1.0 | 5.3 | <1.0 | <1.0 |
| | 11/4/2009 | | A864556 | <1.0 | <1.0 | 1.6 | 1.7 | <1.0 | <1.0 | 7.0 | <1.0 | <1.0 |
| MW-152 | 7/14/1995 | 5-20 | W5070191-01 | <5.0 | <5.0 | 5.3 | <5.0 | <5 | <5.0 | 150 | NA | <10 |
| | 2/5/1997 | | W7020074-10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 150 | NA | <10 |
| | 11/23/1999 | | 253801 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 110 | <5.0 | <5.0 |
| | 2/29/2000 | | 260573 | <5.0 | <5.0 | 5.1 | <5.0 | <10 | <5.0 | 180 | <5.0 | <5.0 |
| | 11/8/2000 | | 280690 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 180 | <5.0 | <2.0 |
| | 6/20/2001 | | 296401 | <5.0 | <5.0 | 7 | <5.0 | <10 | <5.0 | 240 | <5.0 | <2.0 |
| | 7/15/2002 | | 324016 | <1.0 | <1.0 | 1.9 | <1.0 | <5.0 | <1.0 | 139 | <1.0 | <1.0 |
| | 12/03/2003 | | 503002537 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 110 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237224 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 79 | <5.0 | <2.0 |
| | 6/4/2004 | | 503492720 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 36 | <5.0 | <2.0 |
| | 9/15/2004 | | A675215 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 62 | <1.0 | <1.0 |
| | 12/21/2004 | | A685826 | <1.0 | <1.0 | 1.3 | <1.0 | <1.0 | <1.0 | 99 | <1.0 | <1.0 |
| | 3/16/2005 | | A693387 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 68 | <1.0 | <1.0 |
| | 6/15/2005 | | A702989 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 50 | <1.0 | <1.0 |
| | 9/22/2005 | | A713009 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 62.6 | <1.0 | <1.0 |
| | 12/7/2005 | | A721021 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 59 | <1.0 | <1.0 |
| | 3/14/2006 | | A728642 | <1.0 | <1.0 | 3.5 | <1.0 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 6/14/2006 | | A737756 | <1.0 | <1.0 | 1.5 | <1.0 | <1.0 | <1.0 | 100 | <1.0 | <1.0 |
| | 9/29/2006 | | A747983 | <1.0 | <1.0 | 1.1 | <1.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 12/20/2006 | | A756764 | <10 | <10 | <10 | <10 | <10 | <10 | 91 | <10 | <10 |
| | 3/22/2007 | | A764733 | <1.0 | <1.0 | 1.2 | <1.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 7/2/2007 | | A775737 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 68 | <1.0 | <1.0 |
| | 9/6/2007 | | A781782 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 52 | <1.0 | <1.0 |
| | 11/29/2007 | | A790673 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 76 | <1.0 | <1.0 |
| | 3/19/2008 | | A803416 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 42 | <1.0 | <1.0 |
| | 5/29/2008 | | A812354 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 46 | <1.0 | <1.0 |
| | 9/23/2008 | | A824663 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 61 | <1.0 | <1.0 |
| | 12/3/2008 | | A832806 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 51 | <1.0 | <1.0 |
| | 3/12/2009 | | A841826 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 69 | <1.0 | <1.0 |
| | 6/19/2009 | | A850603 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 92 | <1.0 | <1.0 |
| | 9/15/2009 | | A858544 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 35 | <1.0 | <1.0 |
| | 11/4/2009 | | A864534 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| MW-153 | 7/14/1995 | 4.5-19.5 | W5070191-02 | <5.0 | <5.0 | 980 | <5.0 | <5.0 | <5.0 | 570 | NA | 22 |
| | 2/6/1997 | | W7020074-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 5.4 | NA | <10 |
| | 2/6/1997 | | W7020074-23 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253796 | <5.0 | <5.0 | 950 | 19 | <10 | <5.0 | 330 | <5.0 | 67 |
| | 2/28/2000 | | 260594 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280691 | <5.0 | <5.0 | 4,200 | 37 | <10 | <5.0 | 250 | <5.0 | 590 |
| | 6/21/2001 | | 296404 | <5.0 | <5.0 | 16 | <5.0 | <10 | <5.0 | 7.3 | <5.0 | <2.0 |
| | 6/21/2001 | | 296405 | <5.0 | <5.0 | 15 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/22/2002 | | 324185 | <5.0 | 5.3 | 3,600 | 140 | <10 | <5.0 | 290 | <5.0 | 65 |
| | 5/7/2003 | | 842915 | <1.0 | 3.4 | 3,320 | 50 | <5.0 | <1.0 | 384 | <1.0 | 1.1 |
| | 5/7/2003 | | 842916 | <1.0 | 3.5 | 3,270 | 53 | <5.0 | <1.0 | 381 | <1.0 | 1.1 |
| | 8/22/2003 | | 872601 | <1.0 | 2.1 | 1,590 | 35 | <5.0 | <1.0 | 707 | <1.0 | 1.4 |
| | 12/03/2003 | | 503002545 | <5.0 | <5.0 | 770 | 33 | <5.0 | <5.0 | 420 | <5.0 | <2.0 |
| | 12/03/2003 | | 503002552 | <5.0 | <5.0 | 700 | 34 | <5.0 | <5.0 | 420 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237182 | <5.0 | <5.0 | 500 | 25 | <5.0 | <5.0 | 440 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237190 | <5.0 | <5.0 | 540 | 24 | <5.0 | <5.0 | 450 | <5.0 | <2.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-153 | 6/4/2004 | 4.5-19.5 | 503492670 | <5.0 | <5.0 | 790 | 15 | <5.0 | <5.0 | 620 | <5.0 | <2.0 |
| (cont'd) | 6/4/2004 | | 503492696 | <5.0 | <5.0 | 850 | 19 | <5.0 | <5.0 | 630 | <5.0 | <2.0 |
| | 9/15/2004 | | A675218 | <1.0 | <1.0 | 380 | 12 | <1.0 | <1.0 | 330 | <1.0 | <1.0 |
| | 9/15/2004 | | A675222 | <1.0 | <1.0 | 390 | 12 | <1.0 | <1.0 | 350 | <1.0 | <1.0 |
| | 12/22/2004 | | A685835 | <1.0 | <1.0 | 58 | 5.0 | <1.0 | <1.0 | 200 | <1.0 | <1.0 |
| | 12/22/2004 | | A685821 | <1.0 | <1.0 | 56 | 4.4 | <1.0 | <1.0 | 210 | <1.0 | <1.0 |
| | 3/16/2005 | | A693390 | <1.0 | <1.0 | 50 | 4.4 | <1.0 | <1.0 | 200 | <1.0 | <1.0 |
| | 3/16/2005 | | A693391 | <1.0 | <1.0 | 41 | 3.9 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| | 6/15/2005 | | A702991 | <1.0 | <1.0 | 160 | 7.1B | <1.0 | <1.0 | 420 | <1.0 | <1.0 |
| | 6/15/2005 | | A702998 | <1.0 | <1.0 | 140 | 7.6 | <1.0 | <1.0 | 360 | <1.0 | <1.0 |
| | 9/22/2005 | | A713006 | <1.0 | <1.0 | 23.5 | 1.92 | <1.0 | <1.0 | 111 | <1.0 | <1.0 |
| | 9/22/2005 | | A713007[4] | <1.0 | <1.0 | 21.7 | 2.25 | <1.0 | <1.0 | 109 | <1.0 | <1.0 |
| | 12/7/2005 | | A721018 | <1.0 | <1.0 | 33 | 2.8 | <1.0 | <1.0 | 140 | <1.0 | <1.0 |
| | 12/7/2005 | | A721019 | <1.0 | <1.0 | 30 | 2.9 | <1.0 | <1.0 | 160 | <1.0 | <1.0 |
| | 3/14/2006 | | A728638 | <1.0 | <1.0 | 6.5 | <1.0 | <1.0 | <1.0 | 52 | <1.0 | <1.0 |
| | 3/14/2006 | | A728639 | <1.0 | <1.0 | 6.3 | <1.0 | <1.0 | <1.0 | 49 | <1.0 | <1.0 |
| | 6/13/2006 | | A737752 | <1.0 | <1.0 | 87 | 8 | <1.0 | <1.0 | 210 | <1.0 | 1.3 |
| | 6/13/2006 | | A737753 | <1.0 | <1.0 | 92 | 8.1 | <1.0 | <1.0 | 200 | <1.0 | 1.4 |
| | 9/29/2006 | | A747980 | <1.0 | <1.0 | 26 | 5 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 9/29/2006 | | A747981 | <1.0 | <1.0 | 28 | 5.3 | <1.0 | <1.0 | 180 | <1.0 | <1.0 |
| | 11/21/2006 | | A753699 | <1.0 | <1.0 | 3.5 | 1.6 | <1.0 | <1.0 | 7.1 | <1.0 | <1.0 |
| | 12/20/2006 | | A756759 | <10 | <10 | 76 | <10 | <10 | <10 | 170 | <10 | <10 |
| | 12/20/2006 | | A756760 | <10 | <10 | 86 | <10 | <10 | <10 | 180 | <10 | <10 |
| | 3/21/2007 | | A764754 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/21/2007 | | A764729 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/2/2007 | | A775732 | <1.0 | <1.0 | 200 | 13 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| | 9/6/2007 | | A781777 | <5.0 | <5.0 | 230 | 19 | <5.0 | <5.0 | 84 | <5.0 | <5.0 |
| | 9/6/2007 | | A781778 | <1.0 | <1.0 | 74 | 9.4 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 11/29/2007 | | A790669 | <1.0 | <1.0 | 180 | 12 | <1.0 | <1.0 | 390 | <1.0 | <1.0 |
| | 11/29/2007 | | A790670 | <1.0 | <1.0 | 190 | 9.3 | <1.0 | <1.0 | 400 | <1.0 | <1.0 |
| | 3/19/2008 | | A803412 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.3 | <1.0 | <1.0 |
| | 3/19/2008 | | A803413 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.6 | <1.0 | <1.0 |
| | 5/29/2008 | | A812350 | <1.0 | <1.0 | 11 | 2 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 5/29/2008 | | A812351 | <1.0 | <1.0 | 12 | 2.2 | <1.0 | <1.0 | 93 | <1.0 | <1.0 |
| | 9/23/2008 | | A824670 | <1.0 | <1.0 | 32 | 4.9 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 12/2/2008 | | A832801 | <1.0 | <1.0 | 31 | 3.2 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| | 12/2/2008 | | A832802 | <1.0 | <1.0 | 29 | 3.2 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| | 3/13/2009 | | A841831 | <1.0 | <1.0 | 9.9 | 1.6 | <1.0 | <1.0 | 91 | <1.0 | <1.0 |
| | 3/13/2009 | | A841832 | <1.0 | <1.0 | 10 | 1.5 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 6/19/2009 | | A850606 | <1.0 | <1.0 | 3.9 | <1.0 | <1.0 | <1.0 | 63 | <1.0 | <1.0 |
| | 6/19/2009 | | A850611 | <1.0 | <1.0 | 4.1 | <1.0 | <1.0 | <1.0 | 63 | <1.0 | <1.0 |
| | 9/15/2009 | | A858552 | <1.0 | <1.0 | 16 | 1.9 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 9/15/2009 | | A858555 | <1.0 | <1.0 | 20 | 2.1 | <1.0 | <1.0 | 130 | <1.0 | <1.0 |
| | 11/3/2009 | | A864529 | <1.0 | <1.0 | 25 | 2.1 | <1.0 | <1.0 | 190 | <1.0 | <1.0 |
| | 11/3/2009 | | A864530 | <1.0 | <1.0 | 24 | 2.2 | <1.0 | <1.0 | 180 | <1.0 | <1.0 |
| MW-154 | 7/14/1995 | 5-20 | W5070191-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5 | <5.0 | <5.0 | NA | <10 |
| | 2/5/1997 | | W7020074-11 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253789 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 2/28/2000 | | 260587 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280692 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/21/2001 | | 296410 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/22/2002 | | 324191 | <5.0 | <5.0 | 8.5 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 12/03/2003 | | 503002560 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237141 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 12/22/2004 | | A685834 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/14/2005 | | A702975 | <1.0 | <1.0 | <1.0 | <1.0 | 2.8 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/6/2005 | | A721013 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/20/2006 | | A756755 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/2/2007 | | A775727 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/2/2007 | | A775729 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/28/2007 | | A790704 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/2/2008 | | A832826 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/3/2009 | | A864551 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-156 | 9/11/1995 | 5-20 | W5090134-03 | <5.0 | <5.0 | 30 | <5.0 | <5.0 | <5.0 | 280 | NA | <10 |
| | 2/6/1997 | | W7020074-16 | <5.0 | <5.0 | 7.5 | <5.0 | <5.0 | <5.0 | 52 | NA | <10 |
| | 2/6/1997 | | W7020074-24 | <5.0 | <5.0 | 6.9 | <5.0 | <5.0 | <5.0 | 50 | NA | <10 |
| | 11/23/1999 | | 253807 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 48 | <5.0 | <5.0 |
| | 2/29/2000 | | 260577 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 65 | <5.0 | <5.0 |
| | 11/8/2000 | | 280694 | <5.0 | <5.0 | 11 | <5.0 | <10 | <5.0 | 190 | <5.0 | <2.0 |
| | 6/20/2001 | | 296402 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 79 | <5.0 | <2.0 |
| | 7/18/2002 | | 324116 | 2.8 | <1.0 | 15.8 | <1.0 | <5.0 | <1.0 | 292 | <1.0 | <1.0 |
| | 12/04/2003 | | 503002594 | < 5.0 | < 5.0 | 18 | < 5.0 | < 5.0 | < 5.0 | 250 | < 5.0 | <2.0 |
| | 3/11/2004 | | 503237133 | < 5.0 | < 5.0 | 28 | < 5.0 | < 5.0 | < 5.0 | 330 | < 5.0 | <2.0 |
| | 6/11/2004 | | 503518128 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 24 | < 5.0 | <2.0 |
| | 6/11/2004 | | 503518136 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 22 | < 5.0 | <2.0 |
| | 7/16/2004 | | A669500 | <1.0 | <1.0 | 36 | 2.8 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 8/16/2004 | | A671801 | <1.0 | <1.0 | 37 | 3.3 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 9/14/2004 | | A675209 | <1.0 | <1.0 | 50 | 4.6 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 10/18/2004 | | A678049 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 13 | <1.0 | <1.0 |
| | 11/19/2004 | | A681813 | <1.0 | <1.0 | 52 | 4.2 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 12/21/2004 | | A685817 | <1.0 | <1.0 | 54 | 3.9 | <1.0 | <1.0 | 250 | <1.0 | <1.0 |
| | 1/24/2005 | | A688375 | <1.0 | <1.0 | 35 | 2.9 | <1.0 | <1.0 | 130 | <1.0 | <1.0 |
| | 3/16/2005 | | A693385 | <1.0 | <1.0 | 53 | 4.1 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 6/14/2005 | | A702980 | <1.0 | <1.0 | 3.7 | <1.0 | <1.0 | <1.0 | 29 | <1.0 | <1.0 |
| | 9/23/2005 | | A713018 | <1.0 | <1.0 | 50 | 4.2 | <1.0 | <1.0 | 190 | <1.0 | <1.0 |
| | 12/7/2005 | | A721027 | <1.0 | <1.0 | 41 | 3.4 | <1.0 | <1.0 | 160 | <1.0 | <1.0 |
| | 3/15/2006 | | A728651 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.3 | <1.0 | <1.0 |
| | 6/14/2006 | | A737761 | <1.0 | <1.0 | 36 | 3.5 | <1.0 | <1.0 | 160 | <1.0 | <1.0 |
| | 9/27/2006 | | A747964 | <1.0 | <1.0 | 46 | 4.7 | <1.0 | <1.0 | 240 | <1.0 | <1.0 |
| | 11/21/2006 | | A753700 | <1.0 | <1.0 | 11 | 1.3 | <1.0 | <1.0 | 100 | <1.0 | <1.0 |
| | 12/21/2006 | | A756775 | <10 | <10 | 55 | <10 | <10 | <10 | 240 | <10 | <10 |
| | 1/19/2007 | | A758755 | <1.0 | <1.0 | 34 | 3.4 | <1.0 | <1.0 | 200 | <1.0 | <1.0 |
| | 3/23/2007 | | A764756 | <1.0 | <1.0 | 40 | 3.8 | <1.0 | <1.0 | 170 | <1.0 | <1.0 |
| | 7/3/2007 | | A775749 | <1.0 | <1.0 | 41 | 4.6 | <1.0 | <1.0 | 170 | <1.0 | <1.0 |
| | 7/3/2007 | | A775750 | <1.0 | <1.0 | 39 | 4.2 | <1.0 | <1.0 | 190 | <1.0 | <1.0 |
| | 9/6/2007 | | A781789 | <1.0 | <1.0 | 51 | 5.8 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 11/30/2007 | | A790716 | <1.0 | <1.0 | 52 | 4.3 | <1.0 | <1.0 | 200 | <1.0 | <1.0 |
| | 3/20/2008 | | A803425 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 7.6 | <1.0 | <1.0 |
| | 5/30/2008 | | A812361 | <1.0 | <1.0 | 31 | 3.0 | <1.0 | <1.0 | 150 | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [(1)] | | | | 0.289[(2)] | 7 | 70 | 128[(2)] | 6.30[(2)] | 5 | 5 | 13.7[(2)] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [(1)] | | | | 46.1[(2)] | 7 | 1,022 | 2,040[(2)] | 381[(2)] | 56.1 | 260 | 5,110[(2)] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-156 (cont'd.) | 9/24/2008 | 5-20 | A824675 | <1.0 | <1.0 | 43 | 3.5 | <1.0 | <1.0 | 180 | <1.0 | <1.0 |
| | 12/3/2008 | | A832816 | <5.0 | <5.0 | 71 | <5.0 | <5.0 | <5.0 | 160 | <5.0 | <5.0 |
| | 3/12/2009 | | A841806 | <1.0 | <1.0 | 27 | 2.4 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 6/18/2009 | | A850593 | <1.0 | <1.0 | 23 | 2.1 | <1.0 | <1.0 | 79 | <1.0 | <1.0 |
| | 9/16/2009 | | A858564 | <1.0 | <1.0 | 54 | 5.1 | <1.0 | <1.0 | 210 | <1.0 | <1.0 |
| | 11/4/2009 | | A864555 | <1.0 | <1.0 | 38 | 3.8 | <1.0 | <1.0 | 140 | <1.0 | <1.0 |
| MW-157 | 2/6/1997 | 5-20 | W7020074-19 | <50 | <50 | <50 | <50 | <50 | <50 | 60 | NA | <100 |
| | 2/26/1997 | | W7020396-01 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 100 | NA | <10 |
| | 2/29/2000 | | 260581 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 100 | <5.0 | <5.0 |
| | 11/8/2000 | | 280695 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 120 | <5.0 | <2.0 |
| | 6/21/2001 | | 296411 | <5.0 | <5.0 | 7.3 | <5.0 | <10 | <5.0 | 65 | <5.0 | <2.0 |
| | 7/19/2002 | | 324153 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 99 | <5.0 | <2.0 |
| | 12/4/2003 | | 503002602 | <5.0 | <5.0 | 5.3 | <5.0 | <5.0 | <5.0 | 100 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237125 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 110 | <5.0 | <2.0 |
| | 6/4/2004 | | 503493256 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 16 | <5.0 | <2.0 |
| | 9/14/2004 | | A675208 | <1.0 | <1.0 | 2.6 | <1.0 | <1.0 | <1.0 | 90 | <1.0 | <1.0 |
| | 12/21/2004 | | A685815 | <1.0 | <1.0 | 1.9 | <1.0 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 3/15/2005 | | A693378 | <1.0 | <1.0 | 1.6 | <1.0 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 6/14/2005 | | A702982 | <1.0 | <1.0 | 2.0 | <1.0 | <1.0 | <1.0 | 94 | <1.0 | <1.0 |
| | 9/23/2005 | | A713016 | <1.0 | <1.0 | 1.91 | <1.0 | <1.0 | <1.0 | 94.9 | <1.0 | <1.0 |
| | 12/5/2005 | | NS | | | | | | | | | |
| | 3/13/2006 | | NS | | | | | | | | | |
| | 6/15/2006 | | A737767 | <1.0 | <1.0 | 1.3 | <1.0 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 10/13/2006 | | A749067 | <1.0 | <1.0 | 1.6 | <1.0 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 12/21/2006 | | A756777 | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 3/23/2007 | | A764758 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 57 | <1.0 | <1.0 |
| | 7/3/2007 | | A775757 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 100 | <1.0 | <1.0 |
| | 9/7/2007 | | A781795 | <1.0 | <1.0 | 1.2 | <1.0 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 11/30/2007 | | A790706 | <1.0 | <1.0 | 1.0 | <1.0 | <1.0 | <1.0 | 100 | <1.0 | <1.0 |
| | 3/19/2008 | | A803426 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 9.3 | <1.0 | <1.0 |
| | 5/30/2008 | | A812364 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 53 | <1.0 | <1.0 |
| | 9/24/2008 | | A824677 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 71 | <1.0 | <1.0 |
| | 12/3/2008 | | A832818 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 95 | <1.0 | <1.0 |
| | 3/12/2009 | | A841816 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 98 | <1.0 | <1.0 |
| | 9/16/2009 | | A858558 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 70 | <1.0 | <1.0 |
| | 11/4/2009 | | A864558 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 92 | <1.0 | <1.0 |
| MW-160 | 3/2/2000 | 3-13 | 260551 | <5.0 | <5.0 | 61 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280698 | <5.0 | <5.0 | 51 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 5.4 |
| | 6/21/2001 | | 296417 | <5.0 | <5.0 | 47 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 3.3 |
| | 7/17/2002 | | 324027 | <1.0 | <1.0 | 107 | 1.5 | <5.0 | <1.0 | <1.0 | <1.0 | 5.2 |
| | 7/17/2002 | | 324028 | <1.0 | <1.0 | 111 | 1.5 | <5.0 | <1.0 | <1.0 | <1.0 | 5 |
| | 12/04/2003 | | 503002610 | <5.0 | <5.0 | 240 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237281 | <5.0 | <5.0 | 240 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/4/2004 | | 503493264 | <5.0 | <5.0 | 73 | <5.0 | <5.0 | <5.0 | 400 | <5.0 | <2.0 |
| | 9/16/2004 | | A675223 | <1.0 | <1.0 | 180 | 2.5 | <1.0 | <1.0 | <1.0 | <1.0 | 7.2 |
| | 12/22/2004 | | A685818 | <1.0 | <1.0 | 120 | 1.8 | <1.0 | <1.0 | <1.0 | <1.0 | 8.7 |
| | 3/17/2005 | | A693399 | <1.0 | <1.0 | 190 | 2.8 | <1.0 | <1.0 | <1.0 | <1.0 | 2.7 |
| | 6/13/2005 | | A702969 | <1.0 | <1.0 | 56 | <1.0 | 1.0 | <1.0 | <1.0 | <1.0 | 9 |
| | 9/23/2005 | | A713022 | <1.0 | <1.0 | 55 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 18 |
| | 12/6/2005 | | A721006 | <1.0 | <1.0 | 95 | 2.3 | <1.0 | <1.0 | <1.0 | <1.0 | 25 |
| | 4/5/2006 | | A730656 | <1.0 | <1.0 | 92 | 1.9 | <1.0 | <1.0 | <1.0 | <1.0 | 9.5 |
| | 6/13/2006 | | A737750 | <1.0 | <1.0 | 63 | 1.1 | <1.0 | <1.0 | <1.0 | <1.0 | 18 |
| | 10/13/2006 | | A749068 | <1.0 | <1.0 | 86 | 1.8 | <1.0 | <1.0 | <1.0 | <1.0 | 7.9 |
| | 1/19/2007 | | A758748 | <1.0 | <1.0 | 60 | 1.4 | <1.0 | <1.0 | <1.0 | <1.0 | 7.4 |
| | 3/22/2007 | | A764736 | <1.0 | <1.0 | 58 | 1.6 | <1.0 | <1.0 | <1.0 | <1.0 | 6.5 |
| | 7/2/2007 | | A775736 | <1.0 | <1.0 | 5.4 | <1.0 | <1.0 | <1.0 | 1.5 | <1.0 | 2.0 |
| | 9/6/2007 | | A781787 | <1.0 | <1.0 | 5.9 | <1.0 | <1.0 | <1.0 | 1.2 | <1.0 | 2.1 |
| | 11/28/2007 | | A790701 | <1.0 | <1.0 | 22 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 17 |
| | 4/15/2008 | | A806503 | <1.0 | <1.0 | 40 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.4 |
| | 5/30/2008 | | A812367 | <1.0 | <1.0 | 22 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.5 |
| | 9/24/2008 | | A824679 | <1.0 | <1.0 | 25 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.5 |
| | 12/4/2008 | | A832820 | <1.0 | <1.0 | 26 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 3/13/2009 | | A841828 | <1.0 | <1.0 | 26 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.7 |
| MW-161 | 3/2/2000 | 3-13 | 260552 | <5.0 | <5.0 | 160 | <5.0 | <10 | <5.0 | 170 | <5.0 | 8.2 |
| | 11/8/2000 | | 280699 | <5.0 | 79 | 13,000 | 80 | <10 | <5.0 | 4,300 | <5.0 | 570 |
| | 6/21/2001 | | 296416 | 18 | 36 | 6,700 | 37 | <10 | <5.0 | 2,700 | <5.0 | 170 |
| | 7/18/2002 | | 324103 | <1.0 | 11.7 | 7,920 | 55.4 | <5.0 | <1.0 | 3,550 | <1.0 | 120 |
| | 12/04/2003 | | 503002628 | <5.0 | <5.0 | 11 | <5.0 | <5.0 | <5.0 | 53 | < 5.0 | <2.0 |
| | 3/11/2004 | | 503237299 | <5.0 | <5.0 | 330 | <5.0 | <5.0 | <5.0 | 200 | < 5.0 | <2.0 |
| | 6/4/2004 | | 503493272 | <5.0 | <5.0 | 5.1 | <5.0 | <5.0 | <5.0 | <5.0 | < 5.0 | <2.0 |
| | 9/16/2004 | | A675224 | <1.0 | 8.4 | 4,500 | 41 | <1.0 | <1.0 | 1,900 | <1.0 | 110 |
| | 12/22/2004 | | A685819 | <1.0 | 3 | 1,700 | 16 | <1.0 | <1.0 | 660 | <1.0 | 25 |
| | 3/17/2005 | | A693400 | <1.0 | 2.7 | 1,500 | 25 | <1.0 | <1.0 | 810 | <1.0 | 4.1 |
| | 6/13/2005 | | A702970 | <1.0 | 2.0 | 1,200E | 15 | 1.3 | <1.0 | 370 | <1.0 | 27 |
| | 9/26/2005 | | A713024 | <1.0 | <1.0 | 600 | 5.7 | <1.0 | <1.0 | 150 | <1.0 | 10 |
| | 12/6/2005 | | A721007 | <1.0 | <1.0 | 7.3 | <1.0 | <1.0 | <1.0 | 47 | <1.0 | <1.0 |
| | 12/6/2005 | | A721008 | <1.0 | <1.0 | 13 | <1.0 | <1.0 | <1.0 | 50 | <1.0 | <1.0 |
| | 4/5/2006 | | A730657 | <1.0 | <1.0 | 21 | <1.0 | <1.0 | <1.0 | 28 | <1.0 | <1.0 |
| | 4/5/2006 | | A730659 | <1.0 | <1.0 | 19 | <1.0 | <1.0 | <1.0 | 26 | <1.0 | <1.0 |
| | 6/13/2006 | | A737751 | <1.0 | <1.0 | 360 | 3.9 | <1.0 | <1.0 | 280 | <1.0 | <1.0 |
| | 10/13/2006 | | A749069 | <1.0 | 3.7 | 2,300 | 27 | <1.0 | <1.0 | 1,300 | <1.0 | 83 |
| | 10/13/2006 | | A749070 | <1.0 | 4.0 | 2,300 | 31 | <1.0 | <1.0 | 1,300 | <1.0 | 95 |
| | 1/19/2007 | | A758749 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 14 | <1.0 | <1.0 |
| | 1/19/2007 | | A758750 | <1.0 | <1.0 | 3.5 | <1.0 | <1.0 | <1.0 | 14 | <1.0 | <1.0 |
| | 3/22/2007 | | A764737 | <1.0 | <1.0 | 1.4 | <1.0 | <1.0 | <1.0 | 10 | <1.0 | <1.0 |
| | 7/2/2007 | | A775735 | <1.0 | <1.0 | 4.8 | <1.0 | <1.0 | <1.0 | 1.3 | <1.0 | 1.8 |
| | 9/6/2007 | | A781788 | <1.0 | <1.0 | 6.6 | <1.0 | <1.0 | <1.0 | 1.5 | <1.0 | 2.3 |
| | 11/28/2007 | | A790702 | <1.0 | <1.0 | 35 | <1.0 | <1.0 | <1.0 | 59 | <1.0 | <1.0 |
| | 11/28/2007 | | A790703 | <1.0 | <1.0 | 50 | 1.1 | <1.0 | <1.0 | 72 | <1.0 | <1.0 |
| | 4/15/2008 | | A806502 | <1.0 | <1.0 | 2.7 | <1.0 | <1.0 | <1.0 | 8.9 | <1.0 | <1.0 |
| | 5/30/2008 | | A812368 | <1.0 | <1.0 | 690 | 8.8 | <1.0 | <1.0 | 550 | <1.0 | 23 |
| | 9/24/2008 | | A824680 | <1.0 | 1.8 | 1,200 | 20 | <1.0 | <1.0 | 1,100 | <1.0 | 29 |
| | 12/4/2008 | | A832821 | <1.0 | 1.2 | 970 | 7.5 | <1.0 | <1.0 | 760 | <1.0 | 45 |
| | 12/4/2008 | | A832822 | <1.0 | 1.3 | 910 | 7.3 | <1.0 | <1.0 | 730 | <1.0 | 42 |
| | 3/13/2009 | | A841829 | <1.0 | <1.0 | 48 | <1.0 | <1.0 | <1.0 | 39 | <1.0 | <1.0 |
| | 6/19/2009 | | A850605 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 7.0 | <1.0 | <1.0 |
| | 11/4/2009 | | A864559 | <1.0 | <1.0 | 100 | 1.9 | <1.0 | <1.0 | 110 | <1.0 | 5.2 |
| | 11/4/2009 | | A864560 | <1.0 | <1.0 | 88 | 1.8 | <1.0 | <1.0 | 110 | <1.0 | 5.3 |
| Tier II Residential Cleanup Goals - Groundwater (1) | | | | 0.289(2) | 7 | 70 | 128(2) | 6.30(2) | 5 | 5 | 13.7(2) | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater (1) | | | | 46.1(2) | 7 | 1,022 | 2,040(2) | 381(2) | 56.1 | 260 | 5,110(2) | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-163 | 11/8/2000 | 10-20 | 280701 | <5.0 | 11 | 600 | 11 | <10 | <5.0 | 1,500 | <5.0 | <2.0 |
| | 6/20/2001 | | 296395 | <5.0 | 13 | 800 | 14 | <10 | <5.0 | 1,800 | <5.0 | <2.0 |
| | 7/18/2002 | | 324117 | <1.0 | <1.0 | 488 | 6.2 | <5.0 | <1.0 | 1,650 | <1.0 | <1.0 |
| | 7/18/2002 | | 324119 | <1.0 | <1.0 | 521 | 7.1 | <5.0 | <1.0 | 1,600 | <1.0 | <1.0 |
| | 7/16/2004 | | A669497 | <1.0 | <1.0 | 250 | 5.9 | <1.0 | <1.0 | 1,300 | <1.0 | <1.0 |
| | 7/16/2004 | | A669498 | <1.0 | <1.0 | 240 | 5.4 | <1.0 | <1.0 | 1,100 | <1.0 | <1.0 |
| | 8/16/2004 | | A671798 | <1.0 | <1.0 | 240 | 3.7 | <1.0 | <1.0 | 790 | <1.0 | <1.0 |
| | 8/16/2004 | | A671803 | <1.0 | <1.0 | 210 | 3.8 | <1.0 | <1.0 | 680 | <1.0 | <1.0 |
| | 10/18/2004 | | A678053 | <1.0 | <1.0 | 530E | 9.6 | <1.0 | <1.0 | 1,600 | <1.0 | <1.0 |
| | 11/19/2004 | | A681810 | <1.0 | 2.2 | 1,300 | 15 | 1.1 | <1.0 | 700 | <1.0 | <1.0 |
| | 12/21/2004 | | A685841 | <1.0 | <1.0 | 620 | 18 | <1.0 | <1.0 | 470 | <1.0 | <1.0 |
| | 1/24/2005 | | A688371 | <1.0 | <1.0 | 380 | 9 | <1.0 | <1.0 | 360 | <1.0 | <1.0 |
| | 3/15/2005 | | A693406 | <1.0 | <1.0 | 650 | 15 | <1.0 | <1.0 | 400 | <1.0 | <1.0 |
| | 6/14/2005 | | A702978 | <1.0 | <1.0 | 430 | 14 | 3.1 | <1.0 | 430 | <1.0 | <1.0 |
| | 9/23/2005 | | A713028 | <1.0 | 2.0 | 1,200 | 34 | <1.0 | <1.0 | 640 | <1.0 | 54 |
| | 12/7/2005 | | A721031 | <1.0 | 1.5 | 830 | 35 | <1.0 | <1.0 | 520 | <1.0 | 220 |
| | 3/15/2006 | | A728649 | <1.0 | <1.0 | 270 | 9.1 | <1.0 | <1.0 | 410 | <1.0 | 96 |
| | 6/15/2006 | | A737764 | <1.0 | <1.0 | 220 | 8.1 | <1.0 | <1.0 | 440 | <1.0 | 52 |
| | 9/26/2006 | | A747961 | <1.0 | <1.0 | 120 | 9.7 | <1.0 | <1.0 | 450 | <1.0 | 20 |
| | 11/21/2006 | | A753703 | <1.0 | 1.2 | 1,200 | 11 | <1.0 | <1.0 | 58 | <1.0 | 42 |
| | 12/21/2006 | | A756773 | <1.0 | <1.0 | 91 | 2.6 | <1.0 | <1.0 | 28 | <1.0 | 13 |
| | 1/19/2007 | | A758759 | <10 | <10 | 170 | <10 | 10 | <10 | <10 | <10 | 58 |
| | 3/22/2007 | | A764741 | <1.0 | <1.0 | 210 | 8.1 | <1.0 | <1.0 | 23 | <1.0 | 230 |
| | 7/3/2007 | | A775754 | <1.0 | <1.0 | 41 | 1.7 | <1.0 | <1.0 | 46 | <1.0 | <1.0 |
| | 9/7/2007 | | A781792 | <1.0 | <1.0 | 18 | 1.2 | <1.0 | <1.0 | 16 | <1.0 | 30 |
| | 11/30/2007 | | A790714 | <1.0 | <1.0 | 38 | 1.1 | <1.0 | <1.0 | 14 | <1.0 | 52 |
| | 3/20/2008 | | A803423 | <1.0 | <1.0 | 18 | <1.0 | <1.0 | <1.0 | 11 | <1.0 | 2.4 |
| | 5/29/2008 | | A812359 | <1.0 | <1.0 | 100 | 5.2 | <1.0 | <1.0 | 22 | <1.0 | 77 |
| | 9/24/2008 | | A824673 | <1.0 | <1.0 | 5.5 | 1.3 | <1.0 | <1.0 | 5.6 | <1.0 | 15 |
| | 12/3/2008 | | A832814 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.6 | <1.0 | <1.0 |
| | 3/13/2009 | | A841812 | <1.0 | <1.0 | 1.9 | <1.0 | <1.0 | <1.0 | 10 | <1.0 | 1.0 |
| | 6/18/2009 | | A850590 | <1.0 | <1.0 | 39 | 1.5 | <1.0 | <1.0 | 32 | <1.0 | 11 |
| | 9/15/2009 | | A858540 | <1.0 | <1.0 | 19 | <1.0 | <1.0 | <1.0 | 20 | <1.0 | 12 |
| | 11/4/2009 | | A864553 | <1.0 | <1.0 | 16 | <1.0 | <1.0 | <1.0 | 93 | <1.0 | 9.2 |
| MW-164 | 11/7/2000 | 16-26 | 280702 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 18 | <5.0 | <2.0 |
| | 6/21/2001 | | 296413 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 11 | <5.0 | <2.0 |
| | 7/19/2002 | | 324154 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | 17 | <5.0 | <2.0 |
| | 12/05/2003 | | 503002636 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 21 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237117 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 20 | <5.0 | <2.0 |
| | 6/4/2004 | | 503493249 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 16 | <5.0 | <2.0 |
| | 9/15/2004 | | A675228 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 21 | <1.0 | <1.0 |
| | 12/20/2004 | | A685806 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 22 | <1.0 | <1.0 |
| | 3/15/2005 | | A693377 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 19 | <1.0 | <1.0 |
| | 6/14/2005 | | A702983 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 19 | <1.0 | <1.0 |
| | 9/23/2005 | | A713015 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 14 | <1.0 | <1.0 |
| | 12/7/2005 | | A721028 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 20 | <1.0 | <1.0 |
| | 3/15/2006 | | A728653 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 17 | <1.0 | <1.0 |
| | 6/15/2006 | | A737768 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 19 | <1.0 | <1.0 |
| | 9/26/2006 | | A747959 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 17 | <1.0 | <1.0 |
| | 12/21/2006 | | A756778 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 24 | <1.0 | <1.0 |
| | 3/23/2007 | | A764759 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 21 | <1.0 | <1.0 |
| | 7/3/2007 | | A775758 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 25 | <1.0 | <1.0 |
| | 9/7/2007 | | A781796 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 29 | <1.0 | <1.0 |
| | 11/30/2007 | | A790707 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 19 | <1.0 | <1.0 |
| | 3/20/2008 | | A803431 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 22 | <1.0 | <1.0 |
| | 5/30/2008 | | A812365 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 13 | <1.0 | <1.0 |
| | 9/24/2008 | | A824678 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 23 | <1.0 | <1.0 |
| | 12/3/2008 | | A832819 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 23 | <1.0 | <1.0 |
| | 3/13/2009 | | A841809 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 17 | <1.0 | <1.0 |
| | 6/18/2009 | | A850587 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 16 | <1.0 | <1.0 |
| | 9/16/2009 | | A858557 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 14 | <1.0 | <1.0 |
| | 11/4/2009 | | A864557 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 21 | <1.0 | <1.0 |
| MW-165S | 6/1/2001 | 10-20 | 294563 | <5.0 | <5.0 | 23.8 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/1/2001 | | 294564 | <5.0 | <5.0 | 23.6 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/18/2002 | | 324108 | <1.0 | <1.0 | 66.6 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | 36.6 |
| | 12/05/2003 | | 503002644 | <5.0 | <5.0 | 25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 10 |
| | 3/11/2004 | | 503237083 | <5.0 | <5.0 | 23 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 13 |
| | 6/3/2004 | | 503493066 | <5.0 | <5.0 | 19 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 6.5 |
| | 9/14/2004 | | A675200 | <1.0 | <1.0 | 22 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.4 |
| | 12/20/2004 | | A685808 | <1.0 | <1.0 | 27 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 13 |
| | 3/15/2005 | | A693380 | <1.0 | <1.0 | 44 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 26 |
| | 6/13/2005 | | A702972 | <1.0 | <1.0 | 11 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.2 |
| | 9/21/2005 | | A713002 | <1.0 | <1.0 | 19.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 13.6 |
| | 12/6/2005 | | A721010 | <1.0 | <1.0 | 14 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 16 |
| | 3/14/2006 | | A728635 | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 |
| | 6/13/2006 | | A737746 | <1.0 | <1.0 | 5.4 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.3 |
| | 9/27/2006 | | A747971 | <1.0 | <1.0 | 9.1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 15 |
| | 12/21/2006 | | A756783 | <1.0 | <1.0 | 7.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 14 |
| | 3/21/2007 | | A764747 | <1.0 | <1.0 | 7.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 33 |
| | 7/2/2007 | | A775742 | <1.0 | <1.0 | 4.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 17 |
| | 9/7/2007 | | A781802 | <1.0 | <1.0 | 4.3 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 | 10 |
| | 11/28/2007 | | A790697 | <1.0 | <1.0 | 4.1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.0 |
| | 3/19/2008 | | A803404 | <1.0 | <1.0 | 2.2 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.2 |
| | 5/28/2008 | | A812343 | <1.0 | <1.0 | 2.4 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 7.4 |
| | 9/23/2008 | | A824655 | <1.0 | <1.0 | 3.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.6 |
| | 12/2/2008 | | A832834 | <1.0 | <1.0 | 2.8 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.9 |
| | 3/12/2009 | | A841819 | <1.0 | <1.0 | 1.7 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 |
| | 6/18/2009 | | A850585 | <1.0 | <1.0 | 1.9 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.7 |
| | 9/15/2009 | | A858549 | <1.0 | <1.0 | 2.8 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.2 |
| | 11/3/2009 | | A864547 | <1.0 | <1.0 | 2.9 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.4 |
| MW-166S | 6/1/2001 | 10-20 | 294565 | <5.0 | <5.0 | 553 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 63 |
| | 7/18/2002 | | 324106 | <1.0 | <1.0 | 222 | 1.5 | <5.0 | <1.0 | <1.0 | <1.0 | 15.8 |
| | 12/19/2003 | | 503046765 | <5.0 | <5.0 | 170 | 5.5 | <5.0 | <5.0 | <5.0 | <5.0 | 8 |
| | 12/19/2003 | | 503046773 | <5.0 | <5.0 | 130 | 8.3 | <5.0 | <5.0 | <5.0 | <5.0 | 7.7 |
| | 3/11/2004 | | 503237067 | <5.0 | <5.0 | 140 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/3/2004 | | 503493033 | <5.0 | <5.0 | 270 | 5.2 | <5.0 | <5.0 | <5.0 | <5.0 | 17 |
| | 9/14/2004 | | A675202 | <10 | <10 | 290 | 11 | <10 | <10 | <10 | <10 | 18 |
| | 12/20/2004 | | A685810 | <10 | <10 | 350 | 37 | 13 | <10 | <10 | <10 | 19 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-166S (cont'd.) | 3/15/2005 | 10-20 | A693382 | <10 | <10 | 290 | 66 | <10 | <10 | <10 | <10 | 61 |
| | 6/13/2005 | | A702973 | <1.0 | <1.0 | 310 | 7.1 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 9/21/2005 | | A713000[5] | <1.0 | <1.0 | 298 | 3.77 | <1.0 | <1.0 | <1.0 | <1.0 | 10 |
| | 12/6/2005 | | A721011 | <1.0 | <1.0 | 280 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 3/14/2006 | | A728637 | <1.0 | <1.0 | 89 | 1.6 | <1.0 | <1.0 | <1.0 | <1.0 | 4.1 |
| | 6/13/2006 | | A737749 | <1.0 | <1.0 | 340 | 9.8 | <1.0 | <1.0 | <1.0 | <1.0 | 10 |
| | 9/27/2006 | | A747974 | <1.0 | <1.0 | 360 | 17 | <1.0 | <1.0 | <1.0 | <1.0 | 17 |
| | 12/21/2006 | | A756787 | <1.0 | <1.0 | 340 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 3/21/2007 | | A764749 | <1.0 | <1.0 | 44 | 1.8 | <1.0 | <1.0 | <1.0 | <1.0 | 1.3 |
| | 7/2/2007 | | A775744 | <1.0 | <1.0 | 340 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 9/7/2007 | | A781805 | <1.0 | <1.0 | 280 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 15 |
| | 11/28/2007 | | A790699 | <1.0 | <1.0 | 350 | 6.9 | <1.0 | <1.0 | <1.0 | <1.0 | 14 |
| | 3/19/2008 | | A803406 | <1.0 | <1.0 | 270 | 7.9 | <1.0 | <1.0 | <1.0 | <1.0 | 16 |
| | 5/28/2008 | | A812345 | <1.0 | <1.0 | 230 | 7 | <1.0 | <1.0 | <1.0 | <1.0 | 6.7 |
| | 9/23/2008 | | A824657 | <1.0 | <1.0 | 250 | 18 | <1.0 | <1.0 | <1.0 | <1.0 | 7.7 |
| | 12/2/2008 | | A832836 | <1.0 | <1.0 | 250 | 7.3 | <1.0 | <1.0 | <1.0 | <1.0 | 11 |
| | 3/12/2009 | | A841817 | <1.0 | <1.0 | 190 | 5.6 | <1.0 | <1.0 | <1.0 | <1.0 | 5.6 |
| | 6/18/2009 | | A850584 | <1.0 | <1.0 | 17 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/15/2009 | | A858546 | <1.0 | <1.0 | 230 | 8.1 | <1.0 | <1.0 | <1.0 | <1.0 | 7.2 |
| | 11/3/2009 | | A864550 | <1.0 | <1.0 | 170 | 9.7 | <1.0 | <1.0 | <1.0 | <1.0 | 6.5 |
| MW-167S | 6/1/2001 | 12-22 | 294566 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 11 |
| | 7/17/2002 | | 324026 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | 1.7 |
| | 12/04/2003 | | 503002669 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | <2.0 |
| | 3/11/2004 | | 503237109 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | <2.0 |
| | 6/3/2004 | | 503493223 | < 5.0 | < 5.0 | 7.7 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 3.3 |
| | 9/14/2004 | | A675204 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.9 |
| | 12/21/2004 | | A685814 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 20 |
| | 3/15/2005 | | A693375 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/13/2005 | | A702967 | <1.0 | <1.0 | <1.0 | <1.0 | 1.9 | <1.0 | <1.0 | <1.0 | 1.1 |
| | 9/23/2005 | | A713021 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.0 |
| | 11/7/2005 | | A717640 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 15 |
| | 12/6/2005 | | A721004 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 26 |
| | 12/6/2005 | | A721005 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 26 |
| | 3/13/2006 | | A728628 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/12/2006 | | A737739 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/27/2006 | | A747968 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/21/2006 | | A756781 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/21/2007 | | A764744 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 7/2/2007 | | A775740 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/7/2007 | | A781799 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.9 | <1.0 |
| | 11/28/2007 | | A790694 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.0 |
| | 3/19/2008 | | A803402 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/28/2008 | | A812340 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/23/2008 | | A824653 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 9.5 | <1.0 | <1.0 |
| | 12/1/2008 | | A832830 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| | 12/1/2008 | | A832831 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.3 |
| | 3/12/2009 | | A841821 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/19/2009 | | A850599 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/16/2009 | | A858561 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/3/2009 | | A864544 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-168S | 6/1/2001 | 12-22 | 294567 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/18/2002 | | 324110 | <1.0 | <1.0 | 45.5 | <1.0 | <5.0 | 49.8 | 10.8 | <1.0 | 4.1 |
| | 7/18/2002 | | 324111 | <1.0 | <1.0 | 46 | <1.0 | <5.0 | 52.7 | 11.3 | <1.0 | 4.1 |
| | 11/7/2005 | | A717641 | <1.0 | <1.0 | 66 | 3.7 | <1.0 | 370 | 20 | <1.0 | 3.4 |
| MW-169S | 1/30/2002 | 15-25 | 312995 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | |
| | 7/17/2002 | | 324019 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | 1.3 |
| | 12/04/2003 | | 503002693 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 3/11/2004 | | 503237042 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/3/2004 | | 503493199 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 9/14/2004 | | A675207 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/21/2004 | | A685812 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.1 |
| | 3/15/2005 | | A693374 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 |
| | 6/13/2005 | | A702966 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.7 |
| | 9/22/2005 | | A713012 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.05 |
| | 11/7/2005 | | A717638 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.3 |
| | 12/6/2005 | | A721000 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/13/2006 | | A728626 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 |
| | 6/12/2006 | | A737738 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.2 |
| | 9/27/2006 | | A747966 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/21/2006 | | A756779 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.5 |
| | 3/21/2007 | | A764743 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| | 7/3/2007 | | A775759 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/7/2007 | | A781797 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.2 | 1.2 |
| | 11/28/2007 | | A790693 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/19/2008 | | A803401 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.3 |
| | 5/28/2008 | | A812338 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/23/2008 | | A824650 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 11 | <1.0 | <1.0 |
| | 12/1/2008 | | A832829 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/12/2009 | | A841824 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/19/2009 | | A850601 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/16/2009 | | A858559 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/3/2009 | | A864540 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-170S | 1/31/2002 | 17-27 | 313002 | <5.0 | <5.0 | <5.0 | <5.0 | <10. | <5.0 | <5.0 | <5.0 | 6.4 |
| | 7/17/2002 | | 324023 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | 2.2 |
| | 11/3/2009 | | A864541 | <1.0 | <1.0 | 2.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.2 |
| | 11/3/2009 | | A864542 | <1.0 | <1.0 | 2.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 5.3 |
| MW-173 | 3/3/2004 | 8-18 | 503207540 | <1.0 | NA | NA | NA | NA | NA | 310 | NA | NA |
| | 7/16/2004 | | A669499 | <1.0 | <1.0 | 180 | 6.0 | <1.0 | <1.0 | 300 | <1.0 | <1.0 |
| | 8/16/2004 | | A671800 | <1.0 | <1.0 | 120 | 4.8 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 10/18/2004 | | A678051 | <1.0 | <1.0 | 120 | 5.0 | <1.0 | <1.0 | 340 | <1.0 | <1.0 |
| | 11/19/2004 | | A681811 | <1.0 | <1.0 | 150 | 5.3 | <1.0 | <1.0 | 330 | <1.0 | <1.0 |
| | 12/21/2004 | | A685839 | <1.0 | <1.0 | 260 | 19 | <1.0 | <1.0 | 430 | <1.0 | <1.0 |
| | 1/24/2005 | | A688373 | <1.0 | <1.0 | 190 | 7.2 | <1.0 | <1.0 | 290 | <1.0 | <1.0 |
| | 3/15/2005 | | A693404 | <1.0 | <1.0 | 110 | 6.4 | <1.0 | <1.0 | 290 | <1.0 | <1.0 |
| | 6/14/2005 | | A702979 | <1.0 | <1.0 | 57 | 6.3B | <1.0 | <1.0 | 320 | <1.0 | <1.0 |
| | 6/14/2005 | | A703199 | <1.0 | <1.0 | 63 | 6.9 | <1.0 | <1.0 | 310 | <1.0 | <1.0 |
| | 9/23/2005 | | A713029 | <1.0 | <1.0 | 36 | 4.8 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 12/7/2005 | | A721029 | <1.0 | <1.0 | 29 | 3.7 | <1.0 | <1.0 | 170 | <1.0 | <1.0 |
| | 3/15/2006 | | A728650 | <1.0 | <1.0 | 55 | 7.8 | <1.0 | <1.0 | 240 | <1.0 | <1.0 |
| | 6/15/2006 | | A737765 | <1.0 | <1.0 | 36 | 9.1 | <1.0 | <1.0 | 290 | <1.0 | <1.0 |
| | 9/26/2006 | | A747960 | <1.0 | <1.0 | 30 | 6.8 | <1.0 | <1.0 | 210 | <1.0 | <1.0 |
| | 11/21/2006 | | A753704 | <1.0 | <1.0 | 26 | 5.7 | <1.0 | <1.0 | 220 | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

**Table 2a**
**Shallow Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloromethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethylbenzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-173 | 12/21/2006 | 8-18 | A756774 | <10 | <10 | 39 | <10 | <10 | <10 | 270 | <10 | <10 |
| (cont'd.) | 1/19/2007 | | A758760 | <1.0 | <1.0 | 49 | 10 | <1.0 | <1.0 | 250 | <1.0 | <1.0 |
| | 3/22/2007 | | A764755 | <1.0 | <1.0 | 25 | 7.3 | <1.0 | <1.0 | 300 | <1.0 | <1.0 |
| | 7/3/2007 | | A775756 | <1.0 | <1.0 | 23 | 6.9 | <1.0 | <1.0 | 260 | <1.0 | <1.0 |
| | 9/7/2007 | | A781794 | <1.0 | <1.0 | 14 | 3.3 | <1.0 | <1.0 | 180 | <1.0 | <1.0 |
| | 11/30/2007 | | A790715 | <1.0 | <1.0 | 9.5 | 2.3 | <1.0 | <1.0 | 120 | <1.0 | <1.0 |
| | 3/20/2008 | | A803424 | <1.0 | <1.0 | 75 | 8.0 | <1.0 | <1.0 | 160 | <1.0 | 54 |
| | 5/30/2008 | | A812360 | <1.0 | <1.0 | 160 | 8.3 | <1.0 | <1.0 | 190 | <1.0 | 1.6 |
| | 9/24/2008 | | A824674 | <1.0 | <1.0 | 140 | 16 | <1.0 | <1.0 | 320 | <1.0 | 2.0 |
| | 12/3/2008 | | A832815 | <1.0 | <1.0 | 20 | 4.0 | <1.0 | <1.0 | 150 | <1.0 | <1.0 |
| | 3/13/2009 | | A841811 | <1.0 | <1.0 | 8.3 | 2.6 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 6/18/2009 | | A850588 | <1.0 | <1.0 | 71 | 14 | <1.0 | <1.0 | 230 | <1.0 | <1.0 |
| | 9/15/2009 | | A858542 | <1.0 | <1.0 | 15 | 3.8 | <1.0 | <1.0 | 140 | <1.0 | <1.0 |
| | 11/4/2009 | | A864554 | <1.0 | <1.0 | 11 | 3.1 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| IW-1 | 3/3/2004 | 10.5-15.5 | 503207557 | NA | NA | NA | NA | NA | NA | 1,000 | NA | NA |
| | 7/16/2004 | | A669495 | <1.0 | <1.0 | 140 | 4.8 | <1.0 | <1.0 | 1,100 | <1.0 | <1.0 |
| | 8/16/2004 | | A671797 | <1.0 | <1.0 | 87 | 3.5 | <1.0 | <1.0 | 900 | <1.0 | <1.0 |
| | 10/18/2004 | | A678052 | <1.0 | <1.0 | 330E | 7.8 | <1.0 | <1.0 | 1,500 | <1.0 | <1.0 |
| | 11/19/2004 | | A681808 | <1.0 | 2.8 | 1,700 | 8.3 | 4.3 | <1.0 | 640 | <1.0 | 2.2 |
| | 12/21/2004 | | A685840 | <1.0 | 5.6 | 3,600 | 43 | 1.1E | <1.0 | 51 | <1.0 | 2.2 |
| | 1/24/2005 | | A688372 | <1.0 | 3.5 | 1,700 | 33 | <1.0 | <1.0 | 32 | <1.0 | 1.7 |
| | 3/15/2005 | | A693405 | <1.0 | 3.7 | 2,700 | 46 | <1.0 | <1.0 | 11 | <1.0 | <1.0 |
| | 6/14/2005 | | A702977 | <1.0 | 3.3 | 2,400 | 55 | 3.0 | <1.0 | 29 | <1.0 | 5.5 |
| | 9/23/2005 | | A713027 | <1.0 | 2.1 | 1,400 | 40 | <1.0 | <1.0 | 59 | <1.0 | 350 |
| | 12/7/2005 | | A721025 | <1.0 | 2.9 | 140 | 25 | <1.0 | <1.0 | 50 | <1.0 | 620 |
| | 3/15/2006 | | A728648 | <1.0 | <1.0 | 380 | 31 | <1.0 | <1.0 | 100 | <1.0 | 25 |
| | 6/15/2006 | | A737763 | <1.0 | 3.0 | 430 | 20 | <1.0 | <1.0 | 120 | <1.0 | 83 |
| | 9/26/2006 | | A747962 | <1.0 | 1.7 | 230 | 20 | <1.0 | <1.0 | 200 | <1.0 | 61 |
| | 11/21/2006 | | A753702 | <1.0 | 1.0 | 620 | 9.8 | 6.2 | <1.0 | 26 | <1.0 | 100 |
| | 12/21/2006 | | A756772 | <10 | <10 | 340 | <10 | 10 | <10 | <10 | <10 | 170 |
| | 1/19/2007 | | A758758 | <1.0 | <1.0 | 71 | 6.5 | 1.3 | <1.0 | 1.4 | <1.0 | 690 |
| | 3/22/2007 | | A764740 | <1.0 | <1.0 | 77 | 3.3 | <1.0 | <1.0 | 2.6 | <1.0 | 200 |
| | 7/3/2007 | | A775755 | <1.0 | <1.0 | 7.1 | <1.0 | <1.0 | <1.0 | 3.2 | <1.0 | <1.0 |
| | 9/7/2007 | | A781793 | <1.0 | <1.0 | 14 | 1.1 | <1.0 | <1.0 | 1.8 | <1.0 | 82 |
| | 11/30/2007 | | A790712 | <1.0 | <1.0 | 2.1 | <1.0 | <1.0 | <1.0 | 1.0 | <1.0 | 7.2 |
| | 3/20/2008 | | A803422 | <1.0 | <1.0 | 50 | 3.1 | <1.0 | <1.0 | 2.6 | <1.0 | 47 |
| | 5/29/2008 | | A812358 | <1.0 | <1.0 | <1.0 | 3.5 | <1.0 | <1.0 | <1.0 | <1.0 | 1.3 |
| | 9/24/2008 | | A824672 | <1.0 | <1.0 | 4.4 | 1.2 | <1.0 | <1.0 | 88 | <1.0 | 6.4 |
| | 12/3/2008 | | A832813 | <1.0 | <1.0 | 4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.7 |
| | 3/13/2009 | | A841813 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/18/2009 | | A850589 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 25 |
| | 9/15/2009 | | A858539 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/4/2009 | | A864552 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.9 |
| IW-2 | 3/3/2004 | 12-17 | 503207565 | <1.0 | NA | NA | NA | NA | NA | 310 | NA | NA |
| | 7/16/2004 | | A669496 | <1.0 | <1.0 | 44 | 2.0 | <1.0 | <1.0 | 170 | <1.0 | <1.0 |
| | 8/16/2004 | | A671799 | <1.0 | <1.0 | 46 | 1.8 | <1.0 | <1.0 | 210 | <1.0 | <1.0 |
| | 10/18/2004 | | A678050 | <1.0 | <1.0 | 96 | 2.9 | <1.0 | <1.0 | 290 | <1.0 | <1.0 |
| | 11/19/2004 | | A681812 | <1.0 | 1.9 | 550 | 5.8 | <1.0 | <1.0 | 150 | <1.0 | 2.5 |
| | 12/21/2004 | | A685842 | <1.0 | <1.0 | 310 | 6.9 | <1.0 | <1.0 | 230 | <1.0 | 1.1 |
| | 1/24/2005 | | A688374 | <1.0 | <1.0 | 240 | 4.3 | <1.0 | <1.0 | 190 | <1.0 | 1.7 |
| | 3/15/2005 | | A693407 | <1.0 | <1.0 | 280 | 4.2 | <1.0 | <1.0 | 130 | <1.0 | 21 |
| | 6/14/2005 | | A702976 | <1.0 | <1.0 | 130 | 3.3 | 4.3 | <1.0 | 160 | <1.0 | <1.0 |
| | 9/23/2005 | | A713026 | <1.0 | <1.0 | 37 | 2.1 | <1.0 | <1.0 | 130 | <1.0 | <1.0 |
| | 12/7/2005 | | A721024 | <1.0 | <1.0 | 51 | 3.1 | <1.0 | <1.0 | 190 | <1.0 | <1.0 |
| | 3/15/2006 | | A728647 | <1.0 | <1.0 | 54 | 2.6 | <1.0 | <1.0 | 180 | <1.0 | <1.0 |
| | 6/13/2006 | | A737745 | <1.0 | <1.0 | 18 | 1.9 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 9/26/2006 | | A747963 | <1.0 | <1.0 | 32 | 3.0 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 11/21/2006 | | A753701 | <1.0 | <1.0 | 89 | 3.1 | <1.0 | <1.0 | 83 | <1.0 | 12 |
| | 12/21/2006 | | A756771 | <10 | <10 | 41 | <10 | <10 | <10 | 100 | <10 | <10 |
| | 1/19/2007 | | A758757 | <1.0 | <1.0 | 59 | 2.0 | <1.0 | <1.0 | 91 | <1.0 | 8.6 |
| | 3/22/2007 | | A764739 | <1.0 | <1.0 | 31 | 1.9 | <1.0 | <1.0 | 100 | <1.0 | 3.3 |
| | 7/3/2007 | | A775752 | <1.0 | <1.0 | 15 | 2.2 | <1.0 | <1.0 | 130 | <1.0 | 2.9 |
| | 7/3/2007 | | A775753 | <1.0 | <1.0 | 14 | 2.0 | <1.0 | <1.0 | 140 | <1.0 | 2.5 |
| | 9/6/2007 | | A781785 | <1.0 | <1.0 | 20 | 1.9 | <1.0 | <1.0 | 130 | <1.0 | <1.0 |
| | 11/30/2007 | | A790713 | <1.0 | <1.0 | 18 | 1.1 | <1.0 | <1.0 | 110 | <1.0 | <1.0 |
| | 3/20/2008 | | A803421 | <1.0 | <1.0 | 64 | 2.3 | <1.0 | <1.0 | 100 | <1.0 | 4.5 |
| | 5/29/2008 | | A812357 | <1.0 | <1.0 | 16 | 1.1 | <1.0 | <1.0 | 75 | <1.0 | <1.0 |
| | 9/24/2008 | | A824671 | <1.0 | <1.0 | 27 | 1.9 | <1.0 | <1.0 | 190 | <1.0 | <1.0 |
| | 12/3/2008 | | A832812 | <1.0 | <1.0 | 17 | 1.1 | <1.0 | <1.0 | 110 | <1.0 | 13 |
| | 3/13/2009 | | A841814 | <1.0 | <1.0 | 30 | 1.4 | <1.0 | <1.0 | 85 | <1.0 | 11 |
| | 6/18/2009 | | A850591 | <1.0 | <1.0 | 15 | <1.0 | <1.0 | <1.0 | 60 | <1.0 | <1.0 |
| | 9/15/2009 | | A858541 | <1.0 | <1.0 | 19 | 1.4 | <1.0 | <1.0 | 89 | <1.0 | <1.0 |
| | 11/4/2009 | | A864538 | <1.0 | <1.0 | 21 | 1.1 | <1.0 | <1.0 | 90 | <1.0 | 4.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes.

Detected compound exceeds the VRP Tier II Non-Residential Cleanup Goal
Detected compound exceeds the VRP Tier II Residential Cleanup Goal
Detected compound is below the VRP Tier II Residential Cleanup Goal

VOCs = Volatile Organic Compounds
Samples analyzed using EPA SW-846 Method 8260
µg/L = micrograms per liter
E = Result is Estimated NA = Not Applicable NS = Not Sampled B = Detected in Blank
*cis-1,2-Dichloroethylene and trans-1,2-Dichloroethene results are combined
[1] Indiana Department of Environmental Management Voluntary Remediation Program Resource Guide, Appendix F Tier II Cleanup Goals-Human Health Evaluation by Office of Environmental Health Evaluation by Office of Environmental Response, July 1996.
[2] Calculated using surrogate toxicity values and Tier II equations.
[3] Exceeded analytical holding time for vinyl chloride.
[4] Exceeded analytical holding time.
[5] Exceeded analytical holding time for cis-1,2-Dichloroethene.

**Table 2b**
**Deep Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloro-methane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethyl-benzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-165D | 1/30/2002 | 42-47 | 312999 | <5.0 | 7 | 3,300 | 11 | <10 | <5.0 | <5.0 | <5.0 | 1,500 |
| | 7/18/2002 | | 324109 | <1.0 | 4.2 | 2,820 | 9.6 | <5.0 | <1.0 | <1.0 | <1.0 | 973 |
| | 12/05/2003 | | 503002651 | <5.0 | 6.7 | 2,700 | 12 | <5.0 | <5.0 | <5.0 | <5.0 | 980 |
| | 3/11/2004 | | 503237075 | <5.0 | 6.2 | 2,300 | 16 | <5.0 | <5.0 | <5.0 | <5.0 | 840 |
| | 6/3/2004 | | 503493041 | <5.0 | <5.0 | 2,000 | 8.8 | <5.0 | <5.0 | <5.0 | <5.0 | 400 |
| | 6/3/2004 | | 503493041 | <5.0 | <5.0 | 2,000 | 8.8 | <5.0 | <5.0 | <5.0 | <5.0 | 400 |
| | 9/14/2004 | | A675199 | <25 | <25 | 1,800 | <25 | <25 | <25 | <25 | <25 | 740 |
| | 12/20/2004 | | A685807 | <1.0 | 6 | 3,300 | 15 | <1.0 | <1.0 | <1.0 | <1.0 | 1,000 |
| | 3/15/2005 | | A693379 | <1.0 | 3.3 | 1,900 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 640 |
| | 6/13/2005 | | A702971 | <1.0 | 1.1 | 1,400 | 6.2 | 3.0 | <1.0 | <1.0 | <1.0 | 14 |
| | 9/21/2005 | | A713001[3] | <1.0 | 3.45 | 2,270 | 7.41 | <1.0 | <1.0 | <1.0 | <1.0 | 921 |
| | 12/6/2005 | | A721009 | <1.0 | 3.8 | 2,200 | 34 | <1.0 | <1.0 | <1.0 | <1.0 | 780 |
| | 3/14/2006 | | A728634 | <1.0 | 2.5 | 1,600 | 6.2 | <1.0 | <1.0 | <1.0 | <1.0 | 400 |
| | 6/13/2006 | | A737747 | <1.0 | 1.6 | 1,100 | 11 | <1.0 | <1.0 | <1.0 | <1.0 | 560 |
| | 9/27/2006 | | A747972 | <1.0 | 2.6 | 1,800 | 20 | <1.0 | <1.0 | <1.0 | <1.0 | 770 |
| | 12/21/2006 | | A756785 | <1.0 | 2.3 | 1,600 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 860 |
| | 3/21/2007 | | A764748 | <1.0 | 1.2 | 1,200 | 13 | <1.0 | <1.0 | <1.0 | <1.0 | 840 |
| | 7/2/2007 | | A775743 | <1.0 | 1.0 | 810 | 7.2 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/7/2007 | | A781803 | <1.0 | <1.0 | 4.4 | 1.9 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/28/2007 | | A790698 | <1.0 | 1.5 | 1,200 | 5.2 | <1.0 | <1.0 | <1.0 | <1.0 | 610 |
| | 3/19/2008 | | A803405 | <1.0 | <1.0 | 310 | 5.1 | <1.0 | <1.0 | <1.0 | <1.0 | 190 |
| | 5/28/2008 | | A812344 | <10 | <10 | 470 | <10 | <10 | <10 | <10 | <10 | 530 |
| | 9/23/2008 | | A824654 | <10 | <10 | 300 | <10 | <10 | <10 | <10 | <10 | 350 |
| | 12/2/2008 | | A832835 | <1.0 | <1.0 | 650 | 5.4 | <1.0 | <1.0 | <1.0 | <1.0 | 550 |
| | 3/12/2009 | | A841820 | <1.0 | <1.0 | 300 | 3.2 | <1.0 | <1.0 | <1.0 | <1.0 | 340 |
| | 6/18/2009 | | A850586 | <1.0 | <1.0 | 240 | 2.2 | <1.0 | <1.0 | <1.0 | <1.0 | 500 |
| | 9/15/2009 | | A858548 | <1.0 | <1.0 | 98 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 160 |
| | 11/3/2009 | | A864548 | <1.0 | <1.0 | 280 | 2.4 | <1.0 | <1.0 | <1.0 | <1.0 | 400 |
| MW-166D | 1/31/2002 | 46-51 | 313000 | <5.0 | 6.1 | 2,000 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | 730 |
| | 7/18/2002 | | 324107 | <1.0 | 5.1 | 2,130 | 3.3 | <5.0 | <1.0 | <1.0 | <1.0 | 563 |
| | 1/6/2004 | | 503079204 | <5.0 | <5.0 | 2,000 | 7.4 | <5.0 | <5.0 | <5.0 | <5.0 | 290 |
| | 1/6/2004 | | 503079212 | <5.0 | <5.0 | 1,700 | 7.9 | <5.0 | <5.0 | <5.0 | <5.0 | 150 |
| | 3/11/2004 | | 503237059 | <5.0 | <5.0 | 2,100 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 410 |
| | 6/3/2004 | | 503492977 | <5.0 | <5.0 | 1,900 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 340 |
| | 9/14/2004 | | A675201 | <1.0 | 6.6 | 1,900 | 4.7 | <1.0 | <1.0 | <1.0 | <1.0 | 450 |
| | 12/20/2004 | | A685809 | <1.0 | 7.4 | 2,400 | 5.6 | <1.0 | <1.0 | <1.0 | <1.0 | 470 |
| | 3/15/2005 | | A693381 | <1.0 | 4.2 | 1,900 | 5.3 | 1.4 | <1.0 | <1.0 | <1.0 | 230 |
| | 6/13/2005 | | A702974 | <1.0 | 5.5 | 3,700 | 5.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/21/2005 | | A712999[3] | <1.0 | 3.98 | 1,650 | 2.12 | <1.0 | <1.0 | <1.0 | <1.0 | 303 |
| | 12/6/2005 | | A721012 | <1.0 | 5.7 | 1,900 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 430 |
| | 3/14/2006 | | A728636 | <1.0 | 4.4 | 1,800 | 2.9 | <1.0 | <1.0 | <1.0 | <1.0 | 310 |
| | 6/13/2006 | | A737748 | <1.0 | 3.7 | 1,400 | 10 | <1.0 | <1.0 | <1.0 | <1.0 | 240 |
| | 9/27/2006 | | A747973 | <1.0 | 5.6 | 2,100 | 8.2 | <1.0 | <1.0 | <1.0 | <1.0 | 350 |
| | 12/21/2006 | | A756786 | <1.0 | 5.9 | 2,000 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 420 |
| | 3/21/2007 | | A764750 | <1.0 | 4.2 | 2,400 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 410 |
| | 7/2/2007 | | A775745 | <1.0 | 4.9 | 1,700 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 240 |
| | 9/7/2007 | | A781804 | <1.0 | 2.4 | 1,300 | 7.7 | <1.0 | <1.0 | <1.0 | <1.0 | 24 |
| | 11/28/2007 | | A790700 | <1.0 | 4.5 | 1,500 | 4.0 | <1.0 | <1.0 | <1.0 | <1.0 | 270 |
| | 3/19/2008 | | A803407 | <1.0 | 5.5 | 810 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 200 |
| | 5/28/2008 | | A812346 | <10 | <10 | 1,500 | <10 | <10 | <10 | <10 | <10 | 310 |
| | 9/23/2008 | | A824656 | <10 | <10 | 1,600 | <10 | <10 | <10 | <10 | <10 | 300 |
| | 12/2/2008 | | A832837 | <1.0 | 4.3 | 1,300 | 8.5 | <1.0 | <1.0 | <1.0 | <1.0 | 300 |
| | 3/12/2009 | | A841818 | <1.0 | 4.0 | 1,400 | 12 | <1.0 | <1.0 | <1.0 | <1.0 | 330 |
| | 6/18/2009 | | A850583 | <1.0 | 2.2 | 920 | 11 | <1.0 | <1.0 | <1.0 | <1.0 | 150 |
| | 9/15/2009 | | A858547 | <10 | <10 | 850 | <10 | <10 | <10 | <10 | <10 | 210 |
| | 11/3/2009 | | A864549 | <1.0 | 3.9 | 1,100 | 8.2 | <1.0 | <1.0 | <1.0 | <1.0 | 240 |
| MW-167D | 1/31/2002 | 28-33 | 313005 | <5.0 | <5.0 | 530 | 11 | <10 | <5.0 | <5.0 | <5.0 | 390 |
| | 7/17/2002 | | 324025 | <1.0 | <1.0 | 274 | 12.2 | <5.0 | <1.0 | <1.0 | <1.0 | 253 |
| | 12/04/2003 | | 503002677 | <5.0 | <5.0 | 380 | 12 | <5.0 | <5.0 | <5.0 | <5.0 | 230 |
| | 12/04/2003 | | 503002685 | <5.0 | <5.0 | 390 | 14 | <5.0 | <5.0 | <5.0 | <5.0 | 230 |
| | 3/11/2004 | | 503237091 | <5.0 | <5.0 | 410 | 14 | <5.0 | <5.0 | <5.0 | <5.0 | 220 |
| | 6/3/2004 | | 503493207 | <5.0 | <5.0 | 510 | 12 | <5.0 | <5.0 | <5.0 | <5.0 | 240 |
| | 9/14/2004 | | A675203 | <1.0 | <1.0 | 480 | 13 | <1.0 | <1.0 | <1.0 | <1.0 | 290 |
| | 9/14/2004 | | A675205 | <1.0 | <1.0 | 480 | 14 | <1.0 | <1.0 | <1.0 | <1.0 | 300 |
| | 12/21/2004 | | A685813 | <1.0 | <1.0 | 1,300 | 23 | <1.0 | <1.0 | <1.0 | <1.0 | 400 |
| | 12/21/2004 | | A685824 | <1.0 | <1.0 | 680 | 22 | <1.0 | <1.0 | 1.0 | <1.0 | 240 |
| | 3/15/2005 | | A693376 | <10 | <10 | 580 | 18 | <10 | <10 | <10 | <10 | 160 |
| | 3/15/2005 | | A693403 | <1.0 | <1.0 | 530 | 18 | <1.0 | <1.0 | <1.0 | <1.0 | 150 |
| | 6/13/2005 | | A702968 | <1.0 | <1.0 | 510 | 14 | 2.6 | <1.0 | <1.0 | <1.0 | 99 |
| | 9/23/2005 | | A713019 | <1.0 | <1.0 | 630 | 19 | <1.0 | <1.0 | <1.0 | <1.0 | 110 |
| | 9/23/2005 | | A713020 | <1.0 | <1.0 | 640 | 20 | <1.0 | <1.0 | <1.0 | <1.0 | 120 |
| | 11/7/2005 | | A717639 | <1.0 | <1.0 | 740 | 33 | <1.0 | <1.0 | <1.0 | <1.0 | 110 |
| | 12/6/2005 | | A721002 | <1.0 | <1.0 | 670 | 21 | <1.0 | <1.0 | <1.0 | <1.0 | 160 |
| | 12/6/2005 | | A721003 | <1.0 | <1.0 | 640 | 21 | <1.0 | <1.0 | <1.0 | <1.0 | 150 |
| | 3/13/2006 | | A728629 | <1.0 | <1.0 | 680 | 18 | <1.0 | <1.0 | <1.0 | <1.0 | 150 |
| | 3/13/2006 | | A728630 | <1.0 | <1.0 | 670 | 17 | <1.0 | <1.0 | <1.0 | <1.0 | 140 |
| | 6/12/2006 | | A737740 | <1.0 | <1.0 | 460 | 16 | <1.0 | <1.0 | <1.0 | <1.0 | 29 |
| | 6/12/2006 | | A737741 | <1.0 | <1.0 | 460 | 17 | <1.0 | <1.0 | <1.0 | <1.0 | 32 |
| | 9/27/2006 | | A747969 | <1.0 | <1.0 | 550 | 21 | <1.0 | <1.0 | <1.0 | <1.0 | 75 |
| | 9/27/2006 | | A747970 | <1.0 | <1.0 | 570 | 20 | <1.0 | <1.0 | <1.0 | <1.0 | 81 |
| | 12/21/2006 | | A756782 | <1.0 | <1.0 | 670 | 20 | <1.0 | <1.0 | <1.0 | <1.0 | 110 |
| | 12/21/2006 | | A756784 | <1.0 | <1.0 | 640 | 21 | <1.0 | <1.0 | <1.0 | <1.0 | 100 |
| | 3/21/2007 | | A764745 | <1.0 | <1.0 | 18 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.6 |
| | 3/21/2007 | | A764746 | <1.0 | <1.0 | 20 | 1.1 | <1.0 | <1.0 | <1.0 | <1.0 | 3.9 |
| | 7/2/2007 | | A775741 | <1.0 | <1.0 | 290 | 17 | <1.0 | <1.0 | <1.0 | <1.0 | 68 |
| | 9/7/2007 | | A781800 | <1.0 | <1.0 | 510 | 21 | <1.0 | <1.0 | <1.0 | 1.2 | 79 |
| | 9/7/2007 | | A781801 | <1.0 | <1.0 | 520 | 22 | <1.0 | <1.0 | <1.0 | <1.0 | 84 |
| | 11/28/2007 | | A790695 | <1.0 | <1.0 | 610 | 21 | <1.0 | <1.0 | <1.0 | <1.0 | 84 |
| | 11/28/2007 | | A790696 | <1.0 | <1.0 | 710 | 24 | <1.0 | <1.0 | <1.0 | <1.0 | 92 |
| | 3/19/2008 | | A803403 | <1.0 | <1.0 | 58 | 2.2 | <1.0 | <1.0 | <1.0 | <1.0 | 5.4 |
| | 3/19/2008 | | A803410 | <1.0 | <1.0 | 38 | 1.4 | <1.0 | <1.0 | <1.0 | <1.0 | 3.1 |
| | 5/28/2008 | | A812341 | <1.0 | <1.0 | 410 | 24 | <1.0 | <1.0 | <1.0 | <1.0 | 30 |
| | 5/28/2008 | | A812342 | <1.0 | <1.0 | 350 | 23 | <1.0 | <1.0 | <1.0 | <1.0 | 28 |
| | 9/23/2008 | | A824651 | <5.0 | <5.0 | 660 | 21 | <5.0 | <5.0 | <5.0 | <5.0 | 41 |
| | 9/23/2008 | | A824652 | <5.0 | <5.0 | 510 | 24 | <5.0 | <5.0 | <5.0 | <5.0 | 46 |
| | 12/1/2008 | | A832833 | <1.0 | <1.0 | 730 | 26 | <1.0 | <1.0 | <1.0 | <1.0 | 49 |
| | 12/1/2008 | | A832832 | <1.0 | <1.0 | 700 | 26 | <1.0 | <1.0 | <1.0 | <1.0 | 45 |
| | 3/12/2009 | | A841822 | <1.0 | <1.0 | 560 | 25 | <1.0 | <1.0 | <1.0 | <1.0 | 32 |
| | 3/12/2009 | | A841823 | <1.0 | <1.0 | 570 | 26 | <1.0 | <1.0 | <1.0 | <1.0 | 31 |
| | 6/19/2009 | | A850598 | <1.0 | <1.0 | 660 | 29 | <1.0 | <1.0 | <1.0 | <1.0 | 23 |
| | 6/19/2009 | | A850610 | <1.0 | <1.0 | 550 | 25 | <1.0 | <1.0 | <1.0 | <1.0 | 19 |
| | 9/16/2009 | | A858562 | <10 | <10 | 500 | 11 | <10 | <10 | <10 | <10 | 45 |
| | 9/16/2009 | | A858566 | <1.0 | <1.0 | 580 | 19 | <1.0 | <1.0 | <1.0 | <1.0 | 69 |
| | 11/3/2009 | | A864545 | <1.0 | <1.0 | 580 | 25 | <1.0 | <1.0 | <1.0 | <1.0 | 34 |
| | 11/3/2009 | | A864546 | <1.0 | <1.0 | 740 | 25 | <1.0 | <1.0 | <1.0 | <1.0 | 33 |
| MW-168D | 1/31/2002 | 26-31 | 313004 | <5.0 | <5.0 | 18 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/18/2002 | | 324112 | <1.0 | <1.0 | 21 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/7/2005 | | A717642 | <1.0 | <1.0 | 5.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 52 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

See last page for footnotes

**Table 2b**
**Deep Monitoring Well Groundwater Analytical Results for VOCs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Bromodichloro-methane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Methylene chloride | Tetrachloroethene | Trichloroethene | 1,2,4-Trimethyl-benzene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-169D | 1/30/2002 | 32-37 | 312996 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | **8.7** |
| | 7/17/2002 | | 324020 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | **6.4** |
| | 12/04/2003 | | 503002701 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **8.4** |
| | 3/11/2004 | | 503237034 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **11** |
| | 6/3/2004 | | 503493082 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **8.7** |
| | 9/14/2004 | | A675206 | <1.0 | <1.0 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 | **10** |
| | 12/21/2004 | | A685811 | <1.0 | <1.0 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **14** |
| | 3/15/2005 | | A693373 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **9.6** |
| | 6/13/2005 | | A702965 | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 | **2.9** | **6.8** |
| | 9/22/2005 | | A713011[4] | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **7.97** |
| | 11/7/2005 | | A717637 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **5.9** |
| | 12/6/2005 | | A721001 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **1.6** |
| | 3/13/2006 | | A728627 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **7.0** |
| | 6/12/2006 | | A737737 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **9.1** |
| | 9/27/2006 | | A747967 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **9.5** |
| | 12/21/2006 | | A756780 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **5.4** |
| | 3/21/2007 | | A764742 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **1.0** |
| | 7/3/2007 | | A775760 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/7/2007 | | A781798 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.6** | <1.0 |
| | 11/28/2007 | | A790692 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **14** |
| | 3/19/2008 | | A803400 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/28/2008 | | A812339 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **6.8** |
| | 9/23/2008 | | A824649 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **14** | <1.0 | **14** |
| | 12/1/2008 | | A832828 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/12/2009 | | A841825 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **8.2** |
| | 6/19/2009 | | A850600 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **13** |
| | 9/16/2009 | | A858560 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **17** |
| | 11/3/2009 | | A864539 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **14** |
| MW-170D | 1/31/2002 | 34-39 | 313001 | <5.0 | <5.0 | <5.0 | <5.0 | <10. | <5.0 | <5.0 | <5.0 | **80** |
| | 7/17/2002 | | 324024 | <1.0 | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 | **66** |
| | 11/3/2009 | | A864543 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **200** |
| MW-302 | 2/6/1997 | 45-55 | W7020074-18 | <5.0 | <5.0 | **8.2** | <5.0 | <5.0 | <5.0 | <5.0 | NA | <10 |
| | 11/23/1999 | | 253795 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 2/28/2000 | | 260593 | <5.0 | <5.0 | **11** | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 |
| | 11/8/2000 | | 280710 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/21/2001 | | 296403 | <5.0 | <5.0 | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 7/22/2002 | | 324186 | <5.0 | <5.0 | **6** | <5.0 | <10 | <5.0 | <5.0 | <5.0 | **3.3** |
| | 12/03/2003 | | 503002719 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | **4.7** |
| | 6/11/2004 | | 503518110 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 9/15/2004 | | A675217 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **4.1** |
| | 12/22/2004 | | A685822 | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **4.9** |
| | 3/16/2005 | | A693393 | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **3.3** |
| | 6/15/2005 | | A702992 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.3** |
| | 9/22/2005 | | A713005 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/7/2005 | | A721017 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.1** |
| | 3/14/2006 | | A728640 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** |
| | 6/13/2006 | | A737754 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.2** |
| | 9/29/2006 | | A747982 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/20/2006 | | A756761 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** |
| | 3/21/2007 | | A764730 | <1.0 | <1.0 | **1.9** | <1.0 | <1.0 | <1.0 | **24** | <1.0 | <1.0 |
| | 7/3/2007 | | A775751 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/6/2007 | | A781779 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/29/2007 | | A790679 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/19/2008 | | A803414 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/29/2008 | | A812352 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/23/2008 | | A824668 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/23/2008 | | A824669 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 12/2/2008 | | A832803 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 3/13/2009 | | A841833 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 6/19/2009 | | A850607 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 9/15/2009 | | A858553 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/3/2009 | | A864531 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 0.289[2] | 7 | 70 | 128[2] | 6.30[2] | 5 | 5 | 13.7[2] | 2 |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 46.1[2] | 7 | 1,022 | 2,040[2] | 381[2] | 56.1 | 260 | 5,110[2] | 10 |

Detected compound exceeds the VRP Tier II Non-Residential Cleanup Goal
Detected compound exceeds the VRP Tier II Residential Cleanup Goal
Detected compound is below the VRP Tier II Residential Cleanup Goal

VOCs = Volatile Organic Compounds
Samples analyzed using EPA SW-846 Method 8260
µg/L = micrograms per liter NS = Not Sampled

[1] Indiana Department of Environmental Management Voluntary Remediation Program Resource Guide, Appendix F Tier II Cleanup Goals-Human Health Evaluation by Office of Environmental Response, July 1996.
[2] Calculated using surrogate toxicity values and Tier II equations.
[3] Exceeded analytical holding times for cis-1,2-Dichloroethene and vinyl chloride.
[4] Exceeded analytical holding time for vinyl chloride.

**Table 3**
**Shallow Monitoring Well Groundwater Analytical Results for PAHs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Acenaphthene | Acenaphthylene | Anthracene | Benzo (a) anthracene | Benzo (a) pyrene | Benzo (b) fluoranthene | Benzo (ghi) perylene | Benzo (k) fluoranthene | Chrysene | Dibenzo (a,h) anthracene | Fluoranthene | Fluorene | Indeno (1,2,3-cd) pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-10-1 | 7/19/2002 | 7-17 | 324157 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 7/19/2002 | | 324158 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| MW-10-1R | 12/3/2003 | 7-17 | 503002107 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/3/2003 | | 503002115 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/22/2004 | | A685836 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721022 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/7/2005 | | A721023 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756766 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756767 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790675 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790676 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832808 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832809 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-132 | 7/22/2002 | 10-20 | 324190 | <1.01 | <1.01 | <1.01 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.01 | <0.20 |
| | 12/3/2003 | | 503002123 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685833 | **17** | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/6/2005 | | A721014 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-132R | 12/20/2006 | 10-20 | A756757 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/28/2007 | | A790667 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/2/2008 | | A832827 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/3/2009 | | A864527 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-133R | 12/4/2003 | 8-18 | 503002131 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685830 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721020 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756762 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790671 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832804 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864532 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-135 | 6/20/2001 | 10-20 | 296393 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/15/2002 | | 324015 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 12/4/2003 | | 503002149 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685832 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/8/2005 | | A721032 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | | | | | | | | | | | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 1,824 | 6.89[2] | 9,120 | 0.10 | 0.20 | 0.20 | 38.4[2] | 0.20 | 0.20 | 0.30 | 243.2 | 1,216 | 0.40 |
| | | | | | | | | | | | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 6,132 | 2,040[2] | 30,660 | 10 | 10 | 10 | 613[2] | 39.2 | 391.8 | 10 | 817.6 | 4,088 | 10 |

See last page for footnotes.

**Table 3**
**Shallow Monitoring Well Groundwater Analytical Results for PAHs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Acenaphthene | Acenaphthylene | Anthracene | Benzo (a) anthracene | Benzo (a) pyrene | Benzo (b) fluoranthene | Benzo (ghi) perylene | Benzo (k) fluoranthene | Chrysene | Dibenzo (a,h) anthracene | Fluoranthene | Fluorene | Indeno (1,2,3-cd) pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-135 | 12/21/2006 | 10-20 | A756769 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790677 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832811 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864537 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-145 | 6/21/2001 | 17.5-27.5 | 296418 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/22/2002 | | 324184 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 12/4/2003 | | 503002453 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685829 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/8/2005 | | A721034 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756763 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790672 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832805 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864533 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-146 | 6/21/2001 | 15-25 | 296419 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/15/2002 | | 324017 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 12/3/2003 | | 503002461 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685828 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/8/2005 | | A721033 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756765 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790674 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832807 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864535 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-148 | 6/21/2001 | 10.5-25.5 | 296407 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 6/21/2001 | | 296408 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/22/2002 | | 324188 | <1.03 | <1.03 | <1.03 | <0.10 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.10 | <0.21 | <1.03 | <0.21 |
| | 12/3/2003 | | 503002479 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685831 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721016 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/7/2005 | | A721016 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-148R | 12/20/2006 | 10.5-25.5 | A756758 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790668 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/2/2008 | | A832800 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/3/2009 | | A864528 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | | | | | | | | | | | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 1,824 | 6.89[2] | 9,120 | 0.10 | 0.20 | 0.20 | 38.4[2] | 0.20 | 0.20 | 0.30 | 243.2 | 1,216 | 0.40 |
| | | | | | | | | | | | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 6,132 | 2,040[2] | 30,660 | 10 | 10 | 10 | 613[2] | 39.2 | 391.8 | 10 | 817.6 | 4,088 | 10 |

See last page for footnotes.

**Table 3**
**Shallow Monitoring Well Groundwater Analytical Results for PAHs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Acenaphthene | Acenaphthylene | Anthracene | Benzo (a) anthracene | Benzo (a) pyrene | Benzo (b) fluoranthene | Benzo (ghi) perylene | Benzo (k) fluoranthene | Chrysene | Dibenzo (a,h) anthracene | Fluoranthene | Fluorene | Indeno (1,2,3-cd) pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-150 | 6/20/2001 | 4-19 | 296390 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/19/2002 | | 324159 | <1.01 | <1.01 | <1.01 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.01 | <0.20 |
| | 12/3/2003 | | 503002529 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685827 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721030 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/21/2006 | | A756770 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790705 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832810 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864536 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-152 | 6/20/2001 | 5-20 | 296401 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/15/2002 | | 324016 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 12/3/2003 | | 503002537 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/21/2004 | | A685826 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756764 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790673 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/3/2008 | | A832806 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/4/2009 | | A864534 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| MW-153 | 7/22/2002 | 4.5-19.5 | 324185 | <1.01 | <1.01 | <1.01 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.01 | <0.20 |
| | 12/3/2003 | | 503002545 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/3/2003 | | 503002552 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/22/2004 | | A685835 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/7/2005 | | A721018 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/7/2005 | | A721019 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756759 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756760 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790669 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/29/2007 | | A790670 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/2/2008 | | A832801 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/2/2008 | | A832802 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/3/2009 | | A864529 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/3/2009 | | A864530 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | | | | | | | | | | | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater [(1)] | | | | 1,824 | 6.89[(2)] | 9,120 | 0.10 | 0.20 | 0.20 | 38.4[(2)] | 0.20 | 0.20 | 0.30 | 243.2 | 1,216 | 0.40 |
| | | | | | | | | | | | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater [(1)] | | | | 6,132 | 2,040[(2)] | 30,660 | 10 | 10 | 10 | 613[(2)] | 39.2 | 391.8 | 10 | 817.6 | 4,088 | 10 |

See last page for footnotes.

**Table 3**
**Shallow Monitoring Well Groundwater Analytical Results for PAHs (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Acenaphthene | Acenaphthylene | Anthracene | Benzo (a) anthracene | Benzo (a) pyrene | Benzo (b) fluoranthene | Benzo (ghi) perylene | Benzo (k) fluoranthene | Chrysene | Dibenzo (a,h) anthracene | Fluoranthene | Fluorene | Indeno (1,2,3-cd) pyrene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-154 | 6/21/2001 | 5-20 | 296410 | <18 | <10 | <6.6 | <0.20 | <0.20 | <0.20 | <0.76 | <0.20 | <0.20 | <0.20 | <2.1 | <2.1 | <0.20 |
| | 7/22/2002 | | 324191 | <1.02 | <1.02 | <1.02 | <0.10 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.10 | <0.20 | <1.02 | <0.20 |
| | 12/3/2003 | | 503002560 | < 1.0 | < 1.0 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 1.0 | < 1.0 | < 0.10 |
| | 12/22/2004 | | A685834 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.02 |
| | 12/6/2005 | | A721013 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/20/2006 | | A756755 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/28/2007 | | A790704 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 12/2/2008 | | A832826 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | 11/3/2009 | | A864551 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.02 |
| | | | | | | | | | | | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 1,824 | 6.89[2] | 9,120 | 0.10 | 0.20 | 0.20 | 38.4[2] | 0.20 | 0.20 | 0.30 | 243.2 | 1,216 | 0.40 |
| | | | | | | | | | | | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 6,132 | 2,040[2] | 30,660 | 10 | 10 | 10 | 613[2] | 39.2 | 391.8 | 10 | 817.6 | 4,088 | 10 |

Detected compound exceeds the VRP Tier II Non-Residential Cleanup Goal
Detected compound exceeds the VRP Tier II Residential Cleanup Goal
Detected compound is below the VRP Tier II Residential Cleanup Goal

PAHs = Polynuclear Aromatic Hydrocarbons  Samples analyzed using EPA SW-846 Method 8310
µg/L = micrograms per liter  E = result is estimated
[1] Indiana Department of Environmental Management Voluntary Remediation Program Resource Guide, Appendix F Tier II Cleanup Goals-Human Health Evaluation by Office of Environmental Response, July 1996
[2] Calculated using surrogate toxicity values and Tier II equations.

**Table 4**
**Shallow Monitoring Well Groundwater Analytical Results for Metals (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Total Cadmium | Total Chromium | Total Lead |
|---|---|---|---|---|---|---|
| MW-10-1 | 11/8/2000 | 7-17 | 280650 | <5.0 | <10 | **5** |
| | 7/19/2002 | | 324157 | <5.0 | <10 | <5.0 |
| | 7/19/2002 | | 324158 | <5.0 | <10 | <5.0 |
| MW-10-1R | 12/3/2003 | 7-17 | 503002107 | <5.0 | <10 | <10 |
| | 12/3/2003 | | 503002115 | <5.0 | <10 | <10 |
| | 12/22/2004 | | A685836 | <5.0 | <10 | <10 |
| | 12/7/2005 | | A721022 | <5.0 | <10 | <10 |
| | 12/7/2005 | | A721023 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756766 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756767 | <5.0 | <10 | <10 |
| | 11/29/2007 | | A790675 | <5.0 | <10 | <10 |
| | 11/29/2007 | | A790670 | <5.0 | **34** | <10 |
| | 12/3/2008 | | A832808 | <5.0 | **97** | **10** |
| | 12/3/2008 | | A832809 | <5.0 | **100** | **10** |
| MW-132 | 7/22/2002 | 10-20 | 324190 | <5.0 | <10 | NA |
| | 12/3/2003 | | 503002123 | <5.0 | **34.7** | <10 |
| | 12/21/2004 | | A685833 | <5.0 | **39** | <10 |
| | 12/6/2005 | | A721014 | <5.0 | **26** | **10** |
| MW-132R | 12/20/2006 | 10-20 | A756757 | <5.0 | <10 | <10 |
| | 11/28/2007 | | A790667 | <5.0 | **11** | <10 |
| | 12/2/2008 | | A832827 | <5.0 | **18** | **15** |
| | 11/3/2009 | | A864527 | <5.0 | <10 | <10 |
| MW-133R | 12/4/2003 | 8-18 | 503002131 | <5.0 | <10 | <10 |
| | 12/21/2004 | | A685830 | <5.0 | **10** | **10** |
| | 12/7/2005 | | A721020 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756762 | <5.0 | **46** | **42** |
| | 11/29/2007 | | A790671 | <5.0 | **16** | <10 |
| | 12/3/2008 | | A832804 | <5.0 | <10 | <10 |
| | 11/4/2009 | | A864532 | <5.0 | <10 | <10 |
| MW-135 | 11/8/2000 | 10-20 | 280651 | <5.0 | **44** | **5** |
| | 6/20/2001 | | 296393 | <5.0 | **34** | <5.0 |
| | 7/15/2002 | | 324015 | <1.0 | **26.7** | <1.0 |
| | 12/4/2003 | | 503002149 | <5.0 | **30.8** | <10 |
| | 12/21/2004 | | A685832 | <5.0 | **330** | **31** |
| | 12/8/2005 | | A721032 | **17** | **1,400** | **280** |
| | 12/21/2006 | | A756769 | <5.0 | **130** | <10 |
| | 11/29/2007 | | A790677 | <5.0 | **86** | **14** |
| | 12/3/2008 | | A832811 | <5.0 | **19** | <10 |
| | 11/4/2009 | | A864537 | <5.0 | **180** | <10 |
| MW-145 | 11/8/2000 | 17.5-27.5 | 280652 | <5.0 | **10** | **25** |
| | 6/21/2001 | | 296418 | <5.0 | <10 | **28** |
| | 7/22/2002 | | 324184 | <5.0 | <10 | <5.0 |
| | 12/4/2003 | | 503002453 | <5.0 | <10 | <10 |
| | 12/21/2004 | | A685829 | <5.0 | **21** | **34** |
| | 12/8/2005 | | A721034 | <5.0 | **21** | **13** |
| | 12/20/2006 | | A756763 | <5.0 | **48** | **92** |
| | 11/29/2007 | | A790672 | <5.0 | <10 | <10 |
| | 12/3/2008 | | A832805 | <5.0 | **18** | <10 |
| | 11/4/2009 | | A864533 | <5.0 | <10 | **14** |
| MW-146 | 11/8/2000 | 15-25 | 280684 | <5.0 | **320** | **32** |
| | 6/21/2001 | | 296419 | <5.0 | **190** | <5.0 |
| | 7/15/2002 | | 324017 | <5.0 | **108** | <5.0 |
| | 12/3/2003 | | 503002461 | <5.0 | **342** | **11.3** |
| | 12/19/2003 | | 503046732 | NA | **291**[3] | NA |
| | 12/19/2003 | | 503046740 | NA | **134**[3] | NA |
| DISSOLVED | 12/19/2003 | | 503046757 | NA | < 10.0[3] | NA |
| | 12/21/2004 | | A685828 | <5.0 | **55** | <10 |
| | 12/8/2005 | | A721033 | <5.0 | **100** | <10 |
| | 12/20/2006 | | A756765 | <5.0 | **40** | <10 |
| | 11/29/2007 | | A790674 | <5.0 | **67** | <10 |
| | 12/3/2008 | | A832807 | <5.0 | <10 | <10 |
| | 11/4/2009 | | A864535 | <5.0 | **56** | <10 |
| MW-148 | 11/8/2000 | 10.5-25.5 | 280686 | <5.0 | <10 | **7** |
| | 11/8/2000 | | 280687 | <5.0 | <10 | <5.0 |
| | 6/21/2001 | | 296407 | <5.0 | <10 | <5.0 |
| | 6/21/2001 | | 296408 | <5.0 | <10 | <5.0 |
| | 7/22/2002 | | 324188 | <5.0 | <10 | <5.0 |
| | 12/3/2003 | | 503002479 | <5.0 | <10 | <10 |
| | 12/21/2004 | | A685831 | <5.0 | **28** | **100** |
| | 3/16/2005 | | A693389 | NA | <10 | **18** |
| | 12/7/2005 | | A721016 | <5.0 | <10 | <10 |
| MW-148R | 12/20/2006 | 10.5-25.5 | A756758 | <5.0 | **120** | **160** |
| | 11/29/2007 | | A790668 | <5.0 | **73** | **72** |
| | 12/2/2008 | | A832800 | <5.0 | **20** | **10** |
| | 11/3/2009 | | A864528 | <5.0 | **48** | **21** |
| MW-150 | 11/8/2000 | 4-19 | 280688 | <5.0 | **7** | **6** |
| | 6/20/2001 | | 296390 | <5.0 | <10 | <5.0 |
| | 7/19/2002 | | 324159 | <5.0 | <10 | <5.0 |
| | 12/3/2003 | | 503002529 | <5.0 | <10 | <10 |
| | 12/21/2004 | | A685827 | <5.0 | <10 | <10 |
| | 12/7/2005 | | A721030 | <5.0 | **11** | <10 |
| | 12/21/2006 | | A756770 | <5.0 | **11** | <10 |
| | 11/29/2007 | | A790705 | <5.0 | **36** | <10 |
| | 12/3/2008 | | A832810 | <5.0 | **15** | <10 |
| | 11/4/2009 | | A864536 | <5.0 | **340** | **12** |
| MW-152 | 11/8/2000 | 5-20 | 280690 | <5.0 | <10 | **13** |
| | 6/20/2001 | | 296401 | <5.0 | <10 | **7.6** |
| | 7/15/2002 | | 324016 | <5.0 | <10 | **8.9** |
| | 12/3/2003 | | 503002537 | <5.0 | <10 | <10 |
| | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater[1] | | | | 5.0 | 100 | 15[2] |
| | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater[1] | | | | 51.1 | 511 | 15[2] |

See last page for footnotes.

**Table 4**
**Shallow Monitoring Well Groundwater Analytical Results for Metals (ug/L)**
**Former General Motors Corporation**
**Allison Gas Turbine Division, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Date Sampled | Screen Interval (feet) | Lab Sample No. | Total Cadmium | Total Chromium | Total Lead |
|---|---|---|---|---|---|---|
| MW-152 (cont'd.) | 12/21/2004 | 5-20 | A685826 | <5.0 | **11** | **16** |
| | 12/7/2005 | | A721021 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756764 | <5.0 | **26** | **35** |
| | 11/29/2007 | | A790673 | <5.0 | <10 | <10 |
| | 12/3/2008 | | A832806 | <5.0 | **16** | **11** |
| | 11/4/2009 | | A864534 | <5.0 | **16** | <10 |
| MW-153 | 11/8/2000 | 4.5-19.5 | 280691 | <5.0 | <10 | **7** |
| | 6/21/2001 | | 296404 | <5.0 | <10 | <5.0 |
| | 6/21/2001 | | 296405 | <5.0 | <10 | <5.0 |
| | 7/22/2002 | | 324185 | <5.0 | <10 | <5.0 |
| | 12/3/2003 | | 503002545 | <5.0 | <10 | <10 |
| | 12/3/2003 | | 503002552 | <5.0 | <10 | <10 |
| | 12/22/2004 | | A685835 | <5.0 | **21** | **35** |
| | 12/7/2005 | | A721018 | <5.0 | <10 | <10 |
| | 12/7/2005 | | A721019 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756759 | <5.0 | <10 | <10 |
| | 12/20/2006 | | A756760 | <5.0 | <10 | <10 |
| | 11/29/2007 | | A790669 | <5.0 | **38** | <10 |
| | 11/29/2007 | | A790670 | <5.0 | **34** | <10 |
| | 12/2/2008 | | A832801 | <5.0 | **10** | <10 |
| | 12/2/2008 | | A832802 | <5.0 | <10 | <10 |
| | 11/3/2009 | | A864529 | <5.0 | **19** | <10 |
| | 11/3/2009 | | A864530 | <5.0 | **17** | <10 |
| MW-154 | 11/8/2000 | 5-20 | 280692 | <5.0 | <10 | <5.0 |
| | 6/21/2001 | | 296410 | <5.0 | <10 | <5.0 |
| | 7/22/2002 | | 324191 | <5.0 | <10 | <5.0 |
| | 12/03/2003 | | 503002560 | <5.0 | <10 | <10 |
| | 12/22/2004 | | A685834 | <5.0 | **11** | **18** |
| | 12/6/2005 | | A721013 | <5.0 | **22** | **35** |
| | 12/20/2006 | | A756755 | <5.0 | <10 | <10 |
| | 11/28/2007 | | A790704 | <5.0 | <10 | <10 |
| | 12/2/2008 | | A832826 | <5.0 | **12** | <10 |
| | 11/3/2009 | | A864551 | <5.0 | **17** | <10 |
| | | | | | | |
| Tier II Residential Cleanup Goals - Groundwater [1] | | | | 5.0 | 100 | 15[2] |
| | | | | | | |
| Tier II Non-Residential Cleanup Goals - Groundwater [1] | | | | 51.1 | 511 | 15[2] |

Detected compound exceeds the VRP Tier II Non-Residential Cleanup Goal
Detected compound exceeds the VRP Tier II Residential Cleanup Goal
Detected compound is below the VRP Tier II Residential Cleanup Goal

Samples analyzed using EPA Method Series 6000/7000
µg/L = micrograms per liter NA = Not Applicable

[1] Indiana Department of Environmental Management Voluntary Remediation Program Resource Guide, Appendix F Tier II Cleanup Goals-Human Health Evaluation by Office of Environmental Response, July 1996

[2] IDEM VRP Interoffice Memo dated on January 26, 1998

[3] Hexavalent Chromium analytical results were less than 50 µg/L in these three groundwater samples

**Table 5**
**East Off-Site Bioremediation Field Parameters and Select Groundwater Analytical Results**
**Former General Motors Corporation**
**Allison Gas Turbine, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Well Screen Interval (Feet) | Date Sampled | pH | ORP (mV) | DO (mg/L) | TOC (mg/L) | cis-1,2-Dichloroethene (ug/L) | Trichloroethene (ug/L) | Vinyl chloride (ug/L) |
|---|---|---|---|---|---|---|---|---|---|
| IW-1 | 10.5-15.5 | 7/16/2004 | 7.58 | 287 | 1.91 | <1 | 140 | 1,100 | <1.0 |
| | | 8/16/2004 | 7.36 | 34 | 0.26 | 21 | 87 | 900 | <1.0 |
| | | 10/18/2004 | 7.38 | 139 | 1.81 | <1.0 | 330 | 1,500 | <1.0 |
| | | 11/19/2004 | 6.09 | 126 | 0.17 | 2,600 | 1,700 | 640 | 2.2 |
| | | 12/21/2004 | 6.54 | 96 | 0.26 | 270 | 3,600 | 51 | 2.2 |
| | | 1/24/2005 | 6.36 | -112 | 1.39 | 340 | 1,700 | 32 | 1.7 |
| | | 3/15/2005 | 6.75 | NA | 1.68 | 18 | 2,700 | 11 | <1.0 |
| | | 4/25/2005 | 7.91 | -148.2 | 0.19 | NA | NA | NA | NA |
| | | 6/14/2005 | 6.71 | 40 | 0.71 | 60 | 2,400 | 29 | 5.5 |
| | | 9/23/2005 | 6.70 | -98.9 | 0.99 | 4.6 | 1,400 | 59 | 350 |
| | | 12/7/2005 | 7.01 | -86 | 0.81 | 2.7 | 140 | 50 | 620 |
| | | 3/15/2006 | 7.65 | 22 | 1.20 | 1.7 | 380 | 100 | 25 |
| | | 6/15/2006 | 7.08 | -126 | 2.82 | 1.6 | 430 | 120 | 83 |
| | | 9/26/2006 | 7.01 | -46.1 | 0.49 | 2.1 | 230 | 200 | 61 |
| | | 11/21/2006 | 5.71 | -36 | 5.96 | 2,700 | 620 | 26 | 100 |
| | | 12/21/2006 | 5.88 | -49.2 | 3.25 | 950 | 340 | <10 | 170 |
| | | 1/19/2007 | 6.17 | -101.2 | 3.68 | 500 | 71 | 1.4 | 690 |
| | | 3/22/2007 | 6.79 | -128 | 3.38 | 140 | 77 | 2.6 | 200 |
| | | 7/2/2007 | 6.41 | -16.7 | 0.62 | 450 | 7 | 3.2 | <1.0 |
| | | 9/7/2007 | 6.24 | -194 | 0.97 | 270 | 14 | 1.8 | 82 |
| | | 11/30/2007 | 7.23 | -86 | 1.37 | 14 | 2 | 1.0 | 7.2 |
| | | 12/11/2007 | 10.45 | -55 | 0.97 | NA | NA | NA | NA |
| | | 1/10/2008 | 6.78 | -110 | 1.89 | 1,100 | 110 | 3.8 | 90 |
| | | 3/20/2008 | 6.57 | -91.5 | 0.70 | 170 | 50 | 2.6 | 47 |
| | | 5/29/2008 | 6.59 | 68 | 5.69 | 43 | <1.0 | <1.0 | 1.3 |
| | | 9/24/2008 | 14.00 | -85 | 0.50 | 270 | 4.4 | 88 | 6.4 |
| | | 12/3/2008 | 6.50 | 69 | 0.64 | 84 | 4.0 | <1.0 | 6.7 |
| | | 3/13/2009 | 7.70 | -293.3 | 0.00 | 4 | <1.0 | <1.0 | <1.0 |
| | | 6/18/2009 | 6.97 | -116 | 1.95 | 3.6 | <1.0 | <1.0 | 25.0 |
| | | 9/15/2009 | 6.82 | 104 | 1.01 | 2.6 | <1.0 | <1.0 | <1.0 |
| | | 11/4/2009 | 7.00 | 105 | 0.47 | 2.0 | <1.0 | <1.0 | 4.9 |
| IW-2 | 12-17 | 7/16/2004 | 7.37 | 357 | 2.67 | <1 | 44 | 170 | <1.0 |
| | | 8/16/2004 | 7.42 | 105 | 0.77 | 11 | 46 | 210 | <1.0 |
| | | 10/18/2004 | 7.34 | 286 | 2.45 | <1.0 | 96 | 290 | <1.0 |
| | | 11/19/2004 | 7.09 | 138 | 0.25 | 6.3 | 550 | 150 | 2.5 |
| | | 12/21/2004 | 7.20 | 118 | 1.05 | <1.0 | 310 | 230 | 1.1 |
| | | 1/24/2005 | 7.09 | 1.8 | 1.50 | <1.0 | 240 | 190 | 1.7 |
| | | 3/15/2005 | 7.14 | NA | 3.93 | NA | 280 | 130 | 21 |
| | | 4/25/2005 | 7.98 | 100.2 | 3.73 | NA | NA | NA | NA |
| | | 6/14/2005 | 7.38 | 104 | 4.20 | NA | 130 | 160 | <1.0 |
| | | 9/23/2005 | 7.09 | 193.8 | 3.29 | NA | 37 | 130 | <1.0 |
| | | 12/7/2005 | 7.24 | 124 | 3.84 | NA | 51 | 190 | <1.0 |
| | | 3/15/2006 | 7.72 | 85 | 3.32 | NA | 54 | 180 | <1.0 |
| | | 6/13/2006 | 7.16 | 145 | 8.64 | NA | 18 | 110 | <1.0 |
| | | 9/26/2006 | 7.43 | 53.2 | 3.47 | NA | 32 | 110 | <1.0 |
| | | 11/21/2006 | 7.21 | -78 | 0.18 | 3.9 | 89 | 83 | 12 |
| | | 12/21/2006 | 7.08 | -96 | 0.33 | 1.1 | 41 | 100 | <10 |
| | | 1/19/2007 | 7.26 | -64.8 | 6.71 | 3.5 | 59 | 91 | 8.6 |
| | | 3/22/2007 | 7.11 | 89 | 4.13 | 1.2 | 31 | 100 | 3.3 |
| | | 7/2/2007 | 7.42 | 203.5 | 3.83 | 1.1 | 15 | 130 | 2.9 |
| | | 9/6/2007 | 7.02 | -27 | 2.00 | 1.4 | 20 | 130 | <1.0 |
| | | 11/30/2007 | 8.36 | 304 | 2.70 | 2 | 16 | 110 | <1.0 |
| | | 12/11/2007 | 10.29 | -53 | 0.49 | NA | NA | NA | NA |
| | | 1/10/2008 | 7.19 | -90 | 1.10 | 12.0 | 55 | 110 | 22 |
| | | 3/20/2008 | 7.10 | -103.3 | 0.83 | 2.0 | 64 | 100 | 4.5 |
| | | 5/29/2008 | 7.00 | 251 | 2.22 | <1.0 | 16 | 75 | <1.0 |
| | | 9/24/2008 | 14.00 | -44.3 | 1.15 | 1.2 | 27 | 190 | <1.0 |
| | | 12/3/2008 | 7.31 | 247 | 0.29 | 1.4 | 17 | 110 | 13 |
| | | 3/13/2009 | 7.88 | -180.3 | 0.00 | 2 | 30 | 85 | 11 |
| | | 6/18/2009 | 7.16 | 175.4 | 6.92 | 2.3 | 15 | 60 | <1.0 |
| | | 9/15/2009 | 7.23 | 269 | 4.15 | 3.2 | 19 | 89 | <1.0 |
| | | 11/4/2009 | 7.32 | 333 | 0.86 | <1.0 | 21 | 90 | 4.0 |
| Risk-Based Groundwater Concentrations* | | | | | | NA | 104,000 | 1,800 | 198 |

See last page for footnotes

**Table 5**
**East Off-Site Bioremediation Field Parameters and Select Groundwater Analytical Results**
**Former General Motors Corporation**
**Allison Gas Turbine, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Well Screen Interval (Feet) | Date Sampled | pH | ORP (mV) | DO (mg/L) | TOC (mg/L) | cis-1,2-Dichloroethene (ug/L) | Trichloroethene (ug/L) | Vinyl chloride (ug/L) |
|---|---|---|---|---|---|---|---|---|---|
| MW-163 | 10-20 | 7/16/2004 | 7.55 | 294 | 1.67 | <1 | 250 | 1,300 | <1.0 |
| | | 8/16/2004 | 7.54 | 130 | 0.81 | 7.2 | 240 | 790 | <1.0 |
| | | 10/18/2004 | 7.29 | 223 | 4.22 | <1.0 | 530 | 1,600 | <1.0 |
| | | 11/19/2004 | 6.64 | 120 | 0.33 | 220 | 1,300 | 700 | <1.0 |
| | | 12/21/2004 | 7.31 | 124 | 1.50 | <1.0 | 620 | 470 | <1.0 |
| | | 1/24/2005 | 7.42 | -25.9 | 2.00 | 9.9 | 380 | 360 | <1.0 |
| | | 3/15/2005 | 7.20 | NA | 4.34 | NA | 650 | 400 | <1.0 |
| | | 4/25/2005 | 8.25 | 10.1 | 4.37 | NA | NA | NA | NA |
| | | 6/14/2005 | 7.14 | 78 | 3.75 | NA | 430 | 430 | <1.0 |
| | | 9/23/2005 | 6.90 | 108.2 | 0.50 | NA | 1,200 | 640 | 54 |
| | | 12/7/2005 | 7.22 | -38 | 4.28 | NA | 830 | 520 | 220 |
| | | 3/15/2006 | 7.96 | 6 | 2.94 | NA | 270 | 410 | 96 |
| | | 6/15/2006 | 7.32 | -23 | 4.02 | NA | 220 | 440 | 52 |
| | | 9/26/2006 | 7.20 | 209.9 | 1.35 | NA | 120 | 450 | 20 |
| | | 11/21/2006 | 6.97 | -101 | 3.81 | 170 | 1,200 | 58 | 42 |
| | | 12/21/2006 | 7.00 | -60 | 3.45 | 3.5 | 91 | 28 | 13 |
| | | 1/19/2007 | 6.86 | -113.3 | 7.01 | 62 | 170 | <10 | 58 |
| | | 3/22/2007 | 6.62 | -122 | 1.39 | 83 | 210 | 23 | 230 |
| | | 7/2/2007 | 7.12 | 151 | 4.16 | 2.8 | 41 | 46 | <1.0 |
| | | 9/7/2007 | 6.71 | -185 | 1.08 | 3.9 | 18 | 16 | 30 |
| | | 11/30/2007 | 7.44 | -56 | 1.20 | 3 | 38 | 14 | 52 |
| | | 12/11/2007 | 8.32 | -68 | 0.30 | NA | NA | NA | NA |
| | | 1/10/2008 | 7.41 | -76 | 2.28 | 31 | 49 | 120 | 41 |
| | | 3/20/2008 | 7.38 | -103.6 | 0.74 | <200 | 16 | 11 | 2.4 |
| | | 5/29/2008 | 6.80 | 40 | 0.63 | <5 | 100 | 22 | 77 |
| | | 9/24/2008 | 8.65 | -41.3 | 0.35 | 5.4 | 5.5 | 5.6 | 15 |
| | | 12/3/2008 | 7.11 | 53 | 0.78 | 5.1 | <1.0 | 1.6 | <1.0 |
| | | 3/13/2009 | 7.34 | 206 | 1.14 | 6.1 | 1.9 | 10 | 1.0 |
| | | 6/18/2009 | 6.94 | -92.9 | 2.26 | 4.1 | 39 | 32 | 11 |
| | | 9/15/2009 | 6.85 | 147 | 0.94 | 4.0 | 19 | 20 | 12 |
| | | 11/4/2009 | 6.96 | 201 | 0.40 | 1.7 | 16 | 93 | 9 |
| MW-173 | 8-18 | 7/16/2004 | 7.30 | 286 | 1.03 | <1 | 180 | 300 | <1.0 |
| | | 8/16/2004 | 7.37 | 340 | 0.47 | 8.7 | 120 | 260 | <1.0 |
| | | 10/18/2004 | 7.30 | 291 | 1.40 | 1.7 | 120 | 340 | <1.0 |
| | | 11/19/2004 | 7.26 | 161 | 1.21 | 37 | 150 | 330 | <1.0 |
| | | 12/21/2004 | 7.31 | 262 | 2.59 | <1.0 | 260 | 430 | <1.0 |
| | | 1/24/2005 | 7.06 | -15.4 | 2.72 | <1.0 | 190 | 290 | <1.0 |
| | | 3/15/2005 | 7.20 | NA | 4.63 | NA | 110 | 290 | <1.0 |
| | | 4/25/2005 | NA | 128.2 | 3.47 | NA | NA | NA | NA |
| | | 6/14/2005 | 7.21 | 104 | 5.07 | NA | 57 | 320 | <1.0 |
| | | 9/23/2005 | 7.05 | 207.7 | 3.21 | NA | 36 | 230 | <1.0 |
| | | 12/7/2005 | 7.37 | 102 | 6.48 | NA | 29 | 170 | <1.0 |
| | | 3/15/2006 | 7.86 | 64 | 4.41 | NA | 55 | 240 | <1.0 |
| | | 6/15/2006 | 7.23 | 28 | 3.20 | NA | 36 | 290 | <1.0 |
| | | 9/26/2006 | 7.15 | 293.3 | 2.18 | NA | 30 | 210 | <1.0 |
| | | 11/21/2006 | 7.35 | 0.51 | 2.32 | <1.0 | 26 | 220 | <1.0 |
| | | 12/21/2006 | 7.12 | 2.0 | 1.55 | 1.0 | 39 | 270 | <10 |
| | | 1/19/2007 | 7.25 | -8.3 | 4.40 | <1.0 | 49 | 250 | <1.0 |
| | | 3/22/2007 | 7.13 | 3.0 | 3.57 | 1.5 | 25 | 300 | <1.0 |
| | | 7/2/2007 | 7.17 | -40.3 | 3.12 | <1.0 | 23 | 260 | <1.0 |
| | | 9/7/2007 | 7.02 | -21.0 | 1.42 | <1.0 | 14 | 180 | <1.0 |
| | | 11/30/2007 | 7.56 | -9.0 | 1.88 | <1.0 | 10 | 120 | <1.0 |
| | | 12/11/2007 | 8.62 | -7.0 | 0.44 | NA | NA | NA | NA |
| | | 1/10/2008 | 8.00 | -41.0 | 1.12 | 4.7 | 52 | 210 | 1.3 |
| | | 3/20/2008 | 6.99 | -69.4 | -0.03 | 140 | 75 | 160 | 54 |
| | | 5/30/2008 | 7.10 | 82 | 6.35 | 2 | 160 | 190 | 1.6 |
| | | 9/24/2008 | 10.40 | 38 | 1.19 | 1.3 | 140 | 320 | 2.0 |
| | | 12/3/2008 | 7.26 | 143 | 3.98 | 1.2 | 20 | 150 | <1.0 |
| | | 3/13/2009 | 7.58 | 384 | 0.69 | 1.2 | 8.3 | 89 | <1.0 |
| | | 6/18/2009 | 7.31 | 74 | 4.05 | 1.9 | 71 | 230 | <1.0 |
| | | 9/15/2009 | 7.21 | 299 | 2.84 | 2.3 | 15 | 140 | <1.0 |
| | | 11/4/2009 | 7.28 | 268 | 1.45 | <1.0 | 11 | 110 | <1.0 |
| Risk-Based Groundwater Concentrations* | | | | | | NA | 104,000 | 1,800 | 198 |

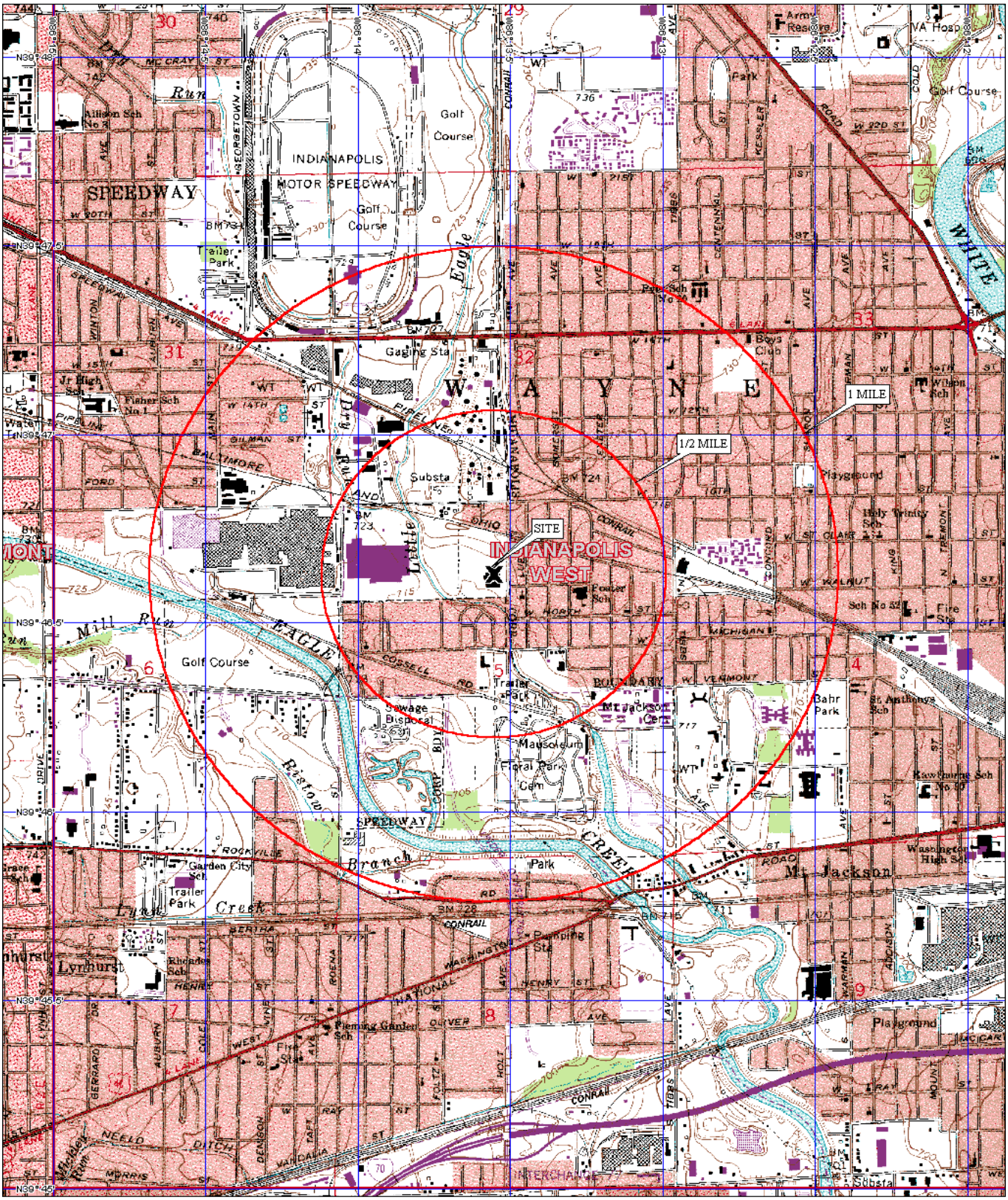
See last page for footnotes

**Table 5**
**East Off-Site Bioremediation Field Parameters and Select Groundwater Analytical Results**
**Former General Motors Corporation**
**Allison Gas Turbine, Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

| Sample No. | Well Screen Interval (Feet) | Date Sampled | pH | ORP (mV) | DO (mg/L) | TOC (mg/L) | cis-1,2-Dichloroethene (ug/L) | Trichloroethene (ug/L) | Vinyl chloride (ug/L) |
|---|---|---|---|---|---|---|---|---|---|
| MW-156 | 5-20 | 7/16/2004 | 7.26 | 296 | 0.59 | <1 | 36 | 230 | <1.0 |
| | | 8/16/2004 | 7.33 | 351 | 0.22 | 9.1 | 37 | 230 | <1.0 |
| | | 10/18/2004 | 7.26 | 270 | 6.66 | <1.0 | <1.0 | 13 | <1.0 |
| | | 11/19/2004 | 7.30 | 238 | 0.85 | 2.9 | 52 | 260 | <1.0 |
| | | 12/21/2004 | 7.38 | 253 | 1.70 | 1.5 | 54 | 250 | <1.0 |
| | | 1/24/2005 | 7.25 | 25.9 | 2.42 | <1.0 | 35 | 130 | <1.0 |
| | | 3/16/2005 | 7.12 | NA | 1.96 | NA | 53 | 230 | <1.0 |
| | | 6/14/2005 | 7.42 | 106 | 7.78 | NA | 3.7 | 29 | <1.0 |
| | | 9/23/2005 | 6.96 | 139.8 | 1.30 | NA | 50 | 190 | <1.0 |
| | | 12/7/2005 | 7.35 | 72 | 3.63 | NA | 41 | 160 | <1.0 |
| | | 3/15/2006 | 8.23 | 111 | 4.41 | NA | <1.0 | 4.3 | <1.0 |
| | | 6/14/2006 | 7.15 | 40 | 2.46 | NA | 36 | 160 | <1.0 |
| | | 9/27/2006 | 7.37 | 91.1 | 2.57 | NA | 46 | 240 | <1.0 |
| | | 11/21/2006 | 7.41 | 247 | 3.39 | 1.0 | 11 | 100 | <1.0 |
| | | 12/21/2006 | 7.16 | 31.1 | 1.41 | 1.3 | 55 | 240 | <10 |
| | | 1/19/2007 | 7.24 | 80.8 | 4.33 | <1.0 | 34 | 200 | <1.0 |
| | | 3/23/2007 | 7.18 | 149 | 8.70 | 1.4 | 40 | 170 | <1.0 |
| | | 7/2/2007 | 7.31 | 85.2 | 1.11 | 1.2 | 41 | 170 | <1.0 |
| | | 9/6/2007 | 6.87 | 28 | 0.90 | 1.5 | 51 | 230 | <1.0 |
| | | 11/30/2007 | 7.71 | 27 | 2.16 | 1.8 | 52 | 200 | <1.0 |
| | | 12/11/2007 | 7.99 | -52 | 1.30 | NA | NA | NA | NA |
| | | 1/10/2008 | 7.89 | 16 | 6.34 | 1.3 | 9.5 | 58 | <1.0 |
| | | 3/20/2008 | 7.37 | -0.2 | 11.47 | <10.0 | <1.0 | 7.6 | <1.0 |
| | | 5/30/2008 | 6.98 | 218 | 0.90 | 1.2 | 31 | 150 | <1.0 |
| | | 9/24/2008 | 14.00 | -30 | 0.60 | 3.8 | 43 | 180 | <1.0 |
| | | 12/3/2008 | 7.18 | 122 | 1.70 | 1.6 | 71 | 160 | <5.0 |
| | | 3/12/2009 | 7.55 | 378 | 4.87 | 1.4 | 27 | 120 | <1.0 |
| | | 6/18/2009 | 7.33 | 128.3 | 4.27 | 2.2 | 23 | 79 | <1.0 |
| | | 9/16/2009 | 7.06 | 282 | 0.80 | 2.8 | 54 | 210 | <1.0 |
| | | 11/4/2009 | 7.24 | 298 | 1.31 | <1.0 | 38 | 140 | <1.0 |
| MW-151 | 5-20 | 7/16/2004 | 7.16 | 334 | 0.96 | <1 | 3.1 | 5.1 | <1.0 |
| | | 8/16/2004 | 7.26 | 360 | 0.40 | 8.2 | 2.6 | 5.4 | <1.0 |
| | | 10/18/2004 | 7.11 | 236 | 0.26 | <1.0 | 3.1 | 5.4 | <1.0 |
| | | 11/19/2004 | 7.10 | 254 | 3.02 | 13 | 3.5 | 4.7 | <1.0 |
| | | 12/21/2004 | 7.14 | 262 | 3.28 | 62 | 4.1 | 6.4 | <1.0 |
| | | 1/24/2005 | 7.13 | 50.6 | 4.00 | <1.0 | 3.3 | 5.0 | <1.0 |
| | | 3/16/2005 | 7.10 | NA | 4.26 | NA | 3.6 | 5.3 | <1.0 |
| | | 6/14/2005 | 7.14 | 112 | 0.89 | NA | 2.8 | 3.6 | <1.0 |
| | | 9/23/2005 | 6.84 | 118 | 1.27 | NA | 3.23 | 4.57 | <1.0 |
| | | 12/7/2005 | 7.11 | 60 | 2.41 | NA | 4.6 | 4.8 | <1.0 |
| | | 3/15/2006 | 7.71 | 142 | 2.68 | NA | 3.4 | 4.8 | <1.0 |
| | | 6/14/2006 | 7.12 | 76 | 1.85 | NA | 2.6 | 4.6 | <1.0 |
| | | 9/27/2006 | 7.02 | 117.2 | 2.32 | NA | 3.6 | 6.6 | <1.0 |
| | | 11/21/2006 | 7.27 | 266 | 4.26 | <1.0 | 3.5 | 7.4 | <1.0 |
| | | 12/21/2006 | 6.97 | 36.3 | 3.70 | <1.0 | 3.5 | 6.5 | <1.0 |
| | | 1/19/2007 | 7.41 | 54.9 | 11.81 | <1.0 | 2.2 | 6.0 | <1.0 |
| | | 3/23/2007 | 7.07 | 152 | 6.58 | 1.2 | 1.6 | 4.2 | <1.0 |
| | | 9/6/2007 | 6.86 | 29 | 1.75 | 1.6 | 2.7 | 7.6 | <1.0 |
| | | 11/30/2007 | 7.34 | 44 | 1.30 | 1.2 | 2.9 | 8.3 | <1.0 |
| | | 12/11/2007 | 7.55 | -32 | 2.82 | NA | NA | NA | NA |
| | | 1/10/2008 | 7.69 | 52 | 4.50 | 1.4 | 2.0 | 5.1 | <1.0 |
| | | 3/20/2008 | 7.10 | 19.2 | 9.40 | <10.0 | <1.0 | 2.7 | <1.0 |
| | | 5/30/2008 | 7.05 | 299 | 8.19 | 1.2 | 1.6 | 6.1 | <1.0 |
| | | 9/24/2008 | 14.00 | -89.2 | 1.56 | 1.3 | 1.8 | 9.1 | <1.0 |
| | | 12/3/2008 | 7.14 | 177 | 1.79 | 1.7 | 2.1 | 7.8 | <1.0 |
| | | 3/13/2009 | 7.74 | -34.3 | 1.30 | 1.9 | 1.8 | 5.1 | <1.0 |
| | | 6/18/2009 | 7.20 | 122.7 | 10.74 | 2.1 | 2.0 | 6.2 | <1.0 |
| | | 9/16/2009 | 7.16 | 294 | 2.20 | 4.6 | 1.7 | 5.3 | <1.0 |
| | | 11/4/2009 | 7.14 | 325 | 1.70 | <1.0 | 1.6 | 7.0 | <1.0 |
| Risk-Based Groundwater Concentrations* | | | | | | NA | 104,000 | 1,800 | 198 |

*Based on $10^{-6}$ risk from vapor intrusion to indoor air.
DO = dissolved oxygen
mg/L = milligrams per liter
mV = millivolts
NA = Not Applicable
ORP = oxidation-reduction potential
TOC = total organic carbon
ug/L = micrograms per liter

# FIGURES




3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 693 ft Scale: 1 : 24,000 Detail: 13-0 Datum: WGS84

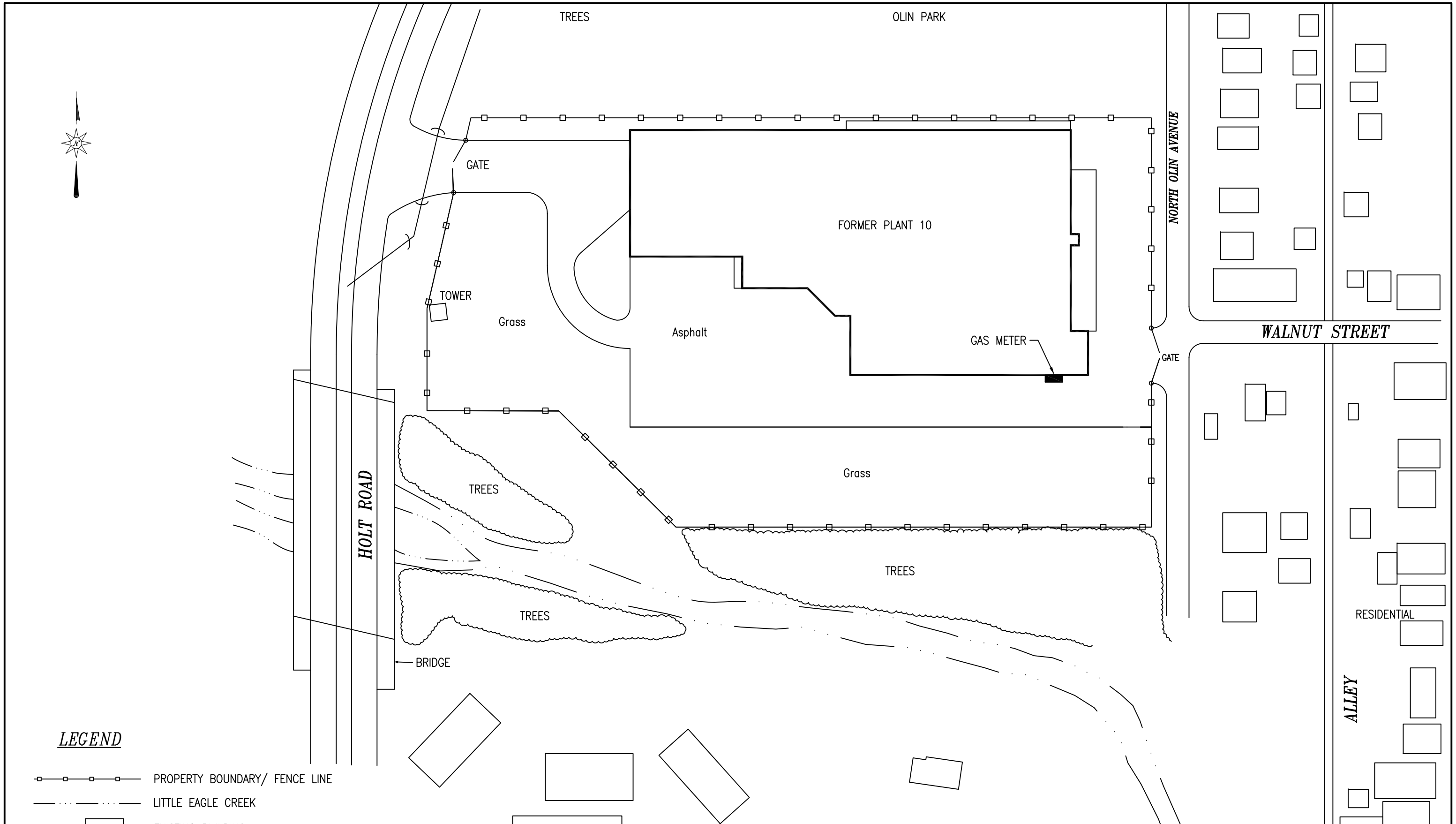

**KERAMIDA Inc.**
**401 North College Avenue**
**Indianapolis, Indiana 46202**

**(317) 685-6600 FAX (317) 685-6610**


**Figure 1**
**Site Location Map**
**Former General Motors Corporation**
**Allison Gas Turbine Plant 10**
**700 North Olin Avenue**
**Indianapolis, IN**

| | |
|---|---|
| Prepared by : | **Becky Cassinelli** |
| Approved by : | **Kris Buckles** |
| Date : | **9/29/2002** |
| Project Number: | **2829E** |

N.

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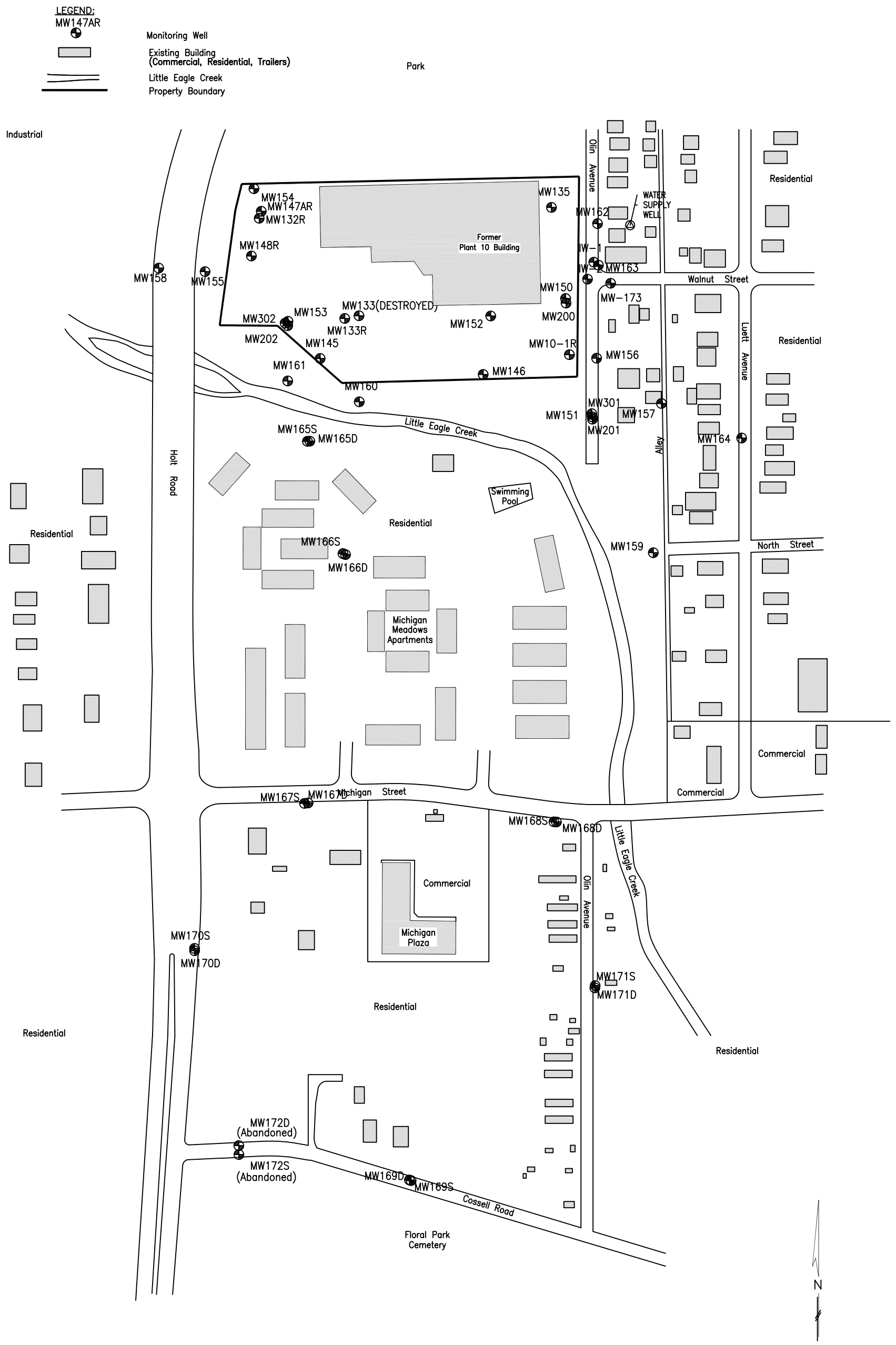
| | |
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | |
| | Drawn By: MHJ |
| Project Number: 2829E | Approved By: RSF |
| Date: June 11, 2009 | File: 2829EFig2 |

**Figure 2**

Site Map

G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-0018\003, Remediation Systems\Figures, Logs & Tables\Figures\System Evaluation Reports\Olden\Figure 2's & 3's\2829EFig2.dwg, Site Plan, 11/2/2009 1:49:51 PM




SCALE: 1" = 200'

0 100' 200'

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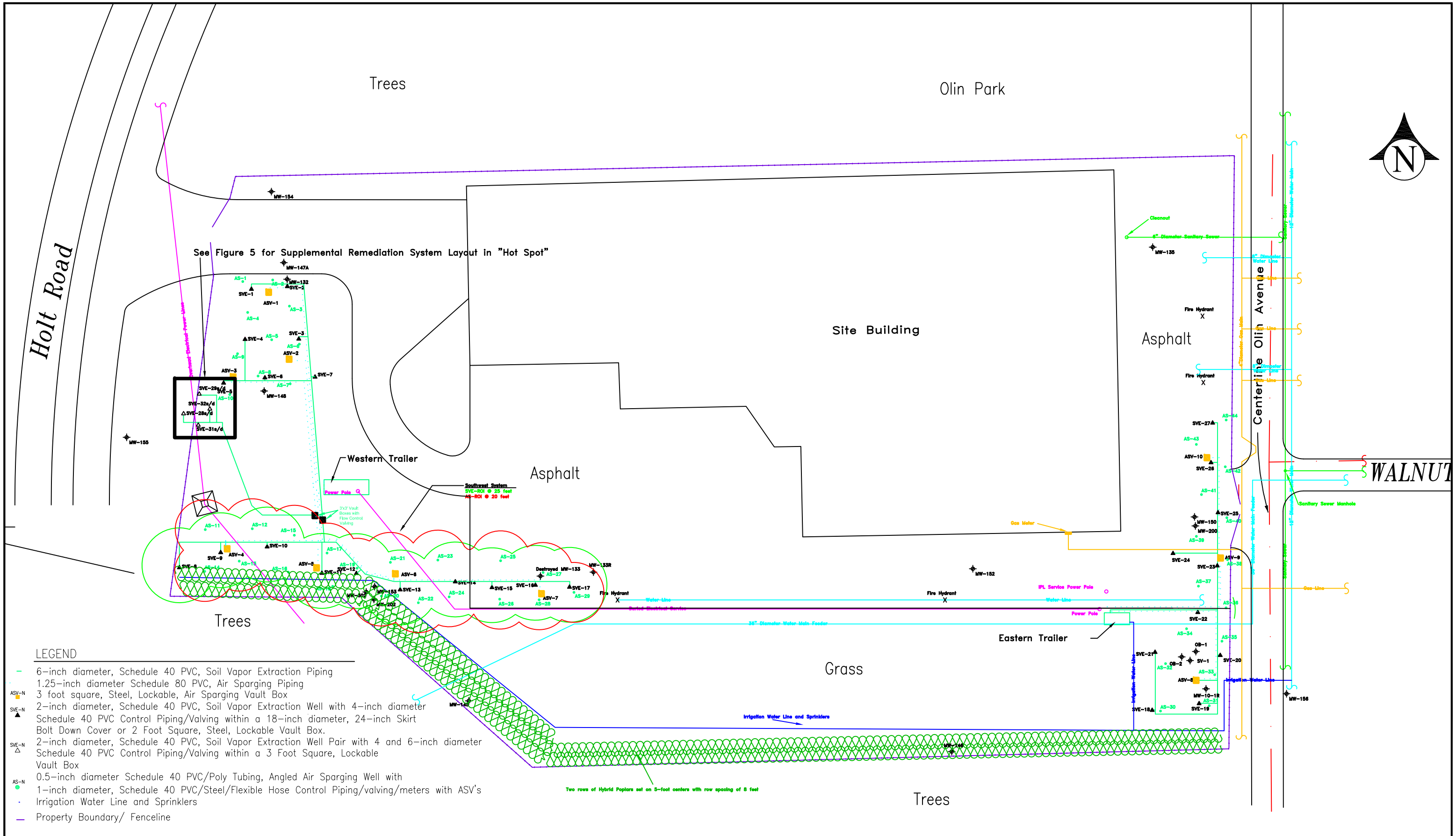
| | |
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | |
| | Drawn By: J.CLARK |
| Project Number: 2829E | Approved By: RSF |
| Date: October 25, 2005 | File No. GenuinePtsFigs |

Figure 3

Expanded Site Map

G:\CLIENTS\G\Genuine Parts\Figures\GenuinePtsFigs.dwg, Site Map (Fig 3), 12/8/2009 9:31:15 AM




SCALE: 1"=60'

0 30' 60'

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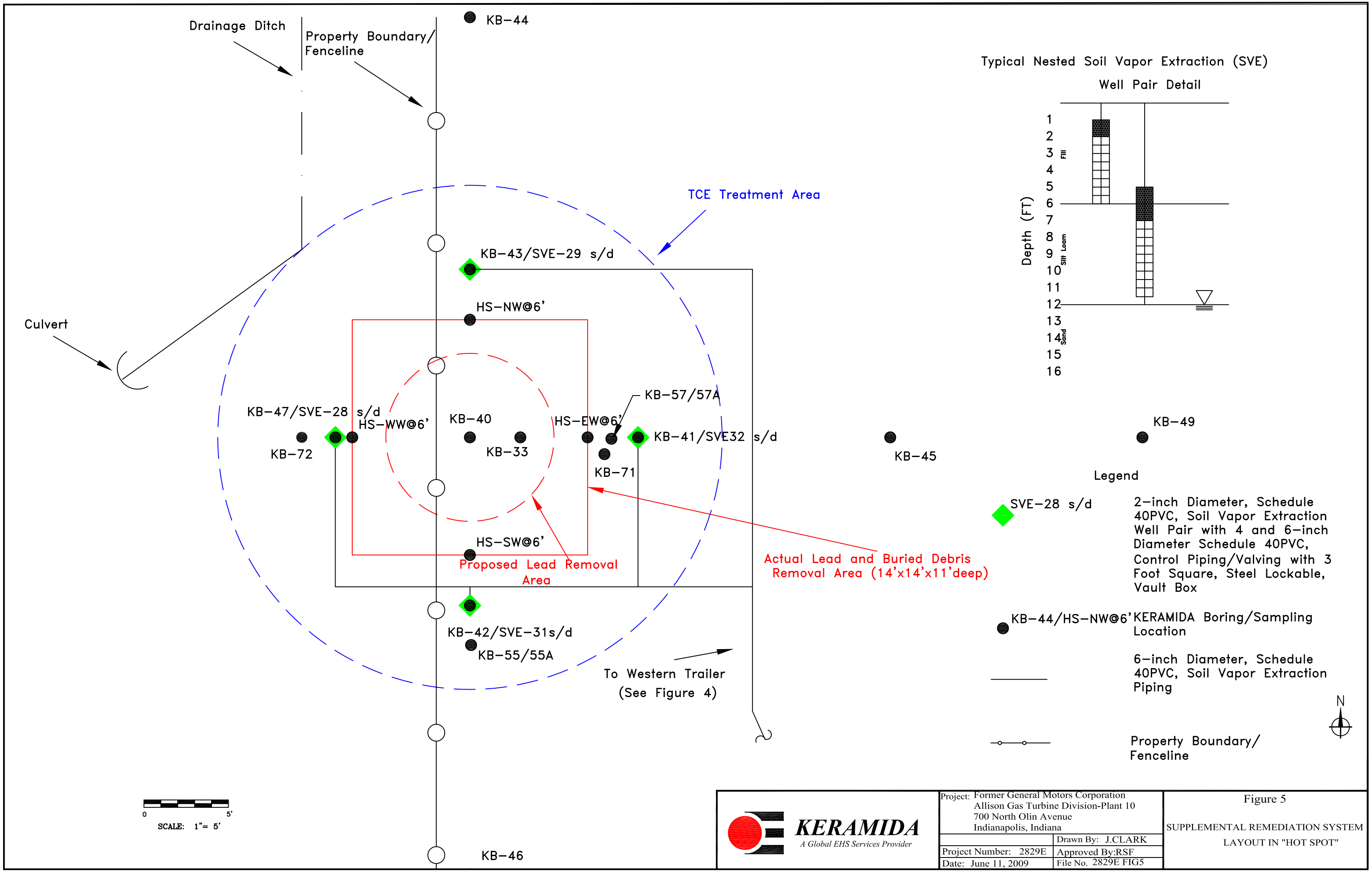
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | |
| | Drawn By: J.CLARK |
| Project Number: 2829E | Approved By: RSF |
| Date: June 10, 2009 | File No. Figs4March2006 |

Figure 4

REMEDIATION SYSTEM LAYOUT WITH UTILITIES

G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-001&003, Remediation Systems\Figures, Logs & Tables\Figures\System Evaluation Reports\Figure 4's\Figure 4 March 2006.dwg, Fig 4, 7/1/2009 9:21:19 AM




G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-001&003, Remediation Systems\Figures, Logs & Tables\Figures\System Evaluation Reports\Figure 5's\Figure 5 July through September 2005 Report.dwg, Fig 5, 7/1/2009 9:23:55 AM

LEGEND:

MW135 Monitoring Well

Existing Building (Commercial, Residential, Trailers)

Little Eagle Creek

Property Boundary/ Fenceline

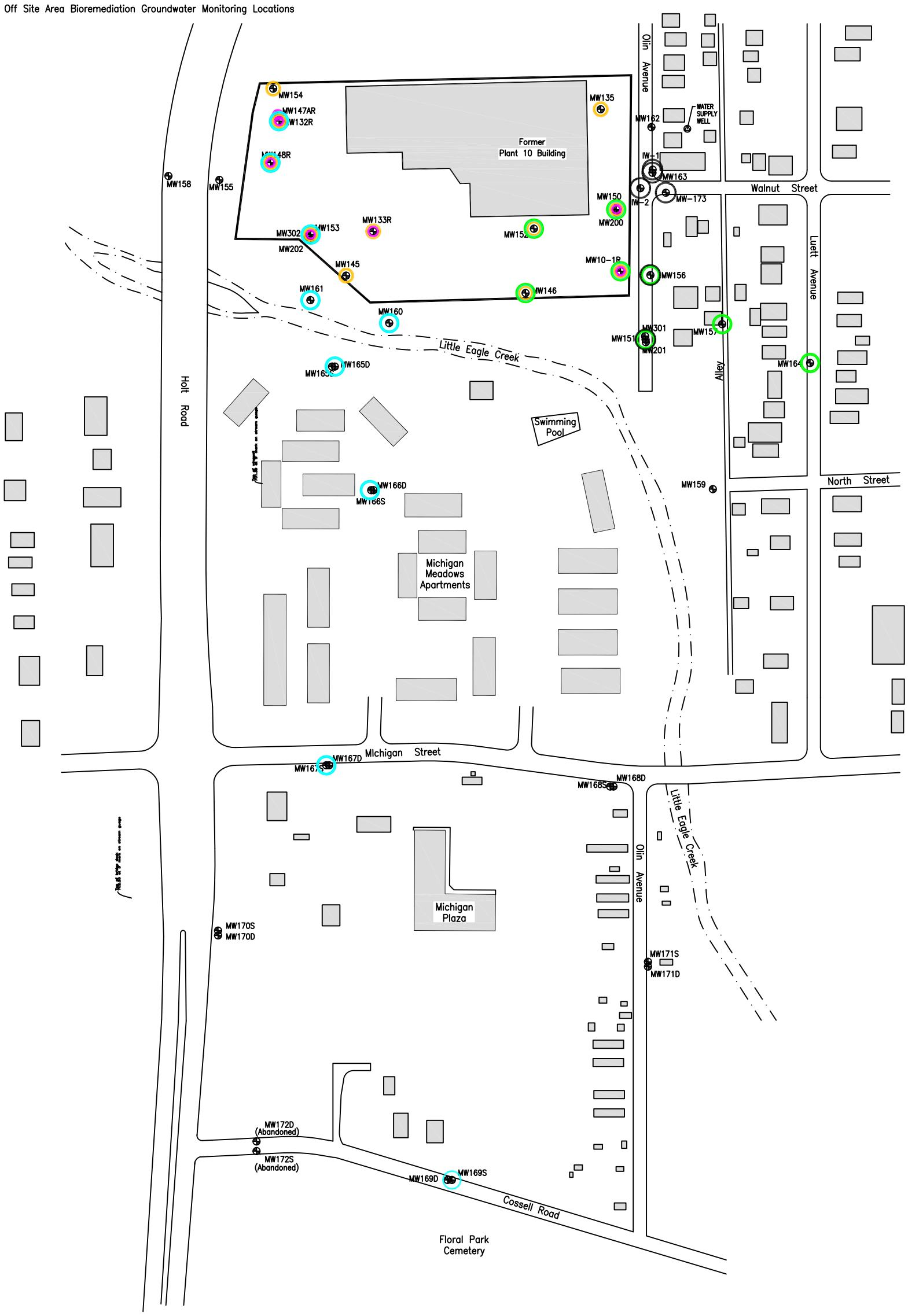
Selective On-Site Groundwater Monitoring Locations

On-Site Groundwater Monitoring Locations

Western Source Plume Stability Groundwater Monitoring Locations

Eastern Source Plume Stability Groundwater Monitoring Locations

East Off Site Area Bioremediation Groundwater Monitoring Locations




SCALE: 1"= 200'

0 100' 200'

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| | |
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | Figure 6<br>GROUNDWATER MONITORING PLAN |
| | Drawn By: J.CLARK |
| Project Number: 2829E | Approved By: |
| Date: June 10, 2009 | File No. 2829EFigs6 |

G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-001&003, Remediation Systems\Figures, Logs & Tables\Figures\System Evaluation Reports\Older\2829EFig6.dwg,
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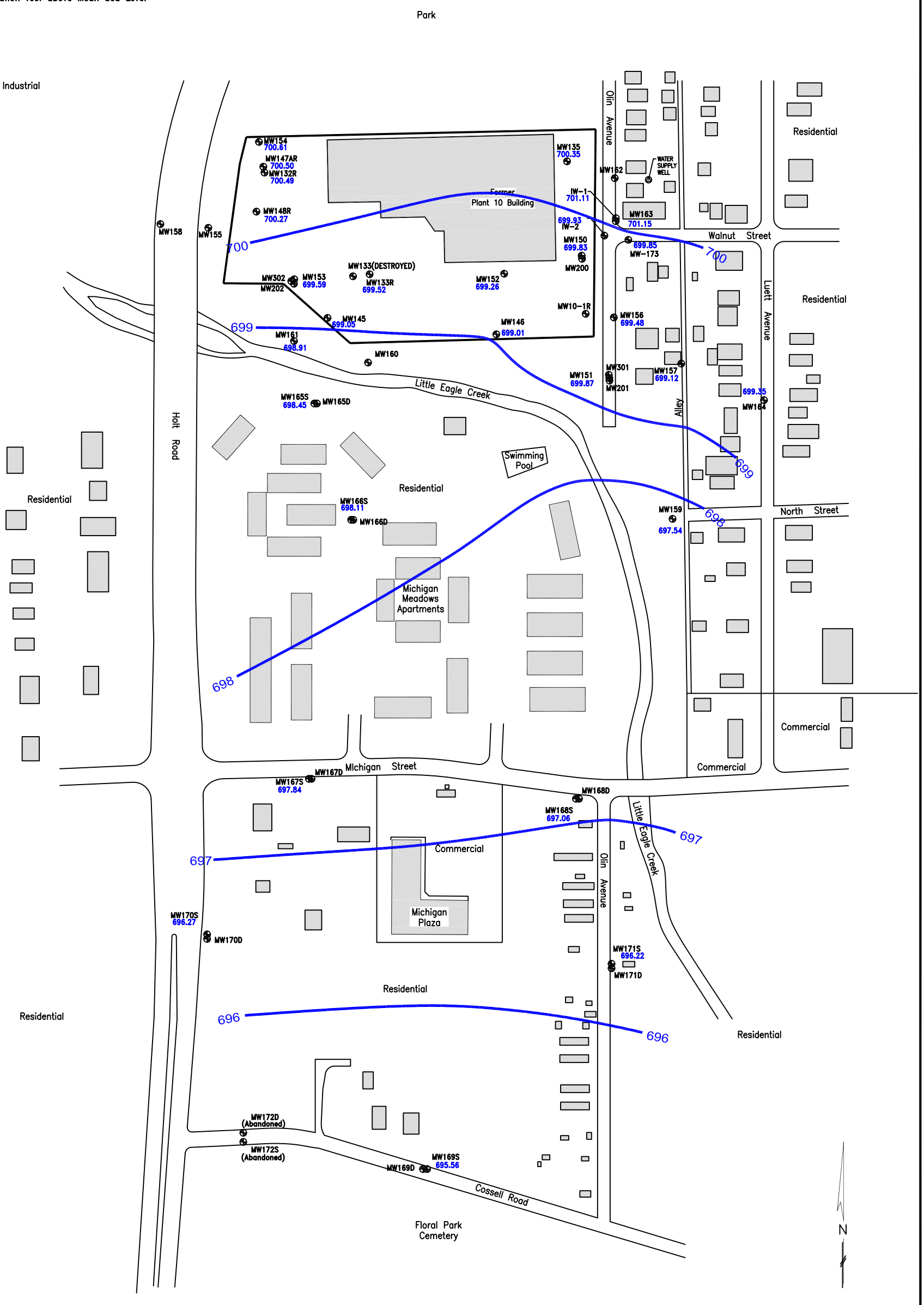
**LEGEND:**

- MW148 Monitoring Well
- Existing Building (Commercial, Residential, Trailers)
- Little Eagle Creek
- Property Boundary/ Fence Line
- 700 Groundwater Potentiometric Surface Elevation feet above Mean Sea Level




SCALE: 1" = 200'

0 100' 200'

KERAMIDA
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| | |
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | |
| | Drawn By: J.CLARK |
| Project Number: 2829E-001 | Approved By: RSF |
| Date: November 16, 2009 | File: GenuinePtsPot |

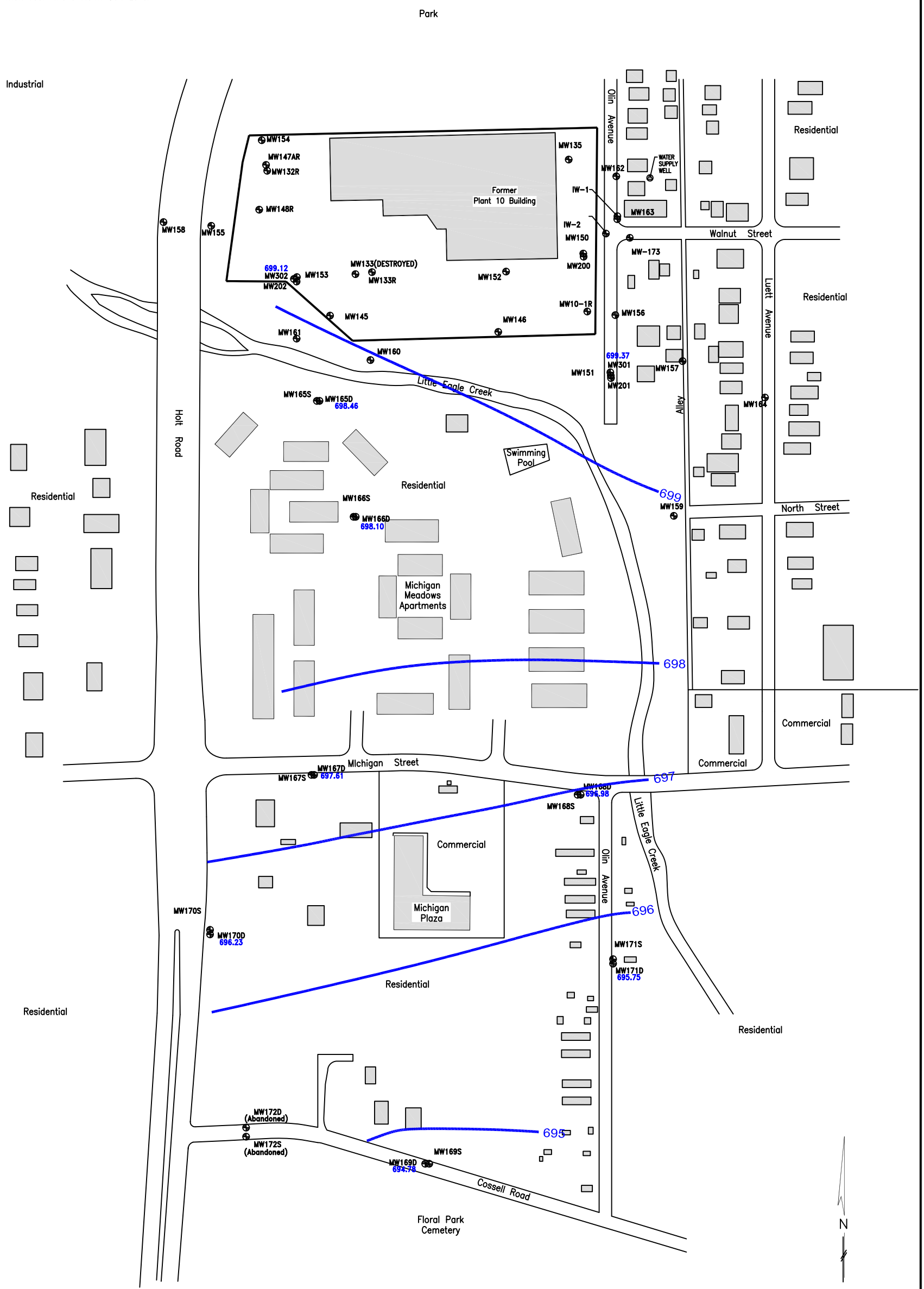
Figure 7

Groundwater Potentiometric Surface Map-Shallow Wells November 2, 2009

G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-001&003, Remediation Systems\Figures, Logs & Tables\Figures\GenuinePtsPot.dwg, Pot Map Shallow Nov 2 2009, 11/16/2009 11:35:20 AM

**LEGEND:**

- MW148 Monitoring Well
- Existing Building (Commercial, Residential, Trailers)
- Little Eagle Creek
- Property Boundary/ Fence Line
- 698 Groundwater Potentiometric Surface Elevation feet above Mean Sea Level




SCALE: 1" = 200'

0 100' 200'

KERAMIDA
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| | |
|---|---|
| Project: Former General Motors Corporation<br>Allison Gas Turbine Division-Plant 10<br>700 North Olin Avenue<br>Indianapolis, Indiana | |
| | Drawn By: J.CLARK |
| Project Number: 2829E-001 | Approved By: RSF |
| Date: November 16, 2009 | File:GenuinePtsPot |

Figure 8

Groundwater Potentiometric Surface Map-Deep Wells
November 2, 2009

G:\CLIENTS\G\Genuine Parts\2829E Genuine Parts Invest. thru Remed\2829E-001&003, Remediation Systems\Figures, Logs & Tables\Figures\GenuinePtsPot.dwg,
Pot Map Deep Nov 2 2009, 11/16/2009 11:34:27 AM

# ATTACHMENT 1

## October through December 2009 - Operation & Maintenance Logs

**KERAMIDA ENVIRONMENTAL, INC.**
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 10/13/09 Technician: R. Fedorchak

## SOUTHWEST SYSTEM STATUS

SVE Blower (B-201) Operating ? (Yes/No)
Air Compressor (AC-201) Operating ? (Yes/No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

## OPERATIONAL PARAMETERS

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 52 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 40 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 37 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 0 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 88 | °F |
| Blower Current (B-201) | 21.5 | amps |
| Blower Hours (B-201) | 55582 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 33 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 37 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 14 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 40 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 92 | °F |
| Compressor Air Temperature on AC-201 display unit | 187 | °F |
| Compressor Load Hours AC-201 display unit | 17464 | hours 50655 total |
| Compressor Current (AC-201) | 26 load | amps 19 idle |

## MAINTENANCE PARAMETERS:

| | | |
|---|---|---|
| Monthly Effluent Vapor Sample Collected ? (Yes/No) | If yes, name: — | |
| SVE Knockout Tanks Drained ? (Yes/No) | | |
| Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No) | | |
| Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) | | Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$. |
| Blower Lubricated ? (Yes/No) | | Lubricate weekly. |
| Blower Oil Changed ? (Yes/No) | | Change every 1,000 hours. |
| Compressor In-line Air Filters (PF-202) Changed? (Yes/No) | | Changing frequency based on indicators on filter housings. |
| Compressor Filter Changed ? (Yes/No) | | Change every 1,500 hours. |
| Compressor Oil Changed ? (Yes/No) | | Change every 4,000 hours. |

NOTES:

- System shutoff late last week due heavy rain event predicted.
- System restarted remotely on Monday 10/12/09
- Tri-State on Site check system for increased load hours, fluctuations in coalescing filters need replaced. Have w/ Tri-State ordering parts.

**KERAMIDA ENVIRONMENTAL, INC.**
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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 10-20-09 Technician: A. Hamper

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? **(Yes / No)**
Air Compressor (AC-201) Operating ? **(Yes / No)**
Air Sparges Operating ? **(Yes/No)**
Heater Operating ? **(Yes/No)**
Ventilation Operating ? **(Yes/No)**

If yes, which vault? **(ASV 4, 5, 6, or 7)**

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 50 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 35 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 45 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 15 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1600 | scfm |
| Effluent Air Temperature (TI-202) | 86 | °F |
| Blower Current (B-201) | 21 | amps |
| Blower Hours (B-201) | 55750 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 33 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 36 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 13 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 39 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 35 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 90 | °F |
| Compressor Air Temperature on AC-201 display unit | 180 | °F |
| Compressor Load Hours AC-201 display unit | 11562 | hours |
| Compressor Current (AC-201) | 16/25 | amps |

50827 TOTAL

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? **(Yes/No)** — If yes, name: VOC's + Vinyl Chloride
SVE Knockout Tanks Drained ? **(Yes/No)**
Blower Dilution Air Filter (FS-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)**
Blower In-line Air Filter (PF-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)** — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? **(Yes/No)** — Lubricate weekly.
Blower Oil Changed ? **(Yes/No)** — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? **(Yes/No)** — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? **(Yes/No)** — Change every 1,500 hours.
Compressor Oil Changed ? **(Yes/No)** — Change every 4,000 hours.

**NOTES:** Performance test

*KERAMIDA ENVIRONMENTAL, INC.*
401 North College Avenue
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(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 10-27-09 Technician: A. HARPER

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? **(Yes / No)**
Air Compressor (AC-201) Operating ? **(Yes / No)**
Air Sparges Operating ? **(Yes/No)**
Heater Operating ? **(Yes/No)**
Ventilation Operating ? **(Yes/No)**

If yes, which vault? **(ASV 4, 5, 6, or 7)**

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 14 | Inches of H2O |
| Influent Air Temperature (TI-201) | 52 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 36 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 45 | Inches of H2O |
| Effluent Air Pressure (PI-204) | .5 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 90 | °F |
| Blower Current (B-201) | 21 | amps |
| Blower Hours (B-201) | 55919 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 34 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 12 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 37 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 35 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 100 | °F |
| Compressor Air Temperature on AC-201 display unit | 188 | °F |
| Compressor Load Hours AC-201 display unit | 17659 | hours 50992 |
| Compressor Current (AC-201) | 16.25 | amps |

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? **(Yes/No)** — If yes, name: _____
SVE Knockout Tanks Drained ? **(Yes/No)**
Blower Dilution Air Filter (FS-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)**
Blower In-line Air Filter (PF-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)** — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? **(Yes/No)** — Lubricate weekly.
Blower Oil Changed ? **(Yes/No)** — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? **(Yes/No)** — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? **(Yes/No)** — Change every 1,500 hours.
Compressor Oil Changed ? **(Yes/No)** — Change every 4,000 hours.

**NOTES:**

**KERAMIDA ENVIRONMENTAL, INC.**
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 4-3-09 Technician: Alan Harper

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 50 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 38 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 42 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 0.5 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 94 | °F |
| Blower Current (B-201) | 23 | amps |
| Blower Hours (B-201) | 56025 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 34 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 11.5 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 36 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 35 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 88 | °F |
| Compressor Air Temperature on AC-201 display unit | 190 | °F |
| Compressor Load Hours AC-201 display unit | 17740 | hours |
| Compressor Current (AC-201) | 16/25 | amps |

51162 Total Hr.

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) If yes, name: N/A
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

NOTES: SVE System down on arrival due to KOT High Alarm, Drained water & Restarted system.

Replaced Valves in Coalescing Filters on Sparge System.

Balanced SVE & Sparge Points as required

*KERAMIDA ENVIRONMENTAL, INC.*
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 11-10-09 Technician: Alan Harper

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 54 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 38 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 49 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 104 | °F |
| Blower Current (B-201) | 24 | amps |
| Blower Hours (B-201) | 56141 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 34 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 11.5 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 34 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 11.5 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 12 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 35 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 4 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 90 | °F |
| Compressor Air Temperature on AC-201 display unit | 187 | °F |
| Compressor Load Hours AC-201 display unit | 17805 | hours 51328 Total |
| Compressor Current (AC-201) | 10/25 | amps |

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) — If yes, name: VOC's + Vinyl Chloride
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

**NOTES:**

*KERAMIDA ENVIRONMENTAL, INC.*
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 11-17-09 Technician: ALAN Hampton

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 50 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 38 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 46 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1000 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | / | scfm |
| Effluent Air Temperature (TI-202) | 98 | °F |
| Blower Current (B-201) | 24 | amps |
| Blower Hours (B-201) | 56365 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 34 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 12 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 12 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 80 | °F |
| Compressor Air Temperature on AC-201 display unit | 186 | °F |
| Compressor Load Hours AC-201 display unit | 17874 | hours |
| Compressor Current (AC-201) | 26/25 | amps |

51502 Total

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No)
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower Lubricated ? (Yes/No)
Blower Oil Changed ? (Yes/No)
Compressor In-line Air Filters (PF-202) Changed? (Yes/No)
Compressor Filter Changed ? (Yes/No)
Compressor Oil Changed ? (Yes/No)

If yes, name: _____

Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Lubricate weekly.
Change every 1,000 hours.
Changing frequency based on indicators on filter housings.
Change every 1,500 hours.
Change every 4,000 hours.

**NOTES:**

**KERAMIDA ENVIRONMENTAL, INC.**
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 11-24-09 Technician: Alan Hamper

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13.5 | Inches of H2O |
| Influent Air Temperature (TI-201) | 52 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 40 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 49 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1010 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1 | scfm |
| Effluent Air Temperature (TI-202) | 92 | °F |
| Blower Current (B-201) | 23 | amps |
| Blower Hours (B-201) | 56527 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 35 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 11.5 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 12 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 12 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 42 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 90 | °F |
| Compressor Air Temperature on AC-201 display unit | 184 | °F |
| Compressor Load Hours AC-201 display unit | 17940 | hours |
| Compressor Current (AC-201) | 17/26 | amps |

51665 Total hrs.

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) If yes, name: N/A
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

NOTES: SVE BLOWER HAD 3 TIMES to much oil in it. It Holds 1½ gal Approx AND I drained over a gal. I didn't do the LAST oil change on Blower!

WE HAVE 1 Particulate Filter for SVE Blower & 2.5 gal oil ; Compressor: 1 oil filter
1 air filter, 3/4 Roll fiber glass filter for AIR intake side of Comp. 105 gal oil.
THERE IS NOT A SEPERATOR Filter left. Will need seperator filter & oil for next change

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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 12/1/09 Technician: CONDRY

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 14 | Inches of H2O |
| Influent Air Temperature (TI-201) | 40 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 46 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 48 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1000 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | N/A | ~~scfm~~ PSI |
| Effluent Air Temperature (TI-202) | 78 | °F |
| Blower Current (B-201) | 21.5 | amps |
| Blower Hours (B-201) | 566 94.5 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 36 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 13 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 36 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 12 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 42 | psi |
| Compressor Pressure (PI-205) | 108 | psi |
| Compressor Air Temperature (TI-203) | 82 | °F |
| Compressor Air Temperature on AC-201 display unit | 186 | °F |
| Compressor Load Hours AC-201 display unit | 18003 | hours Total 51831 |
| Compressor Current (AC-201) | 25.5 | amps on Load 17 Amps @ idle |

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) If yes, name: N/A
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

NOTES: EFF SVE EXHAUST PSI GAUGE broken.
PSI DIFF. GAUGES ON DILUTION APPEAR BROKEN. AFTER FILTER FOR SURE.

**KERAMIDA ENVIRONMENTAL, INC.**
401 North College Avenue
Indianapolis, Indiana 46202
(317) 685-6600 - FAX (317) 685-6610

OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 12-8-09 Technician: Alan Harper

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 14 | Inches of H2O |
| Influent Air Temperature (TI-201) | 40 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 46 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 55 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 78 | °F |
| Blower Current (B-201) | 21.5 | amps |
| Blower Hours (B-201) | 56862 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 35 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 11.5 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 12 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 36 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 12 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 11.5 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 75 | °F |
| Compressor Air Temperature on AC-201 display unit | 184 | °F |
| Compressor Load Hours AC-201 display unit | 18067 | hours |
| Compressor Current (AC-201) | 17/27 | amps |

51999 Total

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) — If yes, name: VOC's + Vinyl Chloride
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

NOTES: MOTOR BEARINGS changed on Comp. MOTOR, New Belts
Reset all HR Readings adjusted belt tension

Put insulation on all Vent opening, started heater in Compressor side of trailer.

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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 12/15/09 Technician: R. Fedorchuk

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No) — Turned up
Ventilation Operating ? (Yes/No) off

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 16 | Inches of H2O |
| Influent Air Temperature (TI-201) | 36 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 48 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 42 | Inches of H2O |
| Effluent Air Pressure (PI-204) | Need New | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 73 | °F |
| Blower Current (B-201) | 22 | amps |
| Blower Hours (B-201) | 57028 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 33 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 14 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 32 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 104 | psi |
| Compressor Air Temperature (TI-203) | 100 | °F |
| Compressor Air Temperature on AC-201 display unit | 76 | °F |
| Compressor Load Hours AC-201 display unit | 18,125 | hours 52,165 total |
| Compressor Current (AC-201) | 26 load | amps |
| | 18 idle | amps |

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) — If yes, name: —
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

**NOTES:**

***KERAMIDA ENVIRONMENTAL, INC.***
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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 12/21/09 Technician: R. Fedochak

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No) off

If yes, which vault? (ASV 4, 5, 6, or 7)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | -15 | Inches of H2O |
| Influent Air Temperature (TI-201) | 38 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 48 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 50 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 0 | ~~Inches of H2O~~ psi |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 84 | °F |
| Blower Current (B-201) | 21.5 | amps |
| Blower Hours (B-201) | 57176 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 33 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 34 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 14 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 31 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 83 | °F |
| Compressor Air Temperature on AC-201 display unit | 186 | °F |
| Compressor Load Hours AC-201 display unit | 18,170 | hours 57313 total |
| Compressor Current (AC-201) | 18 idle<br>26.5 load | amps |

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) If yes, name: — —
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

**NOTES:**
- Bought & installed new effluent pressure gauge.
- Bought 2 new part. filter vacuum gauges — didn't work, will exchange for correct gauges and install then next visit.

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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 12/22/09 Technician: R. Fredericksen

## SOUTHWEST SYSTEM STATUS

SVE Blower (B-201) Operating ? **(Yes / No)**
Air Compressor (AC-201) Operating ? **(Yes / No)**
Air Sparges Operating ? **(Yes/No)**
Heater Operating ? **(Yes/No)**
Ventilation Operating ? **(Yes/No)**

If yes, which vault? **(ASV 4, 5, 6, or 7)**

## OPERATIONAL PARAMETERS

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | -15.5 | Inches of H2O |
| Influent Air Temperature (TI-201) | 68 | °F |
| Influent Air Flowrate (FI-201) | – | scfm |
| Ambient Air Flowrate (FI-202) | – | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 58 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 48 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 0 | ~~Inches of H2O~~ psi |
| Effluent Air Flowrate (FI-203) | 1,000 | scfm |
| Effluent Air Temperature (TI-202) | 73 | °F |
| Blower Current (B-201) | 22 | amps |
| Blower Hours (B-201) | 57302 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 34 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 36 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 14 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 31 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 82 | °F |
| Compressor Air Temperature on AC-201 display unit | 192 | °F |
| Compressor Load Hours AC-201 display unit | 10244 | hours 52400 total |
| Compressor Current (AC-201) | 26 load<br>12.5 idle | amps |

## MAINTENANCE PARAMETERS:

Monthly Effluent Vapor Sample Collected ? **(Yes/No)** — If yes, name: —
SVE Knockout Tanks Drained ? **(Yes/No)**
Blower Dilution Air Filter (FS-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)**
Blower In-line Air Filter (PF-201) Cleaned ? **(Yes/No)** Changed ? **(Yes/No)** — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? **(Yes/No)** — Lubricate weekly.
Blower Oil Changed ? **(Yes/No)** — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? **(Yes/No)** — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? **(Yes/No)** — Change every 1,500 hours.
Compressor Oil Changed ? **(Yes/No)** — Change every 4,000 hours.

## NOTES:

- Installed new effluent vacuum gauge for particulate filter on SW blower
- Left at Northwest Power Substation
- Capitol City Fence installed 2 gate posts in fence line near MW-160 & 161

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OPERATION & MAINTENANCE LOG
Genuine Parts Groundwater Remediation System
KERAMIDA PROJECT #2829E

Date: 10-6-09 Technician: A. Hampton

**SOUTHWEST SYSTEM STATUS**

SVE Blower (B-201) Operating ? (Yes / No)
Air Compressor (AC-201) Operating ? (Yes / No)
Air Sparges Operating ? (Yes/No) If yes, which vault? (ASV 4, 5, 6, or 7)
Heater Operating ? (Yes/No)
Ventilation Operating ? (Yes/No)

**OPERATIONAL PARAMETERS**

**SVE System**

| | | |
|---|---|---|
| Influent Vacuum (PI-201) | 13 | Inches of H2O |
| Influent Air Temperature (TI-201) | 59 | °F |
| Influent Air Flowrate (FI-201) | — | scfm |
| Ambient Air Flowrate (FI-202) | — | scfm |
| Particulate Filter Inlet Vacuum (PI-202) | 39 | Inches of H2O |
| Particulate Filter Outlet Vacuum (PI-203) | 47 | Inches of H2O |
| Effluent Air Pressure (PI-204) | 1 | Inches of H2O |
| Effluent Air Flowrate (FI-203) | 1000 | scfm |
| Effluent Air Temperature (TI-202) | 93 | °F |
| Blower Current (B-201) | 21 | amps |
| Blower Hours (B-201) | 55507 | hours |

**Air Sparging System**

| | | |
|---|---|---|
| Air Injection Pressure ASV-4 (PI-207) | 33 | psi |
| Air Injection Flowrate ASV-4 (FI-204) | 12 | scfm |
| Air Injection Pressure ASV-5 (PI-208) | 35 | psi |
| Air Injection Flowrate ASV-5 (FI-205) | 12.5 | scfm |
| Air Injection Pressure ASV-6 (PI-209) | 35 | psi |
| Air Injection Flowrate ASV-6 (FI-206) | 11 | scfm |
| Air Injection Pressure ASV-7 (PI-210) | 34 | psi |
| Air Injection Flowrate ASV-7 (FI-207) | 12.5 | scfm |
| Regulator Pressure (PI-206) | 40 | psi |
| Compressor Pressure (PI-205) | 110 | psi |
| Compressor Air Temperature (TI-203) | 91 | °F |
| Compressor Air Temperature on AC-201 display unit | 187 | °F |
| Compressor Load Hours AC-201 display unit | 17423 | hours |
| Compressor Current (AC-201) | 17/26 | amps |

50584 Total

**MAINTENANCE PARAMETERS:**

Monthly Effluent Vapor Sample Collected ? (Yes/No) If yes, name: _____
SVE Knockout Tanks Drained ? (Yes/No)
Blower Dilution Air Filter (FS-201) Cleaned ? (Yes/No) Changed ? (Yes/No)
Blower In-line Air Filter (PF-201) Cleaned ? (Yes/No) Changed ? (Yes/No) — Pressure loss across (PI-202 and PI-203) not to exceed 14 inches of $H_2O$.
Blower Lubricated ? (Yes/No) — Lubricate weekly.
Blower Oil Changed ? (Yes/No) — Change every 1,000 hours.
Compressor In-line Air Filters (PF-202) Changed? (Yes/No) — Changing frequency based on indicators on filter housings.
Compressor Filter Changed ? (Yes/No) — Change every 1,500 hours.
Compressor Oil Changed ? (Yes/No) — Change every 4,000 hours.

NOTES: Balance well & Physical - Inspection

# ATTACHMENT 2

## October 2009 – Operational Data Log (Performance Data)

*KERAMIDA ENVIRONMENTAL, INC.*
330 North College Avenue
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(317) 685-6600 - FAX (317) 685-6610

**QUARTERLY OPERATIONAL LOG FOR SW SYSTEM**
**(ASV-5 is Operational)**
**Genuine Parts Groundwater Remediation System**
**KERAMIDA Project #2829E**

Date: 10-20-09 Technician: A. Harper

Air Sparging Points (AS-15, 16, 17, 18 & 19) Pressure set @ 8 psi with an Air Flow @ 6 cfm

| Time | MW - 153 | | |
|---|---|---|---|
| | Vac./Pres.("$H_2O$) | DTW (feet) (Screen @ 4.5' bgs) | DO (% or mg/L) |
| 0 (SVE Only, ASV's Off) | .04 | 12.30 | 9.36 |
| 0 (w/SVE-10&13asObs.Pt., ASV's Off) | .035 | 11.88 | 8.90 |
| 1230 | .02 | 9.68 | 4.92 |
| 1245 | .02 | 10.36 | 5.40 |
| 1315 | .02 | 11.02 | 6.11 |
| 1415 | .02 | 11.10 | 7.39 |
| 1545 | .02 | 11.11 | 8.91 |

| Time | SVE - 10 | | |
|---|---|---|---|
| | Vac./Pres.("$H_2O$) | DTW (feet) (Screen 5' bgs) | DO (% or mg/L) |
| 0 (SVE Only, ASV's Off) | 8 | 10.15 | 7.82 |
| 0 (as Obs. Pt., ASV's Off) | 0 | 10.06 | 6.72 |
| 1230 | 0 | 8.86 | 5.60 |
| 1245 | +.02 | 8.23 | 6.84 |
| 1315 | +.05 | 9.02 | 7.76 |
| 1415 | +.06 | 9.06 | 7.20 |
| 1545 | +.05 | 9.10 | 7.39 |

| Time | SVE - 11 | | |
|---|---|---|---|
| | Vac./Pres.("$H_2O$) | DTW (feet) (Screen @ 5' bgs) | DO (% or mg/L) |
| 0 (SVE Only, ASV's Off) | 8 | 10.62 | 7.18 |
| 0 (w/SVE-10&13asObs.Pt., ASV's Off) | 8 | 10.41 | 7.16 |
| 1230 | 8 | 7.29 | 6.41 |
| 1245 | 8 | 7.71 | 6.32 |
| 1315 | 8 | 8.89 | 6.08 |
| 1415 | 8 | 8.94 | 6.39 |
| 1545 | 8 | 9.01 | 6.18 |

| Time | SVE - 12 | | |
|---|---|---|---|
| | Vac./Pres.("$H_2O$) | DTW (feet) (Screen @ 5' bgs) | DO (% or mg/L) |
| 0 (SVE Only, ASV's Off) | 8 | 10.02 | 9.50 |
| 0 (w/SVE-10&13asObs.Pt., ASV's Off) | 8 | 9.63 | 6.92 |
| 1230 | 8 | 5.88 | 8.71 |
| 1245 | 8 | 6.05 | 9.63 |
| 1315 | 8 | 7.53 | 10.21 |
| 1415 | 8 | 7.91 | 9.61 |
| 1545 | 8 | 7.82 | 8.35 |

| Time | SVE - 13 | | |
|---|---|---|---|
| | Vac./Pres.("$H_2O$) | DTW (feet) (Screen 5' bgs) | DO (% or mg/L) |
| 0 (SVE Only, ASV's Off) | 8 | 9.03 | 6.60 |
| 0 (as Obs. Pt., ASV's Off) | .02 | 8.78 | 6.63 |
| 1230 | .01 | 7.43 | 6.81 |
| 1245 | .01 | 7.96 | 8.11 |
| 1315 | .01 | 8.41 | 8.36 |
| 1415 | .01 | 8.52 | 7.92 |
| 1545 | .01 | 8.53 | 7.26 |

# ATTACHMENT 3

## October through December 2009 - Vapor Analytical Reports and Discharge Calculations

Vapor Discharge Calculation Worksheet

Site: Former Allison Plant #10 - Groundwater Remediation System
Date: 12-8-09
Time: Southwest System

| | |
|---|---|
| Enter Air Flowrate in CFM | 1000 |

Enter Concentrations in PPMV

| | |
|---|---|
| Vinyl Chloride | 0 |
| Methylene Chloride | 0 |
| t-1,2 DCE | 0 |
| Chloroform | 0 |
| 1,1,1 TCA | 0 |
| Carbon Tetrachloride | 0 |
| TCE | 0.061 |
| PCE | 0 |

| | Discharge Rate (pounds/day) | Discharge Rate (pounds/hour) |
|---|---|---|
| Vinyl Chloride | 0.00 | 0.00 |
| Methylene Chloride | 0.00 | 0.00 |
| t-1,2 DCE | 0.00 | 0.00 |
| Chloroform | 0.00 | 0.00 |
| 1,1,1 TCA | 0.00 | 0.00 |
| Carbon Tetrachloride | 0.00 | 0.00 |
| TCE | 0.03 | 0.00 |
| PCE | 0.00 | 0.00 |
| Total Chlorinated HC | 0.03 | 0.00 |

Vapor Discharge Calculation Worksheet

Site: Former Allison Plant #10 - Groundwater Remediation System
Date: 11-10-09
Time: Southwest System

| | |
|---|---|
| Enter Air Flowrate in CFM | 1000 |

Enter Concentrations in PPMV

| | |
|---|---|
| Vinyl Chloride | 0 |
| Methylene Chloride | 0 |
| t-1,2 DCE | 0 |
| Chloroform | 0 |
| 1,1,1 TCA | 0 |
| Carbon Tetrachloride | 0 |
| TCE | 0.081 |
| PCE | 0 |

| | Discharge Rate (pounds/day) | Discharge Rate (pounds/hour) |
|---|---|---|
| Vinyl Chloride | 0.00 | 0.00 |
| Methylene Chloride | 0.00 | 0.00 |
| t-1,2 DCE | 0.00 | 0.00 |
| Chloroform | 0.00 | 0.00 |
| 1,1,1 TCA | 0.00 | 0.00 |
| Carbon Tetrachloride | 0.00 | 0.00 |
| TCE | 0.04 | 0.00 |
| PCE | 0.00 | 0.00 |
| Total Chlorinated HC | 0.04 | 0.00 |

Vapor Discharge Calculation Worksheet

Site: Former Allison Plant #10 - Groundwater Remediation System
Date: 10-20-09
Time: Southwest System

| | |
|---|---|
| Enter Air Flowrate in CFM | 1000 |

Enter Concentrations in PPMV

| | |
|---|---|
| Vinyl Chloride | 0 |
| Methylene Chloride | 0 |
| t-1,2 DCE | 0 |
| Chloroform | 0 |
| 1,1,1 TCA | 0 |
| Carbon Tetrachloride | 0 |
| TCE | 0.073 |
| PCE | 0 |

| | Discharge Rate (pounds/day) | Discharge Rate (pounds/hour) |
|---|---|---|
| Vinyl Chloride | 0.00 | 0.00 |
| Methylene Chloride | 0.00 | 0.00 |
| t-1,2 DCE | 0.00 | 0.00 |
| Chloroform | 0.00 | 0.00 |
| 1,1,1 TCA | 0.00 | 0.00 |
| Carbon Tetrachloride | 0.00 | 0.00 |
| TCE | 0.04 | 0.00 |
| PCE | 0.00 | 0.00 |
| Total Chlorinated HC | 0.04 | 0.00 |

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

12/21/2009

RECEIVED
DEC 28 2009
KERAMIDA

Mr. Rob Fedorchak
Keramida Environmental, Inc.
401 N. College AVE
Indianapolis, IN 46202

Dear Rob:

Enclosed are the sample data report, chain of custody record and quality control data for the sample(s) received on December 14, 2009 for your project; 2829E-G.P.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

# Vaportech Services, Inc.

KER262-9738

## Keramida Environmental, Inc.
## Project: G.P. - 2829E

### CONCENTRATIONS IN PPMV

| COMPOUND | SVE EX | PQL |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.05 |
| TRANS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | 0.061 | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

| | |
|---|---|
| FILE NAME | V62A/B.554.BND |
| DATE SAMPLED | 12/08/09 |
| DATE RECEIVED | 12/14/09 |
| DATE ANALYZED | 12/16/09 |

PQL - denotes lower 'Practical Quantitation Limit'

ND - 'Not Detected' at or above the lower practical quantitation limit

21-Dec-09

Reviewed by:

# Vaportech Services, Inc.

## Keramida Environmental, Inc.
## Quality Control
## Laboratory Project(s): 9738

### CONTINUING CALIBRATION CHECK

| | | |
|---|---|---|
| STANDARDS: | 21V-R4 | STD VC1000 |
| FILE NAME: | V62B.548.BND | V62A.550.BND |
| DATE ANALYZED: | 12/16/09 | 12/16/09 |

| COMPOUND | KNOWN (PPMV) | RESULT (PPMV) | PERCENT DIFFERENCE |
|---|---|---|---|
| 1,1 DICHLOROETHYLENE | 1.01 | 1.06 | 4.55 |
| METHYLENE CHLORIDE | 1.15 | 1.22 | 6.09 |
| TRANS-1,2 DICHLOROETHYLENE | 1.01 | 1.18 | 16.34 |
| 1,1 DICHLOROETHANE | 0.99 | 1.20 | 21.21 |
| CIS-1,2 DICHLOROETHYLENE | 1.01 | 1.16 | 14.85 |
| CHLOROFORM | 0.820 | 0.921 | 12.32 |
| 1,1,1 TRICHLOROETHANE | 0.730 | 0.826 | 13.15 |
| CARBON TETRACHLORIDE | 0.640 | 0.724 | 13.12 |
| TRICHLOROETHYLENE | 0.740 | 0.855 | 15.54 |
| TETRACHLOROETHYLENE | 0.590 | 0.670 | 13.56 |
| VINYL CHLORIDE | 1000 | 1000 | 0.03 |

### LABORATORY BLANK RESULTS

| | |
|---|---|
| BLANK: | N2 IN VIAL |
| FILE NAME: | V62A/B.547.BND |
| DATE ANALYZED: | 12/16/09 |

| COMPOUND | BLANK (PPMV) | PRACTICAL QUANTITATION LIMIT (PPMV) |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.10 |
| TRANS-1,2 DICHLOROETHYLENI | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | ND | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

ND - 'Not Detected' at or above the lower practical quantitation limit

21-Dec-09

Reviewed by:

KER 262 - 9738

# CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.
1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

**Company Name:** KERAMIDA Inc
**Address:** 401 N. COLLEGE AVE
**City:** INDIANAPOLIS **State:** IN **Zip:** 46202
**Proj. Manager:** Rob Fedorchak
**Proj. Location:** G.P.
**Proj. Number:** 2829E
**Phone #:** 317-685-6600 **Fax #:** 317-685-6610

**Sampler's signature:** Alan Hayes

**Analysis Options:** Enter letters in Requested Analysis columns below.

| | | | |
|---|---|---|---|
| A | Light Hydrocarbons | F | BTEX |
| B | Permanent Gases | G | BTEX & C5 - C10 |
| C | Methane | H | TPH (C4 - C12 range) |
| D | Methane, Ethane, Ethylene | I | Chlorinated Hydrocarbons |
| E | Hydrogen | J | 624 Compound List |

**Light Hydrocarbons:** Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
**Permanent Gases:** Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
**BTEX:** Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
**C5-C10:** Pentane, Hexane, Heptane, Octane, Nonane, Decane
**Chlorinated HC:** 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

| Collection Date | Collection Time | Number of Containers | Sample Type | Sample Identification | Requested Analysis (Other) | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 12-8-09 | 9:00 | 2 | Air | SEV Ex | VOCs + Vinyl Chloride | | | | | |
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**Results to :** ROB FEDORCHAK

**Invoice to :** CHERYL APPLE

| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
|---|---|---|---|---|---|---|---|
| Alan Hayes | Keramida | 12-8-09 | 2:00 | [illegible] | [illegible] | 12/14/09 | 1000 |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

11/17/2009

RECEIVED
NOV 2 5 2009
KERAMIDA

Mr. Rob Fedorchak
Keramida Environmental, Inc.
401 N. College AVE
Indianapolis, IN 46202

Dear Rob:

Enclosed are the sample data report, chain of custody record and quality control data for the sample(s) received on November 13, 2009 for your project; G.P. - 2829E.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

# Vaportech Services, Inc.

KER259-9660

## Keramida Environmental, Inc.
## Project: G.P. - 2829E

### CONCENTRATIONS IN PPMV

| COMPOUND | SVE EX | PQL |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.05 |
| TRANS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | 0.081 | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

| | |
|---|---|
| FILE NAME | V62A/B.306.BND |
| DATE SAMPLED | 11/10/09 |
| DATE RECEIVED | 11/13/09 |
| DATE ANALYZED | 11/16/09 |

PQL - denotes lower 'Practical Quantitation Limit'
ND - 'Not Detected' at or above the lower practical quantitation limit

17-Nov-09

Reviewed by:

# Vaportech Services, Inc.

## Keramida Environmental, Inc.
## Quality Control
## Laboratory Project(s): 9660

### CONTINUING CALIBRATION CHECK

| | | |
|---|---|---|
| STANDARDS: | 21V-R4 | STD VC1000 |
| FILE NAME: | V62B.302.BND | V62A.304.BND |
| DATE ANALYZED: | 11/16/09 | 11/16/09 |

| COMPOUND | KNOWN (PPMV) | RESULT (PPMV) | PERCENT DIFFERENCE |
|---|---|---|---|
| 1,1 DICHLOROETHYLENE | 1.01 | 1.05 | 4.16 |
| METHYLENE CHLORIDE | 1.15 | 1.29 | 12.17 |
| TRANS-1,2 DICHLOROETHYLENE | 1.01 | 1.13 | 11.88 |
| 1,1 DICHLOROETHANE | 0.99 | 1.17 | 18.28 |
| CIS-1,2 DICHLOROETHYLENE | 1.01 | 1.11 | 10.30 |
| CHLOROFORM | 0.820 | 0.898 | 9.51 |
| 1,1,1 TRICHLOROETHANE | 0.730 | 0.806 | 10.41 |
| CARBON TETRACHLORIDE | 0.640 | 0.690 | 7.81 |
| TRICHLOROETHYLENE | 0.740 | 0.761 | 2.84 |
| TETRACHLOROETHYLENE | 0.590 | 0.591 | 0.17 |
| VINYL CHLORIDE | 1000 | 1024 | 2.40 |

### LABORATORY BLANK RESULTS

| | |
|---|---|
| BLANK: | N2 IN VIAL |
| FILE NAME: | V62A/B.301.BND |
| DATE ANALYZED: | 11/16/09 |

| COMPOUND | BLANK (PPMV) | PRACTICAL QUANTITATION LIMIT (PPMV) |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.10 |
| TRANS-1,2 DICHLOROETHYLENI | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | ND | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

ND - 'Not Detected' at or above the lower practical quantitation limit

17-Nov-09

Reviewed by:

KER259-9660

# CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.
1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

**Company Name:** KERAMIDA Inc
**Address:** 401 N. College AVE.
**City:** INDIANAPOLIS **State:** IN **Zip:** 46202
**Proj. Manager:** ROB FEDORCHAK
**Proj. Location:** G.P.
**Proj. Number:** 2829E
**Phone #:** 317-685-6600 **Fax #:** 317-685-6610

**Sampler's signature:** [signature]

**Analysis Options:** Enter letters in Requested Analysis columns below.

| | | | |
|---|---|---|---|
| A | Light Hydrocarbons | F | BTEX |
| B | Permanent Gases | G | BTEX & C5 - C10 |
| C | Methane | H | TPH (C4 - C12 range) |
| D | Methane, Ethane, Ethylene | I | Chlorinated Hydrocarbons |
| E | Hydrogen | J | 624 Compound List |

**Light Hydrocarbons:** Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
**Permanent Gases:** Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
**BTEX:** Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
**C5-C10:** Pentane, Hexane, Heptane, Octane, Nonane, Decane
**Chlorinated HC:** 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

| Collection Date | Collection Time | Number of Containers | Sample Type | Sample Identification | Requested Analysis | | | | (Other) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 11-10-09 | 1000 | 2 | AIR | SVE EX | VOC's | + | Vinyl | CHLORIDE | | |
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**Results to :** ROB FEDORCHAK

**Invoice to :** CHERYL APPLE

| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
|---|---|---|---|---|---|---|---|
| [signature] | Keramida | 11-10-09 | 1050 | [signature] | Vaportech | 11/13/09 | 930 |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

10/27/2009

RECEIVED
OCT 30 2009
KERAMIDA

Mr. Rob Fedorchak
Keramida Environmental, Inc.
401 N. College AVE
Indianapolis, IN 46202

Dear Rob:

Enclosed are the sample data report, chain of custody record and quality control data for the sample(s) received on October 23, 2009 for your project; 2829E - G.P.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

# Vaportech Services, Inc.

KER258-9619

## Keramida Environmental, Inc.
## Project: G.P. - 2829E

### CONCENTRATIONS IN PPMV

| COMPOUND | SVE EX | PQL |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.05 |
| TRANS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | 0.073 | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

| | |
|---|---|
| FILE NAME | V62A/B.218.BND |
| DATE SAMPLED | 10/20/09 |
| DATE RECEIVED | 10/23/09 |
| DATE ANALYZED | 10/25/09 |

PQL - denotes lower 'Practical Quantitation Limit'

ND - 'Not Detected' at or above the lower practical quantitation limit

27-Oct-09

Reviewed by:_____

# Vaportech Services, Inc.

## Keramida Environmental, Inc.
## Quality Control
## Laboratory Project(s): 9619

### CONTINUING CALIBRATION CHECK

| | | |
|---|---|---|
| STANDARDS: | 21V-R4 | STD VC1000 |
| FILE NAME: | V62B.214.BND | V62A.216.BND |
| DATE ANALYZED: | 10/25/09 | 10/25/09 |

| COMPOUND | KNOWN (PPMV) | RESULT (PPMV) | PERCENT DIFFERENCE |
|---|---|---|---|
| 1,1 DICHLOROETHYLENE | 1.01 | 1.00 | 0.89 |
| METHYLENE CHLORIDE | 1.15 | 1.22 | 5.83 |
| TRANS-1,2 DICHLOROETHYLENE | 1.01 | 1.07 | 6.14 |
| 1,1 DICHLOROETHANE | 0.99 | 1.09 | 10.51 |
| CIS-1,2 DICHLOROETHYLENE | 1.01 | 1.04 | 2.57 |
| CHLOROFORM | 0.820 | 0.844 | 2.93 |
| 1,1,1 TRICHLOROETHANE | 0.730 | 0.766 | 4.93 |
| CARBON TETRACHLORIDE | 0.640 | 0.659 | 2.97 |
| TRICHLOROETHYLENE | 0.740 | 0.737 | 0.41 |
| TETRACHLOROETHYLENE | 0.590 | 0.582 | 1.36 |
| VINYL CHLORIDE | 1000 | 1008 | 0.75 |

### LABORATORY BLANK RESULTS

| | |
|---|---|
| BLANK: | N2 IN VIAL |
| FILE NAME: | V62A/B.217.BND |
| DATE ANALYZED: | 10/25/09 |

| COMPOUND | BLANK (PPMV) | PRACTICAL QUANTITATION LIMIT (PPMV) |
|---|---|---|
| 1,1 DICHLOROETHYLENE | ND | 0.01 |
| METHYLENE CHLORIDE | ND | 0.10 |
| TRANS-1,2 DICHLOROETHYLENI | ND | 0.01 |
| 1,1 DICHLOROETHANE | ND | 0.02 |
| CIS-1,2 DICHLOROETHYLENE | ND | 0.01 |
| CHLOROFORM | ND | 0.005 |
| 1,1,1 TRICHLOROETHANE | ND | 0.005 |
| CARBON TETRACHLORIDE | ND | 0.005 |
| TRICHLOROETHYLENE | ND | 0.005 |
| TETRACHLOROETHYLENE | ND | 0.005 |
| VINYL CHLORIDE | ND | 1 |

ND - 'Not Detected' at or above the lower practical quantitation limit

27-Oct-09

Reviewed by:

KER 258-9619

# CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.
1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

**Company Name:** KERAMIDA INC.
**Address:** 401 N. College Ave.
**City:** INDIANAPOLIS **State:** IN **Zip:** 46202
**Proj. Manager:** ROB FEDORCHAK
**Proj. Location:** G.P.
**Proj. Number:** 2829E
**Phone #:** 317-685-6600 **Fax #:** 317-685-6610

**Sampler's signature:** Alan D. Harper

**Analysis Options:** Enter letters in Requested Analysis columns below.

| | | | |
|---|---|---|---|
| A | Light Hydrocarbons | F | BTEX |
| B | Permanent Gases | G | BTEX & C5 - C10 |
| C | Methane | H | TPH (C4 - C12 range) |
| D | Methane, Ethane, Ethylene | I | Chlorinated Hydrocarbons |
| E | Hydrogen | J | 624 Compound List |

**Light Hydrocarbons:** Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
**Permanent Gases:** Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
**BTEX:** Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
**C5-C10:** Pentane, Hexane, Heptane, Octane, Nonane, Decane
**Chlorinated HC:** 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

| Collection Date | Time | Number of Containers | Sample Type | Sample Identification | Requested Analysis | | | | (Other) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 10-20-09 | 1600 | 2 | AIR | SVE EX | VOC's | | + | Vinyl | Chloride | |
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**Results to :** Rob Fedorchak

**Invoice to :** Cheryl Apple

| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
|---|---|---|---|---|---|---|---|
| Alan Harper | Keramida | 10-20-09 | 14:30 | Montre | VAportech | 10/23/09 | 1245 |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |
| Relinquished by : | Company : | Date : | Time : | Received by : | Company : | Date : | Time : |

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

# ATTACHMENT 4

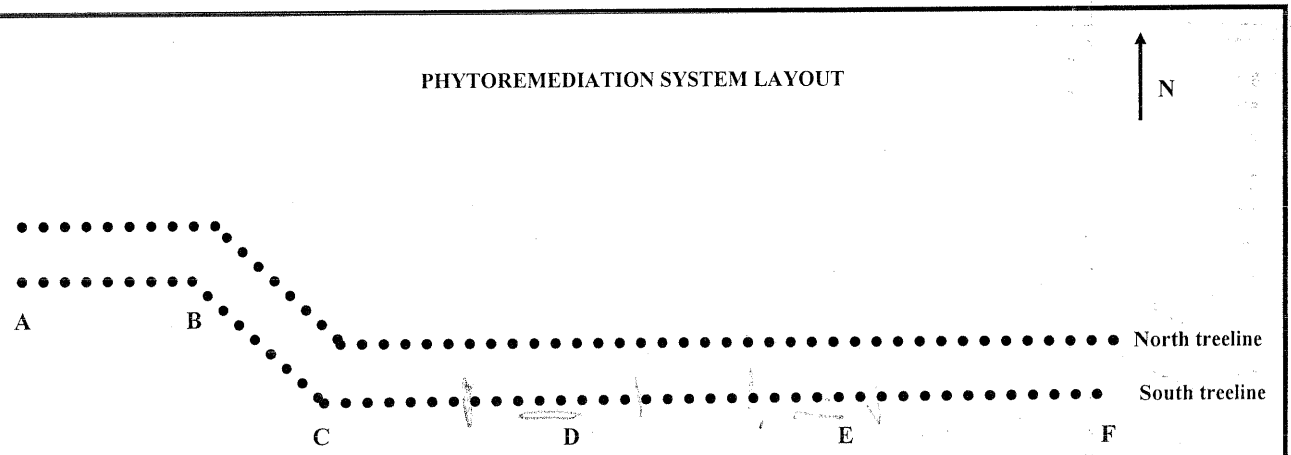
## October 2009 – Phytoremediation System Inspection Checklist

**Phytoremediation System Inspection Checklist**
**Former General Motors Corporation**
**Allison Gas Turbine Division Plant 10**
**Indianapolis, Indiana**
**IDEM VRP #6991004**
**KERAMIDA Project No. 2829E**

**Date of Inspection:** 10-6-07
**Inspection Frequency:** MONTHLY
(monthly, quarterly, other)
**Inspector:** ALAN HAMPTON

| | Parameters | | |
|---|---|---|---|
| | Ground (1) | Trunk, Limbs & Branches(2) | Stability(3) |
| **North Treeline Areas:** | | | |
| A-B | X | X | X |
| B-C | X | X | X |
| C-D | X | X | X |
| D-E | X | X | X |
| E-F | X | X | X |
| **South Treeline Areas:** | | | |
| A-B | X | X | X |
| B-C | X | X | X |
| C-D | X | DEAD | X |
| D-E | X | DEAD | X |
| E-F | X | X | X |

**PHYTOREMEDIATION SYSTEM LAYOUT**




**Notes:**
(1) Ground - check for soil coverage at tree base
(2) Trunk, limbs, & branches - check for broken branches, lacerations, pests, or other signs of damage or potential problems with the tree
(3) Stability - check for overall stability of the tree
Place a check mark in each box where no problems are observed.
Write "RA" where remedial action is needed to address a problem and describe the problem and remedial actions needed on the back of this form.

# ATTACHMENT 5

## November 2009 - Groundwater Sample Information Sheets

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| acility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 169 D | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 34.67 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 20.45 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 31.67 (SD) ~~17.45~~ | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 14.64 | 14.69 | 14.70 | 14.70 | 14.68 | | |
| Spec. Cond (µmhos) | +/- 3% | .918 | .930 | .946 | .950 | .957 | | |
| D.O. (mg/L) | +/- 10%** | .141 | .135 | .134 | .132 | .131 | | |
| pH | +/- 0.1 | 7.15 | 7.15 | 7.15 | 7.15 | 7.15 | | |
| ORP (mV) | +/- 10 mV** | 59 | 89 | 55 | 87 | 57 | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 9 : 50 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: ~~OK~~ Missing cover for well

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| .cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 16Gs | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 23.21 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 20.39 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

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| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 20.21 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ıeld Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.47 | 15.46 | 15.45 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .997 | .988 | .990 | | | | |
| D.O. (mg/L) | +/- 10%** | .85 | .85 | .86 | | | | |
| pH | +/- 0.1 | 7.03 | 7.04 | 7.03 | | | | |
| ORP (mV) | +/- 10 mV** | 170 | 171 | 172 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 10 : 20 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Juliano Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| .cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 170s | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 26.84 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 21.13 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: (Dup-01)) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 23.84 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.58 | 15.58 | 15.58 | 15.57 | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.72 | 1.72 | 1.72 | 1.74 | | | |
| D.O. (mg/L) | +/- 10%** | 1.31 | .84 | .82 | .81 | | | |
| pH | +/- 0.1 | 7.06 | 7.05 | 7.04 | 7.04 | | | |
| ORP (mV) | +/- 10 mV** | 278 | 278 | 278 | 278 | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/3/2009 Sample Time: 11 : 00 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 17D | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 38.45 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 21.11 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 35.45 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.29 | 15.31 | 15.34 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.80 | 1.80 | 1.80 | | | | |
| D.O. (mg/L) | +/- 10%** | .81 | .78 | .69 | | | | |
| pH | +/- 0.1 | 7.12 | 7.12 | 7.12 | | | | |
| ORP (mV) | +/- 10 mV** | 132 | 132 | 131 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 11 : 30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 16/5 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 21.73 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 15.41 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 18.73 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) **Performed** | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.27 | 15.53 | 15.99 | 15.47 | 15.43 | | |
| Spec. Cond (µmhos) | +/- 3% | 1.85 | 1.86 | 1.83 | 1.83 | 1.84 | | |
| D.O. (mg/L) | +/- 10%** | 1.11 | .94 | .57 | .56 | .55 | | |
| pH | +/- 0.1 | 6.91 | 6.90 | 6.92 | 6.92 | 6.92 | | |
| ORP (mV) | +/- 10 mV** | 257 | 228 | 213 | 213 | 213 | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 11 : 40 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| .cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 167 D | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 34.67 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 20.45 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: (Dup-02)) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 31.67 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.79 | 15.80 | 15.81 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .981 | .981 | .986 | | | | |
| D.O. (mg/L) | +/- 10%** | .61 | .55 | .52 | | | | |
| pH | +/- 0.1 | 7.29 | 7.29 | 7.29 | | | | |
| ORP (mV) | +/- 10 mV** | 127 | 126 | 126 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 12 : 10 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 165s | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1/2/4/6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 19.47 ft |
| Depth to product | ft |
| Depth to water (DTW) | 14.09 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | ⇐OR⇒ | Micropurge sampling | |
|---|---|---|---|---|
| Height of water column (H = TD – DTW) | ft | | Depth of pump placement (place mid-screen) | 16.47 ft |
| Conversion value (CV)* | X 0.04 | | Bubbles purged from flow cell? | Y / N |
| 1 Well volume = H x CV | = gal | | Is drawdown >0.3 feet | Y / N |
| 3 Well volumes = | = gal | | Was passive sampling used? | Y / N |
| Purge method (B = bailer, P = pump) | B / P | | Flowrate = | mL/min |
| | | | ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 18.49 | 18.50 | 18.49 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .631 | .631 | .634 | | | | |
| D.O. (mg/L) | +/- 10%** | .63 | .60 | .58 | | | | |
| pH | +/- 0.1 | 7.46 | 7.46 | 7.46 | | | | |
| ORP (mV) | +/- 10 mV** | 117 | 117 | 115 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 12 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 165D | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 46.33 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.58 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

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| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 43.33 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.97 | 15.97 | 15.97 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .819 | .822 | .820 | | | | |
| D.O. (mg/L) | +/- 10%** | .53 | .52 | .50 | | | | |
| pH | +/- 0.1 | 7.39 | 7.38 | 7.38 | | | | |
| ORP (mV) | +/- 10 mV** | 96 | 95 | 96 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 13 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 16b5 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 (2) 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 49.44 ft |
| Depth to product | ft |
| Depth to water (DTW) | 14.66 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | ⇐OR⇒ | Micropurge sampling | |
|---|---|---|---|---|
| Height of water column (H = TD – DTW) | ft | | Depth of pump placement (place mid-screen) | 46.44 ft |
| Conversion value (CV)* | X 0.04 | | Bubbles purged from flow cell? | (Y) / N |
| 1 Well volume = H x CV | = gal | | Is drawdown >0.3 feet | (Y) / N |
| 3 Well volumes = | = gal | | Was passive sampling used? | Y / (N) |
| Purge method (B = bailer, P = pump) | B / P | | Flowrate = | mL/min |
| | | | ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) **Performed** | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.53 | 15.53 | 15.52 | 15.51 | 15.47 | 15.44 | |
| Spec. Cond (µmhos) | +/- 3% | .910 | .942 | .955 | .975 | .978 | .980 | |
| D.O. (mg/L) | +/- 10%** | 1.01 | .99 | .95 | .63 | .62 | .66 | |
| pH | +/- 0.1 | 7.35 | 7.34 | 7.34 | 7.34 | 7.34 | 7.34 | |
| ORP (mV) | +/- 10 mV** | 132 | 123 | 119 | 110 | 111 | 111 | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 13 :30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julian Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 16bs | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 18.98 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 14.88 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 15.98 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 17.64 | 17.67 | 17.70 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.056 | 1.052 | 1.049 | | | | |
| D.O. (mg/L) | +/- 10%** | .89 | .85 | .83 | | | | |
| pH | +/- 0.1 | 7.09 | 7.09 | 7.09 | | | | |
| ORP (mV) | +/- 10 mV** | 207 | 208 | 210 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 13 : 45 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 154 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 20.40 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.65 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 17.65 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.89 | 15.89 | 15.80 | 15.89 | 15.86 | | |
| Spec. Cond (µmhos) | +/- 3% | 2.51 | 2.57 | 2.40 | 2.47 | 2.47 | | |
| D.O. (mg/L) | +/- 10%** | 1.27 | 1.35 | 1.50 | 1.48 | 1.47 | | |
| pH | +/- 0.1 | 7.37 | 7.37 | 7.37 | 7.37 | 7.37 | | |
| ORP (mV) | +/- 10 mV** | 304 | 290 | 284 | 286 | 285 | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 14 : 10 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 147 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 (2) 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 28.47 ft |
| Depth to product | ft |
| Depth to water (DTW) | 11.21 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X | 0.04 |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | |
|---|---|
| Depth of pump placement (place mid-screen) | 25.47 ft |
| Bubbles purged from flow cell? | (Y) / N |
| Is drawdown >0.3 feet | (Y) / N |
| Was passive sampling used? | Y / (N) |
| Flowrate = | mL/min |
| ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.92 | 15.85 | 15.85 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 2.12 | 2.12 | 2.12 | | | | |
| D.O. (mg/L) | +/- 10%** | .60 | .59 | .57 | | | | |
| pH | +/- 0.1 | 7.06 | 7.04 | 7.05 | | | | |
| ORP (mV) | +/- 10 mV** | 122 | 122 | 121 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/3 /2009 Sample Time: 14 : 35 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 132 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 2 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 18.82 ft |
| Depth to product | ft |
| Depth to water (DTW) | 11.25 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X | 0.04 |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | |
|---|---|
| Depth of pump placement (place mid-screen) | 15.82 ft |
| Bubbles purged from flow cell? | (Y) / N |
| Is drawdown >0.3 feet | (Y) / N |
| Was passive sampling used? | Y / (N) |
| Flowrate = | mL/min |
| ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 18.10 | 18.15 | 18.16 | 18.17 | | | |
| Spec. Cond (µmhos) | +/- 3% | ~~1.44~~ 1.52 | 1.52 | 1.52 | 1.53 | | | |
| D.O. (mg/L) | +/- 10%** | 1.90 | 1.76 | 1.67 | 1.60 | | | |
| pH | +/- 0.1 | 7.24 | 7.23 | 7.23 | 7.22 | | | |
| ORP (mV) | +/- 10 mV** | 235 | 234 | 235 | 235 | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 15 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- ~~132~~ 148 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 24.39 ~~15.82~~ | ft |
| Depth to product | (SS) | ft |
| Depth to water (DTW) | ~~4.25~~ 11.17 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | (SS) ~~15.82~~ 21.35 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.73 | 15.78 | 15.78 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.56 | 1.54 | 1.53 | | | | |
| D.O. (mg/L) | +/- 10%** | .71 | .70 | .68 | | | | |
| pH | +/- 0.1 | 7.02 | 7.03 | 7.04 | | | | |
| ORP (mV) | +/- 10 mV** | 224 | 224 | 224 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 15 : 30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 153 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 19.73 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 12.05 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: (Dup-03)) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 16.73 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.55 | 15.92 | 15.94 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.85 | 1.84 | 1.84 | | | | |
| D.O. (mg/L) | +/- 10%** | 4.44 | 4.46 | 4.48 | | | | |
| pH | +/- 0.1 | 7.40 | 7.40 | 7.40 | | | | |
| ORP (mV) | +/- 10 mV** | 262 | 263 | 263 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 16 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| cility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 302 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1/2/4/6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 37.59 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 12.48 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 34.59 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.25 | 15.22 | 15.21 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .697 | .695 | .695 | | | | |
| D.O. (mg/L) | +/- 10%** | 1.87 | 1.86 | 1.86 | | | | |
| pH | +/- 0.1 | 7.57 | 7.57 | 7.57 | | | | |
| ORP (mV) | +/- 10 mV** | 119 | 119 | 120 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 3 /2009 Sample Time: 16 :30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/3/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 133R | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 15.94 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 9.51 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 12.94 | ft |
| Bubbles purged from flow cell? | (Y)/N | |
| Is drawdown >0.3 feet | (Y)/N | |
| Was passive sampling used? | Y /(N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 18.98 | 19.02 | 19.03 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.430 | 1.431 | 1.425 | | | | |
| D.O. (mg/L) | +/- 10%** | 2.78 | 2.78 | 2.79 | | | | |
| pH | +/- 0.1 | 7.16 | 7.17 | 7.17 | | | | |
| ORP (mV) | +/- 10 mV** | 404 | 403 | 403 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 9 : 30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julian Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 145 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 26.00 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 8.93 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 23.00 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.08 | 15.07 | 15.06 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.87 | 1.87 | 1.87 | | | | |
| D.O. (mg/L) | +/- 10%** | .64 | .61 | .60 | | | | |
| pH | +/- 0.1 | 7.13 | 7.13 | 7.13 | | | | |
| ORP (mV) | +/- 10 mV** | 125 | 127 | 127 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 10 : 00 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 152 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 18.50 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.67 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 15.50 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 17.43 | 17.40 | 17.42 | 17.41 | | | |
| Spec. Cond (µmhos) | +/- 3% | .615 | .617 | .617 | .616 | | | |
| D.O. (mg/L) | +/- 10%** | 3.45 | 3.06 | 3.00 | 2.99 | | | |
| pH | +/- 0.1 | 7.36 | 7.36 | 7.36 | 7.36 | | | |
| ORP (mV) | +/- 10 mV** | 250 | 250 | 252 | 251 | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 10 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 146 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 23.13 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 9.66 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 20.13 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 14.51 | 14.49 | 14.50 | | | | |
| Spec. Cond (µmhos) | +/- 3% | 1.146 | 1.136 | 1.135 | | | | |
| D.O. (mg/L) | +/- 10%** | .60 | .55 | .53 | | | | |
| pH | +/- 0.1 | 7.04 | 7.04 | 7.04 | | | | |
| ORP (mV) | +/- 10 mV** | 326 | 326 | 325 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 11 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julian Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 150 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1/2/4/6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 18.35 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.13 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

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| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 15.35 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 16.66 | 16.66 | 16.66 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .939 | .939 | .942 | | | | |
| D.O. (mg/L) | +/- 10%** | .62 | .65 | .65 | | | | |
| pH | +/- 0.1 | 7.17 | 7.17 | 7.17 | | | | |
| ORP (mV) | +/- 10 mV** | 265 | 261 | 260 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 11 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 135 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 18.88 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.35 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 15.88 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 16.51 | 16.50 | 16.52 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .594 | .593 | .594 | | | | |
| D.O. (mg/L) | +/- 10%** | 4.67 | 4.65 | 4.64 | | | | |
| pH | +/- 0.1 | 7.36 | 7.37 | 7.36 | | | | |
| ORP (mV) | +/- 10 mV** | 323 | 323 | 322 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 12 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- IW-2 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 16.71 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 12.90 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 13.71 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 16.80 | 16.80 | 16.84 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .707 | .709 | .712 | | | | |
| D.O. (mg/L) | +/- 10%** | .93 | .88 | .86 | | | | |
| pH | +/- 0.1 | 7.32 | 7.32 | 7.32 | | | | |
| ORP (mV) | +/- 10 mV** | 334 | 334 | 333 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 12 : 30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julian Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- IW-1 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 2 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 14.71 ft |
| Depth to product | ft |
| Depth to water (DTW) | 11.43 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | ⇐OR⇒ | Micropurge sampling | |
|---|---|---|---|---|
| Height of water column (H = TD – DTW) | ft | | Depth of pump placement (place mid-screen) | 14.71 ft |
| Conversion value (CV)* | X 0.04 | | Bubbles purged from flow cell? | Y / N |
| 1 Well volume = H x CV | = gal | | Is drawdown >0.3 feet | Y / N |
| 3 Well volumes = | = gal | | Was passive sampling used? | Y / N |
| Purge method (B = bailer, P = pump) | B / P | | Flowrate = | mL/min |
| | | | ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 17.55 | 17.63 | 17.63 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .829 | .830 | .832 | | | | |
| D.O. (mg/L) | +/- 10%** | .51 | .49 | .47 | | | | |
| pH | +/- 0.1 | 7.00 | 7.00 | 7.00 | | | | |
| ORP (mV) | +/- 10 mV** | 106 | 105 | 105 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 13 : 00 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 163 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 2 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 19.25 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 11.21 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 16.25 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 17.31 | 17.31 | 17.33 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .812 | .814 | .815 | | | | |
| D.O. (mg/L) | +/- 10%** | .46 | .43 | .40 | | | | |
| pH | +/- 0.1 | 6.46 | 6.47 | 6.46 | | | | |
| ORP (mV) | +/- 10 mV** | 205 | 202 | 201 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 13 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| ıcility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 173 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 17.45 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 13.38 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 14.45 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| ield Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 17.04 | 17.03 | 17.01 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .701 | .697 | .698 | | | | |
| D.O. (mg/L) | +/- 10%** | 1.46 | 1.55 | 1.45 | | | | |
| pH | +/- 0.1 | 7.28 | 7.28 | 7.28 | | | | |
| ORP (mV) | +/- 10 mV** | 268 | 268 | 268 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 14 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 15 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1/2/4/6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 18.34 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 12.21 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 15.34 | ft |
| Bubbles purged from flow cell? | Y / N | |
| Is drawdown >0.3 feet | Y / N | |
| Was passive sampling used? | Y / N | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 16.89 | 16.58 | 16.56 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .792 | .805 | .800 | | | | |
| D.O. (mg/L) | +/- 10%** | 1.42 | 1.32 | 1.31 | | | | |
| pH | +/- 0.1 | 7.24 | 7.24 | 7.24 | | | | |
| ORP (mV) | +/- 10 mV** | 300 | 299 | 298 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 14 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES NO explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 151 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 (2) 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 19.45 ft |
| Depth to product | ft |
| Depth to water (DTW) | 13.06 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | ⇐OR⇒ | Micropurge sampling | |
|---|---|---|---|---|
| Height of water column (H = TD – DTW) | ft | | Depth of pump placement (place mid-screen) | 16.45 ft |
| Conversion value (CV)* | X 0.04 | | Bubbles purged from flow cell? | (Y) / N |
| 1 Well volume = H x CV | = gal | | Is drawdown >0.3 feet | (Y) / N |
| 3 Well volumes = | = gal | | Was passive sampling used? | Y / (N) |
| Purge method (B = bailer, P = pump) | B / P | | Flowrate = | mL/min |
| | | | ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.06 | 15.02 | 15.02 | 15.01 | | | |
| Spec. Cond (µmhos) | +/- 3% | .903 | .899 | .898 | .895 | | | |
| D.O. (mg/L) | +/- 10%** | 2.01 | 1.85 | 1.78 | 1.70 | | | |
| pH | +/- 0.1 | 7.15 | 7.15 | 7.14 | 7.14 | | | |
| ORP (mV) | +/- 10 mV** | 326 | 320 | 325 | 325 | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 15 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 164 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1 (2) 4 6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 24.77 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 19.21 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 21.77 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 15.62 | 15.65 | 15.66 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .863 | .858 | .862 | | | | |
| D.O. (mg/L) | +/- 10%** | .42 | .40 | .38 | | | | |
| pH | +/- 0.1 | 7.22 | 7.22 | 7.22 | | | | |
| ORP (mV) | +/- 10 mV** | 320 | 319 | 319 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 15 : 30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 157 | Well Location: |

| Monitoring Well Data | |
|---|---|
| Well Material | (PVC/SS/Teflon) |
| Inside Diameter, in. | (1 (2) 4 6) |
| Stick up or stick down height | ft |
| Total depth of well (TD) | 17.06 ft |
| Depth to product | ft |
| Depth to water (DTW) | 12.15 ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: _____) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | ⇐OR⇒ | Micropurge sampling | |
|---|---|---|---|---|
| Height of water column (H = TD – DTW) | ft | | Depth of pump placement (place mid-screen) | 14.06 ft |
| Conversion value (CV)* | X 0.04 | | Bubbles purged from flow cell? | (Y) / N |
| 1 Well volume = H x CV | = gal | | Is drawdown >0.3 feet | (Y) / N |
| 3 Well volumes = | = gal | | Was passive sampling used? | Y / (N) |
| Purge method (B = bailer, P = pump) | B / P | | Flowrate = | mL/min |
| | | | ID number from controller console | # |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 14.47 | 14.47 | 14.47 | | | | |
| Spec. Cond (µmhos) | +/- 3% | .719 | .720 | .698 | | | | |
| D.O. (mg/L) | +/- 10%** | 1.07 | .90 | .89 | | | | |
| pH | +/- 0.1 | 7.25 | 7.25 | 7.24 | | | | |
| ORP (mV) | +/- 10 mV** | 332 | 331 | 331 | | | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/ 4 /2009 Sample Time: 16 : 00 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julius Date: 11/4/09

# KERAMIDA ENVIRONMENTAL, INC.
# GROUNDWATER SAMPLE INFORMATION SHEET

| | |
|---|---|
| Facility Name: GP | KEI Project #: 2829e-001/003 |
| Sample I.D.:MW- 161 | Well Location: |

| Monitoring Well Data | | |
|---|---|---|
| Well Material | (PVC/SS/Teflon) | |
| Inside Diameter, in. | (1/2/4/6) | |
| Stick up or stick down height | | ft |
| Total depth of well (TD) | 12.92 | ft |
| Depth to product | | ft |
| Depth to water (DTW) | 4.08 | ft |

| Sample Types (circle all applicable) |
|---|
| Monitoring Well |
| Grab/Composite |
| Split Sample |
| Duplicate (Duplicate ID: (Dup-04)) |
| MS/MSD |
| Other_____ |

| Conventional sampling | | |
|---|---|---|
| Height of water column (H = TD – DTW) | | ft |
| Conversion value (CV)* | X 0.04 | |
| 1 Well volume = H x CV | = | gal |
| 3 Well volumes = | = | gal |
| Purge method (B = bailer, P = pump) | B / P | |

⇐OR⇒

| Micropurge sampling | | |
|---|---|---|
| Depth of pump placement (place mid-screen) | 9.92 | ft |
| Bubbles purged from flow cell? | (Y) / N | |
| Is drawdown >0.3 feet | (Y) / N | |
| Was passive sampling used? | Y / (N) | |
| Flowrate = | | mL/min |
| ID number from controller console | # | |

*Conversion values (gal/ft): 0.75" dia = 0.023 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

| Field Test(s) Performed | Stability Range | Result (3 min) | Result (6 min) | Result (9 min) | Result (12 min) | Result (15 min) | Result (18 min) | Result (21 min) |
|---|---|---|---|---|---|---|---|---|
| Temperature (°C) | +/- 3% | 16.18 | 16.16 | 16.18 | 16.18 | 16.16 | | |
| Spec. Cond (µmhos) | +/- 3% | .895 | .899 | .901 | .906 | .910 | | |
| D.O. (mg/L) | +/- 10%** | 5.20 | 4.79 | 4.75 | 4.72 | 4.69 | | |
| pH | +/- 0.1 | 7.08 | 7.08 | 7.07 | 7.08 | 7.07 | | |
| ORP (mV) | +/- 10 mV** | 352 | 349 | 348 | 348 | 348 | | |
| Turbidity (NTU) | +/- 10%** | | | | | | | |
| $H_2S$ (mg/L) | | | | | | | | |
| $Fe^{2+}$ (mg/L) | | | | | | | | |

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: N/A gallons
Sample Date: 11/4/2009 Sample Time: 16:30 (military time)
Was metals sample filtered prior to preservation? YES (NO) method: 0.45 µm cartridge / other: _____
Color of water before filtration: N/A After filtration: N/A
Reaction upon addition of preservatives? YES (NO) explain: N/A
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:OK

Signature: J. Julian Date: 11/4/09

**REMEDIATION SYSTEM EVALUATION REPORT**
**OCTOBER THROUGH DECEMBER 2009**
**FORMER GENERAL MOTORS CORPORATION**
**ALLISON GAS TURBINE DIVISION, PLANT 10**
**700 NORTH OLIN AVENUE**
**INDIANAPOLIS, INDIANA**
**IDEM VRP #6991004**
**KERAMIDA PROJECT NO. 2829E**

# ATTACHMENT 6

## November 2009 - Groundwater Analytical Report

## Part 1 of 4

# Quality Assurance Report Package # 59173

## KERAMIDA ENVIRONMENTAL, INC.

ROB FEDORCHAK
401 NORTH COLLEGE AVENUE
INDIANAPOLIS, IN 46202

Project : KERAMIDA ENVIRONMENTAL
GENUINE PARTS

Sampled : 03-NOV-09 to 04-NOV-09

Sample Range : A864526, A864532, A864533, A864537, A864538, A864551, A864552, A864553, A864554, A864560, A864561, A864562, A864563

Karen L. Fullmer

Approved by: KAREN FULLMER - Project Manager

Heritage Environmental Services, LLC
Commercial Laboratory Operations
7901 West Morris Street
Indianapolis, Indiana 46231
Phone: (317) 243-8304
Fax : (317) 486-5095

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All cadmium, chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5588

Project No.: 2829-E 001
Project Name: GP
Report to: Rob Fedorchak
Client:
Samplers: (signature)
Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TOC | DAH | Cadmium, chromium, lead | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 147AR | 11-3 | 1435 | | X | 4 | | | | | | X | | | | | | | | | GW | II | | A864526 |
| 132 | | 1500 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 527 |
| 148R | | 1530 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 528 |
| 153 | | 1600 | | X | 12 | | 4 | | | 8 | X | | X | X | | | | | | | III | | ms/msd 529 |
| Dup-03 | | | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 530 |
| 302 | | 1630 | | X | 4 | | | | | | X | | | | | | | | | | III | | 531 |
| 133R | 11-4 | 930 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 532 |
| 145 | | 1000 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 533 |
| 152 | | 1030 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 534 |
| 146 | | 1100 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 535 |
| 150 | | 1130 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 536 |
| 135 | | 1200 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 537 |
| IW-2 | | 1230 | | X | 4 | | | 1 | | | X | X | | | | | | | | | II | | 2829-E-003 538 |

Relinquished by: Sign/Date/Time 1750 11/4/09
Received by: Sign/Date/Time
Relinquished by: Sign/Date/Time
Received by: Sign/Date/Time
Received for Lab: Sign/Date/Time
Received for Lab: Sign/Date/Time

01057604

Remarks:
1) No method substitution will be performed by the on
2) Please notify KERAMIDA immediately upon receipt, if sample integrity is in question
3) If analysis cannot be conducted within required holding times, please notify KERAMIDA immediately
4) If requested detection limits cannot be achieved, please contact KERAMIDA immediately

AMENDED SAMPLE ID'S FOR 147 + 148 PER ROB FEDORCHAK. KLF 11/23/09

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1

59173b

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All PAH, Cadmium, Chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5587

Project No. 2829-E 001

Project Name GP

Report to: ROB Fedorchak

Client

Samplers: (signature) J. Julian

Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TOC | PAH | Cadmium, Chromium, lead | | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste, Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 169-D | 11-3 | 950 | | X | 4 | | | | | | X | | | | | | | | | | GW | III | | A864539 |
| 169-S | | 1020 | | X | 4 | | | | | | X | | | | | | | | | | | | | 540 |
| 170-S | | 1100 | | X | 12 | | | | | | X | | | | | | | | | | | | | ms/msd 541 |
| Dup-01 | | | | X | 4 | | | | | | X | | | | | | | | | | | | | 542 |
| 170-D | | 1130 | | X | 4 | | | | | | X | | | | | | | | | | | | | 543 |
| 167-S | | 1140 | | X | 4 | | | | | | X | | | | | | | | | | | | | 544 |
| 167-D | | 1210 | | X | 4 | | | | | | X | | | | | | | | | | | | | 545 |
| Dup-02 | | | | X | 4 | | | | | | X | | | | | | | | | | | | | 546 |
| 165-S | | 1230 | | X | 4 | | | | | | X | | | | | | | | | | | | | 547 |
| 165-D | | 1300 | | X | 4 | | | | | | X | | | | | | | | | | | | | 548 |
| 166-D | | 1330 | | X | 4 | | | | | | X | | | | | | | | | | | | | 549 |
| 166-S | | 1345 | | X | 4 | | | | | | X | | | | | | | | | | | | | 550 |
| 154 | | 1410 | | X | 4 | | | 1 | | 2 | X | | X | X | | | | | | | | II | | 551 |

| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
|---|---|---|---|
| J. Julian 11/4/05 1705 | | | |
| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
| | | | 11-4-09 1705 |

Remarks:
1) No method substitution v
2) Please notify KERAMID
3) If analysis cannot be con
4) If requested detection lim

01057605

ERAMIDA's authorization
ty is in question
notify KERAMIDA immediately
MIDA immediately

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1°c

59173b

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All PAH, Cadmium, Chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5584

Project No. 2529-E 001

Project Name GP.

Report to: Rob Fedorchak

Client

Samplers: (signature)

Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TDC | PAH | Cadmium, Chromium, lead | | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste, Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | # and Type of Containers | | | | | | Analyses | | | | | | | | | | | | | |
| IW-1 | 11-4 | 1300 | | X | 4 | | | 1 | | | X | X | | | | | | | | | GW | II | A864552 | 2529 E-003 |
| 163 | | 1330 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | II | 553 | 2529 E-003 |
| 173 | | 1400 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | II | 554 | 2529 E-003 |
| 156 | | 1430 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | III | ~~555~~ 4-4 | A864555 |
| 151 | | 1500 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | | | 556 |
| 164 | | 1530 | | X | 4 | | | | | | X | | | | | | | | | | | | | 557 |
| 157 | | 1600 | | X | 4 | | | | | | X | | | | | | | | | | | | | 558 |
| 161 | | 1630 | | X | 4 | | | | | | X | | | | | | | | | | | | | 559 |
| Dup-04 | | | | X | 4 | | | | | | X | | | | | | | | | | | II ~~III~~ | | 560 |
| Eq. Blank | 11-3 | 1700 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | | II ~~III~~ | | 561 |
| Eq Blank | 11-4 | 1700 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | | II ~~III~~ | | 562 |
| TEMP Blank | | | | | | | | | | | | | | | | | | | | | | II ~~III~~ | | |
| TRIP Blank | | | | | 6 | | | | | | X | | | | | | | | | | | II ~~III~~ | | 563 |

| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
|---|---|---|---|
| 11/4/09 1205 | | | 11-4-09 1705 |
| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |

Remarks:
Did not receive amber bottles for both EQ Blanks
JLC 11-4-09

1) No method substit
2) Please notify KER
3) If analysis cannot b
4) If requested detecti

01057606

out KERAMIDA's authorization
integrity is in question
lease notify KERAMIDA immediately
KERAMIDA immediately

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1

59173b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864526 |
| | **Completed** | **PO Number** | |
| | 11-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 14:35 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 147AR
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 11:50 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864526 147AR

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864526 147AR**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 100 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 98 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

AMENDED REPORT - KLF - 23-NOV-09 :AMENDED SAMPLE ID PER ROB FEDORCHAK.

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Karen L. Fullmer

Approved by: KAREN FULLMER 23-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864532 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 09:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 133R
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:14 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:14 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | BDL | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:14 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864532 133R

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 19:48 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 82 | | % Rec |
| TERPHENYL-D14 | 23 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 13:55 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864532 133R

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 3.1 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.6 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864532 133R**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 4.2 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 98 | | % Rec |
| DIBROMOFLUOROMETHANE | 93 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864532 133R**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59173b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864533 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 10:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 145
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:18 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:18 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | BDL | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:18 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | 14 | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864533 145

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 20:24 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 79 | | % Rec |
| TERPHENYL-D14 | 33 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 14:20 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864533 145

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 50 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864533 145**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 5.4 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 103 | | % Rec |
| TOLUENE-D8 | 94 | | % Rec |
| 4-BROMOFLUOROBENZENE | 100 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864533 145**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59173b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864537 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 12:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 135
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 12-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:48 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:48 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 180 | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:48 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

**LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C** NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864537 135

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 22:46 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 82 | | % Rec |
| TERPHENYL-D14 | 49 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 15:59 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864537 135

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864537 135**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 105 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 97 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864537 135**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59173b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864538 |
| | **Completed** | **PO Number** | |
| | 11-NOV-09 | 2829E-003 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 12:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: IW-2
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-003
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 16:24 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | 3.3 | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864538 IW-2

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 21 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.1 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864538 IW-2

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 4.0 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 104 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 96 | | % Rec |
| DIBROMOFLUOROMETHANE | 97 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 17:53 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 90 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 105 | | % Rec |
| TOLUENE-D8 | 99 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | BDL | 1000 | ug/L |

**Sample Comments**

AMENDED REPORT - KLF - 02-DEC-09 : AMENDED TOC UNITS.

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864538 IW-2**

**Sample Comments**

Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Karen L. Fullmer

Approved by: KAREN FULLMER 02-DEC-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864551 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 14:10 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 154
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 12-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:58 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:58 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 17 | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:58 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

**LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C** NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864551 154

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 23:22 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 80 | | % Rec |
| TERPHENYL-D14 | 40 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 13:19 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864551 154

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864551 154**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 105 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 96 | | % Rec |
| DIBROMOFLUOROMETHANE | 98 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864551 154**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59173b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864552 |
| | **Completed** | **PO Number** | |
| | 10-NOV-09 | 2829E-003 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 13:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: IW-1
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-003
SAMPLING EVENT: ANNUAL GROUNDWATERS

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 2000 | 1000 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 09:03 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | | |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864552 IW-1

| | | | |
|---|---|---|---|
| | | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864552 IW-1**

| | | | |
|---|---|---|---|
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 4.9 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 93 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 10-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864553 |
| | **Completed** | **PO Number** | |
| | 10-NOV-09 | 2829E-003 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 13:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 163
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-003
SAMPLING EVENT: ANNUAL GROUNDWATERS

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1700 | 1000 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 10:20 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | | |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864553 163

| | | | |
|---|---|---|---|
| | | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 16 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864553 163**

| | | | |
|---|---|---|---|
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 93 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 9.2 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 96 | | % Rec |
| TOLUENE-D8 | 104 | | % Rec |
| 4-BROMOFLUOROBENZENE | 86 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

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IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 10-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864554 |
| | **Completed** | **PO Number** | |
| | 11-NOV-09 | 2829E-003 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 14:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 173
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-003
SAMPLING EVENT: ANNUAL GROUNDWATERS

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | BDL | 1000 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 10:45 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | | |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864554 173

| | | | |
|---|---|---|---|
| | | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 11 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 3.1 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864554 173

| | | | |
|---|---|---|---|
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 84 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 08:05 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 110 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 96 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 89 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864554 173**

**Sample Comments**

Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 11-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864560 |
| | **Completed** | **PO Number** | |
| | 11-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: DUP-04
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 13:19 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864560 DUP-04

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.8 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864560 DUP-04**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 5.3 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 93 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 09:48 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 88 | 10 | ug/L |
| TRICHLOROETHENE | 110 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 87 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference)

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864560 DUP-04**

**Sample Comments**

accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 11-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864561 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 17:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: EQ BLANK
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 12-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:01 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:01 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | BDL | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:01 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B

NELAC:Y

Analyst: R. SHAMP | Analysis Date: 07-NOV-09 13:44 | Instrument: GC/MS VOA | Test: O510.5.0

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864561 EQ BLANK**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864561 EQ BLANK**

| | | | |
|---|---|---|---|
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 105 | | % Rec |
| TOLUENE-D8 | 97 | | % Rec |
| 4-BROMOFLUOROBENZENE | 101 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864561 EQ BLANK**

**Sample Comments**

Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864562 |
| | **Completed** | **PO Number** | |
| | 15-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 17:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: EQ BLANK
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 12-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:04 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:04 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | BDL | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 03:04 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP | Analysis Date: 07-NOV-09 14:09 | Instrument: GC/MS VOA | Test: O510.5.0

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864562 EQ BLANK**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864562 EQ BLANK**

| | | | |
|---|---|---|---|
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 104 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 100 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864562 EQ BLANK**

**Sample Comments**

Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864563 |
| | **Completed** | **PO Number** | |
| | 11-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: TRIP BLANK
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 16:13 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864563 TRIP BLANK

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864563 TRIP BLANK**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 100 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 92 | | % Rec |
| DIBROMOFLUOROMETHANE | 93 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 11-NOV-09

# Quality Assurance Report

## JBJ59173

**24-NOV-09**

| Service Location | Submitter |
|---|---|
| Heritage Environmental Services, LLC<br>Commercial Laboratory Operations<br>7901 West Morris Street<br>Indianapolis, IN 46231<br>(317) 243-8304 | ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Complete |
|---|---|---|---|---|
| A864526 | 147AR..... | 03-Nov-09 14:35 | 04-Nov-09 | 11-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864532 | 133R..... | 04-Nov-09 09:30 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864533 | 145..... | 04-Nov-09 10:00 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864537 | 135..... | 04-Nov-09 12:00 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864538 | IW-2..... | 04-Nov-09 12:30 | 04-Nov-09 | 11-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-003 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864551 | 154..... | 03-Nov-09 14:10 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864552 | IW-1..... | 04-Nov-09 13:00 | 04-Nov-09 | 10-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-003 | | |
| A864553 | 163..... | 04-Nov-09 13:30 | 04-Nov-09 | 10-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-003 | | |
| A864554 | 173..... | 04-Nov-09 14:00 | 04-Nov-09 | 11-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-003 | | |
| A864560 | DUP-04..... | 04-Nov-09 | 04-Nov-09 | 11-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| A864561 | EQ BLANK..... | 03-Nov-09 17:00 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864562 | EQ BLANK..... | 04-Nov-09 17:00 | 04-Nov-09 | 15-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |

# Quality Assurance Report

## JBJ59173

**24-NOV-09**

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Complete |
|---|---|---|---|---|
| A864563 | TRIP BLANK..... | | 04-Nov-09 | 11-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |

HERITAGE

**JBJ59173**

**LEAD ICP SW846-6010B** **M116.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Analyst: P MATAKA Run Date: 11-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864532 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864533 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560118 Analyst: P MATAKA Run Date: 12-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256544 | NA | Analytical Run: R560276 | | | | | | | |
| LCS | Q2256545 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256546 | A864537 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256547 | A864537 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864537 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864551 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864561 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864562 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | LEAD | 1 | | | 1.02 | mg/L | 102.0 | |
| CDL01 | Q2257790 | INORGANIC | LEAD | 10 | | | 9.96 | mg/L | 99.6 | |
| ICS-AB | Q2257761 | PERKIN ELM | LEAD | 1.00 | | | 0.950 | mg/L | 95.0 | |
| LCS | Q2256266 | SPEX | LEAD | 0.5 | | | 0.512 | mg/L | 102.4 | |
| SER01 | Q2257795 | A864529 | LEAD | 0.00755 | | BDL | | mg/L | | |
| SPI02 | Q2256267 | A864529 | LEAD | 0.00755 | 0.500 | | 0.494 | mg/L | 97.3 | |
| DPS02 | Q2256268 | A864529 | LEAD | 0.00755 | 0.500 | | 0.497 | mg/L | 97.9 | 0.6 |
| CCV | Q2257765 | INORGANIC | LEAD | 5.00 | | | 4.97 | mg/L | 99.4 | |
| BLA01 | Q2257742 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| SAMPLE | A864532 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864533 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | LEAD | 5.00 | | | 4.97 | mg/L | 99.4 | |
| BLA01 | Q2257743 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| BLA02 | Q2256544 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| LCS | Q2256545 | SPEX | LEAD | 0.5 | | | 0.502 | mg/L | 100.4 | |
| SER01 | Q2257796 | A864537 | LEAD | 0.00830 | | CNA | 0.00655 | mg/L | | |
| SAMPLE | A864537 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256546 | A864537 | LEAD | 0.00830 | 0.500 | | 0.502 | mg/L | 98.7 | |
| DPS02 | Q2256547 | A864537 | LEAD | 0.00830 | 0.500 | | 0.509 | mg/L | 100.1 | 1.4 |
| SAMPLE | A864551 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864561 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864562 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257767 | INORGANIC | LEAD | 5.00 | | | 5.01 | mg/L | 100.2 | |

HERITAGE

**JBJ59173**

**LEAD ICP SW846-6010B** **M116.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560276 Analyst: J KRAMER Run Date: 12-Nov-09
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2257744 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| CDL01 | Q2257788 | INORGANIC | LEAD | 0.01 | | | 0.00928 | mg/L | 92.8 | |
| ICS-AB | Q2257762 | PERKIN ELM | LEAD | 1.00 | | | 0.962 | mg/L | 96.2 | |
| SER01 | Q2257797 | A864637 | LEAD | 0 | | BDL | | mg/L | | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | LEAD | | | < | 0.000680 | mg/L | | |

**CHROMIUM ICP SW846-6010B** **M110.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Analyst: P MATAKA Run Date: 11-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864532 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864533 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560118 Analyst: P MATAKA Run Date: 12-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256544 | NA | Analytical Run: R560276 | | | | | | | |
| LCS | Q2256545 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256546 | A864537 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256547 | A864537 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864537 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864551 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864561 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864562 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | CHROMIUM | 1 | | | 1.02 | mg/L | 102.0 | |
| CDL01 | Q2257790 | INORGANIC | CHROMIUM | 10 | | | 10.0 | mg/L | 100.0 | |
| ICS-AB | Q2257761 | PERKIN ELM | CHROMIUM | 0.500 | | | 0.500 | mg/L | 100.0 | |
| LCS | Q2256266 | SPEX | CHROMIUM | 0.2 | | | 0.210 | mg/L | 105.0 | |
| SER01 | Q2257795 | A864529 | CHROMIUM | 0.0191 | | CNA | 0.0195 | mg/L | | |

HERITAGE

**JBJ59173**

**CHROMIUM ICP SW846-6010B** **M110.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560276 Analyst: J KRAMER Run Date: 12-Nov-09
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI02 | Q2256267 | A864529 | CHROMIUM | 0.0191 | 0.200 | | 0.218 | mg/L | 99.4 | |
| DPS02 | Q2256268 | A864529 | CHROMIUM | 0.0191 | 0.200 | | 0.220 | mg/L | 100.4 | 1.0 |
| CCV | Q2257765 | INORGANIC | CHROMIUM | 5.00 | | | 5.02 | mg/L | 100.4 | |
| BLA01 | Q2257742 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| SAMPLE | A864532 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864533 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | CHROMIUM | 5.00 | | | 5.00 | mg/L | 100.0 | |
| BLA01 | Q2257743 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| BLA02 | Q2256544 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| LCS | Q2256545 | SPEX | CHROMIUM | 0.2 | | | 0.205 | mg/L | 102.5 | |
| SER01 | Q2257796 | A864537 | CHROMIUM | 0.178 | | | 0.183 | mg/L | | 2.8 |
| SAMPLE | A864537 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256546 | A864537 | CHROMIUM | 0.178 | 0.200 | | 0.370 | mg/L | 96.0 | |
| DPS02 | Q2256547 | A864537 | CHROMIUM | 0.178 | 0.200 | | 0.376 | mg/L | 99.0 | 3.1 |
| SAMPLE | A864551 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864561 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864562 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257767 | INORGANIC | CHROMIUM | 5.00 | | | 5.05 | mg/L | 101.0 | |
| BLA01 | Q2257744 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| CDL01 | Q2257788 | INORGANIC | CHROMIUM | 0.0100 | | | 0.0105 | mg/L | 105.0 | |
| ICS-AB | Q2257762 | PERKIN ELM | CHROMIUM | 0.500 | | | 0.504 | mg/L | 100.8 | |
| SER01 | Q2257797 | A864637 | CHROMIUM | 0 | | BDL | | mg/L | | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | CHROMIUM | | | < | 0.000108 | mg/L | | |

**TOTAL ORGANIC CARBON SW846-9060A** **O401.0**

R559987 Analyst: S BOXUM Run Date: 06-Nov-09 Instrument: TOC
Analytical Reviewer: P SPENCE Review Date: 09-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CDL01 | Q2255871 | | TOTAL ORGANIC CARBON (TOC) | 1.00 | | | 0.901 | mg/L | 90.1 | |
| ICV01 | Q2255872 | | TOTAL ORGANIC CARBON (TOC) | 12.50 | | | 12.0 | mg/L | 96.0 | |
| CCVL | Q2255875 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 5.13 | mg/L | 102.6 | |
| CCVH | Q2255879 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 14.1 | mg/L | 94.0 | |
| BLA01 | Q2255880 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.30 | mg/L | | |
| SAMPLE | A864538 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864552 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2255881 | A864552 | TOTAL ORGANIC CARBON (TOC) | 1930 | 12500 | | 13900 | mg/L | 95.8 | |
| DPS01 | Q2255882 | A864552 | TOTAL ORGANIC CARBON (TOC) | 1930 | 12500 | | 13900 | mg/L | 95.8 | 0 |
| SAMPLE | A864553 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864554 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

HERITAGE

**JBJ59173**

## TOTAL ORGANIC CARBON SW846-9060A — O401.0

R559987 Analytical — Analyst: S BOXUM — Reviewer: P SPENCE — Run Date: 06-Nov-09 — Review Date: 09-Nov-09 — Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVL | Q2255883 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.89 | mg/L | 97.8 | |
| BLA01 | Q2255884 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.30 | mg/L | | |
| CCVH | Q2255887 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 13.6 | mg/L | 90.7 | |

## CADMIUM ICP SW846-6010B — M108.3
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Prep — Analyst: P MATAKA — Reviewer: S ENDERSEN — Run Date: 11-Nov-09 — Review Date: 12-Nov-09 — Instrument: PREP

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864532 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864533 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560118 Prep — Analyst: P MATAKA — Reviewer: S ENDERSEN — Run Date: 12-Nov-09 — Review Date: 12-Nov-09 — Instrument: PREP

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256544 | NA | Analytical Run: R560276 | | | | | | | |
| LCS | Q2256545 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256546 | A864537 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256547 | A864537 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864537 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864551 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864561 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864562 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analytical — Analyst: J KRAMER — Reviewer: S ENDERSEN — Run Date: 12-Nov-09 — Review Date: 15-Nov-09 — Instrument: ICP

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | CADMIUM | 1 | | | 1.01 | mg/L | 101.0 | |
| CDL01 | Q2257790 | INORGANIC | CADMIUM | 10 | | | 9.98 | mg/L | 99.8 | |
| ICS-AB | Q2257761 | PERKIN ELM | CADMIUM | 1.00 | | | 1.07 | mg/L | 107.0 | |
| LCS | Q2256266 | SPEX | CADMIUM | 0.05 | | | 0.0481 | mg/L | 96.2 | |
| SER01 | Q2257795 | A864529 | CADMIUM | 0 | | CNA | 0.00199 | mg/L | | |
| SPI02 | Q2256267 | A864529 | CADMIUM | 0 | 0.050 | | 0.0464 | mg/L | 92.8 | |
| DPS02 | Q2256268 | A864529 | CADMIUM | 0 | 0.050 | | 0.0469 | mg/L | 93.8 | 1.1 |
| CCV | Q2257765 | INORGANIC | CADMIUM | 5.00 | | | 5.13 | mg/L | 102.6 | |
| BLA01 | Q2257742 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| SAMPLE | A864532 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864533 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | CADMIUM | 5.00 | | | 5.18 | mg/L | 103.6 | |
| BLA01 | Q2257743 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| BLA02 | Q2256544 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |

JBJ59173

**CADMIUM ICP SW846-6010B** **M108.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560276 Analyst: J KRAMER Run Date: 12-Nov-09
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS | Q2256545 | SPEX | CADMIUM | 0.05 | | | 0.0494 | mg/L | 98.8 | |
| SER01 | Q2257796 | A864537 | CADMIUM | 0.00207 | | CNA | 0.00208 | mg/L | | |
| SAMPLE | A864537 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256546 | A864537 | CADMIUM | 0.00207 | 0.050 | | 0.0502 | mg/L | 96.3 | |
| DPS02 | Q2256547 | A864537 | CADMIUM | 0.00207 | 0.050 | | 0.0512 | mg/L | 98.3 | 2.0 |
| SAMPLE | A864551 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864561 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864562 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257767 | INORGANIC | CADMIUM | 5.00 | | | 5.17 | mg/L | 103.4 | |
| BLA01 | Q2257744 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| CDL01 | Q2257788 | INORGANIC | CADMIUM | 0.0050 | | | 0.00488 | mg/L | 97.6 | |
| ICS-AB | Q2257762 | PERKIN ELM | CADMIUM | 1.00 | | | 1.09 | mg/L | 109.0 | |
| SER01 | Q2257797 | A864637 | CADMIUM | 0 | | BDL | | mg/L | | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | CADMIUM | | | | 0.000245 | mg/L | | |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R559937 Analyst: J MINNIEAR, II Run Date: 06-Nov-09 Instrument: PREP
Prep Reviewer: L SMITH Review Date: 09-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2255318 | INDY | Analytical Run: R560105 | | | | | | | |
| LCS | Q2255319 | INDY | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864532 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SAMPLE | A864533 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SAMPLE | A864537 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SAMPLE | A864551 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SPI02 | Q2255320 | A864529 | Analytical Run: R560106 | | | | | | | |
| DPS02 | Q2255321 | A864529 | Analytical Run: R560106 | | | | | | | |

R560105 Analyst: J MINNIEAR, II Run Date: 09-Nov-09 Instrument: GC/MS SVOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2255318 | INDY | Analysis Date/Time: 09-Nov-09 13:45 | | | | | | | |
| BLA02 | Q2255318 | INDY | ACENAPHTHENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | ACENAPHTHYLENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(A)ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(A)PYRENE | | | BDL | 0.02 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | | | BDL | 0.10 | ug/L | | |

HERITAGE

**JBJ59173**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560105 Analyst: J MINNIEAR, II Run Date: 09-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2255318 | INDY | BENZO(G,H,I)PERYLENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(K)FLUORANTHENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | CHRYSENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | DIBENZ(A,H)ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | FLUORANTHENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | FLUORENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | INDENO(1,2,3-CD)PYRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | NAPHTHALENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | PHENANTHRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | PYRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | 2-FLUOROBIPHENYL | | | | | | 74 | |
| BLA02 | Q2255318 | INDY | TERPHENYL-D14 | | | | | | 126 | |
| LCS | Q2255319 | INDY | Analysis Date/Time: 09-Nov-09 14:21 | | | | | | | |
| LCS | Q2255319 | INDY | ACENAPHTHENE | 5 | | | 3.74 | ug/L | 74.8 | |
| LCS | Q2255319 | INDY | ACENAPHTHYLENE | 5 | | | 4.09 | ug/L | 81.8 | |
| LCS | Q2255319 | INDY | ANTHRACENE | 5 | | | 4.06 | ug/L | 81.2 | |
| LCS | Q2255319 | INDY | BENZO(A)ANTHRACENE | 5 | | | 4.9 | ug/L | 98 | |
| LCS | Q2255319 | INDY | BENZO(A)PYRENE | 5 | | | 5.45 | ug/L | 109 | |
| LCS | Q2255319 | INDY | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 5 | | | 4.12 | ug/L | 82.4 | |
| LCS | Q2255319 | INDY | BENZO(G,H,I)PERYLENE | 5 | | | 4.96 | ug/L | 99.2 | |
| LCS | Q2255319 | INDY | BENZO(K)FLUORANTHENE | 5 | | | 3.8 | ug/L | 76 | |
| LCS | Q2255319 | INDY | CHRYSENE | 5 | | | 3.82 | ug/L | 76.4 | |
| LCS | Q2255319 | INDY | DIBENZ(A,H)ANTHRACENE | 5 | | | 5.02 | ug/L | 100.4 | |
| LCS | Q2255319 | INDY | FLUORANTHENE | 5 | | | 4.13 | ug/L | 82.6 | |
| LCS | Q2255319 | INDY | FLUORENE | 5 | | | 3.94 | ug/L | 78.8 | |
| LCS | Q2255319 | INDY | INDENO(1,2,3-CD)PYRENE | 5 | | | 4.61 | ug/L | 92.2 | |
| LCS | Q2255319 | INDY | NAPHTHALENE | 5 | | | 3.4 | ug/L | 68 | |
| LCS | Q2255319 | INDY | PHENANTHRENE | 5 | | | 3.67 | ug/L | 73.4 | |
| LCS | Q2255319 | INDY | PYRENE | 5 | | | 3.47 | ug/L | 69.4 | |

Q2256424 Value reported for analytes calibrated by linear (LIN) or
Q2256424 quadratic (QDR) equations is r2 (Coef. of Determination).

R560106 Analyst: J MINNIEAR, II Run Date: 10-Nov-09 Instrument: GC/MS SVOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2256424 | | Analysis Date/Time: 09-Nov-09 07:25 | | | | | | | |
| CAL01 | Q2256424 | | ACENAPHTHENE | 1.4157 | | | | | | 1.8 |
| CAL01 | Q2256424 | | ACENAPHTHYLENE | 2.2282 | | | | | | 5.4 |
| CAL01 | Q2256424 | | ANTHRACENE | 1.2234 | | | | | | 6.9 |
| CAL01 | Q2256424 | | BENZO(A)ANTHRACENE | 1.3064 | | | | | | 5.7 |
| CAL01 | Q2256424 | | BENZO(A)PYRENE | 1.0872 | | | | | | 10.1 |
| CAL01 | Q2256424 | | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 1.6769 | | | | | | 5.6 |
| CAL01 | Q2256424 | | BENZO(G,H,I)PERYLENE | 0.7561 | | | | | | 13.6 |
| CAL01 | Q2256424 | | BENZO(K)FLUORANTHENE | 1.6432 | | | | | | 11.7 |
| CAL01 | Q2256424 | | CHRYSENE | | | LIN | | | | 1.000 |
| CAL01 | Q2256424 | | DIBENZ(A,H)ANTHRACENE | | | LIN | | | | 0.991 |

HERITAGE

**JBJ59173**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560106 Analyst: J MINNIEAR, II Run Date: 10-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2256424 | | FLUORANTHENE | 1.2804 | | | | | | 6.6 |
| CAL01 | Q2256424 | | FLUORENE | 1.5517 | | | | | | 2.8 |
| CAL01 | Q2256424 | | INDENO(1,2,3-CD)PYRENE | | | LIN | | | | 0.992 |
| CAL01 | Q2256424 | | NAPHTHALENE | 1.2686 | | | | | | 2.4 |
| CAL01 | Q2256424 | | PHENANTHRENE | 1.3371 | | | | | | 3.3 |
| CAL01 | Q2256424 | | PYRENE | 2.0180 | | | | | | 5.3 |
| CAL01 | Q2256424 | | 2-FLUOROBIPHENYL | 1.8415 | | | | | | 2.1 |
| CAL01 | Q2256424 | | TERPHENYL-D14 | 0.9923 | | | | | | 4.8 |
| CCVD | Q2256425 | | Analysis Date/Time: 10-Nov-09 17:26 | | | | | | | |
| CCVD | Q2256425 | | ACENAPHTHENE | 1.4157 | | | 1.4311 | | | 1.1 |
| CCVD | Q2256425 | | ACENAPHTHYLENE | 2.2282 | | | 2.2896 | | | 2.8 |
| CCVD | Q2256425 | | ANTHRACENE | 1.2234 | | | 1.2805 | | | 4.7 |
| CCVD | Q2256425 | | BENZO(A)ANTHRACENE | 1.3064 | | | 1.4082 | | | 7.8 |
| CCVD | Q2256425 | | BENZO(A)PYRENE | 1.0872 | | | 1.1645 | | | 7.1 |
| CCVD | Q2256425 | | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 1.6769 | | | 1.7729 | | | 5.7 |
| CCVD | Q2256425 | | BENZO(G,H,I)PERYLENE | 0.7561 | | | 0.9013 | | | 19.2 |
| CCVD | Q2256425 | | BENZO(K)FLUORANTHENE | 1.6432 | | | 1.6592 | | | 1 |
| CCVD | Q2256425 | | CHRYSENE | 1.000 | | LIN | 1.000 | | | 0 |
| CCVD | Q2256425 | | DIBENZ(A,H)ANTHRACENE | 1.000 | | LIN | 1.200 | | | 20 |
| CCVD | Q2256425 | | FLUORANTHENE | 1.2804 | | | 1.2981 | | | 1.4 |
| CCVD | Q2256425 | | FLUORENE | 1.5517 | | | 1.5626 | | | 0.7 |
| CCVD | Q2256425 | | INDENO(1,2,3-CD)PYRENE | 1.000 | | LIN | 1.191 | | | 19.1 |
| CCVD | Q2256425 | | NAPHTHALENE | 1.2686 | | | 1.2980 | | | 2.3 |
| CCVD | Q2256425 | | PHENANTHRENE | 1.3371 | | | 1.3447 | | | 0.6 |
| CCVD | Q2256425 | | PYRENE | 2.0180 | | | 1.7228 | | | 14.6 |
| CCVD | Q2256425 | | 2-FLUOROBIPHENYL | 1.8415 | | | 1.8728 | | | 1.7 |
| CCVD | Q2256425 | | TERPHENYL-D14 | 0.9923 | | | 0.9567 | | | 3.6 |
| SPI02 | Q2255320 | A864529 | Analysis Date/Time: 10-Nov-09 18:37 | | | | | | | |
| SPI02 | Q2255320 | A864529 | ACENAPHTHENE | 0 | 5 | | 3.86 | ug/L | 77.2 | |
| SPI02 | Q2255320 | A864529 | ACENAPHTHYLENE | 0 | 5 | | 4.11 | ug/L | 82.2 | |
| SPI02 | Q2255320 | A864529 | ANTHRACENE | 0 | 5 | | 3.56 | ug/L | 71.2 | |
| SPI02 | Q2255320 | A864529 | BENZO(A)ANTHRACENE | 0 | 5 | | 3.77 | ug/L | 75.4 | |
| SPI02 | Q2255320 | A864529 | BENZO(A)PYRENE | 0 | 5 | | 3.8 | ug/L | 76 | |
| SPI02 | Q2255320 | A864529 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 0 | 5 | | 3.99 | ug/L | 79.8 | |
| SPI02 | Q2255320 | A864529 | BENZO(G,H,I)PERYLENE | 0 | 5 | | 2.52 | ug/L | 50.4 | |
| SPI02 | Q2255320 | A864529 | BENZO(K)FLUORANTHENE | 0 | 5 | | 2.03 | ug/L | 40.6 | |
| SPI02 | Q2255320 | A864529 | CHRYSENE | 0 | 5 | | 1.97 | ug/L | 39.4 | |
| SPI02 | Q2255320 | A864529 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | | 2.57 | ug/L | 51.4 | |
| SPI02 | Q2255320 | A864529 | FLUORANTHENE | 0 | 5 | | 4.83 | ug/L | 96.6 | |
| SPI02 | Q2255320 | A864529 | FLUORENE | 0 | 5 | | 4.14 | ug/L | 82.8 | |
| SPI02 | Q2255320 | A864529 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | | 2.76 | ug/L | 55.2 | |
| SPI02 | Q2255320 | A864529 | NAPHTHALENE | 0 | 5 | | 3.54 | ug/L | 70.8 | |
| SPI02 | Q2255320 | A864529 | PHENANTHRENE | 0 | 5 | | 4.09 | ug/L | 81.8 | |
| SPI02 | Q2255320 | A864529 | PYRENE | 0 | 5 | | 3.82 | ug/L | 76.4 | |
| DPS02 | Q2255321 | A864529 | Analysis Date/Time: 10-Nov-09 19:13 | | | | | | | |
| DPS02 | Q2255321 | A864529 | ACENAPHTHENE | 0 | 5 | | 3.96 | ug/L | 79.1 | 2.4 |

HERITAGE

**JBJ59173**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560106 Analyst: J MINNIEAR, II Run Date: 10-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS02 | Q2255321 | A864529 | ACENAPHTHYLENE | 0 | 5 | | 4.19 | ug/L | 83.8 | 1.8 |
| DPS02 | Q2255321 | A864529 | ANTHRACENE | 0 | 5 | | 3.37 | ug/L | 67.5 | 5.5 |
| DPS02 | Q2255321 | A864529 | BENZO(A)ANTHRACENE | 0 | 5 | | 3.39 | ug/L | 67.8 | 10.6 |
| DPS02 | Q2255321 | A864529 | BENZO(A)PYRENE | 0 | 5 | | 3.22 | ug/L | 64.4 | 16.4 |
| DPS02 | Q2255321 | A864529 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 0 | 5 | | 3.32 | ug/L | 66.4 | 18.5 |
| DPS02 | Q2255321 | A864529 | BENZO(G,H,I)PERYLENE | 0 | 5 | | 2.25 | ug/L | 45 | 11.3 |
| DPS02 | Q2255321 | A864529 | BENZO(K)FLUORANTHENE | 0 | 5 | | 1.71 | ug/L | 34.1 | 17.2 |
| DPS02 | Q2255321 | A864529 | CHRYSENE | 0 | 5 | | 1.78 | ug/L | 35.6 | 10.4 |
| DPS02 | Q2255321 | A864529 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | | 2.2 | ug/L | 44 | 15.5 |
| DPS02 | Q2255321 | A864529 | FLUORANTHENE | 0 | 5 | | 4.67 | ug/L | 93.4 | 3.3 |
| DPS02 | Q2255321 | A864529 | FLUORENE | 0 | 5 | | 4.13 | ug/L | 82.5 | 0.4 |
| DPS02 | Q2255321 | A864529 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | | 2.38 | ug/L | 47.6 | 14.8 |
| DPS02 | Q2255321 | A864529 | NAPHTHALENE | 0 | 5 | | 3.54 | ug/L | 70.9 | 0 |
| DPS02 | Q2255321 | A864529 | PHENANTHRENE | 0 | 5 | | 3.98 | ug/L | 79.6 | 2.7 |
| DPS02 | Q2255321 | A864529 | PYRENE | 0 | 5 | | 3.65 | ug/L | 73.1 | 4.3 |
| SAMPLE | A864532 | | Analysis Date/Time: 10-Nov-09 19:48 | | | | | | | |
| SAMPLE | A864532 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864533 | | Analysis Date/Time: 10-Nov-09 20:24 | | | | | | | |
| SAMPLE | A864533 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864537 | | Analysis Date/Time: 10-Nov-09 22:46 | | | | | | | |
| SAMPLE | A864537 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864551 | | Analysis Date/Time: 10-Nov-09 23:22 | | | | | | | |
| SAMPLE | A864551 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2256424 Value reported for analytes calibrated by linear (LIN) or
Q2256424 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256425 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256425 equations is concentration (UG/ML).

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 10-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | Analysis Date/Time: 31-Oct-09 13:47 | | | | | | | |
| CAL01 | Q2253648 | | ACETONE (2-PROPANONE) | 0.1022 | | | | | | 8.4 |
| CAL01 | Q2253648 | | ACROLEIN | 0.0175 | | | | | | 14.5 |
| CAL01 | Q2253648 | | ACRYLONITRILE | 0.0692 | | | | | | 11.2 |
| CAL01 | Q2253648 | | BENZENE | 0.8701 | | | | | | 2.5 |
| CAL01 | Q2253648 | | BROMOBENZENE | 1.1810 | | | | | | 4.9 |
| CAL01 | Q2253648 | | BROMOCHLOROMETHANE | 0.1079 | | | | | | 3.2 |
| CAL01 | Q2253648 | | BROMODICHLOROMETHANE | 0.2434 | | | | | | 4.8 |
| CAL01 | Q2253648 | | BROMOFORM | 0.3505 | | | | | | 16.4 |
| CAL01 | Q2253648 | | BROMOMETHANE | 0.1012 | | | | | | 10.3 |
| CAL01 | Q2253648 | | N-BUTYLBENZENE | 1.5933 | | | | | | 3.2 |
| CAL01 | Q2253648 | | SEC-BUTYLBENZENE | 3.6289 | | | | | | 6.3 |
| CAL01 | Q2253648 | | TERT-BUTYLBENZENE | 1.5134 | | | | | | 9.6 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | CARBON DISULFIDE | 0.6311 | | | | | | 3 |
| CAL01 | Q2253648 | | CARBON TETRACHLORIDE | 0.2699 | | | | | | 4.3 |
| CAL01 | Q2253648 | | CHLOROBENZENE | 1.7328 | | | | | | 6.7 |
| CAL01 | Q2253648 | | DIBROMOCHLOROMETHANE | 0.5223 | | | | | | 11.9 |
| CAL01 | Q2253648 | | CHLOROETHANE | 0.1262 | | | | | | 10.5 |
| CAL01 | Q2253648 | | CHLOROFORM | 0.3695 | | | | | | 5.2 |
| CAL01 | Q2253648 | | CHLOROMETHANE | 0.2131 | | | | | | 16.2 |
| CAL01 | Q2253648 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | | | | 13.8 |
| CAL01 | Q2253648 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | | | | 6.4 |
| CAL01 | Q2253648 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | | | | 8.4 |
| CAL01 | Q2253648 | | DIBROMOMETHANE | 0.1230 | | | | | | 1.9 |
| CAL01 | Q2253648 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | | | | 0.7 |
| CAL01 | Q2253648 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | | | | 1.8 |
| CAL01 | Q2253648 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | | | | 2.8 |
| CAL01 | Q2253648 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | | | | 5.9 |
| CAL01 | Q2253648 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | | | | 11.1 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHANE | 0.3815 | | | | | | 1.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROETHANE | 0.2779 | | | | | | 2.5 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHENE | 0.1982 | | | | | | 1.4 |
| CAL01 | Q2253648 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | | | | 2 |
| CAL01 | Q2253648 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | | | | 2.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROPROPANE | 0.2007 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3-DICHLOROPROPANE | 0.9526 | | | | | | 9.2 |
| CAL01 | Q2253648 | | 1,1-DICHLOROPROPENE | 0.1063 | | | | | | 2.5 |
| CAL01 | Q2253648 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | | | | 9.3 |
| CAL01 | Q2253648 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | | | | 14.3 |
| CAL01 | Q2253648 | | ETHYL BENZENE | 0.9633 | | | | | | 6.5 |
| CAL01 | Q2253648 | | ETHYL METHACRYLATE | 0.8960 | | | | | | 8.7 |
| CAL01 | Q2253648 | | 2-HEXANONE | 0.6513 | | | | | | 7.1 |
| CAL01 | Q2253648 | | HEXACHLOROBUTADIENE | 0.5378 | | | | | | 2.3 |
| CAL01 | Q2253648 | | IODOMETHANE | 0.3240 | | | | | | 1.8 |
| CAL01 | Q2253648 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | | | | 5.5 |
| CAL01 | Q2253648 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2253648 | | METHYL ETHYL KETONE | 0.0405 | | | | | | 5 |
| CAL01 | Q2253648 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | | | | 3 |
| CAL01 | Q2253648 | | METHYL ISOBUTYL KETONE | 0.3155 | | | | | | 5.9 |
| CAL01 | Q2253648 | | NAPHTHALENE | 3.5250 | | | | | | 3.8 |
| CAL01 | Q2253648 | | N-PROPYLBENZENE | 0.4079 | | | | | | 3.9 |
| CAL01 | Q2253648 | | STYRENE | 1.9432 | | | | | | 7.8 |
| CAL01 | Q2253648 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | | | | 6.6 |

JBJ59173

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | | | | 3.4 |
| CAL01 | Q2253648 | | TETRACHLOROETHENE | 0.7380 | | | | | | 7.4 |
| CAL01 | Q2253648 | | TOLUENE | 0.8639 | | | | | | 6.3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | | | | 6.1 |
| CAL01 | Q2253648 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | | | | 4.4 |
| CAL01 | Q2253648 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | | | | 7 |
| CAL01 | Q2253648 | | TRICHLOROETHENE | 0.2277 | | | | | | 1.8 |
| CAL01 | Q2253648 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | | | | 3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | | | | 3.1 |
| CAL01 | Q2253648 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | | | | 6.4 |
| CAL01 | Q2253648 | | VINYL ACETATE | | | LIN | | | | 0.996 |
| CAL01 | Q2253648 | | VINYL CHLORIDE | 0.2350 | | | | | | 3.4 |
| CAL01 | Q2253648 | | DICHLOROETHANE-D4 | 0.2816 | | | | | | 2.3 |
| CAL01 | Q2253648 | | TOLUENE-D8 | 0.8989 | | | | | | 4 |
| CAL01 | Q2253648 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | | | | 5.2 |
| CAL01 | Q2253648 | | DIBROMOFLUOROMETHANE | 0.2362 | | | | | | 3.2 |
| CCVD | Q2255851 | | Analysis Date/Time: 06-Nov-09 03:35 | | | | | | | |
| CCVD | Q2255851 | | ACETONE (2-PROPANONE) | 0.1022 | | | 0.0864 | | | 15.5 |
| CCVD | Q2255851 | | ACROLEIN | 0.0175 | | | 0.0079 | | | 54.9 |
| CCVD | Q2255851 | | ACRYLONITRILE | 0.0692 | | | 0.0843 | | | 21.8 |
| CCVD | Q2255851 | | BENZENE | 0.8701 | | | 0.8698 | | | 0 |
| CCVD | Q2255851 | | BROMOBENZENE | 1.1810 | | | 1.1198 | | | 5.2 |
| CCVD | Q2255851 | | BROMOCHLOROMETHANE | 0.1079 | | | 0.1002 | | | 7.1 |
| CCVD | Q2255851 | | BROMODICHLOROMETHANE | 0.2434 | | | 0.2242 | | | 7.9 |
| CCVD | Q2255851 | | BROMOFORM | 0.3505 | | | 0.2777 | | | 20.8 |
| CCVD | Q2255851 | | BROMOMETHANE | 0.1012 | | | 0.1021 | | | 0.9 |
| CCVD | Q2255851 | | N-BUTYLBENZENE | 1.5933 | | | 1.4562 | | | 8.6 |
| CCVD | Q2255851 | | SEC-BUTYLBENZENE | 3.6289 | | | 3.4071 | | | 6.1 |
| CCVD | Q2255851 | | TERT-BUTYLBENZENE | 1.5134 | | | 1.4790 | | | 2.3 |
| CCVD | Q2255851 | | CARBON DISULFIDE | 0.6311 | | | 0.5486 | | | 13.1 |
| CCVD | Q2255851 | | CARBON TETRACHLORIDE | 0.2699 | | | 0.2375 | | | 12 |
| CCVD | Q2255851 | | CHLOROBENZENE | 1.7328 | | | 1.7193 | | | 0.8 |
| CCVD | Q2255851 | | DIBROMOCHLOROMETHANE | 0.5223 | | | 0.4523 | | | 13.4 |
| CCVD | Q2255851 | | CHLOROETHANE | 0.1262 | | | 0.1280 | | | 1.4 |
| CCVD | Q2255851 | | CHLOROFORM | 0.3695 | | | 0.3374 | | | 8.7 |
| CCVD | Q2255851 | | CHLOROMETHANE | 0.2131 | | | 0.1836 | | | 13.8 |
| CCVD | Q2255851 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | 0.7147 | | | 6.5 |
| CCVD | Q2255851 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | 0.6942 | | | 3.9 |
| CCVD | Q2255851 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | 0.1656 | | | 16.6 |
| CCVD | Q2255851 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | 0.1649 | | | 25.1 |
| CCVD | Q2255851 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | 0.1818 | | | 3.7 |
| CCVD | Q2255851 | | DIBROMOMETHANE | 0.1230 | | | 0.1179 | | | 4.1 |
| CCVD | Q2255851 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | 1.3586 | | | 9.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2255851 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | 1.3797 | | | 7.4 |
| CCVD | Q2255851 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | 1.3958 | | | 6.5 |
| CCVD | Q2255851 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | 0.1342 | | | 5.6 |
| CCVD | Q2255851 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | 0.1876 | | | 25.3 |
| CCVD | Q2255851 | | 1,1-DICHLOROETHANE | 0.3815 | | | 0.3615 | | | 5.2 |
| CCVD | Q2255851 | | 1,2-DICHLOROETHANE | 0.2779 | | | 0.2705 | | | 2.7 |
| CCVD | Q2255851 | | 1,1-DICHLOROETHENE | 0.1982 | | | 0.1881 | | | 5.1 |
| CCVD | Q2255851 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | 0.2250 | | | 6.8 |
| CCVD | Q2255851 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | 0.2163 | | | 4.8 |
| CCVD | Q2255851 | | 1,2-DICHLOROPROPANE | 0.2007 | | | 0.2143 | | | 6.8 |
| CCVD | Q2255851 | | 1,3-DICHLOROPROPANE | 0.9526 | | | 1.0143 | | | 6.5 |
| CCVD | Q2255851 | | 1,1-DICHLOROPROPENE | 0.1063 | | | 0.1008 | | | 5.2 |
| CCVD | Q2255851 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | 0.2976 | | | 2.1 |
| CCVD | Q2255851 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | 0.2335 | | | 3.9 |
| CCVD | Q2255851 | | ETHYL BENZENE | 0.9633 | | | 0.9504 | | | 1.3 |
| CCVD | Q2255851 | | ETHYL METHACRYLATE | 0.8960 | | | 0.7932 | | | 11.5 |
| CCVD | Q2255851 | | 2-HEXANONE | 0.6513 | | | 0.6297 | | | 3.3 |
| CCVD | Q2255851 | | HEXACHLOROBUTADIENE | 0.5378 | | | 0.4656 | | | 13.4 |
| CCVD | Q2255851 | | IODOMETHANE | 0.3240 | | | 0.2975 | | | 8.2 |
| CCVD | Q2255851 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | 2.7788 | | | 3.7 |
| CCVD | Q2255851 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | 2.8301 | | | 7.2 |
| CCVD | Q2255851 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | LIN | 8.57 | | | 14.3 |
| CCVD | Q2255851 | | METHYL ETHYL KETONE | 0.0405 | | | 0.0363 | | | 10.4 |
| CCVD | Q2255851 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | 0.6769 | | | 10.7 |
| CCVD | Q2255851 | | METHYL ISOBUTYL KETONE | 0.3155 | | | 0.3076 | | | 2.5 |
| CCVD | Q2255851 | | NAPHTHALENE | 3.5250 | | | 2.9887 | | | 15.2 |
| CCVD | Q2255851 | | N-PROPYLBENZENE | 0.4079 | | | 0.3862 | | | 5.3 |
| CCVD | Q2255851 | | STYRENE | 1.9432 | | | 1.8202 | | | 6.3 |
| CCVD | Q2255851 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | 0.5362 | | | 13.7 |
| CCVD | Q2255851 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | 0.8565 | | | 3.5 |
| CCVD | Q2255851 | | TETRACHLOROETHENE | 0.7380 | | | 0.7265 | | | 1.6 |
| CCVD | Q2255851 | | TOLUENE | 0.8639 | | | 0.9345 | | | 8.2 |
| CCVD | Q2255851 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | 0.9468 | | | 18 |
| CCVD | Q2255851 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | 1.0449 | | | 11.9 |
| CCVD | Q2255851 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | 0.2843 | | | 7.4 |
| CCVD | Q2255851 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | 0.1845 | | | 8 |
| CCVD | Q2255851 | | TRICHLOROETHENE | 0.2277 | | | 0.2225 | | | 2.3 |
| CCVD | Q2255851 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | 0.2738 | | | 7.7 |
| CCVD | Q2255851 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | 0.2674 | | | 5.7 |
| CCVD | Q2255851 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | 2.5856 | | | 7.6 |
| CCVD | Q2255851 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | 2.5703 | | | 6.2 |
| CCVD | Q2255851 | | VINYL ACETATE | 10.0 | | LIN | 43.0 | | | 330 |
| CCVD | Q2255851 | | VINYL CHLORIDE | 0.2350 | | | 0.2317 | | | 1.4 |
| CCVD | Q2255851 | | DICHLOROETHANE-D4 | 0.2816 | | | 0.2659 | | | 5.6 |
| CCVD | Q2255851 | | TOLUENE-D8 | 0.8989 | | | 0.9382 | | | 4.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2255851 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | 0.7967 | | | 6.7 |
| CCVD | Q2255851 | | DIBROMOFLUOROMETHANE | 0.2362 | | | 0.2145 | | | 9.2 |
| BLA01 | Q2255852 | | Analysis Date/Time: 06-Nov-09 04:09 | | | | | | | |
| BLA01 | Q2255852 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2255852 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2255852 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2255852 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | XYLENES (O/M/P-XYLENE) | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2255852 | | DICHLOROETHANE-D4 | | | | | | 100 | |
| BLA01 | Q2255852 | | TOLUENE-D8 | | | | | | 97 | |
| BLA01 | Q2255852 | | 4-BROMOFLUOROBENZENE | | | | | | 95 | |
| BLA01 | Q2255852 | | DIBROMOFLUOROMETHANE | | | | | | 98 | |
| LCS01 | Q2255853 | METHOD 826 | Analysis Date/Time: 06-Nov-09 04:43 | | | | | | | |
| LCS01 | Q2255853 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 47.7 | ug/L | 95.4 | |
| LCS01 | Q2255853 | METHOD 826 | ACROLEIN | 100 | | | 86.8 | ug/L | 86.8 | |
| LCS01 | Q2255853 | METHOD 826 | ACRYLONITRILE | 100 | | | 189 | ug/L | 189 | |
| LCS01 | Q2255853 | METHOD 826 | BENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOBENZENE | 10 | | | 9.5 | ug/L | 95 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 9.53 | ug/L | 95.3 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2255853 | METHOD 826 | BROMOFORM | 10 | | | 7.69 | ug/L | 76.9 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOMETHANE | 10 | | | 9.84 | ug/L | 98.4 | |
| LCS01 | Q2255853 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2255853 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 9.39 | ug/L | 93.9 | |
| LCS01 | Q2255853 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2255853 | METHOD 826 | CARBON DISULFIDE | 10 | | | 8.6 | ug/L | 86 | |
| LCS01 | Q2255853 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 9.85 | ug/L | 98.5 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROBENZENE | 10 | | | 9.39 | ug/L | 93.9 | |
| LCS01 | Q2255853 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 8.53 | ug/L | 85.3 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROFORM | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.73 | ug/L | 87.3 | |
| LCS01 | Q2255853 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 9.49 | ug/L | 94.9 | |
| LCS01 | Q2255853 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 9.63 | ug/L | 96.3 | |
| LCS01 | Q2255853 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 9.87 | ug/L | 98.7 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 8.35 | ug/L | 83.5 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 9.46 | ug/L | 94.6 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 9.51 | ug/L | 95.1 | |
| LCS01 | Q2255853 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 9.64 | ug/L | 96.4 | |
| LCS01 | Q2255853 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 8.66 | ug/L | 86.6 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 14.7 | ug/L | 73.5 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 9.72 | ug/L | 97.2 | |
| LCS01 | Q2255853 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 9.11 | ug/L | 91.1 | |
| LCS01 | Q2255853 | METHOD | 1,1-DICHLOROPROPENE | 10 | | | 10.2 | ug/L | 102 | |

JBJ59173

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2255853 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 9.59 | ug/L | 95.9 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2255853 | METHOD 826 | ETHYL BENZENE | 10 | | | 9.44 | ug/L | 94.4 | |
| LCS01 | Q2255853 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 8.74 | ug/L | 87.4 | |
| LCS01 | Q2255853 | METHOD 826 | 2-HEXANONE | 50 | | | 44.8 | ug/L | 89.6 | |
| LCS01 | Q2255853 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | | 8.69 | ug/L | 86.9 | |
| LCS01 | Q2255853 | METHOD 826 | IODOMETHANE | 10 | | | 9.47 | ug/L | 94.7 | |
| LCS01 | Q2255853 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 9.37 | ug/L | 93.7 | |
| LCS01 | Q2255853 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 9.78 | ug/L | 97.8 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 49.3 | ug/L | 98.6 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.25 | ug/L | 92.5 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 49.2 | ug/L | 98.4 | |
| LCS01 | Q2255853 | METHOD 826 | NAPHTHALENE | 10 | | | 9.1 | ug/L | 91 | |
| LCS01 | Q2255853 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 9.56 | ug/L | 95.6 | |
| LCS01 | Q2255853 | METHOD 826 | STYRENE | 10 | | | 9.22 | ug/L | 92.2 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 8.98 | ug/L | 89.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2255853 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 9.32 | ug/L | 93.2 | |
| LCS01 | Q2255853 | METHOD 826 | TOLUENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 8.78 | ug/L | 87.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 9.33 | ug/L | 93.3 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,1-TRICHLOROETHANE | 10 | | | 9.91 | ug/L | 99.1 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2255853 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 9.28 | ug/L | 92.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 8.89 | ug/L | 88.9 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 9.45 | ug/L | 94.5 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 9.45 | ug/L | 94.5 | |
| LCS01 | Q2255853 | METHOD 826 | VINYL ACETATE | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2255853 | METHOD 826 | VINYL CHLORIDE | 10 | | | 9.64 | ug/L | 96.4 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2255853 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 28.4 | ug/L | 94.7 | |
| SAMPLE | A864552 | | Analysis Date/Time: 06-Nov-09 09:03 | | | | | | | |
| SAMPLE | A864552 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2255854 | A864552 | Analysis Date/Time: 06-Nov-09 09:29 | | | | | | | |
| SPI01 | Q2255854 | A864552 | ACETONE (2-PROPANONE) | 0 | 50 | | 60.7 | ug/L | 121.4 | |
| SPI01 | Q2255854 | A864552 | ACROLEIN | 0 | 100 | | 92.7 | ug/L | 92.7 | |
| SPI01 | Q2255854 | A864552 | ACRYLONITRILE | 0 | 100 | | 195 | ug/L | 195 | |
| SPI01 | Q2255854 | A864552 | BENZENE | 0 | 10 | ! | 12.8 | ug/L | 128 | |
| SPI01 | Q2255854 | A864552 | BROMOBENZENE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2255854 | A864552 | BROMOCHLOROMETHANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | BROMODICHLOROMETHANE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2255854 | A864552 | BROMOFORM | 0 | 10 | | 8.94 | ug/L | 89.4 | |
| SPI01 | Q2255854 | A864552 | BROMOMETHANE | 0 | 10 | | 12.9 | ug/L | 129 | |
| SPI01 | Q2255854 | A864552 | N-BUTYLBENZENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2255854 | A864552 | SEC-BUTYLBENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | TERT-BUTYLBENZENE | 0 | 10 | | 12.2 | ug/L | 122 | |
| SPI01 | Q2255854 | A864552 | CARBON DISULFIDE | 0 | 10 | | 9.99 | ug/L | 99.9 | |
| SPI01 | Q2255854 | A864552 | CARBON TETRACHLORIDE | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2255854 | A864552 | CHLOROBENZENE | 0 | 10 | ! | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | DIBROMOCHLOROMETHANE | 0 | 10 | | 10.3 | ug/L | 103 | |
| SPI01 | Q2255854 | A864552 | CHLOROETHANE | 0 | 10 | | 13.7 | ug/L | 137 | |
| SPI01 | Q2255854 | A864552 | CHLOROFORM | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | CHLOROMETHANE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2255854 | A864552 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2255854 | A864552 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2255854 | A864552 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 10.1 | ug/L | 101 | |
| SPI01 | Q2255854 | A864552 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 13.3 | ug/L | 133 | |
| SPI01 | Q2255854 | A864552 | DIBROMOMETHANE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2255854 | A864552 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 12 | ug/L | 120 | |
| SPI01 | Q2255854 | A864552 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 12.2 | ug/L | 61 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROETHANE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROETHANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROETHENE | 0 | 10 | | 12 | ug/L | 120 | |
| SPI01 | Q2255854 | A864552 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 12.9 | ug/L | 129 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROPROPANE | 0 | 10 | ! | 13.1 | ug/L | 131 | |
| SPI01 | Q2255854 | A864552 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 13.6 | ug/L | 136 | |
| SPI01 | Q2255854 | A864552 | 2,2-DICHLOROPROPANE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROPROPENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.8 | ug/L | 108 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2255854 | A864552 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | ETHYL BENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | ETHYL METHACRYLATE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2255854 | A864552 | 2-HEXANONE | 0 | 50 | ! | 67.3 | ug/L | 134.6 | |
| SPI01 | Q2255854 | A864552 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2255854 | A864552 | IODOMETHANE | 0 | 10 | | 12 | ug/L | 120 | |
| SPI01 | Q2255854 | A864552 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2255854 | A864552 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2255854 | A864552 | METHYL ETHYL KETONE | 0 | 50 | | 64.8 | ug/L | 129.6 | |
| SPI01 | Q2255854 | A864552 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2255854 | A864552 | METHYL ISOBUTYL KETONE | 0 | 50 | ! | 68.1 | ug/L | 136.2 | |
| SPI01 | Q2255854 | A864552 | NAPHTHALENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | N-PROPYLBENZENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | STYRENE | 0 | 10 | | 6.41 | ug/L | 64.1 | |
| SPI01 | Q2255854 | A864552 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2255854 | A864552 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | ! | 12.7 | ug/L | 127 | |
| SPI01 | Q2255854 | A864552 | TETRACHLOROETHENE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2255854 | A864552 | TOLUENE | 0 | 10 | ! | 13 | ug/L | 130 | |
| SPI01 | Q2255854 | A864552 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.3 | ug/L | 103 | |
| SPI01 | Q2255854 | A864552 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2255854 | A864552 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 13.8 | ug/L | 138 | |
| SPI01 | Q2255854 | A864552 | TRICHLOROETHENE | 0 | 10 | | 13.2 | ug/L | 132 | |
| SPI01 | Q2255854 | A864552 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2255854 | A864552 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.3 | ug/L | 93 | |
| SPI01 | Q2255854 | A864552 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.78 | ug/L | 87.8 | |
| SPI01 | Q2255854 | A864552 | VINYL ACETATE | 0 | 10 | | 8.89 | ug/L | 88.9 | |
| SPI01 | Q2255854 | A864552 | VINYL CHLORIDE | 4.9 | 10 | | 18.1 | ug/L | 132 | |
| SPI01 | Q2255854 | A864552 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 32.6 | ug/L | 108.7 | |
| DPS01 | Q2255855 | A864552 | Analysis Date/Time: 06-Nov-09 09:54 | | | | | | | |
| DPS01 | Q2255855 | A864552 | ACETONE (2-PROPANONE) | 0 | 50 | | 56.3 | ug/L | 112.6 | 7.5 |
| DPS01 | Q2255855 | A864552 | ACROLEIN | 0 | 100 | | 75.7 | ug/L | 75.7 | 20.2 |
| DPS01 | Q2255855 | A864552 | ACRYLONITRILE | 0 | 100 | | 151 | ug/L | 151.1 | 25.2 |
| DPS01 | Q2255855 | A864552 | BENZENE | 0 | 10 | | 11.9 | ug/L | 118.5 | 7.3 |
| DPS01 | Q2255855 | A864552 | BROMOBENZENE | 0 | 10 | | 11.3 | ug/L | 112.7 | 7.2 |
| DPS01 | Q2255855 | A864552 | BROMOCHLOROMETHANE | 0 | 10 | | 11.5 | ug/L | 114.9 | 7.4 |
| DPS01 | Q2255855 | A864552 | BROMODICHLOROMETHANE | 0 | 10 | | 10.6 | ug/L | 106.4 | 5.8 |
| DPS01 | Q2255855 | A864552 | BROMOFORM | 0 | 10 | | 8.52 | ug/L | 85.2 | 4.8 |
| DPS01 | Q2255855 | A864552 | BROMOMETHANE | 0 | 10 | | 11.6 | ug/L | 115.6 | 10.6 |
| DPS01 | Q2255855 | A864552 | N-BUTYLBENZENE | 0 | 10 | | 11 | ug/L | 109.8 | 0.9 |
| DPS01 | Q2255855 | A864552 | SEC-BUTYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114.1 | 3.4 |
| DPS01 | Q2255855 | A864552 | TERT-BUTYLBENZENE | 0 | 10 | | 11.8 | ug/L | 117.8 | 3.7 |
| DPS01 | Q2255855 | A864552 | CARBON DISULFIDE | 0 | 10 | | 9.41 | ug/L | 94.1 | 6 |
| DPS01 | Q2255855 | A864552 | CARBON TETRACHLORIDE | 0 | 10 | | 10.2 | ug/L | 101.6 | 7.8 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2255855 | A864552 | CHLOROBENZENE | 0 | 10 | | 11.8 | ug/L | 117.7 | 5.9 |
| DPS01 | Q2255855 | A864552 | DIBROMOCHLOROMETHANE | 0 | 10 | | 9.83 | ug/L | 98.3 | 5.1 |
| DPS01 | Q2255855 | A864552 | CHLOROETHANE | 0 | 10 | | 12.6 | ug/L | 126.3 | 8.3 |
| DPS01 | Q2255855 | A864552 | CHLOROFORM | 0 | 10 | | 10.9 | ug/L | 108.7 | 8 |
| DPS01 | Q2255855 | A864552 | CHLOROMETHANE | 0 | 10 | | 10.3 | ug/L | 102.9 | 8.4 |
| DPS01 | Q2255855 | A864552 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.4 | ug/L | 113.6 | 4.1 |
| DPS01 | Q2255855 | A864552 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.2 | ug/L | 111.6 | 6.3 |
| DPS01 | Q2255855 | A864552 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2255855 | A864552 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 9.25 | ug/L | 92.5 | 8.6 |
| DPS01 | Q2255855 | A864552 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 12.2 | ug/L | 122.3 | 8.4 |
| DPS01 | Q2255855 | A864552 | DIBROMOMETHANE | 0 | 10 | | 11.6 | ug/L | 115.6 | 7.9 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 11 | ug/L | 109.9 | 5.5 |
| DPS01 | Q2255855 | A864552 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 110.8 | 4.6 |
| DPS01 | Q2255855 | A864552 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 110.8 | 5.3 |
| DPS01 | Q2255855 | A864552 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 12.2 | ug/L | 121.8 | 1.7 |
| DPS01 | Q2255855 | A864552 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 10.2 | ug/L | 50.8 | 18.1 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 114.8 | 8.7 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROETHANE | 0 | 10 | | 11.3 | ug/L | 112.7 | 9.5 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROETHENE | 0 | 10 | | 11.5 | ug/L | 114.7 | 4.1 |
| DPS01 | Q2255855 | A864552 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 11.7 | ug/L | 116.9 | 6.3 |
| DPS01 | Q2255855 | A864552 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 12.3 | ug/L | 122.5 | 5.2 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROPROPANE | 0 | 10 | | 12.2 | ug/L | 121.9 | 7 |
| DPS01 | Q2255855 | A864552 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 12.5 | ug/L | 125.4 | 7.8 |
| DPS01 | Q2255855 | A864552 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.85 | ug/L | 98.5 | 7.1 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROPROPENE | 0 | 10 | | 10.7 | ug/L | 107 | 8.1 |
| DPS01 | Q2255855 | A864552 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.75 | ug/L | 97.5 | 10 |
| DPS01 | Q2255855 | A864552 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.21 | ug/L | 92.1 | 12.3 |
| DPS01 | Q2255855 | A864552 | ETHYL BENZENE | 0 | 10 | | 11.5 | ug/L | 115.1 | 2.1 |
| DPS01 | Q2255855 | A864552 | ETHYL METHACRYLATE | 0 | 10 | | 10 | ug/L | 100.2 | 7 |
| DPS01 | Q2255855 | A864552 | 2-HEXANONE | 0 | 50 | ! | 61.5 | ug/L | 123 | 9 |
| DPS01 | Q2255855 | A864552 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.8 | ug/L | 108.4 | 1.5 |
| DPS01 | Q2255855 | A864552 | IODOMETHANE | 0 | 10 | | 11 | ug/L | 110.4 | 8.2 |
| DPS01 | Q2255855 | A864552 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.2 | ug/L | 111.7 | 5.2 |
| DPS01 | Q2255855 | A864552 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 10.8 | ug/L | 108.4 | 1.6 |
| DPS01 | Q2255855 | A864552 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 10.6 | ug/L | 106 | 7.3 |
| DPS01 | Q2255855 | A864552 | METHYL ETHYL KETONE | 0 | 50 | | 57.7 | ug/L | 115.4 | 11.6 |
| DPS01 | Q2255855 | A864552 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 10.5 | ug/L | 105.4 | 7.9 |
| DPS01 | Q2255855 | A864552 | METHYL ISOBUTYL KETONE | 0 | 50 | | 61.8 | ug/L | 123.6 | 9.6 |
| DPS01 | Q2255855 | A864552 | NAPHTHALENE | 0 | 10 | | 10.4 | ug/L | 103.9 | 0.1 |
| DPS01 | Q2255855 | A864552 | N-PROPYLBENZENE | 0 | 10 | | 10.9 | ug/L | 109.3 | 5.5 |
| DPS01 | Q2255855 | A864552 | STYRENE | 0 | 10 | | 6.77 | ug/L | 67.7 | 5.5 |
| DPS01 | Q2255855 | A864552 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 101.6 | 8.8 |
| DPS01 | Q2255855 | A864552 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115.1 | 9.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2255855 | A864552 | TETRACHLOROETHENE | 0 | 10 | | 11 | ug/L | 109.8 | 4.4 |
| DPS01 | Q2255855 | A864552 | TOLUENE | 0 | 10 | | 12.2 | ug/L | 121.9 | 6.1 |
| DPS01 | Q2255855 | A864552 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.5 | ug/L | 104.7 | 2.1 |
| DPS01 | Q2255855 | A864552 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | 1.8 |
| DPS01 | Q2255855 | A864552 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 111.4 | 6.4 |
| DPS01 | Q2255855 | A864552 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 12.8 | ug/L | 128.3 | 7.4 |
| DPS01 | Q2255855 | A864552 | TRICHLOROETHENE | 0 | 10 | | 12.5 | ug/L | 124.7 | 5.6 |
| DPS01 | Q2255855 | A864552 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.1 | ug/L | 110.9 | 5.3 |
| DPS01 | Q2255855 | A864552 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 11.4 | ug/L | 113.8 | 8.4 |
| DPS01 | Q2255855 | A864552 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.25 | ug/L | 92.5 | 0.5 |
| DPS01 | Q2255855 | A864552 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.6 |
| DPS01 | Q2255855 | A864552 | VINYL ACETATE | 0 | 10 | | 5.88 | ug/L | 58.8 | 40.8 |
| DPS01 | Q2255855 | A864552 | VINYL CHLORIDE | 4.9 | 10 | | 17.1 | ug/L | 122 | 7.9 |
| DPS01 | Q2255855 | A864552 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 31.3 | ug/L | 104.3 | 4.1 |
| SAMPLE | A864553 | | Analysis Date/Time: 06-Nov-09 10:20 | | | | | | | |
| SAMPLE | A864553 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864554 | | Analysis Date/Time: 06-Nov-09 10:45 | | | | | | | |
| SAMPLE | A864554 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864560 | | Analysis Date/Time: 06-Nov-09 13:19 | | | | | | | |
| SAMPLE | A864560 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2253648 Value reported for analytes calibrated by linear (LIN) or
Q2253648 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2255851 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2255851 equations is concentration ( ).
Q2255854 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2255854 possible. Unacidified sample not available.
Q2255855 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2255855 possible. Unacidified sample not available.

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | Analysis Date/Time: 31-Oct-09 13:47 | | | | | | | |
| CAL01 | Q2253648 | | ACETONE (2-PROPANONE) | 0.1022 | | | | | | 8.4 |
| CAL01 | Q2253648 | | ACROLEIN | 0.0175 | | | | | | 14.5 |
| CAL01 | Q2253648 | | ACRYLONITRILE | 0.0692 | | | | | | 11.2 |
| CAL01 | Q2253648 | | BENZENE | 0.8701 | | | | | | 2.5 |
| CAL01 | Q2253648 | | BROMOBENZENE | 1.1810 | | | | | | 4.9 |
| CAL01 | Q2253648 | | BROMOCHLOROMETHANE | 0.1079 | | | | | | 3.2 |
| CAL01 | Q2253648 | | BROMODICHLOROMETHANE | 0.2434 | | | | | | 4.8 |
| CAL01 | Q2253648 | | BROMOFORM | 0.3505 | | | | | | 16.4 |
| CAL01 | Q2253648 | | BROMOMETHANE | 0.1012 | | | | | | 10.3 |
| CAL01 | Q2253648 | | N-BUTYLBENZENE | 1.5933 | | | | | | 3.2 |
| CAL01 | Q2253648 | | SEC-BUTYLBENZENE | 3.6289 | | | | | | 6.3 |
| CAL01 | Q2253648 | | TERT-BUTYLBENZENE | 1.5134 | | | | | | 9.6 |
| CAL01 | Q2253648 | | CARBON DISULFIDE | 0.6311 | | | | | | 3 |
| CAL01 | Q2253648 | | CARBON TETRACHLORIDE | 0.2699 | | | | | | 4.3 |

JBJ59173

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | CHLOROBENZENE | 1.7328 | | | | | | 6.7 |
| CAL01 | Q2253648 | | DIBROMOCHLOROMETHANE | 0.5223 | | | | | | 11.9 |
| CAL01 | Q2253648 | | CHLOROETHANE | 0.1262 | | | | | | 10.5 |
| CAL01 | Q2253648 | | CHLOROFORM | 0.3695 | | | | | | 5.2 |
| CAL01 | Q2253648 | | CHLOROMETHANE | 0.2131 | | | | | | 16.2 |
| CAL01 | Q2253648 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | | | | 13.8 |
| CAL01 | Q2253648 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | | | | 6.4 |
| CAL01 | Q2253648 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | | | | 8.4 |
| CAL01 | Q2253648 | | DIBROMOMETHANE | 0.1230 | | | | | | 1.9 |
| CAL01 | Q2253648 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | | | | 0.7 |
| CAL01 | Q2253648 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | | | | 1.8 |
| CAL01 | Q2253648 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | | | | 2.8 |
| CAL01 | Q2253648 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | | | | 5.9 |
| CAL01 | Q2253648 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | | | | 11.1 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHANE | 0.3815 | | | | | | 1.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROETHANE | 0.2779 | | | | | | 2.5 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHENE | 0.1982 | | | | | | 1.4 |
| CAL01 | Q2253648 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | | | | 2 |
| CAL01 | Q2253648 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | | | | 2.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROPROPANE | 0.2007 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3-DICHLOROPROPANE | 0.9526 | | | | | | 9.2 |
| CAL01 | Q2253648 | | 1,1-DICHLOROPROPENE | 0.1063 | | | | | | 2.5 |
| CAL01 | Q2253648 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | | | | 9.3 |
| CAL01 | Q2253648 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | | | | 14.3 |
| CAL01 | Q2253648 | | ETHYL BENZENE | 0.9633 | | | | | | 6.5 |
| CAL01 | Q2253648 | | ETHYL METHACRYLATE | 0.8960 | | | | | | 8.7 |
| CAL01 | Q2253648 | | 2-HEXANONE | 0.6513 | | | | | | 7.1 |
| CAL01 | Q2253648 | | HEXACHLOROBUTADIENE | 0.5378 | | | | | | 2.3 |
| CAL01 | Q2253648 | | IODOMETHANE | 0.3240 | | | | | | 1.8 |
| CAL01 | Q2253648 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | | | | 5.5 |
| CAL01 | Q2253648 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2253648 | | METHYL ETHYL KETONE | 0.0405 | | | | | | 5 |
| CAL01 | Q2253648 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | | | | 3 |
| CAL01 | Q2253648 | | METHYL ISOBUTYL KETONE | 0.3155 | | | | | | 5.9 |
| CAL01 | Q2253648 | | NAPHTHALENE | 3.5250 | | | | | | 3.8 |
| CAL01 | Q2253648 | | N-PROPYLBENZENE | 0.4079 | | | | | | 3.9 |
| CAL01 | Q2253648 | | STYRENE | 1.9432 | | | | | | 7.8 |
| CAL01 | Q2253648 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | | | | 6.6 |
| CAL01 | Q2253648 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | | | | 3.4 |
| CAL01 | Q2253648 | | TETRACHLOROETHENE | 0.7380 | | | | | | 7.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | TOLUENE | 0.8639 | | | | | | 6.3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | | | | 6.1 |
| CAL01 | Q2253648 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | | | | 4.4 |
| CAL01 | Q2253648 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | | | | 7 |
| CAL01 | Q2253648 | | TRICHLOROETHENE | 0.2277 | | | | | | 1.8 |
| CAL01 | Q2253648 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | | | | 3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | | | | 3.1 |
| CAL01 | Q2253648 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | | | | 6.4 |
| CAL01 | Q2253648 | | VINYL ACETATE | | | LIN | | | | 0.996 |
| CAL01 | Q2253648 | | VINYL CHLORIDE | 0.2350 | | | | | | 3.4 |
| CAL01 | Q2253648 | | DICHLOROETHANE-D4 | 0.2816 | | | | | | 2.3 |
| CAL01 | Q2253648 | | TOLUENE-D8 | 0.8989 | | | | | | 4 |
| CAL01 | Q2253648 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | | | | 5.2 |
| CAL01 | Q2253648 | | DIBROMOFLUOROMETHANE | 0.2362 | | | | | | 3.2 |
| CCVD | Q2256325 | | Analysis Date/Time: 07-Nov-09 05:43 | | | | | | | |
| CCVD | Q2256325 | | ACETONE (2-PROPANONE) | 0.1022 | | | 0.1092 | | | 6.8 |
| CCVD | Q2256325 | | ACROLEIN | 0.0175 | | | 0.0258 | | | 47.4 |
| CCVD | Q2256325 | | ACRYLONITRILE | 0.0692 | | | 0.1465 | | | 111.7 |
| CCVD | Q2256325 | | BENZENE | 0.8701 | | | 0.8941 | | | 2.8 |
| CCVD | Q2256325 | | BROMOBENZENE | 1.1810 | | | 1.0362 | | | 12.3 |
| CCVD | Q2256325 | | BROMOCHLOROMETHANE | 0.1079 | | | 0.0997 | | | 7.6 |
| CCVD | Q2256325 | | BROMODICHLOROMETHANE | 0.2434 | | | 0.2240 | | | 8 |
| CCVD | Q2256325 | | BROMOFORM | 0.3505 | | | 0.2598 | | | 25.9 |
| CCVD | Q2256325 | | BROMOMETHANE | 0.1012 | | | 0.0992 | | | 2 |
| CCVD | Q2256325 | | N-BUTYLBENZENE | 1.5933 | | | 1.3688 | | | 14.1 |
| CCVD | Q2256325 | | SEC-BUTYLBENZENE | 3.6289 | | | 3.2350 | | | 10.9 |
| CCVD | Q2256325 | | TERT-BUTYLBENZENE | 1.5134 | | | 1.3638 | | | 9.9 |
| CCVD | Q2256325 | | CARBON DISULFIDE | 0.6311 | | | 0.5285 | | | 16.3 |
| CCVD | Q2256325 | | CARBON TETRACHLORIDE | 0.2699 | | | 0.2399 | | | 11.1 |
| CCVD | Q2256325 | | CHLOROBENZENE | 1.7328 | | | 1.5793 | | | 8.9 |
| CCVD | Q2256325 | | DIBROMOCHLOROMETHANE | 0.5223 | | | 0.4242 | | | 18.8 |
| CCVD | Q2256325 | | CHLOROETHANE | 0.1262 | | | 0.1192 | | | 5.5 |
| CCVD | Q2256325 | | CHLOROFORM | 0.3695 | | | 0.3315 | | | 10.3 |
| CCVD | Q2256325 | | CHLOROMETHANE | 0.2131 | | | 0.1833 | | | 14 |
| CCVD | Q2256325 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | 0.6941 | | | 9.2 |
| CCVD | Q2256325 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | 0.6316 | | | 12.6 |
| CCVD | Q2256325 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | 0.1597 | | | 12.5 |
| CCVD | Q2256325 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | 0.1599 | | | 27.4 |
| CCVD | Q2256325 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | 0.1830 | | | 4.4 |
| CCVD | Q2256325 | | DIBROMOMETHANE | 0.1230 | | | 0.1224 | | | 0.5 |
| CCVD | Q2256325 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | 1.2590 | | | 16 |
| CCVD | Q2256325 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | 1.2751 | | | 14.4 |
| CCVD | Q2256325 | | 1,4-DICHLOROBENZENE (P- | 1.4931 | | | 1.2626 | | | 15.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | DICHLOROBENZENE) | | | | | | | |
| CCVD | Q2256325 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | 0.1275 | | | 10.3 |
| CCVD | Q2256325 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | 0.1877 | | | 25.2 |
| CCVD | Q2256325 | | 1,1-DICHLOROETHANE | 0.3815 | | | 0.3605 | | | 5.5 |
| CCVD | Q2256325 | | 1,2-DICHLOROETHANE | 0.2779 | | | 0.2675 | | | 3.7 |
| CCVD | Q2256325 | | 1,1-DICHLOROETHENE | 0.1982 | | | 0.1902 | | | 4 |
| CCVD | Q2256325 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | 0.2213 | | | 8.3 |
| CCVD | Q2256325 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | 0.2094 | | | 7.8 |
| CCVD | Q2256325 | | 1,2-DICHLOROPROPANE | 0.2007 | | | 0.2052 | | | 2.2 |
| CCVD | Q2256325 | | 1,3-DICHLOROPROPANE | 0.9526 | | | 0.9356 | | | 1.8 |
| CCVD | Q2256325 | | 1,1-DICHLOROPROPENE | 0.1063 | | | 0.0950 | | | 10.6 |
| CCVD | Q2256325 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | 0.2899 | | | 4.6 |
| CCVD | Q2256325 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | 0.2321 | | | 4.4 |
| CCVD | Q2256325 | | ETHYL BENZENE | 0.9633 | | | 0.8740 | | | 9.3 |
| CCVD | Q2256325 | | ETHYL METHACRYLATE | 0.8960 | | | 0.8041 | | | 10.3 |
| CCVD | Q2256325 | | 2-HEXANONE | 0.6513 | | | 0.6044 | | | 7.2 |
| CCVD | Q2256325 | | HEXACHLOROBUTADIENE | 0.5378 | | | 0.4407 | | | 18.1 |
| CCVD | Q2256325 | | IODOMETHANE | 0.3240 | | | 0.2964 | | | 8.5 |
| CCVD | Q2256325 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | 2.6021 | | | 9.8 |
| CCVD | Q2256325 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | 2.6593 | | | 12.8 |
| CCVD | Q2256325 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | LIN | 9.16 | | | 8.4 |
| CCVD | Q2256325 | | METHYL ETHYL KETONE | 0.0405 | | | 0.0406 | | | 0.2 |
| CCVD | Q2256325 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | 0.6748 | | | 10.9 |
| CCVD | Q2256325 | | METHYL ISOBUTYL KETONE | 0.3155 | | | 0.3244 | | | 2.8 |
| CCVD | Q2256325 | | NAPHTHALENE | 3.5250 | | | 2.6492 | | | 24.8 |
| CCVD | Q2256325 | | N-PROPYLBENZENE | 0.4079 | | | 0.3657 | | | 10.3 |
| CCVD | Q2256325 | | STYRENE | 1.9432 | | | 1.7002 | | | 12.5 |
| CCVD | Q2256325 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | 0.5097 | | | 17.9 |
| CCVD | Q2256325 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | 0.7880 | | | 11.2 |
| CCVD | Q2256325 | | TETRACHLOROETHENE | 0.7380 | | | 0.6480 | | | 12.2 |
| CCVD | Q2256325 | | TOLUENE | 0.8639 | | | 0.9095 | | | 5.3 |
| CCVD | Q2256325 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | 0.8462 | | | 26.7 |
| CCVD | Q2256325 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | 0.9288 | | | 21.7 |
| CCVD | Q2256325 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | 0.2736 | | | 10.9 |
| CCVD | Q2256325 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | 0.1799 | | | 5.3 |
| CCVD | Q2256325 | | TRICHLOROETHENE | 0.2277 | | | 0.2206 | | | 3.1 |
| CCVD | Q2256325 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | 0.2676 | | | 9.8 |
| CCVD | Q2256325 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | 0.2419 | | | 14.7 |
| CCVD | Q2256325 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | 2.4400 | | | 12.8 |
| CCVD | Q2256325 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | 2.4164 | | | 11.8 |
| CCVD | Q2256325 | | VINYL ACETATE | 10.0 | | LIN | 5.36 | | | 46.4 |
| CCVD | Q2256325 | | VINYL CHLORIDE | 0.2350 | | | 0.2136 | | | 9.1 |
| CCVD | Q2256325 | | DICHLOROETHANE-D4 | 0.2816 | | | 0.2637 | | | 6.4 |
| CCVD | Q2256325 | | TOLUENE-D8 | 0.8989 | | | 0.9386 | | | 4.4 |
| CCVD | Q2256325 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | 0.7290 | | | 14.6 |
| CCVD | Q2256325 | | DIBROMOFLUOROMETHANE | 0.2362 | | | 0.2178 | | | 7.8 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256326 | | Analysis Date/Time: 07-Nov-09 06:08 | | | | | | | |
| BLA01 | Q2256326 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2256326 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2256326 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256326 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | XYLENES (O/M/P-XYLENE) | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256326 | | DICHLOROETHANE-D4 | | | | | | 96 | |
| BLA01 | Q2256326 | | TOLUENE-D8 | | | | | | 103 | |
| BLA01 | Q2256326 | | 4-BROMOFLUOROBENZENE | | | | | | 91 | |
| BLA01 | Q2256326 | | DIBROMOFLUOROMETHANE | | | | | | 94 | |
| LCS01 | Q2256327 | METHOD 826 | Analysis Date/Time: 07-Nov-09 06:44 | | | | | | | |
| LCS01 | Q2256327 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 43 | ug/L | 86 | |
| LCS01 | Q2256327 | METHOD 826 | ACROLEIN | 100 | | | 131 | ug/L | 131 | |
| LCS01 | Q2256327 | METHOD 826 | ACRYLONITRILE | 100 | | | 210 | ug/L | 210 | |
| LCS01 | Q2256327 | METHOD 826 | BENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOBENZENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOFORM | 10 | | | 8.56 | ug/L | 85.6 | |
| LCS01 | Q2256327 | METHOD | BROMOMETHANE | 10 | | | 9.84 | ug/L | 98.4 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2256327 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 9.8 | ug/L | 98 | |
| LCS01 | Q2256327 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256327 | METHOD 826 | CARBON DISULFIDE | 10 | | | 8.14 | ug/L | 81.4 | |
| LCS01 | Q2256327 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 9.61 | ug/L | 96.1 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256327 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 9.6 | ug/L | 96 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROETHANE | 10 | | | 9.35 | ug/L | 93.5 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROFORM | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.3 | ug/L | 83 | |
| LCS01 | Q2256327 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 8.28 | ug/L | 82.8 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 9.61 | ug/L | 96.1 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 9.88 | ug/L | 98.8 | |
| LCS01 | Q2256327 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 8.07 | ug/L | 80.7 | |
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 16 | ug/L | 80 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 9.74 | ug/L | 97.4 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256327 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 9.17 | ug/L | 91.7 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 10.6 | ug/L | 106 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 11.3 | ug/L | 113 | |
| LCS01 | Q2256327 | METHOD 826 | ETHYL BENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256327 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | 2-HEXANONE | 50 | | | 52.3 | ug/L | 104.6 | |
| LCS01 | Q2256327 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | | 9.74 | ug/L | 97.4 | |
| LCS01 | Q2256327 | METHOD 826 | IODOMETHANE | 10 | | | 9.14 | ug/L | 91.4 | |
| LCS01 | Q2256327 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256327 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 9.49 | ug/L | 94.9 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 50.1 | ug/L | 100.2 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.09 | ug/L | 90.9 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 52.9 | ug/L | 105.8 | |
| LCS01 | Q2256327 | METHOD 826 | NAPHTHALENE | 10 | | | 8.7 | ug/L | 87 | |
| LCS01 | Q2256327 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | STYRENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 9.69 | ug/L | 96.9 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | TOLUENE | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 8.51 | ug/L | 85.1 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 9.18 | ug/L | 91.8 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,1-TRICHLOROETHANE | 10 | | | 9.9 | ug/L | 99 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 12.1 | ug/L | 121 | |
| LCS01 | Q2256327 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 9.25 | ug/L | 92.5 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 9.57 | ug/L | 95.7 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | VINYL ACETATE | 10 | | | 7.63 | ug/L | 76.3 | |
| LCS01 | Q2256327 | METHOD 826 | VINYL CHLORIDE | 10 | | | 8.74 | ug/L | 87.4 | |
| LCS01 | Q2256327 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 31.3 | ug/L | 104.3 | |
| SAMPLE | A864554 | | Analysis Date/Time: 07-Nov-09 08:05 | | | | | | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | A864554 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864560 | | Analysis Date/Time: 07-Nov-09 09:48 | | | | | | | |
| SAMPLE | A864560 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SPI01 | Q2256328 | A864541 | Analysis Date/Time: 07-Nov-09 11:31 | | | | | | | |
| SPI01 | Q2256328 | A864541 | ACETONE (2-PROPANONE) | 0 | 50 | | 54.1 | ug/L | 108.2 | |
| SPI01 | Q2256328 | A864541 | ACROLEIN | 0 | 100 | | 83.1 | ug/L | 83.1 | |
| SPI01 | Q2256328 | A864541 | ACRYLONITRILE | 0 | 100 | | 140 | ug/L | 140 | |
| SPI01 | Q2256328 | A864541 | BENZENE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2256328 | A864541 | BROMOBENZENE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | BROMOCHLOROMETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | BROMODICHLOROMETHANE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2256328 | A864541 | BROMOFORM | 0 | 10 | | 8.8 | ug/L | 88 | |
| SPI01 | Q2256328 | A864541 | BROMOMETHANE | 0 | 10 | | 12.2 | ug/L | 122 | |
| SPI01 | Q2256328 | A864541 | N-BUTYLBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2256328 | A864541 | SEC-BUTYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2256328 | A864541 | TERT-BUTYLBENZENE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | CARBON DISULFIDE | 0 | 10 | | 8.16 | ug/L | 81.6 | |
| SPI01 | Q2256328 | A864541 | CARBON TETRACHLORIDE | 0 | 10 | | 10 | ug/L | 100 | |
| SPI01 | Q2256328 | A864541 | CHLOROBENZENE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2256328 | A864541 | DIBROMOCHLOROMETHANE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2256328 | A864541 | CHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | CHLOROFORM | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | CHLOROMETHANE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2256328 | A864541 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2256328 | A864541 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2256328 | A864541 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 9.4 | ug/L | 94 | |
| SPI01 | Q2256328 | A864541 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 12.7 | ug/L | 127 | |
| SPI01 | Q2256328 | A864541 | DIBROMOMETHANE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 12.3 | ug/L | 61.5 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROETHANE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROETHENE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 13.2 | ug/L | 132 | |
| SPI01 | Q2256328 | A864541 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROPROPANE | 0 | 10 | ! | 12.5 | ug/L | 125 | |
| SPI01 | Q2256328 | A864541 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 13.2 | ug/L | 132 | |
| SPI01 | Q2256328 | A864541 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.57 | ug/L | 95.7 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROPROPENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.5 | ug/L | 105 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256328 | A864541 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.1 | ug/L | 101 | |
| SPI01 | Q2256328 | A864541 | ETHYL BENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | ETHYL METHACRYLATE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 2-HEXANONE | 0 | 50 | ! | 63.7 | ug/L | 127.4 | |
| SPI01 | Q2256328 | A864541 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.73 | ug/L | 97.3 | |
| SPI01 | Q2256328 | A864541 | IODOMETHANE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2256328 | A864541 | METHYL ETHYL KETONE | 0 | 50 | | 60.2 | ug/L | 120.4 | |
| SPI01 | Q2256328 | A864541 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | METHYL ISOBUTYL KETONE | 0 | 50 | | 62.6 | ug/L | 125.2 | |
| SPI01 | Q2256328 | A864541 | NAPHTHALENE | 0 | 10 | | 9.49 | ug/L | 94.9 | |
| SPI01 | Q2256328 | A864541 | N-PROPYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2256328 | A864541 | STYRENE | 0 | 10 | | 9.82 | ug/L | 98.2 | |
| SPI01 | Q2256328 | A864541 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | ! | 12.3 | ug/L | 123 | |
| SPI01 | Q2256328 | A864541 | TETRACHLOROETHENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | TOLUENE | 0 | 10 | | 12.6 | ug/L | 126 | |
| SPI01 | Q2256328 | A864541 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 9.37 | ug/L | 93.7 | |
| SPI01 | Q2256328 | A864541 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.65 | ug/L | 96.5 | |
| SPI01 | Q2256328 | A864541 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2256328 | A864541 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 13 | ug/L | 130 | |
| SPI01 | Q2256328 | A864541 | TRICHLOROETHENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2256328 | A864541 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256328 | A864541 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2256328 | A864541 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2256328 | A864541 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256328 | A864541 | VINYL ACETATE | 0 | 10 | | 7.18 | ug/L | 71.8 | |
| SPI01 | Q2256328 | A864541 | VINYL CHLORIDE | 5.2 | 10 | | 16.4 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 35.1 | ug/L | 117.0 | |
| DPS01 | Q2256329 | A864541 | Analysis Date/Time: 07-Nov-09 11:56 | | | | | | | |
| DPS01 | Q2256329 | A864541 | ACETONE (2-PROPANONE) | 0 | 50 | | 44.3 | ug/L | 88.6 | 19.8 |
| DPS01 | Q2256329 | A864541 | ACROLEIN | 0 | 100 | | 56.2 | ug/L | 56.2 | 38.6 |
| DPS01 | Q2256329 | A864541 | ACRYLONITRILE | 0 | 100 | | 94.1 | ug/L | 94.1 | 38.9 |
| DPS01 | Q2256329 | A864541 | BENZENE | 0 | 10 | | 10.3 | ug/L | 103.3 | 14.1 |
| DPS01 | Q2256329 | A864541 | BROMOBENZENE | 0 | 10 | | 10.3 | ug/L | 102.8 | 13 |
| DPS01 | Q2256329 | A864541 | BROMOCHLOROMETHANE | 0 | 10 | | 9.98 | ug/L | 99.8 | 14.2 |
| DPS01 | Q2256329 | A864541 | BROMODICHLOROMETHANE | 0 | 10 | | 9.48 | ug/L | 94.8 | 12.7 |
| DPS01 | Q2256329 | A864541 | BROMOFORM | 0 | 10 | | 7.53 | ug/L | 75.3 | 15.6 |
| DPS01 | Q2256329 | A864541 | BROMOMETHANE | 0 | 10 | | 10.8 | ug/L | 107.5 | 12.8 |
| DPS01 | Q2256329 | A864541 | N-BUTYLBENZENE | 0 | 10 | | 9.29 | ug/L | 92.9 | 13.3 |
| DPS01 | Q2256329 | A864541 | SEC-BUTYLBENZENE | 0 | 10 | | 10 | ug/L | 100.4 | 12.6 |
| DPS01 | Q2256329 | A864541 | TERT-BUTYLBENZENE | 0 | 10 | | 10.4 | ug/L | 103.9 | 12.1 |
| DPS01 | Q2256329 | A864541 | CARBON DISULFIDE | 0 | 10 | | 7.11 | ug/L | 71.1 | 13.8 |
| DPS01 | Q2256329 | A864541 | CARBON TETRACHLORIDE | 0 | 10 | | 9.1 | ug/L | 91 | 9.8 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256329 | A864541 | CHLOROBENZENE | 0 | 10 | | 10.5 | ug/L | 104.8 | 14.6 |
| DPS01 | Q2256329 | A864541 | DIBROMOCHLOROMETHANE | 0 | 10 | | 9.02 | ug/L | 90.2 | 13.7 |
| DPS01 | Q2256329 | A864541 | CHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 101.9 | 12.3 |
| DPS01 | Q2256329 | A864541 | CHLOROFORM | 0 | 10 | | 9.65 | ug/L | 96.5 | 13.6 |
| DPS01 | Q2256329 | A864541 | CHLOROMETHANE | 0 | 10 | | 9.26 | ug/L | 92.6 | 11.2 |
| DPS01 | Q2256329 | A864541 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.94 | ug/L | 99.4 | 16.1 |
| DPS01 | Q2256329 | A864541 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.85 | ug/L | 98.5 | 14.8 |
| DPS01 | Q2256329 | A864541 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2256329 | A864541 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.23 | ug/L | 82.3 | 13.3 |
| DPS01 | Q2256329 | A864541 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 10.8 | ug/L | 108.4 | 15.6 |
| DPS01 | Q2256329 | A864541 | DIBROMOMETHANE | 0 | 10 | | 10.2 | ug/L | 101.6 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.5 | ug/L | 95 | 13.6 |
| DPS01 | Q2256329 | A864541 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.59 | ug/L | 95.9 | 14.2 |
| DPS01 | Q2256329 | A864541 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.79 | ug/L | 97.9 | 13.3 |
| DPS01 | Q2256329 | A864541 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 9.5 | ug/L | 95 | 15.6 |
| DPS01 | Q2256329 | A864541 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 10.5 | ug/L | 52.4 | 16.1 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROETHANE | 0 | 10 | | 10.1 | ug/L | 100.6 | 13.3 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 102.1 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.83 | ug/L | 98.3 | 13.2 |
| DPS01 | Q2256329 | A864541 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 11.7 | ug/L | 117 | 12 |
| DPS01 | Q2256329 | A864541 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 10.2 | ug/L | 101.5 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROPROPANE | 0 | 10 | | 10.9 | ug/L | 109.4 | 13.2 |
| DPS01 | Q2256329 | A864541 | 1,3-DICHLOROPROPANE | 0 | 10 | | 11.3 | ug/L | 113.4 | 15.3 |
| DPS01 | Q2256329 | A864541 | 2,2-DICHLOROPROPANE | 0 | 10 | | 8.49 | ug/L | 84.9 | 12 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.91 | ug/L | 99.1 | 10.9 |
| DPS01 | Q2256329 | A864541 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.08 | ug/L | 90.8 | 14.7 |
| DPS01 | Q2256329 | A864541 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.88 | ug/L | 88.8 | 13.2 |
| DPS01 | Q2256329 | A864541 | ETHYL BENZENE | 0 | 10 | | 10.3 | ug/L | 103.2 | 13.7 |
| DPS01 | Q2256329 | A864541 | ETHYL METHACRYLATE | 0 | 10 | | 9.99 | ug/L | 99.9 | 15.6 |
| DPS01 | Q2256329 | A864541 | 2-HEXANONE | 0 | 50 | | 55 | ug/L | 110 | 14.6 |
| DPS01 | Q2256329 | A864541 | HEXACHLOROBUTADIENE | 0 | 10 | | 8.87 | ug/L | 88.7 | 9.2 |
| DPS01 | Q2256329 | A864541 | IODOMETHANE | 0 | 10 | | 9.75 | ug/L | 97.5 | 13.7 |
| DPS01 | Q2256329 | A864541 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 9.99 | ug/L | 99.9 | 15.3 |
| DPS01 | Q2256329 | A864541 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 9.64 | ug/L | 96.4 | 15.1 |
| DPS01 | Q2256329 | A864541 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.18 | ug/L | 91.8 | 15.4 |
| DPS01 | Q2256329 | A864541 | METHYL ETHYL KETONE | 0 | 50 | | 51.3 | ug/L | 102.7 | 15.8 |
| DPS01 | Q2256329 | A864541 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.45 | ug/L | 94.5 | 14.6 |
| DPS01 | Q2256329 | A864541 | METHYL ISOBUTYL KETONE | 0 | 50 | | 54.8 | ug/L | 109.6 | 13.3 |
| DPS01 | Q2256329 | A864541 | NAPHTHALENE | 0 | 10 | | 8.64 | ug/L | 86.4 | 9.4 |
| DPS01 | Q2256329 | A864541 | N-PROPYLBENZENE | 0 | 10 | | 9.95 | ug/L | 99.5 | 13.8 |
| DPS01 | Q2256329 | A864541 | STYRENE | 0 | 10 | | 8.45 | ug/L | 84.5 | 15 |
| DPS01 | Q2256329 | A864541 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 9.51 | ug/L | 95.1 | 13.4 |
| DPS01 | Q2256329 | A864541 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 10.5 | ug/L | 104.9 | 15.5 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256329 | A864541 | TETRACHLOROETHENE | 0 | 10 | | 9.59 | ug/L | 95.9 | 14.8 |
| DPS01 | Q2256329 | A864541 | TOLUENE | 0 | 10 | | 10.9 | ug/L | 109 | 14.1 |
| DPS01 | Q2256329 | A864541 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 8.61 | ug/L | 86.1 | 8.5 |
| DPS01 | Q2256329 | A864541 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 8.51 | ug/L | 85.1 | 12.6 |
| DPS01 | Q2256329 | A864541 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.61 | ug/L | 96.1 | 13.8 |
| DPS01 | Q2256329 | A864541 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 110.7 | 16 |
| DPS01 | Q2256329 | A864541 | TRICHLOROETHENE | 0 | 10 | | 10.1 | ug/L | 100.6 | 14.6 |
| DPS01 | Q2256329 | A864541 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 9.75 | ug/L | 97.5 | 14.7 |
| DPS01 | Q2256329 | A864541 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 10.2 | ug/L | 101.9 | 17.2 |
| DPS01 | Q2256329 | A864541 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.17 | ug/L | 91.7 | 14.7 |
| DPS01 | Q2256329 | A864541 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 9.8 | ug/L | 98 | 14.5 |
| DPS01 | Q2256329 | A864541 | VINYL ACETATE | 0 | 10 | ! | 3.48 | ug/L | 34.8 | 69.4 |
| DPS01 | Q2256329 | A864541 | VINYL CHLORIDE | 5.2 | 10 | | 15 | ug/L | 98 | 13.3 |
| DPS01 | Q2256329 | A864541 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 30.7 | ug/L | 102.3 | 13.4 |
| SAMPLE | A864563 | | Analysis Date/Time: 07-Nov-09 16:13 | | | | | | | |
| SAMPLE | A864563 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2253648 Value reported for analytes calibrated by linear (LIN) or
Q2253648 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256325 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256325 equations is concentration ( ).
Q2256328 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256328 possible. Unacidified sample not available.
Q2256329 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256329 possible. Unacidified sample not available.

R560090 Analyst: R SHAMP Run Date: 06-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | Analysis Date/Time: 05-Nov-09 08:53 | | | | | | | |
| CAL01 | Q2254851 | | ACETONE (2-PROPANONE) | 0.1365 | | | | | | 9 |
| CAL01 | Q2254851 | | ACROLEIN | 0.0190 | | | | | | 2.7 |
| CAL01 | Q2254851 | | ACRYLONITRILE | 0.0577 | | | | | | 3.6 |
| CAL01 | Q2254851 | | BENZENE | 0.8900 | | | | | | 2.1 |
| CAL01 | Q2254851 | | BROMOBENZENE | 1.3255 | | | | | | 1.6 |
| CAL01 | Q2254851 | | BROMOCHLOROMETHANE | 0.1068 | | | | | | 4 |
| CAL01 | Q2254851 | | BROMODICHLOROMETHANE | 0.2750 | | | | | | 4.7 |
| CAL01 | Q2254851 | | BROMOFORM | 0.4207 | | | | | | 10.4 |
| CAL01 | Q2254851 | | BROMOMETHANE | 0.1199 | | | | | | 21.4 |
| CAL01 | Q2254851 | | N-BUTYLBENZENE | 1.6681 | | | | | | 3.5 |
| CAL01 | Q2254851 | | SEC-BUTYLBENZENE | 3.8168 | | | | | | 8 |
| CAL01 | Q2254851 | | TERT-BUTYLBENZENE | 1.7636 | | | | | | 4.3 |
| CAL01 | Q2254851 | | CARBON DISULFIDE | 0.6034 | | | | | | 3.3 |
| CAL01 | Q2254851 | | CARBON TETRACHLORIDE | 0.2882 | | | | | | 3.1 |
| CAL01 | Q2254851 | | CHLOROBENZENE | 1.7833 | | | | | | 2.3 |
| CAL01 | Q2254851 | | DIBROMOCHLOROMETHANE | 0.5499 | | | | | | 7.1 |
| CAL01 | Q2254851 | | CHLOROETHANE | 0.1378 | | | | | | 26.9 |
| CAL01 | Q2254851 | | CHLOROFORM | 0.3943 | | | | | | 5.7 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | CHLOROMETHANE | 0.3681 | | | | | | 4.5 |
| CAL01 | Q2254851 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | | | | 4.2 |
| CAL01 | Q2254851 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | | | | 8.5 |
| CAL01 | Q2254851 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | | | | 6.8 |
| CAL01 | Q2254851 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | | | | 2.9 |
| CAL01 | Q2254851 | | DIBROMOMETHANE | 0.1439 | | | | | | 3.7 |
| CAL01 | Q2254851 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | | | | 6.2 |
| CAL01 | Q2254851 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | | | | 4 |
| CAL01 | Q2254851 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | | | | 3.6 |
| CAL01 | Q2254851 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | | | | 3.7 |
| CAL01 | Q2254851 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | | | | 6.3 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHANE | 0.4227 | | | | | | 1.5 |
| CAL01 | Q2254851 | | 1,2-DICHLOROETHANE | 0.3868 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHENE | 0.2024 | | | | | | 4 |
| CAL01 | Q2254851 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | | | | 2.2 |
| CAL01 | Q2254851 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 1,2-DICHLOROPROPANE | 0.2379 | | | | | | 2 |
| CAL01 | Q2254851 | | 1,3-DICHLOROPROPANE | 1.0228 | | | | | | 4.4 |
| CAL01 | Q2254851 | | 2,2-DICHLOROPROPANE | 0.2237 | | | | | | 5.6 |
| CAL01 | Q2254851 | | 1,1-DICHLOROPROPENE | 0.1079 | | | | | | 3.5 |
| CAL01 | Q2254851 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | | | | 5.8 |
| CAL01 | Q2254851 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | | | | 7.8 |
| CAL01 | Q2254851 | | ETHYL BENZENE | 1.0051 | | | | | | 3.4 |
| CAL01 | Q2254851 | | ETHYL METHACRYLATE | 0.8695 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 2-HEXANONE | 0.9796 | | | | | | 6.9 |
| CAL01 | Q2254851 | | HEXACHLOROBUTADIENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | IODOMETHANE | 0.3302 | | | | | | 2.3 |
| CAL01 | Q2254851 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | | | | 5.3 |
| CAL01 | Q2254851 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2254851 | | METHYL ETHYL KETONE | 0.0394 | | | | | | 2.8 |
| CAL01 | Q2254851 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | | | | 2.2 |
| CAL01 | Q2254851 | | METHYL ISOBUTYL KETONE | 0.4505 | | | | | | 8.4 |
| CAL01 | Q2254851 | | NAPHTHALENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | N-PROPYLBENZENE | 0.4327 | | | | | | 3.5 |
| CAL01 | Q2254851 | | STYRENE | 2.0649 | | | | | | 3.3 |
| CAL01 | Q2254851 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | | | | 2.8 |
| CAL01 | Q2254851 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | | | | 2.8 |
| CAL01 | Q2254851 | | TETRACHLOROETHENE | 0.7565 | | | | | | 6 |
| CAL01 | Q2254851 | | TOLUENE | 0.9760 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROBENZENE | | | LIN | | | | 0.995 |
| CAL01 | Q2254851 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | | | | 13.3 |

JBJ59173

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | | | | 3.1 |
| CAL01 | Q2254851 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | | | | 1.6 |
| CAL01 | Q2254851 | | TRICHLOROETHENE | 0.2340 | | | | | | 4.6 |
| CAL01 | Q2254851 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | | | | 9.5 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | | | | 8.8 |
| CAL01 | Q2254851 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | | | | 3 |
| CAL01 | Q2254851 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | | | | 2.5 |
| CAL01 | Q2254851 | | VINYL ACETATE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | VINYL CHLORIDE | 0.3113 | | | | | | 2 |
| CAL01 | Q2254851 | | DICHLOROETHANE-D4 | 0.3598 | | | | | | 0.9 |
| CAL01 | Q2254851 | | TOLUENE-D8 | 1.0027 | | | | | | 1.4 |
| CAL01 | Q2254851 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | | | | 2.1 |
| CAL01 | Q2254851 | | DIBROMOFLUOROMETHANE | 0.2351 | | | | | | 1.1 |
| CCVD | Q2256336 | | Analysis Date/Time: 06-Nov-09 06:28 | | | | | | | |
| CCVD | Q2256336 | | ACETONE (2-PROPANONE) | 0.1365 | | | 0.1340 | | | 1.8 |
| CCVD | Q2256336 | | ACROLEIN | 0.0190 | | | 0.0201 | | | 5.8 |
| CCVD | Q2256336 | | ACRYLONITRILE | 0.0577 | | | 0.0594 | | | 2.9 |
| CCVD | Q2256336 | | BENZENE | 0.8900 | | | 0.8420 | | | 5.4 |
| CCVD | Q2256336 | | BROMOBENZENE | 1.3255 | | | 1.3529 | | | 2.1 |
| CCVD | Q2256336 | | BROMOCHLOROMETHANE | 0.1068 | | | 0.1053 | | | 1.4 |
| CCVD | Q2256336 | | BROMODICHLOROMETHANE | 0.2750 | | | 0.2567 | | | 6.7 |
| CCVD | Q2256336 | | BROMOFORM | 0.4207 | | | 0.4214 | | | 0.2 |
| CCVD | Q2256336 | | BROMOMETHANE | 0.1126 | | | 0.1105 | | | 1.9 |
| CCVD | Q2256336 | | N-BUTYLBENZENE | 1.6681 | | | 1.8360 | | | 10.1 |
| CCVD | Q2256336 | | SEC-BUTYLBENZENE | 3.8168 | | | 4.1329 | | | 8.3 |
| CCVD | Q2256336 | | TERT-BUTYLBENZENE | 1.7636 | | | 1.8926 | | | 7.3 |
| CCVD | Q2256336 | | CARBON DISULFIDE | 0.6034 | | | 0.5934 | | | 1.7 |
| CCVD | Q2256336 | | CARBON TETRACHLORIDE | 0.2882 | | | 0.2931 | | | 1.7 |
| CCVD | Q2256336 | | CHLOROBENZENE | 1.7833 | | | 1.8711 | | | 4.9 |
| CCVD | Q2256336 | | DIBROMOCHLOROMETHANE | 0.5499 | | | 0.5565 | | | 1.2 |
| CCVD | Q2256336 | | CHLOROETHANE | 0.1260 | | | 0.1446 | | | 14.8 |
| CCVD | Q2256336 | | CHLOROFORM | 0.3943 | | | 0.3778 | | | 4.2 |
| CCVD | Q2256336 | | CHLOROMETHANE | 0.3681 | | | 0.3386 | | | 8 |
| CCVD | Q2256336 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | 0.8407 | | | 3.4 |
| CCVD | Q2256336 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | 0.8478 | | | 3.4 |
| CCVD | Q2256336 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | 0.1661 | | | 10.3 |
| CCVD | Q2256336 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | 0.2282 | | | 11.1 |
| CCVD | Q2256336 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | 0.2154 | | | 4.2 |
| CCVD | Q2256336 | | DIBROMOMETHANE | 0.1439 | | | 0.1362 | | | 5.4 |
| CCVD | Q2256336 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | 1.6504 | | | 7.5 |
| CCVD | Q2256336 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | 1.6672 | | | 3.6 |
| CCVD | Q2256336 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | 1.6972 | | | 3 |
| CCVD | Q2256336 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | 0.1697 | | | 5.2 |
| CCVD | Q2256336 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | 0.5036 | | | 5.9 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2256336 | | 1,1-DICHLOROETHANE | 0.4227 | | | 0.4349 | | | 2.9 |
| CCVD | Q2256336 | | 1,2-DICHLOROETHANE | 0.3868 | | | 0.3833 | | | 0.9 |
| CCVD | Q2256336 | | 1,1-DICHLOROETHENE | 0.2024 | | | 0.2000 | | | 1.2 |
| CCVD | Q2256336 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | 0.2259 | | | 1 |
| CCVD | Q2256336 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | 0.2121 | | | 1.3 |
| CCVD | Q2256336 | | 1,2-DICHLOROPROPANE | 0.2379 | | | 0.2233 | | | 6.1 |
| CCVD | Q2256336 | | 1,3-DICHLOROPROPANE | 1.0228 | | | 1.0506 | | | 2.7 |
| CCVD | Q2256336 | | 2,2-DICHLOROPROPANE | 0.2237 | | | 0.2334 | | | 4.3 |
| CCVD | Q2256336 | | 1,1-DICHLOROPROPENE | 0.1079 | | | 0.1083 | | | 0.4 |
| CCVD | Q2256336 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | 0.3228 | | | 6.3 |
| CCVD | Q2256336 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | 0.2884 | | | 6.1 |
| CCVD | Q2256336 | | ETHYL BENZENE | 1.0051 | | | 1.0593 | | | 5.4 |
| CCVD | Q2256336 | | ETHYL METHACRYLATE | 0.8695 | | | 0.8349 | | | 4 |
| CCVD | Q2256336 | | 2-HEXANONE | 0.9796 | | | 0.9894 | | | 1 |
| CCVD | Q2256336 | | HEXACHLOROBUTADIENE | 10 | | LIN | 12.59 | | | 25.9 |
| CCVD | Q2256336 | | IODOMETHANE | 0.3302 | | | 0.3304 | | | 0.1 |
| CCVD | Q2256336 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | 3.0672 | | | 3.6 |
| CCVD | Q2256336 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | 3.4056 | | | 9.3 |
| CCVD | Q2256336 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | LIN | 9.88 | | | 1.2 |
| CCVD | Q2256336 | | METHYL ETHYL KETONE | 0.0394 | | | 0.0367 | | | 6.9 |
| CCVD | Q2256336 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | 0.6894 | | | 2.3 |
| CCVD | Q2256336 | | METHYL ISOBUTYL KETONE | 0.4505 | | | 0.4379 | | | 2.8 |
| CCVD | Q2256336 | | NAPHTHALENE | 10 | | LIN | 12.56 | | | 25.6 |
| CCVD | Q2256336 | | N-PROPYLBENZENE | 0.4327 | | | 0.4731 | | | 9.3 |
| CCVD | Q2256336 | | STYRENE | 2.0649 | | | 2.0991 | | | 1.7 |
| CCVD | Q2256336 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | 0.6196 | | | 4.5 |
| CCVD | Q2256336 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | 0.9940 | | | 4.4 |
| CCVD | Q2256336 | | TETRACHLOROETHENE | 0.7565 | | | 0.7679 | | | 1.5 |
| CCVD | Q2256336 | | TOLUENE | 0.9760 | | | 0.9363 | | | 4.1 |
| CCVD | Q2256336 | | 1,2,3-TRICHLOROBENZENE | 10 | | LIN | 13.90 | | | 39 |
| CCVD | Q2256336 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | 1.2678 | | | 20.7 |
| CCVD | Q2256336 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | 0.3180 | | | 1.9 |
| CCVD | Q2256336 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | 0.1916 | | | 6.4 |
| CCVD | Q2256336 | | TRICHLOROETHENE | 0.2340 | | | 0.2256 | | | 3.6 |
| CCVD | Q2256336 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | 0.2731 | | | 4.8 |
| CCVD | Q2256336 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | 0.3174 | | | 1.5 |
| CCVD | Q2256336 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | 3.1387 | | | 6.2 |
| CCVD | Q2256336 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | 3.1029 | | | 5.9 |
| CCVD | Q2256336 | | VINYL ACETATE | 10 | | LIN | 7.88 | | | 21.2 |
| CCVD | Q2256336 | | VINYL CHLORIDE | 0.3113 | | | 0.3025 | | | 2.8 |
| CCVD | Q2256336 | | DICHLOROETHANE-D4 | 0.3598 | | | 0.3746 | | | 4.1 |
| CCVD | Q2256336 | | TOLUENE-D8 | 1.0027 | | | 0.9961 | | | 0.7 |
| CCVD | Q2256336 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | 1.0298 | | | 7.4 |
| CCVD | Q2256336 | | DIBROMOFLUOROMETHANE | 0.2351 | | | 0.2422 | | | 3 |
| BLA01 | Q2256337 | | Analysis Date/Time: 06-Nov-09 06:55 | | | | | | | |
| BLA01 | Q2256337 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256337 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2256337 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |

JBJ59173

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256337 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | XYLENES (O/M/P-XYLENE) | | | BDL | 1.1 | ug/L | | |
| BLA01 | Q2256337 | | DICHLOROETHANE-D4 | | | | | | 102 | |
| BLA01 | Q2256337 | | TOLUENE-D8 | | | | | | 97 | |
| BLA01 | Q2256337 | | 4-BROMOFLUOROBENZENE | | | | | | 97 | |
| BLA01 | Q2256337 | | DIBROMOFLUOROMETHANE | | | | | | 96 | |
| LCS01 | Q2256338 | METHOD 826 | Analysis Date/Time: 06-Nov-09 07:26 | | | | | | | |
| LCS01 | Q2256338 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 48.4 | ug/L | 96.8 | |
| LCS01 | Q2256338 | METHOD 826 | ACROLEIN | 100 | | | 101 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | ACRYLONITRILE | 100 | | | 107 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | BENZENE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOBENZENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256338 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOFORM | 10 | | | 9.7 | ug/L | 97 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOMETHANE | 10 | | | 9.52 | ug/L | 95.2 | |
| LCS01 | Q2256338 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 11.2 | ug/L | 112 | |

JBJ59173

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2256338 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256338 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256338 | METHOD 826 | CARBON DISULFIDE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2256338 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROBENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROFORM | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.36 | ug/L | 83.6 | |
| LCS01 | Q2256338 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 8.53 | ug/L | 85.3 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256338 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 7.66 | ug/L | 76.6 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 19.5 | ug/L | 97.5 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 9.78 | ug/L | 97.8 | |
| LCS01 | Q2256338 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD | ETHYL BENZENE | 10 | | | 10.5 | ug/L | 105 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2256338 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 9.73 | ug/L | 97.3 | |
| LCS01 | Q2256338 | METHOD 826 | 2-HEXANONE | 50 | | | 48.8 | ug/L | 97.6 | |
| LCS01 | Q2256338 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | ! | 13.8 | ug/L | 138 | |
| LCS01 | Q2256338 | METHOD 826 | IODOMETHANE | 10 | | | 9.37 | ug/L | 93.7 | |
| LCS01 | Q2256338 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 12.2 | ug/L | 122 | |
| LCS01 | Q2256338 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256338 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 46.6 | ug/L | 93.2 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.54 | ug/L | 95.4 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 48.1 | ug/L | 96.2 | |
| LCS01 | Q2256338 | METHOD 826 | NAPHTHALENE | 10 | | | 12.9 | ug/L | 129 | |
| LCS01 | Q2256338 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | STYRENE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | TOLUENE | 10 | | | 9.99 | ug/L | 99.9 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 13.6 | ug/L | 136 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 11.9 | ug/L | 119 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,1-TRICHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 9.58 | ug/L | 95.8 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | VINYL ACETATE | 10 | | | 9.32 | ug/L | 93.2 | |
| LCS01 | Q2256338 | METHOD 826 | VINYL CHLORIDE | 10 | | | 8.78 | ug/L | 87.8 | |
| LCS01 | Q2256338 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 31.6 | ug/L | 105.3 | |
| SPI01 | Q2256355 | A864529 | Analysis Date/Time: 06-Nov-09 11:00 | | | | | | | |
| SPI01 | Q2256355 | A864529 | ACETONE (2-PROPANONE) | 0 | 50 | | 49 | ug/L | 98 | |
| SPI01 | Q2256355 | A864529 | ACROLEIN | 0 | 100 | | 105 | ug/L | 105 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256355 | A864529 | ACRYLONITRILE | 0 | 100 | | 111 | ug/L | 111 | |
| SPI01 | Q2256355 | A864529 | BENZENE | 0 | 10 | | 9.22 | ug/L | 92.2 | |
| SPI01 | Q2256355 | A864529 | BROMOBENZENE | 0 | 10 | | 9.13 | ug/L | 91.3 | |
| SPI01 | Q2256355 | A864529 | BROMOCHLOROMETHANE | 0 | 10 | | 9.63 | ug/L | 96.3 | |
| SPI01 | Q2256355 | A864529 | BROMODICHLOROMETHANE | 0 | 10 | | 8.7 | ug/L | 87 | |
| SPI01 | Q2256355 | A864529 | BROMOFORM | 0 | 10 | | 7.21 | ug/L | 72.1 | |
| SPI01 | Q2256355 | A864529 | BROMOMETHANE | 0 | 10 | | 10.2 | ug/L | 102 | |
| SPI01 | Q2256355 | A864529 | N-BUTYLBENZENE | 0 | 10 | | 9.11 | ug/L | 91.1 | |
| SPI01 | Q2256355 | A864529 | SEC-BUTYLBENZENE | 0 | 10 | | 9.22 | ug/L | 92.2 | |
| SPI01 | Q2256355 | A864529 | TERT-BUTYLBENZENE | 0 | 10 | | 9.29 | ug/L | 92.9 | |
| SPI01 | Q2256355 | A864529 | CARBON DISULFIDE | 0 | 10 | ! | 6.47 | ug/L | 64.7 | |
| SPI01 | Q2256355 | A864529 | CARBON TETRACHLORIDE | 0 | 10 | | 8.8 | ug/L | 88 | |
| SPI01 | Q2256355 | A864529 | CHLOROBENZENE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | DIBROMOCHLOROMETHANE | 0 | 10 | | 8.27 | ug/L | 82.7 | |
| SPI01 | Q2256355 | A864529 | CHLOROETHANE | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2256355 | A864529 | CHLOROFORM | 0 | 10 | | 8.98 | ug/L | 89.8 | |
| SPI01 | Q2256355 | A864529 | CHLOROMETHANE | 0 | 10 | | 9.03 | ug/L | 90.3 | |
| SPI01 | Q2256355 | A864529 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.08 | ug/L | 90.8 | |
| SPI01 | Q2256355 | A864529 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.16 | ug/L | 91.6 | |
| SPI01 | Q2256355 | A864529 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2256355 | A864529 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.74 | ug/L | 87.4 | |
| SPI01 | Q2256355 | A864529 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | DIBROMOMETHANE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.24 | ug/L | 92.4 | |
| SPI01 | Q2256355 | A864529 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.06 | ug/L | 90.6 | |
| SPI01 | Q2256355 | A864529 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.14 | ug/L | 91.4 | |
| SPI01 | Q2256355 | A864529 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.31 | ug/L | 83.1 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 18 | ug/L | 90 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROETHANE | 0 | 10 | | 9.68 | ug/L | 96.8 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.42 | ug/L | 94.2 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | | 34.2 | ug/L | 97 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | | 11.3 | ug/L | 92.1 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROPROPANE | 0 | 10 | | 9.4 | ug/L | 94 | |
| SPI01 | Q2256355 | A864529 | 1,3-DICHLOROPROPANE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| SPI01 | Q2256355 | A864529 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.23 | ug/L | 92.3 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.16 | ug/L | 81.6 | |
| SPI01 | Q2256355 | A864529 | ETHYL BENZENE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | ETHYL METHACRYLATE | 0 | 10 | | 7.32 | ug/L | 73.2 | |
| SPI01 | Q2256355 | A864529 | 2-HEXANONE | 0 | 50 | | 46.7 | ug/L | 93.4 | |
| SPI01 | Q2256355 | A864529 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.76 | ug/L | 97.6 | |
| SPI01 | Q2256355 | A864529 | IODOMETHANE | 0 | 10 | | 9.55 | ug/L | 95.5 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256355 | A864529 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 8.78 | ug/L | 87.8 | |
| SPI01 | Q2256355 | A864529 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 8.53 | ug/L | 85.3 | |
| SPI01 | Q2256355 | A864529 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.74 | ug/L | 97.4 | |
| SPI01 | Q2256355 | A864529 | METHYL ETHYL KETONE | 0 | 50 | | 48.5 | ug/L | 97 | |
| SPI01 | Q2256355 | A864529 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.26 | ug/L | 92.6 | |
| SPI01 | Q2256355 | A864529 | METHYL ISOBUTYL KETONE | 0 | 50 | | 47.1 | ug/L | 94.2 | |
| SPI01 | Q2256355 | A864529 | NAPHTHALENE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2256355 | A864529 | N-PROPYLBENZENE | 0 | 10 | | 8.87 | ug/L | 88.7 | |
| SPI01 | Q2256355 | A864529 | STYRENE | 0 | 10 | | 3.51 | ug/L | 35.1 | |
| SPI01 | Q2256355 | A864529 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.92 | ug/L | 89.2 | |
| SPI01 | Q2256355 | A864529 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.49 | ug/L | 94.9 | |
| SPI01 | Q2256355 | A864529 | TETRACHLOROETHENE | 0 | 10 | | 8.41 | ug/L | 84.1 | |
| SPI01 | Q2256355 | A864529 | TOLUENE | 0 | 10 | | 8.87 | ug/L | 88.7 | |
| SPI01 | Q2256355 | A864529 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256355 | A864529 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.97 | ug/L | 99.7 | |
| SPI01 | Q2256355 | A864529 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | TRICHLOROETHENE | 216 | 10 | NQR | | ug/L | 70 | |
| SPI01 | Q2256355 | A864529 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 9.91 | ug/L | 99.1 | |
| SPI01 | Q2256355 | A864529 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 9.3 | ug/L | 93 | |
| SPI01 | Q2256355 | A864529 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | ! | 5.55 | ug/L | 55.5 | |
| SPI01 | Q2256355 | A864529 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | ! | 7.22 | ug/L | 72.2 | |
| SPI01 | Q2256355 | A864529 | VINYL ACETATE | 0 | 10 | | 8.52 | ug/L | 85.2 | |
| SPI01 | Q2256355 | A864529 | VINYL CHLORIDE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | XYLENES (O/M/P-XYLENE) | 0 | 30 | ! | 25.2 | ug/L | 84.0 | |
| DPS01 | Q2256356 | A864529 | Analysis Date/Time: 06-Nov-09 11:25 | | | | | | | |
| DPS01 | Q2256356 | A864529 | ACETONE (2-PROPANONE) | 0 | 50 | | 46.9 | ug/L | 93.7 | 4.5 |
| DPS01 | Q2256356 | A864529 | ACROLEIN | 0 | 100 | | 103 | ug/L | 102.6 | 2.2 |
| DPS01 | Q2256356 | A864529 | ACRYLONITRILE | 0 | 100 | | 108 | ug/L | 107.8 | 2.6 |
| DPS01 | Q2256356 | A864529 | BENZENE | 0 | 10 | | 9.08 | ug/L | 90.8 | 1.5 |
| DPS01 | Q2256356 | A864529 | BROMOBENZENE | 0 | 10 | | 9 | ug/L | 90 | 1.4 |
| DPS01 | Q2256356 | A864529 | BROMOCHLOROMETHANE | 0 | 10 | | 9.82 | ug/L | 98.2 | 2 |
| DPS01 | Q2256356 | A864529 | BROMODICHLOROMETHANE | 0 | 10 | | 8.44 | ug/L | 84.4 | 3 |
| DPS01 | Q2256356 | A864529 | BROMOFORM | 0 | 10 | | 6.89 | ug/L | 68.9 | 4.5 |
| DPS01 | Q2256356 | A864529 | BROMOMETHANE | 0 | 10 | | 10 | ug/L | 100.4 | 1.2 |
| DPS01 | Q2256356 | A864529 | N-BUTYLBENZENE | 0 | 10 | | 9.03 | ug/L | 90.3 | 0.9 |
| DPS01 | Q2256356 | A864529 | SEC-BUTYLBENZENE | 0 | 10 | | 9.13 | ug/L | 91.3 | 1 |
| DPS01 | Q2256356 | A864529 | TERT-BUTYLBENZENE | 0 | 10 | | 9.24 | ug/L | 92.4 | 0.5 |
| DPS01 | Q2256356 | A864529 | CARBON DISULFIDE | 0 | 10 | ! | 6.21 | ug/L | 62.1 | 4.1 |
| DPS01 | Q2256356 | A864529 | CARBON TETRACHLORIDE | 0 | 10 | | 8.74 | ug/L | 87.4 | 0.7 |
| DPS01 | Q2256356 | A864529 | CHLOROBENZENE | 0 | 10 | | 8.81 | ug/L | 88.1 | 3.8 |
| DPS01 | Q2256356 | A864529 | DIBROMOCHLOROMETHANE | 0 | 10 | | 7.74 | ug/L | 77.4 | 6.6 |
| DPS01 | Q2256356 | A864529 | CHLOROETHANE | 0 | 10 | | 10.9 | ug/L | 109 | 1.8 |
| DPS01 | Q2256356 | A864529 | CHLOROFORM | 0 | 10 | | 8.91 | ug/L | 89.1 | 0.8 |
| DPS01 | Q2256356 | A864529 | CHLOROMETHANE | 0 | 10 | | 8.7 | ug/L | 87 | 3.7 |
| DPS01 | Q2256356 | A864529 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 8.77 | ug/L | 87.7 | 3.5 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256356 | A864529 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 8.85 | ug/L | 88.5 | 3.4 |
| DPS01 | Q2256356 | A864529 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2256356 | A864529 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.35 | ug/L | 83.5 | 4.6 |
| DPS01 | Q2256356 | A864529 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 8.94 | ug/L | 89.4 | 1.4 |
| DPS01 | Q2256356 | A864529 | DIBROMOMETHANE | 0 | 10 | | 9.29 | ug/L | 92.9 | 0.1 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.17 | ug/L | 91.7 | 0.8 |
| DPS01 | Q2256356 | A864529 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.6 |
| DPS01 | Q2256356 | A864529 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 8.73 | ug/L | 87.3 | 4.6 |
| DPS01 | Q2256356 | A864529 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.02 | ug/L | 80.2 | 3.6 |
| DPS01 | Q2256356 | A864529 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 16.9 | ug/L | 84.3 | 6.3 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROETHANE | 0 | 10 | | 9.53 | ug/L | 95.3 | 1.6 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.34 | ug/L | 93.4 | 0.9 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROETHENE | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.7 |
| DPS01 | Q2256356 | A864529 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | | 34 | ug/L | 94.4 | 2.5 |
| DPS01 | Q2256356 | A864529 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | | 11.2 | ug/L | 91.3 | 1.3 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROPROPANE | 0 | 10 | | 8.95 | ug/L | 89.5 | 4.9 |
| DPS01 | Q2256356 | A864529 | 1,3-DICHLOROPROPANE | 0 | 10 | | 8.86 | ug/L | 88.6 | 4.6 |
| DPS01 | Q2256356 | A864529 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.01 | ug/L | 90.1 | 2.4 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.1 | ug/L | 91 | 0.3 |
| DPS01 | Q2256356 | A864529 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.59 | ug/L | 85.9 | 2.9 |
| DPS01 | Q2256356 | A864529 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 7.99 | ug/L | 79.9 | 2.1 |
| DPS01 | Q2256356 | A864529 | ETHYL BENZENE | 0 | 10 | | 8.71 | ug/L | 87.1 | 1.5 |
| DPS01 | Q2256356 | A864529 | ETHYL METHACRYLATE | 0 | 10 | | 6.98 | ug/L | 69.8 | 4.8 |
| DPS01 | Q2256356 | A864529 | 2-HEXANONE | 0 | 50 | | 44.1 | ug/L | 88.2 | 5.7 |
| DPS01 | Q2256356 | A864529 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.77 | ug/L | 97.7 | 0.1 |
| DPS01 | Q2256356 | A864529 | IODOMETHANE | 0 | 10 | | 9.56 | ug/L | 95.6 | 0.1 |
| DPS01 | Q2256356 | A864529 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 8.52 | ug/L | 85.2 | 3 |
| DPS01 | Q2256356 | A864529 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 8.49 | ug/L | 84.9 | 0.5 |
| DPS01 | Q2256356 | A864529 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.73 | ug/L | 97.3 | 0.1 |
| DPS01 | Q2256356 | A864529 | METHYL ETHYL KETONE | 0 | 50 | | 46.8 | ug/L | 93.6 | 3.7 |
| DPS01 | Q2256356 | A864529 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.03 | ug/L | 90.3 | 2.5 |
| DPS01 | Q2256356 | A864529 | METHYL ISOBUTYL KETONE | 0 | 50 | | 46.1 | ug/L | 92.2 | 2.1 |
| DPS01 | Q2256356 | A864529 | NAPHTHALENE | 0 | 10 | | 10.3 | ug/L | 103.1 | 4.5 |
| DPS01 | Q2256356 | A864529 | N-PROPYLBENZENE | 0 | 10 | | 8.76 | ug/L | 87.6 | 1.2 |
| DPS01 | Q2256356 | A864529 | STYRENE | 0 | 10 | | 2.99 | ug/L | 29.9 | 16 |
| DPS01 | Q2256356 | A864529 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.68 | ug/L | 86.8 | 2.7 |
| DPS01 | Q2256356 | A864529 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.31 | ug/L | 93.1 | 1.9 |
| DPS01 | Q2256356 | A864529 | TETRACHLOROETHENE | 0 | 10 | | 8.33 | ug/L | 83.3 | 1 |
| DPS01 | Q2256356 | A864529 | TOLUENE | 0 | 10 | | 8.9 | ug/L | 89 | 0.3 |
| DPS01 | Q2256356 | A864529 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.9 | ug/L | 109.3 | 3.2 |
| DPS01 | Q2256356 | A864529 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.95 | ug/L | 99.5 | 0.2 |
| DPS01 | Q2256356 | A864529 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 8.93 | ug/L | 89.3 | 2.4 |
| DPS01 | Q2256356 | A864529 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.31 | ug/L | 93.1 | 1.7 |
| DPS01 | Q2256356 | A864529 | TRICHLOROETHENE | 216 | 10 | NQR | | ug/L | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256356 | A864529 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 10 | ug/L | 100.4 | 1.3 |
| DPS01 | Q2256356 | A864529 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 8.79 | ug/L | 87.9 | 5.6 |
| DPS01 | Q2256356 | A864529 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | ! | 5.04 | ug/L | 50.4 | 9.6 |
| DPS01 | Q2256356 | A864529 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | ! | 6.9 | ug/L | 69 | 4.5 |
| DPS01 | Q2256356 | A864529 | VINYL ACETATE | 0 | 10 | | 7.91 | ug/L | 79.1 | 7.4 |
| DPS01 | Q2256356 | A864529 | VINYL CHLORIDE | 0 | 10 | | 8.94 | ug/L | 89.4 | 1.1 |
| DPS01 | Q2256356 | A864529 | XYLENES (O/M/P-XYLENE) | 0 | 30 | ! | 23.8 | ug/L | 79.3 | 5.8 |
| SAMPLE | A864526 | | Analysis Date/Time: 06-Nov-09 11:50 | | | | | | | |
| SAMPLE | A864526 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864532 | | Analysis Date/Time: 06-Nov-09 13:55 | | | | | | | |
| SAMPLE | A864532 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864533 | | Analysis Date/Time: 06-Nov-09 14:20 | | | | | | | |
| SAMPLE | A864533 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864537 | | Analysis Date/Time: 06-Nov-09 15:59 | | | | | | | |
| SAMPLE | A864537 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864538 | | Analysis Date/Time: 06-Nov-09 16:24 | | | | | | | |
| SAMPLE | A864538 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2254851 Value reported for analytes calibrated by linear (LIN) or
Q2254851 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256336 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256336 equations is concentration ( ).
Q2256355 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256355 possible. Unacidified sample not available.
Q2256356 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256356 possible. Unacidified sample not available.

R560098 Analyst: R SHAMP Run Date: 07-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | Analysis Date/Time: 05-Nov-09 08:53 | | | | | | | |
| CAL01 | Q2254851 | | ACETONE (2-PROPANONE) | 0.1365 | | | | | | 9 |
| CAL01 | Q2254851 | | ACROLEIN | 0.0190 | | | | | | 2.7 |
| CAL01 | Q2254851 | | ACRYLONITRILE | 0.0577 | | | | | | 3.6 |
| CAL01 | Q2254851 | | BENZENE | 0.8900 | | | | | | 2.1 |
| CAL01 | Q2254851 | | BROMOBENZENE | 1.3255 | | | | | | 1.6 |
| CAL01 | Q2254851 | | BROMOCHLOROMETHANE | 0.1068 | | | | | | 4 |
| CAL01 | Q2254851 | | BROMODICHLOROMETHANE | 0.2750 | | | | | | 4.7 |
| CAL01 | Q2254851 | | BROMOFORM | 0.4207 | | | | | | 10.4 |
| CAL01 | Q2254851 | | BROMOMETHANE | 0.1199 | | | | | | 21.4 |
| CAL01 | Q2254851 | | N-BUTYLBENZENE | 1.6681 | | | | | | 3.5 |
| CAL01 | Q2254851 | | SEC-BUTYLBENZENE | 3.8168 | | | | | | 8 |
| CAL01 | Q2254851 | | TERT-BUTYLBENZENE | 1.7636 | | | | | | 4.3 |
| CAL01 | Q2254851 | | CARBON DISULFIDE | 0.6034 | | | | | | 3.3 |
| CAL01 | Q2254851 | | CARBON TETRACHLORIDE | 0.2882 | | | | | | 3.1 |
| CAL01 | Q2254851 | | CHLOROBENZENE | 1.7833 | | | | | | 2.3 |
| CAL01 | Q2254851 | | DIBROMOCHLOROMETHANE | 0.5499 | | | | | | 7.1 |
| CAL01 | Q2254851 | | CHLOROETHANE | 0.1378 | | | | | | 26.9 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | CHLOROFORM | 0.3943 | | | | | | 5.7 |
| CAL01 | Q2254851 | | CHLOROMETHANE | 0.3681 | | | | | | 4.5 |
| CAL01 | Q2254851 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | | | | 4.2 |
| CAL01 | Q2254851 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | | | | 8.5 |
| CAL01 | Q2254851 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | | | | 6.8 |
| CAL01 | Q2254851 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | | | | 2.9 |
| CAL01 | Q2254851 | | DIBROMOMETHANE | 0.1439 | | | | | | 3.7 |
| CAL01 | Q2254851 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | | | | 6.2 |
| CAL01 | Q2254851 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | | | | 4 |
| CAL01 | Q2254851 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | | | | 3.6 |
| CAL01 | Q2254851 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | | | | 3.7 |
| CAL01 | Q2254851 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | | | | 6.3 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHANE | 0.4227 | | | | | | 1.5 |
| CAL01 | Q2254851 | | 1,2-DICHLOROETHANE | 0.3868 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHENE | 0.2024 | | | | | | 4 |
| CAL01 | Q2254851 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | | | | 2.2 |
| CAL01 | Q2254851 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 1,2-DICHLOROPROPANE | 0.2379 | | | | | | 2 |
| CAL01 | Q2254851 | | 1,3-DICHLOROPROPANE | 1.0228 | | | | | | 4.4 |
| CAL01 | Q2254851 | | 2,2-DICHLOROPROPANE | 0.2237 | | | | | | 5.6 |
| CAL01 | Q2254851 | | 1,1-DICHLOROPROPENE | 0.1079 | | | | | | 3.5 |
| CAL01 | Q2254851 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | | | | 5.8 |
| CAL01 | Q2254851 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | | | | 7.8 |
| CAL01 | Q2254851 | | ETHYL BENZENE | 1.0051 | | | | | | 3.4 |
| CAL01 | Q2254851 | | ETHYL METHACRYLATE | 0.8695 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 2-HEXANONE | 0.9796 | | | | | | 6.9 |
| CAL01 | Q2254851 | | HEXACHLOROBUTADIENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | IODOMETHANE | 0.3302 | | | | | | 2.3 |
| CAL01 | Q2254851 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | | | | 5.3 |
| CAL01 | Q2254851 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2254851 | | METHYL ETHYL KETONE | 0.0394 | | | | | | 2.8 |
| CAL01 | Q2254851 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | | | | 2.2 |
| CAL01 | Q2254851 | | METHYL ISOBUTYL KETONE | 0.4505 | | | | | | 8.4 |
| CAL01 | Q2254851 | | NAPHTHALENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | N-PROPYLBENZENE | 0.4327 | | | | | | 3.5 |
| CAL01 | Q2254851 | | STYRENE | 2.0649 | | | | | | 3.3 |
| CAL01 | Q2254851 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | | | | 2.8 |
| CAL01 | Q2254851 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | | | | 2.8 |
| CAL01 | Q2254851 | | TETRACHLOROETHENE | 0.7565 | | | | | | 6 |
| CAL01 | Q2254851 | | TOLUENE | 0.9760 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROBENZENE | | | LIN | | | | 0.995 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | | | | 13.3 |
| CAL01 | Q2254851 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | | | | 3.1 |
| CAL01 | Q2254851 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | | | | 1.6 |
| CAL01 | Q2254851 | | TRICHLOROETHENE | 0.2340 | | | | | | 4.6 |
| CAL01 | Q2254851 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | | | | 9.5 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | | | | 8.8 |
| CAL01 | Q2254851 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | | | | 3 |
| CAL01 | Q2254851 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | | | | 2.5 |
| CAL01 | Q2254851 | | VINYL ACETATE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | VINYL CHLORIDE | 0.3113 | | | | | | 2 |
| CAL01 | Q2254851 | | DICHLOROETHANE-D4 | 0.3598 | | | | | | 0.9 |
| CAL01 | Q2254851 | | TOLUENE-D8 | 1.0027 | | | | | | 1.4 |
| CAL01 | Q2254851 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | | | | 2.1 |
| CAL01 | Q2254851 | | DIBROMOFLUOROMETHANE | 0.2351 | | | | | | 1.1 |
| CCVD | Q2256392 | | Analysis Date/Time: 07-Nov-09 07:40 | | | | | | | |
| CCVD | Q2256392 | | ACETONE (2-PROPANONE) | 0.1365 | | | 0.1485 | | | 8.8 |
| CCVD | Q2256392 | | ACROLEIN | 0.0190 | | | 0.0155 | | | 18.4 |
| CCVD | Q2256392 | | ACRYLONITRILE | 0.0577 | | | 0.0498 | | | 13.7 |
| CCVD | Q2256392 | | BENZENE | 0.8900 | | | 0.8706 | | | 2.2 |
| CCVD | Q2256392 | | BROMOBENZENE | 1.3255 | | | 1.2387 | | | 6.5 |
| CCVD | Q2256392 | | BROMOCHLOROMETHANE | 0.1068 | | | 0.1085 | | | 1.6 |
| CCVD | Q2256392 | | BROMODICHLOROMETHANE | 0.2750 | | | 0.2594 | | | 5.7 |
| CCVD | Q2256392 | | BROMOFORM | 0.4207 | | | 0.3439 | | | 18.3 |
| CCVD | Q2256392 | | BROMOMETHANE | 0.1126 | | | 0.1165 | | | 3.5 |
| CCVD | Q2256392 | | N-BUTYLBENZENE | 1.6681 | | | 1.6192 | | | 2.9 |
| CCVD | Q2256392 | | SEC-BUTYLBENZENE | 3.8168 | | | 3.6297 | | | 4.9 |
| CCVD | Q2256392 | | TERT-BUTYLBENZENE | 1.7636 | | | 1.6631 | | | 5.7 |
| CCVD | Q2256392 | | CARBON DISULFIDE | 0.6034 | | | 0.5590 | | | 7.4 |
| CCVD | Q2256392 | | CARBON TETRACHLORIDE | 0.2882 | | | 0.2797 | | | 2.9 |
| CCVD | Q2256392 | | CHLOROBENZENE | 1.7833 | | | 1.6608 | | | 6.9 |
| CCVD | Q2256392 | | DIBROMOCHLOROMETHANE | 0.5499 | | | 0.4787 | | | 12.9 |
| CCVD | Q2256392 | | CHLOROETHANE | 0.1260 | | | 0.1429 | | | 13.4 |
| CCVD | Q2256392 | | CHLOROFORM | 0.3943 | | | 0.3817 | | | 3.2 |
| CCVD | Q2256392 | | CHLOROMETHANE | 0.3681 | | | 0.3375 | | | 8.3 |
| CCVD | Q2256392 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | 0.7564 | | | 6.9 |
| CCVD | Q2256392 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | 0.7577 | | | 7.6 |
| CCVD | Q2256392 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | 0.1763 | | | 4.8 |
| CCVD | Q2256392 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | 0.1924 | | | 6.3 |
| CCVD | Q2256392 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | 0.2163 | | | 3.8 |
| CCVD | Q2256392 | | DIBROMOMETHANE | 0.1439 | | | 0.1400 | | | 2.7 |
| CCVD | Q2256392 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | 1.4502 | | | 5.5 |
| CCVD | Q2256392 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | 1.4703 | | | 8.6 |
| CCVD | Q2256392 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | 1.5170 | | | 7.9 |
| CCVD | Q2256392 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | 0.1433 | | | 20 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2256392 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | 0.3970 | | | 16.5 |
| CCVD | Q2256392 | | 1,1-DICHLOROETHANE | 0.4227 | | | 0.4200 | | | 0.6 |
| CCVD | Q2256392 | | 1,2-DICHLOROETHANE | 0.3868 | | | 0.3896 | | | 0.7 |
| CCVD | Q2256392 | | 1,1-DICHLOROETHENE | 0.2024 | | | 0.2025 | | | 0 |
| CCVD | Q2256392 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | 0.2275 | | | 1.7 |
| CCVD | Q2256392 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | 0.2118 | | | 1.5 |
| CCVD | Q2256392 | | 1,2-DICHLOROPROPANE | 0.2379 | | | 0.2306 | | | 3.1 |
| CCVD | Q2256392 | | 1,3-DICHLOROPROPANE | 1.0228 | | | 0.9526 | | | 6.9 |
| CCVD | Q2256392 | | 2,2-DICHLOROPROPANE | 0.2237 | | | 0.2317 | | | 3.6 |
| CCVD | Q2256392 | | 1,1-DICHLOROPROPENE | 0.1079 | | | 0.1066 | | | 1.2 |
| CCVD | Q2256392 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | 0.3259 | | | 5.4 |
| CCVD | Q2256392 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | 0.2754 | | | 10.3 |
| CCVD | Q2256392 | | ETHYL BENZENE | 1.0051 | | | 0.9411 | | | 6.4 |
| CCVD | Q2256392 | | ETHYL METHACRYLATE | 0.8695 | | | 0.7801 | | | 10.3 |
| CCVD | Q2256392 | | 2-HEXANONE | 0.9796 | | | 0.9626 | | | 1.7 |
| CCVD | Q2256392 | | HEXACHLOROBUTADIENE | 10 | | LIN | 10.49 | | | 4.9 |
| CCVD | Q2256392 | | IODOMETHANE | 0.3302 | | | 0.3290 | | | 0.4 |
| CCVD | Q2256392 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | 2.7134 | | | 8.3 |
| CCVD | Q2256392 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | 2.9738 | | | 4.6 |
| CCVD | Q2256392 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | LIN | 10.18 | | | 1.8 |
| CCVD | Q2256392 | | METHYL ETHYL KETONE | 0.0394 | | | 0.0409 | | | 3.8 |
| CCVD | Q2256392 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | 0.7045 | | | 0.2 |
| CCVD | Q2256392 | | METHYL ISOBUTYL KETONE | 0.4505 | | | 0.4654 | | | 3.3 |
| CCVD | Q2256392 | | NAPHTHALENE | 10 | | LIN | 11.16 | | | 11.6 |
| CCVD | Q2256392 | | N-PROPYLBENZENE | 0.4327 | | | 0.4067 | | | 6 |
| CCVD | Q2256392 | | STYRENE | 2.0649 | | | 1.8291 | | | 11.4 |
| CCVD | Q2256392 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | 0.5402 | | | 8.9 |
| CCVD | Q2256392 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | 0.9077 | | | 4.7 |
| CCVD | Q2256392 | | TETRACHLOROETHENE | 0.7565 | | | 0.6861 | | | 9.3 |
| CCVD | Q2256392 | | TOLUENE | 0.9760 | | | 0.9342 | | | 4.3 |
| CCVD | Q2256392 | | 1,2,3-TRICHLOROBENZENE | 10 | | LIN | 11.41 | | | 14.1 |
| CCVD | Q2256392 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | 1.1037 | | | 5.1 |
| CCVD | Q2256392 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | 0.3145 | | | 3 |
| CCVD | Q2256392 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | 0.2048 | | | 0.1 |
| CCVD | Q2256392 | | TRICHLOROETHENE | 0.2340 | | | 0.2261 | | | 3.4 |
| CCVD | Q2256392 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | 0.2587 | | | 0.7 |
| CCVD | Q2256392 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | 0.3007 | | | 3.9 |
| CCVD | Q2256392 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | 2.8094 | | | 5 |
| CCVD | Q2256392 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | 2.6971 | | | 7.9 |
| CCVD | Q2256392 | | VINYL ACETATE | 10 | | LIN | 9.87 | | | 1.3 |
| CCVD | Q2256392 | | VINYL CHLORIDE | 0.3113 | | | 0.2933 | | | 5.8 |
| CCVD | Q2256392 | | DICHLOROETHANE-D4 | 0.3598 | | | 0.3709 | | | 3.1 |
| CCVD | Q2256392 | | TOLUENE-D8 | 1.0027 | | | 1.0055 | | | 0.3 |
| CCVD | Q2256392 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | 0.9232 | | | 3.7 |
| CCVD | Q2256392 | | DIBROMOFLUOROMETHANE | 0.2351 | | | 0.2364 | | | 0.6 |
| BLA01 | Q2256393 | | Analysis Date/Time: 07-Nov-09 08:07 | | | | | | | |

JBJ59173

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256393 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2256393 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2256393 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256393 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |

JBJ59173

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256393 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256393 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256393 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | XYLENES (O/M/P-XYLENE) | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256393 | | DICHLOROETHANE-D4 | | | | | | 105 | |
| BLA01 | Q2256393 | | TOLUENE-D8 | | | | | | 96 | |
| BLA01 | Q2256393 | | 4-BROMOFLUOROBENZENE | | | | | | 99 | |
| BLA01 | Q2256393 | | DIBROMOFLUOROMETHANE | | | | | | 99 | |
| LCS01 | Q2256400 | METHOD 826 | Analysis Date/Time: 07-Nov-09 08:37 | | | | | | | |
| LCS01 | Q2256400 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 56 | ug/L | 112 | |
| LCS01 | Q2256400 | METHOD 826 | ACROLEIN | 100 | | | 81.6 | ug/L | 81.6 | |
| LCS01 | Q2256400 | METHOD 826 | ACRYLONITRILE | 100 | | | 91.7 | ug/L | 91.7 | |
| LCS01 | Q2256400 | METHOD 826 | BENZENE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256400 | METHOD 826 | BROMOBENZENE | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256400 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256400 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256400 | METHOD 826 | BROMOFORM | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256400 | METHOD 826 | BROMOMETHANE | 10 | | | 9.72 | ug/L | 97.2 | |

JBJ59173

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2256400 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 12.1 | ug/L | 121 | |
| LCS01 | Q2256400 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 12 | ug/L | 120 | |
| LCS01 | Q2256400 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 12.1 | ug/L | 121 | |
| LCS01 | Q2256400 | METHOD 826 | CARBON DISULFIDE | 10 | | | 9.11 | ug/L | 91.1 | |
| LCS01 | Q2256400 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256400 | METHOD 826 | CHLOROBENZENE | 10 | | | 11.7 | ug/L | 117 | |
| LCS01 | Q2256400 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256400 | METHOD 826 | CHLOROETHANE | 10 | | | 11.3 | ug/L | 113 | |
| LCS01 | Q2256400 | METHOD 826 | CHLOROFORM | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256400 | METHOD 826 | CHLOROMETHANE | 10 | | | 9.21 | ug/L | 92.1 | |
| LCS01 | Q2256400 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256400 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256400 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 9.92 | ug/L | 99.2 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 11.9 | ug/L | 119 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256400 | METHOD 826 | DIBROMOMETHANE | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 11.8 | ug/L | 118 | |
| LCS01 | Q2256400 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256400 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256400 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 7.59 | ug/L | 75.9 | |
| LCS01 | Q2256400 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 20 | ug/L | 100 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 11.3 | ug/L | 113 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2256400 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256400 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256400 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 11.8 | ug/L | 118 | |
| LCS01 | Q2256400 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256400 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256400 | METHOD | TRANS-1,3-DICHLOROPROPENE | 10 | | | 11 | ug/L | 110 | |

JBJ59173

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2256400 | METHOD 826 | ETHYL BENZENE | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256400 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2256400 | METHOD 826 | 2-HEXANONE | 50 | | | 57.9 | ug/L | 115.8 | |
| LCS01 | Q2256400 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | ! | 13.9 | ug/L | 139 | |
| LCS01 | Q2256400 | METHOD 826 | IODOMETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256400 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 13.3 | ug/L | 133 | |
| LCS01 | Q2256400 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 12.3 | ug/L | 123 | |
| LCS01 | Q2256400 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2256400 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 56.7 | ug/L | 113.4 | |
| LCS01 | Q2256400 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256400 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 55.3 | ug/L | 110.6 | |
| LCS01 | Q2256400 | METHOD 826 | NAPHTHALENE | 10 | | ! | 14.7 | ug/L | 147 | |
| LCS01 | Q2256400 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 12.1 | ug/L | 121 | |
| LCS01 | Q2256400 | METHOD 826 | STYRENE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 12.4 | ug/L | 124 | |
| LCS01 | Q2256400 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 11.3 | ug/L | 113 | |
| LCS01 | Q2256400 | METHOD 826 | TOLUENE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | ! | 15.2 | ug/L | 152 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | ! | 13.3 | ug/L | 133 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1,1-TRICHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256400 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256400 | METHOD 826 | TRICHLOROETHENE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256400 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 9.6 | ug/L | 96 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256400 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 12 | ug/L | 120 | |
| LCS01 | Q2256400 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 11.7 | ug/L | 117 | |
| LCS01 | Q2256400 | METHOD 826 | VINYL ACETATE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256400 | METHOD 826 | VINYL CHLORIDE | 10 | | | 9.78 | ug/L | 97.8 | |
| LCS01 | Q2256400 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 34.6 | ug/L | 115.3 | |
| SPI01 | Q2256395 | A864635 | Analysis Date/Time: 07-Nov-09 11:15 | | | | | | | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256395 | A864635 | ACETONE (2-PROPANONE) | 0 | 50 | | 53.4 | ug/L | 106.8 | |
| SPI01 | Q2256395 | A864635 | ACROLEIN | 0 | 100 | | 60.1 | ug/L | 60.1 | |
| SPI01 | Q2256395 | A864635 | ACRYLONITRILE | 0 | 100 | | 76 | ug/L | 76 | |
| SPI01 | Q2256395 | A864635 | BENZENE | 0 | 10 | | 9.51 | ug/L | 95.1 | |
| SPI01 | Q2256395 | A864635 | BROMOBENZENE | 0 | 10 | | 9.56 | ug/L | 95.6 | |
| SPI01 | Q2256395 | A864635 | BROMOCHLOROMETHANE | 0 | 10 | | 9.61 | ug/L | 96.1 | |
| SPI01 | Q2256395 | A864635 | BROMODICHLOROMETHANE | 0 | 10 | | 8.48 | ug/L | 84.8 | |
| SPI01 | Q2256395 | A864635 | BROMOFORM | 0 | 10 | | 6.29 | ug/L | 62.9 | |
| SPI01 | Q2256395 | A864635 | BROMOMETHANE | 0 | 10 | | 9.17 | ug/L | 91.7 | |
| SPI01 | Q2256395 | A864635 | N-BUTYLBENZENE | 0 | 10 | | 9.97 | ug/L | 99.7 | |
| SPI01 | Q2256395 | A864635 | SEC-BUTYLBENZENE | 0 | 10 | | 10 | ug/L | 100 | |
| SPI01 | Q2256395 | A864635 | TERT-BUTYLBENZENE | 0 | 10 | | 9.78 | ug/L | 97.8 | |
| SPI01 | Q2256395 | A864635 | CARBON DISULFIDE | 0 | 10 | | 8.49 | ug/L | 84.9 | |
| SPI01 | Q2256395 | A864635 | CARBON TETRACHLORIDE | 0 | 10 | | 8.37 | ug/L | 83.7 | |
| SPI01 | Q2256395 | A864635 | CHLOROBENZENE | 0 | 10 | | 9.42 | ug/L | 94.2 | |
| SPI01 | Q2256395 | A864635 | DIBROMOCHLOROMETHANE | 0 | 10 | | 7.72 | ug/L | 77.2 | |
| SPI01 | Q2256395 | A864635 | CHLOROETHANE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2256395 | A864635 | CHLOROFORM | 0 | 10 | | 9.39 | ug/L | 93.9 | |
| SPI01 | Q2256395 | A864635 | CHLOROMETHANE | 0 | 10 | | 9.25 | ug/L | 92.5 | |
| SPI01 | Q2256395 | A864635 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.42 | ug/L | 94.2 | |
| SPI01 | Q2256395 | A864635 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.37 | ug/L | 93.7 | |
| SPI01 | Q2256395 | A864635 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2256395 | A864635 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.99 | ug/L | 89.9 | |
| SPI01 | Q2256395 | A864635 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 9.01 | ug/L | 90.1 | |
| SPI01 | Q2256395 | A864635 | DIBROMOMETHANE | 0 | 10 | | 9.49 | ug/L | 94.9 | |
| SPI01 | Q2256395 | A864635 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.84 | ug/L | 98.4 | |
| SPI01 | Q2256395 | A864635 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.74 | ug/L | 97.4 | |
| SPI01 | Q2256395 | A864635 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.88 | ug/L | 98.8 | |
| SPI01 | Q2256395 | A864635 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.34 | ug/L | 83.4 | |
| SPI01 | Q2256395 | A864635 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 7.41 | ug/L | 37.1 | |
| SPI01 | Q2256395 | A864635 | 1,1-DICHLOROETHANE | 0 | 10 | | 9.64 | ug/L | 96.4 | |
| SPI01 | Q2256395 | A864635 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.65 | ug/L | 96.5 | |
| SPI01 | Q2256395 | A864635 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.39 | ug/L | 93.9 | |
| SPI01 | Q2256395 | A864635 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 9.54 | ug/L | 95.4 | |
| SPI01 | Q2256395 | A864635 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 9.39 | ug/L | 93.9 | |
| SPI01 | Q2256395 | A864635 | 1,2-DICHLOROPROPANE | 0 | 10 | | 9.45 | ug/L | 94.5 | |
| SPI01 | Q2256395 | A864635 | 1,3-DICHLOROPROPANE | 0 | 10 | | 9.42 | ug/L | 94.2 | |
| SPI01 | Q2256395 | A864635 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.98 | ug/L | 99.8 | |
| SPI01 | Q2256395 | A864635 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.6 | ug/L | 96 | |
| SPI01 | Q2256395 | A864635 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | ! | 6.77 | ug/L | 67.7 | |
| SPI01 | Q2256395 | A864635 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | ! | 6.3 | ug/L | 63 | |
| SPI01 | Q2256395 | A864635 | ETHYL BENZENE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256395 | A864635 | ETHYL METHACRYLATE | 0 | 10 | | 6.96 | ug/L | 69.6 | |
| SPI01 | Q2256395 | A864635 | 2-HEXANONE | 0 | 50 | | 49.2 | ug/L | 98.4 | |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256395 | A864635 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.1 | ug/L | 101 | |
| SPI01 | Q2256395 | A864635 | IODOMETHANE | 0 | 10 | | 9.3 | ug/L | 93 | |
| SPI01 | Q2256395 | A864635 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 9.4 | ug/L | 94 | |
| SPI01 | Q2256395 | A864635 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 9.55 | ug/L | 95.5 | |
| SPI01 | Q2256395 | A864635 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.48 | ug/L | 94.8 | |
| SPI01 | Q2256395 | A864635 | METHYL ETHYL KETONE | 0 | 50 | | 47.7 | ug/L | 95.4 | |
| SPI01 | Q2256395 | A864635 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.34 | ug/L | 93.4 | |
| SPI01 | Q2256395 | A864635 | METHYL ISOBUTYL KETONE | 0 | 50 | | 48.8 | ug/L | 97.6 | |
| SPI01 | Q2256395 | A864635 | NAPHTHALENE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256395 | A864635 | N-PROPYLBENZENE | 0 | 10 | | 9.5 | ug/L | 95 | |
| SPI01 | Q2256395 | A864635 | STYRENE | 0 | 10 | | 5.57 | ug/L | 55.7 | |
| SPI01 | Q2256395 | A864635 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256395 | A864635 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.93 | ug/L | 99.3 | |
| SPI01 | Q2256395 | A864635 | TETRACHLOROETHENE | 0 | 10 | | 8.68 | ug/L | 86.8 | |
| SPI01 | Q2256395 | A864635 | TOLUENE | 0 | 10 | | 9.14 | ug/L | 91.4 | |
| SPI01 | Q2256395 | A864635 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256395 | A864635 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.3 | ug/L | 103 | |
| SPI01 | Q2256395 | A864635 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.26 | ug/L | 92.6 | |
| SPI01 | Q2256395 | A864635 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.27 | ug/L | 92.7 | |
| SPI01 | Q2256395 | A864635 | TRICHLOROETHENE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| SPI01 | Q2256395 | A864635 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 8.89 | ug/L | 88.9 | |
| SPI01 | Q2256395 | A864635 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 9.57 | ug/L | 95.7 | |
| SPI01 | Q2256395 | A864635 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 8.86 | ug/L | 88.6 | |
| SPI01 | Q2256395 | A864635 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.71 | ug/L | 87.1 | |
| SPI01 | Q2256395 | A864635 | VINYL ACETATE | 0 | 10 | | 10.2 | ug/L | 102 | |
| SPI01 | Q2256395 | A864635 | VINYL CHLORIDE | 0 | 10 | | 9.2 | ug/L | 92 | |
| SPI01 | Q2256395 | A864635 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 27.2 | ug/L | 90.7 | |
| DPS01 | Q2256396 | A864635 | Analysis Date/Time: 07-Nov-09 11:40 | | | | | | | |
| DPS01 | Q2256396 | A864635 | ACETONE (2-PROPANONE) | 0 | 50 | | 54.1 | ug/L | 108.2 | 1.4 |
| DPS01 | Q2256396 | A864635 | ACROLEIN | 0 | 100 | | 57.6 | ug/L | 57.6 | 4.1 |
| DPS01 | Q2256396 | A864635 | ACRYLONITRILE | 0 | 100 | | 75.8 | ug/L | 75.8 | 0.3 |
| DPS01 | Q2256396 | A864635 | BENZENE | 0 | 10 | | 9.76 | ug/L | 97.6 | 2.6 |
| DPS01 | Q2256396 | A864635 | BROMOBENZENE | 0 | 10 | | 9.61 | ug/L | 96.1 | 0.5 |
| DPS01 | Q2256396 | A864635 | BROMOCHLOROMETHANE | 0 | 10 | | 9.92 | ug/L | 99.2 | 3.2 |
| DPS01 | Q2256396 | A864635 | BROMODICHLOROMETHANE | 0 | 10 | | 8.89 | ug/L | 88.9 | 4.7 |
| DPS01 | Q2256396 | A864635 | BROMOFORM | 0 | 10 | | 6.09 | ug/L | 60.9 | 3.2 |
| DPS01 | Q2256396 | A864635 | BROMOMETHANE | 0 | 10 | | 9.71 | ug/L | 97.1 | 5.7 |
| DPS01 | Q2256396 | A864635 | N-BUTYLBENZENE | 0 | 10 | | 9.76 | ug/L | 97.6 | 2.1 |
| DPS01 | Q2256396 | A864635 | SEC-BUTYLBENZENE | 0 | 10 | | 9.7 | ug/L | 97 | 3.3 |
| DPS01 | Q2256396 | A864635 | TERT-BUTYLBENZENE | 0 | 10 | | 9.72 | ug/L | 97.2 | 0.6 |
| DPS01 | Q2256396 | A864635 | CARBON DISULFIDE | 0 | 10 | | 8.85 | ug/L | 88.5 | 4.2 |
| DPS01 | Q2256396 | A864635 | CARBON TETRACHLORIDE | 0 | 10 | | 8.16 | ug/L | 81.6 | 2.5 |
| DPS01 | Q2256396 | A864635 | CHLOROBENZENE | 0 | 10 | | 9.37 | ug/L | 93.7 | 0.5 |
| DPS01 | Q2256396 | A864635 | DIBROMOCHLOROMETHANE | 0 | 10 | | 7.68 | ug/L | 76.8 | 0.5 |
| DPS01 | Q2256396 | A864635 | CHLOROETHANE | 0 | 10 | | 11.3 | ug/L | 112.8 | 6.2 |
| DPS01 | Q2256396 | A864635 | CHLOROFORM | 0 | 10 | | 9.52 | ug/L | 95.2 | 1.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256396 | A864635 | CHLOROMETHANE | 0 | 10 | | 9.62 | ug/L | 96.2 | 3.9 |
| DPS01 | Q2256396 | A864635 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.49 | ug/L | 94.9 | 0.7 |
| DPS01 | Q2256396 | A864635 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.33 | ug/L | 93.3 | 0.4 |
| DPS01 | Q2256396 | A864635 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2256396 | A864635 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 9.1 | ug/L | 91 | 1.2 |
| DPS01 | Q2256396 | A864635 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 9.23 | ug/L | 92.3 | 2.4 |
| DPS01 | Q2256396 | A864635 | DIBROMOMETHANE | 0 | 10 | | 9.76 | ug/L | 97.6 | 2.8 |
| DPS01 | Q2256396 | A864635 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.69 | ug/L | 96.9 | 1.5 |
| DPS01 | Q2256396 | A864635 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.52 | ug/L | 95.2 | 2.3 |
| DPS01 | Q2256396 | A864635 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.46 | ug/L | 94.6 | 4.3 |
| DPS01 | Q2256396 | A864635 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.39 | ug/L | 83.9 | 0.6 |
| DPS01 | Q2256396 | A864635 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 6.1 | ug/L | 30.5 | 19.5 |
| DPS01 | Q2256396 | A864635 | 1,1-DICHLOROETHANE | 0 | 10 | | 10.1 | ug/L | 101.1 | 4.8 |
| DPS01 | Q2256396 | A864635 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.92 | ug/L | 99.2 | 2.8 |
| DPS01 | Q2256396 | A864635 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.68 | ug/L | 96.8 | 3 |
| DPS01 | Q2256396 | A864635 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 10.2 | ug/L | 102.1 | 6.8 |
| DPS01 | Q2256396 | A864635 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 9.87 | ug/L | 98.7 | 5 |
| DPS01 | Q2256396 | A864635 | 1,2-DICHLOROPROPANE | 0 | 10 | | 9.82 | ug/L | 98.2 | 3.8 |
| DPS01 | Q2256396 | A864635 | 1,3-DICHLOROPROPANE | 0 | 10 | | 9.48 | ug/L | 94.8 | 0.6 |
| DPS01 | Q2256396 | A864635 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.89 | ug/L | 98.9 | 0.9 |
| DPS01 | Q2256396 | A864635 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.79 | ug/L | 97.9 | 2 |
| DPS01 | Q2256396 | A864635 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 7.31 | ug/L | 73.1 | 7.7 |
| DPS01 | Q2256396 | A864635 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | ! | 6.7 | ug/L | 67 | 6.2 |
| DPS01 | Q2256396 | A864635 | ETHYL BENZENE | 0 | 10 | | 9.28 | ug/L | 92.8 | 1.4 |
| DPS01 | Q2256396 | A864635 | ETHYL METHACRYLATE | 0 | 10 | | 7.02 | ug/L | 70.2 | 0.9 |
| DPS01 | Q2256396 | A864635 | 2-HEXANONE | 0 | 50 | | 47.3 | ug/L | 94.6 | 4 |
| DPS01 | Q2256396 | A864635 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.5 | ug/L | 104.8 | 4.1 |
| DPS01 | Q2256396 | A864635 | IODOMETHANE | 0 | 10 | | 9.65 | ug/L | 96.5 | 3.7 |
| DPS01 | Q2256396 | A864635 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 9.23 | ug/L | 92.3 | 1.8 |
| DPS01 | Q2256396 | A864635 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 9.5 | ug/L | 95 | 0.5 |
| DPS01 | Q2256396 | A864635 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.97 | ug/L | 99.7 | 5 |
| DPS01 | Q2256396 | A864635 | METHYL ETHYL KETONE | 0 | 50 | | 47.6 | ug/L | 95.2 | 0.2 |
| DPS01 | Q2256396 | A864635 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.47 | ug/L | 94.7 | 1.4 |
| DPS01 | Q2256396 | A864635 | METHYL ISOBUTYL KETONE | 0 | 50 | | 49.9 | ug/L | 99.9 | 2.3 |
| DPS01 | Q2256396 | A864635 | NAPHTHALENE | 0 | 10 | | 11.3 | ug/L | 113 | 0.4 |
| DPS01 | Q2256396 | A864635 | N-PROPYLBENZENE | 0 | 10 | | 9.38 | ug/L | 93.8 | 1.3 |
| DPS01 | Q2256396 | A864635 | STYRENE | 0 | 10 | | 5.33 | ug/L | 53.3 | 4.4 |
| DPS01 | Q2256396 | A864635 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.92 | ug/L | 89.2 | 0.9 |
| DPS01 | Q2256396 | A864635 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.68 | ug/L | 96.8 | 2.5 |
| DPS01 | Q2256396 | A864635 | TETRACHLOROETHENE | 0 | 10 | | 8.57 | ug/L | 85.7 | 1.3 |
| DPS01 | Q2256396 | A864635 | TOLUENE | 0 | 10 | | 9.35 | ug/L | 93.5 | 2.3 |
| DPS01 | Q2256396 | A864635 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 11.9 | ug/L | 118.6 | 1.5 |
| DPS01 | Q2256396 | A864635 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.6 | ug/L | 105.5 | 2.4 |

HERITAGE

**JBJ59173**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560098 Analyst: R SHAMP Run Date: 07-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256396 | A864635 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.78 | ug/L | 97.8 | 5.5 |
| DPS01 | Q2256396 | A864635 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.64 | ug/L | 96.4 | 3.9 |
| DPS01 | Q2256396 | A864635 | TRICHLOROETHENE | 0 | 10 | | 9.83 | ug/L | 98.3 | 5.8 |
| DPS01 | Q2256396 | A864635 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 8.89 | ug/L | 88.9 | 0 |
| DPS01 | Q2256396 | A864635 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 9.35 | ug/L | 93.5 | 2.3 |
| DPS01 | Q2256396 | A864635 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 8.67 | ug/L | 86.7 | 2.2 |
| DPS01 | Q2256396 | A864635 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.46 | ug/L | 84.6 | 2.9 |
| DPS01 | Q2256396 | A864635 | VINYL ACETATE | 0 | 10 | | 10.4 | ug/L | 104 | 1.6 |
| DPS01 | Q2256396 | A864635 | VINYL CHLORIDE | 0 | 10 | | 9.71 | ug/L | 97.1 | 5.4 |
| DPS01 | Q2256396 | A864635 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 27.2 | ug/L | 90.7 | 0 |
| SAMPLE | A864551 | | Analysis Date/Time: 07-Nov-09 13:19 | | | | | | | |
| SAMPLE | A864551 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864561 | | Analysis Date/Time: 07-Nov-09 13:44 | | | | | | | |
| SAMPLE | A864561 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864562 | | Analysis Date/Time: 07-Nov-09 14:09 | | | | | | | |
| SAMPLE | A864562 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864538 | | Analysis Date/Time: 07-Nov-09 17:53 | | | | | | | |
| SAMPLE | A864538 | | See Certificate of Analysis, Rep: 1 | | | | | | | |

Q2254851 Value reported for analytes calibrated by linear (LIN) or
Q2254851 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256392 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256392 equations is concentration ( ).
Q2256395 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256395 possible. Unacidified sample not available.
Q2256396 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256396 possible. Unacidified sample not available.

| RQL | Result Qualifier Definition |
|---|---|
| ! | Outside Lab Generated Control Limits |
| < | Less Than |
| BDL | Below Detection Limit |
| CNA | RPD Calculation Not Applicable < DL |
| LIN | Linear Regression Used |
| NQR | No QC Result. High Sample Concentration. |

| QC Type | Definition |
|---|---|
| BLA01 | CALIBRATION (INSTRUMENT) BLANK |
| DPS01 | DUPLICATE MATRIX SPIKE |
| CCVD | CONTINUING CALIBRATION VERIFICATION (USING %D) |
| ICV01 | INITIAL CALIBRATION VERIFICATION DIFFERENT SOURCE |
| CCVH | HIGH CONTINUING CALIBRATION VERIFICATION |
| SPI01 | MATRIX SPIKE |
| BLA02 | PREPPED (CALIBRATION) BLANK OR METHOD BLANK |
| ICS-AB | INTERFERENCE CHECK SAMPLE AB |
| SER01 | ICP SERIAL DILUTION |
| LCS | LABORATORY CONTROL SAMPLE PREPPED |
| LCS01 | LABORATORY CONTROL SAMPLE |
| CCV | CONTINUING CALIBRATION VERIFICATION |
| DPS02 | PREPPED DUPLICATE MATRIX SPIKE |

**JBJ59173**

| QC Type | Definition |
|---|---|
| CDL01 | DETECTION LIMIT STANDARD |
| CAL01 | INITIAL CALIBRATION |
| SPI02 | PREPPED MATRIX SPIKE |
| CCVL | LOW CONTINUING CALIBRATION VERIFICATION |

GABusch, QAO

Approved By : GREGORY BUSCH

**REMEDIATION SYSTEM EVALUATION REPORT**
**OCTOBER THROUGH DECEMBER 2009**
**FORMER GENERAL MOTORS CORPORATION**
**ALLISON GAS TURBINE DIVISION, PLANT 10**
**700 NORTH OLIN AVENUE**
**INDIANAPOLIS, INDIANA**
**IDEM VRP #6991004**
**KERAMIDA PROJECT NO. 2829E**

# ATTACHMENT 6

## November 2009 - Groundwater Analytical Report

## Part 2 of 4

# Quality Assurance Report Package # 59169

## KERAMIDA ENVIRONMENTAL, INC.

ROB FEDORCHAK
401 NORTH COLLEGE AVENUE
INDIANAPOLIS, IN 46202

Project : KERAMIDA ENVIRONMENTAL
GENUINE PARTS

Sampled : 03-NOV-09 to 04-NOV-09

Sample Range : A864527, A864528, A864529, A864530, A864531, A864534, A864535, A864536, A864539, A864540, A864541, A864542, A864543, A864544, A864545, A864546, A864547, A864548, A864549, A864550, A864555, A864556, A864557, A864558, A864559

Karen L. Fullmer

Approved by: KAREN FULLMER - Project Manager

Heritage Environmental Services, LLC
Commercial Laboratory Operations
7901 West Morris Street
Indianapolis, Indiana 46231
Phone: (317) 243-8304
Fax : (317) 486-5095

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All cadmium, chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5588

Project No.: 2824-E 001
Project Name: GP
Report to: Rob Fedorchak
Client:
Samplers: (signature)
Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TPC | DAH | Cadmium, chromium, lead | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste, Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 147AR | 11-3 | 1435 | | X | 4 | | | | | | X | | | | | | | | | GW | II | | A864526 |
| 132R | | 1500 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 527 |
| 148R | | 1530 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 528 |
| 153 | | 1600 | | X | 12 | | 4 | | | 8 | X | | X | X | | | | | | | III | | ms/msd 529 |
| Dup-03 | | | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 530 |
| 302 | | 1630 | | X | 4 | | | | | | X | | | | | | | | | | III | | 531 |
| 133R | 11-4 | 930 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 532 |
| 145 | | 1000 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 533 |
| 152 | | 1030 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 534 |
| 146 | | 1100 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 535 |
| 150 | | 1130 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | III | | 536 |
| 135 | | 1200 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | II | | 537 |
| IW-2 | | 1230 | | X | 4 | | | 1 | | | X | X | | | | | | | | | II | | 2824-E-003 538 |

Relinquished by: Sign/Date/Time 1750 11/4/09
Received by: Sign/Date/Time
Relinquished by: Sign/Date/Time
Received by: Sign/Date/Time
Received for Lab: Sign/Date/Time
Received for Lab: Sign/Date/Time

01057604

Remarks:
1) No method substitution will be performed by the
2) Please notify KERAMIDA immediately upon receipt, if sample integrity is in question
3) If analysis cannot be conducted within required holding times, please notify KERAMIDA immediately
4) If requested detection limits cannot be achieved, please contact KERAMIDA immediately

on

AMENDED SAMPLE ID'S FOR 147 + 148 PER ROB FEDORCHAK. KLF 11/23/09
AMENDED SAMPLE ID FOR 132 PER ROB FEDORCHAK. KLF 12/2/09

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All PAH, Cadmium, Chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5587

Project No. 2829-E 001

Project Name GP

Report to: ROB Fedorchak

Client

Samplers: (signature) J. Julian

Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TOC | PAH | Cadmium, Chromium, lead | | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste, Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 169-D | 11-3 | 950 | | X | 4 | | | | | | X | | | | | | | | | | GW | III | | A864539 |
| 169-S | | 1020 | | X | 4 | | | | | | X | | | | | | | | | | | | | 540 |
| 170-S | | 1100 | | X | 12 | | | | | | X | | | | | | | | | | | | | ms/msd 541 |
| Dup-01 | | | | X | 4 | | | | | | X | | | | | | | | | | | | | 542 |
| 170-D | | 1130 | | X | 4 | | | | | | X | | | | | | | | | | | | | 543 |
| 167-S | | 1140 | | X | 4 | | | | | | X | | | | | | | | | | | | | 544 |
| 167-D | | 1210 | | X | 4 | | | | | | X | | | | | | | | | | | | | 545 |
| Dup-02 | | | | X | 4 | | | | | | X | | | | | | | | | | | | | 546 |
| 165-S | | 1230 | | X | 4 | | | | | | X | | | | | | | | | | | | | 547 |
| 165-D | | 1300 | | X | 4 | | | | | | X | | | | | | | | | | | | | 548 |
| 166-D | | 1330 | | X | 4 | | | | | | X | | | | | | | | | | | | | 549 |
| 166-S | | 1345 | | X | 4 | | | | | | X | | | | | | | | | | | | | 550 |
| 154 | | 1410 | | X | 4 | | | 1 | | 2 | X | | X | X | | | | | | | | II | | 551 |

| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
|---|---|---|---|
| J. Julian 11/4/05 1705 | | | |
| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
| | | | 11-4-05 1705 |

Remarks:
1) No method substitution v
2) Please notify KERAMID
3) If analysis cannot be con
4) If requested detection lim

01057605

ERAMIDA's authorization
ty is in question
notify KERAMIDA immediately
MIDA immediately

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1°c

59169b

**KERAMIDA**
401 North College Avenue
Indianapolis, IN 46202
(317) 685-6600 - FAX (317) 685-6610

* All PAH, Cadmium, Chromium, lead level II

**CHAIN OF CUSTODY RECORD**

COC# 5584

Project No. 2529-E 001

Project Name GP.

Report to: Rob Fedorchak

Client

Samplers: (signature)

Sampled By: KERAMIDA Environmental, Inc.

| Sample ID/Description | Date | Time | Comp | Grab | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Unpreserved | Other | VOC | TDC | PAH | Cadmium, Chromium, lead | | | | | | | MATRIX (SW, GW, WW, Soil, Air, Waste, Oil) | QA/QC Level | Detection Level | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | # and Type of Containers | | | | | | Analyses | | | | | | | | | | | | | |
| IW-1 | 11-4 | 1300 | | X | 4 | | | 1 | | | X | X | | | | | | | | | GW | II | A864552 | 2529 E-003 |
| 163 | | 1330 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | II | 553 | 2529 E-003 |
| 173 | | 1400 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | II | 554 | 2529 E-003 |
| 156 | | 1430 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | III | ~~555~~ 4-PR | A864555 |
| 151 | | 1500 | | X | 4 | | | 1 | | | X | X | | | | | | | | | | | | 556 |
| 164 | | 1530 | | X | 4 | | | | | | X | | | | | | | | | | | | | 557 |
| 157 | | 1600 | | X | 4 | | | | | | X | | | | | | | | | | | | | 558 |
| 161 | | 1630 | | X | 4 | | | | | | X | | | | | | | | | | | | | 559 |
| Dup-04 | | | | X | 4 | | | | | | X | | | | | | | | | | | II ~~III~~ | | 560 |
| Eq. Blank | 11-3 | 1700 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | | II ~~III~~ | | 561 |
| Eq Blank | 11-4 | 1700 | | X | 4 | | 1 | | | 2 | X | | X | X | | | | | | | | II ~~III~~ | | 562 |
| TEMP Blank | | | | | | | | | | | | | | | | | | | | | | II ~~III~~ | | |
| TRIP Blank | | | | | 6 | | | | | | X | | | | | | | | | | | II ~~III~~ | | 563 |

| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |
|---|---|---|---|
| 11/4/09 1205 | | | 11-4-09 1705 |
| Relinquished by: Sign/Date/Time | Received by: Sign/Date/Time | Relinquished by: Sign/Date/Time | Received for Lab: Sign/Date/Time |

Remarks:
Did not receive amber bottles for both EQ Blanks
JLC 11-4-09

1) No method substit
2) Please notify KER
3) If analysis cannot b
4) If requested detecti

01057606

out KERAMIDA's authorization
integrity is in question
lease notify KERAMIDA immediately
KERAMIDA immediately

Sample Condition:
Bottle Intact? Yes/No
Field Filtered? Yes/No
COC Seals Present & Intact? Yes/No
VOC Free of Headspace? Yes/No
VOC Preserved? Yes/No
Temperature upon Receipt: 1.1

59169b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864527 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 15:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 132R
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:04 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:04 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | BDL | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:04 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864527 132R

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 09-NOV-09 16:43 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 71 | | % Rec |
| TERPHENYL-D14 | 81 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 12:15 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864527 132R

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | 2.5 | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 9.8 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.8 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864527 132R**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 33 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 95 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

AMENDED REPORT - KLF - 02-DEC-09 : CORRECTED SAMPLE ID PER ROB FEDORCHAK.

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864527 132R**

Karen A. Fullmer

Approved by: KAREN FULLMER 02-DEC-09



59169b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864528 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 15:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 148R
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:08 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:08 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 48 | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:08 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | 21 | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864528 148R

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 09-NOV-09 17:19 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 70 | | % Rec |
| TERPHENYL-D14 | 93 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 12:40 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864528 148R

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | 4.9 | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 39 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864528 148R

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 48 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 101 | | % Rec |
| DIBROMOFLUOROMETHANE | 99 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 16:38 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 480 | 10 | ug/L |
| TRICHLOROETHENE | 110 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 103 | | % Rec |
| TOLUENE-D8 | 94 | | % Rec |
| 4-BROMOFLUOROBENZENE | 96 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864528 148R**

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

AMENDED REPORT - KLF - 23-NOV-09 :AMENDED SAMPLE ID PER ROB FEDORCHAK.

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Karen L. Fullmer

Approved by: KAREN FULLMER 23-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864529 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 16:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 153
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 01:48 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 01:48 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 19 | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 01:48 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864529 153

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 09-NOV-09 14:57 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 66 | | % Rec |
| TERPHENYL-D14 | 94 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 10:35 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864529 153

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 25 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 2.1 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864529 153

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 97 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 16:13 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 190 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 105 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 96 | | % Rec |
| DIBROMOFLUOROMETHANE | 97 | | % Rec |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864529 153**

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864530 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: DUP-03
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:11 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:11 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 17 | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:11 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

**LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C** NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864530 DUP-03

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 09-NOV-09 17:55 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 67 | | % Rec |
| TERPHENYL-D14 | 92 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 13:05 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864530 DUP-03

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 24 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 2.2 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864530 DUP-03

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 98 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 17:03 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 180 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 103 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 94 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864530 DUP-03**

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864531 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 16:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 302
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 13:30 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864531 302

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864531 302**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 98 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864534 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 10:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 152
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

## FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

## CADMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:21 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

## CHROMIUM ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:21 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 16 | 10 | ug/L |

## LEAD ICP SW846-6010B

NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:21 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

## LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C

NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864534 152

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 20:59 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 80 | | % Rec |
| TERPHENYL-D14 | 44 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 14:44 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864534 152

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864534 152

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 103 | | % Rec |
| TOLUENE-D8 | 97 | | % Rec |
| 4-BROMOFLUOROBENZENE | 97 | | % Rec |
| DIBROMOFLUOROMETHANE | 97 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 07-NOV-09 17:28 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 110 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 103 | | % Rec |
| TOLUENE-D8 | 94 | | % Rec |
| 4-BROMOFLUOROBENZENE | 95 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864534 152**

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864535 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 11:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 146
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:24 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:24 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 56 | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:24 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | BDL | 10 | ug/L |

**LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C** NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864535 146

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 21:35 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 82 | | % Rec |
| TERPHENYL-D14 | 51 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 15:09 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864535 146

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864535 146**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 45 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 104 | | % Rec |
| TOLUENE-D8 | 99 | | % Rec |
| 4-BROMOFLUOROBENZENE | 98 | | % Rec |
| DIBROMOFLUOROMETHANE | 96 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864535 146**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59169b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864536 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 11:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 150
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

Analyst: P. MATAKA | Analysis Date: 11-NOV-09 06:00 | Instrument: PREP | Test: P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 50 | | mL |
| FINAL VOLUME | 50 | | mL |

**CADMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:28 | Instrument: ICP | Test: M108.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CADMIUM | BDL | 5.0 | ug/L |

**CHROMIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:28 | Instrument: ICP | Test: M110.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHROMIUM | 340 | 10 | ug/L |

**LEAD ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER | Analysis Date: 13-NOV-09 02:28 | Instrument: ICP | Test: M116.3.0

Prep: FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A P130.4.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| LEAD | 12 | 10 | ug/L |

**LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C** NELAC:Y

Analyst: J. MINNIEAR, II | Analysis Date: 06-NOV-09 | Instrument: PREP | Test: P233.9.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864536 150

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| INITIAL WEIGHT OR VOLUME | 1000 | | mL |
| FINAL VOLUME | 1.0 | | mL |

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 10-NOV-09 22:10 Instrument: GC/MS SVOA Test: O517.4.0

Prep: LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C P233.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACENAPHTHENE | BDL | 0.10 | ug/L |
| ACENAPHTHYLENE | BDL | 0.10 | ug/L |
| ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)ANTHRACENE | BDL | 0.10 | ug/L |
| BENZO(A)PYRENE | BDL | 0.10 | ug/L |
| BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | BDL | 0.10 | ug/L |
| BENZO(G,H,I)PERYLENE | BDL | 0.10 | ug/L |
| BENZO(K)FLUORANTHENE | BDL | 0.10 | ug/L |
| CHRYSENE | BDL | 0.10 | ug/L |
| DIBENZ(A,H)ANTHRACENE | BDL | 0.10 | ug/L |
| FLUORANTHENE | BDL | 0.10 | ug/L |
| FLUORENE | BDL | 0.10 | ug/L |
| INDENO(1,2,3-CD)PYRENE | BDL | 0.020 | ug/L |
| NAPHTHALENE | BDL | 0.10 | ug/L |
| PHENANTHRENE | BDL | 0.10 | ug/L |
| PYRENE | BDL | 0.10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| 2-FLUOROBIPHENYL | 83 | | % Rec |
| TERPHENYL-D14 | 43 | | % Rec |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 15:34 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864536 150

| | | | |
|---|---|---|---|
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864536 150**

| | | | |
|---|---|---|---|
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 7.3 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 95 | | % Rec |
| 4-BROMOFLUOROBENZENE | 103 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5588.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

**HERITAGE ENVIRONMENTAL SERVICES, LLC**

**Sample ID: A864536 150**

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09



59169b

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864539 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 09:50 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 169D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: R. SHAMP Analysis Date: 06-NOV-09 16:49 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864539 169D

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864539 169D**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 14 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 94 | | % Rec |
| 4-BROMOFLUOROBENZENE | 102 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864540 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 10:20 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 169S
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 10:40 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864540 169S

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864540 169S**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

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IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864541 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 11:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 170S
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 11:05 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864541 170S

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 2.0 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864541 170S**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 5.2 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 87 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864542 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: DUP-01
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 12:22 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864542 DUP-01

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 2.0 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864542 DUP-01**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 5.3 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864543 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 11:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 170D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 12:47 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864543 170D

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864543 170D**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | EX | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 08:28 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| VINYL CHLORIDE | 200 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 98 | | % Rec |
| 4-BROMOFLUOROBENZENE | 95 | | % Rec |
| DIBROMOFLUOROMETHANE | 100 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

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**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864543 170D**

**Sample Comments**

justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864544 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 11:40 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 167S
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 13:13 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864544 167S

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864544 167S**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 101 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864545 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 12:10 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 167D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 13:39 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864545 167D

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 25 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864545 167D**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 34 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 08:54 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 580 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 89 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864545 167D**

**Sample Comments**

justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864546 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: DUP-02
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 14:04 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864546 DUP-02

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 25 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864546 DUP-02**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 33 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 101 | | % Rec |
| 4-BROMOFLUOROBENZENE | 92 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 09:20 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 740 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 99 | | % Rec |
| 4-BROMOFLUOROBENZENE | 94 | | % Rec |
| DIBROMOFLUOROMETHANE | 101 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

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**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864546 DUP-02**

**Sample Comments**

justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864547 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 12:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 165S
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 14:30 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864547 165S

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 2.9 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864547 165S**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 2.4 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 88 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864548 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 13:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 165D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 14:56 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864548 165D

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 2.4 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864548 165D

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | EX | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 09:46 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 280 | 10 | ug/L |
| VINYL CHLORIDE | 400 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 101 | | % Rec |
| 4-BROMOFLUOROBENZENE | 85 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference)

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864548 165D**

**Sample Comments**

accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864549 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 13:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 166D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 15:22 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864549 166D

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | 3.9 | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 8.2 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864549 166D

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | EX | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 101 | | % Rec |
| 4-BROMOFLUOROBENZENE | 89 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 10:12 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 1100 | 20 | ug/L |
| VINYL CHLORIDE | 240 | 20 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 98 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

1:20 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference)

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864549 166D**

**Sample Comments**

accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864550 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 03-NOV-09 13:45 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 166S
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 15:47 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864550 166S

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 9.7 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864550 166S**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | BDL | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 6.5 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 99 | | % Rec |
| TOLUENE-D8 | 101 | | % Rec |
| 4-BROMOFLUOROBENZENE | 90 | | % Rec |
| DIBROMOFLUOROMETHANE | 94 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 09-NOV-09 10:37 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 170 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 91 | | % Rec |
| DIBROMOFLUOROMETHANE | 93 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5587.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864550 166S**

**Sample Comments**

justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864555 |
| | **Completed** | **PO Number** | |
| | 19-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 14:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 156
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | BDL | 1000 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 11:11 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | 2.4 | | |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864555 156

| | | | |
|---|---|---|---|
| | | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 38 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 3.8 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864555 156

| | | | |
|---|---|---|---|
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 96 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 86 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 08:31 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 140 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 103 | | % Rec |
| 4-BROMOFLUOROBENZENE | 86 | | % Rec |
| DIBROMOFLUOROMETHANE | 95 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864555 156**

**Sample Comments**

Sample chain of custody number 5584.

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IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 19-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864556 |
| | **Completed** | **PO Number** | |
| | 19-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 15:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 151
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: S. BOXUM Analysis Date: 07-NOV-09 10:30 Instrument: TOC Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | BDL | 1000 | ug/L |

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 11:36 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | | |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864556 151

| | | | |
|---|---|---|---|
| | | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | 1.6 | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.7 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864556 151**

| | | | |
|---|---|---|---|
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| TRICHLOROETHENE | 7.0 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 95 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 92 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 19-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864557 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 15:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 164
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 12:02 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864557 164

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864557 164**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | 21 | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| ---------- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 94 | | % Rec |
| DIBROMOFLUOROMETHANE | 99 | | % Rec |

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864558 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 16:00 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 157
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 12:28 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864558 157

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864558 157**

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | BDL | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 97 | | % Rec |
| TOLUENE-D8 | 102 | | % Rec |
| 4-BROMOFLUOROBENZENE | 88 | | % Rec |
| DIBROMOFLUOROMETHANE | 92 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 08:57 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TRICHLOROETHENE | 92 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 101 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 93 | | % Rec |
| DIBROMOFLUOROMETHANE | 98 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864558 157**

**Sample Comments**

justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Project | Lab ID |
|---|---|---|---|
| HERITAGE ENVIRONMENTAL SERVICES, LLC<br>COMMERCIAL LABORATORY OPERATIONS<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 04-NOV-09 | 5029 | A864559 |
| | **Completed** | **PO Number** | |
| | 16-NOV-09 | 2829E-001 | |
| | **Printed** | **Sampled** | |
| | 11-DEC-09 | 04-NOV-09 16:30 | |

| Report To | Bill To |
|---|---|
| ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 | ACCOUNTS PAYABLE<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 N. COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

**Sample Description**

CLIENT ID: 161
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 1618
PROJECT NAME: GENUINE PARTS 2829E-001
SAMPLING EVENT: ANNUAL GROUNDWATERS

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 06-NOV-09 12:54 Instrument: GC/MS VOA Test: O510.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ACETONE (2-PROPANONE) | BDL | 10 | ug/L |
| ACROLEIN | BDL | 50 | ug/L |
| ACRYLONITRILE | BDL | 10 | ug/L |
| BENZENE | BDL | 1.0 | ug/L |
| BROMOBENZENE | BDL | 1.0 | ug/L |
| BROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMODICHLOROMETHANE | BDL | 1.0 | ug/L |
| BROMOFORM | BDL | 1.0 | ug/L |
| BROMOMETHANE | BDL | 1.0 | ug/L |
| N-BUTYLBENZENE | BDL | 1.0 | ug/L |
| SEC-BUTYLBENZENE | BDL | 1.0 | ug/L |
| TERT-BUTYLBENZENE | BDL | 1.0 | ug/L |
| CARBON DISULFIDE | BDL | 1.0 | ug/L |
| CARBON TETRACHLORIDE | BDL | 1.0 | ug/L |
| CHLOROBENZENE | BDL | 1.0 | ug/L |
| DIBROMOCHLOROMETHANE | BDL | 1.0 | ug/L |
| CHLOROETHANE | BDL | 1.0 | ug/L |
| CHLOROFORM | BDL | 1.0 | ug/L |
| CHLOROMETHANE | BDL | 1.0 | ug/L |
| 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | ug/L |
| 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864559 161

| | | | |
|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | ug/L |
| 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | ug/L |
| DIBROMOMETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | ug/L |
| DICHLORODIFLUOROMETHANE | BDL | 1.0 | ug/L |
| TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | ug/L |
| 1,1-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,2-DICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROETHENE | BDL | 1.0 | ug/L |
| CIS-1,2-DICHLOROETHENE | EX | 1.0 | ug/L |
| TRANS-1,2-DICHLOROETHENE | 1.9 | 1.0 | ug/L |
| 1,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,3-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 2,2-DICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,1-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | ug/L |
| ETHYL BENZENE | BDL | 1.0 | ug/L |
| ETHYL METHACRYLATE | BDL | 10 | ug/L |
| 2-HEXANONE | BDL | 10 | ug/L |
| HEXACHLOROBUTADIENE | BDL | 1.0 | ug/L |
| IODOMETHANE | BDL | 1.0 | ug/L |
| ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | ug/L |
| 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | ug/L |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | ug/L |
| METHYL ETHYL KETONE | BDL | 10 | ug/L |
| METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | ug/L |
| METHYL ISOBUTYL KETONE | BDL | 10 | ug/L |
| NAPHTHALENE | BDL | 1.0 | ug/L |
| N-PROPYLBENZENE | BDL | 1.0 | ug/L |
| STYRENE | BDL | 1.0 | ug/L |
| 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | ug/L |
| TETRACHLOROETHENE | BDL | 1.0 | ug/L |
| TOLUENE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | ug/L |
| 1,1,1-TRICHLOROETHANE | BDL | 1.0 | ug/L |
| 1,1,2-TRICHLOROETHANE | BDL | 1.0 | ug/L |

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A864559 161

| | | | |
|---|---|---|---|
| TRICHLOROETHENE | EX | 1.0 | ug/L |
| TRICHLOROFLUOROMETHANE | BDL | 1.0 | ug/L |
| 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | ug/L |
| 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | ug/L |
| VINYL ACETATE | BDL | 1.0 | ug/L |
| VINYL CHLORIDE | 5.2 | 1.0 | ug/L |
| XYLENES (O/M/P-XYLENE) | BDL | 2.0 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 102 | | % Rec |
| TOLUENE-D8 | 97 | | % Rec |
| 4-BROMOFLUOROBENZENE | 88 | | % Rec |
| DIBROMOFLUOROMETHANE | 100 | | % Rec |

Dilution necessary due to high concentration of target analytes.

Prep Method SW846-5030B Purge and Trap

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** NELAC:Y

Analyst: H. WILLIAMS Analysis Date: 07-NOV-09 09:22 Instrument: GC/MS VOA Test: O510.5.1

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CIS-1,2-DICHLOROETHENE | 100 | 10 | ug/L |
| TRICHLOROETHENE | 110 | 10 | ug/L |
| ... | | | |
| SURROGATE RECOVERY | | | |
| --- | | | |
| DICHLOROETHANE-D4 | 100 | | % Rec |
| TOLUENE-D8 | 96 | | % Rec |
| 4-BROMOFLUOROBENZENE | 96 | | % Rec |
| DIBROMOFLUOROMETHANE | 99 | | % Rec |

1:10 Dilution

Prep Method SW846-5030B Purge and Trap

**Sample Comments**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

Sample was received on ice at temperature 1.1 C.
Sample chain of custody number 5584.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference)

**HERITAGE ENVIRONMENTAL SERVICES, LLC** **Sample ID: A864559 161**

**Sample Comments**

accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.

IL ELAP / NELAP Accreditation # 100401 Indiana SDWA Lab Accred. No. C-49-01

Scott A Bryan

Approved by: SCOTT BRYAN 16-NOV-09

# Quality Assurance Report

## 59169KF

**08-DEC-09**

| Service Location | Submitter |
|---|---|
| Heritage Environmental Services, LLC<br>Commercial Laboratory Operations<br>7901 West Morris Street<br>Indianapolis, IN 46231<br>(317) 243-8304 | ROB FEDORCHAK<br>KERAMIDA ENVIRONMENTAL, INC.<br>401 NORTH COLLEGE AVENUE<br>INDIANAPOLIS, IN 46202 |

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Complete |
|---|---|---|---|---|
| A864527 | 132R..... | 03-Nov-09 15:00 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864528 | 148R..... | 03-Nov-09 15:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864529 | 153..... | 03-Nov-09 16:00 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864530 | DUP-03..... | 03-Nov-09 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864531 | 302..... | 03-Nov-09 16:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864534 | 152..... | 04-Nov-09 10:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864535 | 146..... | 04-Nov-09 11:00 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864536 | 150..... | 04-Nov-09 11:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864539 | 169D..... | 03-Nov-09 09:50 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864540 | 169S..... | 03-Nov-09 10:20 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864541 | 170S..... | 03-Nov-09 11:00 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864542 | DUP-01..... | 03-Nov-09 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |

# Quality Assurance Report

## 59169KF

**08-DEC-09**

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Complete |
|---|---|---|---|---|
| A864543 | 170D..... | 03-Nov-09 11:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864544 | 167S..... | 03-Nov-09 11:40 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864545 | 167D..... | 03-Nov-09 12:10 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864546 | DUP-02..... | 03-Nov-09 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864547 | 165S..... | 03-Nov-09 12:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864548 | 165D..... | 03-Nov-09 13:00 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864549 | 166D..... | 03-Nov-09 13:30 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864550 | 166S..... | 03-Nov-09 13:45 | 04-Nov-09 | 16-Nov-09 |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| A864555 | 156..... | 04-Nov-09 14:30 | 04-Nov-09 | 19-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| A864556 | 151..... | 04-Nov-09 15:00 | 04-Nov-09 | 19-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| A864557 | 164..... | 04-Nov-09 15:30 | 04-Nov-09 | 16-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| A864558 | 157..... | 04-Nov-09 16:00 | 04-Nov-09 | 16-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |
| A864559 | 161..... | 04-Nov-09 16:30 | 04-Nov-09 | 16-Nov-09 |
| | SAMPLING EVENT : | ANNUAL GROUNDWATERS | | |
| | PROJECT NAME : | GENUINE PARTS 2829E-001 | | |

**59169KF**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R559937 Prep — Analyst: J MINNIEAR, II — Reviewer: L SMITH — Run Date: 06-Nov-09 — Review Date: 09-Nov-09 — Instrument: PREP

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2255318 | INDY | Analytical Run: R560105 | | | | | | | |
| LCS | Q2255319 | INDY | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864527 | Rep: 0 | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864528 | Rep: 0 | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864529 | Rep: 0 | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864530 | Rep: 0 | Analytical Run: R560105 | | | | | | | |
| SAMPLE | A864534 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SAMPLE | A864535 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SAMPLE | A864536 | Rep: 0 | Analytical Run: R560106 | | | | | | | |
| SPI02 | Q2255320 | A864529 | Analytical Run: R560106 | | | | | | | |
| DPS02 | Q2255321 | A864529 | Analytical Run: R560106 | | | | | | | |

R560105 Analytical — Analyst: J MINNIEAR, II — Reviewer: L SMITH — Run Date: 09-Nov-09 — Review Date: 11-Nov-09 — Instrument: GC/MS SVOA

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2256424 | | Analysis Date/Time: 09-Nov-09 07:25 | | | | | | | |
| CAL01 | Q2256424 | | ACENAPHTHENE | 1.4157 | | | | | | 1.8 |
| CAL01 | Q2256424 | | ACENAPHTHYLENE | 2.2282 | | | | | | 5.4 |
| CAL01 | Q2256424 | | ANTHRACENE | 1.2234 | | | | | | 6.9 |
| CAL01 | Q2256424 | | BENZO(A)ANTHRACENE | 1.3064 | | | | | | 5.7 |
| CAL01 | Q2256424 | | BENZO(A)PYRENE | 1.0872 | | | | | | 10.1 |
| CAL01 | Q2256424 | | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 1.6769 | | | | | | 5.6 |
| CAL01 | Q2256424 | | BENZO(G,H,I)PERYLENE | 0.7561 | | | | | | 13.6 |
| CAL01 | Q2256424 | | BENZO(K)FLUORANTHENE | 1.6432 | | | | | | 11.7 |
| CAL01 | Q2256424 | | CHRYSENE | | | LIN | | | | 1.000 |
| CAL01 | Q2256424 | | DIBENZ(A,H)ANTHRACENE | | | LIN | | | | 0.991 |
| CAL01 | Q2256424 | | FLUORANTHENE | 1.2804 | | | | | | 6.6 |
| CAL01 | Q2256424 | | FLUORENE | 1.5517 | | | | | | 2.8 |
| CAL01 | Q2256424 | | INDENO(1,2,3-CD)PYRENE | | | LIN | | | | 0.992 |
| CAL01 | Q2256424 | | NAPHTHALENE | 1.2686 | | | | | | 2.4 |
| CAL01 | Q2256424 | | PHENANTHRENE | 1.3371 | | | | | | 3.3 |
| CAL01 | Q2256424 | | PYRENE | 2.0180 | | | | | | 5.3 |
| CAL01 | Q2256424 | | 2-FLUOROBIPHENYL | 1.8415 | | | | | | 2.1 |
| CAL01 | Q2256424 | | TERPHENYL-D14 | 0.9923 | | | | | | 4.8 |
| BLA02 | Q2255318 | INDY | Analysis Date/Time: 09-Nov-09 13:45 | | | | | | | |
| BLA02 | Q2255318 | INDY | ACENAPHTHENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | ACENAPHTHYLENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(A)ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(A)PYRENE | | | BDL | 0.02 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(G,H,I)PERYLENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | BENZO(K)FLUORANTHENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | CHRYSENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | DIBENZ(A,H)ANTHRACENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | FLUORANTHENE | | | BDL | 0.10 | ug/L | | |

**59169KF**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560105 Analyst: J MINNIEAR, II Run Date: 09-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2255318 | INDY | FLUORENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | INDENO(1,2,3-CD)PYRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | NAPHTHALENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | PHENANTHRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | PYRENE | | | BDL | 0.10 | ug/L | | |
| BLA02 | Q2255318 | INDY | 2-FLUOROBIPHENYL | | | | | | 74 | |
| BLA02 | Q2255318 | INDY | TERPHENYL-D14 | | | | | | 126 | |
| LCS | Q2255319 | INDY | Analysis Date/Time: 09-Nov-09 14:21 | | | | | | | |
| LCS | Q2255319 | INDY | ACENAPHTHENE | 5 | | | 3.74 | ug/L | 74.8 | |
| LCS | Q2255319 | INDY | ACENAPHTHYLENE | 5 | | | 4.09 | ug/L | 81.8 | |
| LCS | Q2255319 | INDY | ANTHRACENE | 5 | | | 4.06 | ug/L | 81.2 | |
| LCS | Q2255319 | INDY | BENZO(A)ANTHRACENE | 5 | | | 4.9 | ug/L | 98 | |
| LCS | Q2255319 | INDY | BENZO(A)PYRENE | 5 | | | 5.45 | ug/L | 109 | |
| LCS | Q2255319 | INDY | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 5 | | | 4.12 | ug/L | 82.4 | |
| LCS | Q2255319 | INDY | BENZO(G,H,I)PERYLENE | 5 | | | 4.96 | ug/L | 99.2 | |
| LCS | Q2255319 | INDY | BENZO(K)FLUORANTHENE | 5 | | | 3.8 | ug/L | 76 | |
| LCS | Q2255319 | INDY | CHRYSENE | 5 | | | 3.82 | ug/L | 76.4 | |
| LCS | Q2255319 | INDY | DIBENZ(A,H)ANTHRACENE | 5 | | | 5.02 | ug/L | 100.4 | |
| LCS | Q2255319 | INDY | FLUORANTHENE | 5 | | | 4.13 | ug/L | 82.6 | |
| LCS | Q2255319 | INDY | FLUORENE | 5 | | | 3.94 | ug/L | 78.8 | |
| LCS | Q2255319 | INDY | INDENO(1,2,3-CD)PYRENE | 5 | | | 4.61 | ug/L | 92.2 | |
| LCS | Q2255319 | INDY | NAPHTHALENE | 5 | | | 3.4 | ug/L | 68 | |
| LCS | Q2255319 | INDY | PHENANTHRENE | 5 | | | 3.67 | ug/L | 73.4 | |
| LCS | Q2255319 | INDY | PYRENE | 5 | | | 3.47 | ug/L | 69.4 | |
| SAMPLE | A864529 | | Analysis Date/Time: 09-Nov-09 14:57 | | | | | | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864527 | | Analysis Date/Time: 09-Nov-09 16:43 | | | | | | | |
| SAMPLE | A864527 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864528 | | Analysis Date/Time: 09-Nov-09 17:19 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864530 | | Analysis Date/Time: 09-Nov-09 17:55 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2256424 Value reported for analytes calibrated by linear (LIN) or
Q2256424 quadratic (QDR) equations is r2 (Coef. of Determination).

R560106 Analyst: J MINNIEAR, II Run Date: 10-Nov-09 Instrument: GC/MS SVOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2256424 | | Analysis Date/Time: 09-Nov-09 07:25 | | | | | | | |
| CAL01 | Q2256424 | | ACENAPHTHENE | 1.4157 | | | | | | 1.8 |
| CAL01 | Q2256424 | | ACENAPHTHYLENE | 2.2282 | | | | | | 5.4 |
| CAL01 | Q2256424 | | ANTHRACENE | 1.2234 | | | | | | 6.9 |
| CAL01 | Q2256424 | | BENZO(A)ANTHRACENE | 1.3064 | | | | | | 5.7 |
| CAL01 | Q2256424 | | BENZO(A)PYRENE | 1.0872 | | | | | | 10.1 |
| CAL01 | Q2256424 | | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 1.6769 | | | | | | 5.6 |
| CAL01 | Q2256424 | | BENZO(G,H,I)PERYLENE | 0.7561 | | | | | | 13.6 |

HERITAGE

**59169KF**

**POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM** **O517.4**
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560106 Analyst: J MINNIEAR, II Run Date: 10-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2256424 | | BENZO(K)FLUORANTHENE | 1.6432 | | | | | | 11.7 |
| CAL01 | Q2256424 | | CHRYSENE | | | LIN | | | | 1.000 |
| CAL01 | Q2256424 | | DIBENZ(A,H)ANTHRACENE | | | LIN | | | | 0.991 |
| CAL01 | Q2256424 | | FLUORANTHENE | 1.2804 | | | | | | 6.6 |
| CAL01 | Q2256424 | | FLUORENE | 1.5517 | | | | | | 2.8 |
| CAL01 | Q2256424 | | INDENO(1,2,3-CD)PYRENE | | | LIN | | | | 0.992 |
| CAL01 | Q2256424 | | NAPHTHALENE | 1.2686 | | | | | | 2.4 |
| CAL01 | Q2256424 | | PHENANTHRENE | 1.3371 | | | | | | 3.3 |
| CAL01 | Q2256424 | | PYRENE | 2.0180 | | | | | | 5.3 |
| CAL01 | Q2256424 | | 2-FLUOROBIPHENYL | 1.8415 | | | | | | 2.1 |
| CAL01 | Q2256424 | | TERPHENYL-D14 | 0.9923 | | | | | | 4.8 |
| CCVD | Q2256425 | | Analysis Date/Time: 10-Nov-09 17:26 | | | | | | | |
| CCVD | Q2256425 | | ACENAPHTHENE | 1.4157 | | | 1.4311 | | | 1.1 |
| CCVD | Q2256425 | | ACENAPHTHYLENE | 2.2282 | | | 2.2896 | | | 2.8 |
| CCVD | Q2256425 | | ANTHRACENE | 1.2234 | | | 1.2805 | | | 4.7 |
| CCVD | Q2256425 | | BENZO(A)ANTHRACENE | 1.3064 | | | 1.4082 | | | 7.8 |
| CCVD | Q2256425 | | BENZO(A)PYRENE | 1.0872 | | | 1.1645 | | | 7.1 |
| CCVD | Q2256425 | | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 1.6769 | | | 1.7729 | | | 5.7 |
| CCVD | Q2256425 | | BENZO(G,H,I)PERYLENE | 0.7561 | | | 0.9013 | | | 19.2 |
| CCVD | Q2256425 | | BENZO(K)FLUORANTHENE | 1.6432 | | | 1.6592 | | | 1 |
| CCVD | Q2256425 | | CHRYSENE | 1.000 | | LIN | 1.000 | | | 0 |
| CCVD | Q2256425 | | DIBENZ(A,H)ANTHRACENE | 1.000 | | LIN | 1.200 | | | 20 |
| CCVD | Q2256425 | | FLUORANTHENE | 1.2804 | | | 1.2981 | | | 1.4 |
| CCVD | Q2256425 | | FLUORENE | 1.5517 | | | 1.5626 | | | 0.7 |
| CCVD | Q2256425 | | INDENO(1,2,3-CD)PYRENE | 1.000 | | LIN | 1.191 | | | 19.1 |
| CCVD | Q2256425 | | NAPHTHALENE | 1.2686 | | | 1.2980 | | | 2.3 |
| CCVD | Q2256425 | | PHENANTHRENE | 1.3371 | | | 1.3447 | | | 0.6 |
| CCVD | Q2256425 | | PYRENE | 2.0180 | | | 1.7228 | | | 14.6 |
| CCVD | Q2256425 | | 2-FLUOROBIPHENYL | 1.8415 | | | 1.8728 | | | 1.7 |
| CCVD | Q2256425 | | TERPHENYL-D14 | 0.9923 | | | 0.9567 | | | 3.6 |
| SPI02 | Q2255320 | A864529 | Analysis Date/Time: 10-Nov-09 18:37 | | | | | | | |
| SPI02 | Q2255320 | A864529 | ACENAPHTHENE | 0 | 5 | | 3.86 | ug/L | 77.2 | |
| SPI02 | Q2255320 | A864529 | ACENAPHTHYLENE | 0 | 5 | | 4.11 | ug/L | 82.2 | |
| SPI02 | Q2255320 | A864529 | ANTHRACENE | 0 | 5 | | 3.56 | ug/L | 71.2 | |
| SPI02 | Q2255320 | A864529 | BENZO(A)ANTHRACENE | 0 | 5 | | 3.77 | ug/L | 75.4 | |
| SPI02 | Q2255320 | A864529 | BENZO(A)PYRENE | 0 | 5 | | 3.8 | ug/L | 76 | |
| SPI02 | Q2255320 | A864529 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 0 | 5 | | 3.99 | ug/L | 79.8 | |
| SPI02 | Q2255320 | A864529 | BENZO(G,H,I)PERYLENE | 0 | 5 | | 2.52 | ug/L | 50.4 | |
| SPI02 | Q2255320 | A864529 | BENZO(K)FLUORANTHENE | 0 | 5 | | 2.03 | ug/L | 40.6 | |
| SPI02 | Q2255320 | A864529 | CHRYSENE | 0 | 5 | | 1.97 | ug/L | 39.4 | |
| SPI02 | Q2255320 | A864529 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | | 2.57 | ug/L | 51.4 | |
| SPI02 | Q2255320 | A864529 | FLUORANTHENE | 0 | 5 | | 4.83 | ug/L | 96.6 | |
| SPI02 | Q2255320 | A864529 | FLUORENE | 0 | 5 | | 4.14 | ug/L | 82.8 | |
| SPI02 | Q2255320 | A864529 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | | 2.76 | ug/L | 55.2 | |
| SPI02 | Q2255320 | A864529 | NAPHTHALENE | 0 | 5 | | 3.54 | ug/L | 70.8 | |
| SPI02 | Q2255320 | A864529 | PHENANTHRENE | 0 | 5 | | 4.09 | ug/L | 81.8 | |

**59169KF**

## POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS, SIM SW846-8270C SIM — O517.4
**Prep : LOW LEVEL SIM/ION TRAP B/N LIQUID-LIQUID EXTRACTION SW846-3510C**

R560106 Analyst: J MINNIEAR, II — Run Date: 10-Nov-09
Analytical Reviewer: L SMITH — Review Date: 11-Nov-09

Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI02 | Q2255320 | A864529 | PYRENE | 0 | 5 | | 3.82 | ug/L | 76.4 | |
| DPS02 | Q2255321 | A864529 | Analysis Date/Time: 10-Nov-09 19:13 | | | | | | | |
| DPS02 | Q2255321 | A864529 | ACENAPHTHENE | 0 | 5 | | 3.96 | ug/L | 79.1 | 2.4 |
| DPS02 | Q2255321 | A864529 | ACENAPHTHYLENE | 0 | 5 | | 4.19 | ug/L | 83.8 | 1.8 |
| DPS02 | Q2255321 | A864529 | ANTHRACENE | 0 | 5 | | 3.37 | ug/L | 67.5 | 5.5 |
| DPS02 | Q2255321 | A864529 | BENZO(A)ANTHRACENE | 0 | 5 | | 3.39 | ug/L | 67.8 | 10.6 |
| DPS02 | Q2255321 | A864529 | BENZO(A)PYRENE | 0 | 5 | | 3.22 | ug/L | 64.4 | 16.4 |
| DPS02 | Q2255321 | A864529 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTHENE) | 0 | 5 | | 3.32 | ug/L | 66.4 | 18.5 |
| DPS02 | Q2255321 | A864529 | BENZO(G,H,I)PERYLENE | 0 | 5 | | 2.25 | ug/L | 45 | 11.3 |
| DPS02 | Q2255321 | A864529 | BENZO(K)FLUORANTHENE | 0 | 5 | | 1.71 | ug/L | 34.1 | 17.2 |
| DPS02 | Q2255321 | A864529 | CHRYSENE | 0 | 5 | | 1.78 | ug/L | 35.6 | 10.4 |
| DPS02 | Q2255321 | A864529 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | | 2.2 | ug/L | 44 | 15.5 |
| DPS02 | Q2255321 | A864529 | FLUORANTHENE | 0 | 5 | | 4.67 | ug/L | 93.4 | 3.3 |
| DPS02 | Q2255321 | A864529 | FLUORENE | 0 | 5 | | 4.13 | ug/L | 82.5 | 0.4 |
| DPS02 | Q2255321 | A864529 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | | 2.38 | ug/L | 47.6 | 14.8 |
| DPS02 | Q2255321 | A864529 | NAPHTHALENE | 0 | 5 | | 3.54 | ug/L | 70.9 | 0 |
| DPS02 | Q2255321 | A864529 | PHENANTHRENE | 0 | 5 | | 3.98 | ug/L | 79.6 | 2.7 |
| DPS02 | Q2255321 | A864529 | PYRENE | 0 | 5 | | 3.65 | ug/L | 73.1 | 4.3 |
| SAMPLE | A864534 | | Analysis Date/Time: 10-Nov-09 20:59 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864535 | | Analysis Date/Time: 10-Nov-09 21:35 | | | | | | | |
| SAMPLE | A864535 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864536 | | Analysis Date/Time: 10-Nov-09 22:10 | | | | | | | |
| SAMPLE | A864536 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2256424 Value reported for analytes calibrated by linear (LIN) or
Q2256424 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256425 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256425 equations is concentration (UG/ML).

## TOTAL ORGANIC CARBON SW846-9060A — O401.0

R559987 Analyst: S BOXUM — Run Date: 06-Nov-09 — Instrument: TOC
Analytical Reviewer: P SPENCE — Review Date: 09-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CDL01 | Q2255871 | | TOTAL ORGANIC CARBON (TOC) | 1.00 | | | 0.901 | mg/L | 90.1 | |
| ICV01 | Q2255872 | | TOTAL ORGANIC CARBON (TOC) | 12.50 | | | 12.0 | mg/L | 96.0 | |
| CCVL | Q2255875 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 5.13 | mg/L | 102.6 | |
| CCVH | Q2255879 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 14.1 | mg/L | 94.0 | |
| BLA01 | Q2255880 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.30 | mg/L | | |
| SPI01 | Q2255881 | A864552 | TOTAL ORGANIC CARBON (TOC) | 1930 | 12500 | | 13900 | mg/L | 95.8 | |
| DPS01 | Q2255882 | A864552 | TOTAL ORGANIC CARBON (TOC) | 1930 | 12500 | | 13900 | mg/L | 95.8 | 0 |
| SAMPLE | A864555 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864556 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2255883 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.89 | mg/L | 97.8 | |
| BLA01 | Q2255884 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.30 | mg/L | | |
| CCVH | Q2255887 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 13.6 | mg/L | 90.7 | |

**59169KF**

**LEAD ICP SW846-6010B** **M116.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Analyst: P MATAKA Run Date: 11-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864527 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864528 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864529 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864530 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864534 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864535 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864536 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | LEAD | 1 | | | 1.02 | mg/L | 102.0 | |
| CDL01 | Q2257790 | INORGANIC | LEAD | 10 | | | 9.96 | mg/L | 99.6 | |
| ICS-AB | Q2257761 | PERKIN ELM | LEAD | 1.00 | | | 0.950 | mg/L | 95.0 | |
| CCV | Q2257764 | INORGANIC | LEAD | 5.00 | | | 5.01 | mg/L | 100.2 | |
| BLA01 | Q2257741 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| LCS | Q2256266 | SPEX | LEAD | 0.5 | | | 0.512 | mg/L | 102.4 | |
| SER01 | Q2257795 | A864529 | LEAD | 0.00755 | | BDL | | mg/L | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256267 | A864529 | LEAD | 0.00755 | 0.500 | | 0.494 | mg/L | 97.3 | |
| DPS02 | Q2256268 | A864529 | LEAD | 0.00755 | 0.500 | | 0.497 | mg/L | 97.9 | 0.6 |
| CCV | Q2257765 | INORGANIC | LEAD | 5.00 | | | 4.97 | mg/L | 99.4 | |
| BLA01 | Q2257742 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| SAMPLE | A864527 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864535 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864536 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | LEAD | 5.00 | | | 4.97 | mg/L | 99.4 | |
| BLA01 | Q2257743 | NA | LEAD | | | < | 0.00200 | mg/L | | |
| SER01 | Q2257796 | A864537 | LEAD | 0.00830 | | CNA | 0.00655 | mg/L | | |
| CDL01 | Q2257788 | INORGANIC | LEAD | 0.01 | | | 0.00928 | mg/L | 92.8 | |
| ICS-AB | Q2257762 | PERKIN ELM | LEAD | 1.00 | | | 0.962 | mg/L | 96.2 | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | LEAD | | | < | 0.000680 | mg/L | | |

**59169KF**

**CHROMIUM ICP SW846-6010B** **M110.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Analyst: P MATAKA Run Date: 11-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864527 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864528 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864529 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864530 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864534 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864535 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864536 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | CHROMIUM | 1 | | | 1.02 | mg/L | 102.0 | |
| CDL01 | Q2257790 | INORGANIC | CHROMIUM | 10 | | | 10.0 | mg/L | 100.0 | |
| ICS-AB | Q2257761 | PERKIN ELM | CHROMIUM | 0.500 | | | 0.500 | mg/L | 100.0 | |
| CCV | Q2257764 | INORGANIC | CHROMIUM | 5.00 | | | 5.06 | mg/L | 101.2 | |
| BLA01 | Q2257741 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| LCS | Q2256266 | SPEX | CHROMIUM | 0.2 | | | 0.210 | mg/L | 105.0 | |
| SER01 | Q2257795 | A864529 | CHROMIUM | 0.0191 | | CNA | 0.0195 | mg/L | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256267 | A864529 | CHROMIUM | 0.0191 | 0.200 | | 0.218 | mg/L | 99.4 | |
| DPS02 | Q2256268 | A864529 | CHROMIUM | 0.0191 | 0.200 | | 0.220 | mg/L | 100.4 | 1.0 |
| CCV | Q2257765 | INORGANIC | CHROMIUM | 5.00 | | | 5.02 | mg/L | 100.4 | |
| BLA01 | Q2257742 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| SAMPLE | A864527 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864535 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864536 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | CHROMIUM | 5.00 | | | 5.00 | mg/L | 100.0 | |
| BLA01 | Q2257743 | NA | CHROMIUM | | | < | 0.000800 | mg/L | | |
| SER01 | Q2257796 | A864537 | CHROMIUM | 0.178 | | | 0.183 | mg/L | | 2.8 |
| CDL01 | Q2257788 | INORGANIC | CHROMIUM | 0.0100 | | | 0.0105 | mg/L | 105.0 | |
| ICS-AB | Q2257762 | PERKIN ELM | CHROMIUM | 0.500 | | | 0.504 | mg/L | 100.8 | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | CHROMIUM | | | < | 0.000108 | mg/L | | |

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**CADMIUM ICP SW846-6010B** **M108.3**
**Prep : FAA/ ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE SW846-3005A**

R560065 Analyst: P MATAKA Run Date: 11-Nov-09 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 12-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | Analytical Run: R560277 | | | | | | | |
| LCS | Q2256266 | SPEX | Analytical Run: R560276 | | | | | | | |
| SPI02 | Q2256267 | A864529 | Analytical Run: R560276 | | | | | | | |
| DPS02 | Q2256268 | A864529 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864527 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864528 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864529 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864530 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864534 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864535 | Rep: 0 | Analytical Run: R560276 | | | | | | | |
| SAMPLE | A864536 | Rep: 0 | Analytical Run: R560276 | | | | | | | |

R560276 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2257802 | PERKIN ELM | CADMIUM | 1 | | | 1.01 | mg/L | 101.0 | |
| CDL01 | Q2257790 | INORGANIC | CADMIUM | 10 | | | 9.98 | mg/L | 99.8 | |
| ICS-AB | Q2257761 | PERKIN ELM | CADMIUM | 1.00 | | | 1.07 | mg/L | 107.0 | |
| CCV | Q2257764 | INORGANIC | CADMIUM | 5.00 | | | 5.16 | mg/L | 103.2 | |
| BLA01 | Q2257741 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| LCS | Q2256266 | SPEX | CADMIUM | 0.05 | | | 0.0481 | mg/L | 96.2 | |
| SER01 | Q2257795 | A864529 | CADMIUM | 0 | | CNA | 0.00199 | mg/L | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI02 | Q2256267 | A864529 | CADMIUM | 0 | 0.050 | | 0.0464 | mg/L | 92.8 | |
| DPS02 | Q2256268 | A864529 | CADMIUM | 0 | 0.050 | | 0.0469 | mg/L | 93.8 | 1.1 |
| CCV | Q2257765 | INORGANIC | CADMIUM | 5.00 | | | 5.13 | mg/L | 102.6 | |
| BLA01 | Q2257742 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| SAMPLE | A864527 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864535 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864536 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2257766 | INORGANIC | CADMIUM | 5.00 | | | 5.18 | mg/L | 103.6 | |
| BLA01 | Q2257743 | NA | CADMIUM | | | < | 0.000400 | mg/L | | |
| SER01 | Q2257796 | A864537 | CADMIUM | 0.00207 | | CNA | 0.00208 | mg/L | | |
| CDL01 | Q2257788 | INORGANIC | CADMIUM | 0.0050 | | | 0.00488 | mg/L | 97.6 | |
| ICS-AB | Q2257762 | PERKIN ELM | CADMIUM | 1.00 | | | 1.09 | mg/L | 109.0 | |

Q2257795 1:5 Dilution.
Q2257796 1:5 Dilution.

R560277 Analyst: J KRAMER Run Date: 12-Nov-09 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2256265 | NA | CADMIUM | | | | 0.000245 | mg/L | | |

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## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 10-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | Analysis Date/Time: 31-Oct-09 13:47 | | | | | | | |
| CAL01 | Q2253648 | | ACETONE (2-PROPANONE) | 0.1022 | | | | | | 8.4 |
| CAL01 | Q2253648 | | ACROLEIN | 0.0175 | | | | | | 14.5 |
| CAL01 | Q2253648 | | ACRYLONITRILE | 0.0692 | | | | | | 11.2 |
| CAL01 | Q2253648 | | BENZENE | 0.8701 | | | | | | 2.5 |
| CAL01 | Q2253648 | | BROMOBENZENE | 1.1810 | | | | | | 4.9 |
| CAL01 | Q2253648 | | BROMOCHLOROMETHANE | 0.1079 | | | | | | 3.2 |
| CAL01 | Q2253648 | | BROMODICHLOROMETHANE | 0.2434 | | | | | | 4.8 |
| CAL01 | Q2253648 | | BROMOFORM | 0.3505 | | | | | | 16.4 |
| CAL01 | Q2253648 | | BROMOMETHANE | 0.1012 | | | | | | 10.3 |
| CAL01 | Q2253648 | | N-BUTYLBENZENE | 1.5933 | | | | | | 3.2 |
| CAL01 | Q2253648 | | SEC-BUTYLBENZENE | 3.6289 | | | | | | 6.3 |
| CAL01 | Q2253648 | | TERT-BUTYLBENZENE | 1.5134 | | | | | | 9.6 |
| CAL01 | Q2253648 | | CARBON DISULFIDE | 0.6311 | | | | | | 3 |
| CAL01 | Q2253648 | | CARBON TETRACHLORIDE | 0.2699 | | | | | | 4.3 |
| CAL01 | Q2253648 | | CHLOROBENZENE | 1.7328 | | | | | | 6.7 |
| CAL01 | Q2253648 | | DIBROMOCHLOROMETHANE | 0.5223 | | | | | | 11.9 |
| CAL01 | Q2253648 | | CHLOROETHANE | 0.1262 | | | | | | 10.5 |
| CAL01 | Q2253648 | | CHLOROFORM | 0.3695 | | | | | | 5.2 |
| CAL01 | Q2253648 | | CHLOROMETHANE | 0.2131 | | | | | | 16.2 |
| CAL01 | Q2253648 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | | | | 13.8 |
| CAL01 | Q2253648 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | | | | 6.4 |
| CAL01 | Q2253648 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | | | | 8.4 |
| CAL01 | Q2253648 | | DIBROMOMETHANE | 0.1230 | | | | | | 1.9 |
| CAL01 | Q2253648 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | | | | 0.7 |
| CAL01 | Q2253648 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | | | | 1.8 |
| CAL01 | Q2253648 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | | | | 2.8 |
| CAL01 | Q2253648 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | | | | 5.9 |
| CAL01 | Q2253648 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | | | | 11.1 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHANE | 0.3815 | | | | | | 1.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROETHANE | 0.2779 | | | | | | 2.5 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHENE | 0.1982 | | | | | | 1.4 |
| CAL01 | Q2253648 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | | | | 2 |
| CAL01 | Q2253648 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | | | | 2.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROPROPANE | 0.2007 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3-DICHLOROPROPANE | 0.9526 | | | | | | 9.2 |
| CAL01 | Q2253648 | | 1,1-DICHLOROPROPENE | 0.1063 | | | | | | 2.5 |
| CAL01 | Q2253648 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | | | | 9.3 |
| CAL01 | Q2253648 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | | | | 14.3 |
| CAL01 | Q2253648 | | ETHYL BENZENE | 0.9633 | | | | | | 6.5 |
| CAL01 | Q2253648 | | ETHYL METHACRYLATE | 0.8960 | | | | | | 8.7 |
| CAL01 | Q2253648 | | 2-HEXANONE | 0.6513 | | | | | | 7.1 |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | HEXACHLOROBUTADIENE | 0.5378 | | | | | | 2.3 |
| CAL01 | Q2253648 | | IODOMETHANE | 0.3240 | | | | | | 1.8 |
| CAL01 | Q2253648 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | | | | 5.5 |
| CAL01 | Q2253648 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2253648 | | METHYL ETHYL KETONE | 0.0405 | | | | | | 5 |
| CAL01 | Q2253648 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | | | | 3 |
| CAL01 | Q2253648 | | METHYL ISOBUTYL KETONE | 0.3155 | | | | | | 5.9 |
| CAL01 | Q2253648 | | NAPHTHALENE | 3.5250 | | | | | | 3.8 |
| CAL01 | Q2253648 | | N-PROPYLBENZENE | 0.4079 | | | | | | 3.9 |
| CAL01 | Q2253648 | | STYRENE | 1.9432 | | | | | | 7.8 |
| CAL01 | Q2253648 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | | | | 6.6 |
| CAL01 | Q2253648 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | | | | 3.4 |
| CAL01 | Q2253648 | | TETRACHLOROETHENE | 0.7380 | | | | | | 7.4 |
| CAL01 | Q2253648 | | TOLUENE | 0.8639 | | | | | | 6.3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | | | | 6.1 |
| CAL01 | Q2253648 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | | | | 4.4 |
| CAL01 | Q2253648 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | | | | 7 |
| CAL01 | Q2253648 | | TRICHLOROETHENE | 0.2277 | | | | | | 1.8 |
| CAL01 | Q2253648 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | | | | 3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | | | | 3.1 |
| CAL01 | Q2253648 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | | | | 6.4 |
| CAL01 | Q2253648 | | VINYL ACETATE | | | LIN | | | | 0.996 |
| CAL01 | Q2253648 | | VINYL CHLORIDE | 0.2350 | | | | | | 3.4 |
| CAL01 | Q2253648 | | DICHLOROETHANE-D4 | 0.2816 | | | | | | 2.3 |
| CAL01 | Q2253648 | | TOLUENE-D8 | 0.8989 | | | | | | 4 |
| CAL01 | Q2253648 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | | | | 5.2 |
| CAL01 | Q2253648 | | DIBROMOFLUOROMETHANE | 0.2362 | | | | | | 3.2 |
| CCVD | Q2255851 | | Analysis Date/Time: 06-Nov-09 03:35 | | | | | | | |
| CCVD | Q2255851 | | ACETONE (2-PROPANONE) | 0.1022 | | | 0.0864 | | | 15.5 |
| CCVD | Q2255851 | | ACROLEIN | 0.0175 | | | 0.0079 | | | 54.9 |
| CCVD | Q2255851 | | ACRYLONITRILE | 0.0692 | | | 0.0843 | | | 21.8 |
| CCVD | Q2255851 | | BENZENE | 0.8701 | | | 0.8698 | | | 0 |
| CCVD | Q2255851 | | BROMOBENZENE | 1.1810 | | | 1.1198 | | | 5.2 |
| CCVD | Q2255851 | | BROMOCHLOROMETHANE | 0.1079 | | | 0.1002 | | | 7.1 |
| CCVD | Q2255851 | | BROMODICHLOROMETHANE | 0.2434 | | | 0.2242 | | | 7.9 |
| CCVD | Q2255851 | | BROMOFORM | 0.3505 | | | 0.2777 | | | 20.8 |
| CCVD | Q2255851 | | BROMOMETHANE | 0.1012 | | | 0.1021 | | | 0.9 |
| CCVD | Q2255851 | | N-BUTYLBENZENE | 1.5933 | | | 1.4562 | | | 8.6 |
| CCVD | Q2255851 | | SEC-BUTYLBENZENE | 3.6289 | | | 3.4071 | | | 6.1 |
| CCVD | Q2255851 | | TERT-BUTYLBENZENE | 1.5134 | | | 1.4790 | | | 2.3 |
| CCVD | Q2255851 | | CARBON DISULFIDE | 0.6311 | | | 0.5486 | | | 13.1 |
| CCVD | Q2255851 | | CARBON TETRACHLORIDE | 0.2699 | | | 0.2375 | | | 12 |
| CCVD | Q2255851 | | CHLOROBENZENE | 1.7328 | | | 1.7193 | | | 0.8 |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2255851 | | DIBROMOCHLOROMETHANE | 0.5223 | | | 0.4523 | | | 13.4 |
| CCVD | Q2255851 | | CHLOROETHANE | 0.1262 | | | 0.1280 | | | 1.4 |
| CCVD | Q2255851 | | CHLOROFORM | 0.3695 | | | 0.3374 | | | 8.7 |
| CCVD | Q2255851 | | CHLOROMETHANE | 0.2131 | | | 0.1836 | | | 13.8 |
| CCVD | Q2255851 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | 0.7147 | | | 6.5 |
| CCVD | Q2255851 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | 0.6942 | | | 3.9 |
| CCVD | Q2255851 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | 0.1656 | | | 16.6 |
| CCVD | Q2255851 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | 0.1649 | | | 25.1 |
| CCVD | Q2255851 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | 0.1818 | | | 3.7 |
| CCVD | Q2255851 | | DIBROMOMETHANE | 0.1230 | | | 0.1179 | | | 4.1 |
| CCVD | Q2255851 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | 1.3586 | | | 9.4 |
| CCVD | Q2255851 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | 1.3797 | | | 7.4 |
| CCVD | Q2255851 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | 1.3958 | | | 6.5 |
| CCVD | Q2255851 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | 0.1342 | | | 5.6 |
| CCVD | Q2255851 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | 0.1876 | | | 25.3 |
| CCVD | Q2255851 | | 1,1-DICHLOROETHANE | 0.3815 | | | 0.3615 | | | 5.2 |
| CCVD | Q2255851 | | 1,2-DICHLOROETHANE | 0.2779 | | | 0.2705 | | | 2.7 |
| CCVD | Q2255851 | | 1,1-DICHLOROETHENE | 0.1982 | | | 0.1881 | | | 5.1 |
| CCVD | Q2255851 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | 0.2250 | | | 6.8 |
| CCVD | Q2255851 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | 0.2163 | | | 4.8 |
| CCVD | Q2255851 | | 1,2-DICHLOROPROPANE | 0.2007 | | | 0.2143 | | | 6.8 |
| CCVD | Q2255851 | | 1,3-DICHLOROPROPANE | 0.9526 | | | 1.0143 | | | 6.5 |
| CCVD | Q2255851 | | 1,1-DICHLOROPROPENE | 0.1063 | | | 0.1008 | | | 5.2 |
| CCVD | Q2255851 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | 0.2976 | | | 2.1 |
| CCVD | Q2255851 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | 0.2335 | | | 3.9 |
| CCVD | Q2255851 | | ETHYL BENZENE | 0.9633 | | | 0.9504 | | | 1.3 |
| CCVD | Q2255851 | | ETHYL METHACRYLATE | 0.8960 | | | 0.7932 | | | 11.5 |
| CCVD | Q2255851 | | 2-HEXANONE | 0.6513 | | | 0.6297 | | | 3.3 |
| CCVD | Q2255851 | | HEXACHLOROBUTADIENE | 0.5378 | | | 0.4656 | | | 13.4 |
| CCVD | Q2255851 | | IODOMETHANE | 0.3240 | | | 0.2975 | | | 8.2 |
| CCVD | Q2255851 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | 2.7788 | | | 3.7 |
| CCVD | Q2255851 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | 2.8301 | | | 7.2 |
| CCVD | Q2255851 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | LIN | 8.57 | | | 14.3 |
| CCVD | Q2255851 | | METHYL ETHYL KETONE | 0.0405 | | | 0.0363 | | | 10.4 |
| CCVD | Q2255851 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | 0.6769 | | | 10.7 |
| CCVD | Q2255851 | | METHYL ISOBUTYL KETONE | 0.3155 | | | 0.3076 | | | 2.5 |
| CCVD | Q2255851 | | NAPHTHALENE | 3.5250 | | | 2.9887 | | | 15.2 |
| CCVD | Q2255851 | | N-PROPYLBENZENE | 0.4079 | | | 0.3862 | | | 5.3 |
| CCVD | Q2255851 | | STYRENE | 1.9432 | | | 1.8202 | | | 6.3 |
| CCVD | Q2255851 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | 0.5362 | | | 13.7 |
| CCVD | Q2255851 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | 0.8565 | | | 3.5 |
| CCVD | Q2255851 | | TETRACHLOROETHENE | 0.7380 | | | 0.7265 | | | 1.6 |
| CCVD | Q2255851 | | TOLUENE | 0.8639 | | | 0.9345 | | | 8.2 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2255851 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | 0.9468 | | | 18 |
| CCVD | Q2255851 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | 1.0449 | | | 11.9 |
| CCVD | Q2255851 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | 0.2843 | | | 7.4 |
| CCVD | Q2255851 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | 0.1845 | | | 8 |
| CCVD | Q2255851 | | TRICHLOROETHENE | 0.2277 | | | 0.2225 | | | 2.3 |
| CCVD | Q2255851 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | 0.2738 | | | 7.7 |
| CCVD | Q2255851 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | 0.2674 | | | 5.7 |
| CCVD | Q2255851 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | 2.5856 | | | 7.6 |
| CCVD | Q2255851 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | 2.5703 | | | 6.2 |
| CCVD | Q2255851 | | VINYL ACETATE | 10.0 | | LIN | 43.0 | | | 330 |
| CCVD | Q2255851 | | VINYL CHLORIDE | 0.2350 | | | 0.2317 | | | 1.4 |
| CCVD | Q2255851 | | DICHLOROETHANE-D4 | 0.2816 | | | 0.2659 | | | 5.6 |
| CCVD | Q2255851 | | TOLUENE-D8 | 0.8989 | | | 0.9382 | | | 4.4 |
| CCVD | Q2255851 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | 0.7967 | | | 6.7 |
| CCVD | Q2255851 | | DIBROMOFLUOROMETHANE | 0.2362 | | | 0.2145 | | | 9.2 |
| BLA01 | Q2255852 | | Analysis Date/Time: 06-Nov-09 04:09 | | | | | | | |
| BLA01 | Q2255852 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2255852 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2255852 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |

**59169KF**

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2255852 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2255852 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2255852 | | XYLENES (O/M/P-XYLENE) | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2255852 | | DICHLOROETHANE-D4 | | | | | | 100 | |
| BLA01 | Q2255852 | | TOLUENE-D8 | | | | | | 97 | |
| BLA01 | Q2255852 | | 4-BROMOFLUOROBENZENE | | | | | | 95 | |

59169KF

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2255852 | | DIBROMOFLUOROMETHANE | | | | | | 98 | |
| LCS01 | Q2255853 | METHOD 826 | Analysis Date/Time: 06-Nov-09 04:43 | | | | | | | |
| LCS01 | Q2255853 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 47.7 | ug/L | 95.4 | |
| LCS01 | Q2255853 | METHOD 826 | ACROLEIN | 100 | | | 86.8 | ug/L | 86.8 | |
| LCS01 | Q2255853 | METHOD 826 | ACRYLONITRILE | 100 | | | 189 | ug/L | 189 | |
| LCS01 | Q2255853 | METHOD 826 | BENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOBENZENE | 10 | | | 9.5 | ug/L | 95 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 9.53 | ug/L | 95.3 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOFORM | 10 | | | 7.69 | ug/L | 76.9 | |
| LCS01 | Q2255853 | METHOD 826 | BROMOMETHANE | 10 | | | 9.84 | ug/L | 98.4 | |
| LCS01 | Q2255853 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2255853 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 9.39 | ug/L | 93.9 | |
| LCS01 | Q2255853 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2255853 | METHOD 826 | CARBON DISULFIDE | 10 | | | 8.6 | ug/L | 86 | |
| LCS01 | Q2255853 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 9.85 | ug/L | 98.5 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROBENZENE | 10 | | | 9.39 | ug/L | 93.9 | |
| LCS01 | Q2255853 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 8.53 | ug/L | 85.3 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROFORM | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.73 | ug/L | 87.3 | |
| LCS01 | Q2255853 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 9.49 | ug/L | 94.9 | |
| LCS01 | Q2255853 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 9.63 | ug/L | 96.3 | |
| LCS01 | Q2255853 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 9.87 | ug/L | 98.7 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 8.35 | ug/L | 83.5 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 9.46 | ug/L | 94.6 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 9.51 | ug/L | 95.1 | |
| LCS01 | Q2255853 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 9.64 | ug/L | 96.4 | |
| LCS01 | Q2255853 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 8.66 | ug/L | 86.6 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 14.7 | ug/L | 73.5 | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2255853 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2255853 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 9.72 | ug/L | 97.2 | |
| LCS01 | Q2255853 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 9.11 | ug/L | 91.1 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2255853 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 9.59 | ug/L | 95.9 | |
| LCS01 | Q2255853 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2255853 | METHOD 826 | ETHYL BENZENE | 10 | | | 9.44 | ug/L | 94.4 | |
| LCS01 | Q2255853 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 8.74 | ug/L | 87.4 | |
| LCS01 | Q2255853 | METHOD 826 | 2-HEXANONE | 50 | | | 44.8 | ug/L | 89.6 | |
| LCS01 | Q2255853 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | | 8.69 | ug/L | 86.9 | |
| LCS01 | Q2255853 | METHOD 826 | IODOMETHANE | 10 | | | 9.47 | ug/L | 94.7 | |
| LCS01 | Q2255853 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2255853 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 9.37 | ug/L | 93.7 | |
| LCS01 | Q2255853 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 9.78 | ug/L | 97.8 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 49.3 | ug/L | 98.6 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.25 | ug/L | 92.5 | |
| LCS01 | Q2255853 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 49.2 | ug/L | 98.4 | |
| LCS01 | Q2255853 | METHOD 826 | NAPHTHALENE | 10 | | | 9.1 | ug/L | 91 | |
| LCS01 | Q2255853 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 9.56 | ug/L | 95.6 | |
| LCS01 | Q2255853 | METHOD 826 | STYRENE | 10 | | | 9.22 | ug/L | 92.2 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 8.98 | ug/L | 89.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2255853 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 9.32 | ug/L | 93.2 | |
| LCS01 | Q2255853 | METHOD 826 | TOLUENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 8.78 | ug/L | 87.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 9.33 | ug/L | 93.3 | |
| LCS01 | Q2255853 | METHOD | 1,1,1-TRICHLOROETHANE | 10 | | | 9.91 | ug/L | 99.1 | |

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2255853 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2255853 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2255853 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 9.28 | ug/L | 92.8 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 8.89 | ug/L | 88.9 | |
| LCS01 | Q2255853 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 9.45 | ug/L | 94.5 | |
| LCS01 | Q2255853 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 9.45 | ug/L | 94.5 | |
| LCS01 | Q2255853 | METHOD 826 | VINYL ACETATE | 10 | | | 11.1 | ug/L | 111 | |
| LCS01 | Q2255853 | METHOD 826 | VINYL CHLORIDE | 10 | | | 9.64 | ug/L | 96.4 | |
| LCS01 | Q2255853 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 28.4 | ug/L | 94.7 | |
| SPI01 | Q2255854 | A864552 | Analysis Date/Time: 06-Nov-09 09:29 | | | | | | | |
| SPI01 | Q2255854 | A864552 | ACETONE (2-PROPANONE) | 0 | 50 | | 60.7 | ug/L | 121.4 | |
| SPI01 | Q2255854 | A864552 | ACROLEIN | 0 | 100 | | 92.7 | ug/L | 92.7 | |
| SPI01 | Q2255854 | A864552 | ACRYLONITRILE | 0 | 100 | | 195 | ug/L | 195 | |
| SPI01 | Q2255854 | A864552 | BENZENE | 0 | 10 | ! | 12.8 | ug/L | 128 | |
| SPI01 | Q2255854 | A864552 | BROMOBENZENE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2255854 | A864552 | BROMOCHLOROMETHANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | BROMODICHLOROMETHANE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2255854 | A864552 | BROMOFORM | 0 | 10 | | 8.94 | ug/L | 89.4 | |
| SPI01 | Q2255854 | A864552 | BROMOMETHANE | 0 | 10 | | 12.9 | ug/L | 129 | |
| SPI01 | Q2255854 | A864552 | N-BUTYLBENZENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2255854 | A864552 | SEC-BUTYLBENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | TERT-BUTYLBENZENE | 0 | 10 | | 12.2 | ug/L | 122 | |
| SPI01 | Q2255854 | A864552 | CARBON DISULFIDE | 0 | 10 | | 9.99 | ug/L | 99.9 | |
| SPI01 | Q2255854 | A864552 | CARBON TETRACHLORIDE | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2255854 | A864552 | CHLOROBENZENE | 0 | 10 | ! | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | DIBROMOCHLOROMETHANE | 0 | 10 | | 10.3 | ug/L | 103 | |
| SPI01 | Q2255854 | A864552 | CHLOROETHANE | 0 | 10 | | 13.7 | ug/L | 137 | |
| SPI01 | Q2255854 | A864552 | CHLOROFORM | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | CHLOROMETHANE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2255854 | A864552 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2255854 | A864552 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2255854 | A864552 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 10.1 | ug/L | 101 | |
| SPI01 | Q2255854 | A864552 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 13.3 | ug/L | 133 | |
| SPI01 | Q2255854 | A864552 | DIBROMOMETHANE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2255854 | A864552 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 12 | ug/L | 120 | |

**59169KF**

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2255854 | A864552 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 12.2 | ug/L | 61 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROETHANE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROETHANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROETHENE | 0 | 10 | | 12 | ug/L | 120 | |
| SPI01 | Q2255854 | A864552 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 12.5 | ug/L | 125 | |
| SPI01 | Q2255854 | A864552 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 12.9 | ug/L | 129 | |
| SPI01 | Q2255854 | A864552 | 1,2-DICHLOROPROPANE | 0 | 10 | ! | 13.1 | ug/L | 131 | |
| SPI01 | Q2255854 | A864552 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 13.6 | ug/L | 136 | |
| SPI01 | Q2255854 | A864552 | 2,2-DICHLOROPROPANE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2255854 | A864552 | 1,1-DICHLOROPROPENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2255854 | A864552 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | ETHYL BENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | ETHYL METHACRYLATE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2255854 | A864552 | 2-HEXANONE | 0 | 50 | ! | 67.3 | ug/L | 134.6 | |
| SPI01 | Q2255854 | A864552 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2255854 | A864552 | IODOMETHANE | 0 | 10 | | 12 | ug/L | 120 | |
| SPI01 | Q2255854 | A864552 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2255854 | A864552 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2255854 | A864552 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2255854 | A864552 | METHYL ETHYL KETONE | 0 | 50 | | 64.8 | ug/L | 129.6 | |
| SPI01 | Q2255854 | A864552 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2255854 | A864552 | METHYL ISOBUTYL KETONE | 0 | 50 | ! | 68.1 | ug/L | 136.2 | |
| SPI01 | Q2255854 | A864552 | NAPHTHALENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | N-PROPYLBENZENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2255854 | A864552 | STYRENE | 0 | 10 | | 6.41 | ug/L | 64.1 | |
| SPI01 | Q2255854 | A864552 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2255854 | A864552 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | ! | 12.7 | ug/L | 127 | |
| SPI01 | Q2255854 | A864552 | TETRACHLOROETHENE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2255854 | A864552 | TOLUENE | 0 | 10 | ! | 13 | ug/L | 130 | |
| SPI01 | Q2255854 | A864552 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.3 | ug/L | 103 | |
| SPI01 | Q2255854 | A864552 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2255854 | A864552 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2255854 | A864552 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 13.8 | ug/L | 138 | |
| SPI01 | Q2255854 | A864552 | TRICHLOROETHENE | 0 | 10 | | 13.2 | ug/L | 132 | |
| SPI01 | Q2255854 | A864552 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2255854 | A864552 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 12.4 | ug/L | 124 | |
| SPI01 | Q2255854 | A864552 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.3 | ug/L | 93 | |
| SPI01 | Q2255854 | A864552 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.78 | ug/L | 87.8 | |
| SPI01 | Q2255854 | A864552 | VINYL ACETATE | 0 | 10 | | 8.89 | ug/L | 88.9 | |
| SPI01 | Q2255854 | A864552 | VINYL CHLORIDE | 4.9 | 10 | | 18.1 | ug/L | 132 | |
| SPI01 | Q2255854 | A864552 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 32.6 | ug/L | 108.7 | |
| DPS01 | Q2255855 | A864552 | Analysis Date/Time: 06-Nov-09 09:54 | | | | | | | |
| DPS01 | Q2255855 | A864552 | ACETONE (2-PROPANONE) | 0 | 50 | | 56.3 | ug/L | 112.6 | 7.5 |
| DPS01 | Q2255855 | A864552 | ACROLEIN | 0 | 100 | | 75.7 | ug/L | 75.7 | 20.2 |
| DPS01 | Q2255855 | A864552 | ACRYLONITRILE | 0 | 100 | | 151 | ug/L | 151.1 | 25.2 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2255855 | A864552 | BENZENE | 0 | 10 | | 11.9 | ug/L | 118.5 | 7.3 |
| DPS01 | Q2255855 | A864552 | BROMOBENZENE | 0 | 10 | | 11.3 | ug/L | 112.7 | 7.2 |
| DPS01 | Q2255855 | A864552 | BROMOCHLOROMETHANE | 0 | 10 | | 11.5 | ug/L | 114.9 | 7.4 |
| DPS01 | Q2255855 | A864552 | BROMODICHLOROMETHANE | 0 | 10 | | 10.6 | ug/L | 106.4 | 5.8 |
| DPS01 | Q2255855 | A864552 | BROMOFORM | 0 | 10 | | 8.52 | ug/L | 85.2 | 4.8 |
| DPS01 | Q2255855 | A864552 | BROMOMETHANE | 0 | 10 | | 11.6 | ug/L | 115.6 | 10.6 |
| DPS01 | Q2255855 | A864552 | N-BUTYLBENZENE | 0 | 10 | | 11 | ug/L | 109.8 | 0.9 |
| DPS01 | Q2255855 | A864552 | SEC-BUTYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114.1 | 3.4 |
| DPS01 | Q2255855 | A864552 | TERT-BUTYLBENZENE | 0 | 10 | | 11.8 | ug/L | 117.8 | 3.7 |
| DPS01 | Q2255855 | A864552 | CARBON DISULFIDE | 0 | 10 | | 9.41 | ug/L | 94.1 | 6 |
| DPS01 | Q2255855 | A864552 | CARBON TETRACHLORIDE | 0 | 10 | | 10.2 | ug/L | 101.6 | 7.8 |
| DPS01 | Q2255855 | A864552 | CHLOROBENZENE | 0 | 10 | | 11.8 | ug/L | 117.7 | 5.9 |
| DPS01 | Q2255855 | A864552 | DIBROMOCHLOROMETHANE | 0 | 10 | | 9.83 | ug/L | 98.3 | 5.1 |
| DPS01 | Q2255855 | A864552 | CHLOROETHANE | 0 | 10 | | 12.6 | ug/L | 126.3 | 8.3 |
| DPS01 | Q2255855 | A864552 | CHLOROFORM | 0 | 10 | | 10.9 | ug/L | 108.7 | 8 |
| DPS01 | Q2255855 | A864552 | CHLOROMETHANE | 0 | 10 | | 10.3 | ug/L | 102.9 | 8.4 |
| DPS01 | Q2255855 | A864552 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.4 | ug/L | 113.6 | 4.1 |
| DPS01 | Q2255855 | A864552 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.2 | ug/L | 111.6 | 6.3 |
| DPS01 | Q2255855 | A864552 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2255855 | A864552 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 9.25 | ug/L | 92.5 | 8.6 |
| DPS01 | Q2255855 | A864552 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 12.2 | ug/L | 122.3 | 8.4 |
| DPS01 | Q2255855 | A864552 | DIBROMOMETHANE | 0 | 10 | | 11.6 | ug/L | 115.6 | 7.9 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 11 | ug/L | 109.9 | 5.5 |
| DPS01 | Q2255855 | A864552 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 110.8 | 4.6 |
| DPS01 | Q2255855 | A864552 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 110.8 | 5.3 |
| DPS01 | Q2255855 | A864552 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 12.2 | ug/L | 121.8 | 1.7 |
| DPS01 | Q2255855 | A864552 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 10.2 | ug/L | 50.8 | 18.1 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 114.8 | 8.7 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROETHANE | 0 | 10 | | 11.3 | ug/L | 112.7 | 9.5 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROETHENE | 0 | 10 | | 11.5 | ug/L | 114.7 | 4.1 |
| DPS01 | Q2255855 | A864552 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 11.7 | ug/L | 116.9 | 6.3 |
| DPS01 | Q2255855 | A864552 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 12.3 | ug/L | 122.5 | 5.2 |
| DPS01 | Q2255855 | A864552 | 1,2-DICHLOROPROPANE | 0 | 10 | | 12.2 | ug/L | 121.9 | 7 |
| DPS01 | Q2255855 | A864552 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 12.5 | ug/L | 125.4 | 7.8 |
| DPS01 | Q2255855 | A864552 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.85 | ug/L | 98.5 | 7.1 |
| DPS01 | Q2255855 | A864552 | 1,1-DICHLOROPROPENE | 0 | 10 | | 10.7 | ug/L | 107 | 8.1 |
| DPS01 | Q2255855 | A864552 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.75 | ug/L | 97.5 | 10 |
| DPS01 | Q2255855 | A864552 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.21 | ug/L | 92.1 | 12.3 |
| DPS01 | Q2255855 | A864552 | ETHYL BENZENE | 0 | 10 | | 11.5 | ug/L | 115.1 | 2.1 |
| DPS01 | Q2255855 | A864552 | ETHYL METHACRYLATE | 0 | 10 | | 10 | ug/L | 100.2 | 7 |
| DPS01 | Q2255855 | A864552 | 2-HEXANONE | 0 | 50 | ! | 61.5 | ug/L | 123 | 9 |
| DPS01 | Q2255855 | A864552 | HEXACHLOROBUTADIENE | 0 | 10 | | 10.8 | ug/L | 108.4 | 1.5 |
| DPS01 | Q2255855 | A864552 | IODOMETHANE | 0 | 10 | | 11 | ug/L | 110.4 | 8.2 |
| DPS01 | Q2255855 | A864552 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.2 | ug/L | 111.7 | 5.2 |

59169KF

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R559983 Analyst: H WILLIAMS Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 10-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2255855 | A864552 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 10.8 | ug/L | 108.4 | 1.6 |
| DPS01 | Q2255855 | A864552 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 10.6 | ug/L | 106 | 7.3 |
| DPS01 | Q2255855 | A864552 | METHYL ETHYL KETONE | 0 | 50 | | 57.7 | ug/L | 115.4 | 11.6 |
| DPS01 | Q2255855 | A864552 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 10.5 | ug/L | 105.4 | 7.9 |
| DPS01 | Q2255855 | A864552 | METHYL ISOBUTYL KETONE | 0 | 50 | | 61.8 | ug/L | 123.6 | 9.6 |
| DPS01 | Q2255855 | A864552 | NAPHTHALENE | 0 | 10 | | 10.4 | ug/L | 103.9 | 0.1 |
| DPS01 | Q2255855 | A864552 | N-PROPYLBENZENE | 0 | 10 | | 10.9 | ug/L | 109.3 | 5.5 |
| DPS01 | Q2255855 | A864552 | STYRENE | 0 | 10 | | 6.77 | ug/L | 67.7 | 5.5 |
| DPS01 | Q2255855 | A864552 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 101.6 | 8.8 |
| DPS01 | Q2255855 | A864552 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115.1 | 9.4 |
| DPS01 | Q2255855 | A864552 | TETRACHLOROETHENE | 0 | 10 | | 11 | ug/L | 109.8 | 4.4 |
| DPS01 | Q2255855 | A864552 | TOLUENE | 0 | 10 | | 12.2 | ug/L | 121.9 | 6.1 |
| DPS01 | Q2255855 | A864552 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.5 | ug/L | 104.7 | 2.1 |
| DPS01 | Q2255855 | A864552 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | 1.8 |
| DPS01 | Q2255855 | A864552 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 111.4 | 6.4 |
| DPS01 | Q2255855 | A864552 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 12.8 | ug/L | 128.3 | 7.4 |
| DPS01 | Q2255855 | A864552 | TRICHLOROETHENE | 0 | 10 | | 12.5 | ug/L | 124.7 | 5.6 |
| DPS01 | Q2255855 | A864552 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.1 | ug/L | 110.9 | 5.3 |
| DPS01 | Q2255855 | A864552 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 11.4 | ug/L | 113.8 | 8.4 |
| DPS01 | Q2255855 | A864552 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.25 | ug/L | 92.5 | 0.5 |
| DPS01 | Q2255855 | A864552 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.6 |
| DPS01 | Q2255855 | A864552 | VINYL ACETATE | 0 | 10 | | 5.88 | ug/L | 58.8 | 40.8 |
| DPS01 | Q2255855 | A864552 | VINYL CHLORIDE | 4.9 | 10 | | 17.1 | ug/L | 122 | 7.9 |
| DPS01 | Q2255855 | A864552 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 31.3 | ug/L | 104.3 | 4.1 |
| SAMPLE | A864555 | | Analysis Date/Time: 06-Nov-09 11:11 | | | | | | | |
| SAMPLE | A864555 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864556 | | Analysis Date/Time: 06-Nov-09 11:36 | | | | | | | |
| SAMPLE | A864556 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864557 | | Analysis Date/Time: 06-Nov-09 12:02 | | | | | | | |
| SAMPLE | A864557 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864558 | | Analysis Date/Time: 06-Nov-09 12:28 | | | | | | | |
| SAMPLE | A864558 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864559 | | Analysis Date/Time: 06-Nov-09 12:54 | | | | | | | |
| SAMPLE | A864559 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2253648 Value reported for analytes calibrated by linear (LIN) or
Q2253648 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2255851 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2255851 equations is concentration ( ).
Q2255854 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2255854 possible. Unacidified sample not available.
Q2255855 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2255855 possible. Unacidified sample not available.

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | Analysis Date/Time: 31-Oct-09 13:47 | | | | | | | |
| CAL01 | Q2253648 | | ACETONE (2-PROPANONE) | 0.1022 | | | | | | 8.4 |
| CAL01 | Q2253648 | | ACROLEIN | 0.0175 | | | | | | 14.5 |
| CAL01 | Q2253648 | | ACRYLONITRILE | 0.0692 | | | | | | 11.2 |
| CAL01 | Q2253648 | | BENZENE | 0.8701 | | | | | | 2.5 |
| CAL01 | Q2253648 | | BROMOBENZENE | 1.1810 | | | | | | 4.9 |
| CAL01 | Q2253648 | | BROMOCHLOROMETHANE | 0.1079 | | | | | | 3.2 |
| CAL01 | Q2253648 | | BROMODICHLOROMETHANE | 0.2434 | | | | | | 4.8 |
| CAL01 | Q2253648 | | BROMOFORM | 0.3505 | | | | | | 16.4 |
| CAL01 | Q2253648 | | BROMOMETHANE | 0.1012 | | | | | | 10.3 |
| CAL01 | Q2253648 | | N-BUTYLBENZENE | 1.5933 | | | | | | 3.2 |
| CAL01 | Q2253648 | | SEC-BUTYLBENZENE | 3.6289 | | | | | | 6.3 |
| CAL01 | Q2253648 | | TERT-BUTYLBENZENE | 1.5134 | | | | | | 9.6 |
| CAL01 | Q2253648 | | CARBON DISULFIDE | 0.6311 | | | | | | 3 |
| CAL01 | Q2253648 | | CARBON TETRACHLORIDE | 0.2699 | | | | | | 4.3 |
| CAL01 | Q2253648 | | CHLOROBENZENE | 1.7328 | | | | | | 6.7 |
| CAL01 | Q2253648 | | DIBROMOCHLOROMETHANE | 0.5223 | | | | | | 11.9 |
| CAL01 | Q2253648 | | CHLOROETHANE | 0.1262 | | | | | | 10.5 |
| CAL01 | Q2253648 | | CHLOROFORM | 0.3695 | | | | | | 5.2 |
| CAL01 | Q2253648 | | CHLOROMETHANE | 0.2131 | | | | | | 16.2 |
| CAL01 | Q2253648 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | | | | 13.8 |
| CAL01 | Q2253648 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | | | | 6.4 |
| CAL01 | Q2253648 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | | | | 8.4 |
| CAL01 | Q2253648 | | DIBROMOMETHANE | 0.1230 | | | | | | 1.9 |
| CAL01 | Q2253648 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | | | | 0.7 |
| CAL01 | Q2253648 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | | | | 1.8 |
| CAL01 | Q2253648 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | | | | 2.8 |
| CAL01 | Q2253648 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | | | | 5.9 |
| CAL01 | Q2253648 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | | | | 11.1 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHANE | 0.3815 | | | | | | 1.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROETHANE | 0.2779 | | | | | | 2.5 |
| CAL01 | Q2253648 | | 1,1-DICHLOROETHENE | 0.1982 | | | | | | 1.4 |
| CAL01 | Q2253648 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | | | | 2 |
| CAL01 | Q2253648 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | | | | 2.6 |
| CAL01 | Q2253648 | | 1,2-DICHLOROPROPANE | 0.2007 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3-DICHLOROPROPANE | 0.9526 | | | | | | 9.2 |
| CAL01 | Q2253648 | | 1,1-DICHLOROPROPENE | 0.1063 | | | | | | 2.5 |
| CAL01 | Q2253648 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | | | | 9.3 |
| CAL01 | Q2253648 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | | | | 14.3 |
| CAL01 | Q2253648 | | ETHYL BENZENE | 0.9633 | | | | | | 6.5 |
| CAL01 | Q2253648 | | ETHYL METHACRYLATE | 0.8960 | | | | | | 8.7 |
| CAL01 | Q2253648 | | 2-HEXANONE | 0.6513 | | | | | | 7.1 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | HEXACHLOROBUTADIENE | 0.5378 | | | | | | 2.3 |
| CAL01 | Q2253648 | | IODOMETHANE | 0.3240 | | | | | | 1.8 |
| CAL01 | Q2253648 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | | | | 5.5 |
| CAL01 | Q2253648 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | | | | 5.5 |
| CAL01 | Q2253648 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2253648 | | METHYL ETHYL KETONE | 0.0405 | | | | | | 5 |
| CAL01 | Q2253648 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | | | | 3 |
| CAL01 | Q2253648 | | METHYL ISOBUTYL KETONE | 0.3155 | | | | | | 5.9 |
| CAL01 | Q2253648 | | NAPHTHALENE | 3.5250 | | | | | | 3.8 |
| CAL01 | Q2253648 | | N-PROPYLBENZENE | 0.4079 | | | | | | 3.9 |
| CAL01 | Q2253648 | | STYRENE | 1.9432 | | | | | | 7.8 |
| CAL01 | Q2253648 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | | | | 6.6 |
| CAL01 | Q2253648 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | | | | 3.4 |
| CAL01 | Q2253648 | | TETRACHLOROETHENE | 0.7380 | | | | | | 7.4 |
| CAL01 | Q2253648 | | TOLUENE | 0.8639 | | | | | | 6.3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | | | | 6.1 |
| CAL01 | Q2253648 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | | | | 4.4 |
| CAL01 | Q2253648 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | | | | 2.9 |
| CAL01 | Q2253648 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | | | | 7 |
| CAL01 | Q2253648 | | TRICHLOROETHENE | 0.2277 | | | | | | 1.8 |
| CAL01 | Q2253648 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | | | | 3 |
| CAL01 | Q2253648 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | | | | 3.1 |
| CAL01 | Q2253648 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | | | | 4.1 |
| CAL01 | Q2253648 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | | | | 6.4 |
| CAL01 | Q2253648 | | VINYL ACETATE | | | LIN | | | | 0.996 |
| CAL01 | Q2253648 | | VINYL CHLORIDE | 0.2350 | | | | | | 3.4 |
| CAL01 | Q2253648 | | DICHLOROETHANE-D4 | 0.2816 | | | | | | 2.3 |
| CAL01 | Q2253648 | | TOLUENE-D8 | 0.8989 | | | | | | 4 |
| CAL01 | Q2253648 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | | | | 5.2 |
| CAL01 | Q2253648 | | DIBROMOFLUOROMETHANE | 0.2362 | | | | | | 3.2 |
| CCVD | Q2256325 | | Analysis Date/Time: 07-Nov-09 05:43 | | | | | | | |
| CCVD | Q2256325 | | ACETONE (2-PROPANONE) | 0.1022 | | | 0.1092 | | | 6.8 |
| CCVD | Q2256325 | | ACROLEIN | 0.0175 | | | 0.0258 | | | 47.4 |
| CCVD | Q2256325 | | ACRYLONITRILE | 0.0692 | | | 0.1465 | | | 111.7 |
| CCVD | Q2256325 | | BENZENE | 0.8701 | | | 0.8941 | | | 2.8 |
| CCVD | Q2256325 | | BROMOBENZENE | 1.1810 | | | 1.0362 | | | 12.3 |
| CCVD | Q2256325 | | BROMOCHLOROMETHANE | 0.1079 | | | 0.0997 | | | 7.6 |
| CCVD | Q2256325 | | BROMODICHLOROMETHANE | 0.2434 | | | 0.2240 | | | 8 |
| CCVD | Q2256325 | | BROMOFORM | 0.3505 | | | 0.2598 | | | 25.9 |
| CCVD | Q2256325 | | BROMOMETHANE | 0.1012 | | | 0.0992 | | | 2 |
| CCVD | Q2256325 | | N-BUTYLBENZENE | 1.5933 | | | 1.3688 | | | 14.1 |
| CCVD | Q2256325 | | SEC-BUTYLBENZENE | 3.6289 | | | 3.2350 | | | 10.9 |
| CCVD | Q2256325 | | TERT-BUTYLBENZENE | 1.5134 | | | 1.3638 | | | 9.9 |
| CCVD | Q2256325 | | CARBON DISULFIDE | 0.6311 | | | 0.5285 | | | 16.3 |
| CCVD | Q2256325 | | CARBON TETRACHLORIDE | 0.2699 | | | 0.2399 | | | 11.1 |
| CCVD | Q2256325 | | CHLOROBENZENE | 1.7328 | | | 1.5793 | | | 8.9 |

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## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2256325 | | DIBROMOCHLOROMETHANE | 0.5223 | | | 0.4242 | | | 18.8 |
| CCVD | Q2256325 | | CHLOROETHANE | 0.1262 | | | 0.1192 | | | 5.5 |
| CCVD | Q2256325 | | CHLOROFORM | 0.3695 | | | 0.3315 | | | 10.3 |
| CCVD | Q2256325 | | CHLOROMETHANE | 0.2131 | | | 0.1833 | | | 14 |
| CCVD | Q2256325 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | | 0.6941 | | | 9.2 |
| CCVD | Q2256325 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | | 0.6316 | | | 12.6 |
| CCVD | Q2256325 | | 2-CHLOROETHYLVINYLETHER | 0.1420 | | | 0.1597 | | | 12.5 |
| CCVD | Q2256325 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | | 0.1599 | | | 27.4 |
| CCVD | Q2256325 | | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | | 0.1830 | | | 4.4 |
| CCVD | Q2256325 | | DIBROMOMETHANE | 0.1230 | | | 0.1224 | | | 0.5 |
| CCVD | Q2256325 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | | 1.2590 | | | 16 |
| CCVD | Q2256325 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | | 1.2751 | | | 14.4 |
| CCVD | Q2256325 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | | 1.2626 | | | 15.4 |
| CCVD | Q2256325 | | DICHLORODIFLUOROMETHANE | 0.1421 | | | 0.1275 | | | 10.3 |
| CCVD | Q2256325 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | | 0.1877 | | | 25.2 |
| CCVD | Q2256325 | | 1,1-DICHLOROETHANE | 0.3815 | | | 0.3605 | | | 5.5 |
| CCVD | Q2256325 | | 1,2-DICHLOROETHANE | 0.2779 | | | 0.2675 | | | 3.7 |
| CCVD | Q2256325 | | 1,1-DICHLOROETHENE | 0.1982 | | | 0.1902 | | | 4 |
| CCVD | Q2256325 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | 0.2213 | | | 8.3 |
| CCVD | Q2256325 | | TRANS-1,2-DICHLOROETHENE | 0.2272 | | | 0.2094 | | | 7.8 |
| CCVD | Q2256325 | | 1,2-DICHLOROPROPANE | 0.2007 | | | 0.2052 | | | 2.2 |
| CCVD | Q2256325 | | 1,3-DICHLOROPROPANE | 0.9526 | | | 0.9356 | | | 1.8 |
| CCVD | Q2256325 | | 1,1-DICHLOROPROPENE | 0.1063 | | | 0.0950 | | | 10.6 |
| CCVD | Q2256325 | | CIS-1,3-DICHLOROPROPENE | 0.3040 | | | 0.2899 | | | 4.6 |
| CCVD | Q2256325 | | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | | 0.2321 | | | 4.4 |
| CCVD | Q2256325 | | ETHYL BENZENE | 0.9633 | | | 0.8740 | | | 9.3 |
| CCVD | Q2256325 | | ETHYL METHACRYLATE | 0.8960 | | | 0.8041 | | | 10.3 |
| CCVD | Q2256325 | | 2-HEXANONE | 0.6513 | | | 0.6044 | | | 7.2 |
| CCVD | Q2256325 | | HEXACHLOROBUTADIENE | 0.5378 | | | 0.4407 | | | 18.1 |
| CCVD | Q2256325 | | IODOMETHANE | 0.3240 | | | 0.2964 | | | 8.5 |
| CCVD | Q2256325 | | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | | 2.6021 | | | 9.8 |
| CCVD | Q2256325 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | | 2.6593 | | | 12.8 |
| CCVD | Q2256325 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | LIN | 9.16 | | | 8.4 |
| CCVD | Q2256325 | | METHYL ETHYL KETONE | 0.0405 | | | 0.0406 | | | 0.2 |
| CCVD | Q2256325 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | | 0.6748 | | | 10.9 |
| CCVD | Q2256325 | | METHYL ISOBUTYL KETONE | 0.3155 | | | 0.3244 | | | 2.8 |
| CCVD | Q2256325 | | NAPHTHALENE | 3.5250 | | | 2.6492 | | | 24.8 |
| CCVD | Q2256325 | | N-PROPYLBENZENE | 0.4079 | | | 0.3657 | | | 10.3 |
| CCVD | Q2256325 | | STYRENE | 1.9432 | | | 1.7002 | | | 12.5 |
| CCVD | Q2256325 | | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | | 0.5097 | | | 17.9 |
| CCVD | Q2256325 | | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | | 0.7880 | | | 11.2 |
| CCVD | Q2256325 | | TETRACHLOROETHENE | 0.7380 | | | 0.6480 | | | 12.2 |
| CCVD | Q2256325 | | TOLUENE | 0.8639 | | | 0.9095 | | | 5.3 |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2256325 | | 1,2,3-TRICHLOROBENZENE | 1.1543 | | | 0.8462 | | | 26.7 |
| CCVD | Q2256325 | | 1,2,4-TRICHLOROBENZENE | 1.1867 | | | 0.9288 | | | 21.7 |
| CCVD | Q2256325 | | 1,1,1-TRICHLOROETHANE | 0.3069 | | | 0.2736 | | | 10.9 |
| CCVD | Q2256325 | | 1,1,2-TRICHLOROETHANE | 0.1709 | | | 0.1799 | | | 5.3 |
| CCVD | Q2256325 | | TRICHLOROETHENE | 0.2277 | | | 0.2206 | | | 3.1 |
| CCVD | Q2256325 | | TRICHLOROFLUOROMETHANE | 0.2968 | | | 0.2676 | | | 9.8 |
| CCVD | Q2256325 | | 1,2,3-TRICHLOROPROPANE | 0.2837 | | | 0.2419 | | | 14.7 |
| CCVD | Q2256325 | | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | | 2.4400 | | | 12.8 |
| CCVD | Q2256325 | | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | | 2.4164 | | | 11.8 |
| CCVD | Q2256325 | | VINYL ACETATE | 10.0 | | LIN | 5.36 | | | 46.4 |
| CCVD | Q2256325 | | VINYL CHLORIDE | 0.2350 | | | 0.2136 | | | 9.1 |
| CCVD | Q2256325 | | DICHLOROETHANE-D4 | 0.2816 | | | 0.2637 | | | 6.4 |
| CCVD | Q2256325 | | TOLUENE-D8 | 0.8989 | | | 0.9386 | | | 4.4 |
| CCVD | Q2256325 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | 0.7290 | | | 14.6 |
| CCVD | Q2256325 | | DIBROMOFLUOROMETHANE | 0.2362 | | | 0.2178 | | | 7.8 |
| BLA01 | Q2256326 | | Analysis Date/Time: 07-Nov-09 06:08 | | | | | | | |
| BLA01 | Q2256326 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2256326 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2256326 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256326 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256326 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256326 | | XYLENES (O/M/P-XYLENE) | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256326 | | DICHLOROETHANE-D4 | | | | | | 96 | |
| BLA01 | Q2256326 | | TOLUENE-D8 | | | | | | 103 | |
| BLA01 | Q2256326 | | 4-BROMOFLUOROBENZENE | | | | | | 91 | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256326 | | DIBROMOFLUOROMETHANE | | | | | | 94 | |
| LCS01 | Q2256327 | METHOD 826 | Analysis Date/Time: 07-Nov-09 06:44 | | | | | | | |
| LCS01 | Q2256327 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 43 | ug/L | 86 | |
| LCS01 | Q2256327 | METHOD 826 | ACROLEIN | 100 | | | 131 | ug/L | 131 | |
| LCS01 | Q2256327 | METHOD 826 | ACRYLONITRILE | 100 | | | 210 | ug/L | 210 | |
| LCS01 | Q2256327 | METHOD 826 | BENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOBENZENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOFORM | 10 | | | 8.56 | ug/L | 85.6 | |
| LCS01 | Q2256327 | METHOD 826 | BROMOMETHANE | 10 | | | 9.84 | ug/L | 98.4 | |
| LCS01 | Q2256327 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 9.8 | ug/L | 98 | |
| LCS01 | Q2256327 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256327 | METHOD 826 | CARBON DISULFIDE | 10 | | | 8.14 | ug/L | 81.4 | |
| LCS01 | Q2256327 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 9.61 | ug/L | 96.1 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256327 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 9.6 | ug/L | 96 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROETHANE | 10 | | | 9.35 | ug/L | 93.5 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROFORM | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.3 | ug/L | 83 | |
| LCS01 | Q2256327 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 8.28 | ug/L | 82.8 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 9.61 | ug/L | 96.1 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 9.88 | ug/L | 98.8 | |
| LCS01 | Q2256327 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 8.07 | ug/L | 80.7 | |
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 16 | ug/L | 80 | |

59169KF

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 9.74 | ug/L | 97.4 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 11.5 | ug/L | 115 | |
| LCS01 | Q2256327 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 9.17 | ug/L | 91.7 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 11.3 | ug/L | 113 | |
| LCS01 | Q2256327 | METHOD 826 | ETHYL BENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256327 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | 2-HEXANONE | 50 | | | 52.3 | ug/L | 104.6 | |
| LCS01 | Q2256327 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | | 9.74 | ug/L | 97.4 | |
| LCS01 | Q2256327 | METHOD 826 | IODOMETHANE | 10 | | | 9.14 | ug/L | 91.4 | |
| LCS01 | Q2256327 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256327 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 9.49 | ug/L | 94.9 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 50.1 | ug/L | 100.2 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.09 | ug/L | 90.9 | |
| LCS01 | Q2256327 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 52.9 | ug/L | 105.8 | |
| LCS01 | Q2256327 | METHOD 826 | NAPHTHALENE | 10 | | | 8.7 | ug/L | 87 | |
| LCS01 | Q2256327 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | STYRENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 9.69 | ug/L | 96.9 | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256327 | METHOD 826 | TOLUENE | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 8.51 | ug/L | 85.1 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 9.18 | ug/L | 91.8 | |
| LCS01 | Q2256327 | METHOD | 1,1,1-TRICHLOROETHANE | 10 | | | 9.9 | ug/L | 99 | |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2256327 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 12.1 | ug/L | 121 | |
| LCS01 | Q2256327 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256327 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 9.25 | ug/L | 92.5 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 9.57 | ug/L | 95.7 | |
| LCS01 | Q2256327 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 9.95 | ug/L | 99.5 | |
| LCS01 | Q2256327 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256327 | METHOD 826 | VINYL ACETATE | 10 | | | 7.63 | ug/L | 76.3 | |
| LCS01 | Q2256327 | METHOD 826 | VINYL CHLORIDE | 10 | | | 8.74 | ug/L | 87.4 | |
| LCS01 | Q2256327 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 31.3 | ug/L | 104.3 | |
| SAMPLE | A864555 | | Analysis Date/Time: 07-Nov-09 08:31 | | | | | | | |
| SAMPLE | A864555 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864558 | | Analysis Date/Time: 07-Nov-09 08:57 | | | | | | | |
| SAMPLE | A864558 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864559 | | Analysis Date/Time: 07-Nov-09 09:22 | | | | | | | |
| SAMPLE | A864559 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864540 | | Analysis Date/Time: 07-Nov-09 10:40 | | | | | | | |
| SAMPLE | A864540 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864541 | | Analysis Date/Time: 07-Nov-09 11:05 | | | | | | | |
| SAMPLE | A864541 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2256328 | A864541 | Analysis Date/Time: 07-Nov-09 11:31 | | | | | | | |
| SPI01 | Q2256328 | A864541 | ACETONE (2-PROPANONE) | 0 | 50 | | 54.1 | ug/L | 108.2 | |
| SPI01 | Q2256328 | A864541 | ACROLEIN | 0 | 100 | | 83.1 | ug/L | 83.1 | |
| SPI01 | Q2256328 | A864541 | ACRYLONITRILE | 0 | 100 | | 140 | ug/L | 140 | |
| SPI01 | Q2256328 | A864541 | BENZENE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2256328 | A864541 | BROMOBENZENE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | BROMOCHLOROMETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | BROMODICHLOROMETHANE | 0 | 10 | | 10.8 | ug/L | 108 | |
| SPI01 | Q2256328 | A864541 | BROMOFORM | 0 | 10 | | 8.8 | ug/L | 88 | |
| SPI01 | Q2256328 | A864541 | BROMOMETHANE | 0 | 10 | | 12.2 | ug/L | 122 | |
| SPI01 | Q2256328 | A864541 | N-BUTYLBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2256328 | A864541 | SEC-BUTYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2256328 | A864541 | TERT-BUTYLBENZENE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | CARBON DISULFIDE | 0 | 10 | | 8.16 | ug/L | 81.6 | |
| SPI01 | Q2256328 | A864541 | CARBON TETRACHLORIDE | 0 | 10 | | 10 | ug/L | 100 | |
| SPI01 | Q2256328 | A864541 | CHLOROBENZENE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2256328 | A864541 | DIBROMOCHLOROMETHANE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2256328 | A864541 | CHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | CHLOROFORM | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | CHLOROMETHANE | 0 | 10 | | 10.4 | ug/L | 104 | |
| SPI01 | Q2256328 | A864541 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 11.4 | ug/L | 114 | |

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## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256328 | A864541 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2256328 | A864541 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 9.4 | ug/L | 94 | |
| SPI01 | Q2256328 | A864541 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | ! | 12.7 | ug/L | 127 | |
| SPI01 | Q2256328 | A864541 | DIBROMOMETHANE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 12.3 | ug/L | 61.5 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROETHANE | 0 | 10 | | 11.5 | ug/L | 115 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROETHANE | 0 | 10 | | 11.9 | ug/L | 119 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROETHENE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 13.2 | ug/L | 132 | |
| SPI01 | Q2256328 | A864541 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | 1,2-DICHLOROPROPANE | 0 | 10 | ! | 12.5 | ug/L | 125 | |
| SPI01 | Q2256328 | A864541 | 1,3-DICHLOROPROPANE | 0 | 10 | ! | 13.2 | ug/L | 132 | |
| SPI01 | Q2256328 | A864541 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.57 | ug/L | 95.7 | |
| SPI01 | Q2256328 | A864541 | 1,1-DICHLOROPROPENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.5 | ug/L | 105 | |
| SPI01 | Q2256328 | A864541 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 10.1 | ug/L | 101 | |
| SPI01 | Q2256328 | A864541 | ETHYL BENZENE | 0 | 10 | | 11.8 | ug/L | 118 | |
| SPI01 | Q2256328 | A864541 | ETHYL METHACRYLATE | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 2-HEXANONE | 0 | 50 | ! | 63.7 | ug/L | 127.4 | |
| SPI01 | Q2256328 | A864541 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.73 | ug/L | 97.3 | |
| SPI01 | Q2256328 | A864541 | IODOMETHANE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 11.7 | ug/L | 117 | |
| SPI01 | Q2256328 | A864541 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2256328 | A864541 | METHYL ETHYL KETONE | 0 | 50 | | 60.2 | ug/L | 120.4 | |
| SPI01 | Q2256328 | A864541 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | METHYL ISOBUTYL KETONE | 0 | 50 | | 62.6 | ug/L | 125.2 | |
| SPI01 | Q2256328 | A864541 | NAPHTHALENE | 0 | 10 | | 9.49 | ug/L | 94.9 | |
| SPI01 | Q2256328 | A864541 | N-PROPYLBENZENE | 0 | 10 | | 11.4 | ug/L | 114 | |
| SPI01 | Q2256328 | A864541 | STYRENE | 0 | 10 | | 9.82 | ug/L | 98.2 | |
| SPI01 | Q2256328 | A864541 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 10.9 | ug/L | 109 | |
| SPI01 | Q2256328 | A864541 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | ! | 12.3 | ug/L | 123 | |
| SPI01 | Q2256328 | A864541 | TETRACHLOROETHENE | 0 | 10 | | 11.1 | ug/L | 111 | |
| SPI01 | Q2256328 | A864541 | TOLUENE | 0 | 10 | | 12.6 | ug/L | 126 | |
| SPI01 | Q2256328 | A864541 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 9.37 | ug/L | 93.7 | |
| SPI01 | Q2256328 | A864541 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.65 | ug/L | 96.5 | |
| SPI01 | Q2256328 | A864541 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 11 | ug/L | 110 | |
| SPI01 | Q2256328 | A864541 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 13 | ug/L | 130 | |
| SPI01 | Q2256328 | A864541 | TRICHLOROETHENE | 0 | 10 | | 11.6 | ug/L | 116 | |
| SPI01 | Q2256328 | A864541 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 11.3 | ug/L | 113 | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256328 | A864541 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 12.1 | ug/L | 121 | |
| SPI01 | Q2256328 | A864541 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 10.6 | ug/L | 106 | |
| SPI01 | Q2256328 | A864541 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256328 | A864541 | VINYL ACETATE | 0 | 10 | | 7.18 | ug/L | 71.8 | |
| SPI01 | Q2256328 | A864541 | VINYL CHLORIDE | 5.2 | 10 | | 16.4 | ug/L | 112 | |
| SPI01 | Q2256328 | A864541 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 35.1 | ug/L | 117.0 | |
| DPS01 | Q2256329 | A864541 | Analysis Date/Time: 07-Nov-09 11:56 | | | | | | | |
| DPS01 | Q2256329 | A864541 | ACETONE (2-PROPANONE) | 0 | 50 | | 44.3 | ug/L | 88.6 | 19.8 |
| DPS01 | Q2256329 | A864541 | ACROLEIN | 0 | 100 | | 56.2 | ug/L | 56.2 | 38.6 |
| DPS01 | Q2256329 | A864541 | ACRYLONITRILE | 0 | 100 | | 94.1 | ug/L | 94.1 | 38.9 |
| DPS01 | Q2256329 | A864541 | BENZENE | 0 | 10 | | 10.3 | ug/L | 103.3 | 14.1 |
| DPS01 | Q2256329 | A864541 | BROMOBENZENE | 0 | 10 | | 10.3 | ug/L | 102.8 | 13 |
| DPS01 | Q2256329 | A864541 | BROMOCHLOROMETHANE | 0 | 10 | | 9.98 | ug/L | 99.8 | 14.2 |
| DPS01 | Q2256329 | A864541 | BROMODICHLOROMETHANE | 0 | 10 | | 9.48 | ug/L | 94.8 | 12.7 |
| DPS01 | Q2256329 | A864541 | BROMOFORM | 0 | 10 | | 7.53 | ug/L | 75.3 | 15.6 |
| DPS01 | Q2256329 | A864541 | BROMOMETHANE | 0 | 10 | | 10.8 | ug/L | 107.5 | 12.8 |
| DPS01 | Q2256329 | A864541 | N-BUTYLBENZENE | 0 | 10 | | 9.29 | ug/L | 92.9 | 13.3 |
| DPS01 | Q2256329 | A864541 | SEC-BUTYLBENZENE | 0 | 10 | | 10 | ug/L | 100.4 | 12.6 |
| DPS01 | Q2256329 | A864541 | TERT-BUTYLBENZENE | 0 | 10 | | 10.4 | ug/L | 103.9 | 12.1 |
| DPS01 | Q2256329 | A864541 | CARBON DISULFIDE | 0 | 10 | | 7.11 | ug/L | 71.1 | 13.8 |
| DPS01 | Q2256329 | A864541 | CARBON TETRACHLORIDE | 0 | 10 | | 9.1 | ug/L | 91 | 9.8 |
| DPS01 | Q2256329 | A864541 | CHLOROBENZENE | 0 | 10 | | 10.5 | ug/L | 104.8 | 14.6 |
| DPS01 | Q2256329 | A864541 | DIBROMOCHLOROMETHANE | 0 | 10 | | 9.02 | ug/L | 90.2 | 13.7 |
| DPS01 | Q2256329 | A864541 | CHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 101.9 | 12.3 |
| DPS01 | Q2256329 | A864541 | CHLOROFORM | 0 | 10 | | 9.65 | ug/L | 96.5 | 13.6 |
| DPS01 | Q2256329 | A864541 | CHLOROMETHANE | 0 | 10 | | 9.26 | ug/L | 92.6 | 11.2 |
| DPS01 | Q2256329 | A864541 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.94 | ug/L | 99.4 | 16.1 |
| DPS01 | Q2256329 | A864541 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.85 | ug/L | 98.5 | 14.8 |
| DPS01 | Q2256329 | A864541 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2256329 | A864541 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.23 | ug/L | 82.3 | 13.3 |
| DPS01 | Q2256329 | A864541 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 10.8 | ug/L | 108.4 | 15.6 |
| DPS01 | Q2256329 | A864541 | DIBROMOMETHANE | 0 | 10 | | 10.2 | ug/L | 101.6 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.5 | ug/L | 95 | 13.6 |
| DPS01 | Q2256329 | A864541 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.59 | ug/L | 95.9 | 14.2 |
| DPS01 | Q2256329 | A864541 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.79 | ug/L | 97.9 | 13.3 |
| DPS01 | Q2256329 | A864541 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 9.5 | ug/L | 95 | 15.6 |
| DPS01 | Q2256329 | A864541 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 10.5 | ug/L | 52.4 | 16.1 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROETHANE | 0 | 10 | | 10.1 | ug/L | 100.6 | 13.3 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROETHANE | 0 | 10 | | 10.2 | ug/L | 102.1 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.83 | ug/L | 98.3 | 13.2 |
| DPS01 | Q2256329 | A864541 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 11.7 | ug/L | 117 | 12 |
| DPS01 | Q2256329 | A864541 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | | 10.2 | ug/L | 101.5 | 14.9 |
| DPS01 | Q2256329 | A864541 | 1,2-DICHLOROPROPANE | 0 | 10 | | 10.9 | ug/L | 109.4 | 13.2 |
| DPS01 | Q2256329 | A864541 | 1,3-DICHLOROPROPANE | 0 | 10 | | 11.3 | ug/L | 113.4 | 15.3 |

**59169KF**

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256329 | A864541 | 2,2-DICHLOROPROPANE | 0 | 10 | | 8.49 | ug/L | 84.9 | 12 |
| DPS01 | Q2256329 | A864541 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.91 | ug/L | 99.1 | 10.9 |
| DPS01 | Q2256329 | A864541 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 9.08 | ug/L | 90.8 | 14.7 |
| DPS01 | Q2256329 | A864541 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.88 | ug/L | 88.8 | 13.2 |
| DPS01 | Q2256329 | A864541 | ETHYL BENZENE | 0 | 10 | | 10.3 | ug/L | 103.2 | 13.7 |
| DPS01 | Q2256329 | A864541 | ETHYL METHACRYLATE | 0 | 10 | | 9.99 | ug/L | 99.9 | 15.6 |
| DPS01 | Q2256329 | A864541 | 2-HEXANONE | 0 | 50 | | 55 | ug/L | 110 | 14.6 |
| DPS01 | Q2256329 | A864541 | HEXACHLOROBUTADIENE | 0 | 10 | | 8.87 | ug/L | 88.7 | 9.2 |
| DPS01 | Q2256329 | A864541 | IODOMETHANE | 0 | 10 | | 9.75 | ug/L | 97.5 | 13.7 |
| DPS01 | Q2256329 | A864541 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 9.99 | ug/L | 99.9 | 15.3 |
| DPS01 | Q2256329 | A864541 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 9.64 | ug/L | 96.4 | 15.1 |
| DPS01 | Q2256329 | A864541 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.18 | ug/L | 91.8 | 15.4 |
| DPS01 | Q2256329 | A864541 | METHYL ETHYL KETONE | 0 | 50 | | 51.3 | ug/L | 102.7 | 15.8 |
| DPS01 | Q2256329 | A864541 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.45 | ug/L | 94.5 | 14.6 |
| DPS01 | Q2256329 | A864541 | METHYL ISOBUTYL KETONE | 0 | 50 | | 54.8 | ug/L | 109.6 | 13.3 |
| DPS01 | Q2256329 | A864541 | NAPHTHALENE | 0 | 10 | | 8.64 | ug/L | 86.4 | 9.4 |
| DPS01 | Q2256329 | A864541 | N-PROPYLBENZENE | 0 | 10 | | 9.95 | ug/L | 99.5 | 13.8 |
| DPS01 | Q2256329 | A864541 | STYRENE | 0 | 10 | | 8.45 | ug/L | 84.5 | 15 |
| DPS01 | Q2256329 | A864541 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 9.51 | ug/L | 95.1 | 13.4 |
| DPS01 | Q2256329 | A864541 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 10.5 | ug/L | 104.9 | 15.5 |
| DPS01 | Q2256329 | A864541 | TETRACHLOROETHENE | 0 | 10 | | 9.59 | ug/L | 95.9 | 14.8 |
| DPS01 | Q2256329 | A864541 | TOLUENE | 0 | 10 | | 10.9 | ug/L | 109 | 14.1 |
| DPS01 | Q2256329 | A864541 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 8.61 | ug/L | 86.1 | 8.5 |
| DPS01 | Q2256329 | A864541 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 8.51 | ug/L | 85.1 | 12.6 |
| DPS01 | Q2256329 | A864541 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.61 | ug/L | 96.1 | 13.8 |
| DPS01 | Q2256329 | A864541 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 11.1 | ug/L | 110.7 | 16 |
| DPS01 | Q2256329 | A864541 | TRICHLOROETHENE | 0 | 10 | | 10.1 | ug/L | 100.6 | 14.6 |
| DPS01 | Q2256329 | A864541 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 9.75 | ug/L | 97.5 | 14.7 |
| DPS01 | Q2256329 | A864541 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 10.2 | ug/L | 101.9 | 17.2 |
| DPS01 | Q2256329 | A864541 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | | 9.17 | ug/L | 91.7 | 14.7 |
| DPS01 | Q2256329 | A864541 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | | 9.8 | ug/L | 98 | 14.5 |
| DPS01 | Q2256329 | A864541 | VINYL ACETATE | 0 | 10 | ! | 3.48 | ug/L | 34.8 | 69.4 |
| DPS01 | Q2256329 | A864541 | VINYL CHLORIDE | 5.2 | 10 | | 15 | ug/L | 98 | 13.3 |
| DPS01 | Q2256329 | A864541 | XYLENES (O/M/P-XYLENE) | 0 | 30 | | 30.7 | ug/L | 102.3 | 13.4 |
| SAMPLE | A864542 | | Analysis Date/Time: 07-Nov-09 12:22 | | | | | | | |
| SAMPLE | A864542 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864543 | | Analysis Date/Time: 07-Nov-09 12:47 | | | | | | | |
| SAMPLE | A864543 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864544 | | Analysis Date/Time: 07-Nov-09 13:13 | | | | | | | |
| SAMPLE | A864544 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864545 | | Analysis Date/Time: 07-Nov-09 13:39 | | | | | | | |
| SAMPLE | A864545 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864546 | | Analysis Date/Time: 07-Nov-09 14:04 | | | | | | | |
| SAMPLE | A864546 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864547 | | Analysis Date/Time: 07-Nov-09 14:30 | | | | | | | |
| SAMPLE | A864547 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560082 Analyst: H WILLIAMS Run Date: 07-Nov-09
Analytical Reviewer: R SHAMP Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | A864548 | | Analysis Date/Time: 07-Nov-09 14:56 | | | | | | | |
| SAMPLE | A864548 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864549 | | Analysis Date/Time: 07-Nov-09 15:22 | | | | | | | |
| SAMPLE | A864549 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864550 | | Analysis Date/Time: 07-Nov-09 15:47 | | | | | | | |
| SAMPLE | A864550 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2253648 Value reported for analytes calibrated by linear (LIN) or
Q2253648 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256325 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256325 equations is concentration ( ).
Q2256328 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256328 possible. Unacidified sample not available.
Q2256329 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256329 possible. Unacidified sample not available.

R560090 Analyst: R SHAMP Run Date: 06-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | Analysis Date/Time: 05-Nov-09 08:53 | | | | | | | |
| CAL01 | Q2254851 | | ACETONE (2-PROPANONE) | 0.1365 | | | | | | 9 |
| CAL01 | Q2254851 | | ACROLEIN | 0.0190 | | | | | | 2.7 |
| CAL01 | Q2254851 | | ACRYLONITRILE | 0.0577 | | | | | | 3.6 |
| CAL01 | Q2254851 | | BENZENE | 0.8900 | | | | | | 2.1 |
| CAL01 | Q2254851 | | BROMOBENZENE | 1.3255 | | | | | | 1.6 |
| CAL01 | Q2254851 | | BROMOCHLOROMETHANE | 0.1068 | | | | | | 4 |
| CAL01 | Q2254851 | | BROMODICHLOROMETHANE | 0.2750 | | | | | | 4.7 |
| CAL01 | Q2254851 | | BROMOFORM | 0.4207 | | | | | | 10.4 |
| CAL01 | Q2254851 | | BROMOMETHANE | 0.1199 | | | | | | 21.4 |
| CAL01 | Q2254851 | | N-BUTYLBENZENE | 1.6681 | | | | | | 3.5 |
| CAL01 | Q2254851 | | SEC-BUTYLBENZENE | 3.8168 | | | | | | 8 |
| CAL01 | Q2254851 | | TERT-BUTYLBENZENE | 1.7636 | | | | | | 4.3 |
| CAL01 | Q2254851 | | CARBON DISULFIDE | 0.6034 | | | | | | 3.3 |
| CAL01 | Q2254851 | | CARBON TETRACHLORIDE | 0.2882 | | | | | | 3.1 |
| CAL01 | Q2254851 | | CHLOROBENZENE | 1.7833 | | | | | | 2.3 |
| CAL01 | Q2254851 | | DIBROMOCHLOROMETHANE | 0.5499 | | | | | | 7.1 |
| CAL01 | Q2254851 | | CHLOROETHANE | 0.1378 | | | | | | 26.9 |
| CAL01 | Q2254851 | | CHLOROFORM | 0.3943 | | | | | | 5.7 |
| CAL01 | Q2254851 | | CHLOROMETHANE | 0.3681 | | | | | | 4.5 |
| CAL01 | Q2254851 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | | | | 4.2 |
| CAL01 | Q2254851 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | | | | 8.5 |
| CAL01 | Q2254851 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | | | | 6.8 |
| CAL01 | Q2254851 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | | | | 2.9 |
| CAL01 | Q2254851 | | DIBROMOMETHANE | 0.1439 | | | | | | 3.7 |
| CAL01 | Q2254851 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | | | | 6.2 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | | | | 4 |
| CAL01 | Q2254851 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | | | | 3.6 |
| CAL01 | Q2254851 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | | | | 3.7 |
| CAL01 | Q2254851 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | | | | 6.3 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHANE | 0.4227 | | | | | | 1.5 |
| CAL01 | Q2254851 | | 1,2-DICHLOROETHANE | 0.3868 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 1,1-DICHLOROETHENE | 0.2024 | | | | | | 4 |
| CAL01 | Q2254851 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | | | | 2.2 |
| CAL01 | Q2254851 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | | | | 3.6 |
| CAL01 | Q2254851 | | 1,2-DICHLOROPROPANE | 0.2379 | | | | | | 2 |
| CAL01 | Q2254851 | | 1,3-DICHLOROPROPANE | 1.0228 | | | | | | 4.4 |
| CAL01 | Q2254851 | | 2,2-DICHLOROPROPANE | 0.2237 | | | | | | 5.6 |
| CAL01 | Q2254851 | | 1,1-DICHLOROPROPENE | 0.1079 | | | | | | 3.5 |
| CAL01 | Q2254851 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | | | | 5.8 |
| CAL01 | Q2254851 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | | | | 7.8 |
| CAL01 | Q2254851 | | ETHYL BENZENE | 1.0051 | | | | | | 3.4 |
| CAL01 | Q2254851 | | ETHYL METHACRYLATE | 0.8695 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 2-HEXANONE | 0.9796 | | | | | | 6.9 |
| CAL01 | Q2254851 | | HEXACHLOROBUTADIENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | IODOMETHANE | 0.3302 | | | | | | 2.3 |
| CAL01 | Q2254851 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | | | | 1.9 |
| CAL01 | Q2254851 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | | | | 5.3 |
| CAL01 | Q2254851 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | LIN | | | | 1.000 |
| CAL01 | Q2254851 | | METHYL ETHYL KETONE | 0.0394 | | | | | | 2.8 |
| CAL01 | Q2254851 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | | | | 2.2 |
| CAL01 | Q2254851 | | METHYL ISOBUTYL KETONE | 0.4505 | | | | | | 8.4 |
| CAL01 | Q2254851 | | NAPHTHALENE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | N-PROPYLBENZENE | 0.4327 | | | | | | 3.5 |
| CAL01 | Q2254851 | | STYRENE | 2.0649 | | | | | | 3.3 |
| CAL01 | Q2254851 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | | | | 2.8 |
| CAL01 | Q2254851 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | | | | 2.8 |
| CAL01 | Q2254851 | | TETRACHLOROETHENE | 0.7565 | | | | | | 6 |
| CAL01 | Q2254851 | | TOLUENE | 0.9760 | | | | | | 2.9 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROBENZENE | | | LIN | | | | 0.995 |
| CAL01 | Q2254851 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | | | | 13.3 |
| CAL01 | Q2254851 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | | | | 3.1 |
| CAL01 | Q2254851 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | | | | 1.6 |
| CAL01 | Q2254851 | | TRICHLOROETHENE | 0.2340 | | | | | | 4.6 |
| CAL01 | Q2254851 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | | | | 9.5 |
| CAL01 | Q2254851 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | | | | 8.8 |
| CAL01 | Q2254851 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | | | | 3 |
| CAL01 | Q2254851 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | | | | 2.5 |
| CAL01 | Q2254851 | | VINYL ACETATE | | | LIN | | | | 0.997 |
| CAL01 | Q2254851 | | VINYL CHLORIDE | 0.3113 | | | | | | 2 |
| CAL01 | Q2254851 | | DICHLOROETHANE-D4 | 0.3598 | | | | | | 0.9 |

59169KF

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | TOLUENE-D8 | 1.0027 | | | | | | 1.4 |
| CAL01 | Q2254851 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | | | | 2.1 |
| CAL01 | Q2254851 | | DIBROMOFLUOROMETHANE | 0.2351 | | | | | | 1.1 |
| CCVD | Q2256336 | | Analysis Date/Time: 06-Nov-09 06:28 | | | | | | | |
| CCVD | Q2256336 | | ACETONE (2-PROPANONE) | 0.1365 | | | 0.1340 | | | 1.8 |
| CCVD | Q2256336 | | ACROLEIN | 0.0190 | | | 0.0201 | | | 5.8 |
| CCVD | Q2256336 | | ACRYLONITRILE | 0.0577 | | | 0.0594 | | | 2.9 |
| CCVD | Q2256336 | | BENZENE | 0.8900 | | | 0.8420 | | | 5.4 |
| CCVD | Q2256336 | | BROMOBENZENE | 1.3255 | | | 1.3529 | | | 2.1 |
| CCVD | Q2256336 | | BROMOCHLOROMETHANE | 0.1068 | | | 0.1053 | | | 1.4 |
| CCVD | Q2256336 | | BROMODICHLOROMETHANE | 0.2750 | | | 0.2567 | | | 6.7 |
| CCVD | Q2256336 | | BROMOFORM | 0.4207 | | | 0.4214 | | | 0.2 |
| CCVD | Q2256336 | | BROMOMETHANE | 0.1126 | | | 0.1105 | | | 1.9 |
| CCVD | Q2256336 | | N-BUTYLBENZENE | 1.6681 | | | 1.8360 | | | 10.1 |
| CCVD | Q2256336 | | SEC-BUTYLBENZENE | 3.8168 | | | 4.1329 | | | 8.3 |
| CCVD | Q2256336 | | TERT-BUTYLBENZENE | 1.7636 | | | 1.8926 | | | 7.3 |
| CCVD | Q2256336 | | CARBON DISULFIDE | 0.6034 | | | 0.5934 | | | 1.7 |
| CCVD | Q2256336 | | CARBON TETRACHLORIDE | 0.2882 | | | 0.2931 | | | 1.7 |
| CCVD | Q2256336 | | CHLOROBENZENE | 1.7833 | | | 1.8711 | | | 4.9 |
| CCVD | Q2256336 | | DIBROMOCHLOROMETHANE | 0.5499 | | | 0.5565 | | | 1.2 |
| CCVD | Q2256336 | | CHLOROETHANE | 0.1260 | | | 0.1446 | | | 14.8 |
| CCVD | Q2256336 | | CHLOROFORM | 0.3943 | | | 0.3778 | | | 4.2 |
| CCVD | Q2256336 | | CHLOROMETHANE | 0.3681 | | | 0.3386 | | | 8 |
| CCVD | Q2256336 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | | 0.8407 | | | 3.4 |
| CCVD | Q2256336 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | | 0.8478 | | | 3.4 |
| CCVD | Q2256336 | | 2-CHLOROETHYLVINYLETHER | 0.1852 | | | 0.1661 | | | 10.3 |
| CCVD | Q2256336 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | | 0.2282 | | | 11.1 |
| CCVD | Q2256336 | | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | | 0.2154 | | | 4.2 |
| CCVD | Q2256336 | | DIBROMOMETHANE | 0.1439 | | | 0.1362 | | | 5.4 |
| CCVD | Q2256336 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | | 1.6504 | | | 7.5 |
| CCVD | Q2256336 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | | 1.6672 | | | 3.6 |
| CCVD | Q2256336 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | | 1.6972 | | | 3 |
| CCVD | Q2256336 | | DICHLORODIFLUOROMETHANE | 0.1791 | | | 0.1697 | | | 5.2 |
| CCVD | Q2256336 | | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | | 0.5036 | | | 5.9 |
| CCVD | Q2256336 | | 1,1-DICHLOROETHANE | 0.4227 | | | 0.4349 | | | 2.9 |
| CCVD | Q2256336 | | 1,2-DICHLOROETHANE | 0.3868 | | | 0.3833 | | | 0.9 |
| CCVD | Q2256336 | | 1,1-DICHLOROETHENE | 0.2024 | | | 0.2000 | | | 1.2 |
| CCVD | Q2256336 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | 0.2259 | | | 1 |
| CCVD | Q2256336 | | TRANS-1,2-DICHLOROETHENE | 0.2150 | | | 0.2121 | | | 1.3 |
| CCVD | Q2256336 | | 1,2-DICHLOROPROPANE | 0.2379 | | | 0.2233 | | | 6.1 |
| CCVD | Q2256336 | | 1,3-DICHLOROPROPANE | 1.0228 | | | 1.0506 | | | 2.7 |
| CCVD | Q2256336 | | 2,2-DICHLOROPROPANE | 0.2237 | | | 0.2334 | | | 4.3 |
| CCVD | Q2256336 | | 1,1-DICHLOROPROPENE | 0.1079 | | | 0.1083 | | | 0.4 |
| CCVD | Q2256336 | | CIS-1,3-DICHLOROPROPENE | 0.3445 | | | 0.3228 | | | 6.3 |

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## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVD | Q2256336 | | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | | 0.2884 | | | 6.1 |
| CCVD | Q2256336 | | ETHYL BENZENE | 1.0051 | | | 1.0593 | | | 5.4 |
| CCVD | Q2256336 | | ETHYL METHACRYLATE | 0.8695 | | | 0.8349 | | | 4 |
| CCVD | Q2256336 | | 2-HEXANONE | 0.9796 | | | 0.9894 | | | 1 |
| CCVD | Q2256336 | | HEXACHLOROBUTADIENE | 10 | | LIN | 12.59 | | | 25.9 |
| CCVD | Q2256336 | | IODOMETHANE | 0.3302 | | | 0.3304 | | | 0.1 |
| CCVD | Q2256336 | | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | | 3.0672 | | | 3.6 |
| CCVD | Q2256336 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | | 3.4056 | | | 9.3 |
| CCVD | Q2256336 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | LIN | 9.88 | | | 1.2 |
| CCVD | Q2256336 | | METHYL ETHYL KETONE | 0.0394 | | | 0.0367 | | | 6.9 |
| CCVD | Q2256336 | | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | | 0.6894 | | | 2.3 |
| CCVD | Q2256336 | | METHYL ISOBUTYL KETONE | 0.4505 | | | 0.4379 | | | 2.8 |
| CCVD | Q2256336 | | NAPHTHALENE | 10 | | LIN | 12.56 | | | 25.6 |
| CCVD | Q2256336 | | N-PROPYLBENZENE | 0.4327 | | | 0.4731 | | | 9.3 |
| CCVD | Q2256336 | | STYRENE | 2.0649 | | | 2.0991 | | | 1.7 |
| CCVD | Q2256336 | | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | | 0.6196 | | | 4.5 |
| CCVD | Q2256336 | | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | | 0.9940 | | | 4.4 |
| CCVD | Q2256336 | | TETRACHLOROETHENE | 0.7565 | | | 0.7679 | | | 1.5 |
| CCVD | Q2256336 | | TOLUENE | 0.9760 | | | 0.9363 | | | 4.1 |
| CCVD | Q2256336 | | 1,2,3-TRICHLOROBENZENE | 10 | | LIN | 13.90 | | | 39 |
| CCVD | Q2256336 | | 1,2,4-TRICHLOROBENZENE | 1.0500 | | | 1.2678 | | | 20.7 |
| CCVD | Q2256336 | | 1,1,1-TRICHLOROETHANE | 0.3242 | | | 0.3180 | | | 1.9 |
| CCVD | Q2256336 | | 1,1,2-TRICHLOROETHANE | 0.2046 | | | 0.1916 | | | 6.4 |
| CCVD | Q2256336 | | TRICHLOROETHENE | 0.2340 | | | 0.2256 | | | 3.6 |
| CCVD | Q2256336 | | TRICHLOROFLUOROMETHANE | 0.2605 | | | 0.2731 | | | 4.8 |
| CCVD | Q2256336 | | 1,2,3-TRICHLOROPROPANE | 0.3128 | | | 0.3174 | | | 1.5 |
| CCVD | Q2256336 | | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | | 3.1387 | | | 6.2 |
| CCVD | Q2256336 | | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | | 3.1029 | | | 5.9 |
| CCVD | Q2256336 | | VINYL ACETATE | 10 | | LIN | 7.88 | | | 21.2 |
| CCVD | Q2256336 | | VINYL CHLORIDE | 0.3113 | | | 0.3025 | | | 2.8 |
| CCVD | Q2256336 | | DICHLOROETHANE-D4 | 0.3598 | | | 0.3746 | | | 4.1 |
| CCVD | Q2256336 | | TOLUENE-D8 | 1.0027 | | | 0.9961 | | | 0.7 |
| CCVD | Q2256336 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | 1.0298 | | | 7.4 |
| CCVD | Q2256336 | | DIBROMOFLUOROMETHANE | 0.2351 | | | 0.2422 | | | 3 |
| BLA01 | Q2256337 | | Analysis Date/Time: 06-Nov-09 06:55 | | | | | | | |
| BLA01 | Q2256337 | | ACETONE (2-PROPANONE) | | | BDL | 10. | ug/L | | |
| BLA01 | Q2256337 | | ACROLEIN | | | BDL | 25. | ug/L | | |
| BLA01 | Q2256337 | | ACRYLONITRILE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMODICHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | BROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | N-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | SEC-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256337 | | TERT-BUTYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CARBON DISULFIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CARBON TETRACHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DIBROMOCHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROFORM | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CHLOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-CHLOROETHYLVINYLETHER | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DIBROMOETHANE (EDB) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DIBROMOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DICHLORODIFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,4-DICHLORO-2-BUTENE | | | BDL | 2.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2,2-DICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | CIS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRANS-1,3-DICHLOROPROPENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ETHYL BENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ETHYL METHACRYLATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 2-HEXANONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | HEXACHLOROBUTADIENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | IODOMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | ISOPROPYLBENZENE (CUMENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL ETHYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL-T-BUTYL ETHER (MTBE) | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | METHYL ISOBUTYL KETONE | | | BDL | 5.0 | ug/L | | |
| BLA01 | Q2256337 | | NAPHTHALENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | N-PROPYLBENZENE | | | BDL | 1.0 | ug/L | | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256337 | | STYRENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,1,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,2,2-TETRACHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TETRACHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TOLUENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,3-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,4-TRICHLOROBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,1-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,1,2-TRICHLOROETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | TRICHLOROFLUOROMETHANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,3-TRICHLOROPROPANE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,2,4-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | 1,3,5-TRIMETHYLBENZENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | VINYL ACETATE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256337 | | XYLENES (O/M/P-XYLENE) | | | BDL | 1.1 | ug/L | | |
| BLA01 | Q2256337 | | DICHLOROETHANE-D4 | | | | | | 102 | |
| BLA01 | Q2256337 | | TOLUENE-D8 | | | | | | 97 | |
| BLA01 | Q2256337 | | 4-BROMOFLUOROBENZENE | | | | | | 97 | |
| BLA01 | Q2256337 | | DIBROMOFLUOROMETHANE | | | | | | 96 | |
| LCS01 | Q2256338 | METHOD 826 | Analysis Date/Time: 06-Nov-09 07:26 | | | | | | | |
| LCS01 | Q2256338 | METHOD 826 | ACETONE (2-PROPANONE) | 50 | | | 48.4 | ug/L | 96.8 | |
| LCS01 | Q2256338 | METHOD 826 | ACROLEIN | 100 | | | 101 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | ACRYLONITRILE | 100 | | | 107 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | BENZENE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOBENZENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOCHLOROMETHANE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256338 | METHOD 826 | BROMODICHLOROMETHANE | 10 | | | 9.93 | ug/L | 99.3 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOFORM | 10 | | | 9.7 | ug/L | 97 | |
| LCS01 | Q2256338 | METHOD 826 | BROMOMETHANE | 10 | | | 9.52 | ug/L | 95.2 | |
| LCS01 | Q2256338 | METHOD 826 | N-BUTYLBENZENE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256338 | METHOD 826 | SEC-BUTYLBENZENE | 10 | | | 11.2 | ug/L | 112 | |
| LCS01 | Q2256338 | METHOD 826 | TERT-BUTYLBENZENE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256338 | METHOD 826 | CARBON DISULFIDE | 10 | | | 9.38 | ug/L | 93.8 | |
| LCS01 | Q2256338 | METHOD 826 | CARBON TETRACHLORIDE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROBENZENE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | DIBROMOCHLOROMETHANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD | CHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |

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**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 826 | | | | | | | | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROFORM | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | CHLOROMETHANE | 10 | | | 8.36 | ug/L | 83.6 | |
| LCS01 | Q2256338 | METHOD 826 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | 2-CHLOROETHYLVINYLETHER | 10 | | | 8.53 | ug/L | 85.3 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DIBROMOETHANE (EDB) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | DIBROMOMETHANE | 10 | | | 10.7 | ug/L | 107 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256338 | METHOD 826 | DICHLORODIFLUOROMETHANE | 10 | | | 7.66 | ug/L | 76.6 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | | 19.5 | ug/L | 97.5 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROETHANE | 10 | | | 10.4 | ug/L | 104 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROETHENE | 10 | | | 9.78 | ug/L | 97.8 | |
| LCS01 | Q2256338 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,2-DICHLOROETHENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2-DICHLOROPROPANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3-DICHLOROPROPANE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | 2,2-DICHLOROPROPANE | 10 | | | 11 | ug/L | 110 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1-DICHLOROPROPENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | CIS-1,3-DICHLOROPROPENE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | TRANS-1,3-DICHLOROPROPENE | 10 | | | 10.3 | ug/L | 103 | |
| LCS01 | Q2256338 | METHOD 826 | ETHYL BENZENE | 10 | | | 10.5 | ug/L | 105 | |
| LCS01 | Q2256338 | METHOD 826 | ETHYL METHACRYLATE | 10 | | | 9.73 | ug/L | 97.3 | |
| LCS01 | Q2256338 | METHOD 826 | 2-HEXANONE | 50 | | | 48.8 | ug/L | 97.6 | |
| LCS01 | Q2256338 | METHOD 826 | HEXACHLOROBUTADIENE | 10 | | ! | 13.8 | ug/L | 138 | |
| LCS01 | Q2256338 | METHOD 826 | IODOMETHANE | 10 | | | 9.37 | ug/L | 93.7 | |
| LCS01 | Q2256338 | METHOD 826 | ISOPROPYLBENZENE (CUMENE) | 10 | | | 12.2 | ug/L | 122 | |
| LCS01 | Q2256338 | METHOD 826 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | | 11.2 | ug/L | 112 | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS01 | Q2256338 | METHOD 826 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL ETHYL KETONE | 50 | | | 46.6 | ug/L | 93.2 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | | 9.54 | ug/L | 95.4 | |
| LCS01 | Q2256338 | METHOD 826 | METHYL ISOBUTYL KETONE | 50 | | | 48.1 | ug/L | 96.2 | |
| LCS01 | Q2256338 | METHOD 826 | NAPHTHALENE | 10 | | | 12.9 | ug/L | 129 | |
| LCS01 | Q2256338 | METHOD 826 | N-PROPYLBENZENE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | STYRENE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,1,2-TETRACHLOROETHANE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,2,2-TETRACHLOROETHANE | 10 | | | 10.9 | ug/L | 109 | |
| LCS01 | Q2256338 | METHOD 826 | TETRACHLOROETHENE | 10 | | | 10.6 | ug/L | 106 | |
| LCS01 | Q2256338 | METHOD 826 | TOLUENE | 10 | | | 9.99 | ug/L | 99.9 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,3-TRICHLOROBENZENE | 10 | | | 13.6 | ug/L | 136 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,4-TRICHLOROBENZENE | 10 | | | 11.9 | ug/L | 119 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,1-TRICHLOROETHANE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | 1,1,2-TRICHLOROETHANE | 10 | | | 10 | ug/L | 100 | |
| LCS01 | Q2256338 | METHOD 826 | TRICHLOROETHENE | 10 | | | 10.2 | ug/L | 102 | |
| LCS01 | Q2256338 | METHOD 826 | TRICHLOROFLUOROMETHANE | 10 | | | 10.1 | ug/L | 101 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,3-TRICHLOROPROPANE | 10 | | | 9.58 | ug/L | 95.8 | |
| LCS01 | Q2256338 | METHOD 826 | 1,2,4-TRIMETHYLBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | 1,3,5-TRIMETHYLBENZENE | 10 | | | 10.8 | ug/L | 108 | |
| LCS01 | Q2256338 | METHOD 826 | VINYL ACETATE | 10 | | | 9.32 | ug/L | 93.2 | |
| LCS01 | Q2256338 | METHOD 826 | VINYL CHLORIDE | 10 | | | 8.78 | ug/L | 87.8 | |
| LCS01 | Q2256338 | METHOD 826 | XYLENES (O/M/P-XYLENE) | 30 | | | 31.6 | ug/L | 105.3 | |
| SAMPLE | A864529 | | Analysis Date/Time: 06-Nov-09 10:35 | | | | | | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2256355 | A864529 | Analysis Date/Time: 06-Nov-09 11:00 | | | | | | | |
| SPI01 | Q2256355 | A864529 | ACETONE (2-PROPANONE) | 0 | 50 | | 49 | ug/L | 98 | |
| SPI01 | Q2256355 | A864529 | ACROLEIN | 0 | 100 | | 105 | ug/L | 105 | |
| SPI01 | Q2256355 | A864529 | ACRYLONITRILE | 0 | 100 | | 111 | ug/L | 111 | |
| SPI01 | Q2256355 | A864529 | BENZENE | 0 | 10 | | 9.22 | ug/L | 92.2 | |
| SPI01 | Q2256355 | A864529 | BROMOBENZENE | 0 | 10 | | 9.13 | ug/L | 91.3 | |
| SPI01 | Q2256355 | A864529 | BROMOCHLOROMETHANE | 0 | 10 | | 9.63 | ug/L | 96.3 | |
| SPI01 | Q2256355 | A864529 | BROMODICHLOROMETHANE | 0 | 10 | | 8.7 | ug/L | 87 | |
| SPI01 | Q2256355 | A864529 | BROMOFORM | 0 | 10 | | 7.21 | ug/L | 72.1 | |
| SPI01 | Q2256355 | A864529 | BROMOMETHANE | 0 | 10 | | 10.2 | ug/L | 102 | |
| SPI01 | Q2256355 | A864529 | N-BUTYLBENZENE | 0 | 10 | | 9.11 | ug/L | 91.1 | |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256355 | A864529 | SEC-BUTYLBENZENE | 0 | 10 | | 9.22 | ug/L | 92.2 | |
| SPI01 | Q2256355 | A864529 | TERT-BUTYLBENZENE | 0 | 10 | | 9.29 | ug/L | 92.9 | |
| SPI01 | Q2256355 | A864529 | CARBON DISULFIDE | 0 | 10 | ! | 6.47 | ug/L | 64.7 | |
| SPI01 | Q2256355 | A864529 | CARBON TETRACHLORIDE | 0 | 10 | | 8.8 | ug/L | 88 | |
| SPI01 | Q2256355 | A864529 | CHLOROBENZENE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | DIBROMOCHLOROMETHANE | 0 | 10 | | 8.27 | ug/L | 82.7 | |
| SPI01 | Q2256355 | A864529 | CHLOROETHANE | 0 | 10 | | 10.7 | ug/L | 107 | |
| SPI01 | Q2256355 | A864529 | CHLOROFORM | 0 | 10 | | 8.98 | ug/L | 89.8 | |
| SPI01 | Q2256355 | A864529 | CHLOROMETHANE | 0 | 10 | | 9.03 | ug/L | 90.3 | |
| SPI01 | Q2256355 | A864529 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 9.08 | ug/L | 90.8 | |
| SPI01 | Q2256355 | A864529 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 9.16 | ug/L | 91.6 | |
| SPI01 | Q2256355 | A864529 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| SPI01 | Q2256355 | A864529 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.74 | ug/L | 87.4 | |
| SPI01 | Q2256355 | A864529 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | DIBROMOMETHANE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.24 | ug/L | 92.4 | |
| SPI01 | Q2256355 | A864529 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 9.06 | ug/L | 90.6 | |
| SPI01 | Q2256355 | A864529 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 9.14 | ug/L | 91.4 | |
| SPI01 | Q2256355 | A864529 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.31 | ug/L | 83.1 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 18 | ug/L | 90 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROETHANE | 0 | 10 | | 9.68 | ug/L | 96.8 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.42 | ug/L | 94.2 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROETHENE | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | | 34.2 | ug/L | 97 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | | 11.3 | ug/L | 92.1 | |
| SPI01 | Q2256355 | A864529 | 1,2-DICHLOROPROPANE | 0 | 10 | | 9.4 | ug/L | 94 | |
| SPI01 | Q2256355 | A864529 | 1,3-DICHLOROPROPANE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| SPI01 | Q2256355 | A864529 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.23 | ug/L | 92.3 | |
| SPI01 | Q2256355 | A864529 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.07 | ug/L | 90.7 | |
| SPI01 | Q2256355 | A864529 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.16 | ug/L | 81.6 | |
| SPI01 | Q2256355 | A864529 | ETHYL BENZENE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | ETHYL METHACRYLATE | 0 | 10 | | 7.32 | ug/L | 73.2 | |
| SPI01 | Q2256355 | A864529 | 2-HEXANONE | 0 | 50 | | 46.7 | ug/L | 93.4 | |
| SPI01 | Q2256355 | A864529 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.76 | ug/L | 97.6 | |
| SPI01 | Q2256355 | A864529 | IODOMETHANE | 0 | 10 | | 9.55 | ug/L | 95.5 | |
| SPI01 | Q2256355 | A864529 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 8.78 | ug/L | 87.8 | |
| SPI01 | Q2256355 | A864529 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 8.53 | ug/L | 85.3 | |
| SPI01 | Q2256355 | A864529 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.74 | ug/L | 97.4 | |
| SPI01 | Q2256355 | A864529 | METHYL ETHYL KETONE | 0 | 50 | | 48.5 | ug/L | 97 | |
| SPI01 | Q2256355 | A864529 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.26 | ug/L | 92.6 | |
| SPI01 | Q2256355 | A864529 | METHYL ISOBUTYL KETONE | 0 | 50 | | 47.1 | ug/L | 94.2 | |
| SPI01 | Q2256355 | A864529 | NAPHTHALENE | 0 | 10 | | 10.8 | ug/L | 108 | |

59169KF

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SPI01 | Q2256355 | A864529 | N-PROPYLBENZENE | 0 | 10 | | 8.87 | ug/L | 88.7 | |
| SPI01 | Q2256355 | A864529 | STYRENE | 0 | 10 | | 3.51 | ug/L | 35.1 | |
| SPI01 | Q2256355 | A864529 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.92 | ug/L | 89.2 | |
| SPI01 | Q2256355 | A864529 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.49 | ug/L | 94.9 | |
| SPI01 | Q2256355 | A864529 | TETRACHLOROETHENE | 0 | 10 | | 8.41 | ug/L | 84.1 | |
| SPI01 | Q2256355 | A864529 | TOLUENE | 0 | 10 | | 8.87 | ug/L | 88.7 | |
| SPI01 | Q2256355 | A864529 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 11.3 | ug/L | 113 | |
| SPI01 | Q2256355 | A864529 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.97 | ug/L | 99.7 | |
| SPI01 | Q2256355 | A864529 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.15 | ug/L | 91.5 | |
| SPI01 | Q2256355 | A864529 | TRICHLOROETHENE | 216 | 10 | NQR | | ug/L | 70 | |
| SPI01 | Q2256355 | A864529 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 9.91 | ug/L | 99.1 | |
| SPI01 | Q2256355 | A864529 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 9.3 | ug/L | 93 | |
| SPI01 | Q2256355 | A864529 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | ! | 5.55 | ug/L | 55.5 | |
| SPI01 | Q2256355 | A864529 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | ! | 7.22 | ug/L | 72.2 | |
| SPI01 | Q2256355 | A864529 | VINYL ACETATE | 0 | 10 | | 8.52 | ug/L | 85.2 | |
| SPI01 | Q2256355 | A864529 | VINYL CHLORIDE | 0 | 10 | | 8.84 | ug/L | 88.4 | |
| SPI01 | Q2256355 | A864529 | XYLENES (O/M/P-XYLENE) | 0 | 30 | ! | 25.2 | ug/L | 84.0 | |
| DPS01 | Q2256356 | A864529 | Analysis Date/Time: 06-Nov-09 11:25 | | | | | | | |
| DPS01 | Q2256356 | A864529 | ACETONE (2-PROPANONE) | 0 | 50 | | 46.9 | ug/L | 93.7 | 4.5 |
| DPS01 | Q2256356 | A864529 | ACROLEIN | 0 | 100 | | 103 | ug/L | 102.6 | 2.2 |
| DPS01 | Q2256356 | A864529 | ACRYLONITRILE | 0 | 100 | | 108 | ug/L | 107.8 | 2.6 |
| DPS01 | Q2256356 | A864529 | BENZENE | 0 | 10 | | 9.08 | ug/L | 90.8 | 1.5 |
| DPS01 | Q2256356 | A864529 | BROMOBENZENE | 0 | 10 | | 9 | ug/L | 90 | 1.4 |
| DPS01 | Q2256356 | A864529 | BROMOCHLOROMETHANE | 0 | 10 | | 9.82 | ug/L | 98.2 | 2 |
| DPS01 | Q2256356 | A864529 | BROMODICHLOROMETHANE | 0 | 10 | | 8.44 | ug/L | 84.4 | 3 |
| DPS01 | Q2256356 | A864529 | BROMOFORM | 0 | 10 | | 6.89 | ug/L | 68.9 | 4.5 |
| DPS01 | Q2256356 | A864529 | BROMOMETHANE | 0 | 10 | | 10 | ug/L | 100.4 | 1.2 |
| DPS01 | Q2256356 | A864529 | N-BUTYLBENZENE | 0 | 10 | | 9.03 | ug/L | 90.3 | 0.9 |
| DPS01 | Q2256356 | A864529 | SEC-BUTYLBENZENE | 0 | 10 | | 9.13 | ug/L | 91.3 | 1 |
| DPS01 | Q2256356 | A864529 | TERT-BUTYLBENZENE | 0 | 10 | | 9.24 | ug/L | 92.4 | 0.5 |
| DPS01 | Q2256356 | A864529 | CARBON DISULFIDE | 0 | 10 | ! | 6.21 | ug/L | 62.1 | 4.1 |
| DPS01 | Q2256356 | A864529 | CARBON TETRACHLORIDE | 0 | 10 | | 8.74 | ug/L | 87.4 | 0.7 |
| DPS01 | Q2256356 | A864529 | CHLOROBENZENE | 0 | 10 | | 8.81 | ug/L | 88.1 | 3.8 |
| DPS01 | Q2256356 | A864529 | DIBROMOCHLOROMETHANE | 0 | 10 | | 7.74 | ug/L | 77.4 | 6.6 |
| DPS01 | Q2256356 | A864529 | CHLOROETHANE | 0 | 10 | | 10.9 | ug/L | 109 | 1.8 |
| DPS01 | Q2256356 | A864529 | CHLOROFORM | 0 | 10 | | 8.91 | ug/L | 89.1 | 0.8 |
| DPS01 | Q2256356 | A864529 | CHLOROMETHANE | 0 | 10 | | 8.7 | ug/L | 87 | 3.7 |
| DPS01 | Q2256356 | A864529 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | | 8.77 | ug/L | 87.7 | 3.5 |
| DPS01 | Q2256356 | A864529 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | | 8.85 | ug/L | 88.5 | 3.4 |
| DPS01 | Q2256356 | A864529 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | ! | 0 | ug/L | 0 | |
| DPS01 | Q2256356 | A864529 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | | 8.35 | ug/L | 83.5 | 4.6 |
| DPS01 | Q2256356 | A864529 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | | 8.94 | ug/L | 89.4 | 1.4 |
| DPS01 | Q2256356 | A864529 | DIBROMOMETHANE | 0 | 10 | | 9.29 | ug/L | 92.9 | 0.1 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | | 9.17 | ug/L | 91.7 | 0.8 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| DPS01 | Q2256356 | A864529 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.6 |
| DPS01 | Q2256356 | A864529 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | | 8.73 | ug/L | 87.3 | 4.6 |
| DPS01 | Q2256356 | A864529 | DICHLORODIFLUOROMETHANE | 0 | 10 | | 8.02 | ug/L | 80.2 | 3.6 |
| DPS01 | Q2256356 | A864529 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | | 16.9 | ug/L | 84.3 | 6.3 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROETHANE | 0 | 10 | | 9.53 | ug/L | 95.3 | 1.6 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROETHANE | 0 | 10 | | 9.34 | ug/L | 93.4 | 0.9 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROETHENE | 0 | 10 | | 8.92 | ug/L | 89.2 | 1.7 |
| DPS01 | Q2256356 | A864529 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | | 34 | ug/L | 94.4 | 2.5 |
| DPS01 | Q2256356 | A864529 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | | 11.2 | ug/L | 91.3 | 1.3 |
| DPS01 | Q2256356 | A864529 | 1,2-DICHLOROPROPANE | 0 | 10 | | 8.95 | ug/L | 89.5 | 4.9 |
| DPS01 | Q2256356 | A864529 | 1,3-DICHLOROPROPANE | 0 | 10 | | 8.86 | ug/L | 88.6 | 4.6 |
| DPS01 | Q2256356 | A864529 | 2,2-DICHLOROPROPANE | 0 | 10 | | 9.01 | ug/L | 90.1 | 2.4 |
| DPS01 | Q2256356 | A864529 | 1,1-DICHLOROPROPENE | 0 | 10 | | 9.1 | ug/L | 91 | 0.3 |
| DPS01 | Q2256356 | A864529 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | | 8.59 | ug/L | 85.9 | 2.9 |
| DPS01 | Q2256356 | A864529 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | | 7.99 | ug/L | 79.9 | 2.1 |
| DPS01 | Q2256356 | A864529 | ETHYL BENZENE | 0 | 10 | | 8.71 | ug/L | 87.1 | 1.5 |
| DPS01 | Q2256356 | A864529 | ETHYL METHACRYLATE | 0 | 10 | | 6.98 | ug/L | 69.8 | 4.8 |
| DPS01 | Q2256356 | A864529 | 2-HEXANONE | 0 | 50 | | 44.1 | ug/L | 88.2 | 5.7 |
| DPS01 | Q2256356 | A864529 | HEXACHLOROBUTADIENE | 0 | 10 | | 9.77 | ug/L | 97.7 | 0.1 |
| DPS01 | Q2256356 | A864529 | IODOMETHANE | 0 | 10 | | 9.56 | ug/L | 95.6 | 0.1 |
| DPS01 | Q2256356 | A864529 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | | 8.52 | ug/L | 85.2 | 3 |
| DPS01 | Q2256356 | A864529 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | | 8.49 | ug/L | 84.9 | 0.5 |
| DPS01 | Q2256356 | A864529 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | | 9.73 | ug/L | 97.3 | 0.1 |
| DPS01 | Q2256356 | A864529 | METHYL ETHYL KETONE | 0 | 50 | | 46.8 | ug/L | 93.6 | 3.7 |
| DPS01 | Q2256356 | A864529 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | | 9.03 | ug/L | 90.3 | 2.5 |
| DPS01 | Q2256356 | A864529 | METHYL ISOBUTYL KETONE | 0 | 50 | | 46.1 | ug/L | 92.2 | 2.1 |
| DPS01 | Q2256356 | A864529 | NAPHTHALENE | 0 | 10 | | 10.3 | ug/L | 103.1 | 4.5 |
| DPS01 | Q2256356 | A864529 | N-PROPYLBENZENE | 0 | 10 | | 8.76 | ug/L | 87.6 | 1.2 |
| DPS01 | Q2256356 | A864529 | STYRENE | 0 | 10 | | 2.99 | ug/L | 29.9 | 16 |
| DPS01 | Q2256356 | A864529 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | | 8.68 | ug/L | 86.8 | 2.7 |
| DPS01 | Q2256356 | A864529 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | | 9.31 | ug/L | 93.1 | 1.9 |
| DPS01 | Q2256356 | A864529 | TETRACHLOROETHENE | 0 | 10 | | 8.33 | ug/L | 83.3 | 1 |
| DPS01 | Q2256356 | A864529 | TOLUENE | 0 | 10 | | 8.9 | ug/L | 89 | 0.3 |
| DPS01 | Q2256356 | A864529 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | | 10.9 | ug/L | 109.3 | 3.2 |
| DPS01 | Q2256356 | A864529 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | | 9.95 | ug/L | 99.5 | 0.2 |
| DPS01 | Q2256356 | A864529 | 1,1,1-TRICHLOROETHANE | 0 | 10 | | 8.93 | ug/L | 89.3 | 2.4 |
| DPS01 | Q2256356 | A864529 | 1,1,2-TRICHLOROETHANE | 0 | 10 | | 9.31 | ug/L | 93.1 | 1.7 |
| DPS01 | Q2256356 | A864529 | TRICHLOROETHENE | 216 | 10 | NQR | | ug/L | | |
| DPS01 | Q2256356 | A864529 | TRICHLOROFLUOROMETHANE | 0 | 10 | | 10 | ug/L | 100.4 | 1.3 |
| DPS01 | Q2256356 | A864529 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | | 8.79 | ug/L | 87.9 | 5.6 |
| DPS01 | Q2256356 | A864529 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | ! | 5.04 | ug/L | 50.4 | 9.6 |
| DPS01 | Q2256356 | A864529 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | ! | 6.9 | ug/L | 69 | 4.5 |
| DPS01 | Q2256356 | A864529 | VINYL ACETATE | 0 | 10 | | 7.91 | ug/L | 79.1 | 7.4 |
| DPS01 | Q2256356 | A864529 | VINYL CHLORIDE | 0 | 10 | | 8.94 | ug/L | 89.4 | 1.1 |
| DPS01 | Q2256356 | A864529 | XYLENES (O/M/P-XYLENE) | 0 | 30 | ! | 23.8 | ug/L | 79.3 | 5.8 |

HERITAGE

**59169KF**

**VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B** **O510.5**

R560090 Analyst: R SHAMP Run Date: 06-Nov-09
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | A864527 | | Analysis Date/Time: 06-Nov-09 12:15 | | | | | | | |
| SAMPLE | A864527 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864528 | | Analysis Date/Time: 06-Nov-09 12:40 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864530 | | Analysis Date/Time: 06-Nov-09 13:05 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864531 | | Analysis Date/Time: 06-Nov-09 13:30 | | | | | | | |
| SAMPLE | A864531 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864534 | | Analysis Date/Time: 06-Nov-09 14:44 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864535 | | Analysis Date/Time: 06-Nov-09 15:09 | | | | | | | |
| SAMPLE | A864535 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864536 | | Analysis Date/Time: 06-Nov-09 15:34 | | | | | | | |
| SAMPLE | A864536 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | A864539 | | Analysis Date/Time: 06-Nov-09 16:49 | | | | | | | |
| SAMPLE | A864539 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

Q2254851 Value reported for analytes calibrated by linear (LIN) or
Q2254851 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256336 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256336 equations is concentration ( ).
Q2256355 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256355 possible. Unacidified sample not available.
Q2256356 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256356 possible. Unacidified sample not available.

R560098 Analyst: R SHAMP Run Date: 07-Nov-09 Instrument: GC/MS VOA
Analytical Reviewer: L SMITH Review Date: 11-Nov-09

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2254851 | | Analysis Date/Time: 05-Nov-09 08:53 | | | | | | | |
| CAL01 | Q2254851 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | | | | 2.2 |
| CAL01 | Q2254851 | | TRICHLOROETHENE | 0.2340 | | | | | | 4.6 |
| CAL01 | Q2254851 | | DICHLOROETHANE-D4 | 0.3598 | | | | | | 0.9 |
| CAL01 | Q2254851 | | TOLUENE-D8 | 1.0027 | | | | | | 1.4 |
| CAL01 | Q2254851 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | | | | 2.1 |
| CAL01 | Q2254851 | | DIBROMOFLUOROMETHANE | 0.2351 | | | | | | 1.1 |
| CCVD | Q2256392 | | Analysis Date/Time: 07-Nov-09 07:40 | | | | | | | |
| CCVD | Q2256392 | | CIS-1,2-DICHLOROETHENE | 0.2236 | | | 0.2275 | | | 1.7 |
| CCVD | Q2256392 | | TRICHLOROETHENE | 0.2340 | | | 0.2261 | | | 3.4 |
| CCVD | Q2256392 | | DICHLOROETHANE-D4 | 0.3598 | | | 0.3709 | | | 3.1 |
| CCVD | Q2256392 | | TOLUENE-D8 | 1.0027 | | | 1.0055 | | | 0.3 |
| CCVD | Q2256392 | | 4-BROMOFLUOROBENZENE | 0.9585 | | | 0.9232 | | | 3.7 |
| CCVD | Q2256392 | | DIBROMOFLUOROMETHANE | 0.2351 | | | 0.2364 | | | 0.6 |
| BLA01 | Q2256393 | | Analysis Date/Time: 07-Nov-09 08:07 | | | | | | | |
| BLA01 | Q2256393 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | TRICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256393 | | DICHLOROETHANE-D4 | | | | | | 105 | |
| BLA01 | Q2256393 | | TOLUENE-D8 | | | | | | 96 | |

**59169KF**

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B — O510.5

R560098 Analytical — Analyst: R SHAMP — Reviewer: L SMITH — Run Date: 07-Nov-09 — Review Date: 11-Nov-09 — Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256393 | | 4-BROMOFLUOROBENZENE | | | | | | 99 | |
| BLA01 | Q2256393 | | DIBROMOFLUOROMETHANE | | | | | | 99 | |
| LCS01 | Q2256400 | METHOD 826 | Analysis Date/Time: 07-Nov-09 08:37 | | | | | | | |
| LCS01 | Q2256400 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 11.4 | ug/L | 114 | |
| LCS01 | Q2256400 | METHOD 826 | TRICHLOROETHENE | 10 | | | 11 | ug/L | 110 | |
| SPI01 | Q2256395 | A864635 | Analysis Date/Time: 07-Nov-09 11:15 | | | | | | | |
| SPI01 | Q2256395 | A864635 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 9.54 | ug/L | 95.4 | |
| SPI01 | Q2256395 | A864635 | TRICHLOROETHENE | 0 | 10 | | 9.28 | ug/L | 92.8 | |
| DPS01 | Q2256396 | A864635 | Analysis Date/Time: 07-Nov-09 11:40 | | | | | | | |
| DPS01 | Q2256396 | A864635 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 10.2 | ug/L | 102.1 | 6.8 |
| DPS01 | Q2256396 | A864635 | TRICHLOROETHENE | 0 | 10 | | 9.83 | ug/L | 98.3 | 5.8 |
| SAMPLE | A864529 | | Analysis Date/Time: 07-Nov-09 16:13 | | | | | | | |
| SAMPLE | A864529 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864528 | | Analysis Date/Time: 07-Nov-09 16:38 | | | | | | | |
| SAMPLE | A864528 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864530 | | Analysis Date/Time: 07-Nov-09 17:03 | | | | | | | |
| SAMPLE | A864530 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864534 | | Analysis Date/Time: 07-Nov-09 17:28 | | | | | | | |
| SAMPLE | A864534 | | See Certificate of Analysis, Rep: 1 | | | | | | | |

Q2254851 Value reported for analytes calibrated by linear (LIN) or
Q2254851 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256392 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256392 equations is concentration ( ).
Q2256395 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256395 possible. Unacidified sample not available.
Q2256396 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256396 possible. Unacidified sample not available.

R560121 Analytical — Analyst: H WILLIAMS — Reviewer: R SHAMP — Run Date: 09-Nov-09 — Review Date: 12-Nov-09 — Instrument: GC/MS VOA

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CAL01 | Q2253648 | | Analysis Date/Time: 31-Oct-09 13:47 | | | | | | | |
| CAL01 | Q2253648 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | | | | 2 |
| CAL01 | Q2253648 | | VINYL CHLORIDE | 0.2350 | | | | | | 3.4 |
| CAL01 | Q2253648 | | DICHLOROETHANE-D4 | 0.2816 | | | | | | 2.3 |
| CAL01 | Q2253648 | | TOLUENE-D8 | 0.8989 | | | | | | 4 |
| CAL01 | Q2253648 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | | | | 5.2 |
| CAL01 | Q2253648 | | DIBROMOFLUOROMETHANE | 0.2362 | | | | | | 3.2 |
| CCVD | Q2256552 | | Analysis Date/Time: 09-Nov-09 06:16 | | | | | | | |
| CCVD | Q2256552 | | CIS-1,2-DICHLOROETHENE | 0.2414 | | | 0.2543 | | | 5.3 |
| CCVD | Q2256552 | | VINYL CHLORIDE | 0.2350 | | | 0.2379 | | | 1.2 |
| CCVD | Q2256552 | | DICHLOROETHANE-D4 | 0.2816 | | | 0.2680 | | | 4.8 |
| CCVD | Q2256552 | | TOLUENE-D8 | 0.8989 | | | 0.9433 | | | 4.9 |
| CCVD | Q2256552 | | 4-BROMOFLUOROBENZENE | 0.8538 | | | 0.7673 | | | 10.1 |
| CCVD | Q2256552 | | DIBROMOFLUOROMETHANE | 0.2362 | | | 0.2228 | | | 5.7 |

59169KF

## VOLATILE ORGANICS, CAPILLARY COLUMN TECHNIQUE SW846-8260B O510.5

R560121 Analyst: H WILLIAMS Run Date: 09-Nov-09
Analytical Reviewer: R SHAMP Review Date: 12-Nov-09

Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2256553 | | Analysis Date/Time: 09-Nov-09 06:56 | | | | | | | |
| BLA01 | Q2256553 | | CIS-1,2-DICHLOROETHENE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256553 | | VINYL CHLORIDE | | | BDL | 1.0 | ug/L | | |
| BLA01 | Q2256553 | | DICHLOROETHANE-D4 | | | | | | 98 | |
| BLA01 | Q2256553 | | TOLUENE-D8 | | | | | | 99 | |
| BLA01 | Q2256553 | | 4-BROMOFLUOROBENZENE | | | | | | 94 | |
| BLA01 | Q2256553 | | DIBROMOFLUOROMETHANE | | | | | | 99 | |
| LCS01 | Q2256554 | METHOD 826 | Analysis Date/Time: 09-Nov-09 07:29 | | | | | | | |
| LCS01 | Q2256554 | METHOD 826 | CIS-1,2-DICHLOROETHENE | 10 | | | 11.6 | ug/L | 116 | |
| LCS01 | Q2256554 | METHOD 826 | VINYL CHLORIDE | 10 | | | 9.4 | ug/L | 94 | |
| SAMPLE | A864543 | | Analysis Date/Time: 09-Nov-09 08:28 | | | | | | | |
| SAMPLE | A864543 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864545 | | Analysis Date/Time: 09-Nov-09 08:54 | | | | | | | |
| SAMPLE | A864545 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864546 | | Analysis Date/Time: 09-Nov-09 09:20 | | | | | | | |
| SAMPLE | A864546 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864548 | | Analysis Date/Time: 09-Nov-09 09:46 | | | | | | | |
| SAMPLE | A864548 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864549 | | Analysis Date/Time: 09-Nov-09 10:12 | | | | | | | |
| SAMPLE | A864549 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SAMPLE | A864550 | | Analysis Date/Time: 09-Nov-09 10:37 | | | | | | | |
| SAMPLE | A864550 | | See Certificate of Analysis, Rep: 1 | | | | | | | |
| SPI01 | Q2256555 | A864665 | Analysis Date/Time: 09-Nov-09 11:54 | | | | | | | |
| SPI01 | Q2256555 | A864665 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 11.2 | ug/L | 112 | |
| SPI01 | Q2256555 | A864665 | VINYL CHLORIDE | 0 | 10 | | 10.7 | ug/L | 107 | |
| DPS01 | Q2256556 | A864665 | Analysis Date/Time: 09-Nov-09 12:19 | | | | | | | |
| DPS01 | Q2256556 | A864665 | CIS-1,2-DICHLOROETHENE | 0 | 10 | | 10.4 | ug/L | 104.1 | 6.9 |
| DPS01 | Q2256556 | A864665 | VINYL CHLORIDE | 0 | 10 | | 10.2 | ug/L | 101.6 | 4.7 |

Q2253648 Value reported for analytes calibrated by linear (LIN) or
Q2253648 quadratic (QDR) equations is r2 (Coef. of Determination).
Q2256552 Value reported for analytes calibrated by linear (LIN) or quadratic (QDR)
Q2256552 equations is concentration ( ).
Q2256555 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256555 possible. Unacidified sample not available.
Q2256556 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q2256556 possible. Unacidified sample not available.

| RQL | Result Qualifier Definition |
|---|---|
| ! | Outside Lab Generated Control Limits |
| < | Less Than |
| BDL | Below Detection Limit |
| CNA | RPD Calculation Not Applicable < DL |
| LIN | Linear Regression Used |
| NQR | No QC Result. High Sample Concentration. |

| QC Type | Definition |
|---|---|
| ICV01 | INITIAL CALIBRATION VERIFICATION DIFFERENT SOURCE |

**59169KF**

| QC Type | Definition |
|---|---|
| CCVD | CONTINUING CALIBRATION VERIFICATION (USING %D) |
| CCV | CONTINUING CALIBRATION VERIFICATION |
| BLA01 | CALIBRATION (INSTRUMENT) BLANK |
| DPS02 | PREPPED DUPLICATE MATRIX SPIKE |
| ICS-AB | INTERFERENCE CHECK SAMPLE AB |
| BLA02 | PREPPED (CALIBRATION) BLANK OR METHOD BLANK |
| SPI02 | PREPPED MATRIX SPIKE |
| CAL01 | INITIAL CALIBRATION |
| CCVL | LOW CONTINUING CALIBRATION VERIFICATION |
| CCVH | HIGH CONTINUING CALIBRATION VERIFICATION |
| SPI01 | MATRIX SPIKE |
| LCS01 | LABORATORY CONTROL SAMPLE |
| DPS01 | DUPLICATE MATRIX SPIKE |
| CDL01 | DETECTION LIMIT STANDARD |
| SER01 | ICP SERIAL DILUTION |
| LCS | LABORATORY CONTROL SAMPLE PREPPED |

Scott A Bryan

Approved By : SCOTT BRYAN

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION
SDG# 59169

SAMPLE# A864555 - A864556

These samples were analyzed using normal procedures with no modifications. The required hold times were met for the analyses. The method blanks were below the reporting limit. The Initial and Continuing Calibration standards were within the control limits. Another Keramida sample from the same project, A864552, was analyzed for the matrix spike and matrix spike duplicate and was within the control limits.

Polly K. Spence

POLLY K. SPENCE
LABORATORY SUPERVISOR

# QC ACCEPTANCE LIMITS

| ANALYSIS | ICV | CCV | LFB | LCS | MS/MSD % | MS/MSD RPD | DUP RPD |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Total Organic Carbon | 90-110% | 90-110% | | | 70-130% | ≤ 20% | ≤ 20% |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

SDG 59169 - KERAMIDA ENVIRONMENTAL

| TEST | METHOD |
|---|---|
| TOTAL ORGANIC CARBON (TOC) | SW846-9060A |

| INSTR | RUN | FILENAME | SAMPLEID | TEST | ST |
|---|---|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | R559987 | 091106 | A864555 | O401.0.0 | 7 |
| | | | A864556 | O401.0.0 | 7 |

# Heritage Env Svc, LLC - GEN TOC Bench Sheet

091106 - 1

Analyst 4672 S. BOXUM

Instr 392 GEN - TOC1 PERSULFATE (4/27/05)

Start Date 11-6-09 Start Time 10:30

End Date 11-7-09 End Time 8:40

Method : SW846-9060A

LIMS RunID R559987

Reviewer PKB 2524 11-9-09

Recorder TDT 1066 11-10-09

DE Reviewer SS 4671 11.10.09

| SampleID | TestID Rep/ QCType | Parm | | Raw Data | Result | Limit | Units | Smp/ TruVal | SpikeVal | % Rec | RPD | ClientID | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BLA01 | 730 | TOTAL ORGANIC CARBON | | BDL | 0.5 | mg/L | | | | | | Dil____ |
| | CDL01 | 730 | TOTAL ORGANIC CARBON | | 0.901 | | | 1.00 | | 90.1 | | | Dil____ |
| | ICV01 | 730 | TOTAL ORGANIC CARBON | | 12.0 | | | 12.5 | | 96.0 | | | Dil____ |
| A864426 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 6.0 | 1.0 | mg/L | | | | | | Dil____ |
| A864036 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 4.1 | 0.5 | mg/L | | | | | | Dil 1:5 |
| A864427 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 3.8 | 1.0 | mg/L | | | | | | Dil____ |
| A864428 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 2.8 | 1.0 | mg/L | | | | | | Dil____ |
| A864429 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 2.3 | 1.0 | mg/L | | | | | | Dil____ |
| A864430 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 1.8 | 1.0 | mg/L | | | | | | Dil____ |
| A864432 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 1.3 | 1.0 | mg/L | | | | | | Dil____ |
| A864433 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 1.1 | 1.0 | mg/L | | | | | | Dil____ |
| A864433 | SPI01 | 730 | TOTAL ORGANIC CARBON | | 14.4 | | | 1.12 | 12.5 | 106.2 | | | Dil____ |
| A864433 | DPS01 | 730 | TOTAL ORGANIC CARBON | | 14.3 | | | | | 105.4 ~~0.9~~ | 0.8 PKB 11-9-09 | | Dil____ |
| | CCVL | 730 | TOTAL ORGANIC CARBON | | 5.13 | | mg/L | 5.00 | | ~~103~~ 102.6 | | | Dil____ |
| | BLA01 | 730 | TOTAL ORGANIC CARBON | | BDL | 0.5 | | | | 11-9-09 | | | Dil____ |
| A864434 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 2.2 | 1.0 | mg/L | | | | | | Dil____ |

**Dilution Factor = Detection Limit Multiplier**

# Heritage Env Svc, LLC - GEN TOC Bench Sheet

091106 - 2

| SampleID | TestID Rep/ QCType | | Parm | | Raw Data | Result | Limit | Units | Smp/ TruVal | SpikeVal | % Rec | RPD | ClientID | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A864435 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 1.5 | 1.0 | mg/L | | | | | | Dil____ |
| A864436 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 1.9 | 1.0 | mg/L | | | | | | Dil____ |
| A864437 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 2.8 | 1.0 | mg/L | | | | | | Dil____ |
| A864439 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 2.2 | 1.0 | mg/L | | | | | | Dil 1:2 |
| A864440 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864440 | SPI01 | | 730 | TOTAL ORGANIC CARBON | | 11-9-09 SIB ~~13.3~~ 26.6 | | | 0.973 | 25.0 | RB 11-9-09 ~~103~~ 102.5 | | | Dil 1:2 |
| A864440 | DPS01 | | 730 | TOTAL ORGANIC CARBON | | 11-9-09 SIB ~~13.2~~ 26.4 5 RB 11-9-09 | | | | | 102.1 | ~~1.0~~ 0.4 RB 11-9-09 | | Dil 1:2 |
| A864441 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| 11-7-09 | CCVH | | 730 | TOTAL ORGANIC CARBON | | 14.1 | | mg/L | 15.0 | | 94.0 | | | Dil____ |
| | BLA01 | | 730 | TOTAL ORGANIC CARBON | | BDL | 0.30 | | | | | | | Dil____ |
| A864538 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864552 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 2000 | 1000 | ug/L | | | | | | Dil____ |
| A864552 | SPI01 | | 730 | TOTAL ORGANIC CARBON | | 13900 | | | 1930 | 12,500 | 95.8 | | | Dil____ |
| A864552 | DPS01 | | 730 | TOTAL ORGANIC CARBON | | 13900 | | | | | 95.8 | 0.0 | | Dil____ |
| A864553 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | 1700 | 1000 | ug/L | | | | | | Dil____ |
| A864554 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1000 | ug/L | | | | | | Dil____ |
| A864555 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1000 | ug/L | | | | | | Dil____ |
| A864556 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1000 | ug/L | | | | | | Dil____ |
| A864722 | O401.0 | 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 0.30 | mg/L | | | | | | Dil____ |



**Dilution Factor = Detection Limit Multiplier**

# Heritage Env Svc, LLC - GEN TOC Bench Sheet

11-7-09

091106 - 3

| SampleID | TestID Rep/ QCType | Parm | | Raw Data | Result | Limit | Units | Smp/ TruVal | SpikeVal | % Rec | RPD | ClientID | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CCVL | 730 | TOTAL ORGANIC CARBON | | 4.89 | | mg/L | 5.00 | | 97.8 | | | Dil____ |
| | BLA01 | 730 | TOTAL ORGANIC CARBON | | BDL | 0.30 | ↓ | | | | | | Dil____ |
| A864631 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864632 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 15 | 1.0 | mg/L | | | | | | Dil 1:5 |
| A864633 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864634 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864635 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864636 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864636 | SPI01 | 730 | TOTAL ORGANIC CARBON | | 12.6 | | ↓ | 0.682 | 12.5 | 95.3 | | | Dil____ |
| A864636 | DPS01 | 730 | TOTAL ORGANIC CARBON | | 12.6 | | ↓ | ↓ | ↓ | 95.3 | 0.0 | | Dil____ |
| A864637 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 1.0 | 1.0 | mg/L | | | | | | Dil____ |
| A864638 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| | CCVH | 730 | TOTAL ORGANIC CARBON | | 13.6 | | mg/L | 15.0 | | 90.7 | | | Dil____ |
| | BLA01 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | ↓ | | | | | | Dil____ |
| A864639 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864640 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864641 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864642 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 11 | 1.0 | mg/L | | | | | | Dil 1:2 |
| A864644 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |



**Dilution Factor = Detection Limit Multiplier**

# Heritage Env Svc, LLC - GEN TOC Bench Sheet

11-7-09

091106 - 4

| SampleID | TestID Rep/ QCType | Parm | | Raw Data | Result | Limit | Units | Smp/ TruVal | SpikeVal | % Rec | RPD | ClientID | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A864644 | SPI01 | 730 | TOTAL ORGANIC CARBON | | 12.4 | | mg/L | 0.857 | 12.5 | 90.3 | | | Dil____ |
| A864644 | DPS01 | 730 | TOTAL ORGANIC CARBON | | 12.4 | | ↓ | ↓ | ↓ | ↓ | 0.0 | | Dil____ |
| A864645 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | mg/L | | | | | | Dil____ |
| A864646 | O401.0 0 | 730 | TOTAL ORGANIC CARBON | | 1.0 | 1.0 | mg/L | | | | | | Dil____ |
| | CCVL | 730 | TOTAL ORGANIC CARBON | | 4.73 | | mg/L | 5.00 | | 94.6 | | | Dil____ |
| | BLA01 | 730 | TOTAL ORGANIC CARBON | | BDL | 1.0 | ↓ | | | | | | Dil____ |



**Dilution Factor = Detection Limit Multiplier**

Detailed Analysis Report  Print Date/Time: 2009/11/06 17:10:14

Sample ID: Clean
Method: Cleaning Procedure
Cal. Curve: 091022
Operator ID:

Mode: UTILITY
Filename: 11061010
Timestamp: 11/06/2009 10:31
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2582 | 5.1637 | 760485 | 9.947 | 10.447 | 120 |
| 2 | 0.1949 | 3.8988 | 574197 | 9.771 | 10.268 | 137 |
| 3 | 0.0412 | 0.8250 | 121500 | 9.744 | 10.244 | 102 |
| 4 | 0.0234 | 0.4672 | 68805 | 9.700 | 10.199 | 88 |
| 5 | 0.0197 | 0.3938 | 57993 | 9.639 | 10.139 | 83 |
| 6 | 0.0164 | 0.3280 | 48307 | 9.563 | 10.063 | 79 |

<<<Statistics>>> Mean: 0.0923 Std Dev: 0.1062 RSD: 115.11

Sample ID: Clean
Method: Cleaning Procedure
Cal. Curve: 091022
Operator ID:

Mode: UTILITY
Filename: 11061010
Timestamp: 11/06/2009 10:54
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2515 | 5.0300 | 740800 | 9.517 | 10.016 | 126 |
| 2 | 0.0173 | 0.3453 | 50861 | 9.496 | 9.995 | 77 |
| 3 | 0.0123 | 0.2454 | 36146 | 9.459 | 9.958 | 72 |
| 4 | 0.0130 | 0.2610 | 38433 | 9.468 | 9.548 | 120 |
| 5 | 0.0130 | 0.2610 | 38433 | 9.467 | 9.519 | 120 |
| 6 | 0.0144 | 0.2875 | 42343 | 9.435 | 9.523 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.0536 Std Dev: 0.0970 RSD: 180.98

Sample ID: BLA01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 11:18
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1965 | -0.7861 | 57094 | 9.468 | 10.463 | 62 |
| 2 | -0.1963 | -0.7852 | 57234 | 9.462 | 9.443 | 120 |
| 3 | -0.1940 | -0.7759 | 58603 | 9.440 | 9.482 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -0.1956 Std Dev: 0.0014 RSD: -0.71

Sample ID: CDL01 TV=1.00 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 11:40
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.0238 | 4.0950 | 775962 | 9.434 | 10.431 | 92 |
| 2 | 1.0391 | 4.1564 | 785010 | 9.429 | 10.419 | 91 |
| 3 | 0.6413 | 2.5653 | 550673 | 9.413 | 10.407 | 87 |

<<<Statistics>>> Mean: 0.9014 Std Dev: 0.2254 RSD: 25.00

Sample ID: ICV01 TV=12.5 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 12:05
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 11.9886 | 47.9543 | 7235331 | 9.375 | 10.373 | 146 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | 12.0396 | 48.1585 | 7265407 | 9.460 | 10.458 | 150 |
| 3 | 12.0419 | 48.1675 | 7266740 | 9.445 | 10.441 | 144 |

<<<Statistics>>> Mean: 12.0234 Std Dev: 0.0301 RSD: 0.25

Sample ID: A864036-C DL=0.5 1:5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 12:31
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9410 | 3.7641 | 654059 | 9.409 | 10.408 | 214 |
| 2 | 0.7053 | 2.8213 | 515206 | 9.324 | 10.322 | 172 |
| 3 | 0.6396 | 2.5585 | 476512 | 9.308 | 10.308 | 153 |

3.81

<<<Statistics>>> Mean: 0.7620 Std Dev: 0.1585 RSD: 20.80

Sample ID: A864426-B SW-2113
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 13:01
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 5.8937 | 23.5748 | 3571688 | 9.230 | 10.229 | 249 |
| 2 | 6.0685 | 24.2741 | 3674678 | 9.208 | 10.207 | 250 |
| 3 | 6.1082 | 24.4329 | 3698064 | 9.183 | 10.182 | 249 |

<<<Statistics>>> Mean: 6.0235 Std Dev: 0.1141 RSD: 1.89

Sample ID: 036 1:5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 13:28
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9062 | 3.6246 | 633522 | 9.219 | 10.218 | 194 |
| 2 | 0.7756 | 3.1024 | 556613 | 9.133 | 10.133 | 184 |
| 3 | 0.7574 | 3.0297 | 545900 | 9.089 | 10.088 | 180 |

4.07

<<<Statistics>>> Mean: 0.8131 Std Dev: 0.0812 RSD: 9.98

Sample ID: A864427-B SW-2114
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 13:58
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 3.7406 | 14.9625 | 2303310 | 9.141 | 10.140 | 255 |
| 2 | 3.8240 | 15.2960 | 2352427 | 9.142 | 10.142 | 255 |
| 3 | 3.8345 | 15.3382 | 2358637 | 9.208 | 10.208 | 250 |

<<<Statistics>>> Mean: 3.7997 Std Dev: 0.0515 RSD: 1.35

Sample ID: A864428-B SW2115
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 14:23
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.7713 | 11.0853 | 1732294 | 9.174 | 10.173 | 138 |
| 2 | 2.7608 | 11.0434 | 1726115 | 9.154 | 10.151 | 141 |
| 3 | 2.7427 | 10.9707 | 1715411 | 9.153 | 10.150 | 141 |

<<<Statistics>>> Mean: 2.7583 Std Dev: 0.0145 RSD: 0.52

Sample ID: A864429-B MW-2103R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 14:45
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.3643 | 9.4570 | 1492485 | 9.118 | 10.114 | 106 |
| 2 | 2.3166 | 9.2666 | 1464441 | 9.139 | 10.130 | 103 |
| 3 | 2.3261 | 9.3042 | 1469987 | 9.103 | 10.103 | 103 |

<<<Statistics>>> Mean: 2.3357 Std Dev: 0.0252 RSD: 1.08

Sample ID: A864430-B MW-2106R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 15:19
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.7737 | 7.0948 | 1144587 | 9.070 | 10.067 | 324 |
| 2 | 1.7945 | 7.1779 | 1156823 | 9.050 | 10.049 | 335 |
| 3 | 1.7330 | 6.9319 | 1120594 | 9.132 | 10.130 | 324 |

<<<Statistics>>> Mean: 1.7671 Std Dev: 0.0313 RSD: 1.77

Sample ID: A864432-B MW-2104R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 15:47
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.3430 | 5.3718 | 890842 | 9.052 | 10.052 | 210 |
| 2 | 1.3176 | 5.2706 | 875930 | 8.985 | 9.983 | 208 |
| 3 | 1.2717 | 5.0868 | 848857 | 8.977 | 9.977 | 202 |

<<<Statistics>>> Mean: 1.3108 Std Dev: 0.0361 RSD: 2.76

Sample ID: A864433-B MW-2105R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 16:10
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.1387 | 4.5550 | 770541 | 8.896 | 9.895 | 106 |
| 2 | 1.1394 | 4.5576 | 770927 | 8.853 | 9.852 | 105 |
| 3 | 1.1270 | 4.5081 | 763641 | 8.832 | 9.827 | 104 |

<<<Statistics>>> Mean: 1.1350 Std Dev: 0.0070 RSD: 0.61

Sample ID: SPI01 433B TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 16:35
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 14.3520 | 57.4078 | 8554441 | 8.769 | 9.769 | 153 |
| 2 | 14.4215 | 57.6861 | 8595421 | 8.823 | 9.821 | 155 |
| 3 | 14.4211 | 57.6843 | 8595153 | 8.786 | 9.780 | 153 |

<<<Statistics>>> Mean: 14.3982 Std Dev: 0.0400 RSD: 0.28

Sample ID: DPS01 433B TV=12.5 Mode: TOC

Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Filename: 11061010
Timestamp: 11/06/2009 17:00
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 14.3182 | 57.2730 | 8534582 | 8.788 | 9.787 | 151 |
| 2 | 14.3889 | 57.5557 | 8576222 | 8.787 | 9.785 | 153 |
| 3 | 14.3151 | 57.2605 | 8532744 | 8.767 | 9.765 | 151 |

<<<Statistics>>> Mean: 14.3407 Std Dev: 0.0417 RSD: 0.29

Sample ID: CCVL TV=5.00
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061010
Timestamp: 11/06/2009 17:08
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 5.5060 | 22.0240 | 3416460 | 8.724 | 9.720 | 113 |

* TOC Randomly shut off

Detailed Analysis Report  Print Date/Time:  2009/11/07 20:36:34

Sample ID:  Clean
Method:  Cleaning Procedure
Cal. Curve:  091022
Operator ID:

Mode:  UTILITY
Filename:  11061808
Timestamp:  11/06/2009 18:19
Sample Type:  Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2973 | 5.9458 | 875670 | 8.291 | 8.791 | 156 |
| 2 | 0.0389 | 0.7774 | 114490 | 8.395 | 8.892 | 86 |
| 3 | 0.0174 | 0.3487 | 51352 | 8.396 | 8.895 | 72 |

<<<Statistics>>>  Mean:  0.1179  Std Dev:  0.1558  RSD: 132.15

Sample ID:  CCVL TV=5.00
Method:  TOC Range 0.1 - 20 ppm C
Cal. Curve:  091022
Operator ID:

Mode:  TOC
Filename:  11061808
Timestamp:  11/06/2009 18:42
Sample Type:  Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 5.1293 | 20.5171 | 3194532 | 8.475 | 9.473 | 107 |
| 2 | 5.1360 | 20.5438 | 3198462 | 8.377 | 9.373 | 114 |
| 3 | 5.1260 | 20.5039 | 3192579 | 8.403 | 9.399 | 111 |

<<<Statistics>>>  Mean:  5.1304  Std Dev:  0.0051  RSD: 0.10

Sample ID:  BLA01
Method:  TOC Range 0.1 - 20 ppm C
Cal. Curve:  091022
Operator ID:

Mode:  TOC
Filename:  11061808
Timestamp:  11/06/2009 19:03
Sample Type:  Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1772 | -0.7089 | 68469 | 8.461 | 9.458 | 58 |
| 2 | -0.2057 | -0.8229 | 51684 | 8.457 | 9.450 | 57 |
| 3 | -0.1969 | -0.7874 | 56903 | 8.459 | 8.502 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>>  Mean:  -0.1933  Std Dev:  0.0146  RSD: -7.55

Sample ID:  A864434-B MW-2107R2
Method:  TOC Range 0.1 - 20 ppm C
Cal. Curve:  091022
Operator ID:

Mode:  TOC
Filename:  11061808
Timestamp:  11/06/2009 19:27
Sample Type:  Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.1719 | 8.6878 | 1379196 | 8.529 | 9.525 | 157 |
| 2 | 2.2016 | 8.8066 | 1396692 | 8.560 | 9.559 | 159 |
| 3 | 2.1923 | 8.7692 | 1391194 | 8.628 | 9.624 | 155 |

<<<Statistics>>>  Mean:  2.1886  Std Dev:  0.0152  RSD: 0.69

Sample ID:  A864435-B MW-2108
Method:  TOC Range 0.1 - 20 ppm C
Cal. Curve:  091022
Operator ID:

Mode:  TOC
Filename:  11061808
Timestamp:  11/06/2009 19:53
Sample Type:  Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.4613 | 5.8454 | 960582 | 8.683 | 9.682 | 170 |
| 2 | 1.4738 | 5.8954 | 967949 | 8.786 | 9.783 | 169 |
| 3 | 1.4665 | 5.8660 | 963626 | 8.856 | 9.853 | 167 |

<<<Statistics>>>  Mean:  1.4672  Std Dev:  0.0063  RSD: 0.43

Sample ID: A864436-B MW-2109R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 20:18
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.9170 | 7.6678 | 1228981 | 8.892 | 9.890 | 175 |
| 2 | 1.9223 | 7.6891 | 1232117 | 8.877 | 9.876 | 177 |
| 3 | 1.9130 | 7.6519 | 1226633 | 8.957 | 9.956 | 170 |

<<<Statistics>>> Mean: 1.9174 Std Dev: 0.0047 RSD: 0.24

Sample ID: A864437-B MW-2110RR
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 20:43
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.8411 | 11.3646 | 1773419 | 8.989 | 9.988 | 163 |
| 2 | 2.8316 | 11.3263 | 1767783 | 9.038 | 10.038 | 162 |
| 3 | 2.8380 | 11.3521 | 1771582 | 9.054 | 10.051 | 160 |

<<<Statistics>>> Mean: 2.8369 Std Dev: 0.0048 RSD: 0.17

Sample ID: A864438-B MW-2111
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 21:14
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.2345 | 4.9379 | 826930 | 9.090 | 10.089 | 295 |
| 2 | 1.0515 | 4.2060 | 719143 | 9.125 | 10.125 | 262 |
| 3 | 1.0667 | 4.2670 | 728125 | 9.141 | 10.140 | 252 |

<<<Statistics>>> Mean: 1.1176 Std Dev: 0.1016 RSD: 9.09

Sample ID: A864439-B MW-2112R 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 21:44
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.0980 | 4.3922 | 746563 | 9.214 | 10.214 | 252 |
| 2 | 1.1354 | 4.5415 | 768554 | 9.230 | 10.229 | 263 |
| 3 | 1.1338 | 4.5351 | 767618 | 9.215 | 10.215 | 265 |

<<<Statistics>>> Mean: 1.1224 Std Dev: 0.0211 RSD: 1.88

Sample ID: A864440-B M-2101R
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 22:14
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9934 | 3.9736 | 684924 | 9.258 | 10.257 | 267 |
| 2 | 0.9807 | 3.9229 | 677446 | 9.270 | 10.270 | 269 |
| 3 | 0.9826 | 3.9304 | 678548 | 9.258 | 10.257 | 271 |

<<<Statistics>>> Mean: 0.9856 Std Dev: 0.0069 RSD: 0.70

Sample ID: SPI01 440B TV=12.5 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 22:46
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.2611 | 53.0443 | 7911808 | 9.246 | 10.245 | 280 |
| 2 | 13.2972 | 53.1890 | 7933106 | 9.302 | 10.302 | 289 |
| 3 | 13.2809 | 53.1235 | 7923472 | 9.309 | 10.308 | 287 |

<<<Statistics>>> Mean: 13.2797 Std Dev: 0.0181 RSD: 0.14

Sample ID: DPS01 440B TV=12.5 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 23:16
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.2376 | 52.9504 | 7897974 | 9.308 | 10.308 | 278 |
| 2 | 13.3111 | 53.2443 | 7941256 | 9.353 | 10.352 | 278 |
| 3 | 13.1970 | 52.7880 | 7874057 | 9.396 | 10.395 | 278 |

<<<Statistics>>> Mean: 13.2486 Std Dev: 0.0578 RSD: 0.44

Sample ID: A864441-B MW-2102RR
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/06/2009 23:39
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.5847 | 2.3386 | 444129 | 9.382 | 10.380 | 110 |
| 2 | 0.5627 | 2.2508 | 431191 | 9.297 | 10.296 | 117 |
| 3 | 0.5456 | 2.1824 | 421123 | 9.328 | 10.326 | 110 |

<<<Statistics>>> Mean: 0.5643 Std Dev: 0.0196 RSD: 3.47

11/7/09

Sample ID: CCVH TV=15.00
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 00:03
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.9839 | 55.9356 | 8410783 | 9.290 | 10.290 | 139 |
| 2 | 14.0373 | 56.1492 | 8442234 | 9.390 | 10.389 | 146 |
| 3 | 14.1511 | 56.6043 | 8509263 | 9.433 | 10.432 | 147 |

<<<Statistics>>> Mean: 14.0574 Std Dev: 0.0854 RSD: 0.61

Sample ID: BLA01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 00:23
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1709 | -0.6837 | 72184 | 9.406 | 10.402 | 59 |
| 2 | -0.2052 | -0.8209 | 51970 | 9.319 | 10.315 | 56 |
| 3 | -0.2088 | -0.8351 | 49878 | 9.375 | 10.372 | 56 |

<<<Statistics>>> Mean: -0.1950 Std Dev: 0.0209 RSD: -10.73

Sample ID: A864538-E IW-2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 00:45
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9024 | 3.6096 | 631312 | 9.395 | 10.394 | 95 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | 0.9255 | 3.7019 | 644896 | 9.350 | 10.350 | 96 |
| 3 | 0.9359 | 3.7438 | 651072 | 9.275 | 10.270 | 98 |

<<<Statistics>>> Mean: 0.9213 Std Dev: 0.0171 RSD: 1.86

Sample ID: A864552-E IW-1
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 01:06
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.9552 | 7.8209 | 1251528 | 9.254 | 10.250 | 95 |
| 2 | 1.9705 | 7.8822 | 1260553 | 9.273 | 10.268 | 95 |
| 3 | 1.9459 | 7.7834 | 1246008 | 9.233 | 10.228 | 94 |

<<<Statistics>>> Mean: 1.9572 Std Dev: 0.0124 RSD: 0.63

Sample ID: SPI01 552E TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 01:31
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.7824 | 55.1295 | 8218900 | 9.198 | 10.197 | 153 |
| 2 | 13.9374 | 55.7496 | 8310221 | 9.264 | 10.263 | 141 |
| 3 | 13.8663 | 55.4651 | 8268325 | 9.236 | 10.235 | 146 |

<<<Statistics>>> Mean: 13.8620 Std Dev: 0.0776 RSD: 0.56

Sample ID: DPS01 552E TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 01:55
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.7712 | 55.0847 | 8212296 | 9.239 | 10.236 | 152 |
| 2 | 13.9154 | 55.6618 | 8297290 | 9.256 | 10.254 | 141 |
| 3 | 13.9327 | 55.7308 | 8307455 | 9.270 | 10.270 | 144 |

<<<Statistics>>> Mean: 13.8731 Std Dev: 0.0887 RSD: 0.64

Sample ID: A864553-E 163
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 02:17
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.6747 | 6.6987 | 1086251 | 9.254 | 10.254 | 96 |
| 2 | 1.6649 | 6.6595 | 1080477 | 9.240 | 10.239 | 95 |
| 3 | 1.6516 | 6.6066 | 1072685 | 9.208 | 10.207 | 97 |

<<<Statistics>>> Mean: 1.6637 Std Dev: 0.0116 RSD: 0.70

Sample ID: A864554-E 173
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 02:38
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.7564 | 3.0255 | 545285 | 9.219 | 10.214 | 86 |
| 2 | 0.7108 | 2.8434 | 518464 | 9.170 | 10.166 | 84 |
| 3 | 0.6923 | 2.7693 | 507560 | 9.136 | 10.131 | 84 |

<<<Statistics>>> Mean: 0.7198 Std Dev: 0.0330 RSD: 4.58

Sample ID: A864555-E 156
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 03:00
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9426 | 3.7702 | 654967 | 9.112 | 10.111 | 115 |
| 2 | 0.9279 | 3.7116 | 646335 | 9.106 | 10.105 | 115 |
| 3 | 0.9299 | 3.7195 | 647493 | 9.105 | 10.101 | 112 |

<<<Statistics>>> Mean: 0.9335 Std Dev: 0.0080 RSD: 0.85

Sample ID: A864556-E 151
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 03:22
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.8512 | 3.4048 | 601141 | 9.089 | 10.088 | 100 |
| 2 | 0.8424 | 3.3696 | 595961 | 9.108 | 10.108 | 103 |
| 3 | 0.8482 | 3.3929 | 599393 | 9.064 | 10.060 | 105 |

<<<Statistics>>> Mean: 0.8473 Std Dev: 0.0045 RSD: 0.53

DNQ

Sample ID: 036C 1:5 (3rd Time A Charm)
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 03:45
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.4966 | 1.9865 | 392268 | 9.077 | 10.075 | 130 |
| 2 | 0.4482 | 1.7929 | 363750 | 9.080 | 10.078 | 120 |
| 3 | 0.4259 | 1.7037 | 350623 | 9.069 | 10.066 | 109 |

2.28

<<<Statistics>>> Mean: 0.4569 Std Dev: 0.0361 RSD: 7.91

Sample ID: A864722-A Herst DI
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 04:05
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.0110 | 0.0440 | 106181 | 9.065 | 10.058 | 63 |
| 2 | 0.0018 | 0.0074 | 100790 | 9.048 | 10.041 | 63 |
| 3 | 0.0079 | 0.0317 | 104372 | 9.024 | 10.015 | 63 |

<<<Statistics>>> Mean: 0.0069 Std Dev: 0.0047 RSD: 67.84

Sample ID: CCVL TV=5.00 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 04:28
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 4.8970 | 19.5878 | 3057667 | 9.032 | 10.030 | 105 |
| 2 | 4.9069 | 19.6277 | 3063539 | 9.060 | 10.058 | 106 |
| 3 | 4.8632 | 19.4529 | 3037800 | 9.077 | 10.076 | 106 |

<<<Statistics>>> Mean: 4.8890 Std Dev: 0.0229 RSD: 0.47

Sample ID: BLA01
Mode: TOC

Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Filename: 11061808
Timestamp: 11/07/2009 04:47
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1794 | -0.7176 | 67183 | 9.071 | 10.062 | 56 |
| 2 | -0.2111 | -0.8444 | 48510 | 9.043 | 10.040 | 55 |
| 3 | -0.2161 | -0.8645 | 45552 | 9.045 | 9.972 | 55 |

<<<Statistics>>> Mean: -0.2022 Std Dev: 0.0199 RSD: -9.84

Sample ID: A864631-F PZ-111-5D
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 05:08
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.8545 | 3.4179 | 603081 | 9.004 | 10.000 | 80 |
| 2 | 0.8820 | 3.5280 | 619291 | 9.026 | 10.023 | 81 |
| 3 | 0.8904 | 3.5617 | 624253 | 9.034 | 10.032 | 80 |

<<<Statistics>>> Mean: 0.8756 Std Dev: 0.0188 RSD: 2.14

Sample ID: A864632-F PZ-110-5S 1:5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 05:32
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.9197 | 11.6788 | 1819703 | 9.031 | 10.030 | 132 |
| 2 | 2.9362 | 11.7447 | 1829406 | 9.029 | 10.029 | 134 |
| 3 | 2.9324 | 11.7296 | 1827176 | 9.047 | 10.043 | 134 |

<<<Statistics>>> Mean: 2.9294 Std Dev: 0.0086 RSD: 0.29

Sample ID: A864633-F 9Z-109-5S
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 05:53
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.6868 | 2.7473 | 504320 | 9.019 | 10.012 | 78 |
| 2 | 0.6993 | 2.7970 | 511634 | 9.016 | 10.014 | 78 |
| 3 | 0.6760 | 2.7041 | 497955 | 9.009 | 10.008 | 77 |

<<<Statistics>>> Mean: 0.6874 Std Dev: 0.0117 RSD: 1.70

Sample ID: A864634-F PZ-205-5S
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 06:14
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.6717 | 2.6867 | 495395 | 9.002 | 10.001 | 93 |
| 2 | 0.6592 | 2.6370 | 488062 | 8.976 | 9.973 | 92 |
| 3 | 0.6675 | 2.6699 | 492921 | 8.975 | 9.973 | 93 |

<<<Statistics>>> Mean: 0.6661 Std Dev: 0.0064 RSD: 0.95

Sample ID: A864635-F PZ-16-5D
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 06:36
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.7904 | 3.1616 | 565323 | 8.939 | 9.934 | 85 |
| 2 | 0.7841 | 3.1366 | 561645 | 8.965 | 9.965 | 83 |
| 3 | 0.8090 | 3.2360 | 576280 | 8.951 | 9.951 | 86 |

<<<Statistics>>> Mean: 0.7945 Std Dev: 0.0129 RSD: 1.63

Sample ID: A864636-F PZ-106-SS
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 06:57
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.6988 | 2.7950 | 511344 | 8.967 | 9.962 | 82 |
| 2 | 0.6974 | 2.7897 | 510562 | 8.941 | 9.940 | 82 |
| 3 | 0.6765 | 2.7060 | 498232 | 8.957 | 9.956 | 81 |

<<<Statistics>>> Mean: 0.6909 Std Dev: 0.0125 RSD: 1.81

Sample ID: SPI01 636F TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 07:20
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.4447 | 49.7789 | 7430892 | 8.952 | 9.952 | 143 |
| 2 | 12.5903 | 50.3613 | 7516657 | 9.066 | 10.060 | 126 |
| 3 | 12.5527 | 50.2110 | 7494526 | 9.015 | 10.011 | 126 |

<<<Statistics>>> Mean: 12.5292 Std Dev: 0.0756 RSD: 0.60

Sample ID: DPS01 636F TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 07:44
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.5670 | 50.2681 | 7502932 | 9.017 | 10.013 | 130 |
| 2 | 12.6293 | 50.5171 | 7539611 | 8.995 | 9.992 | 130 |
| 3 | 12.5124 | 50.0495 | 7470745 | 8.969 | 9.967 | 131 |

<<<Statistics>>> Mean: 12.5696 Std Dev: 0.0585 RSD: 0.47

Sample ID: A864637-F PZ-105-SS
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 08:10
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.0392 | 4.1569 | 711911 | 9.034 | 10.031 | 180 |
| 2 | 1.0159 | 4.0637 | 698190 | 8.914 | 9.913 | 184 |
| 3 | 1.0162 | 4.0648 | 698346 | 8.866 | 9.866 | 185 |

<<<Statistics>>> Mean: 1.0238 Std Dev: 0.0134 RSD: 1.31

Sample ID: A864638-F FB@PZ-104SD
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 08:30
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.0487 | 0.1947 | 128377 | 8.866 | 9.859 | 64 |
| 2 | 0.0229 | 0.0918 | 113221 | 8.876 | 9.866 | 63 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 0.0056 | 0.0225 | 103013 | 8.886 | 9.875 | 63 |

<<<Statistics>>> Mean: 0.0257 Std Dev: 0.0217 RSD: 84.28

Sample ID: CCVH TV=15.0 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 08:54
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 13.5553 | 54.2213 | 8158317 | 8.881 | 9.881 | 144 |
| 2 | 13.4824 | 53.9295 | 8115339 | 8.952 | 9.952 | 146 |
| 3 | 13.6496 | 54.5985 | 8213861 | 8.940 | 9.939 | 147 |

<<<Statistics>>> Mean: 13.5624 Std Dev: 0.0838 RSD: 0.62

Sample ID: BLA01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 09:15
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1596 | -0.6384 | 78852 | 8.947 | 9.938 | 57 |
| 2 | -0.2198 | -0.8794 | 43358 | 8.870 | 9.865 | 54 |
| 3 | -0.2121 | -0.8484 | 47925 | 8.818 | 8.810 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -0.1972 Std Dev: 0.0328 RSD: -16.62

Sample ID: A864639-F PZ-104-SD
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 09:40
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.7291 | 2.9163 | 529209 | 8.784 | 9.783 | 162 |
| 2 | 0.7434 | 2.9736 | 537644 | 8.789 | 9.787 | 171 |
| 3 | 0.7553 | 3.0212 | 544648 | 8.799 | 9.798 | 168 |

<<<Statistics>>> Mean: 0.7426 Std Dev: 0.0131 RSD: 1.77

Sample ID: A864640-F PZ-104-SS
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 10:01
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.7062 | 2.8249 | 515737 | 8.784 | 9.781 | 81 |
| 2 | 0.7502 | 3.0010 | 541676 | 8.835 | 9.835 | 81 |
| 3 | 0.7471 | 2.9884 | 539826 | 8.869 | 9.868 | 81 |

<<<Statistics>>> Mean: 0.7345 Std Dev: 0.0246 RSD: 3.34

Sample ID: A864641F PZ-201A-SS
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 10:22
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.6702 | 2.6809 | 494537 | 8.840 | 9.834 | 77 |
| 2 | 0.6257 | 2.5026 | 468278 | 8.786 | 9.779 | 75 |
| 3 | 0.6272 | 2.5086 | 469162 | 8.781 | 9.779 | 76 |

<<<Statistics>>> Mean: 0.6410 Std Dev: 0.0253 RSD: 3.94

Sample ID: A864642-F PZ-115-SS 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 10:51
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 5.4547 | 21.8188 | 3313063 | 8.752 | 9.750 | 242 |
| 2 | 5.4562 | 21.8247 | 3313940 | 8.771 | 9.767 | 245 |
| 3 | 5.4628 | 21.8512 | 3317835 | 8.767 | 9.765 | 253 |

<<<Statistics>>> Mean: 5.4579 Std Dev: 0.0043 RSD: 0.08

DNR

Sample ID: A864643-F PZ-114-AS 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 11:26
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 3.9588 | 15.8353 | 2431850 | 8.769 | 9.846 | 360 |
| 2 | 3.9753 | 15.9012 | 2441546 | 8.756 | 9.829 | 360 |
| 3 | 3.9357 | 15.7428 | 2418222 | 8.752 | 9.923 | 360 |

7.91

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 3.9566 Std Dev: 0.0199 RSD: 0.50

Sample ID: A864644-F PZ-100-SD
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 11:47
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.8856 | 3.5423 | 621397 | 8.740 | 9.734 | 81 |
| 2 | 0.8555 | 3.4219 | 603666 | 8.723 | 9.715 | 79 |
| 3 | 0.8611 | 3.4444 | 606971 | 8.675 | 9.674 | 79 |

<<<Statistics>>> Mean: 0.8674 Std Dev: 0.0160 RSD: 1.85

Sample ID: SPI01 644F TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 12:10
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.4785 | 49.9139 | 7450772 | 8.639 | 9.638 | 133 |
| 2 | 12.3772 | 49.5089 | 7391129 | 8.708 | 9.707 | 130 |
| 3 | 12.4881 | 49.9523 | 7456434 | 8.686 | 9.686 | 132 |

<<<Statistics>>> Mean: 12.4479 Std Dev: 0.0614 RSD: 0.49

Sample ID: DPS01 644F TV=12.5
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 12:34
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.4024 | 49.6096 | 7405951 | 8.646 | 9.643 | 132 |
| 2 | 12.4448 | 49.7791 | 7430915 | 8.660 | 9.658 | 133 |
| 3 | 12.4665 | 49.8661 | 7443734 | 8.626 | 9.626 | 136 |

<<<Statistics>>> Mean: 12.4379 Std Dev: 0.0326 RSD: 0.26

Sample ID: A864645-F PZ-100-SS
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 12:55
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.5144 | 2.0577 | 402754 | 8.608 | 9.606 | 73 |
| 2 | 0.4883 | 1.9532 | 387367 | 8.575 | 9.567 | 72 |
| 3 | 0.4826 | 1.9304 | 384000 | 8.508 | 9.501 | 73 |

<<<Statistics>>> Mean: 0.4951 Std Dev: 0.0170 RSD: 3.42

Sample ID: A864646-F DUP
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 13:21
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.9691 | 3.8762 | 670573 | 8.504 | 9.504 | 179 |
| 2 | 1.0127 | 4.0509 | 696295 | 8.467 | 9.464 | 188 |
| 3 | 1.0276 | 4.1103 | 705054 | 8.484 | 9.484 | 175 |

<<<Statistics>>> Mean: 1.0031 Std Dev: 0.0304 RSD: 3.03

Sample ID: CCVL TV=5.00 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 13:43
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 4.7265 | 18.9060 | 2957253 | 8.461 | 9.461 | 99 |
| 2 | 4.7341 | 18.9366 | 2961752 | 8.464 | 9.457 | 99 |
| 3 | 4.7320 | 18.9280 | 2960484 | 8.452 | 9.443 | 99 |

<<<Statistics>>> Mean: 4.7309 Std Dev: 0.0039 RSD: 0.08

Sample ID: BLA01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 14:06
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.2123 | -0.8492 | 47800 | 8.485 | 8.474 | 120 |
| 2 | -0.2092 | -0.8369 | 49619 | 8.450 | 8.467 | 120 |
| 3 | -0.2093 | -0.8371 | 49591 | 8.448 | 8.453 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -0.2103 Std Dev: 0.0018 RSD: -0.84

CCVH out of calibration

DNR

Sample ID: A864681-B MW-22
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 14:36
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.4898 | 5.9592 | 977338 | 8.419 | 9.419 | 263 |
| 2 | 1.5272 | 6.1089 | 999389 | 8.430 | 9.427 | 263 |
| 3 | 1.5384 | 6.1534 | 1005952 | 8.449 | 9.449 | 263 |

<<<Statistics>>> Mean: 1.5185 Std Dev: 0.0254 RSD: 1.68

Sample ID: A864693-B SW-1
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022

Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 14:59

DNR

Operator ID: Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 6.3383 | 25.3532 | 3833590 | 8.448 | 9.446 | 131 |
| 2 | 6.4473 | 25.7893 | 3897827 | 8.525 | 9.524 | 129 |
| 3 | 6.4557 | 25.8228 | 3902761 | 8.512 | 9.511 | 132 |

<<<Statistics>>> Mean: 6.4138 Std Dev: 0.0655 RSD: 1.02

Sample ID: A864682-B DUP-2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 15:29
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.6687 | 6.6749 | 1082748 | 8.493 | 9.493 | 262 |
| 2 | 1.6064 | 6.4257 | 1046052 | 8.456 | 9.455 | 250 |
| 3 | 1.6181 | 6.4725 | 1052944 | 8.403 | 9.400 | 265 |

<<<Statistics>>> Mean: 1.6311 Std Dev: 0.0331 RSD: 2.03

Sample ID: A864683-B MW-20
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 15:59
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.6099 | 6.4395 | 1048078 | 8.369 | 9.367 | 262 |
| 2 | 1.6124 | 6.4494 | 1049545 | 8.365 | 9.364 | 252 |
| 3 | 1.6314 | 6.5255 | 1060741 | 8.353 | 9.353 | 261 |

<<<Statistics>>> Mean: 1.6179 Std Dev: 0.0118 RSD: 0.73

Sample ID: A864684-B MW-40
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 16:29
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 2.0822 | 8.3288 | 1326331 | 8.333 | 9.331 | 269 |
| 2 | 2.0766 | 8.3065 | 1323046 | 8.362 | 9.361 | 263 |
| 3 | 2.1006 | 8.4022 | 1337139 | 8.349 | 9.347 | 262 |

<<<Statistics>>> Mean: 2.0865 Std Dev: 0.0126 RSD: 0.60

Sample ID: A864685-B MW-01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 16:57
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.8902 | 7.5609 | 1213236 | 8.401 | 9.398 | 230 |
| 2 | 1.8823 | 7.5293 | 1208585 | 8.428 | 9.426 | 230 |
| 3 | 1.8545 | 7.4178 | 1192165 | 8.437 | 9.436 | 228 |

<<<Statistics>>> Mean: 1.8757 Std Dev: 0.0188 RSD: 1.00

Sample ID: SPI01 685B TV=12.5 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 17:23
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|

DNR

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 12.3896 | 49.5584 | 7398423 | 8.433 | 9.430 | 176 |
| 2 | 12.5304 | 50.1214 | 7481334 | 8.516 | 9.513 | 183 |
| 3 | 12.4869 | 49.9476 | 7455739 | 8.512 | 9.512 | 181 |

<<<Statistics>>> Mean: 12.4690 Std Dev: 0.0721 RSD: 0.58

Sample ID: DPS01 685B TV=12.5 1:2
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 17:49
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.4632 | 49.8529 | 7441783 | 8.518 | 9.516 | 180 |
| 2 | 12.4838 | 49.9354 | 7453934 | 8.516 | 9.516 | 184 |
| 3 | 12.4992 | 49.9967 | 7462964 | 8.511 | 9.507 | 183 |

<<<Statistics>>> Mean: 12.4821 Std Dev: 0.0181 RSD: 0.14

Sample ID: A864686-B MW-43
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 18:19
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.5275 | 6.1101 | 999574 | 8.503 | 9.502 | 263 |
| 2 | 1.5420 | 6.1679 | 1008088 | 8.442 | 9.440 | 269 |
| 3 | 1.5400 | 6.1600 | 1006915 | 8.451 | 9.449 | 257 |

<<<Statistics>>> Mean: 1.5365 Std Dev: 0.0079 RSD: 0.51

Sample ID: A864687-B MW-13
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 18:48
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 1.7723 | 7.0892 | 1143760 | 8.411 | 9.410 | 245 |
| 2 | 1.7719 | 7.0876 | 1143530 | 8.429 | 9.427 | 242 |
| 3 | 1.7526 | 7.0105 | 1132180 | 8.408 | 9.405 | 242 |

<<<Statistics>>> Mean: 1.7656 Std Dev: 0.0113 RSD: 0.64

Sample ID: CCVH TV=15.0 mg/L
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 19:13
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 12.9983 | 51.9930 | 7830137 | 8.396 | 9.391 | 143 |
| 2 | 13.0526 | 52.2105 | 7862171 | 8.461 | 9.458 | 141 |
| 3 | 13.0000 | 52.0001 | 7831184 | 8.446 | 9.445 | 141 |

Last Message: Out of Calibration
<<<Statistics>>> Mean: 13.0170 Std Dev: 0.0309 RSD: 0.24

Sample ID: BLA01
Method: TOC Range 0.1 - 20 ppm C
Cal. Curve: 091022
Operator ID:
Mode: TOC
Filename: 11061808
Timestamp: 11/07/2009 19:32
Sample Type: Cal. Verification

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | -0.1497 | -0.5988 | 84684 | 8.453 | 9.448 | 58 |
| 2 | -0.1877 | -0.7507 | 62305 | 8.372 | 9.367 | 56 |
| 3 | -0.1944 | -0.7776 | 58350 | 8.338 | 9.334 | 55 |

<<<Statistics>>> Mean: -0.1773 Std Dev: 0.0241 RSD: -13.60

Sample ID: CLEAN
Method: Cleaning Procedure
Cal. Curve: 091022
Operator ID:

Mode: UTILITY
Filename: 11061808
Timestamp: 11/07/2009 19:51
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2253 | 4.5068 | 663739 | 8.349 | 8.847 | 104 |
| 2 | 0.0341 | 0.6829 | 100567 | 8.346 | 8.846 | 78 |
| 3 | 0.0170 | 0.3403 | 50119 | 8.328 | 8.826 | 69 |
| 4 | 0.0155 | 0.3090 | 45513 | 8.303 | 8.801 | 67 |
| 5 | 0.0140 | 0.2795 | 41158 | 8.311 | 8.809 | 65 |
| 6 | 0.0132 | 0.2647 | 38977 | 8.283 | 8.782 | 65 |

<<<Statistics>>> Mean: 0.0532 Std Dev: 0.0847 RSD: 159.22

Sample ID: CLEAN
Method: Cleaning Procedure
Cal. Curve: 091022
Operator ID:

Mode: UTILITY
Filename: 11061808
Timestamp: 11/07/2009 20:12
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2298 | 4.5965 | 676956 | 8.277 | 8.775 | 106 |
| 2 | 0.0163 | 0.3264 | 48076 | 8.276 | 8.771 | 69 |
| 3 | 0.0097 | 0.1932 | 28455 | 8.265 | 8.765 | 62 |
| 4 | 0.0115 | 0.2291 | 33737 | 8.268 | 8.313 | 120 |
| 5 | 0.0103 | 0.2051 | 30202 | 8.240 | 8.738 | 63 |
| 6 | 0.0105 | 0.2104 | 30980 | 8.256 | 8.295 | 120 |

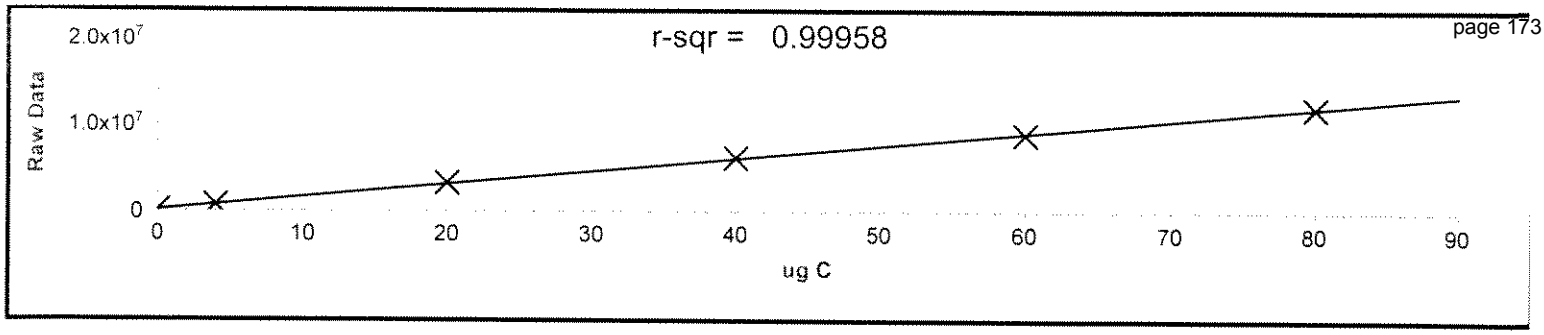
Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.0480 Std Dev: 0.0891 RSD: 185.53

Sample ID: CLEAN
Method: Cleaning Procedure
Cal. Curve: 091022
Operator ID:

Mode: UTILITY
Filename: 11061808
Timestamp: 11/07/2009 20:35
Sample Type: Sample

| Rep # | ppm C | ug C | Raw Data | Beginning Baseline | Ending Baseline | Integration Time |
|---|---|---|---|---|---|---|
| 1 | 0.2220 | 4.4397 | 653855 | 8.236 | 8.732 | 102 |
| 2 | 0.0101 | 0.2026 | 29831 | 8.301 | 8.800 | 62 |
| 3 | 0.0093 | 0.1868 | 27518 | 8.255 | 8.294 | 120 |
| 4 | 0.0098 | 0.1964 | 28923 | 8.236 | 8.256 | 120 |
| 5 | 0.0098 | 0.1963 | 28910 | 8.211 | 8.245 | 120 |
| 6 | 0.0094 | 0.1870 | 27541 | 8.206 | 8.221 | 120 |

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 0.0451 Std Dev: 0.0867 RSD: 192.34




Calibration Report  Print Date/Time: 2009/10/23 9:58:13

Cal. Curve ID: 091022
Created: 10/23/2009 09:57
Calibration Factor (m): 1.473e+05
Y Intercept (b): 172869
r-squared: 0.99958

| Standard ID | Y Raw Data | X Expected ug C | Measured ug C | Message | Date & Time |
|---|---|---|---|---|---|
| 0.00 | 103766 | 0.000 | -0.469 | | 10/22/2009 18:25 |
| 1.00 | 736422 | 4.000 | 3.827 | | 10/22/2009 18:46 |
| 5.00 | 3222299 | 20.000 | 20.706 | | 10/22/2009 19:08 |
| 10.0 | 6163948 | 40.000 | 40.680 | | 10/22/2009 19:32 |
| 15.0 | 8870909 | 60.000 | 59.060 | | 10/22/2009 19:57 |
| 20.0 | 11983964 | 80.000 | 80.198 | | 10/22/2009 20:24 |

CCV L = G622 - 26

CCV H = G622 - 24

ICV01 = G648 - 2

Sp101 / dpS01 = 1mL G622 (1000 ppm) into 79 mL of sample.
Mix well and split

TV = 12.5

M 180 M 180

U. S. EPA -CLP

November 16, 2009

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Lab Name : HES - Commercial Laboratory

Contract : Keramida - Raw data

Lab Code: Metals

Case No. : _____

SDG Number: 59169

| EPA Sample No. | Lab Sample No. | |
|---|---|---|
| | A864527 | Water |
| | A864528 | |
| | A864529 | |
| | A864530 | |
| | A864532 | |
| | A864533 | |
| | A864534 | |
| | A864535 | |
| | A864536 | |
| | A864537 | |
| | A862551 | A864551 |
| | A862561 | 561 |
| | A862562 | 562 |

Were ICP interelement corrections applied? Yes/No __ yes

Were ICP background corrections applied? Yes/No __ yes

If yes-were raw data generated before application of background corrections? Yes/No __ no

Comments:

HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
METALS SECTION

# CASE NARRATIVE

SAMPLE # A864 527-535, 551, 561-562

These samples were analyzed using normal procedures with no modifications.

Steven J. Endersen, Metals Supervisor

ACCREDITED IN ACCORDANCE WITH nelac

U. S. EPA - CLP
17
STANDARD SOLUTIONS SOURCES

Lab Name: Heritage Environmental Services, LLC

Contract_____

| Analyte | CALIBRATION STANDARD | ICV | CCV | CRDL | MATRIX SPIKE | ICS | Method |
|---|---|---|---|---|---|---|---|
| Aluminum | INV | PE | INV | | IV | PE | P |
| Antimony | INV | PE | INV | INV | IV | PE | P |
| Arsenic | INV | PE | INV | INV | IV | PE | P |
| Barium | INV | PE | INV | | IV | PE | P |
| Beryllium | INV | PE | INV | INV | IV | PE | P |
| Cadmium | INV | PE | INV | INV | IV | PE | P |
| Calcium | INV | PE | INV | | IV | PE | P |
| Chromium | INV | PE | INV | INV | IV | PE | P |
| Cobalt | INV | PE | INV | INV | IV | PE | P |
| Copper | INV | PE | INV | INV | IV | PE | P |
| Iron | INV | PE | INV | | IV | PE | P |
| Lead | INV | PE | INV | INV | IV | PE | P |
| Magnesium | INV | PE | INV | | IV | PE | P |
| Manganese | INV | PE | INV | INV | IV | PE | P |
| Mercury | INV | NIST | FISHER | FISHER | FISHER | | CV |
| Nickel | INV | PE | INV | INV | IV | PE | P |
| Potassium | INV | PE | INV | | IV | | P |
| Selenium | INV | PE | INV | INV | IV | PE | P |
| Silver | INV | PE | INV | INV | IV | PE | P |
| Sodium | INV | PE | INV | | IV | | P |
| Thallium | INV | PE | INV | INV | IV | PE | P |
| Vanadium | INV | PE | INV | INV | IV | PE | P |
| Zinc | INV | PE | INV | INV | IV | PE | P |
| Titanium | INV | PE | INV | | IV | | P |
| Strontium | INV | PE | INV | | IV | | P |
| Molybdenum | INV | PE | INV | | IV | | P |
| Boron | INV | PE | INV | | IV | | P |
| Tin | INV | PE | INV | | INV | | P |
| Zirconium | INV | PE | INV | | IV | | P |
| Lithium | INV | PE | INV | | IV | | P |
| Silicon | INV | PE | INV | | INV | | P |

PE = Perkin Elmer Pure
INV = Inorganic Ventures

# WATER METHOD DETECTION LIMITS, uG/L

Hotblock / Clean

| Element | ICP-MS | ICP-MS | ICP-MS | Vista | Vista | Vista | Vista | Vista | Vista | Vista | CVAA | CVAA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | #401/402 | #401/402 | #401/402 | #334/387 | #334/387 | #370/427 | #370/427 | #370/411 | #370 | #370 | FIMS | FIMS |
| | AAS | AAS | | JPK | JPK | JPK | JPK | JJL | JPK | JPK | WJW | SON |
| | Clean | Hotblock | | Clean | Hotblock | CPT-mg/kg | CPT-mg/kg | Microwave | Clean | Hotblock | Hotblock | Hotblock |
| Method | | | | | | paint | plastic | HF prep | Trace | Trace | | |
| Complete | 2/5/09 | 12/20/08 | | 10/7/09 | 7/29/09 | 4/26/09 | 8/19/09 | 7/2/07 | 9/14/09 | 9/22/09 | 7/14/09 | 7/1/09 |
| Al | 0.087 | 0.79 | | 4.3 | 6.1 | | | 18 | 3.9 | 3.5 | | |
| B | 0.13 | 0.11 | | 10 | 2.0 | | | 9.1 | 9.4 | 4.2 | | |
| Sb | 0.0082 | 0.021 | | 3.3 | 4.7 | | | 4.6 | 2.2 | 1.8 | | |
| As-H | 0.075 | 0.16 | | | | | | | | | | |
| As | 0.11 | 0.14 | | 2.9 | 4.0 | | | 2.6 | 2.8 | 2.0 | | |
| Ba | 0.016 | 0.039 | | 0.10 | 0.17 | | | 0.25 | 0.012 | 0.11 | | |
| Be | 0.0046 | 0.014 | | 0.055 | 0.12 | | | 0.22 | 0.027 | 0.061 | | |
| Cd | 0.0042 | 0.011 | | 0.35 | 0.36 | | | 0.25 | 0.20 | 0.24 | | |
| Ca | | | | 2.6 | 5.6 | | | 19 | 8.0 | 2.7 | | |
| Cr | 0.089 | 0.20 | | 0.15 | 0.27 | | | 0.63 | 0.87 | 0.42 | | |
| Co | 0.0013 | 0.0067 | | 0.62 | 0.36 | | | 0.91 | 0.23 | 0.48 | | |
| Cu | 0.027 | 0.081 | | 0.17 | 0.39 | | | 1.1 | 0.22 | 0.35 | | |
| Fe | | | | 1.6 | 2.7 | | | | 4.7 | 1.9 | | |
| Pb | 0.0060 | 0.016 | | 2.3 | 1.7 | 1.8 | 3.10 | 2.7 | 1.7 | 1.3 | | |
| Mg | | | | 3.0 | 4.4 | | | 9.2 | 2.3 | 2.7 | | |
| Mn | 0.019 | 0.052 | | 0.35 | 0.31 | | | 0.41 | 0.32 | 0.37 | | |
| Hg | | | | | | | | | | | | |
| Mo | 0.013 | 0.045 | | 0.77 | 0.89 | | | 1.2 | 0.57 | 0.43 | 0.021 | 0.016 |
| Ni | 0.0096 | 0.12 | | 0.71 | 0.98 | | | 1.5 | 0.59 | 0.61 | | |
| K | | | | 1.4 | 4.3 | | | 18 | 2.0 | 1.8 | | |
| Li | | | | 1.4 | 1.5 | | | 2.2 | 0.88 | 0.73 | | |
| P | | | | | | | | | | | | |
| Se-H | 0.018 | 0.13 | | | | | | | | | | |
| Se | 0.24 | 0.26 | | 5.0 | 6.8 | | | 4.4 | 4.3 | 3.2 | | |
| Si | | | | 3.3 | 2.3 | | | | 3.8 | 1.7 | | |
| Sr | 0.0026 | 0.0087 | | 0.65 | 0.48 | | | 0.68 | 0.49 | 0.30 | | |
| Sn | 0.011 | 0.026 | | 2.2 | 3.0 | | | 1.8 | 1.8 | 2.6 | | |
| Ag | 0.0049 | 0.0062 | | 0.23 | 0.24 | | | 0.21 | 0.28 | 0.23 | | |
| Na | | | | 8.2 | 7.8 | | | 11 | 3.3 | 2.7 | | |
| Th | 0.014 | 0.0049 | | | | | | | | | | |
| Ti | 0.13 | NA | | 0.58 | 0.96 | | | 2.1 | 0.69 | 0.65 | | |
| Tl | 0.0085 | 0.011 | | 2.9 | 5.0 | | | 3.3 | 4.1 | 2.1 | | |
| U | 0.0018 | 0.0036 | | | | | | | | | | |
| V | 0.051 | NA | | 0.73 | 0.50 | | | 1.0 | 0.28 | 0.62 | | |
| Zn | 0.14 | 0.71 | | 2.4 | 2.5 | | | 1.7 | 1.3 | 1.3 | | |
| Zr | NA | NA | | 0.64 | 0.94 | | | 1.5 | 0.65 | 0.70 | | |

| Method | 1631-E | 1631-E |
|---|---|---|
| Instrument | 373 | 373 |
| Analyst | WJW | SON |
| Units | ng/L | ng/L |
| Complete | 12/3/2008 | |
| Hg | 0.13 | |

MDL

U. S. EPA -CLP

10
INSTRUMENT DETECTION LIMITS (ANNUAL)

Lab Name: Heritage Environmental Service, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No. _____

ICP ID Number : Vista ICP #334 Date: Oct 07, 2009
Flame AA ID Number : PE FIMS-CVAA

| Analyte | Wave-length (nm) | Back-ground | USEPA CRDL (uG/L) | Laboratory Reporting Limits | High Calibration Standard | IDL (uG/L) | M |
|---|---|---|---|---|---|---|---|
| Aluminum | 237.312 | | 200 | 50 | 10,000 | 4.3 | P |
| Antimony | 217.582 | | 60 | 10 | 2,000 | 3.3 | P |
| Arsenic | 188.980 | | 10 | 10 | 10,000 | 2.9 | P |
| Barium | 233.527 | | 200 | 10 | 10,000 | 0.10 | P |
| Beryllium | 234.861 | | 5 | 4 | 10,000 | 0.055 | P |
| Boron | 249.772 | | | 50 | 10,000 | 10 | P |
| Cadmium | 228.802 | | 5 | 5 | 10,000 | 0.35 | P |
| Calcium | 315.887 | | 5000 | 100 | 100,000 | 2.6 | P |
| Chromium | 267.716 | | 10 | 10 | 10,000 | 0.15 | P |
| Cobalt | 231.160 | | 50 | 10 | 10,000 | 0.62 | P |
| Copper | 324.754 | | 25 | 10 | 10,000 | 0.17 | P |
| Iron | 261.382 | | 100 | 20 | 10,000 | 1.6 | P |
| Lead | 220.353 | | 3 | 10 | 10,000 | 2.3 | P |
| Lithium | 610.365 | | | 10 | 10,000 | 1.4 | P |
| Magnesium | 279.078 | | 5000 | 100 | 100,000 | 3.0 | P |
| Manganese | 293.305 | | 15 | 10 | 10,000 | 0.35 | P |
| Mercury ** | 253.7 | | 0.20 | 0.20 | 5.0 | 0.016 | CV |
| Molybdenum | 202.032 | | | 10 | 2,000 | 0.77 | P |
| Nickel | 221.648 | | 40 | 5 | 10,000 | 0.71 | P |
| Palladium | 340.458 | | | 1 | 10,000 | 0.84 | P |
| Potassium | 766.5 | | 5000 | 100 | 100,000 | 1.4 | P |
| Selenium | 196.026 | | 5 | 10 | 10,000 | 5.0 | P |
| Silicon | 251.611 | | | 100 | 10,000 | 3.3 | P |
| Silver | 328.068 | | 10 | 10 | 2,000 | 0.23 | P |
| Sodium | 589.592 | | 5000 | 100 | 100,000 | 8.2 | P |
| Sodium | 568.821 | | 5000 | | 100,000 | 93 | P |
| Strontium | 216.596 | | | 5 | 10,000 | 0.65 | P |
| Thallium | 190.794 | | 10 | 10 | 10,000 | 2.9 | P |
| Tin | 189.927 | | | 10 | 10,000 | 2.2 | P |
| Titanium | 322.284 | | | 10 | 10,000 | 0.58 | P |
| Uranium | | | | | | | P |
| Vanadium | 289.164 | | 50 | 10 | 10,000 | 0.73 | P |
| Zinc | 206.200 | | 20 | 20 | 10,000 | 2.4 | P |
| Zirconium | 257.147 | | | 10 | 10,000 | 0.64 | P |

Comments: **Mercury on 7/1/09 (Hotblock)

U. S. EPA -CLP

12
ICP LINEAR RANGES (BI-ANNUAL)

Lab Name: Heritage Environmental Services, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____

ICP ID Number : ICP#334 Date Jul 21, 2009

| Analyte | Integ. Time (Sec.) | Concentration (uG/L) | M |
|---|---|---|---|
| Aluminum | 20 | 450,000 | P |
| Antimony | 20 | 90,000 | P |
| Arsenic | 20 | 45,000 | P |
| Barium | 20 | 18,000 | P |
| Beryllium | 20 | 18,000 | P |
| Boron | 20 | 90,000 | P |
| Cadmium | 20 | 18,000 | P |
| Calcium | 20 | 450,000 | P |
| Chromium | 20 | 90,000 | P |
| Cobalt | 20 | 90,000 | P |
| Copper | 20 | 90,000 | P |
| Iron | 20 | 270,000 | P |
| Lead | 20 | 90,000 | P |
| Lithium | 20 | 18,000 | P |
| Magnesium | 20 | 900,000 | P |
| Manganese | 20 | 180,000 | P |
| Mercury | | | P |
| Molybdenum | 20 | 22,500 | P |
| Nickel | 20 | 90,000 | P |
| Phosphorus | | | P |
| Potassium | 20 | 90,000 | P |
| Selenium | 20 | 90,000 | P |
| Silicon | 20 | 45,000 | P |
| Silver | 20 | 4,500 | P |
| Sodium - L | 20 | 90,000 | P |
| Sodium - H | 20 | 450,000 | P |
| Strontium | 20 | 90,000 | P |
| Thallium | 20 | 90,000 | P |
| Tin | 20 | 45,000 | P |
| Titanium | 20 | 90,000 | P |
| Uranium | | | P |
| Vanadium | 20 | 90,000 | P |
| Zinc | 20 | 72,000 | P |
| Zirconium | 20 | 45,000 | P |

Comments: _____

FORM XII - IN

U. S. EPA-CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

| ICP ID # | ICP 334 |
|---|---|

7/27/2009

| IEC Factors | Al | As | Ba | Be | Ca | Cd | Co | Cr |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Al 237.312 | 0.00000000 | 0.00000000 | 0.00353600 | -0.00031500 | 0.00000000 | 0.00000000 | 0.00097900 | -0.00027900 |
| As 188.980 | 0.00000000 | 0.00000000 | 0.00013500 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00151100 |
| B 249.772 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00013700 |
| Ba 233.527 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Be 234.861 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ca 315.887 | 0.00040300 | 0.00019000 | 0.00048400 | 0.00131800 | 0.00000000 | 0.00143800 | 0.00441600 | -0.00166200 |
| Cd 228.802 | 0.00000000 | 0.00228100 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00011300 | 0.00000000 |
| Co 231.160 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00305800 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cr 267.716 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cu 324.754 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00034500 | -0.00011000 |
| Fe 261.382 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00098600 | 0.00052900 |
| K 766.491 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Li 610.365 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00024200 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mg 279.078 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mn 293.305 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00005900 |
| Mo 202.032 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00002700 |
| Na 568.821 | 0.00000000 | 0.00000000 | -0.01400300 | 0.00528900 | 0.00600900 | 0.00100200 | 0.00263500 | 0.00020100 |
| Na 589.592 | 0.00000000 | 0.00000000 | 0.00912900 | 0.00001300 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000900 |
| Ni 231.604 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00114000 | 0.00000000 |
| Pb 220.353 | -0.00001100 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00086500 | -0.00069800 | 0.00000000 |
| Sb 217.582 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00041100 | 0.00000000 | 0.00000000 | -0.00004900 | 0.00000000 |
| Se 196.026 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00028600 | 0.00000000 |
| Si 251.611 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00007200 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Sn 189.927 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00009700 |
| Sr 216.596 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ti 322.284 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00001600 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Tl 190.794 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00317600 | 0.00000000 |
| V 289.164 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00157800 |
| Zn 206.200 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00279100 |
| Zr 257.147 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |

U. S. EPA-CLP
11A
ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)
Lab Name: Heritage Environmental Services, LLC

| ICP ID # | ICP 334 |
|---|---|

7/27/2009

| IEC Factors | Cu | Fe | K | Mg | Mn | Mo | Na | Ni | Pb |
|---|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00008500 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Al 237.312 | 0.00000000 | -0.00166000 | 0.00000000 | 0.00000000 | -0.00169100 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| As 188.980 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00331600 | 0.00000000 | 0.00000000 | 0.00000000 |
| B 249.772 | 0.00000000 | 0.00015500 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ba 233.527 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Be 234.861 | 0.00000000 | -0.00019700 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ca 315.887 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00061300 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cd 228.802 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00004900 | 0.00000000 |
| Co 231.160 | 0.00000000 | 0.00011800 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00021400 | 0.00000000 |
| Cr 267.716 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00007400 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cu 324.754 | 0.00000000 | -0.00009600 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00031400 | 0.00000000 | 0.00000000 | 0.00000000 |
| Fe 261.382 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00013400 | -0.00026400 | 0.00000000 | 0.00000000 | -0.00750900 |
| K 766.491 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Li 610.365 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mg 279.078 | 0.00000000 | 0.00022900 | 0.00000000 | 0.00000000 | -0.00071200 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mn 293.305 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mo 202.032 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Na 568.821 | 0.00081900 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Na 589.592 | 0.00001000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.05268300 | 0.00000000 | 0.00048900 | 0.00034100 |
| Ni 231.604 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00045700 | 0.00000000 | 0.00000000 | 0.00000000 |
| Pb 220.353 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Sb 217.582 | 0.00000000 | -0.00003600 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00057800 | 0.00000000 | 0.00000000 | 0.00000000 |
| Se 196.026 | 0.00000000 | 0.00001300 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00025800 |
| Si 251.611 | 0.00000000 | 0.00006100 | 0.00000000 | 0.00000000 | 0.00063000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Sn 189.927 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00039600 | 0.00971200 | 0.00000000 | 0.00000000 | 0.00000000 |
| Sr 216.596 | 0.00000000 | 0.00008800 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ti 322.284 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00048900 | 0.00000000 |
| Tl 190.794 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00018700 | 0.00111000 | 0.00000000 | 0.00000000 | 0.00000000 |
| V 289.164 | 0.00000000 | 0.00005100 | 0.00000000 | 0.00000000 | 0.00099300 | -0.00063500 | 0.00000000 | 0.00000000 | 0.00000000 |
| Zn 206.200 | 0.00000000 | -0.00006200 | 0.00000000 | 0.00000000 | -0.00199100 | -0.00068700 | 0.00000000 | 0.00000000 | 0.00000000 |
| Zr 257.147 | 0.00000000 | 0.00003400 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00049300 | 0.00000000 | 0.00000000 | 0.00000000 |
| | | | | | | 0.00119300 | 0.00000000 | 0.00000000 | 0.00000000 |

U. S. EPA-CLP
11A
ICP INTERELEMENT CORRECTION FACTORS (SEMI-ANNUALLY)
Lab Name: Heritage Environmental Services, LLC

| ICP ID # | ICP 334 |
|---|---|

7/27/2009

| IEC Factors | Sb | Si | Sn | Sr | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00086600 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00352100 |
| Al 237.312 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00313700 |
| As 188.980 | 0.00000000 | 0.00000000 | -0.00000500 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| B 249.772 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ba 233.527 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00017200 | 0.00000000 | 0.00000000 |
| Be 234.861 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ca 315.887 | 0.00011000 | 0.00053100 | 0.00027900 | 0.00058700 | 0.00000000 | 0.00359600 | 0.00000000 | -0.00794200 |
| Cd 228.802 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Co 231.160 | 0.00562400 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cr 267.716 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Cu 324.754 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00012800 | 0.00000000 | 0.00000000 | 0.00000000 |
| Fe 261.382 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00168800 | 0.00100600 | 0.00000000 | 0.00000000 |
| K 766491 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Li 610.365 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mg 279.078 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00017100 | 0.00000000 | 0.00000000 |
| Mn 293.305 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Mo 202.032 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Na 568.821 | 0.00019700 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00735300 | -0.00195900 | 0.00000000 | 0.00956600 |
| Na 589.592 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ni 231.604 | -0.00023400 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Pb 220.353 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00027900 | 0.00000000 | 0.00000000 | 0.00000000 |
| Sb 217.582 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00179200 | 0.00000000 | -0.00061500 |
| Se 196.026 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Si 251.611 | 0.00000000 | 0.00000000 | 0.00993900 | 0.00750400 | 0.00112990 | 0.00000000 | -0.00019000 | 0.00000000 |
| Sn 189.927 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00035800 | 0.00000000 | 0.00000000 | 0.00061500 |
| Sr 216.596 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Ti 322.284 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00026500 |
| Tl 190.794 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00170000 | 0.00190000 | 0.00000000 | 0.00000000 |
| V 289.164 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | -0.00022500 | 0.00000000 | 0.00000000 | 0.00150300 |
| Zn 206.200 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 |
| Zr 257.147 | 0.00000000 | 0.00000000 | 0.00016000 | 0.00000000 | -0.00072300 | 0.00000000 | 0.00000000 | 0.00000000 |

2009_11_12JPK. All Data Report 11/13/2009, 7:21:18 PM



COPY

**Blank (Blk)** **11/13/2009, 12:26:37 AM** **Rack 1, Tube 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000016 | -0.000088 | 0.000104 |
| Al 237.312 | -0.001753 | 0.002550 | -0.000797 |
| As 188.980 | -0.000567 | 0.001113 | -0.000547 |
| B 249.772 | -0.000022 | -0.000042 | 0.000064 |
| Ba 233.527 | 0.000039 | -0.000109 | 0.000069 |
| Be 234.861 | -0.000003 | 0.000011 | -0.000008 |
| Ca 315.887 | 0.000955 | -0.000709 | -0.000246 |
| Cd 228.802 | -0.000008 | 0.000141 | -0.000133 |
| Co 231.160 | -0.000050 | -0.000101 | 0.000151 |
| Cr 267.716 | -0.000036 | -0.000052 | 0.000088 |
| Cu 324.754 | -0.000033 | 0.000159 | -0.000126 |
| Fe 261.382 | 0.000101 | -0.001617 | 0.001516 |
| K 766.491 | -0.000295 | 0.000673 | -0.000378 |
| Li 610.365 | 0.000275 | -0.000617 | 0.000342 |
| Mg 279.078 | 0.001430 | -0.000512 | -0.000918 |
| Mn 293.305 | -0.000234 | -0.000062 | 0.000296 |
| Mo 202.032 | 0.000333 | -0.000211 | -0.000123 |
| Na 568.821 | -0.179661 | -0.076643 | -0.155353 |
| Na 589.592 | -0.000298 | 0.000144 | 0.000154 |
| Ni 231.604 | 0.000281 | -0.000116 | -0.000164 |
| Pb 220.353 | -0.000922 | -0.001496 | 0.002418 |
| Sb 217.582 | 0.003535 | -0.002786 | -0.000749 |
| Se 196.026 | -0.006898 | 0.004517 | 0.002381 |
| Si 251.611 | 0.000481 | -0.000739 | 0.000259 |
| Sn 189.927 | -0.001095 | 0.000786 | 0.000309 |
| Sr 216.596 | 0.000049 | 0.000260 | -0.000308 |
| Ti 322.284 | 0.000237 | 0.000009 | -0.000246 |
| Tl 190.794 | 0.000033 | 0.002538 | -0.002572 |
| V 289.164 | -0.000393 | 0.000260 | 0.000133 |
| Zn 206.200 | 0.000408 | -0.001582 | 0.001175 |
| Zr 257.147 | 0.000226 | -0.000045 | -0.000181 |
| Y 361.104 | 0.655908 | 0.659009 | 0.657583 |

ICP #334

11/12/09

JPK #3506

CCV=S15878
DLS=S15862
CDL01=S15863
HMCS=STD2
ICS-A=S15864
ICS-AB=S15865
ICV01-30=S15768

STD3=S15876
MADE 11-04-09

STD3X=S15877
MADE 11-04-09

STD2=S15867
MADE 10-23-09

STD4=S15875
MADE 11-04-09

091112JPK334

091112JPK387

A864527-536 cd Ca Pb

A864537, 551, 561-562 cd Ca Pb

Raw data only

| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Ag 328.068 | 0.000000 | mg/L | 4.232 | 26.8 | -15.8054 |
| Al 237.312 | 0.000000 | mg/L | 1.604 | 57.3 | -2.79838 |
| As 188.980 | 0.000000 | mg/L | 0.369 | 139.0 | 0.265228 |

2009_11_12JPK. All Data Report 11/13/2009, 7:21:18 PM



| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| B 249.772 | 0.000000 | mg/L | 0.653 | 3.9 | 16.9185 |
| Ba 233.527 | 0.000000 | mg/L | 3.891 | 34.1 | 11.4166 |
| Be 234.861 | 0.000000 | mg/L | 0.515 | 11.2 | -4.61763 |
| Ca 315.887 | 0.000000 | mg/L | 6.558 | 1.1 | 594.308 |
| Cd 228.802 | 0.000000 | mg/L | 1.147 | 72.4 | -1.58528 |
| Co 231.160 | 0.000000 | mg/L | 0.796 | 10.6 | 7.51193 |
| Cr 267.716 | 0.000000 | mg/L | 2.769 | 42.6 | -6.49946 |
| Cu 324.754 | 0.000000 | mg/L | 7.841 | 6.3 | 124.368 |
| Fe 261.382 | 0.000000 | mg/L | 3.290 | 35.4 | 9.29363 |
| K 766.491 | 0.000000 | mg/L | 20.683 | 6.5 | -318.174 |
| Li 610.365 | 0.000000 | mg/L | 12.020 | 2.7 | 450.477 |
| Mg 279.078 | 0.000000 | mg/L | 1.371 | 6.6 | 20.6196 |
| Mn 293.305 | 0.000000 | mg/L | 4.153 | 1616.5 | 0.256942 |
| Mo 202.032 | 0.000000 | mg/L | 1.086 | 94.5 | 1.14971 |
| Na 568.821 | 0.000000 | mg/L | 21.064 | 4.2 | -498.485 |
| Na 589.592 | 0.000000 | mg/L | 50.268 | 0.7 | 7344.06 |
| Ni 231.604 | 0.000000 | mg/L | 0.725 | 296.9 | -0.244128 |
| Pb 220.353 | 0.000000 | mg/L | 3.016 | 287.6 | -1.04867 |
| Sb 217.582 | 0.000000 | mg/L | 1.591 | 217.4 | 0.731751 |
| Se 196.026 | 0.000000 | mg/L | 1.286 | 107.2 | 1.19920 |
| Si 251.611 | 0.000000 | mg/L | 1.528 | 3.5 | 43.6531 |
| Sn 189.927 | 0.000000 | mg/L | 0.670 | 78.1 | 0.857371 |
| Sr 216.596 | 0.000000 | mg/L | 1.501 | 377.9 | 0.397331 |
| Ti 322.284 | 0.000000 | mg/L | 2.647 | 2.3 | 116.354 |
| Tl 190.794 | 0.000000 | mg/L | 0.937 | 366.7 | 0.255590 |
| V 289.164 | 0.000000 | mg/L | 3.140 | 123.5 | 2.54343 |
| Zn 206.200 | 0.000000 | mg/L | 0.965 | 940.3 | -0.102597 |
| Zr 257.147 | 0.000000 | mg/L | 2.815 | 17.4 | 16.1584 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.657500 | 170579 | 402.676 | 0.2 |

**Standard 2 (Std)** **11/13/2009, 12:29:56 AM** **Rack 1, Tube 2**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.98600 | 2.00468 | 2.00931 |
| Al 237.312 | 9.91337 | 10.0308 | 10.0558 |
| As 188.980 | 9.92542 | 10.0053 | 10.0693 |

| Label | Replicates Concentration | | |
|---|---|---|---|
| B 249.772 | 9.72766 | 9.99132 | 10.2810 |
| Ba 233.527 | 9.91160 | 10.0242 | 10.0642 |
| Be 234.861 | 9.83436 | 10.0584 | 10.1073 |
| Cd 228.802 | 9.91526 | 10.0398 | 10.0450 |
| Co 231.160 | 9.90653 | 10.0373 | 10.0562 |
| Cr 267.716 | 9.89495 | 10.0288 | 10.0762 |
| Cu 324.754 | 9.91349 | 10.0156 | 10.0709 |
| Fe 261.382 | 9.90857 | 10.0237 | 10.0677 |
| Li 610.365 | 9.90582 | 10.0103 | 10.0839 |
| Mn 293.305 | 9.90650 | 10.0271 | 10.0665 |
| Ni 231.604 | 9.91364 | 10.0221 | 10.0643 |
| Pb 220.353 | 9.91775 | 10.0274 | 10.0548 |
| Se 196.026 | 9.92638 | 10.0228 | 10.0508 |
| Sr 216.596 | 9.86414 | 10.0580 | 10.0779 |
| Tl 190.794 | 9.85156 | 10.0569 | 10.0915 |
| V 289.164 | 9.90751 | 10.0200 | 10.0725 |
| Zn 206.200 | 9.97146 | 10.0148 | 10.0137 |
| Zr 257.147 | 9.90936 | 10.0259 | 10.0647 |
| Y 361.104 | 0.632276 | 0.630486 | 0.634117 |

| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Ag 328.068 | 2.00000 | mg/L | 2102.666 | 2.4 | 87505.7 |
| Al 237.312 | 10.0000 | mg/L | 69.772 | 1.0 | 7097.10 |
| As 188.980 | 10.0000 | mg/L | 28.939 | 0.8 | 3822.62 |
| B 249.772 | 10.0000 | mg/L | 3190.314 | 2.8 | 115279 |
| Ba 233.527 | 10.0000 | mg/L | 3234.996 | 0.8 | 408478 |
| Be 234.861 | 10.0000 | mg/L | 7814.594 | 1.5 | 536998 |
| Cd 228.802 | 10.0000 | mg/L | 742.167 | 0.9 | 83597.5 |
| Co 231.160 | 10.0000 | mg/L | 562.998 | 0.9 | 59842.9 |
| Cr 267.716 | 10.0000 | mg/L | 3409.186 | 0.9 | 362674 |
| Cu 324.754 | 10.0000 | mg/L | 4322.805 | 0.8 | 539387 |
| Fe 261.382 | 10.0000 | mg/L | 243.277 | 1.2 | 20973.5 |
| Li 610.365 | 10.0000 | mg/L | 2009.314 | 0.9 | 224964 |
| Mn 293.305 | 10.0000 | mg/L | 1281.223 | 0.8 | 153736 |
| Ni 231.604 | 10.0000 | mg/L | 236.985 | 0.8 | 29675.6 |
| Pb 220.353 | 10.0000 | mg/L | 104.757 | 0.7 | 14269.2 |
| Se 196.026 | 10.0000 | mg/L | 13.896 | 0.7 | 2120.03 |
| Sr 216.596 | 10.0000 | mg/L | 617.919 | 1.2 | 52270.5 |



| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Tl 190.794 | 10.0000 | mg/L | 60.536 | 1.7 | 3668.34 |
| V 289.164 | 10.0000 | mg/L | 821.750 | 0.9 | 90669.8 |
| Zn 206.200 | 10.0000 | mg/L | 35.811 | 0.5 | 6779.97 |
| Zr 257.147 | 10.0000 | mg/L | 1099.369 | 0.8 | 135983 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.632293 | 164039 | 471.024 | 0.3 |

**Standard 4 (Std)** — **11/13/2009, 12:33:15 AM** — **Rack 1, Tube 3**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Mo 202.032 | 1.96928 | 2.00251 | 2.02821 |
| Sb 217.582 | 1.98869 | 2.01035 | 2.00096 |
| Si 251.611 | 9.81889 | 10.0421 | 10.1390 |
| Sn 189.927 | 9.80240 | 10.0524 | 10.1452 |
| Ti 322.284 | 9.88495 | 10.0123 | 10.1028 |
| Y 361.104 | 0.652991 | 0.652759 | 0.648234 |

| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Mo 202.032 | 2.00000 | mg/L | 109.869 | 1.5 | 7439.52 |
| Sb 217.582 | 2.00000 | mg/L | 5.357 | 0.5 | 987.021 |
| Si 251.611 | 10.0000 | mg/L | 1052.899 | 4.5 | 23548.6 |
| Sn 189.927 | 10.0000 | mg/L | 121.569 | 1.8 | 6850.10 |
| Ti 322.284 | 10.0000 | mg/L | 1199.035 | 1.1 | 109573 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.651328 | 168977 | 695.828 | 0.4 |

**Standard 3 (Std)** — **11/13/2009, 12:36:33 AM** — **Rack 1, Tube 4**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Na 568.821 | 9.88487 | 10.0889 | 10.0262 |
| Na 589.592 | 9.92451 | 10.0282 | 10.0472 |
| Y 361.104 | 0.643339 | 0.641158 | 0.641648 |

| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Na 568.821 | 10.0000 | mg/L | 55.043 | 1.6 | 3466.87 |
| Na 589.592 | 10.0000 | mg/L | 12868.667 | 0.7 | 1955336 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.642048 | 166570 | 296.822 | 0.2 |

**Standard 3 10 X (Std)** **11/13/2009, 12:39:51 AM** **Rack 1, Tube 5**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ca 315.887 | 98.3849 | 99.8097 | 101.805 |
| K 766.491 | 98.8515 | 99.6710 | 101.478 |
| Mg 279.078 | 98.2335 | 99.6933 | 102.073 |
| Na 568.821 | 98.5100 | 99.8154 | 101.675 |
| Na 589.592 | 101.643 | 102.950 | 104.763 |
| Y 361.104 | 0.606544 | 0.606079 | 0.595196 |

| Label | Sol'n Conc. | Units | SD(Int) | %RSD(Int) | Int. (c/s) |
|---|---|---|---|---|---|
| Ca 315.887 | 100.000 | mg/L | 13121.549 | 1.7 | 764286 |
| K 766.491 | 100.000 | mg/L | 47545.758 | 1.3 | 3538508 |
| Mg 279.078 | 100.000 | mg/L | 2117.614 | 1.9 | 109280 |
| Na 568.821 | 100.000 | mg/L | 744.624 | 1.9 | 38672.0 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.602606 | 156337 | 1666.058 | 1.1 |

**Ag 328.068 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -15.8054 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 87505.7 | 2.00000 | 2.00000 | 0.000000 | 0.0 |

Curve Type: Linear Equation: y = 43760.8 x + -15.8

**Al 237.312 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -2.79838 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 7097.10 | 10.0000 | 10.00000 | -0.000001 | 0.0 |

Curve Type: Linear Equation: y = 710.0 x + -2.8





**As 188.980 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.265228 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 3822.62 | 10.0000 | 10.0000 | 0.000001 | 0.0 |

Curve Type: Linear Equation: y = 382.2 x + 0.3

**B 249.772 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 16.9185 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 115279 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear Equation: y = 11526.2 x + 16.9

**Ba 233.527 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 11.4166 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 408478 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear Equation: y = 40846.6 x + 11.4

**Be 234.861 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -4.61763 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 536998 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear Equation: y = 53700.3 x + -4.6

**Ca 315.887 Calibration (mg/L)** **11/13/2009, 12:39:51 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 594.308 | 0.000000 | 0.000000 | - | - |
| Standard 3 10 X | | 764286 | 100.000 | 100.0000 | -0.000008 | 0.0 |

Curve Type: Linear Equation: y = 7636.9 x + 594.3

**Cd 228.802 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -1.58528 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 83597.5 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 8359.9 x + -1.6

**Co 231.160 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 7.51193 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 59842.9 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 5983.5 x + 7.5

**Cr 267.716 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -6.49946 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 362674 | 10.0000 | 10.00000 | -0.000001 | 0.0 |

Curve Type: Linear

Equation: y = 36268.0 x + -6.5

**Cu 324.754 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 124.368 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 539387 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 53926.3 x + 124.4

**Fe 261.382 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 9.29363 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 20973.5 | 10.0000 | 10.0000 | 0.000000 | 0.0 |



Curve Type: Linear

Equation: y = 2096.4 x + 9.3



**K 766.491 Calibration (mg/L)** **11/13/2009, 12:39:51 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -318.174 | 0.000000 | 0.000000 | - | - |
| Standard 3 10 X | | 3538508 | 100.000 | 100.000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 35388.3 x + -318.2

**Li 610.365 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 450.477 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 224964 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 22451.4 x + 450.5

**Mg 279.078 Calibration (mg/L)** **11/13/2009, 12:39:51 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 20.6196 | 0.000000 | 0.000000 | - | - |
| Standard 3 10 X | | 109280 | 100.000 | 100.000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 1092.6 x + 20.6

**Mn 293.305 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.256942 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 153736 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 15373.6 x + 0.3

**Mo 202.032 Calibration (mg/L)** **11/13/2009, 12:33:15 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 1.14971 | 0.000000 | 0.000000 | - | - |
| Standard 4 | | 7439.52 | 2.00000 | 2.00000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 3719.2 x + 1.1

**Na 568.821 Calibration (mg/L)** **11/13/2009, 12:39:51 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Standard 3 | | 3466.87 | 10.0000 | 10.0000 | 0.000000 | 0.0 |
| Standard 3 10 X | | 38672.0 | 100.000 | 100.000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 391.2 x + -444.8

**Na 589.592 Calibration (mg/L)** **11/13/2009, 12:36:33 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 7344.06 | 0.000000 | 0.000000 | - | - |
| Standard 3 | | 1955336 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 194799.2 x + 7344.1

**Ni 231.604 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -0.244128 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 29675.6 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 2967.6 x + -0.2

**Pb 220.353 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -1.04867 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 14269.2 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 1427.0 x + -1.0





**Sb 217.582 Calibration (mg/L)** **11/13/2009, 12:33:15 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.731751 | 0.000000 | 0.000000 | - | - |
| Standard 4 | | 987.021 | 2.00000 | 2.00000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 493.1 x + 0.7

**Se 196.026 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 1.19920 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 2120.03 | 10.0000 | 10.0000 | 0.000001 | 0.0 |

Curve Type: Linear

Equation: y = 211.9 x + 1.2

**Si 251.611 Calibration (mg/L)** **11/13/2009, 12:33:15 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 43.6531 | 0.000000 | 0.000000 | - | - |
| Standard 4 | | 23548.6 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 2350.5 x + 43.7

**Sn 189.927 Calibration (mg/L)** **11/13/2009, 12:33:15 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.857371 | 0.000000 | 0.000000 | - | - |
| Standard 4 | | 6850.10 | 10.0000 | 10.0000 | 0.000001 | 0.0 |

Curve Type: Linear

Equation: y = 684.9 x + 0.9

**Sr 216.596 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.397331 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 52270.5 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 5227.0 x + 0.4



**Ti 322.284 Calibration (mg/L)** **11/13/2009, 12:33:15 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 116.354 | 0.000000 | 0.000000 | - | - |
| Standard 4 | | 109573 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 10945.6 x + 116.4

**Tl 190.794 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 0.255590 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 3668.34 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 366.8 x + 0.3

**V 289.164 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 2.54343 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 90669.8 | 10.0000 | 10.0000 | 0.000001 | 0.0 |

Curve Type: Linear

Equation: y = 9066.7 x + 2.5

**Zn 206.200 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | -0.102597 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 6779.97 | 10.0000 | 10.0000 | 0.000001 | 0.0 |

Curve Type: Linear

Equation: y = 678.0 x + -0.1



**Zr 257.147 Calibration (mg/L)** **11/13/2009, 12:29:56 AM** **Correlation Coefficient: 1.000000**

| Label | Flags | Int. (c/s) | Std Conc. | Calc Conc. | Error | %Error |
|---|---|---|---|---|---|---|
| Blank | | 16.1584 | 0.000000 | 0.000000 | - | - |
| Standard 2 | | 135983 | 10.0000 | 10.0000 | 0.000000 | 0.0 |

Curve Type: Linear

Equation: y = 13596.7 x + 16.2

**CCV (CCV)**

**Weight: 1** **11/13/2009, 12:43:10 AM** **Rack 1, Tube 6**

**Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.04706 | 1.05546 | 1.05149 |
| Al 237.312 | 5.20430 | 5.22391 | 5.21744 |
| As 188.980 | 2.05333 | 2.05739 | 2.06426 |
| B 249.772 | 2.12834 | 2.16730 | 2.16311 |
| Ba 233.527 | 5.04154 | 5.08508 | 5.07546 |
| Be 234.861 | 2.11285 | 2.13881 | 2.13693 |
| Ca 315.887 | 50.1053 | 50.5993 | 50.3562 |
| Cd 228.802 | 5.14410 | 5.18783 | 5.16700 |
| Co 231.160 | 5.00741 | 5.04873 | 5.03604 |
| Cr 267.716 | 5.03173 | 5.07856 | 5.06690 |
| Cu 324.754 | 5.05207 | 5.14105 | 5.09149 |
| Fe 261.382 | 5.01674 | 5.07092 | 5.05137 |
| K 766.491 | 50.0006 | 50.5342 | 50.2845 |
| Li 610.365 | 5.09973 | 5.12811 | 5.11017 |
| Mg 279.078 | 50.6546 | 51.1827 | 50.9806 |
| Mn 293.305 | 5.09086 | 5.15011 | 5.12451 |
| Mo 202.032 | 1.01552 | 1.03208 | 1.02814 |
| Na 568.821 | 49.1833 | 49.7330 | 49.3900 |
| Na 589.592 | 52.2804 | 52.5634 | 52.4199 |
| Ni 231.604 | 4.95049 | 5.00190 | 4.98340 |
| Pb 220.353 | 5.01861 | 5.04312 | 5.02125 |
| Sb 217.582 | 1.05480 | 1.05733 | 1.02661 |
| Se 196.026 | 2.05948 | 2.14642 | 2.09731 |
| Si 251.611 | 4.99266 | 5.08725 | 5.11749 |
| Sn 189.927 | 4.99226 | 5.05071 | 5.02157 |
| Sr 216.596 | 4.93762 | 5.00894 | 5.01795 |
| Ti 322.284 | 5.07029 | 5.11813 | 5.10499 |
| Tl 190.794 | 1.92433 | 1.98119 | 1.97579 |
| V 289.164 | 2.02779 | 2.05065 | 2.04612 |
| Zn 206.200 | 5.10713 | 5.10367 | 5.09483 |
| Zr 257.147 | 5.12739 | 5.17430 | 5.15682 |
| Y 361.104 | 0.609104 | 0.610112 | 0.610726 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.05134 | mg/L | 0.004202 | 0.4 | 46851.6 | 1.05134 mg/L | Y 361.104 | 105.13373 |
| Al 237.312 | 5.21521 | mg/L | 0.009993 | 0.2 | 3719.24 | 5.21521 mg/L | Y 361.104 | 104.30429 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.05833 | mg/L | 0.005525 | 0.3 | 781.384 | 2.05833 mg/L | Y 361.104 | 102.91628 |
| B 249.772 | 2.15292 | mg/L | 0.021384 | 1.0 | 24831.9 | 2.15292 mg/L | Y 361.104 | 107.64588 |
| Ba 233.527 | 5.06736 | mg/L | 0.022872 | 0.5 | 206996 | 5.06736 mg/L | Y 361.104 | 101.34721 |
| Be 234.861 | 2.12953 | mg/L | 0.014474 | 0.7 | 114277 | 2.12953 mg/L | Y 361.104 | 106.47646 |
| Ca 315.887 | 50.3536 | mg/L | 0.246998 | 0.5 | 385141 | 50.3536 mg/L | Y 361.104 | 100.70718 |
| Cd 228.802 | 5.16631 | mg/L | 0.021871 | 0.4 | 43263.3 | 5.16631 mg/L | Y 361.104 | 103.32623 |
| Co 231.160 | 5.03072 | mg/L | 0.021167 | 0.4 | 30116.6 | 5.03072 mg/L | Y 361.104 | 100.61448 |
| Cr 267.716 | 5.05906 | mg/L | 0.024381 | 0.5 | 183495 | 5.05906 mg/L | Y 361.104 | 101.18125 |
| Cu 324.754 | 5.09487 | mg/L | 0.044586 | 0.9 | 274784 | 5.09487 mg/L | Y 361.104 | 101.89742 |
| Fe 261.382 | 5.04635 | mg/L | 0.027439 | 0.5 | 10483.0 | 5.04635 mg/L | Y 361.104 | 100.92691 |
| K 766.491 | 50.2731 | mg/L | 0.266988 | 0.5 | 1778759 | 50.2731 mg/L | Y 361.104 | 100.54617 |
| Li 610.365 | 5.11267 | mg/L | 0.014350 | 0.3 | 114851 | 5.11267 mg/L | Y 361.104 | 102.25342 |
| Mg 279.078 | 50.9393 | mg/L | 0.266457 | 0.5 | 55676.4 | 50.9393 mg/L | Y 361.104 | 101.87857 |
| Mn 293.305 | 5.12183 | mg/L | 0.029716 | 0.6 | 78741.1 | 5.12183 mg/L | Y 361.104 | 102.43655 |
| Mo 202.032 | 1.02525 | mg/L | 0.008650 | 0.8 | 3814.96 | 1.02525 mg/L | Y 361.104 | 102.52473 |
| Na 568.821 | 49.4355 | mg/L | 0.277679 | 0.6 | 19056.1 | 49.4355 mg/L | Y 361.104 | 98.87091 |
| Na 589.592 | 52.4212 | mg/L | 0.141496 | 0.3 | 10231699 | 52.4212 mg/L | Y 361.104 | 104.84240 |
| Ni 231.604 | 4.97860 | mg/L | 0.026042 | 0.5 | 14750.0 | 4.97860 mg/L | Y 361.104 | 99.57191 |
| Pb 220.353 | 5.02766 | mg/L | 0.013455 | 0.3 | 7162.57 | 5.02766 mg/L | Y 361.104 | 100.55325 |
| Sb 217.582 | 1.04624 | mg/L | 0.017051 | 1.6 | 518.383 | 1.04624 mg/L | Y 361.104 | 104.62440 |
| Se 196.026 | 2.10107 | mg/L | 0.043592 | 2.1 | 446.914 | 2.10107 mg/L | Y 361.104 | 105.05356 |
| Si 251.611 | 5.06580 | mg/L | 0.065125 | 1.3 | 12475.7 | 5.06580 mg/L | Y 361.104 | 101.31599 |
| Sn 189.927 | 5.02151 | mg/L | 0.029224 | 0.6 | 3444.47 | 5.02151 mg/L | Y 361.104 | 100.43025 |
| Sr 216.596 | 4.98817 | mg/L | 0.044011 | 0.9 | 26058.7 | 4.98817 mg/L | Y 361.104 | 99.76344 |
| Ti 322.284 | 5.09780 | mg/L | 0.024718 | 0.5 | 55938.7 | 5.09780 mg/L | Y 361.104 | 101.95601 |
| Tl 190.794 | 1.96044 | mg/L | 0.031388 | 1.6 | 735.868 | 1.96044 mg/L | Y 361.104 | 98.02182 |
| V 289.164 | 2.04152 | mg/L | 0.012104 | 0.6 | 18361.6 | 2.04152 mg/L | Y 361.104 | 102.07604 |
| Zn 206.200 | 5.10188 | mg/L | 0.006342 | 0.1 | 3472.56 | 5.10188 mg/L | Y 361.104 | 102.03751 |
| Zr 257.147 | 5.15284 | mg/L | 0.023706 | 0.5 | 70052.3 | 5.15284 mg/L | Y 361.104 | 103.05676 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.609980 | 158250 | 212.469 | 0.1 |

**BLA01 (CCB)** **11/13/2009, 12:46:28 AM** **Rack 1, Tube 7**

**Weight: 1** **Volume: 1** **Dilution: 1**



| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000383 | 0.000265 | 0.000454 |
| Al 237.312 | 0.003427 | 0.004465 | 0.001011 |
| As 188.980 | 0.000320 | -0.000687u | -0.000738u |
| B 249.772 | 0.006498 | 0.005276 | 0.004667 |
| Ba 233.527 | -0.000187u | -0.000068u | 0.000112 |
| Be 234.861 | -0.000039u | 0.000007 | -0.000047u |
| Ca 315.887 | 0.001713 | 0.002136 | 0.002933 |
| Cd 228.802 | 0.000409 | 0.000309 | 0.000384 |
| Co 231.160 | -0.000301u | 0.000459 | 0.000513 |
| Cr 267.716 | -0.000033u | 0.000091 | 0.000180 |
| Cu 324.754 | -0.000072u | 0.000067 | 0.000083 |
| Fe 261.382 | -0.000026u | 0.001369 | -0.000851u |
| K 766.491 | -0.000236u | -0.000132u | -0.001005u |
| Li 610.365 | -0.002952u | -0.002118u | -0.003233u |
| Mg 279.078 | 0.000187 | 0.002508 | -0.002142u |
| Mn 293.305 | -0.000556u | -0.000048u | 0.000321 |
| Mo 202.032 | 0.000452 | 0.000429 | 0.000790 |
| Na 568.821 | -0.082670u | -0.105106u | -0.046198u |
| Na 589.592 | -0.000962u | 0.000019 | -0.000406u |
| Ni 231.604 | 0.001045 | -0.000766u | 0.000013 |
| Pb 220.353 | -0.000753u | 0.001894 | -0.001872u |
| Sb 217.582 | -0.004526u | -0.004851u | 0.001060 |
| Se 196.026 | 0.002744 | 0.006071 | -0.005817u |
| Si 251.611 | 0.002633 | 0.002788 | 0.003051 |
| Sn 189.927 | 0.001239 | 0.001697 | 0.001072 |
| Sr 216.596 | 0.000530 | 0.000801 | -0.000295u |
| Ti 322.284 | 0.000570 | 0.000192 | 0.000804 |
| Tl 190.794 | 0.002385 | 0.000303 | 0.002027 |
| V 289.164 | 0.000548 | 0.000767 | 0.000297 |
| Zn 206.200 | 0.003940 | -0.002262u | -0.002198u |
| Zr 257.147 | 0.000028 | 0.000235 | 0.000555 |
| Y 361.104 | 0.662882 | 0.654256 | 0.654217 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000367 | mg/L | 0.000096 | 26.0 | 0.351793 | 0.000367 mg/L | Y 361.104 | 0.00037 |
| Al 237.312 | 0.002968 | mg/L | 0.001772 | 59.7 | -0.691946 | 0.002968 mg/L | Y 361.104 | 0.00297 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000368uv | mg/L | 0.000596 | 162.0 | 0.123492 | -0.000368 mg/L | Y 361.104 | -0.00037 |
| B 249.772 | 0.005480 | mg/L | 0.000933 | 17.0 | 80.0843 | 0.005480 mg/L | Y 361.104 | 0.00548 |
| Ba 233.527 | -0.000048uv | mg/L | 0.000150 | 314.8 | 9.47099 | -0.000048 mg/L | Y 361.104 | -0.00005 |
| Be 234.861 | -0.000026uv | mg/L | 0.000029 | 111.5 | -6.05723 | -0.000026 mg/L | Y 361.104 | -0.00003 |
| Ca 315.887 | 0.002261 | mg/L | 0.000620 | 27.4 | 611.681 | 0.002261 mg/L | Y 361.104 | 0.00226 |
| Cd 228.802 | 0.000367 | mg/L | 0.000052 | 14.1 | 1.53493 | 0.000367 mg/L | Y 361.104 | 0.00037 |
| Co 231.160 | 0.000224uv | mg/L | 0.000455 | 203.5 | 8.72448 | 0.000224 mg/L | Y 361.104 | 0.00022 |
| Cr 267.716 | 0.000079uv | mg/L | 0.000107 | 135.1 | -3.62140 | 0.000079 mg/L | Y 361.104 | 0.00008 |
| Cu 324.754 | 0.000026uv | mg/L | 0.000086 | 329.1 | 125.797 | 0.000026 mg/L | Y 361.104 | 0.00003 |
| Fe 261.382 | 0.000164uv | mg/L | 0.001122 | 683.9 | 9.63720 | 0.000164 mg/L | Y 361.104 | 0.00016 |
| K 766.491 | -0.000458uv | mg/L | 0.000477 | 104.2 | -334.369 | -0.000458 mg/L | Y 361.104 | -0.00046 |
| Li 610.365 | -0.002767uv | mg/L | 0.000580 | 21.0 | 387.887 | -0.002767 mg/L | Y 361.104 | -0.00277 |
| Mg 279.078 | 0.000184uv | mg/L | 0.002325 | 1261.7 | 20.8225 | 0.000184 mg/L | Y 361.104 | 0.00018 |
| Mn 293.305 | -0.000094uv | mg/L | 0.000441 | 468.0 | -1.19100 | -0.000094 mg/L | Y 361.104 | -0.00009 |
| Mo 202.032 | 0.000557 | mg/L | 0.000202 | 36.2 | 3.22166 | 0.000557 mg/L | Y 361.104 | 0.00056 |
| Na 568.821 | -uv | mg/L | 0.029731 | 38.1 | -475.121 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.000450uv | mg/L | 0.000492 | 109.4 | 7256.89 | -0.000450 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.000098uv | mg/L | 0.000909 | 931.4 | 0.045824 | 0.000098 mg/L | Y 361.104 | 0.00010 |
| Pb 220.353 | -0.000244uv | mg/L | 0.001934 | 793.6 | -1.40025 | -0.000244 mg/L | Y 361.104 | -0.00024 |
| Sb 217.582 | -0.002772uv | mg/L | 0.003323 | 119.9 | -0.634498 | -0.002772 mg/L | Y 361.104 | -0.00277 |
| Se 196.026 | 0.001000uv | mg/L | 0.006133 | 613.6 | 1.41086 | 0.001000 mg/L | Y 361.104 | 0.00100 |
| Si 251.611 | 0.002824 | mg/L | 0.000212 | 7.5 | 50.5651 | 0.002824 mg/L | Y 361.104 | 0.00282 |
| Sn 189.927 | 0.001336 | mg/L | 0.000324 | 24.2 | 1.77421 | 0.001336 mg/L | Y 361.104 | 0.00134 |
| Sr 216.596 | 0.000345uv | mg/L | 0.000571 | 165.4 | 2.20212 | 0.000345 mg/L | Y 361.104 | 0.00035 |
| Ti 322.284 | 0.000522 | mg/L | 0.000309 | 59.1 | 122.082 | 0.000522 mg/L | Y 361.104 | 0.00052 |
| Tl 190.794 | 0.001572 | mg/L | 0.001113 | 70.8 | 0.836578 | 0.001572 mg/L | Y 361.104 | 0.00157 |
| V 289.164 | 0.000537 | mg/L | 0.000235 | 43.7 | 7.42556 | 0.000537 mg/L | Y 361.104 | 0.00054 |
| Zn 206.200 | -0.000173uv | mg/L | 0.003562 | 2054.1 | -0.220506 | -0.000173 mg/L | Y 361.104 | -0.00017 |
| Zr 257.147 | 0.000272 | mg/L | 0.000266 | 97.6 | 19.8323 | 0.000272 mg/L | Y 361.104 | 0.00027 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.657118 | 170480 | 1294.894 | 0.8 |

**ICV01-30 (ICV) (ICV)** **11/13/2009, 12:49:46 AM** **Rack 1, Tube 8**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.512332 | 0.518413 | 0.520582 |
| Al 237.312 | 1.02137 | 1.01790 | 1.03066 |
| As 188.980 | 1.00279 | 1.01138 | 1.00853 |
| B 249.772 | 1.02174 | 1.03794 | 1.04592 |
| Ba 233.527 | 1.01475 | 1.02947 | 1.03148 |
| Be 234.861 | 1.04009 | 1.04657 | 1.05181 |
| Ca 315.887 | 19.5672 | 19.8307 | 19.8620 |
| Cd 228.802 | 0.993299 | 1.01743 | 1.02102 |
| Co 231.160 | 0.989909 | 1.01341 | 1.00977 |
| Cr 267.716 | 1.00642 | 1.01923 | 1.02354 |
| Cu 324.754 | 1.01580 | 1.01730 | 1.01841 |
| Fe 261.382 | 1.02018 | 1.02931 | 1.03178 |
| K 766.491 | 17.8427 | 18.0437 | 18.1542 |
| Li 610.365 | 0.977189 | 0.985505 | 0.985026 |
| Mg 279.078 | 20.0673 | 20.3131 | 20.3481 |
| Mn 293.305 | 1.01992 | 1.03466 | 1.03494 |
| Mo 202.032 | 0.495500 | 0.502412 | 0.507963 |
| Na 568.821 | 18.7375 | 18.7833 | 18.8779 |
| Na 589.592 | 19.4645 | 19.7083 | 19.6975 |
| Ni 231.604 | 1.01135 | 1.01764 | 1.02104 |
| Pb 220.353 | 1.00565 | 1.01699 | 1.02254 |
| Sb 217.582 | 0.504872 | 0.510431 | 0.505452 |
| Se 196.026 | 1.00299 | 1.00724 | 1.03898 |
| Si 251.611 | 2.58579 | 2.61099 | 2.61529 |
| Sn 189.927 | 1.96849 | 1.99228 | 2.00356 |
| Sr 216.596 | 0.979919 | 0.994822 | 1.00097 |
| Ti 322.284 | 1.00572 | 1.00967 | 1.01035 |
| Tl 190.794 | 0.979042 | 1.01760 | 1.00240 |
| V 289.164 | 1.00978 | 1.01975 | 1.02327 |
| Zn 206.200 | 0.967887 | 0.998025 | 0.976291 |
| Zr 257.147 | 1.02481 | 1.03447 | 1.03831 |
| Y 361.104 | 0.627446 | 0.627259 | 0.625868 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.517109 | mg/L | 0.004277 | 0.8 | 22786.0 | 0.517109 mg/L | Y 361.104 | 103.42180 |
| Al 237.312 | 1.02331 | mg/L | 0.006595 | 0.6 | 727.403 | 1.02331 mg/L | Y 361.104 | 102.33087 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 1.00756 | mg/L | 0.004374 | 0.4 | 383.702 | 1.00756 mg/L | Y 361.104 | 100.75648 |
| B 249.772 | 1.03520 | mg/L | 0.012322 | 1.2 | 11948.8 | 1.03520 mg/L | Y 361.104 | 103.51971 |
| Ba 233.527 | 1.02524 | mg/L | 0.009134 | 0.9 | 41898.6 | 1.02524 mg/L | Y 361.104 | 102.52351 |
| Be 234.861 | 1.04616 | mg/L | 0.005871 | 0.6 | 56159.3 | 1.04616 mg/L | Y 361.104 | 104.61562 |
| Ca 315.887 | 19.7533 | mg/L | 0.161943 | 0.8 | 151502 | 19.7533 mg/L | Y 361.104 | 98.76657 |
| Cd 228.802 | 1.01058 | mg/L | 0.015074 | 1.5 | 8480.90 | 1.01058 mg/L | Y 361.104 | 101.05811 |
| Co 231.160 | 1.00436 | mg/L | 0.012649 | 1.3 | 6016.19 | 1.00436 mg/L | Y 361.104 | 100.43626 |
| Cr 267.716 | 1.01639 | mg/L | 0.008905 | 0.9 | 36860.1 | 1.01639 mg/L | Y 361.104 | 101.63947 |
| Cu 324.754 | 1.01717 | mg/L | 0.001306 | 0.1 | 54966.6 | 1.01717 mg/L | Y 361.104 | 101.71693 |
| Fe 261.382 | 1.02709 | mg/L | 0.006106 | 0.6 | 2142.74 | 1.02709 mg/L | Y 361.104 | 102.70884 |
| K 766.491 | 18.0135 | mg/L | 0.157972 | 0.9 | 637150 | 18.0135 mg/L | Y 361.104 | 90.06771 |
| Li 610.365 | 0.982573 | mg/L | 0.004669 | 0.5 | 22359.0 | 0.982573 mg/L | Y 361.104 | 98.25732 |
| Mg 279.078 | 20.2429 | mg/L | 0.153007 | 0.8 | 22137.8 | 20.2429 mg/L | Y 361.104 | 101.21429 |
| Mn 293.305 | 1.02984 | mg/L | 0.008591 | 0.8 | 15832.6 | 1.02984 mg/L | Y 361.104 | 102.98438 |
| Mo 202.032 | 0.501958 | mg/L | 0.006244 | 1.2 | 1868.02 | 0.501958 mg/L | Y 361.104 | 100.39162 |
| Na 568.821 | 18.7996 | mg/L | 0.071576 | 0.4 | 6965.96 | 18.7996 mg/L | Y 361.104 | 93.99786 |
| Na 589.592 | 19.6234 | mg/L | 0.137759 | 0.7 | 3832594 | 19.6234 mg/L | Y 361.104 | 98.11716 |
| Ni 231.604 | 1.01668 | mg/L | 0.004916 | 0.5 | 3011.73 | 1.01668 mg/L | Y 361.104 | 101.66791 |
| Pb 220.353 | 1.01506 | mg/L | 0.008607 | 0.8 | 1444.92 | 1.01506 mg/L | Y 361.104 | 101.50603 |
| Sb 217.582 | 0.506918 | mg/L | 0.003056 | 0.6 | 251.592 | 0.506918 mg/L | Y 361.104 | 101.38361 |
| Se 196.026 | 1.01640 | mg/L | 0.019667 | 1.9 | 216.666 | 1.01640 mg/L | Y 361.104 | 101.64045 |
| Si 251.611 | 2.60402 | mg/L | 0.015937 | 0.6 | 6314.05 | 2.60402 mg/L | Y 361.104 | 104.16086 |
| Sn 189.927 | 1.98811 | mg/L | 0.017902 | 0.9 | 1363.41 | 1.98811 mg/L | Y 361.104 | 99.40568 |
| Sr 216.596 | 0.991902 | mg/L | 0.010823 | 1.1 | 5182.03 | 0.991902 mg/L | Y 361.104 | 99.19019 |
| Ti 322.284 | 1.00858 | mg/L | 0.002501 | 0.2 | 11165.7 | 1.00858 mg/L | Y 361.104 | 100.85793 |
| Tl 190.794 | 0.999680 | mg/L | 0.019422 | 1.9 | 370.716 | 0.999680 mg/L | Y 361.104 | 99.96796 |
| V 289.164 | 1.01760 | mg/L | 0.006999 | 0.7 | 9195.82 | 1.01760 mg/L | Y 361.104 | 101.76031 |
| Zn 206.200 | 0.980734 | mg/L | 0.015553 | 1.6 | 667.709 | 0.980734 mg/L | Y 361.104 | 98.07345 |
| Zr 257.147 | 1.03253 | mg/L | 0.006954 | 0.7 | 14060.6 | 1.03253 mg/L | Y 361.104 | 103.25330 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.626858 | 162629 | 223.658 | 0.1 |

**BLA01 (CCB)** 11/13/2009, 12:53:04 AM Rack 1, Tube 9

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000205 | -0.000197u | -0.000107u |
| Al 237.312 | 0.001143 | 0.006213 | 0.008145 |
| As 188.980 | -0.003842u | 0.003595 | -0.001742u |
| B 249.772 | 0.004160 | 0.003443 | 0.002908 |
| Ba 233.527 | -0.000085u | -0.000016u | -0.000020u |
| Be 234.861 | 0.000050 | 0.000055 | 0.000013 |
| Ca 315.887 | 0.001438 | 0.001767 | 0.001489 |
| Cd 228.802 | 0.000311 | -0.000246u | 0.000625 |
| Co 231.160 | 0.000102 | 0.000583 | 0.000905 |
| Cr 267.716 | -0.000028u | -0.000072u | -0.000026u |
| Cu 324.754 | 0.000109 | 0.000199 | 0.000122 |
| Fe 261.382 | -0.000471u | -0.000644u | -0.001832u |
| K 766.491 | -0.000761u | 0.000371 | 0.001273 |
| Li 610.365 | -0.001410u | -0.001926u | -0.001334u |
| Mg 279.078 | 0.001811 | 0.004827 | 0.003148 |
| Mn 293.305 | 0.000409 | 0.000360 | -0.000457u |
| Mo 202.032 | 0.000011 | 0.000308 | 0.000299 |
| Na 568.821 | -0.109821u | -0.034386u | -0.117591u |
| Na 589.592 | -0.001177u | -0.000556u | -0.000424u |
| Ni 231.604 | -0.000298u | 0.000387 | 0.000616 |
| Pb 220.353 | 0.000964 | -0.000199u | -0.000800u |
| Sb 217.582 | -0.005494u | -0.004484u | -0.006563u |
| Se 196.026 | -0.003236u | 0.005575 | -0.000375u |
| Si 251.611 | 0.001807 | 0.000771 | 0.001707 |
| Sn 189.927 | -0.001947u | -0.000218u | -0.001581u |
| Sr 216.596 | -0.000357u | 0.000207 | -0.000225u |
| Ti 322.284 | 0.000550 | -0.000204u | 0.000014 |
| Tl 190.794 | 0.003881 | 0.002475 | -0.002854u |
| V 289.164 | 0.000240 | 0.000229 | -0.000098u |
| Zn 206.200 | 0.000197 | -0.000571u | 0.000375 |
| Zr 257.147 | 0.000210 | -0.000185u | 0.000087 |
| Y 361.104 | 0.654562 | 0.649983 | 0.648382 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000033uv | mg/L | 0.000211 | 635.7 | -17.1962 | -0.000033 mg/L | Y 361.104 | -0.00003 |
| Al 237.312 | 0.005167 | mg/L | 0.003616 | 70.0 | 0.870941 | 0.005167 mg/L | Y 361.104 | 0.00517 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000663uv | mg/L | 0.003834 | 578.4 | 0.011543 | -0.000663 mg/L | Y 361.104 | -0.00066 |
| B 249.772 | 0.003503 | mg/L | 0.000628 | 17.9 | 57.2989 | 0.003503 mg/L | Y 361.104 | 0.00350 |
| Ba 233.527 | -0.000040uv | mg/L | 0.000039 | 95.5 | 9.76849 | -0.000040 mg/L | Y 361.104 | -0.00004 |
| Be 234.861 | 0.000039 | mg/L | 0.000023 | 58.8 | -2.53253 | 0.000039 mg/L | Y 361.104 | 0.00004 |
| Ca 315.887 | 0.001565 | mg/L | 0.000177 | 11.3 | 606.369 | 0.001565 mg/L | Y 361.104 | 0.00156 |
| Cd 228.802 | 0.000230uv | mg/L | 0.000441 | 191.4 | 0.379615 | 0.000230 mg/L | Y 361.104 | 0.00023 |
| Co 231.160 | 0.000530 | mg/L | 0.000404 | 76.2 | 10.4194 | 0.000530 mg/L | Y 361.104 | 0.00053 |
| Cr 267.716 | -0.000042uv | mg/L | 0.000026 | 61.6 | -8.03038 | -0.000042 mg/L | Y 361.104 | -0.00004 |
| Cu 324.754 | 0.000143 | mg/L | 0.000049 | 34.0 | 132.097 | 0.000143 mg/L | Y 361.104 | 0.00014 |
| Fe 261.382 | -0.000982uv | mg/L | 0.000741 | 75.4 | 7.25208 | -0.000982 mg/L | Y 361.104 | -0.00098 |
| K 766.491 | 0.000294uv | mg/L | 0.001019 | 346.3 | -307.761 | 0.000294 mg/L | Y 361.104 | 0.00029 |
| Li 610.365 | -0.001557uv | mg/L | 0.000322 | 20.7 | 415.078 | -0.001557 mg/L | Y 361.104 | -0.00156 |
| Mg 279.078 | 0.003262 | mg/L | 0.001512 | 46.3 | 24.1845 | 0.003262 mg/L | Y 361.104 | 0.00326 |
| Mn 293.305 | 0.000104uv | mg/L | 0.000486 | 466.7 | 1.85888 | 0.000104 mg/L | Y 361.104 | 0.00010 |
| Mo 202.032 | 0.000206 | mg/L | 0.000169 | 81.9 | 1.91519 | 0.000206 mg/L | Y 361.104 | 0.00021 |
| Na 568.821 | -uv | mg/L | 0.045960 | 52.7 | -478.744 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.000719uv | mg/L | 0.000402 | 55.9 | 7204.42 | -0.000719 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.000235uv | mg/L | 0.000475 | 202.4 | 0.454726 | 0.000235 mg/L | Y 361.104 | 0.00023 |
| Pb 220.353 | -0.000012uv | mg/L | 0.000897 | 7652.1 | -1.06901 | -0.000012 mg/L | Y 361.104 | -0.00001 |
| Sb 217.582 | -0.005514uv | mg/L | 0.001040 | 18.9 | -1.98687 | -0.005514 mg/L | Y 361.104 | -0.00551 |
| Se 196.026 | 0.000655uv | mg/L | 0.004495 | 686.6 | 1.33779 | 0.000655 mg/L | Y 361.104 | 0.00065 |
| Si 251.611 | 0.001428 | mg/L | 0.000571 | 40.0 | 47.1518 | 0.001428 mg/L | Y 361.104 | 0.00143 |
| Sn 189.927 | -0.001249uv | mg/L | 0.000911 | 72.9 | 0.003392 | -0.001249 mg/L | Y 361.104 | -0.00125 |
| Sr 216.596 | -0.000125uv | mg/L | 0.000295 | 235.6 | -0.256806 | -0.000125 mg/L | Y 361.104 | -0.00013 |
| Ti 322.284 | 0.000120uv | mg/L | 0.000388 | 323.4 | 117.673 | 0.000120 mg/L | Y 361.104 | 0.00012 |
| Tl 190.794 | 0.001168uv | mg/L | 0.003553 | 304.3 | 0.688211 | 0.001168 mg/L | Y 361.104 | 0.00117 |
| V 289.164 | 0.000124uv | mg/L | 0.000192 | 155.1 | 3.67189 | 0.000124 mg/L | Y 361.104 | 0.00012 |
| Zn 206.200 | 0.000000uv | mg/L | 0.000503 | 294257.3 | -0.103224 | 0.000000 mg/L | Y 361.104 | 0.00000 |
| Zr 257.147 | 0.000037uv | mg/L | 0.000202 | 542.5 | 16.6243 | 0.000037 mg/L | Y 361.104 | 0.00004 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.650976 | 168886 | 832.014 | 0.5 |

**DLS (CRI)** **11/13/2009, 12:56:23 AM** **Rack 1, Tube 10**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.010772 | 0.010939 | 0.010732 |
| Al 237.312 | 0.050609 | 0.054721 | 0.056880 |
| As 188.980 | 0.005520 | 0.008882 | 0.006517 |
| B 249.772 | 0.051006 | 0.052057 | 0.051701 |
| Ba 233.527 | 0.010044 | 0.010001 | 0.009941 |
| Be 234.861 | 0.004012 | 0.004036 | 0.003991 |
| Ca 315.887 | 0.053338 | 0.053326 | 0.053644 |
| Cd 228.802 | 0.005034 | 0.005059 | 0.004984 |
| Co 231.160 | 0.009247 | 0.010301 | 0.011460 |
| Cr 267.716 | 0.010165 | 0.010339 | 0.010436 |
| Cu 324.754 | 0.010736 | 0.010741 | 0.010656 |
| Fe 261.382 | 0.019021 | 0.020434 | 0.020660 |
| K 766.491 | 0.068532 | 0.069543 | 0.067335 |
| Li 610.365 | 0.006516 | 0.006474 | 0.006005 |
| Mg 279.078 | 0.086934 | 0.085220 | 0.086277 |
| Mn 293.305 | 0.010711 | 0.010764 | 0.010388 |
| Mo 202.032 | 0.009296 | 0.009401 | 0.009893 |
| Na 568.821 | -0.041617u | -0.124324u | -0.142656u |
| Na 589.592 | 0.042296 | 0.042619 | 0.042544 |
| Ni 231.604 | 0.005888 | 0.005401 | 0.005818 |
| Pb 220.353 | 0.006244 | 0.006023 | 0.009073 |
| Sb 217.582 | 0.004657 | 0.006912 | 0.004106 |
| Se 196.026 | 0.011012 | 0.001906 | 0.005431 |
| Si 251.611 | 0.091079 | 0.092873 | 0.093410 |
| Sn 189.927 | 0.011599 | 0.008814 | 0.009217 |
| Sr 216.596 | 0.009148 | 0.009756 | 0.009880 |
| Ti 322.284 | 0.010541 | 0.010966 | 0.011708 |
| Tl 190.794 | 0.012702 | 0.005459 | 0.012607 |
| V 289.164 | 0.010927 | 0.009935 | 0.010456 |
| Zn 206.200 | 0.020402 | 0.015373 | 0.021256 |
| Zr 257.147 | 0.010349 | 0.010858 | 0.010391 |
| Y 361.104 | 0.632474 | 0.633600 | 0.635633 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.010815 | mg/L | 0.000110 | 1.0 | 459.291 | 0.010815 mg/L | Y 361.104 | 108.14570 |
| Al 237.312 | 0.054070 | mg/L | 0.003186 | 5.9 | 35.6111 | 0.054070 mg/L | Y 361.104 | 108.13985 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.006973 | mg/L | 0.001727 | 24.8 | 2.90511 | 0.006973 mg/L | Y 361.104 | 69.72852 |
| B 249.772 | 0.051588 | mg/L | 0.000535 | 1.0 | 611.532 | 0.051588 mg/L | Y 361.104 | 103.17597 |
| Ba 233.527 | 0.009995 | mg/L | 0.000051 | 0.5 | 419.797 | 0.009995 mg/L | Y 361.104 | 99.95422 |
| Be 234.861 | 0.004013 | mg/L | 0.000022 | 0.6 | 210.554 | 0.004013 mg/L | Y 361.104 | 100.33038 |
| Ca 315.887 | 0.053436 | mg/L | 0.000180 | 0.3 | 1003.34 | 0.053436 mg/L | Y 361.104 | 53.43601 |
| Cd 228.802 | 0.005026 | mg/L | 0.000038 | 0.8 | 40.7251 | 0.005026 mg/L | Y 361.104 | 100.51045 |
| Co 231.160 | 0.010336 | mg/L | 0.001107 | 10.7 | 69.6377 | 0.010336 mg/L | Y 361.104 | 103.36228 |
| Cr 267.716 | 0.010313 | mg/L | 0.000137 | 1.3 | 367.543 | 0.010313 mg/L | Y 361.104 | 103.13277 |
| Cu 324.754 | 0.010711 | mg/L | 0.000048 | 0.4 | 701.989 | 0.010711 mg/L | Y 361.104 | 107.11293 |
| Fe 261.382 | 0.020038 | mg/L | 0.000888 | 4.4 | 51.1666 | 0.020038 mg/L | Y 361.104 | 100.18967 |
| K 766.491 | 0.068470 | mg/L | 0.001105 | 1.6 | 2104.87 | 0.068470 mg/L | Y 361.104 | 68.47023 |
| Li 610.365 | 0.006332 | mg/L | 0.000284 | 4.5 | 591.783 | 0.006332 mg/L | Y 361.104 | 63.31624 |
| Mg 279.078 | 0.086144 | mg/L | 0.000864 | 1.0 | 114.740 | 0.086144 mg/L | Y 361.104 | 86.14380 |
| Mn 293.305 | 0.010621 | mg/L | 0.000203 | 1.9 | 163.542 | 0.010621 mg/L | Y 361.104 | 106.21122 |
| Mo 202.032 | 0.009530 | mg/L | 0.000319 | 3.3 | 36.5927 | 0.009530 mg/L | Y 361.104 | 95.29789 |
| Na 568.821 | -uv | mg/L | 0.053829 | 52.3 | -484.909 | - mg/L | Y 361.104 | - |
| Na 589.592 | 0.042486 | mg/L | 0.000169 | 0.4 | 15647.0 | 0.042486 mg/L | Y 361.104 | 42.48628R |
| Ni 231.604 | 0.005702 | mg/L | 0.000263 | 4.6 | 16.6216 | 0.005702 mg/L | Y 361.104 | 114.04556 |
| Pb 220.353 | 0.007113 | mg/L | 0.001701 | 23.9 | 9.06696 | 0.007113 mg/L | Y 361.104 | 71.13428 |
| Sb 217.582 | 0.005225 | mg/L | 0.001487 | 28.5 | 3.31640 | 0.005225 mg/L | Y 361.104 | 52.24894 |
| Se 196.026 | 0.006116 | mg/L | 0.004592 | 75.1 | 2.49617 | 0.006116 mg/L | Y 361.104 | 61.16166 |
| Si 251.611 | 0.092454 | mg/L | 0.001221 | 1.3 | 262.467 | 0.092454 mg/L | Y 361.104 | 92.45427 |
| Sn 189.927 | 0.009877 | mg/L | 0.001505 | 15.2 | 7.63238 | 0.009877 mg/L | Y 361.104 | 98.76637 |
| Sr 216.596 | 0.009595 | mg/L | 0.000392 | 4.1 | 50.5433 | 0.009595 mg/L | Y 361.104 | 95.95039 |
| Ti 322.284 | 0.011072 | mg/L | 0.000591 | 5.3 | 237.724 | 0.011072 mg/L | Y 361.104 | 110.71580 |
| Tl 190.794 | 0.010256 | mg/L | 0.004155 | 40.5 | 4.05881 | 0.010256 mg/L | Y 361.104 | 102.56024 |
| V 289.164 | 0.010439 | mg/L | 0.000496 | 4.8 | 96.8303 | 0.010439 mg/L | Y 361.104 | 104.39389 |
| Zn 206.200 | 0.019011 | mg/L | 0.003179 | 16.7 | 12.8167 | 0.019011 mg/L | Y 361.104 | 95.05312 |
| Zr 257.147 | 0.010533 | mg/L | 0.000283 | 2.7 | 159.453 | 0.010533 mg/L | Y 361.104 | 105.32767 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.633903 | 164457 | 415.342 | 0.3 |

**CDL01 (CRI)** **11/13/2009, 12:59:41 AM** **Rack 1, Tube 11**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.021132 | 0.021653 | 0.021790 |
| Al 237.312 | 0.005923 | 0.003740 | 0.005119 |
| As 188.980 | 0.023501 | 0.018292 | 0.017521 |
| B 249.772 | 0.001932 | 0.001630 | 0.001981 |
| Ba 233.527 | -0.000039u | -0.000075u | -0.000168u |
| Be 234.861 | 0.010101 | 0.010281 | 0.010040 |
| Ca 315.887 | -0.039350u | -0.038800u | -0.039492u |
| Cd 228.802 | 0.010421 | 0.009862 | 0.010285 |
| Co 231.160 | 0.101434 | 0.102961 | 0.102292 |
| Cr 267.716 | 0.020804 | 0.020896 | 0.020951 |
| Cu 324.754 | 0.052723 | 0.052248 | 0.052159 |
| Fe 261.382 | 0.001497 | 0.000801 | 0.000449u |
| K 766.491 | -0.002600u | -0.003058u | -0.003056u |
| Li 610.365 | -0.002199u | -0.001769u | -0.000941u |
| Mg 279.078 | -0.020725u | -0.018903u | -0.020074u |
| Mn 293.305 | 0.031333 | 0.031632 | 0.032124 |
| Mo 202.032 | -0.000312u | 0.000031 | -0.000166u |
| Na 568.821 | -0.192817u | -0.207624u | -0.118304u |
| Na 589.592 | -0.034034u | -0.033875u | -0.034019u |
| Ni 231.604 | 0.081605 | 0.082869 | 0.081442 |
| Pb 220.353 | 0.103364 | 0.100169 | 0.103364 |
| Sb 217.582 | 0.114862 | 0.115420 | 0.118189 |
| Se 196.026 | 0.005923 | 0.008699 | 0.006633 |
| Si 251.611 | -0.009956u | -0.010784u | -0.009593u |
| Sn 189.927 | -0.000228u | 0.000444 | 0.000579 |
| Sr 216.596 | 0.000205 | -0.000384u | -0.000112u |
| Ti 322.284 | 0.000546 | 0.000797 | 0.000608 |
| Tl 190.794 | 0.017023 | 0.021924 | 0.018434 |
| V 289.164 | 0.102139 | 0.103085 | 0.103647 |
| Zn 206.200 | 0.043916 | 0.042833 | 0.039154 |
| Zr 257.147 | 0.000352 | 0.000383 | 0.000066 |
| Y 361.104 | 0.632478 | 0.636933 | 0.634810 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.021525 | mg/L | 0.000347 | 1.6 | 926.426 | 0.021525 mg/L | Y 361.104 | 107.62505 |
| Al 237.312 | 0.004927 | mg/L | 0.001104 | 22.4 | 0.735633 | 0.004927 mg/L | Y 361.104 | - |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.019771 | mg/L | 0.003253 | 16.5 | 7.80597 | 0.019771 mg/L | Y 361.104 | 98.85550 |
| B 249.772 | 0.001848 | mg/L | 0.000190 | 10.3 | 38.1752 | 0.001848 mg/L | Y 361.104 | - |
| Ba 233.527 | -0.000094uv | mg/L | 0.000067 | 70.8 | 8.55565 | -0.000094 mg/L | Y 361.104 | - |
| Be 234.861 | 0.010141 | mg/L | 0.000126 | 1.2 | 539.944 | 0.010141 mg/L | Y 361.104 | 101.40762 |
| Ca 315.887 | -0.039214uv | mg/L | 0.000365 | 0.9 | 303.516 | -0.039214 mg/L | Y 361.104 | - |
| Cd 228.802 | 0.010189 | mg/L | 0.000291 | 2.9 | 84.4660 | 0.010189 mg/L | Y 361.104 | 101.89316 |
| Co 231.160 | 0.102229 | mg/L | 0.000765 | 0.7 | 624.452 | 0.102229 mg/L | Y 361.104 | 102.22906 |
| Cr 267.716 | 0.020884 | mg/L | 0.000074 | 0.4 | 751.015 | 0.020884 mg/L | Y 361.104 | 104.41763 |
| Cu 324.754 | 0.052377 | mg/L | 0.000303 | 0.6 | 2946.26 | 0.052377 mg/L | Y 361.104 | 104.75351 |
| Fe 261.382 | 0.000916uv | mg/L | 0.000534 | 58.3 | 9.68105 | 0.000916 mg/L | Y 361.104 | - |
| K 766.491 | -0.002905uv | mg/L | 0.000263 | 9.1 | -420.963 | -0.002905 mg/L | Y 361.104 | - |
| Li 610.365 | -0.001636uv | mg/L | 0.000640 | 39.1 | 413.594 | -0.001636 mg/L | Y 361.104 | - |
| Mg 279.078 | -0.019901uv | mg/L | 0.000923 | 4.6 | -1.12970 | -0.019901 mg/L | Y 361.104 | - |
| Mn 293.305 | 0.031696 | mg/L | 0.000399 | 1.3 | 487.543 | 0.031696 mg/L | Y 361.104 | 105.65450 |
| Mo 202.032 | -0.000149uv | mg/L | 0.000172 | 115.6 | 0.598426 | -0.000149 mg/L | Y 361.104 | - |
| Na 568.821 | -uv | mg/L | 0.047870 | 27.7 | -512.212 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.033976uv | mg/L | 0.000088 | 0.3 | 725.595 | -0.033976 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.081972 | mg/L | 0.000781 | 1.0 | 242.429 | 0.081972 mg/L | Y 361.104 | 102.46505 |
| Pb 220.353 | 0.102299 | mg/L | 0.001845 | 1.8 | 144.792 | 0.102299 mg/L | Y 361.104 | 102.29881 |
| Sb 217.582 | 0.116157 | mg/L | 0.001781 | 1.5 | 58.1203 | 0.116157 mg/L | Y 361.104 | 96.79768 |
| Se 196.026 | 0.007085 | mg/L | 0.001442 | 20.4 | 2.69764 | 0.007085 mg/L | Y 361.104 | 70.85392 |
| Si 251.611 | -0.010111uv | mg/L | 0.000610 | 6.0 | 20.0997 | -0.010111 mg/L | Y 361.104 | - |
| Sn 189.927 | 0.000265uv | mg/L | 0.000432 | 163.0 | 1.03884 | 0.000265 mg/L | Y 361.104 | - |
| Sr 216.596 | -0.000097uv | mg/L | 0.000295 | 304.3 | -0.407749 | -0.000097 mg/L | Y 361.104 | - |
| Ti 322.284 | 0.000650 | mg/L | 0.000131 | 20.1 | 123.379 | 0.000650 mg/L | Y 361.104 | - |
| Tl 190.794 | 0.019127 | mg/L | 0.002523 | 13.2 | 7.55156 | 0.019127 mg/L | Y 361.104 | 95.63383 |
| V 289.164 | 0.102957 | mg/L | 0.000762 | 0.7 | 934.851 | 0.102957 mg/L | Y 361.104 | 102.95729 |
| Zn 206.200 | 0.041968 | mg/L | 0.002496 | 5.9 | 28.4061 | 0.041968 mg/L | Y 361.104 | 104.91904 |
| Zr 257.147 | 0.000267 | mg/L | 0.000175 | 65.4 | 19.7397 | 0.000267 mg/L | Y 361.104 | - |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.634741 | 164674 | 578.126 | 0.4 |

**HMCS (ICV)** **11/13/2009, 1:02:59 AM** **Rack 1, Tube 12**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 2.01418 | 2.02404 | 2.00482 |
| Al 237.312 | 9.98944 | 10.0411 | 9.99280 |
| As 188.980 | 10.1519 | 10.1634 | 10.0496 |
| B 249.772 | 10.2488 | 10.0630 | 10.0364 |
| Ba 233.527 | 9.99962 | 10.0367 | 9.94967 |
| Be 234.861 | 10.3135 | 10.2809 | 10.2176 |
| Ca 315.887 | -0.100872u | -0.099160u | -0.099925u |
| Cd 228.802 | 9.97022 | 10.0633 | 9.91091 |
| Co 231.160 | 10.0047 | 10.0624 | 9.92942 |
| Cr 267.716 | 9.99098 | 10.0468 | 9.96639 |
| Cu 324.754 | 10.1654 | 10.2251 | 10.1436 |
| Fe 261.382 | 10.0132 | 10.0719 | 9.97131 |
| K 766.491 | -0.001030u | -0.001469u | -0.001081u |
| Li 610.365 | 10.3434 | 10.3670 | 10.2502 |
| Mg 279.078 | -0.018603u | -0.015862u | -0.017247u |
| Mn 293.305 | 10.0288 | 10.0919 | 9.99579 |
| Mo 202.032 | 0.000226 | -0.000075 | -0.000170 |
| Na 568.821 | -0.289743u | -0.271822u | -0.250785u |
| Na 589.592 | -0.089254 | -0.089666 | -0.088762 |
| Ni 231.604 | 10.0185 | 10.0596 | 10.0037 |
| Pb 220.353 | 9.95665 | 10.0221 | 9.91824 |
| Sb 217.582 | 0.001882 | -0.011598 | -0.001689 |
| Se 196.026 | 10.1845 | 10.2497 | 10.1582 |
| Si 251.611 | 0.038365 | 0.118940 | 0.163273 |
| Sn 189.927 | -0.001701 | -0.002487 | -0.005644 |
| Sr 216.596 | 10.0540 | 9.94248 | 9.82890 |
| Ti 322.284 | 0.001181 | 0.001476 | 0.001047 |
| Tl 190.794 | 9.94542 | 10.0841 | 9.99399 |
| V 289.164 | 10.0127 | 10.0588 | 9.97270 |
| Zn 206.200 | 9.68087 | 9.79838 | 9.71480 |
| Zr 257.147 | 9.95633 | 10.0081 | 9.91595 |
| Y 361.104 | 0.624642 | 0.622765 | 0.626641 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 2.01435 | mg/L | 0.009608 | 0.5 | 89781.8 | 2.01435 mg/L | Y 361.104 | 100.71741 |
| Al 237.312 | 10.0078 | mg/L | 0.028881 | 0.3 | 7138.05 | 10.0078 mg/L | Y 361.104 | 100.07764 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 10.1216 | mg/L | 0.062629 | 0.6 | 3861.77 | 10.1216 mg/L | Y 361.104 | 101.21635 |
| B 249.772 | 10.1161 | mg/L | 0.115714 | 1.1 | 116617 | 10.1161 mg/L | Y 361.104 | 101.16062 |
| Ba 233.527 | 9.99534 | mg/L | 0.043685 | 0.4 | 408383 | 9.99534 mg/L | Y 361.104 | 99.95335 |
| Be 234.861 | 10.2706 | mg/L | 0.048771 | 0.5 | 551379 | 10.2706 mg/L | Y 361.104 | 102.70648 |
| Ca 315.887 | -0.099986uv | mg/L | 0.000858 | 0.9 | 135.716 | -0.099986 mg/L | Y 361.104 | - |
| Cd 228.802 | 9.98149 | mg/L | 0.076836 | 0.8 | 83784.1 | 9.98149 mg/L | Y 361.104 | 99.81487 |
| Co 231.160 | 9.99884 | mg/L | 0.066702 | 0.7 | 59596.5 | 9.99884 mg/L | Y 361.104 | 99.98844 |
| Cr 267.716 | 10.0014 | mg/L | 0.041208 | 0.4 | 362761 | 10.0014 mg/L | Y 361.104 | 100.01392 |
| Cu 324.754 | 10.1780 | mg/L | 0.042225 | 0.4 | 548663 | 10.1780 mg/L | Y 361.104 | 101.78044 |
| Fe 261.382 | 10.0188 | mg/L | 0.050538 | 0.5 | 20872.2 | 10.0188 mg/L | Y 361.104 | 100.18794 |
| K 766.491 | -0.001193uv | mg/L | 0.000240 | 20.1 | -360.526 | -0.001193 mg/L | Y 361.104 | - |
| Li 610.365 | 10.3202 | mg/L | 0.061772 | 0.6 | 232154 | 10.3202 mg/L | Y 361.104 | 103.20229 |
| Mg 279.078 | -0.017237uv | mg/L | 0.001370 | 7.9 | -2.68009 | -0.017237 mg/L | Y 361.104 | - |
| Mn 293.305 | 10.0388 | mg/L | 0.048845 | 0.5 | 154333 | 10.0388 mg/L | Y 361.104 | 100.38840 |
| Mo 202.032 | -0.000007 | mg/L | 0.000207 | 3106.5 | 2.54396 | -0.000007 mg/L | Y 361.104 | - |
| Na 568.821 | -uv | mg/L | 0.019500 | 7.2 | -526.296 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.089227 | mg/L | 0.000452 | 0.5 | 14865.6 | -0.089227 mg/L | Y 361.104 | - |
| Ni 231.604 | 10.0273 | mg/L | 0.028973 | 0.3 | 29710.8 | 10.0273 mg/L | Y 361.104 | 100.27287 |
| Pb 220.353 | 9.96565 | mg/L | 0.052493 | 0.5 | 14206.5 | 9.96565 mg/L | Y 361.104 | 99.65652 |
| Sb 217.582 | -0.003802 | mg/L | 0.006984 | 183.7 | 7.60943 | -0.003802 mg/L | Y 361.104 | - |
| Se 196.026 | 10.1975 | mg/L | 0.047079 | 0.5 | 2162.91 | 10.1975 mg/L | Y 361.104 | 101.97470 |
| Si 251.611 | 0.106859 | mg/L | 0.063324 | 59.3 | 540.791 | 0.106859 mg/L | Y 361.104 | - |
| Sn 189.927 | -0.003277 | mg/L | 0.002087 | 63.7 | 3.43575 | -0.003277 mg/L | Y 361.104 | - |
| Sr 216.596 | 9.94178 | mg/L | 0.112543 | 1.1 | 51936.3 | 9.94178 mg/L | Y 361.104 | 99.41785 |
| Ti 322.284 | 0.001235 | mg/L | 0.000220 | 17.8 | 138.914 | 0.001235 mg/L | Y 361.104 | - |
| Tl 190.794 | 10.0078 | mg/L | 0.070352 | 0.7 | 3701.39 | 10.0078 mg/L | Y 361.104 | 100.07829 |
| V 289.164 | 10.0147 | mg/L | 0.043073 | 0.4 | 90550.1 | 10.0147 mg/L | Y 361.104 | 100.14712 |
| Zn 206.200 | 9.73135 | mg/L | 0.060477 | 0.6 | 6623.65 | 9.73135 mg/L | Y 361.104 | 97.31354 |
| Zr 257.147 | 9.96011 | mg/L | 0.046177 | 0.5 | 135441 | 9.96011 mg/L | Y 361.104 | 99.60114 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.624683 | 162065 | 502.827 | 0.3 |

**ICS-A (ICSA)** **11/13/2009, 1:06:18 AM** **Rack 1, Tube 13**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000113 | 0.000123 | 0.000267 |
| Al 237.312 | 532.452 | 542.807 | 544.575 |
| As 188.980 | 0.001635 | -0.003610u | 0.007563 |
| B 249.772 | -0.003113 | -0.011426 | -0.016500 |
| Ba 233.527 | 0.004926 | 0.005174 | 0.005069 |
| Be 234.861 | 0.022283u | 0.019160u | 0.020005u |
| Ca 315.887 | 475.450 | 486.896 | 481.014 |
| Cd 228.802 | 0.002609 | 0.002237 | 0.001997 |
| Co 231.160 | -0.011172 | -0.011056 | -0.012064 |
| Cr 267.716 | 0.000852 | 0.000845 | 0.000974 |
| Cu 324.754 | 0.007959u | 0.007292u | 0.007764u |
| Fe 261.382 | 190.746 | 194.087 | 194.165 |
| K 766.491 | 0.003790 | 0.003866 | 0.004801 |
| Li 610.365 | 0.030139u | 0.028135u | 0.028169u |
| Mg 279.078 | 510.415 | 520.222 | 517.996 |
| Mn 293.305 | 0.001087 | 0.000938 | 0.001393 |
| Mo 202.032 | -0.001429u | -0.002463u | -0.001630u |
| Na 568.821 | -0.313858 | -0.300240 | -0.329286 |
| Na 589.592 | -0.023632u | -0.023522u | -0.023413u |
| Ni 231.604 | 0.001765 | 0.000585 | 0.001861 |
| Pb 220.353 | -0.005459u | -0.009246u | -0.000913u |
| Sb 217.582 | 0.004035u | -0.014421u | 0.000382u |
| Se 196.026 | 0.003526 | 0.005606 | -0.004207u |
| Si 251.611 | -0.046232u | -0.046960u | -0.048898u |
| Sn 189.927 | 0.008376 | -0.005731u | 0.001993 |
| Sr 216.596 | -0.001845 | -0.001658 | -0.000352 |
| Ti 322.284 | -0.000688u | -0.002331u | -0.000691u |
| Tl 190.794 | -0.003975u | 0.000609 | 0.006349 |
| V 289.164 | -0.000985 | 0.000122 | 0.000083 |
| Zn 206.200 | 0.014365u | 0.010131u | 0.003773u |
| Zr 257.147 | -0.002071 | -0.000732 | -0.001110 |
| Y 361.104 | 0.550684 | 0.548054 | 0.549770 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000092 | mg/L | 0.000192 | 208.2 | -4.45135 | 0.000092 mg/L | Y 361.104 | 0.00009 |
| Al 237.312 | 539.945 | mg/L | 6.54867 | 1.2 | 383023 | 539.945 mg/L | Y 361.104 | - |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.001863uv | mg/L | 0.005590 | 300.1 | 0.980279 | 0.001863 mg/L | Y 361.104 | 0.00186 |
| B 249.772 | -0.010346 | mg/L | 0.006759 | 65.3 | 397.292 | -0.010346 mg/L | Y 361.104 | -0.01035 |
| Ba 233.527 | 0.005056 | mg/L | 0.000124 | 2.5 | 218.087 | 0.005056 mg/L | Y 361.104 | 0.00506 |
| Be 234.861 | 0.020483uv | mg/L | 0.001615 | 7.9 | -1849.15 | 0.020483 mg/L | Y 361.104 | 0.02048 |
| Ca 315.887 | 481.120 | mg/L | 5.72352 | 1.2 | 3676921 | 481.120 mg/L | Y 361.104 | - |
| Cd 228.802 | 0.002281 | mg/L | 0.000309 | 13.5 | 19.8535 | 0.002281 mg/L | Y 361.104 | 0.00228 |
| Co 231.160 | -0.011430 | mg/L | 0.000551 | 4.8 | 135.887 | -0.011430 mg/L | Y 361.104 | -0.01143 |
| Cr 267.716 | 0.000890 | mg/L | 0.000072 | 8.1 | 30.4105 | 0.000890 mg/L | Y 361.104 | 0.00089 |
| Cu 324.754 | 0.007671uv | mg/L | 0.000343 | 4.5 | -886.699 | 0.007671 mg/L | Y 361.104 | 0.00767 |
| Fe 261.382 | 192.999 | mg/L | 1.95212 | 1.0 | 404617 | 192.999 mg/L | Y 361.104 | - |
| K 766.491 | 0.004152 | mg/L | 0.000563 | 13.6 | -171.237 | 0.004152 mg/L | Y 361.104 | 0.00415 |
| Li 610.365 | 0.028814uv | mg/L | 0.001147 | 4.0 | -2585.37 | 0.028814 mg/L | Y 361.104 | 0.02881 |
| Mg 279.078 | 516.211 | mg/L | 5.14144 | 1.0 | 564098 | 516.211 mg/L | Y 361.104 | - |
| Mn 293.305 | 0.001139 | mg/L | 0.000232 | 20.4 | 17.7729 | 0.001139 mg/L | Y 361.104 | 0.00114 |
| Mo 202.032 | -0.001841uv | mg/L | 0.000548 | 29.8 | -5.61909 | -0.001841 mg/L | Y 361.104 | -0.00184 |
| Na 568.821 | -0.314461 | mg/L | 0.014532 | 4.6 | 1026.03 | -0.314461 mg/L | Y 361.104 | - |
| Na 589.592 | -0.023522uv | mg/L | 0.000110 | 0.5 | 2774.53 | -0.023522 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.001404 | mg/L | 0.000711 | 50.6 | 3.85994 | 0.001404 mg/L | Y 361.104 | 0.00140 |
| Pb 220.353 | -0.005206uv | mg/L | 0.004172 | 80.1 | -19.1268 | -0.005206 mg/L | Y 361.104 | -0.00521 |
| Sb 217.582 | -0.003335uv | mg/L | 0.009774 | 293.1 | -5.81807 | -0.003335 mg/L | Y 361.104 | -0.00333 |
| Se 196.026 | 0.001642av | mg/L | 0.005170 | 314.9 | 2.31505 | 0.001642 mg/L | Y 361.104 | 0.00164 |
| Si 251.611 | -0.047363uv | mg/L | 0.001378 | 2.9 | -27.0066 | -0.047363 mg/L | Y 361.104 | -0.04736 |
| Sn 189.927 | 0.001546uv | mg/L | 0.007064 | 456.9 | 1.92118 | 0.001546 mg/L | Y 361.104 | 0.00155 |
| Sr 216.596 | -0.001285 | mg/L | 0.000813 | 63.3 | 122.370 | -0.001285 mg/L | Y 361.104 | -0.00129 |
| Ti 322.284 | -0.001236uv | mg/L | 0.000948 | 76.7 | 99.4526 | -0.001236 mg/L | Y 361.104 | -0.00124 |
| Tl 190.794 | 0.000994uv | mg/L | 0.005173 | 520.3 | 0.670016 | 0.000994 mg/L | Y 361.104 | 0.00099 |
| V 289.164 | -0.000260 | mg/L | 0.000628 | 241.5 | 130.999 | -0.000260 mg/L | Y 361.104 | -0.00026 |
| Zn 206.200 | 0.009423uv | mg/L | 0.005331 | 56.6 | -5.59493 | 0.009423 mg/L | Y 361.104 | 0.00942 |
| Zr 257.147 | -0.001304 | mg/L | 0.000690 | 52.9 | 132.157 | -0.001304 mg/L | Y 361.104 | -0.00130 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.549503 | 142560 | 346.351 | 0.2 |

**ICS-AB (ICSAB)**
**Weight: 1** **11/13/2009, 1:09:35 AM** **Volume: 1** **Rack 1, Tube 14** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.231036 | 0.232441 | 0.233388 |
| Al 237.312 | 537.587 | 540.254 | 543.167 |
| As 188.980 | 0.093685 | 0.103275 | 0.120639 |
| B 249.772 | -0.030462 | -0.031952 | -0.030038 |
| Ba 233.527 | 0.511639 | 0.514037 | 0.517131 |
| Be 234.861 | 0.576877 | 0.578487 | 0.582342 |
| Ca 315.887 | 478.676 | 475.411 | 483.713 |
| Cd 228.802 | 1.05579 | 1.07300 | 1.07825 |
| Co 231.160 | 0.466736 | 0.470781 | 0.471447 |
| Cr 267.716 | 0.497592 | 0.500170 | 0.502649 |
| Cu 324.754 | 0.563262 | 0.563278 | 0.562900 |
| Fe 261.382 | 191.857 | 192.904 | 193.796 |
| K 766.491 | 0.004774 | 0.004823 | 0.003576 |
| Li 610.365 | 0.027306u | 0.027819u | 0.024044u |
| Mg 279.078 | 514.074 | 516.121 | 519.643 |
| Mn 293.305 | 0.503162 | 0.505098 | 0.509377 |
| Mo 202.032 | -0.001802u | -0.001155u | 0.000111 |
| Na 568.821 | -0.256780 | -0.255783 | -0.321162 |
| Na 589.592 | -0.027682u | -0.027949u | -0.028010u |
| Ni 231.604 | 0.942724 | 0.944102 | 0.949759 |
| Pb 220.353 | 0.942756 | 0.958036 | 0.949768 |
| Sb 217.582 | 0.652169 | 0.633242 | 0.632279 |
| Se 196.026 | 0.017994 | 0.049254 | 0.067801 |
| Si 251.611 | -0.040728u | -0.043807u | -0.037663u |
| Sn 189.927 | 0.001620 | 0.005853 | 0.000914 |
| Sr 216.596 | -0.001852 | -0.002430 | 0.000323 |
| Ti 322.284 | -0.001552u | -0.001190u | -0.000396u |
| Tl 190.794 | 0.094279 | 0.096153 | 0.089277 |
| V 289.164 | 0.502137 | 0.504182 | 0.507736 |
| Zn 206.200 | 0.940108 | 0.933484 | 0.956616 |
| Zr 257.147 | -0.001042 | -0.001150 | -0.002460 |
| Y 361.104 | 0.548566 | 0.551812 | 0.548962 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.232289 | mg/L | 0.001183 | 0.5 | 10159.1 | 0.232289 mg/L | Y 361.104 | 116.14429 |
| Al 237.312 | 540.336 | mg/L | 2.79097 | 0.5 | 383302 | 540.336 mg/L | Y 361.104 | 108.06715 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.105866 | mg/L | 0.013663 | 12.9 | 40.3665 | 0.105866 mg/L | Y 361.104 | 105.86635 |
| B 249.772 | -0.030817 | mg/L | 0.001006 | 3.3 | 159.860 | -0.030817 mg/L | Y 361.104 | - |
| Ba 233.527 | 0.514269 | mg/L | 0.002753 | 0.5 | 21022.6 | 0.514269 mg/L | Y 361.104 | 102.85381 |
| Be 234.861 | 0.579235 | mg/L | 0.002809 | 0.5 | 28158.2 | 0.579235 mg/L | Y 361.104 | 115.84705 |
| Ca 315.887 | 479.267 | mg/L | 4.18234 | 0.9 | 3662831 | 479.267 mg/L | Y 361.104 | 95.85331 |
| Cd 228.802 | 1.06901 | mg/L | 0.011751 | 1.1 | 8942.07 | 1.06901 mg/L | Y 361.104 | 106.90115 |
| Co 231.160 | 0.469655 | mg/L | 0.002550 | 0.5 | 3031.40 | 0.469655 mg/L | Y 361.104 | 93.93099 |
| Cr 267.716 | 0.500137 | mg/L | 0.002529 | 0.5 | 18138.9 | 0.500137 mg/L | Y 361.104 | 100.02738 |
| Cu 324.754 | 0.563147 | mg/L | 0.000214 | 0.0 | 29056.9 | 0.563147 mg/L | Y 361.104 | 112.62936 |
| Fe 261.382 | 192.852 | mg/L | 0.970591 | 0.5 | 404309 | 192.852 mg/L | Y 361.104 | 96.42611 |
| K 766.491 | 0.004391 | mg/L | 0.000706 | 16.1 | -162.775 | 0.004391 mg/L | Y 361.104 | - |
| Li 610.365 | 0.026390uv | mg/L | 0.002048 | 7.8 | -2625.69 | 0.026390 mg/L | Y 361.104 | - |
| Mg 279.078 | 516.612 | mg/L | 2.81713 | 0.5 | 564536 | 516.612 mg/L | Y 361.104 | 103.32249 |
| Mn 293.305 | 0.505879 | mg/L | 0.003180 | 0.6 | 7777.43 | 0.505879 mg/L | Y 361.104 | 101.17580 |
| Mo 202.032 | -0.000949uv | mg/L | 0.000973 | 102.6 | -2.23079 | -0.000949 mg/L | Y 361.104 | - |
| Na 568.821 | -0.277909 | mg/L | 0.037462 | 13.5 | 1033.51 | -0.277909 mg/L | Y 361.104 | - |
| Na 589.592 | -0.027880uv | mg/L | 0.000174 | 0.6 | 3194.64 | -0.027880 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.945528 | mg/L | 0.003728 | 0.4 | 2802.79 | 0.945528 mg/L | Y 361.104 | 94.55283 |
| Pb 220.353 | 0.950187 | mg/L | 0.007649 | 0.8 | 1343.58 | 0.950187 mg/L | Y 361.104 | 95.01869 |
| Sb 217.582 | 0.639230 | mg/L | 0.011216 | 1.8 | 311.981 | 0.639230 mg/L | Y 361.104 | 106.53834 |
| Se 196.026 | 0.045016 | mg/L | 0.025172 | 55.9 | 11.5565 | 0.045016 mg/L | Y 361.104 | 90.03297 |
| Si 251.611 | -0.040733uv | mg/L | 0.003072 | 7.5 | -11.3255 | -0.040733 mg/L | Y 361.104 | - |
| Sn 189.927 | 0.002796 | mg/L | 0.002671 | 95.5 | 2.73059 | 0.002796 mg/L | Y 361.104 | - |
| Sr 216.596 | -0.001320 | mg/L | 0.001451 | 110.0 | 118.663 | -0.001320 mg/L | Y 361.104 | - |
| Ti 322.284 | -0.001046uv | mg/L | 0.000592 | 56.6 | 100.020 | -0.001046 mg/L | Y 361.104 | - |
| Tl 190.794 | 0.093237 | mg/L | 0.003555 | 3.8 | 35.9958 | 0.093237 mg/L | Y 361.104 | 93.23660 |
| V 289.164 | 0.504685 | mg/L | 0.002833 | 0.6 | 4686.74 | 0.504685 mg/L | Y 361.104 | 100.93697 |
| Zn 206.200 | 0.943403 | mg/L | 0.011912 | 1.3 | 628.980 | 0.943403 mg/L | Y 361.104 | 94.34028 |
| Zr 257.147 | -0.001551 | mg/L | 0.000789 | 50.9 | 128.741 | -0.001551 mg/L | Y 361.104 | - |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.549780 | 142632 | 459.429 | 0.3 |

**CCV (CCV)** 11/13/2009, 1:12:52 AM Rack 1, Tube 15

**Weight:** 1 **Volume:** 1 **Dilution:** 1

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.04880 | 1.07956 | 1.04707 |
| Al 237.312 | 5.19758 | 5.37141 | 5.20137 |
| As 188.980 | 2.05602 | 2.10986 | 2.04645 |
| B 249.772 | 2.12383 | 2.21927 | 2.16314 |
| Ba 233.527 | 5.01652 | 5.16704 | 5.01932 |
| Be 234.861 | 2.13945 | 2.20780 | 2.14703 |
| Ca 315.887 | 49.7232 | 51.1641 | 49.6216 |
| Cd 228.802 | 5.11353 | 5.26778 | 5.11044 |
| Co 231.160 | 4.98777 | 5.13354 | 4.98252 |
| Cr 267.716 | 5.00157 | 5.16561 | 5.01157 |
| Cu 324.754 | 5.06802 | 5.23956 | 5.05634 |
| Fe 261.382 | 5.00461 | 5.16768 | 5.07879 |
| K 766.491 | 50.1108 | 51.4136 | 49.7667 |
| Li 610.365 | 5.16206 | 5.32987 | 5.15418 |
| Mg 279.078 | 50.8422 | 52.4649 | 50.8440 |
| Mn 293.305 | 5.08180 | 5.23795 | 5.07901 |
| Mo 202.032 | 1.00806 | 1.04799 | 1.01545 |
| Na 568.821 | 49.9771 | 51.4695 | 49.7888 |
| Na 589.592 | 51.8565 | 53.0901 | 51.5634 |
| Ni 231.604 | 4.93366 | 5.08317 | 4.93509 |
| Pb 220.353 | 4.96162 | 5.12225 | 4.95580 |
| Sb 217.582 | 1.03118 | 1.05104 | 1.03256 |
| Se 196.026 | 2.05819 | 2.18890 | 2.09310 |
| Si 251.611 | 4.95490 | 5.10081 | 4.94504 |
| Sn 189.927 | 4.92088 | 5.08628 | 4.93745 |
| Sr 216.596 | 4.88392 | 4.99295 | 4.85683 |
| Ti 322.284 | 5.06384 | 5.22840 | 5.07243 |
| Tl 190.794 | 1.95705 | 2.03233 | 1.97298 |
| V 289.164 | 2.01974 | 2.08225 | 2.02509 |
| Zn 206.200 | 4.93564 | 5.07355 | 4.91530 |
| Zr 257.147 | 5.09338 | 5.25789 | 5.09418 |
| Y 361.104 | 0.606208 | 0.600795 | 0.612636 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.05848 | mg/L | 0.018277 | 1.7 | 47165.9 | 1.05848 mg/L | Y 361.104 | 105.84761 |
| Al 237.312 | 5.25679 | mg/L | 0.099283 | 1.9 | 3748.64 | 5.25679 mg/L | Y 361.104 | 105.13572 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.07078 | mg/L | 0.034182 | 1.7 | 786.144 | 2.07078 mg/L | Y 361.104 | 103.53879 |
| B 249.772 | 2.16875 | mg/L | 0.047968 | 2.2 | 25014.3 | 2.16875 mg/L | Y 361.104 | 108.43731 |
| Ba 233.527 | 5.06763 | mg/L | 0.086106 | 1.7 | 207007 | 5.06763 mg/L | Y 361.104 | 101.35250 |
| Be 234.861 | 2.16476 | mg/L | 0.037470 | 1.7 | 116168 | 2.16476 mg/L | Y 361.104 | 108.23801 |
| Ca 315.887 | 50.1696 | mg/L | 0.862741 | 1.7 | 383736 | 50.1696 mg/L | Y 361.104 | 100.33926 |
| Cd 228.802 | 5.16392 | mg/L | 0.089963 | 1.7 | 43243.7 | 5.16392 mg/L | Y 361.104 | 103.27835 |
| Co 231.160 | 5.03461 | mg/L | 0.085716 | 1.7 | 30138.4 | 5.03461 mg/L | Y 361.104 | 100.69212 |
| Cr 267.716 | 5.05958 | mg/L | 0.091957 | 1.8 | 183514 | 5.05958 mg/L | Y 361.104 | 101.19165 |
| Cu 324.754 | 5.12131 | mg/L | 0.102577 | 2.0 | 276210 | 5.12131 mg/L | Y 361.104 | 102.42616 |
| Fe 261.382 | 5.08370 | mg/L | 0.081647 | 1.6 | 10561.4 | 5.08370 mg/L | Y 361.104 | 101.67392 |
| K 766.491 | 50.4303 | mg/L | 0.868710 | 1.7 | 1784324 | 50.4303 mg/L | Y 361.104 | 100.86069 |
| Li 610.365 | 5.21537 | mg/L | 0.099235 | 1.9 | 117159 | 5.21537 mg/L | Y 361.104 | 104.30740 |
| Mg 279.078 | 51.3837 | mg/L | 0.936316 | 1.8 | 56162.0 | 51.3837 mg/L | Y 361.104 | 102.76745 |
| Mn 293.305 | 5.13292 | mg/L | 0.090972 | 1.8 | 78911.6 | 5.13292 mg/L | Y 361.104 | 102.65842 |
| Mo 202.032 | 1.02384 | mg/L | 0.021245 | 2.1 | 3809.71 | 1.02384 mg/L | Y 361.104 | 102.38363 |
| Na 568.821 | 50.4118 | mg/L | 0.920810 | 1.8 | 19437.6 | 50.4118 mg/L | Y 361.104 | 100.82360 |
| Na 589.592 | 52.1700 | mg/L | 0.810182 | 1.6 | 10182764 | 52.1700 mg/L | Y 361.104 | 104.33997 |
| Ni 231.604 | 4.98397 | mg/L | 0.085907 | 1.7 | 14766.0 | 4.98397 mg/L | Y 361.104 | 99.67946 |
| Pb 220.353 | 5.01322 | mg/L | 0.094464 | 1.9 | 7141.95 | 5.01322 mg/L | Y 361.104 | 100.26448 |
| Sb 217.582 | 1.03826 | mg/L | 0.011090 | 1.1 | 514.439 | 1.03826 mg/L | Y 361.104 | 103.82583 |
| Se 196.026 | 2.11340 | mg/L | 0.067676 | 3.2 | 449.528 | 2.11340 mg/L | Y 361.104 | 105.66989 |
| Si 251.611 | 5.00025 | mg/L | 0.087230 | 1.7 | 12319.3 | 5.00025 mg/L | Y 361.104 | 100.00497 |
| Sn 189.927 | 4.98154 | mg/L | 0.091086 | 1.8 | 3417.09 | 4.98154 mg/L | Y 361.104 | 99.63071 |
| Sr 216.596 | 4.91123 | mg/L | 0.072054 | 1.5 | 25656.6 | 4.91123 mg/L | Y 361.104 | 98.22464 |
| Ti 322.284 | 5.12156 | mg/L | 0.092629 | 1.8 | 56198.7 | 5.12156 mg/L | Y 361.104 | 102.43119 |
| Tl 190.794 | 1.98745 | mg/L | 0.039673 | 2.0 | 745.810 | 1.98745 mg/L | Y 361.104 | 99.37260 |
| V 289.164 | 2.04236 | mg/L | 0.034648 | 1.7 | 18368.7 | 2.04236 mg/L | Y 361.104 | 102.11803 |
| Zn 206.200 | 4.97483 | mg/L | 0.086098 | 1.7 | 3386.42 | 4.97483 mg/L | Y 361.104 | 99.49660 |
| Zr 257.147 | 5.14848 | mg/L | 0.094754 | 1.8 | 69992.7 | 5.14848 mg/L | Y 361.104 | 102.96967 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.606547 | 157359 | 1537.839 | 1.0 |

**BLA01 (CCB)** **11/13/2009, 1:16:11 AM** **Rack 1, Tube 16**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000101 | 0.000367 | 0.000176 |
| Al 237.312 | 0.006891 | -0.004906u | 0.005142 |
| As 188.980 | 0.002274 | -0.005660u | 0.000928 |
| B 249.772 | 0.009501 | 0.007846 | 0.006241 |
| Ba 233.527 | -0.000050u | 0.000001 | -0.000058u |
| Be 234.861 | 0.000002 | 0.000042 | 0.000070 |
| Ca 315.887 | 0.000074 | 0.000791 | 0.001116 |
| Cd 228.802 | -0.000041u | 0.000265 | 0.000106 |
| Co 231.160 | 0.001091 | 0.000459 | 0.000568 |
| Cr 267.716 | -0.000091u | -0.000021u | -0.000034u |
| Cu 324.754 | 0.000068 | 0.000276 | 0.000245 |
| Fe 261.382 | -0.000258u | 0.000127 | 0.000866 |
| K 766.491 | -0.000640u | -0.000641u | -0.000117u |
| Li 610.365 | -0.002272u | -0.002919u | -0.002495u |
| Mg 279.078 | -0.001478u | -0.003563u | 0.000915 |
| Mn 293.305 | 0.000298 | 0.000144 | 0.000496 |
| Mo 202.032 | 0.000281 | 0.001327 | 0.000093 |
| Na 568.821 | -0.118936u | -0.142116u | -0.171501u |
| Na 589.592 | -0.001366u | -0.001067u | -0.001099u |
| Ni 231.604 | 0.001648 | -0.000877u | 0.000744 |
| Pb 220.353 | -0.000528u | -0.001495u | -0.001954u |
| Sb 217.582 | 0.000594 | -0.008097u | -0.006782u |
| Se 196.026 | -0.003549u | 0.001315 | 0.004794 |
| Si 251.611 | 0.005231 | 0.005460 | 0.004574 |
| Sn 189.927 | -0.000208u | -0.000743u | -0.001165u |
| Sr 216.596 | 0.000224 | -0.000119u | -0.000348u |
| Ti 322.284 | 0.000803 | 0.000054 | 0.000773 |
| Tl 190.794 | 0.004936 | 0.006472 | 0.002036 |
| V 289.164 | 0.000691 | 0.000350 | 0.000397 |
| Zn 206.200 | -0.000831u | -0.001313u | 0.000479 |
| Zr 257.147 | -0.000466u | -0.000382u | -0.000135u |
| Y 361.104 | 0.648765 | 0.647229 | 0.644738 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000215 | mg/L | 0.000137 | 63.7 | -6.42110 | 0.000215 mg/L | Y 361.104 | 0.00021 |
| Al 237.312 | 0.002376uv | mg/L | 0.006366 | 268.0 | -1.11426 | 0.002376 mg/L | Y 361.104 | 0.00238 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000819uv | mg/L | 0.004246 | 518.1 | -0.049016 | -0.000819 mg/L | Y 361.104 | -0.00082 |
| B 249.772 | 0.007863 | mg/L | 0.001630 | 20.7 | 107.546 | 0.007863 mg/L | Y 361.104 | 0.00786 |
| Ba 233.527 | -0.000036uv | mg/L | 0.000032 | 88.7 | 9.95716 | -0.000036 mg/L | Y 361.104 | -0.00004 |
| Be 234.861 | 0.000038 | mg/L | 0.000034 | 88.7 | -2.61096 | 0.000038 mg/L | Y 361.104 | 0.00004 |
| Ca 315.887 | 0.000660 | mg/L | 0.000533 | 80.8 | 599.529 | 0.000660 mg/L | Y 361.104 | 0.00066 |
| Cd 228.802 | 0.000110uv | mg/L | 0.000153 | 138.7 | -0.628555 | 0.000110 mg/L | Y 361.104 | 0.00011 |
| Co 231.160 | 0.000706 | mg/L | 0.000338 | 47.8 | 11.5830 | 0.000706 mg/L | Y 361.104 | 0.00071 |
| Cr 267.716 | -0.000049uv | mg/L | 0.000037 | 76.0 | -8.26658 | -0.000049 mg/L | Y 361.104 | -0.00005 |
| Cu 324.754 | 0.000196 | mg/L | 0.000112 | 57.3 | 134.953 | 0.000196 mg/L | Y 361.104 | 0.00020 |
| Fe 261.382 | 0.000245uv | mg/L | 0.000571 | 232.9 | 9.82029 | 0.000245 mg/L | Y 361.104 | 0.00025 |
| K 766.491 | -0.000466uv | mg/L | 0.000302 | 64.8 | -334.667 | -0.000466 mg/L | Y 361.104 | -0.00047 |
| Li 610.365 | -0.002562uv | mg/L | 0.000329 | 12.8 | 392.519 | -0.002562 mg/L | Y 361.104 | -0.00256 |
| Mg 279.078 | -0.001376uv | mg/L | 0.002240 | 162.9 | 19.1178 | -0.001376 mg/L | Y 361.104 | -0.00138 |
| Mn 293.305 | 0.000313 | mg/L | 0.000176 | 56.4 | 5.06416 | 0.000313 mg/L | Y 361.104 | 0.00031 |
| Mo 202.032 | 0.000567 | mg/L | 0.000665 | 117.3 | 3.25770 | 0.000567 mg/L | Y 361.104 | 0.00057 |
| Na 568.821 | -uv | mg/L | 0.026344 | 18.3 | -501.023 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.001177uv | mg/L | 0.000165 | 14.0 | 7115.22 | -0.001177 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.000505uv | mg/L | 0.001279 | 253.3 | 1.25347 | 0.000505 mg/L | Y 361.104 | 0.00051 |
| Pb 220.353 | -0.001326uv | mg/L | 0.000728 | 54.9 | -2.94533 | -0.001326 mg/L | Y 361.104 | -0.00133 |
| Sb 217.582 | -0.004762uv | mg/L | 0.004685 | 98.4 | -1.61567 | -0.004762 mg/L | Y 361.104 | -0.00476 |
| Se 196.026 | 0.000853uv | mg/L | 0.004190 | 491.0 | 1.37993 | 0.000853 mg/L | Y 361.104 | 0.00085 |
| Si 251.611 | 0.005088 | mg/L | 0.000460 | 9.0 | 55.8085 | 0.005088 mg/L | Y 361.104 | 0.00509 |
| Sn 189.927 | -0.000705uv | mg/L | 0.000480 | 68.0 | 0.375652 | -0.000705 mg/L | Y 361.104 | -0.00071 |
| Sr 216.596 | -0.000081uv | mg/L | 0.000288 | 355.8 | -0.025192 | -0.000081 mg/L | Y 361.104 | -0.00008 |
| Ti 322.284 | 0.000543 | mg/L | 0.000424 | 78.1 | 122.310 | 0.000543 mg/L | Y 361.104 | 0.00054 |
| Tl 190.794 | 0.004481 | mg/L | 0.002253 | 50.3 | 1.90456 | 0.004481 mg/L | Y 361.104 | 0.00448 |
| V 289.164 | 0.000480 | mg/L | 0.000185 | 38.5 | 6.88419 | 0.000480 mg/L | Y 361.104 | 0.00048 |
| Zn 206.200 | -0.000555uv | mg/L | 0.000928 | 167.2 | -0.479481 | -0.000555 mg/L | Y 361.104 | -0.00055 |
| Zr 257.147 | -0.000328uv | mg/L | 0.000172 | 52.5 | 11.6674 | -0.000328 mg/L | Y 361.104 | -0.00033 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.646911 | 167831 | 527.251 | 0.3 |

**Q2256265 BLA02 (Samp)** **11/13/2009, 1:38:25 AM** **Rack 1, Tube 17**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000102 | 0.000103 | 0.000234 |
| Al 237.312 | 0.012823 | 0.011549 | 0.013217 |
| As 188.980 | 0.000920 | -0.005294u | -0.003610u |
| B 249.772 | 0.004289 | 0.004555 | 0.004262 |
| Ba 233.527 | 0.000067 | 0.000090 | 0.000193 |
| Be 234.861 | 0.000058 | 0.000089 | 0.000048 |
| Ca 315.887 | -0.018116u | -0.019441u | -0.018686u |
| Cd 228.802 | -0.000009u | 0.000355 | 0.000390 |
| Co 231.160 | -0.000073u | 0.000230 | 0.000335 |
| Cr 267.716 | 0.000047 | -0.000048u | 0.000036 |
| Cu 324.754 | 0.000255 | 0.000270 | 0.000351 |
| Fe 261.382 | 0.001857 | 0.001819 | 0.000499 |
| K 766.491 | 0.000346 | -0.000908u | -0.001720u |
| Li 610.365 | -0.003242u | -0.003656u | -0.003669u |
| Mg 279.078 | -0.018691u | -0.016396u | -0.016699u |
| Mn 293.305 | 0.000089 | -0.000056u | 0.000443 |
| Mo 202.032 | -0.000511u | -0.000483u | -0.000219u |
| Na 568.821 | -0.130594u | -0.087272u | -0.127340u |
| Na 589.592 | -0.031483u | -0.031402u | -0.031493u |
| Ni 231.604 | -0.000454u | -0.000073u | -0.000736u |
| Pb 220.353 | -0.002157u | 0.005220 | -0.002312u |
| Sb 217.582 | -0.013435u | -0.003186u | -0.003708u |
| Se 196.026 | -0.003030u | -0.011105u | -0.004496u |
| Si 251.611 | -0.009814u | -0.007881u | -0.007749u |
| Sn 189.927 | -0.001090u | -0.000008u | -0.001157u |
| Sr 216.596 | 0.000405 | -0.000059u | 0.000782 |
| Ti 322.284 | 0.000535 | 0.000277 | 0.000496 |
| Tl 190.794 | 0.001768 | 0.007284 | -0.001920u |
| V 289.164 | 0.001980 | 0.000098 | -0.000415u |
| Zn 206.200 | -0.000537u | 0.003729 | 0.000951 |
| Zr 257.147 | -0.000385u | -0.000475u | -0.000362u |
| Y 361.104 | 0.645892 | 0.646182 | 0.642361 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000146 | mg/L | 0.000076 | 52.0 | -9.46079 | 0.000146 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.012530 | mg/L | 0.000872 | 7.0 | 6.09298 | 0.012530 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.002661uv | mg/L | 0.003214 | 120.8 | -0.751163 | -0.002661 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.004369 | mg/L | 0.000162 | 3.7 | 67.2823 | 0.004369 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.000117 | mg/L | 0.000067 | 57.5 | 16.2011 | 0.000117 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000065 | mg/L | 0.000021 | 32.6 | -1.19156 | 0.000065 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | -0.018748uv | mg/L | 0.000665 | 3.5 | 451.249 | -0.018748 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000245uv | mg/L | 0.000221 | 90.1 | 0.440742 | 0.000245 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.000164uv | mg/L | 0.000212 | 129.0 | 8.19271 | 0.000164 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.000012uv | mg/L | 0.000052 | 446.7 | -6.07959 | 0.000012 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.000292 | mg/L | 0.000052 | 17.8 | 140.110 | 0.000292 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | -0.001392 | mg/L | 0.000774 | 55.6 | 12.1882 | 0.001392 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | -0.000761uv | mg/L | 0.001041 | 136.9 | -345.088 | -0.000761 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | -0.003523uv | mg/L | 0.000243 | 6.9 | 371.096 | -0.003523 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | -0.017262uv | mg/L | 0.001246 | 7.2 | 1.75943 | -0.017262 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.000159uv | mg/L | 0.000256 | 161.3 | 2.69873 | 0.000159 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | -0.000404uv | mg/L | 0.000161 | 39.8 | -0.353344 | -0.000404 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | -uv | mg/L | 0.024128 | 21.0 | -489.671 | - mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -0.031459uv | mg/L | 0.000050 | 0.2 | 1216.54 | -0.031459 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | -0.000421uv | mg/L | 0.000333 | 79.0 | -1.49017 | -0.000421 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.000250uv | mg/L | 0.004304 | 1719.6 | -0.694141 | 0.000250 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.006776uv | mg/L | 0.005773 | 85.2 | -2.60922 | -0.006776 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.006210uv | mg/L | 0.004302 | 69.3 | -0.116590 | -0.006210 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | -0.008481uv | mg/L | 0.001156 | 13.6 | 23.8866 | -0.008481 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000752uv | mg/L | 0.000645 | 85.8 | 0.343804 | -0.000752 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.000376uv | mg/L | 0.000421 | 111.9 | 2.36670 | 0.000376 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.000436 | mg/L | 0.000139 | 31.8 | 121.120 | 0.000436 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.002377uv | mg/L | 0.004632 | 194.8 | 1.13219 | 0.002377 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.000554uv | mg/L | 0.001261 | 227.5 | 7.57168 | 0.000554 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.001381uv | mg/L | 0.002165 | 156.8 | 0.832782 | 0.001381 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | -0.000407uv | mg/L | 0.000060 | 14.6 | 10.5666 | -0.000407 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.644812 | 167287 | 551.927 | 0.3 |

**Q2256266 LCS (Samp)** **11/13/2009, 1:41:44 AM** **Rack 1, Tube 18**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.055040 | 0.055718 | 0.055187 |
| Al 237.312 | 2.21507 | 2.23488 | 2.22674 |
| As 188.980 | 2.18176 | 2.19773 | 2.20639 |
| B 249.772 | 1.11657 | 1.13548 | 1.14085 |
| Ba 233.527 | 2.07763 | 2.09439 | 2.08326 |
| Be 234.861 | 0.057551 | 0.058489 | 0.057987 |
| Ca 315.887 | 102.182 | 102.717 | 102.624 |
| Cd 228.802 | 0.047190 | 0.048266 | 0.048761 |
| Co 231.160 | 0.507564 | 0.512159 | 0.513550 |
| Cr 267.716 | 0.208819 | 0.210097 | 0.209978 |
| Cu 324.754 | 0.264199 | 0.270332 | 0.266930 |
| Fe 261.382 | 1.03519 | 1.04011 | 1.03870 |
| K 766.491 | 108.452 | 108.524 | 108.248 |
| Li 610.365 | 1.10345 | 1.11452 | 1.10959 |
| Mg 279.078 | 106.704 | 107.516 | 107.462 |
| Mn 293.305 | 0.525361 | 0.529081 | 0.526763 |
| Mo 202.032 | 1.02853 | 1.04665 | 1.04132 |
| Na 568.821 | 110.610 | 111.395 | 111.065 |
| Na 589.592 | 109.900x | 110.428x | 109.789x |
| Ni 231.604 | 0.515150 | 0.518468 | 0.515836 |
| Pb 220.353 | 0.507670 | 0.516914 | 0.513186 |
| Sb 217.582 | 0.543156 | 0.541532 | 0.541225 |
| Se 196.026 | 2.21030 | 2.26371 | 2.28402 |
| Si 251.611 | 1.08728 | 1.09384 | 1.09271 |
| Sn 189.927 | 4.05862 | 4.10841 | 4.10523 |
| Sr 216.596 | 1.00256 | 1.01119 | 1.01120 |
| Ti 322.284 | 1.03136 | 1.04298 | 1.04186 |
| Tl 190.794 | 3.01393 | 3.09568 | 3.11041 |
| V 289.164 | 0.521912 | 0.528308 | 0.527222 |
| Zn 206.200 | 0.504159 | 0.507934 | 0.516432 |
| Zr 257.147 | 1.04066 | 1.05119 | 1.05008 |
| Y 361.104 | 0.598295 | 0.599322 | 0.598716 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.055315 | mg/L | 0.000357 | 0.6 | 2576.17 | 0.055315 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 2.22556 | mg/L | 0.009959 | 0.4 | 1585.63 | 2.22556 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.19529 | mg/L | 0.012496 | 0.6 | 837.409 | 2.19529 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.13097 | mg/L | 0.012754 | 1.1 | 13054.8 | 1.13097 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.08510 | mg/L | 0.008528 | 0.4 | 85180.6 | 2.08510 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.058009 | mg/L | 0.000470 | 0.8 | 3098.50 | 0.058009 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 102.508 | mg/L | 0.285558 | 0.3 | 783439 | 102.508 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.048072 | mg/L | 0.000803 | 1.7 | 472.032 | 0.048072 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.511091 | mg/L | 0.003133 | 0.6 | 3091.18 | 0.511091 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.209631 | mg/L | 0.000706 | 0.3 | 7599.27 | 0.209631 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.267154 | mg/L | 0.003073 | 1.2 | 14549.8 | 0.267154 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 1.03800 | mg/L | 0.002530 | 0.2 | 2171.78 | 1.03800 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 108.408 | mg/L | 0.143381 | 0.1 | 3836044 | 108.408 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.10919 | mg/L | 0.005549 | 0.5 | 24568.7 | 1.10919 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 107.228 | mg/L | 0.453903 | 0.4 | 117176 | 107.228 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.527069 | mg/L | 0.001879 | 0.4 | 8103.19 | 0.527069 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.03884 | mg/L | 0.009314 | 0.9 | 3864.77 | 1.03884 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 111.023 | mg/L | 0.394383 | 0.4 | 43286.4 | 111.023 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 0.341632 | 0.3 | 21448170 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.516485 | mg/L | 0.001752 | 0.3 | 1529.58 | 0.516485 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.512590 | mg/L | 0.004651 | 0.9 | 727.888 | 0.512590 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.541971 | mg/L | 0.001038 | 0.2 | 268.085 | 0.541971 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.25268 | mg/L | 0.038080 | 1.7 | 478.560 | 2.25268 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 1.09128 | mg/L | 0.003505 | 0.3 | 2851.98 | 1.09128 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 4.09075 | mg/L | 0.027877 | 0.7 | 2803.66 | 4.09075 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.00832 | mg/L | 0.004983 | 0.5 | 5269.53 | 1.00832 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.03873 | mg/L | 0.006412 | 0.6 | 11506.5 | 1.03873 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 3.07334 | mg/L | 0.051973 | 1.7 | 1129.71 | 3.07334 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.525814 | mg/L | 0.003423 | 0.7 | 4760.59 | 0.525814 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.509508 | mg/L | 0.006286 | 1.2 | 346.323 | 0.509508 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.04731 | mg/L | 0.005786 | 0.6 | 14281.2 | 1.04731 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.598778 | 155344 | 133.874 | 0.1 |

**A864529 SD-ICP 1:5 (Samp)** **11/13/2009, 1:45:03 AM** **Rack 1, Tube 19**

**Weight: 1** **Volume: 1** **Dilution: 5**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000120 | 0.000205 | -0.000150u |
| Al 237.312 | 0.612229 | 0.615435 | 0.610040 |
| As 188.980 | 0.001389 | 0.001132 | 0.001792 |
| B 249.772 | 0.020785 | 0.019463 | 0.019033 |
| Ba 233.527 | 0.018883 | 0.018963 | 0.018607 |
| Be 234.861 | 0.000163u | 0.000247u | 0.000249u |
| Ca 315.887 | 27.1767 | 27.2208 | 27.2020 |
| Cd 228.802 | 0.000772 | 0.000337 | 0.000083 |
| Co 231.160 | 0.001869 | 0.001995 | 0.001844 |
| Cr 267.716 | 0.003959 | 0.003989 | 0.003760 |
| Cu 324.754 | 0.003303 | 0.003517 | 0.003252 |
| Fe 261.382 | 2.65394 | 2.65014 | 2.64673 |
| K 766.491 | 0.681486 | 0.685413 | 0.685901 |
| Li 610.365 | 0.004542u | 0.005103u | 0.005695u |
| Mg 279.078 | 9.46847 | 9.50568 | 9.49461 |
| Mn 293.305 | 0.212535 | 0.213013 | 0.212264 |
| Mo 202.032 | 0.003753 | 0.003607 | 0.004407 |
| Na 568.821 | 37.3719 | 37.4860 | 37.5446 |
| Na 589.592 | 34.6756 | 34.8362 | 34.6860 |
| Ni 231.604 | 0.004115 | 0.004718 | 0.004760 |
| Pb 220.353 | 0.000193 | -0.000149u | 0.000673 |
| Sb 217.582 | -0.005368u | -0.004197u | -0.011495u |
| Se 196.026 | 0.006951 | -0.003229u | 0.007005 |
| Si 251.611 | 1.80274 | 1.80453 | 1.80219 |
| Sn 189.927 | -0.001551u | -0.000265u | -0.000821u |
| Sr 216.596 | 0.065223 | 0.066552 | 0.065929 |
| Ti 322.284 | 0.017121 | 0.017907 | 0.017554 |
| Tl 190.794 | 0.006845 | 0.008242 | -0.001493u |
| V 289.164 | 0.002710 | 0.003856 | 0.002436 |
| Zn 206.200 | 0.011198 | 0.011276 | 0.012032 |
| Zr 257.147 | 0.001266 | 0.000977 | 0.001513 |
| Y 361.104 | 0.620902 | 0.618960 | 0.620073 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000058uv | mg/L | 0.000185 | 317.3 | -15.7248 | 0.000292 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.612568 | mg/L | 0.002714 | 0.4 | 427.321 | 3.06284 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.001438 | mg/L | 0.000332 | 23.1 | 0.805758 | 0.007188 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.019760 | mg/L | 0.000913 | 4.6 | 251.537 | 0.098801 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.018818 | mg/L | 0.000187 | 1.0 | 780.051 | 0.094088 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000219uv | mg/L | 0.000049 | 22.4 | -32.3543 | 0.001096 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 27.1999 | mg/L | 0.022117 | 0.1 | 208317 | 135.999 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000397 | mg/L | 0.000349 | 87.8 | 1.91505 | 0.001987 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.001902 | mg/L | 0.000081 | 4.2 | 21.3214 | 0.009512 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.003902 | mg/L | 0.000125 | 3.2 | 136.113 | 0.019512 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.003357 | mg/L | 0.000140 | 4.2 | 286.147 | 0.016786 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 2.65027 | mg/L | 0.003607 | 0.1 | 5565.38 | 13.2514 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 0.684267 | mg/L | 0.002420 | 0.4 | 23896.8 | 3.42133 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.005113uv | mg/L | 0.000576 | 11.3 | 356.778 | 0.025567 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 9.48958 | mg/L | 0.019105 | 0.2 | 10388.8 | 47.4479 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.212604 | mg/L | 0.000379 | 0.2 | 3268.74 | 1.06302 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.003922 | mg/L | 0.000426 | 10.9 | 15.7393 | 0.019611 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 37.4675 | mg/L | 0.087829 | 0.2 | 14301.3 | 187.338 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 34.7326 | mg/L | 0.089895 | 0.3 | 6773229 | 173.663 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.004531 | mg/L | 0.000361 | 8.0 | 13.1969 | 0.022656 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.000239uv | mg/L | 0.000412 | 172.6 | -0.723848 | 0.001195 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.007020uv | mg/L | 0.003920 | 55.8 | -2.79501 | -0.035101 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 0.003576uv | mg/L | 0.005893 | 164.8 | 2.00563 | 0.017878 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 1.80315 | mg/L | 0.001224 | 0.1 | 4285.26 | 9.01577 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000879uv | mg/L | 0.000645 | 73.4 | 0.263036 | -0.004395 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.065901 | mg/L | 0.000665 | 1.0 | 346.615 | 0.329506 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.017527 | mg/L | 0.000394 | 2.2 | 307.497 | 0.087636 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.004531uv | mg/L | 0.005264 | 116.2 | 2.04607 | 0.022657 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.003001 | mg/L | 0.000754 | 25.1 | 26.1793 | 0.015004 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.011502 | mg/L | 0.000461 | 4.0 | 7.53896 | 0.057509 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.001252 | mg/L | 0.000268 | 21.4 | 34.8082 | 0.006261 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.619978 | 160844 | 252.784 | 0.2 |

**A864529 (Samp)** **11/13/2009, 1:48:22 AM** **Rack 1, Tube 20**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000022u | -0.000084u | -0.000217u |
| Al 237.312 | 3.20171 | 3.21504 | 3.21185 |
| As 188.980 | 0.007417 | 0.002256 | 0.007260 |
| B 249.772 | 0.080192 | 0.081447 | 0.082488 |
| Ba 233.527 | 0.093601 | 0.095201 | 0.094799 |
| Be 234.861 | 0.001267u | 0.001655u | 0.001243u |
| Ca 315.887 | 132.675 | 133.998 | 133.787 |
| Cd 228.802 | 0.000603 | 0.001303 | 0.000758 |
| Co 231.160 | 0.006243 | 0.006251 | 0.008359 |
| Cr 267.716 | 0.019011 | 0.019175 | 0.019161 |
| Cu 324.754 | 0.014910 | 0.015319 | 0.014823 |
| Fe 261.382 | 12.8536 | 12.9658 | 12.9844 |
| K 766.491 | 4.77099 | 4.79416 | 4.82399 |
| Li 610.365 | 0.025944u | 0.026152u | 0.026475u |
| Mg 279.078 | 47.5259 | 47.8287 | 47.9867 |
| Mn 293.305 | 1.02947 | 1.03355 | 1.03529 |
| Mo 202.032 | 0.013519 | 0.013111 | 0.014249 |
| Na 568.821 | 209.788 | 211.135 | 211.914 |
| Na 589.592 | 176.148o | 178.530o | 179.344o |
| Ni 231.604 | 0.023259 | 0.022128 | 0.022755 |
| Pb 220.353 | 0.005260 | 0.008370 | 0.009021 |
| Sb 217.582 | -0.003521u | -0.007340u | -0.003814u |
| Se 196.026 | 0.001959 | 0.004992 | -0.000677 |
| Si 251.611 | 9.25219 | 9.43302 | 9.36576 |
| Sn 189.927 | -0.002636u | -0.000033 | -0.004733u |
| Sr 216.596 | 0.325588 | 0.325938 | 0.325520 |
| Ti 322.284 | 0.082531 | 0.082238 | 0.082875 |
| Tl 190.794 | -0.004384u | -0.002803u | 0.005933 |
| V 289.164 | 0.012127 | 0.012718 | 0.013397 |
| Zn 206.200 | 0.042482 | 0.044683 | 0.045643 |
| Zr 257.147 | 0.003705 | 0.003756 | 0.003554 |
| Y 361.104 | 0.600946 | 0.600340 | 0.599947 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000108uv | mg/L | 0.000100 | 92.2 | -34.0056 | -0.000108 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 3.20954 | mg/L | 0.006958 | 0.2 | 2252.54 | 3.20954 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.005644 | mg/L | 0.002935 | 52.0 | 2.38869 | 0.005644 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.081376 | mg/L | 0.001150 | 1.4 | 988.322 | 0.081376 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.094534 | mg/L | 0.000832 | 0.9 | 3872.80 | 0.094534 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.001388uv | mg/L | 0.000231 | 16.7 | -122.477 | 0.001388 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 133.486 | mg/L | 0.710814 | 0.5 | 1020019 | 133.486 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000888 | mg/L | 0.000368 | 41.4 | 6.39826 | 0.000888 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.006951 | mg/L | 0.001220 | 17.5 | 62.1962 | 0.006951 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.019116 | mg/L | 0.000090 | 0.5 | 692.224 | 0.019116 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.015018 | mg/L | 0.000265 | 1.8 | 840.125 | 0.015018 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 12.9346 | mg/L | 0.070762 | 0.5 | 27125.7 | 12.9346 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 4.79638 | mg/L | 0.026573 | 0.6 | 169417 | 4.79638 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.026190uv | mg/L | 0.000268 | 1.0 | 16.9611 | 0.026190 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 47.7805 | mg/L | 0.234148 | 0.5 | 52225.1 | 47.7805 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 1.03277 | mg/L | 0.002988 | 0.3 | 15877.6 | 1.03277 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.013626 | mg/L | 0.000576 | 4.2 | 51.8389 | 0.013626 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 210.946 | mg/L | 1.07591 | 0.5 | 82511.7 | 210.946 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 1.66082 | 0.9 | 34683100 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.022714 | mg/L | 0.000566 | 2.5 | 67.1234 | 0.022714 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.007550 | mg/L | 0.002010 | 26.6 | 9.67401 | 0.007550 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.004892uv | mg/L | 0.002126 | 43.5 | -1.99947 | -0.004892 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 0.002092 | mg/L | 0.002837 | 135.6 | 1.88028 | 0.002092 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 9.35033 | mg/L | 0.091398 | 1.0 | 22036.9 | 9.35033 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.002467uv | mg/L | 0.002354 | 95.4 | -0.802549 | -0.002467 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.325682 | mg/L | 0.000224 | 0.1 | 1711.28 | 0.325682 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.082548 | mg/L | 0.000319 | 0.4 | 1016.36 | 0.082548 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.000418uv | mg/L | 0.005557 | 1330.4 | 0.707744 | -0.000418 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.012747 | mg/L | 0.000635 | 5.0 | 100.775 | 0.012747 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.044269 | mg/L | 0.001620 | 3.7 | 29.1479 | 0.044269 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.003672 | mg/L | 0.000105 | 2.9 | 74.0875 | 0.003672 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.600411 | 155768 | 130.593 | 0.1 |

**Q2256267 SP102 (Samp)** **11/13/2009, 1:51:41 AM** **Rack 1, Tube 21**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.054681 | 0.055235 | 0.052584 |
| Al 237.312 | 6.33305 | 6.41115 | 6.06239 |
| As 188.980 | 2.20380 | 2.19396 | 2.10174 |
| B 249.772 | 1.19102 | 1.21108 | 1.16515 |
| Ba 233.527 | 2.10914 | 2.12658 | 2.03218 |
| Be 234.861 | 0.058133 | 0.058197 | 0.055230 |
| Ca 315.887 | 226.663 | 227.371 | 216.694 |
| Cd 228.802 | 0.047468 | 0.047597 | 0.044092 |
| Co 231.160 | 0.495474 | 0.501471 | 0.475868 |
| Cr 267.716 | 0.221212 | 0.222213 | 0.211923 |
| Cu 324.754 | 0.275024 | 0.278435 | 0.270197 |
| Fe 261.382 | 13.5213 | 13.6401 | 12.9902 |
| K 766.491 | 129.260 | 129.546 | 123.658 |
| Li 610.365 | 1.11066 | 1.11435 | 1.07241 |
| Mg 279.078 | 150.389 | 151.500 | 144.402 |
| Mn 293.305 | 1.49320 | 1.50172 | 1.43323 |
| Mo 202.032 | 1.01509 | 1.03004 | 0.984183 |
| Na 568.821 | 325.055 | 327.567 | 312.749 |
| Na 589.592 | 222.128o | 224.752o | 215.158o |
| Ni 231.604 | 0.507809 | 0.512706 | 0.489281 |
| Pb 220.353 | 0.498420 | 0.502101 | 0.481920 |
| Sb 217.582 | 0.547973 | 0.541202 | 0.519085 |
| Se 196.026 | 2.20451 | 2.26219 | 2.16649 |
| Si 251.611 | 12.1622 | 12.2220 | 11.6491 |
| Sn 189.927 | 3.92767 | 3.97156 | 3.79501 |
| Sr 216.596 | 1.27590 | 1.28786 | 1.26270 |
| Ti 322.284 | 1.09131 | 1.10450 | 1.05212 |
| Tl 190.794 | 2.84234 | 2.89952 | 2.75220 |
| V 289.164 | 0.524309 | 0.529573 | 0.504058 |
| Zn 206.200 | 0.527284 | 0.517787 | 0.508315 |
| Zr 257.147 | 1.02353 | 1.03294 | 0.987013 |
| Y 361.104 | 0.581385 | 0.580604 | 0.599174 |

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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.054167 | mg/L | 0.001398 | 2.6 | 2507.17 | 0.054167 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 6.26887 | mg/L | 0.183028 | 2.9 | 4433.62 | 6.26887 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.16650 | mg/L | 0.056299 | 2.6 | 826.451 | 2.16650 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.18908 | mg/L | 0.023027 | 1.9 | 13756.6 | 1.18908 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.08930 | mg/L | 0.050231 | 2.4 | 85352.3 | 2.08930 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.057187 | mg/L | 0.001695 | 3.0 | 2870.64 | 0.057187 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 223.576 | mg/L | 5.97056 | 2.7 | 1708026 | 223.576 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.046386 | mg/L | 0.001987 | 4.3 | 457.288 | 0.046386 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.490937 | mg/L | 0.013391 | 2.7 | 2982.92 | 0.490937 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.218449 | mg/L | 0.005674 | 2.6 | 7924.07 | 0.218449 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.274552 | mg/L | 0.004139 | 1.5 | 14858.1 | 0.274552 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 13.3839 | mg/L | 0.346072 | 2.6 | 28053.7 | 13.3839 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 127.488 | mg/L | 3.31985 | 2.6 | 4511269 | 127.488 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.09914 | mg/L | 0.023223 | 2.1 | 23417.0 | 1.09914 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 148.764 | mg/L | 3.81805 | 2.6 | 162558 | 148.764 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 1.47605 | mg/L | 0.037328 | 2.5 | 22692.4 | 1.47605 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.00977 | mg/L | 0.023387 | 2.3 | 3756.67 | 1.00977 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 321.790 | mg/L | 7.92972 | 2.5 | 126133 | 321.790 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 4.95839 | 2.2 | 43000796 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.503265 | mg/L | 0.012356 | 2.5 | 1490.44 | 0.503265 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.494147 | mg/L | 0.010748 | 2.2 | 701.613 | 0.494147 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.536087 | mg/L | 0.015108 | 2.8 | 264.876 | 0.536087 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.21106 | mg/L | 0.048188 | 2.2 | 469.966 | 2.21106 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 12.0111 | mg/L | 0.314916 | 2.6 | 28522.9 | 12.0111 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 3.89808 | mg/L | 0.091918 | 2.4 | 2671.69 | 3.89808 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.27549 | mg/L | 0.012588 | 1.0 | 6674.29 | 1.27549 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.08264 | mg/L | 0.027244 | 2.5 | 11983.1 | 1.08264 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 2.83135 | mg/L | 0.074270 | 2.6 | 1041.43 | 2.83135 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.519313 | mg/L | 0.013471 | 2.6 | 4685.99 | 0.519313 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.517796 | mg/L | 0.009485 | 1.8 | 351.170 | 0.517796 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.01450 | mg/L | 0.024261 | 2.4 | 13841.5 | 1.01450 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.587054 | 152302 | 2724.959 | 1.8 |

**Q2256268 DPS02 (Samp)** **11/13/2009, 1:55:01 AM** **Rack 1, Tube 22**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.056329 | 0.052467 | 0.054604 |
| Al 237.312 | 6.61410 | 6.06978 | 6.33313 |
| As 188.980 | 2.23637 | 2.06902 | 2.16032 |
| B 249.772 | 1.23350 | 1.16070 | 1.20923 |
| Ba 233.527 | 2.17921 | 2.01476 | 2.11133 |
| Be 234.861 | 0.059689 | 0.055551 | 0.057342 |
| Ca 315.887 | 236.146 | 219.289 | 227.612 |
| Cd 228.802 | 0.048878 | 0.045115 | 0.046758 |
| Co 231.160 | 0.512132 | 0.470635 | 0.493657 |
| Cr 267.716 | 0.229175 | 0.211505 | 0.220877 |
| Cu 324.754 | 0.288276 | 0.267773 | 0.284324 |
| Fe 261.382 | 14.3895 | 13.2601 | 13.8599 |
| K 766.491 | 133.191 | 123.809 | 128.698 |
| Li 610.365 | 1.14263 | 1.06760 | 1.10520 |
| Mg 279.078 | 156.959 | 144.893 | 151.426 |
| Mn 293.305 | 1.59114 | 1.46944 | 1.53512 |
| Mo 202.032 | 1.05325 | 0.973849 | 1.02261 |
| Na 568.821 | 343.759 | 318.444 | 330.821 |
| Na 589.592 | 225.101o | 215.541o | 223.547o |
| Ni 231.604 | 0.525891 | 0.483982 | 0.507705 |
| Pb 220.353 | 0.516480 | 0.477886 | 0.496683 |
| Sb 217.582 | 0.553062 | 0.515392 | 0.528928 |
| Se 196.026 | 2.28087 | 2.15192 | 2.22478 |
| Si 251.611 | 12.7564 | 11.7816 | 12.2895 |
| Sn 189.927 | 4.06712 | 3.72749 | 3.93530 |
| Sr 216.596 | 1.35157 | 1.24625 | 1.31830 |
| Ti 322.284 | 1.13296 | 1.04622 | 1.09301 |
| Tl 190.794 | 2.91872 | 2.73545 | 2.84925 |
| V 289.164 | 0.542071 | 0.498549 | 0.522726 |
| Zn 206.200 | 0.540468 | 0.509568 | 0.531729 |
| Zr 257.147 | 1.06089 | 0.973792 | 1.02266 |
| Y 361.104 | 0.573770 | 0.603489 | 0.584527 |

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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.054467 | mg/L | 0.001935 | 3.6 | 2519.93 | 0.054467 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 6.33901 | mg/L | 0.272208 | 4.3 | 4482.61 | 6.33901 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.15523 | mg/L | 0.083791 | 3.9 | 822.131 | 2.15523 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.20115 | mg/L | 0.037071 | 3.1 | 13896.9 | 1.20115 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.10177 | mg/L | 0.082644 | 3.9 | 85861.5 | 2.10177 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.057527 | mg/L | 0.002076 | 3.6 | 2882.21 | 0.057527 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 227.682 | mg/L | 8.42863 | 3.7 | 1739385 | 227.682 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.046917 | mg/L | 0.001886 | 4.0 | 461.379 | 0.046917 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.492141 | mg/L | 0.020790 | 4.2 | 2990.66 | 0.492141 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.220519 | mg/L | 0.008841 | 4.0 | 7999.39 | 0.220519 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.280124 | mg/L | 0.010877 | 3.9 | 15155.6 | 0.280124 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 13.8365 | mg/L | 0.565061 | 4.1 | 29002.3 | 13.8365 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 128.566 | mg/L | 4.69198 | 3.6 | 4549403 | 128.566 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.10514 | mg/L | 0.037515 | 3.4 | 23520.4 | 1.10514 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 151.093 | mg/L | 6.03967 | 4.0 | 165103 | 151.093 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 1.53190 | mg/L | 0.060912 | 4.0 | 23551.1 | 1.53190 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.01657 | mg/L | 0.040044 | 3.9 | 3781.95 | 1.01657 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 331.008 | mg/L | 12.6585 | 3.8 | 129752 | 331.008 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 5.12982 | 2.3 | 43140564 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.505859 | mg/L | 0.021016 | 4.2 | 1498.13 | 0.505859 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.497016 | mg/L | 0.019299 | 3.9 | 705.696 | 0.497016 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.532460 | mg/L | 0.019082 | 3.6 | 263.076 | 0.532460 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.21919 | mg/L | 0.064655 | 2.9 | 471.700 | 2.21919 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 12.2758 | mg/L | 0.487535 | 4.0 | 29147.0 | 12.2758 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 3.90997 | mg/L | 0.171226 | 4.4 | 2679.84 | 3.90997 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.30537 | mg/L | 0.053837 | 4.1 | 6830.79 | 1.30537 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.09073 | mg/L | 0.043413 | 4.0 | 12071.5 | 1.09073 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 2.83447 | mg/L | 0.092523 | 3.3 | 1042.61 | 2.83447 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.521115 | mg/L | 0.021806 | 4.2 | 4701.22 | 0.521115 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.527255 | mg/L | 0.015928 | 3.0 | 357.564 | 0.527255 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.01911 | mg/L | 0.043656 | 4.3 | 13904.7 | 1.01911 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.587262 | 152356 | 3903.836 | 2.6 |

**CCV (CCV)** **11/13/2009, 1:58:20 AM** **Rack 1, Tube 23**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.05077 | 1.05708 | 1.06422 |
| Al 237.312 | 5.23118 | 5.26128 | 5.31378 |
| As 188.980 | 2.04423 | 2.04922 | 2.08696 |
| B 249.772 | 2.15144 | 2.18678 | 2.21043 |
| Ba 233.527 | 4.99522 | 5.02689 | 5.06557 |
| Be 234.861 | 2.14619 | 2.15914 | 2.17472 |
| Ca 315.887 | 49.2746 | 49.6252 | 50.0085 |
| Cd 228.802 | 5.09499 | 5.12662 | 5.16789 |
| Co 231.160 | 4.95977 | 4.99838 | 5.03526 |
| Cr 267.716 | 4.98116 | 5.02632 | 5.06542 |
| Cu 324.754 | 5.13768 | 5.17374 | 5.20441 |
| Fe 261.382 | 4.99847 | 5.04458 | 5.07658 |
| K 766.491 | 50.5128 | 50.7150 | 50.9027 |
| Li 610.365 | 5.16208 | 5.19080 | 5.23204 |
| Mg 279.078 | 50.9242 | 51.3036 | 51.6988 |
| Mn 293.305 | 5.05976 | 5.10381 | 5.14140 |
| Mo 202.032 | 1.01338 | 1.01651 | 1.02804 |
| Na 568.821 | 50.7674 | 51.1208 | 51.2807 |
| Na 589.592 | 51.6774 | 52.1408 | 52.5521 |
| Ni 231.604 | 4.92172 | 4.95673 | 4.98918 |
| Pb 220.353 | 4.93617 | 4.97602 | 5.00679 |
| Sb 217.582 | 1.04508 | 1.05772 | 1.05913 |
| Se 196.026 | 2.10363 | 2.16239 | 2.12860 |
| Si 251.611 | 5.05516 | 5.08690 | 5.14630 |
| Sn 189.927 | 4.90438 | 4.93968 | 4.96831 |
| Sr 216.596 | 4.86023 | 4.90983 | 4.92927 |
| Ti 322.284 | 5.07129 | 5.11461 | 5.15803 |
| Tl 190.794 | 1.93675 | 1.98498 | 2.01574 |
| V 289.164 | 2.01952 | 2.03223 | 2.05437 |
| Zn 206.200 | 4.88463 | 4.93024 | 4.96552 |
| Zr 257.147 | 5.08150 | 5.12253 | 5.16310 |
| Y 361.104 | 0.596837 | 0.599077 | 0.598155 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.05736 | mg/L | 0.006732 | 0.6 | 47111.8 | 1.05736 mg/L | Y 361.104 | 105.73576 |
| Al 237.312 | 5.26875 | mg/L | 0.041805 | 0.8 | 3757.02 | 5.26875 mg/L | Y 361.104 | 105.37492 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.06014 | mg/L | 0.023365 | 1.1 | 782.112 | 2.06014 mg/L | Y 361.104 | 103.00690 |
| B 249.772 | 2.18288 | mg/L | 0.029688 | 1.4 | 25177.3 | 2.18288 mg/L | Y 361.104 | 109.14417 |
| Ba 233.527 | 5.02923 | mg/L | 0.035235 | 0.7 | 205438 | 5.02923 mg/L | Y 361.104 | 100.58450 |
| Be 234.861 | 2.16001 | mg/L | 0.014284 | 0.7 | 115914 | 2.16001 mg/L | Y 361.104 | 108.00074 |
| Ca 315.887 | 49.6361 | mg/L | 0.367076 | 0.7 | 379661 | 49.6361 mg/L | Y 361.104 | 99.27213 |
| Cd 228.802 | 5.12983 | mg/L | 0.036555 | 0.7 | 42958.4 | 5.12983 mg/L | Y 361.104 | 102.59666 |
| Co 231.160 | 4.99780 | mg/L | 0.037746 | 0.8 | 29918.9 | 4.99780 mg/L | Y 361.104 | 99.95607 |
| Cr 267.716 | 5.02430 | mg/L | 0.042166 | 0.8 | 182234 | 5.02430 mg/L | Y 361.104 | 100.48604 |
| Cu 324.754 | 5.17194 | mg/L | 0.033404 | 0.6 | 278941 | 5.17194 mg/L | Y 361.104 | 103.43888 |
| Fe 261.382 | 5.03988 | mg/L | 0.039267 | 0.8 | 10470.3 | 5.03988 mg/L | Y 361.104 | 100.79754 |
| K 766.491 | 50.7101 | mg/L | 0.194990 | 0.4 | 1794226 | 50.7101 mg/L | Y 361.104 | 101.42029 |
| Li 610.365 | 5.19497 | mg/L | 0.035170 | 0.7 | 116705 | 5.19497 mg/L | Y 361.104 | 103.89948 |
| Mg 279.078 | 51.3089 | mg/L | 0.387318 | 0.8 | 56080.2 | 51.3089 mg/L | Y 361.104 | 102.61774 |
| Mn 293.305 | 5.10165 | mg/L | 0.040867 | 0.8 | 78430.9 | 5.10165 mg/L | Y 361.104 | 102.03309 |
| Mo 202.032 | 1.01931 | mg/L | 0.007723 | 0.8 | 3792.86 | 1.01931 mg/L | Y 361.104 | 101.93077 |
| Na 568.821 | 51.0563 | mg/L | 0.262663 | 0.5 | 19688.1 | 51.0563 mg/L | Y 361.104 | 102.11256 |
| Na 589.592 | 52.1234 | mg/L | 0.437628 | 0.8 | 10173600 | 52.1234 mg/L | Y 361.104 | 104.24686 |
| Ni 231.604 | 4.95587 | mg/L | 0.033739 | 0.7 | 14682.7 | 4.95587 mg/L | Y 361.104 | 99.11747 |
| Pb 220.353 | 4.97299 | mg/L | 0.035406 | 0.7 | 7084.60 | 4.97299 mg/L | Y 361.104 | 99.45988 |
| Sb 217.582 | 1.05398 | mg/L | 0.007738 | 0.7 | 522.183 | 1.05398 mg/L | Y 361.104 | 105.39769 |
| Se 196.026 | 2.13154 | mg/L | 0.029490 | 1.4 | 453.369 | 2.13154 mg/L | Y 361.104 | 106.57692 |
| Si 251.611 | 5.09612 | mg/L | 0.046261 | 0.9 | 12542.4 | 5.09612 mg/L | Y 361.104 | 101.92242 |
| Sn 189.927 | 4.93746 | mg/L | 0.032021 | 0.6 | 3386.89 | 4.93746 mg/L | Y 361.104 | 98.74915 |
| Sr 216.596 | 4.89978 | mg/L | 0.035600 | 0.7 | 25596.8 | 4.89978 mg/L | Y 361.104 | 97.99552 |
| Ti 322.284 | 5.11465 | mg/L | 0.043369 | 0.8 | 56122.9 | 5.11465 mg/L | Y 361.104 | 102.29290 |
| Tl 190.794 | 1.97916 | mg/L | 0.039815 | 2.0 | 742.683 | 1.97916 mg/L | Y 361.104 | 98.95803 |
| V 289.164 | 2.03537 | mg/L | 0.017636 | 0.9 | 18306.3 | 2.03537 mg/L | Y 361.104 | 101.76862 |
| Zn 206.200 | 4.92680 | mg/L | 0.040556 | 0.8 | 3353.76 | 4.92680 mg/L | Y 361.104 | 98.53596 |
| Zr 257.147 | 5.12238 | mg/L | 0.040800 | 0.8 | 69637.5 | 5.12238 mg/L | Y 361.104 | 102.44754 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.598023 | 155148 | 292.078 | 0.2 |

**BLA01 (CCB)** **11/13/2009, 2:01:39 AM** **Rack 1, Tube 24**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000033 | -0.000143u | 0.000099 |
| Al 237.312 | 0.007489 | 0.008694 | 0.007851 |
| As 188.980 | -0.002125u | -0.001658u | 0.002946 |
| B 249.772 | 0.009744 | 0.008350 | 0.005891 |
| Ba 233.527 | 0.000046 | -0.000216u | -0.000180u |
| Be 234.861 | 0.000024 | 0.000071 | -0.000051u |
| Ca 315.887 | -0.001259u | 0.001152 | -0.002193u |
| Cd 228.802 | 0.000353 | -0.000256u | 0.000399 |
| Co 231.160 | 0.000155 | 0.000057u | 0.000597 |
| Cr 267.716 | 0.000194 | 0.000002 | 0.000181 |
| Cu 324.754 | 0.000111 | 0.000457 | 0.000293 |
| Fe 261.382 | 0.000818 | 0.000212 | -0.001162u |
| K 766.491 | 0.001891 | 0.001043 | 0.000244 |
| Li 610.365 | -0.003158u | -0.003047u | -0.004097u |
| Mg 279.078 | -0.002572u | 0.000029 | -0.001068u |
| Mn 293.305 | 0.000549 | 0.000405 | 0.000060 |
| Mo 202.032 | 0.000454 | 0.001611 | 0.001250 |
| Na 568.821 | -0.065515u | -0.108091u | -0.044265u |
| Na 589.592 | -0.001467u | 0.000049 | -0.001286u |
| Ni 231.604 | 0.000070 | -0.000719u | -0.000430u |
| Pb 220.353 | -0.001333u | -0.002211u | -0.002196u |
| Sb 217.582 | -0.007283u | -0.004280u | -0.009316u |
| Se 196.026 | 0.004824 | -0.004069u | -0.008918u |
| Si 251.611 | 0.010964 | 0.009981 | 0.006189 |
| Sn 189.927 | 0.000490 | 0.003898 | 0.000651 |
| Sr 216.596 | -0.000274u | -0.000233u | -0.001406u |
| Ti 322.284 | 0.001462 | 0.000572 | 0.001481 |
| Tl 190.794 | 0.009693 | 0.004923 | 0.008303 |
| V 289.164 | -0.000120u | 0.000138 | 0.000029 |
| Zn 206.200 | 0.000331 | -0.001419u | 0.002026 |
| Zr 257.147 | -0.000376u | 0.000508 | 0.000013 |
| Y 361.104 | 0.644910 | 0.626454 | 0.642856 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000003uv | mg/L | 0.000125 | 3752.8 | -15.8573 | -0.000003 mg/L | Y 361.104 | 0.00000 |
| Al 237.312 | 0.008011 | mg/L | 0.000619 | 7.7 | 2.88786 | 0.008011 mg/L | Y 361.104 | 0.00801 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000279uv | mg/L | 0.002802 | 1004.3 | 0.156530 | -0.000279 mg/L | Y 361.104 | -0.00028 |
| B 249.772 | 0.007995 | mg/L | 0.001951 | 24.4 | 109.072 | 0.007995 mg/L | Y 361.104 | 0.00800 |
| Ba 233.527 | -0.000117uv | mg/L | 0.000142 | 122.0 | 6.65756 | -0.000117 mg/L | Y 361.104 | -0.00012 |
| Be 234.861 | 0.000015uv | mg/L | 0.000062 | 415.2 | -3.85217 | 0.000015 mg/L | Y 361.104 | 0.00001 |
| Ca 315.887 | -0.000767uv | mg/L | 0.001726 | 225.1 | 588.601 | -0.000767 mg/L | Y 361.104 | -0.00077 |
| Cd 228.802 | 0.000166uv | mg/L | 0.000366 | 220.7 | -0.149906 | 0.000166 mg/L | Y 361.104 | 0.00017 |
| Co 231.160 | 0.000270uv | mg/L | 0.000288 | 106.7 | 8.76331 | 0.000270 mg/L | Y 361.104 | 0.00027 |
| Cr 267.716 | 0.000125 | mg/L | 0.000107 | 85.3 | -1.95216 | 0.000125 mg/L | Y 361.104 | 0.00013 |
| Cu 324.754 | 0.000287 | mg/L | 0.000173 | 60.2 | 139.894 | 0.000287 mg/L | Y 361.104 | 0.00029 |
| Fe 261.382 | -0.000044uv | mg/L | 0.001015 | 2308.4 | 9.22402 | -0.000044 mg/L | Y 361.104 | -0.00004 |
| K 766.491 | 0.001059 | mg/L | 0.000823 | 77.7 | -280.684 | 0.001059 mg/L | Y 361.104 | 0.00106 |
| Li 610.365 | -0.003434uv | mg/L | 0.000577 | 16.8 | 372.944 | -0.003434 mg/L | Y 361.104 | -0.00343 |
| Mg 279.078 | -0.001204uv | mg/L | 0.001306 | 108.5 | 19.3051 | -0.001204 mg/L | Y 361.104 | -0.00120 |
| Mn 293.305 | 0.000338 | mg/L | 0.000251 | 74.5 | 5.44821 | 0.000338 mg/L | Y 361.104 | 0.00034 |
| Mo 202.032 | 0.001105 | mg/L | 0.000592 | 53.6 | 5.25998 | 0.001105 mg/L | Y 361.104 | 0.00111 |
| Na 568.821 | -uv | mg/L | 0.032501 | 44.8 | -473.046 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.000901uv | mg/L | 0.000828 | 91.9 | 7168.84 | -0.000901 mg/L | Y 361.104 | - |
| Ni 231.604 | -0.000359uv | mg/L | 0.000399 | 111.1 | -1.30551 | -0.000359 mg/L | Y 361.104 | -0.00036 |
| Pb 220.353 | -0.001913uv | mg/L | 0.000503 | 26.3 | -3.78373 | -0.001913 mg/L | Y 361.104 | -0.00191 |
| Sb 217.582 | -0.006960uv | mg/L | 0.002533 | 36.4 | -2.70030 | -0.006960 mg/L | Y 361.104 | -0.00696 |
| Se 196.026 | -0.002721uv | mg/L | 0.006970 | 256.2 | 0.622721 | -0.002721 mg/L | Y 361.104 | -0.00272 |
| Si 251.611 | 0.009045 | mg/L | 0.002521 | 27.9 | 65.2052 | 0.009045 mg/L | Y 361.104 | 0.00904 |
| Sn 189.927 | 0.001680 | mg/L | 0.001923 | 114.4 | 2.00978 | 0.001680 mg/L | Y 361.104 | 0.00168 |
| Sr 216.596 | -0.000638uv | mg/L | 0.000666 | 104.4 | -2.93608 | -0.000638 mg/L | Y 361.104 | -0.00064 |
| Ti 322.284 | 0.001172 | mg/L | 0.000520 | 44.4 | 129.200 | 0.001172 mg/L | Y 361.104 | 0.00117 |
| Tl 190.794 | 0.007640 | mg/L | 0.002453 | 32.1 | 3.06224 | 0.007640 mg/L | Y 361.104 | 0.00764 |
| V 289.164 | 0.000016uv | mg/L | 0.000129 | 819.3 | 2.67467 | 0.000016 mg/L | Y 361.104 | 0.00002 |
| Zn 206.200 | 0.000313uv | mg/L | 0.001722 | 550.5 | 0.109561 | 0.000313 mg/L | Y 361.104 | 0.00031 |
| Zr 257.147 | 0.000049uv | mg/L | 0.000443 | 913.1 | 16.7946 | 0.000049 mg/L | Y 361.104 | 0.00005 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.638074 | 165539 | 2624.164 | 1.6 |

**A864527 (Samp)** **11/13/2009, 2:04:58 AM** **Rack 1, Tube 25**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000284 | 0.000304 | 0.000396 |
| Al 237.312 | 0.092596 | 0.084675 | 0.093018 |
| As 188.980 | -0.004190u | 0.000830 | 0.001192 |
| B 249.772 | 0.058057 | 0.060426 | 0.060480 |
| Ba 233.527 | 0.146984 | 0.148919 | 0.149494 |
| Be 234.861 | -0.000075u | -0.000045u | 0.000020 |
| Ca 315.887 | 114.147 | 114.937 | 114.825 |
| Cd 228.802 | -0.000150u | 0.000418 | 0.000615 |
| Co 231.160 | 0.000571 | -0.000607u | 0.000107 |
| Cr 267.716 | 0.000682 | 0.000485 | 0.000812 |
| Cu 324.754 | 0.002242 | 0.002387 | 0.002180 |
| Fe 261.382 | 0.156447 | 0.156093 | 0.158483 |
| K 766.491 | 2.48966 | 2.50421 | 2.49749 |
| Li 610.365 | 0.020187u | 0.018368u | 0.020422u |
| Mg 279.078 | 28.2702 | 28.5447 | 28.5950 |
| Mn 293.305 | 0.194170 | 0.194260 | 0.195209 |
| Mo 202.032 | 0.003542 | 0.002740 | 0.002474 |
| Na 568.821 | 158.730 | 159.835 | 160.060 |
| Na 589.592 | 141.205x | 142.145x | 142.529x |
| Ni 231.604 | 0.001385 | 0.002657 | 0.002113 |
| Pb 220.353 | 0.000916 | -0.002193u | 0.001390 |
| Sb 217.582 | -0.005349u | 0.002392 | -0.008909u |
| Se 196.026 | -0.001021u | -0.009536u | -0.002666u |
| Si 251.611 | 5.48441 | 5.54775 | 5.58152 |
| Sn 189.927 | 0.001527 | -0.000871u | 0.001101 |
| Sr 216.596 | 0.187798 | 0.186032 | 0.188892 |
| Ti 322.284 | 0.003350 | 0.003376 | 0.003042 |
| Tl 190.794 | 0.001317 | 0.009090 | -0.001151u |
| V 289.164 | 0.000473u | 0.000966 | 0.000860 |
| Zn 206.200 | 0.003158 | 0.010506 | 0.001080 |
| Zr 257.147 | 0.001142 | 0.000501 | 0.000933 |
| Y 361.104 | 0.607324 | 0.602411 | 0.602260 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000328 | mg/L | 0.000059 | 18.1 | -11.9791 | 0.000328 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.090096 | mg/L | 0.004699 | 5.2 | 61.1059 | 0.090096 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000723uv | mg/L | 0.003008 | 416.2 | -0.006337 | -0.000723 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.059654 | mg/L | 0.001384 | 2.3 | 704.919 | 0.059654 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.148466 | mg/L | 0.001315 | 0.9 | 6075.73 | 0.148466 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | -0.000034uv | mg/L | 0.000049 | 145.5 | -4.04487 | -0.000034 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 114.636 | mg/L | 0.427327 | 0.4 | 876060 | 114.636 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000294uv | mg/L | 0.000397 | 135.0 | 1.19782 | 0.000294 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.000024uv | mg/L | 0.000593 | 2524.4 | 7.71651 | 0.000024 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.000660 | mg/L | 0.000165 | 25.0 | 19.3588 | 0.000660 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.002270 | mg/L | 0.000106 | 4.7 | 246.660 | 0.002270 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 0.157008 | mg/L | 0.001290 | 0.8 | 338.340 | 0.157008 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 2.49712 | mg/L | 0.007281 | 0.3 | 88050.6 | 2.49712 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.019659uv | mg/L | 0.001124 | 5.7 | 14.5154 | 0.019659 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 28.4699 | mg/L | 0.174843 | 0.6 | 31126.6 | 28.4699 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.194546 | mg/L | 0.000576 | 0.3 | 2991.13 | 0.194546 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.002918 | mg/L | 0.000556 | 19.0 | 12.0084 | 0.002918 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 159.542 | mg/L | 0.711950 | 0.4 | 62341.3 | 159.542 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 0.681259 | 0.5 | 27661024 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.002052 | mg/L | 0.000638 | 31.1 | 5.84559 | 0.002052 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.000038uv | mg/L | 0.001946 | 5160.1 | -0.937897 | 0.000038 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.003956uv | mg/L | 0.005778 | 146.1 | -1.22301 | -0.003956 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.004408uv | mg/L | 0.004517 | 102.5 | 0.301089 | -0.004408 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 5.53789 | mg/L | 0.049299 | 0.9 | 13065.6 | 5.53789 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.000586uv | mg/L | 0.001280 | 218.5 | 1.26119 | 0.000586 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.187574 | mg/L | 0.001443 | 0.8 | 980.950 | 0.187574 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.003256 | mg/L | 0.000186 | 5.7 | 150.707 | 0.003256 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.003085uv | mg/L | 0.005345 | 173.2 | 1.48848 | 0.003085 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.000766uv | mg/L | 0.000260 | 33.9 | 4.76273 | 0.000766 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.004914 | mg/L | 0.004952 | 100.8 | 3.19220 | 0.004914 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.000858 | mg/L | 0.000327 | 38.1 | 28.0137 | 0.000858 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.603998 | 156698 | 747.486 | 0.5 |

**A864528 (Samp)** **11/13/2009, 2:08:17 AM** **Rack 1, Tube 26**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000403u | -0.000009u | -0.000435u |
| Al 237.312 | 10.3186 | 10.2845 | 11.3126 |
| As 188.980 | 0.026128 | 0.015290 | 0.007834 |
| B 249.772 | 0.104830 | 0.106468 | 0.116074 |
| Ba 233.527 | 0.247500 | 0.245735 | 0.268413 |
| Be 234.861 | 0.004147u | 0.003367u | 0.003458u |
| Ca 315.887 | 290.318 | 288.990 | 316.016 |
| Cd 228.802 | 0.000480 | 0.001080 | 0.001415 |
| Co 231.160 | 0.013428 | 0.013776 | 0.015285 |
| Cr 267.716 | 0.045960 | 0.047224 | 0.050345 |
| Cu 324.754 | 0.035499 | 0.036655 | 0.038025 |
| Fe 261.382 | 31.3179 | 31.2239 | 34.1456 |
| K 766.491 | 6.58942 | 6.54637 | 7.18528 |
| Li 610.365 | 0.047933u | 0.049647u | 0.043735u |
| Mg 279.078 | 93.7705 | 93.2711 | 102.062 |
| Mn 293.305 | 3.42307 | 3.41120 | 3.72892 |
| Mo 202.032 | 0.007270 | 0.008205 | 0.008890 |
| Na 568.821 | 139.668 | 138.726 | 151.801 |
| Na 589.592 | 130.802x | 129.668x | 141.940x |
| Ni 231.604 | 0.038413 | 0.038142 | 0.040781 |
| Pb 220.353 | 0.018398 | 0.022678 | 0.022288 |
| Sb 217.582 | -0.008725u | -0.008313u | -0.001312u |
| Se 196.026 | -0.004374u | -0.008052u | -0.007588u |
| Si 251.611 | 22.8395 | 24.2468 | 25.5939 |
| Sn 189.927 | 0.001248 | -0.001606u | -0.000659u |
| Sr 216.596 | 0.421656 | 0.420305 | 0.460537 |
| Ti 322.284 | 0.370001 | 0.369331 | 0.405708 |
| Tl 190.794 | 0.004713 | -0.002480 | -0.006141u |
| V 289.164 | 0.028153 | 0.028594 | 0.031074 |
| Zn 206.200 | 0.117001 | 0.122051 | 0.126625 |
| Zr 257.147 | 0.007198 | 0.007691 | 0.007929 |
| Y 361.104 | 0.610845 | 0.614057 | 0.578504 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000282uv | mg/L | 0.000237 | 84.2 | -31.5534 | -0.000282 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 10.6385 | mg/L | 0.583988 | 5.5 | 7490.65 | 10.6385 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.016418 | mg/L | 0.009199 | 56.0 | 6.50480 | 0.016418 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.109124 | mg/L | 0.006075 | 5.6 | 1358.04 | 0.109124 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.253883 | mg/L | 0.012614 | 5.0 | 10381.7 | 0.253883 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.003657uv | mg/L | 0.000427 | 11.7 | -292.393 | 0.003657 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 298.441 | mg/L | 15.2346 | 5.1 | 2279766 | 298.441 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000992 | mg/L | 0.000474 | 47.8 | 8.51412 | 0.000992 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.014163 | mg/L | 0.000987 | 7.0 | 125.235 | 0.014163 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.047843 | mg/L | 0.002257 | 4.7 | 1743.14 | 0.047843 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.036726 | mg/L | 0.001264 | 3.4 | 1870.79 | 0.036726 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 32.2291 | mg/L | 1.66038 | 5.2 | 67575.1 | 32.2291 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 6.77369 | mg/L | 0.357092 | 5.3 | 239391 | 6.77369 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.047105uv | mg/L | 0.003042 | 6.5 | -775.281 | 0.047105 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 96.3677 | mg/L | 4.93734 | 5.1 | 105311 | 96.3677 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 3.52106 | mg/L | 0.180107 | 5.1 | 54131.6 | 3.52106 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.008122 | mg/L | 0.000813 | 10.0 | 31.3770 | 0.008122 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 143.398 | mg/L | 7.29229 | 5.1 | 56635.6 | 143.398 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 6.78150 | 5.1 | 26137038 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.039112 | mg/L | 0.001452 | 3.7 | 115.737 | 0.039112 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.021121 | mg/L | 0.002366 | 11.2 | 28.6929 | 0.021121 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.006117uv | mg/L | 0.004166 | 68.1 | -3.08543 | -0.006117 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.006671uv | mg/L | 0.002003 | 30.0 | 0.550583 | -0.006671 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 24.2267 | mg/L | 1.37733 | 5.7 | 57024.5 | 24.2267 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000339uv | mg/L | 0.001454 | 429.0 | 0.757392 | -0.000339 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.434166 | mg/L | 0.022848 | 5.3 | 2291.13 | 0.434166 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.381680 | mg/L | 0.020812 | 5.5 | 4282.40 | 0.381680 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.001303uv | mg/L | 0.005521 | 423.9 | 1.90244 | -0.001303 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.029274 | mg/L | 0.001574 | 5.4 | 201.226 | 0.029274 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.121892 | mg/L | 0.004814 | 3.9 | 80.6360 | 0.121892 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.007606 | mg/L | 0.000373 | 4.9 | 136.507 | 0.007606 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.601136 | 155956 | 5101.810 | 3.3 |

**A864530 (Samp)** **11/13/2009, 2:11:37 AM** **Rack 1, Tube 27**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000097u | -0.000077u | 0.000222u |
| Al 237.312 | 2.86209 | 2.88320 | 2.88641 |
| As 188.980 | 0.007997 | 0.004817 | 0.000998 |
| B 249.772 | 0.078200 | 0.080144 | 0.080367 |
| Ba 233.527 | 0.093604 | 0.094005 | 0.094798 |
| Be 234.861 | 0.001196u | 0.001469u | 0.001520u |
| Ca 315.887 | 131.232 | 131.383 | 132.072 |
| Cd 228.802 | 0.000950 | 0.000623 | 0.000793 |
| Co 231.160 | 0.006105 | 0.006661 | 0.007081 |
| Cr 267.716 | 0.017083 | 0.017004 | 0.017404 |
| Cu 324.754 | 0.013965 | 0.013777 | 0.014110 |
| Fe 261.382 | 12.4943 | 12.5191 | 12.5535 |
| K 766.491 | 4.52182 | 4.52939 | 4.52172 |
| Li 610.365 | 0.025842u | 0.025587u | 0.027773u |
| Mg 279.078 | 46.9393 | 47.0445 | 47.2176 |
| Mn 293.305 | 1.03888 | 1.03823 | 1.04313 |
| Mo 202.032 | 0.012927 | 0.014674 | 0.013933 |
| Na 568.821 | 205.999 | 206.297 | 206.393 |
| Na 589.592 | 176.252o | 178.187o | 176.475o |
| Ni 231.604 | 0.021642 | 0.021401 | 0.020376 |
| Pb 220.353 | 0.006264 | 0.007842 | 0.006782 |
| Sb 217.582 | -0.000020u | -0.011372u | -0.006573u |
| Se 196.026 | 0.009645 | 0.004252 | 0.003056 |
| Si 251.611 | 8.61099 | 8.63508 | 8.55868 |
| Sn 189.927 | -0.000205u | -0.000213u | 0.001586 |
| Sr 216.596 | 0.320641 | 0.320737 | 0.322374 |
| Ti 322.284 | 0.074874 | 0.074041 | 0.073553 |
| Tl 190.794 | -0.004435u | 0.004666 | -0.000324 |
| V 289.164 | 0.012710 | 0.011944 | 0.012279 |
| Zn 206.200 | 0.051338 | 0.052904 | 0.050308 |
| Zr 257.147 | 0.003214 | 0.002986 | 0.003355 |
| Y 361.104 | 0.599855 | 0.599442 | 0.596383 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000016uv | mg/L | 0.000179 | 1118.6 | -28.3535 | 0.000016 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 2.87724 | mg/L | 0.013211 | 0.5 | 2017.29 | 2.87724 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.004604 | mg/L | 0.003505 | 76.1 | 1.99206 | 0.004604 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.079571 | mg/L | 0.001192 | 1.5 | 966.451 | 0.079571 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.094135 | mg/L | 0.000607 | 0.6 | 3856.53 | 0.094135 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.001395uv | mg/L | 0.000174 | 12.5 | -115.904 | 0.001395 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 131.562 | mg/L | 0.447642 | 0.3 | 1005325 | 131.562 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000789 | mg/L | 0.000164 | 20.8 | 5.53305 | 0.000789 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.006616 | mg/L | 0.000490 | 7.4 | 59.7213 | 0.006616 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.017164 | mg/L | 0.000212 | 1.2 | 621.434 | 0.017164 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.013950 | mg/L | 0.000167 | 1.2 | 785.559 | 0.013950 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 12.5223 | mg/L | 0.029721 | 0.2 | 26261.3 | 12.5223 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 4.52431 | mg/L | 0.004400 | 0.1 | 159789 | 4.52431 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.026401uv | mg/L | 0.001195 | 4.5 | 36.4002 | 0.026401 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 47.0671 | mg/L | 0.140507 | 0.3 | 51445.7 | 47.0671 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 1.04008 | mg/L | 0.002664 | 0.3 | 15990.0 | 1.04008 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.013845 | mg/L | 0.000877 | 6.3 | 52.6496 | 0.013845 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 206.230 | mg/L | 0.205347 | 0.1 | 80660.6 | 206.230 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 1.05864 | 0.6 | 34481312 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.021140 | mg/L | 0.000672 | 3.2 | 62.4554 | 0.021140 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.006963 | mg/L | 0.000804 | 11.6 | 8.84478 | 0.006963 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.005989uv | mg/L | 0.005699 | 95.2 | -2.53038 | -0.005989 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 0.005651 | mg/L | 0.003510 | 62.1 | 2.63412 | 0.005651 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 8.60158 | mg/L | 0.039055 | 0.5 | 20276.6 | 8.60158 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.000389uv | mg/L | 0.001036 | 266.2 | 1.15105 | 0.000389 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.321251 | mg/L | 0.000974 | 0.3 | 1687.85 | 0.321251 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.074156 | mg/L | 0.000668 | 0.9 | 924.491 | 0.074156 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.000031uv | mg/L | 0.004557 | 14771.5 | 0.844739 | -0.000031 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.012311 | mg/L | 0.000384 | 3.1 | 96.4163 | 0.012311 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.051517 | mg/L | 0.001307 | 2.5 | 34.0822 | 0.051517 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.003185 | mg/L | 0.000186 | 5.8 | 67.3194 | 0.003185 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.598560 | 155287 | 492.063 | 0.3 |

**A864532 (Samp)** **11/13/2009, 2:14:56 AM** **Rack 1, Tube 28**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000144u | -0.000225u | -0.000142u |
| Al 237.312 | 2.51175 | 2.49032 | 2.52072 |
| As 188.980 | 0.006683 | -0.004709u | 0.005037 |
| B 249.772 | 0.089862 | 0.090388 | 0.091998 |
| Ba 233.527 | 0.239261 | 0.237312 | 0.238968 |
| Be 234.861 | 0.000559u | 0.000587u | 0.000635u |
| Ca 315.887 | 187.148 | 187.606 | 187.545 |
| Cd 228.802 | 0.000527 | 0.000131 | 0.000387 |
| Co 231.160 | 0.004339 | 0.005257 | 0.003957 |
| Cr 267.716 | 0.004687 | 0.004883 | 0.004961 |
| Cu 324.754 | 0.009677 | 0.009514 | 0.009758 |
| Fe 261.382 | 4.87674 | 4.86467 | 4.87721 |
| K 766.491 | 4.36815 | 4.33033 | 4.40932 |
| Li 610.365 | 0.035511u | 0.035230u | 0.035526u |
| Mg 279.078 | 58.4653 | 58.2846 | 57.9441 |
| Mn 293.305 | 0.713490 | 0.709524 | 0.713770 |
| Mo 202.032 | 0.005570 | 0.005673 | 0.005705 |
| Na 568.821 | 60.8460 | 60.5759 | 61.1208 |
| Na 589.592 | 62.2569 | 61.7309 | 62.2039 |
| Ni 231.604 | 0.012828 | 0.012925 | 0.012124 |
| Pb 220.353 | 0.004261 | 0.001690 | 0.004846 |
| Sb 217.582 | -0.002233u | -0.000664u | 0.000814 |
| Se 196.026 | 0.006908 | 0.005765 | -0.003135u |
| Si 251.611 | 10.1257 | 9.99804 | 10.2414 |
| Sn 189.927 | -0.000642u | -0.000671u | -0.000005 |
| Sr 216.596 | 0.422308 | 0.421091 | 0.422476 |
| Ti 322.284 | 0.057604 | 0.058126 | 0.058477 |
| Tl 190.794 | -0.000009 | 0.000874 | 0.001716 |
| V 289.164 | 0.008864 | 0.006162 | 0.007980 |
| Zn 206.200 | 0.020689 | 0.018914 | 0.023215 |
| Zr 257.147 | 0.003180 | 0.002511 | 0.002700 |
| Y 361.104 | 0.613347 | 0.613154 | 0.611646 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000170uv | mg/L | 0.000048 | 28.1 | -40.5233 | -0.000170 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 2.50760 | mg/L | 0.015620 | 0.6 | 1768.94 | 2.50760 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.002337uv | mg/L | 0.006157 | 263.4 | 1.16132 | 0.002337 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.090749 | mg/L | 0.001113 | 1.2 | 1075.52 | 0.090749 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.238514 | mg/L | 0.001050 | 0.4 | 9753.89 | 0.238514 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000594uv | mg/L | 0.000039 | 6.5 | -41.6018 | 0.000594 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 187.433 | mg/L | 0.248181 | 0.1 | 1432004 | 187.433 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000349 | mg/L | 0.000201 | 57.6 | 2.26577 | 0.000349 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.004518 | mg/L | 0.000668 | 14.8 | 39.5715 | 0.004518 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.004844 | mg/L | 0.000141 | 2.9 | 172.617 | 0.004844 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.009650 | mg/L | 0.000124 | 1.3 | 610.873 | 0.009650 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 4.87288 | mg/L | 0.007106 | 0.1 | 10224.9 | 4.87288 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 4.36927 | mg/L | 0.039506 | 0.9 | 154303 | 4.36927 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.035423uv | mg/L | 0.000167 | 0.5 | -188.420 | 0.035423 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 58.2313 | mg/L | 0.264648 | 0.5 | 63643.6 | 58.2313 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.712262 | mg/L | 0.002375 | 0.3 | 10950.3 | 0.712262 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.005650 | mg/L | 0.000071 | 1.3 | 22.1710 | 0.005650 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 60.8476 | mg/L | 0.272470 | 0.4 | 23975.8 | 60.8476 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 62.0639 | mg/L | 0.289590 | 0.5 | 12097344 | 62.0639 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.012626 | mg/L | 0.000437 | 3.5 | 37.1987 | 0.012626 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.003599 | mg/L | 0.001679 | 46.6 | 4.01528 | 0.003599 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.000694uv | mg/L | 0.001524 | 219.5 | 0.271043 | -0.000694 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 0.003179uv | mg/L | 0.005498 | 172.9 | 2.02084 | 0.003179 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 10.1217 | mg/L | 0.121741 | 1.2 | 23849.1 | 10.1217 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000439uv | mg/L | 0.000376 | 85.7 | 0.578809 | -0.000439 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.421958 | mg/L | 0.000756 | 0.2 | 2209.18 | 0.421958 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.058069 | mg/L | 0.000439 | 0.8 | 748.777 | 0.058069 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.000860 | mg/L | 0.000863 | 100.3 | 0.989076 | 0.000860 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.007669 | mg/L | 0.001377 | 18.0 | 57.5702 | 0.007669 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.020939 | mg/L | 0.002161 | 10.3 | 13.7637 | 0.020939 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.002797 | mg/L | 0.000345 | 12.3 | 56.9525 | 0.002797 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.612716 | 158960 | 241.666 | 0.2 |

**A864533 (Samp)** **11/13/2009, 2:18:14 AM** **Rack 1, Tube 29**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000333u | -0.000092u | -0.000123u |
| Al 237.312 | 2.36073 | 2.37293 | 2.38571 |
| As 188.980 | -0.000104u | 0.002352 | 0.004786 |
| B 249.772 | 0.085802 | 0.086999 | 0.086944 |
| Ba 233.527 | 0.220243 | 0.218998 | 0.219163 |
| Be 234.861 | 0.000626u | 0.000685u | 0.000603u |
| Ca 315.887 | 129.858 | 129.140 | 129.370 |
| Cd 228.802 | 0.000561 | 0.000172 | 0.001152 |
| Co 231.160 | 0.001273 | 0.001027 | 0.000685 |
| Cr 267.716 | 0.008479 | 0.008357 | 0.008219 |
| Cu 324.754 | 0.043789 | 0.044487 | 0.045005 |
| Fe 261.382 | 6.08403 | 6.07742 | 6.07318 |
| K 766.491 | 4.64428 | 4.64405 | 4.62049 |
| Li 610.365 | 0.026223u | 0.024663u | 0.023284u |
| Mg 279.078 | 36.9535 | 36.8691 | 36.8987 |
| Mn 293.305 | 0.292103 | 0.290891 | 0.290217 |
| Mo 202.032 | 0.001743 | 0.001743 | 0.001893 |
| Na 568.821 | 210.942 | 210.763 | 210.783 |
| Na 589.592 | 186.519o | 189.741o | 185.717o |
| Ni 231.604 | 0.007710 | 0.009304 | 0.006586 |
| Pb 220.353 | 0.013590 | 0.013273 | 0.014788 |
| Sb 217.582 | -0.005846u | -0.005729u | -0.003120u |
| Se 196.026 | -0.011381u | -0.008482u | -0.012289u |
| Si 251.611 | 8.32963 | 8.40650 | 8.33486 |
| Sn 189.927 | 0.003800 | 0.001098 | 0.000208 |
| Sr 216.596 | 0.315213 | 0.315074 | 0.315497 |
| Ti 322.284 | 0.046694 | 0.047583 | 0.045615 |
| Tl 190.794 | 0.002880 | 0.004047 | -0.006746u |
| V 289.164 | 0.005623 | 0.005430 | 0.007004 |
| Zn 206.200 | 0.834051 | 0.847094 | 0.843622 |
| Zr 257.147 | 0.001492 | 0.001611 | 0.001855 |
| Y 361.104 | 0.609746 | 0.607475 | 0.606583 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000183uv | mg/L | 0.000131 | 71.9 | -40.9635 | -0.000183 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 2.37312 | mg/L | 0.012493 | 0.5 | 1672.02 | 2.37312 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.002345uv | mg/L | 0.002445 | 104.3 | 1.16724 | 0.002345 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.086581 | mg/L | 0.000676 | 0.8 | 1030.60 | 0.086581 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.219468 | mg/L | 0.000677 | 0.3 | 8975.94 | 0.219468 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000638uv | mg/L | 0.000042 | 6.6 | -57.7921 | 0.000638 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 129.456 | mg/L | 0.366319 | 0.3 | 989239 | 129.456 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000629 | mg/L | 0.000493 | 78.5 | 4.09305 | 0.000629 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.000995 | mg/L | 0.000295 | 29.6 | 19.4810 | 0.000995 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.008352 | mg/L | 0.000130 | 1.6 | 299.060 | 0.008352 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.044427 | mg/L | 0.000610 | 1.4 | 2476.43 | 0.044427 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 6.07821 | mg/L | 0.005470 | 0.1 | 12751.8 | 6.07821 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 4.63627 | mg/L | 0.013672 | 0.3 | 163751 | 4.63627 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.024724uv | mg/L | 0.001470 | 5.9 | 14.8579 | 0.024724 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 36.9071 | mg/L | 0.042803 | 0.1 | 40345.0 | 36.9071 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.291070 | mg/L | 0.000956 | 0.3 | 4475.05 | 0.291070 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.001793 | mg/L | 0.000087 | 4.8 | 7.82526 | 0.001793 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 210.829 | mg/L | 0.098044 | 0.0 | 82452.1 | 210.829 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 2.12996 | 1.1 | 36498272 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.007867 | mg/L | 0.001366 | 17.4 | 23.0957 | 0.007867 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.013884 | mg/L | 0.000799 | 5.8 | 18.7722 | 0.013884 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.004898uv | mg/L | 0.001541 | 31.5 | -1.83478 | -0.004898 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.010718uv | mg/L | 0.001989 | 18.6 | -0.994928 | -0.010718 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 8.35700 | mg/L | 0.042951 | 0.5 | 19697.3 | 8.35700 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.001702 | mg/L | 0.001871 | 109.9 | 2.04070 | 0.001702 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.315261 | mg/L | 0.000215 | 0.1 | 1652.29 | 0.315261 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.046631 | mg/L | 0.000985 | 2.1 | 625.084 | 0.046631 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.000060uv | mg/L | 0.005923 | 9801.3 | 0.473165 | 0.000060 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.006019 | mg/L | 0.000858 | 14.3 | 53.7355 | 0.006019 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.841589 | mg/L | 0.006755 | 0.8 | 570.120 | 0.841589 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.001653 | mg/L | 0.000185 | 11.2 | 42.2108 | 0.001653 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.607934 | 157720 | 423.045 | 0.3 |

**A864534 (Samp)** **11/13/2009, 2:21:32 AM** **Rack 1, Tube 30**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000126u | -0.000338u | 0.000123 |
| Al 237.312 | 4.39779 | 4.41549 | 4.40397 |
| As 188.980 | 0.006191 | 0.013331 | 0.004288 |
| B 249.772 | 0.057509 | 0.058212 | 0.058500 |
| Ba 233.527 | 0.049843 | 0.050200 | 0.050006 |
| Be 234.861 | 0.001460u | 0.001999u | 0.001232u |
| Ca 315.887 | 102.848 | 103.343 | 102.982 |
| Cd 228.802 | 0.000550 | 0.000016 | 0.000012 |
| Co 231.160 | 0.004048 | 0.003690 | 0.004740 |
| Cr 267.716 | 0.015722 | 0.015710 | 0.015452 |
| Cu 324.754 | 0.019208 | 0.018912 | 0.019202 |
| Fe 261.382 | 9.96887 | 10.0326 | 10.0091 |
| K 766.491 | 2.54450 | 2.54438 | 2.54200 |
| Li 610.365 | 0.022341u | 0.021706u | 0.020702u |
| Mg 279.078 | 29.7603 | 29.9397 | 29.8646 |
| Mn 293.305 | 0.160624 | 0.161067 | 0.161794 |
| Mo 202.032 | 0.002445 | 0.002308 | 0.002114 |
| Na 568.821 | 13.2335 | 13.1555 | 13.1482 |
| Na 589.592 | 14.1359 | 14.2125 | 14.2095 |
| Ni 231.604 | 0.014132 | 0.014046 | 0.014639 |
| Pb 220.353 | 0.010471 | 0.009572 | 0.007746 |
| Sb 217.582 | -0.004563u | -0.000648u | 0.000647 |
| Se 196.026 | -0.015714u | -0.000481u | -0.002915u |
| Si 251.611 | 12.8187 | 12.8882 | 12.8341 |
| Sn 189.927 | -0.000001 | -0.000778u | -0.002234u |
| Sr 216.596 | 0.108721 | 0.109238 | 0.108060 |
| Ti 322.284 | 0.101621 | 0.102585 | 0.101402 |
| Tl 190.794 | -0.007066u | -0.002734u | -0.007272u |
| V 289.164 | 0.014989 | 0.012619 | 0.013026 |
| Zn 206.200 | 0.047740 | 0.047713 | 0.045748 |
| Zr 257.147 | 0.004438 | 0.004654 | 0.004321 |
| Y 361.104 | 0.636081 | 0.633059 | 0.633758 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000114uv | mg/L | 0.000231 | 203.0 | -24.1150 | -0.000114 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 4.40575 | mg/L | 0.008982 | 0.2 | 3108.10 | 4.40575 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.007937 | mg/L | 0.004767 | 60.1 | 3.28568 | 0.007937 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.058074 | mg/L | 0.000510 | 0.9 | 712.157 | 0.058074 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.050016 | mg/L | 0.000179 | 0.4 | 2054.41 | 0.050016 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.001564uv | mg/L | 0.000394 | 25.2 | -70.9804 | 0.001564 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 103.058 | mg/L | 0.255815 | 0.2 | 787724 | 103.058 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000193 | mg/L | 0.000309 | 160.5 | 0.819989 | 0.000193 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.004159 | mg/L | 0.000533 | 12.8 | 42.4730 | 0.004159 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.015628 | mg/L | 0.000153 | 1.0 | 561.209 | 0.015628 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.019107 | mg/L | 0.000170 | 0.9 | 1081.94 | 0.019107 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 10.0035 | mg/L | 0.032216 | 0.3 | 20980.9 | 10.0035 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 2.54363 | mg/L | 0.001409 | 0.1 | 89696.3 | 2.54363 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.021583uv | mg/L | 0.000826 | 3.8 | 146.201 | 0.021583 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 29.8549 | mg/L | 0.090092 | 0.3 | 32643.2 | 29.8549 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.161162 | mg/L | 0.000591 | 0.4 | 2477.89 | 0.161162 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.002289 | mg/L | 0.000166 | 7.3 | 9.66947 | 0.002289 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 13.1791 | mg/L | 0.047290 | 0.4 | 5051.84 | 13.1791 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 14.1860 | mg/L | 0.043371 | 0.3 | 2770765 | 14.1860 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.014272 | mg/L | 0.000321 | 2.2 | 42.0864 | 0.014272 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.009263 | mg/L | 0.001388 | 15.0 | 12.0200 | 0.009263 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.001521uv | mg/L | 0.002713 | 178.3 | -0.260279 | -0.001521 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.006370uv | mg/L | 0.008183 | 128.5 | -0.082019 | -0.006370 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 12.8470 | mg/L | 0.036455 | 0.3 | 30249.3 | 12.8470 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.001004uv | mg/L | 0.001134 | 112.9 | 0.206977 | -0.001004 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.108673 | mg/L | 0.000591 | 0.5 | 575.045 | 0.108673 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.101869 | mg/L | 0.000629 | 0.6 | 1230.27 | 0.101869 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.005691uv | mg/L | 0.002562 | 45.0 | -1.63878 | -0.005691 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.013545 | mg/L | 0.001268 | 9.4 | 127.550 | 0.013545 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.047067 | mg/L | 0.001142 | 2.4 | 31.2182 | 0.047067 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.004471 | mg/L | 0.000169 | 3.8 | 82.3992 | 0.004471 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.634300 | 164560 | 410.394 | 0.2 |

**A864535 (Samp)** **11/13/2009, 2:24:51 AM** **Rack 1, Tube 31**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000500u | -0.000056u | -0.000253u |
| Al 237.312 | 1.44074 | 1.46034 | 1.45140 |
| As 188.980 | 0.001632 | 0.002857 | 0.008067 |
| B 249.772 | 0.150344 | 0.156022 | 0.155669 |
| Ba 233.527 | 0.071410 | 0.071967 | 0.071837 |
| Be 234.861 | 0.000323u | 0.000325u | 0.000333u |
| Ca 315.887 | 150.207 | 153.351 | 153.622 |
| Cd 228.802 | -0.000019 | 0.000318 | 0.000863 |
| Co 231.160 | 0.003244 | 0.001836 | 0.002027 |
| Cr 267.716 | 0.055313 | 0.056439 | 0.056369 |
| Cu 324.754 | 0.009841 | 0.010447 | 0.010329 |
| Fe 261.382 | 3.53806 | 3.60112 | 3.60361 |
| K 766.491 | 2.66930 | 2.66284 | 2.71409 |
| Li 610.365 | 0.027906u | 0.027018u | 0.027957u |
| Mg 279.078 | 49.3307 | 50.1647 | 50.2131 |
| Mn 293.305 | 0.035759 | 0.036388 | 0.036413 |
| Mo 202.032 | 0.006384 | 0.005618 | 0.005556 |
| Na 568.821 | 34.4070 | 34.8533 | 34.9249 |
| Na 589.592 | 36.3728 | 36.8493 | 36.8317 |
| Ni 231.604 | 0.009689 | 0.011178 | 0.010365 |
| Pb 220.353 | 0.000962 | 0.000787 | 0.000971 |
| Sb 217.582 | -0.010343u | -0.008440u | -0.001364u |
| Se 196.026 | -0.013930u | -0.017155u | -0.005715u |
| Si 251.611 | 9.61760 | 9.64272 | 9.62631 |
| Sn 189.927 | 0.002178 | 0.000688 | -0.000559u |
| Sr 216.596 | 0.637499 | 0.645899 | 0.647984 |
| Ti 322.284 | 0.041950 | 0.039849 | 0.039246 |
| Tl 190.794 | -0.002219u | -0.004040u | 0.001254 |
| V 289.164 | 0.004348 | 0.004656 | 0.004627 |
| Zn 206.200 | 0.019233 | 0.018736 | 0.020674 |
| Zr 257.147 | 0.001759 | 0.002252 | 0.002515 |
| Y 361.104 | 0.626126 | 0.621968 | 0.622549 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000270uv | mg/L | 0.000223 | 82.5 | -59.4719 | -0.000270 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 1.45083 | mg/L | 0.009812 | 0.7 | 1021.35 | 1.45083 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.004185 | mg/L | 0.003417 | 81.6 | 1.81421 | 0.004185 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.154012 | mg/L | 0.003181 | 2.1 | 1801.24 | 0.154012 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.071738 | mg/L | 0.000291 | 0.4 | 2941.69 | 0.071738 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000327uv | mg/L | 0.000005 | 1.6 | -37.3458 | 0.000327 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 152.393 | mg/L | 1.89837 | 1.2 | 1164409 | 152.393 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000387 | mg/L | 0.000445 | 115.0 | 2.51010 | 0.000387 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.002369 | mg/L | 0.000764 | 32.2 | 25.1287 | 0.002369 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.056040 | mg/L | 0.000631 | 1.1 | 2026.75 | 0.056040 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.010206 | mg/L | 0.000321 | 3.1 | 650.115 | 0.010206 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 3.58093 | mg/L | 0.037144 | 1.0 | 7516.43 | 3.58093 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 2.68208 | mg/L | 0.027914 | 1.0 | 94595.8 | 2.68208 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.027627uv | mg/L | 0.000528 | 1.9 | -95.4139 | 0.027627 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 49.9028 | mg/L | 0.496092 | 1.0 | 54544.0 | 49.9028 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.036187 | mg/L | 0.000371 | 1.0 | 556.505 | 0.036187 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.005853 | mg/L | 0.000461 | 7.9 | 22.9325 | 0.005853 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 34.7284 | mg/L | 0.280669 | 0.8 | 13644.0 | 34.7284 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 36.6846 | mg/L | 0.270186 | 0.7 | 7153473 | 36.6846 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.010410 | mg/L | 0.000746 | 7.2 | 30.6404 | 0.010410 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.000907 | mg/L | 0.000104 | 11.4 | 0.196297 | 0.000907 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.006716uv | mg/L | 0.004732 | 70.5 | -2.66700 | -0.006716 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.012267uv | mg/L | 0.005899 | 48.1 | -1.37944 | -0.012267 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 9.62888 | mg/L | 0.012753 | 0.1 | 22694.2 | 9.62888 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.000769uv | mg/L | 0.001370 | 178.2 | 1.39532 | 0.000769 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.643794 | mg/L | 0.005550 | 0.9 | 3367.87 | 0.643794 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.040348 | mg/L | 0.001419 | 3.5 | 556.937 | 0.040348 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.001668uv | mg/L | 0.002689 | 161.2 | -0.293245 | -0.001668 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.004544 | mg/L | 0.000170 | 3.7 | 43.9581 | 0.004544 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.019548 | mg/L | 0.001007 | 5.2 | 13.0440 | 0.019548 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.002175 | mg/L | 0.000384 | 17.6 | 47.8512 | 0.002175 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.623548 | 161770 | 584.198 | 0.4 |

2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

**A864536 (Samp)** **11/13/2009, 2:28:11 AM** **Rack 1, Tube 32**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000442u | -0.000120u | 0.000344 |
| Al 237.312 | 2.89752 | 3.11681 | 3.03008 |
| As 188.980 | 0.005892 | 0.000873 | 0.000027u |
| B 249.772 | 0.108054 | 0.116820 | 0.113544 |
| Ba 233.527 | 0.114630 | 0.123158 | 0.118507 |
| Be 234.861 | 0.000743u | 0.000609u | 0.000777u |
| Ca 315.887 | 133.690 | 144.151 | 138.429 |
| Cd 228.802 | 0.000583 | 0.000541 | 0.000177 |
| Co 231.160 | 0.011476 | 0.014220 | 0.013960 |
| Cr 267.716 | 0.330757 | 0.356569 | 0.344126 |
| Cu 324.754 | 0.157348 | 0.168428 | 0.160155 |
| Fe 261.382 | 6.05405 | 6.51356 | 6.29770 |
| K 766.491 | 3.00569 | 3.21479 | 3.09464 |
| Li 610.365 | 0.026862u | 0.026506u | 0.029104u |
| Mg 279.078 | 38.7602 | 41.6067 | 40.1328 |
| Mn 293.305 | 1.61738 | 1.73145 | 1.67072 |
| Mo 202.032 | 0.008573 | 0.008912 | 0.008436 |
| Na 568.821 | 32.0262 | 34.2859 | 32.9268 |
| Na 589.592 | 33.6771 | 36.1646 | 34.8360 |
| Ni 231.604 | 0.172921 | 0.185215 | 0.179062 |
| Pb 220.353 | 0.012972 | 0.009359 | 0.012786 |
| Sb 217.582 | -0.000112u | -0.013049u | -0.009355u |
| Se 196.026 | -0.010425u | -0.026319u | 0.001799 |
| Si 251.611 | 10.7855 | 11.2250 | 11.1830 |
| Sn 189.927 | -0.000289u | 0.002770 | 0.002881 |
| Sr 216.596 | 0.182081 | 0.194383 | 0.187900 |
| Ti 322.284 | 0.068741 | 0.073893 | 0.071293 |
| Tl 190.794 | -0.003866u | 0.003446 | -0.014069u |
| V 289.164 | 0.009822 | 0.010915 | 0.009210 |
| Zn 206.200 | 0.041399 | 0.039502 | 0.038338 |
| Zr 257.147 | 0.002565 | 0.002651 | 0.002374 |
| Y 361.104 | 0.642580 | 0.618624 | 0.630564 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000073uv | mg/L | 0.000395 | 542.4 | -19.2805 | -0.000073 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 3.01480 | mg/L | 0.110441 | 3.7 | 2124.57 | 3.01480 mg/L | Y 361.104 | 1.00000 |



2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.002264uv | mg/L | 0.003170 | 140.0 | 0.845833 | 0.002264 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.112806 | mg/L | 0.004429 | 3.9 | 1332.67 | 0.112806 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.118765 | mg/L | 0.004270 | 3.6 | 4862.56 | 0.118765 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000710uv | mg/L | 0.000089 | 12.5 | -58.6912 | 0.000710 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 138.757 | mg/L | 5.23846 | 3.8 | 1060267 | 138.757 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000434 | mg/L | 0.000223 | 51.4 | 2.87217 | 0.000434 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.013219 | mg/L | 0.001514 | 11.5 | 93.2115 | 0.013219 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.343817 | mg/L | 0.012909 | 3.8 | 12469.7 | 0.343817 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.161977 | mg/L | 0.005760 | 3.6 | 8814.12 | 0.161977 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 6.28844 | mg/L | 0.229898 | 3.7 | 13192.5 | 6.28844 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 3.10504 | mg/L | 0.104936 | 3.4 | 109564 | 3.10504 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.027490uv | mg/L | 0.001409 | 5.1 | 5.83395 | 0.027490 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 40.1666 | mg/L | 1.42351 | 3.5 | 43906.2 | 40.1666 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 1.67318 | mg/L | 0.057077 | 3.4 | 25723.1 | 1.67318 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.008641 | mg/L | 0.000245 | 2.8 | 33.3408 | 0.008641 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 33.0796 | mg/L | 1.13757 | 3.4 | 12953.7 | 33.0796 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 34.8926 | mg/L | 1.24474 | 3.6 | 6804392 | 34.8926 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.179066 | mg/L | 0.006147 | 3.4 | 531.085 | 0.179066 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.011706 | mg/L | 0.002034 | 17.4 | 15.5398 | 0.011706 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.007506uv | mg/L | 0.006664 | 88.8 | -3.12706 | -0.007506 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.011649uv | mg/L | 0.014099 | 121.0 | -0.941890 | -0.011649 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 11.0645 | mg/L | 0.242543 | 2.2 | 26061.7 | 11.0645 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.001788uv | mg/L | 0.001799 | 100.6 | 2.07690 | 0.001788 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.188121 | mg/L | 0.006154 | 3.3 | 987.246 | 0.188121 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.071309 | mg/L | 0.002576 | 3.6 | 891.427 | 0.071309 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.004830uv | mg/L | 0.008797 | 182.1 | -0.599358 | -0.004830 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.009982 | mg/L | 0.000864 | 8.7 | 49.1255 | 0.009982 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.039746 | mg/L | 0.001545 | 3.9 | 27.3405 | 0.039746 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.002530 | mg/L | 0.000142 | 5.6 | 54.1199 | 0.002530 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.630589 | 163597 | 3107.458 | 1.9 |

**CCV (CCV)** **11/13/2009, 2:31:30 AM** **Rack 1, Tube 33**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.03756 | 1.05325 | 1.04194 |
| Al 237.312 | 5.24415 | 5.35008 | 5.29349 |
| As 188.980 | 1.96610 | 1.99718 | 2.00982 |
| B 249.772 | 2.07555 | 2.13520 | 2.12818 |
| Ba 233.527 | 4.95403 | 5.03452 | 4.97400 |
| Be 234.861 | 2.02609 | 2.05696 | 2.03107 |
| Ca 315.887 | 49.5515 | 50.4096 | 49.7847 |
| Cd 228.802 | 5.13606 | 5.23277 | 5.17407 |
| Co 231.160 | 4.94880 | 5.04066 | 4.98062 |
| Cr 267.716 | 4.96062 | 5.05494 | 5.00009 |
| Cu 324.754 | 4.98315 | 5.08276 | 5.05114 |
| Fe 261.382 | 5.01438 | 5.03254 | 4.97801 |
| K 766.491 | 49.8101 | 50.4724 | 49.7920 |
| Li 610.365 | 4.80756 | 4.88414 | 4.82745 |
| Mg 279.078 | 49.5580 | 50.4306 | 49.8522 |
| Mn 293.305 | 4.98701 | 5.06655 | 5.01488 |
| Mo 202.032 | 1.00411 | 1.01977 | 1.01288 |
| Na 568.821 | 48.5104 | 49.2765 | 48.4941 |
| Na 589.592 | 51.7960 | 52.8146 | 52.0701 |
| Ni 231.604 | 4.87744 | 4.96055 | 4.89822 |
| Pb 220.353 | 4.93617 | 5.01944 | 4.96223 |
| Sb 217.582 | 1.00979 | 1.02893 | 1.01854 |
| Se 196.026 | 2.01315 | 2.08084 | 2.07198 |
| Si 251.611 | 4.89998 | 4.98333 | 4.94687 |
| Sn 189.927 | 4.91549 | 4.98191 | 4.93318 |
| Sr 216.596 | 4.87271 | 5.05590 | 4.97839 |
| Ti 322.284 | 5.00472 | 5.10063 | 5.04540 |
| Tl 190.794 | 1.90614 | 1.97921 | 1.95362 |
| V 289.164 | 2.00293 | 2.03656 | 2.01477 |
| Zn 206.200 | 5.23707 | 5.34354 | 5.29332 |
| Zr 257.147 | 5.08425 | 5.17275 | 5.11289 |
| Y 361.104 | 0.616128 | 0.613254 | 0.619298 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.04425 | mg/L | 0.008098 | 0.8 | 46538.5 | 1.04425 mg/L | Y 361.104 | 104.42511 |
| Al 237.312 | 5.29590 | mg/L | 0.053006 | 1.0 | 3776.42 | 5.29590 mg/L | Y 361.104 | 105.91806 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 1.99104 | mg/L | 0.022499 | 1.1 | 755.732 | 1.99104 mg/L | Y 361.104 | 99.55179 |
| B 249.772 | 2.11298 | mg/L | 0.032601 | 1.5 | 24371.5 | 2.11298 mg/L | Y 361.104 | 105.64879 |
| Ba 233.527 | 4.98751 | mg/L | 0.041913 | 0.8 | 203735 | 4.98751 mg/L | Y 361.104 | 99.75026 |
| Be 234.861 | 2.03804 | mg/L | 0.016571 | 0.8 | 109364 | 2.03804 mg/L | Y 361.104 | 101.90205 |
| Ca 315.887 | 49.9153 | mg/L | 0.443725 | 0.9 | 381793 | 49.9153 mg/L | Y 361.104 | 99.83051 |
| Cd 228.802 | 5.18097 | mg/L | 0.048726 | 0.9 | 43383.6 | 5.18097 mg/L | Y 361.104 | 103.61932 |
| Co 231.160 | 4.99003 | mg/L | 0.046648 | 0.9 | 29873.5 | 4.99003 mg/L | Y 361.104 | 99.80052 |
| Cr 267.716 | 5.00522 | mg/L | 0.047368 | 0.9 | 181542 | 5.00522 mg/L | Y 361.104 | 100.10436 |
| Cu 324.754 | 5.03902 | mg/L | 0.050897 | 1.0 | 271772 | 5.03902 mg/L | Y 361.104 | 100.78033 |
| Fe 261.382 | 5.00831 | mg/L | 0.027767 | 0.6 | 10404.7 | 5.00831 mg/L | Y 361.104 | 100.16618 |
| K 766.491 | 50.0248 | mg/L | 0.387735 | 0.8 | 1769974 | 50.0248 mg/L | Y 361.104 | 100.04966 |
| Li 610.365 | 4.83972 | mg/L | 0.039736 | 0.8 | 108727 | 4.83972 mg/L | Y 361.104 | 96.79436 |
| Mg 279.078 | 49.9469 | mg/L | 0.443921 | 0.9 | 54592.1 | 49.9469 mg/L | Y 361.104 | 99.89383 |
| Mn 293.305 | 5.02281 | mg/L | 0.040357 | 0.8 | 77218.9 | 5.02281 mg/L | Y 361.104 | 100.45625 |
| Mo 202.032 | 1.01225 | mg/L | 0.007853 | 0.8 | 3766.62 | 1.01225 mg/L | Y 361.104 | 101.22532 |
| Na 568.821 | 48.7603 | mg/L | 0.447095 | 0.9 | 18791.0 | 48.7603 mg/L | Y 361.104 | 97.52069 |
| Na 589.592 | 52.2269 | mg/L | 0.527092 | 1.0 | 10193648 | 52.2269 mg/L | Y 361.104 | 104.45379 |
| Ni 231.604 | 4.91207 | mg/L | 0.043249 | 0.9 | 14552.8 | 4.91207 mg/L | Y 361.104 | 98.24142 |
| Pb 220.353 | 4.97261 | mg/L | 0.042596 | 0.9 | 7084.12 | 4.97261 mg/L | Y 361.104 | 99.45222 |
| Sb 217.582 | 1.01909 | mg/L | 0.009579 | 0.9 | 505.021 | 1.01909 mg/L | Y 361.104 | 101.90879 |
| Se 196.026 | 2.05532 | mg/L | 0.036790 | 1.8 | 437.207 | 2.05532 mg/L | Y 361.104 | 102.76617 |
| Si 251.611 | 4.94339 | mg/L | 0.041784 | 0.8 | 12182.3 | 4.94339 mg/L | Y 361.104 | 98.86783 |
| Sn 189.927 | 4.94353 | mg/L | 0.034399 | 0.7 | 3391.03 | 4.94353 mg/L | Y 361.104 | 98.87058 |
| Sr 216.596 | 4.96900 | mg/L | 0.091957 | 1.9 | 25958.5 | 4.96900 mg/L | Y 361.104 | 99.37997 |
| Ti 322.284 | 5.05025 | mg/L | 0.048135 | 1.0 | 55418.2 | 5.05025 mg/L | Y 361.104 | 101.00498 |
| Tl 190.794 | 1.94632 | mg/L | 0.037078 | 1.9 | 730.515 | 1.94632 mg/L | Y 361.104 | 97.31606 |
| V 289.164 | 2.01809 | mg/L | 0.017059 | 0.8 | 18152.5 | 2.01809 mg/L | Y 361.104 | 100.90434 |
| Zn 206.200 | 5.29131 | mg/L | 0.053262 | 1.0 | 3600.85 | 5.29131 mg/L | Y 361.104 | 105.82619 |
| Zr 257.147 | 5.12330 | mg/L | 0.045160 | 0.9 | 69650.7 | 5.12330 mg/L | Y 361.104 | 102.46590 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.616226 | 159871 | 784.400 | 0.5 |

**BLA01 (CCB)** **11/13/2009, 2:34:50 AM** **Rack 1, Tube 34**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000074 | 0.000024 | -0.000062u |
| Al 237.312 | 0.004078 | 0.008002 | -0.000684u |
| As 188.980 | -0.000090u | -0.000079u | 0.000189 |
| B 249.772 | 0.010333 | 0.007475 | 0.005452 |
| Ba 233.527 | -0.000125u | 0.000001 | 0.000082 |
| Be 234.861 | 0.000020 | 0.000116 | 0.000013 |
| Ca 315.887 | 0.000110 | 0.002784 | -0.000199u |
| Cd 228.802 | 0.000372 | 0.000233 | 0.000513 |
| Co 231.160 | 0.001015 | -0.000198u | 0.001035 |
| Cr 267.716 | 0.000027 | -0.000057u | 0.000136 |
| Cu 324.754 | -0.000382u | -0.000006u | -0.000315u |
| Fe 261.382 | -0.000051u | 0.002315 | -0.002399u |
| K 766.491 | 0.000834 | 0.000331 | 0.000506 |
| Li 610.365 | -0.000513u | 0.000127 | -0.000284u |
| Mg 279.078 | 0.001120 | 0.000165 | 0.001391 |
| Mn 293.305 | 0.000814 | 0.000707 | 0.000223 |
| Mo 202.032 | 0.000867 | -0.000231u | 0.000261 |
| Na 568.821 | -0.081531u | -0.128176u | -0.117492u |
| Na 589.592 | 0.000082 | 0.001725 | 0.000070 |
| Ni 231.604 | -0.000673u | 0.000898 | 0.000216 |
| Pb 220.353 | 0.000656 | -0.001170u | 0.000796 |
| Sb 217.582 | 0.001662 | -0.006980u | -0.008497u |
| Se 196.026 | -0.005250u | -0.002062u | -0.003968u |
| Si 251.611 | 0.006832 | 0.006800 | 0.004838 |
| Sn 189.927 | -0.001196u | -0.001226u | 0.002547 |
| Sr 216.596 | 0.000410 | -0.000201u | 0.000426 |
| Ti 322.284 | 0.001161 | -0.000946u | 0.000291 |
| Tl 190.794 | 0.002564 | -0.001800u | 0.006389 |
| V 289.164 | 0.000785 | 0.000461 | 0.001328 |
| Zn 206.200 | 0.002055 | 0.001127 | -0.000569u |
| Zr 257.147 | 0.000415 | 0.000288 | 0.000235 |
| Y 361.104 | 0.663062 | 0.644141 | 0.659901 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000012uv | mg/L | 0.000069 | 563.9 | -15.1594 | 0.000012 mg/L | Y 361.104 | 0.00001 |
| Al 237.312 | 0.003799uv | mg/L | 0.004350 | 114.5 | -0.101654 | 0.003799 mg/L | Y 361.104 | 0.00380 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.000007uv | mg/L | 0.000158 | 2297.4 | 0.267350 | 0.000007 mg/L | Y 361.104 | 0.00001 |
| B 249.772 | 0.007753 | mg/L | 0.002453 | 31.6 | 106.285 | 0.007753 mg/L | Y 361.104 | 0.00775 |
| Ba 233.527 | -0.000014uv | mg/L | 0.000104 | 754.1 | 10.8627 | -0.000014 mg/L | Y 361.104 | -0.00001 |
| Be 234.861 | 0.000050 | mg/L | 0.000057 | 115.9 | -1.99282 | 0.000050 mg/L | Y 361.104 | 0.00005 |
| Ca 315.887 | 0.000898uv | mg/L | 0.001640 | 182.5 | 601.321 | 0.000898 mg/L | Y 361.104 | 0.00090 |
| Cd 228.802 | 0.000373 | mg/L | 0.000140 | 37.6 | 1.59110 | 0.000373 mg/L | Y 361.104 | 0.00037 |
| Co 231.160 | 0.000617uv | mg/L | 0.000706 | 114.4 | 11.0750 | 0.000617 mg/L | Y 361.104 | 0.00062 |
| Cr 267.716 | 0.000035uv | mg/L | 0.000097 | 273.5 | -5.22011 | 0.000035 mg/L | Y 361.104 | 0.00004 |
| Cu 324.754 | -0.000234uv | mg/L | 0.000201 | 85.7 | 111.759 | -0.000234 mg/L | Y 361.104 | -0.00023 |
| Fe 261.382 | -0.000045uv | mg/L | 0.002357 | 5217.4 | 9.19215 | -0.000045 mg/L | Y 361.104 | -0.00005 |
| K 766.491 | 0.000557 | mg/L | 0.000255 | 45.8 | -298.468 | 0.000557 mg/L | Y 361.104 | 0.00056 |
| Li 610.365 | -0.000223uv | mg/L | 0.000325 | 145.4 | 445.018 | -0.000223 mg/L | Y 361.104 | -0.00022 |
| Mg 279.078 | 0.000892 | mg/L | 0.000644 | 72.2 | 21.5950 | 0.000892 mg/L | Y 361.104 | 0.00089 |
| Mn 293.305 | 0.000581 | mg/L | 0.000315 | 54.2 | 9.19264 | 0.000581 mg/L | Y 361.104 | 0.00058 |
| Mo 202.032 | 0.000299uv | mg/L | 0.000550 | 184.0 | 2.26132 | 0.000299 mg/L | Y 361.104 | 0.00030 |
| Na 568.821 | -uv | mg/L | 0.024437 | 22.4 | -487.274 | - mg/L | Y 361.104 | - |
| Na 589.592 | 0.000626 | mg/L | 0.000952 | 152.2 | 7466.45 | 0.000626 mg/L | Y 361.104 | 0.00063 |
| Ni 231.604 | 0.000147uv | mg/L | 0.000788 | 535.8 | 0.191086 | 0.000147 mg/L | Y 361.104 | 0.00015 |
| Pb 220.353 | 0.000094uv | mg/L | 0.001097 | 1163.8 | -0.918057 | 0.000094 mg/L | Y 361.104 | 0.00009 |
| Sb 217.582 | -0.004605uv | mg/L | 0.005480 | 119.0 | -1.53834 | -0.004605 mg/L | Y 361.104 | -0.00461 |
| Se 196.026 | -0.003760uv | mg/L | 0.001604 | 42.7 | 0.402533 | -0.003760 mg/L | Y 361.104 | -0.00376 |
| Si 251.611 | 0.006157 | mg/L | 0.001142 | 18.6 | 58.3262 | 0.006157 mg/L | Y 361.104 | 0.00616 |
| Sn 189.927 | 0.000042uv | mg/L | 0.002170 | 5224.3 | 0.887424 | 0.000042 mg/L | Y 361.104 | 0.00004 |
| Sr 216.596 | 0.000212uv | mg/L | 0.000357 | 168.7 | 1.50359 | 0.000212 mg/L | Y 361.104 | 0.00021 |
| Ti 322.284 | 0.000169uv | mg/L | 0.001059 | 628.2 | 118.207 | 0.000169 mg/L | Y 361.104 | 0.00017 |
| Tl 190.794 | 0.002384uv | mg/L | 0.004097 | 171.8 | 1.13572 | 0.002384 mg/L | Y 361.104 | 0.00238 |
| V 289.164 | 0.000858 | mg/L | 0.000438 | 51.1 | 10.3226 | 0.000858 mg/L | Y 361.104 | 0.00086 |
| Zn 206.200 | 0.000871uv | mg/L | 0.001331 | 152.8 | 0.487393 | 0.000871 mg/L | Y 361.104 | 0.00087 |
| Zr 257.147 | 0.000313 | mg/L | 0.000093 | 29.6 | 20.3751 | 0.000313 mg/L | Y 361.104 | 0.00031 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.655701 | 170112 | 2629.425 | 1.5 |

2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

**Q2256544 BLA02 (Samp)** **11/13/2009, 2:38:09 AM** **Rack 1, Tube 35**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000271 | -0.000080u | -0.000192u |
| Al 237.312 | 0.011687 | 0.013307 | 0.010461 |
| As 188.980 | -0.001246u | -0.003330u | -0.003369u |
| B 249.772 | 0.002893 | 0.002937 | 0.002666 |
| Ba 233.527 | 0.000067 | 0.000035 | -0.000076u |
| Be 234.861 | 0.000016 | 0.000083 | 0.000082 |
| Ca 315.887 | -0.019133u | -0.018186u | -0.018320u |
| Cd 228.802 | -0.000135u | -0.000145u | 0.000233 |
| Co 231.160 | 0.000255 | 0.000268 | 0.000079 |
| Cr 267.716 | 0.000186 | 0.000060 | 0.000203 |
| Cu 324.754 | 0.000073 | -0.000059u | 0.000090 |
| Fe 261.382 | 0.011623 | 0.007201 | 0.007608 |
| K 766.491 | 0.000071 | -0.000515u | -0.001511u |
| Li 610.365 | -0.000769u | -0.000504u | -0.001856u |
| Mg 279.078 | -0.015434u | -0.016153u | -0.016429u |
| Mn 293.305 | 0.000185 | 0.000719 | -0.000112u |
| Mo 202.032 | -0.000600u | -0.000256u | -0.000201u |
| Na 568.821 | -0.185000u | -0.195456u | -0.197926u |
| Na 589.592 | -0.031237u | -0.031220u | -0.031254u |
| Ni 231.604 | 0.000384 | -0.000622u | 0.000282 |
| Pb 220.353 | 0.000971 | 0.003031 | -0.002027u |
| Sb 217.582 | -0.003180u | -0.004900u | -0.006535u |
| Se 196.026 | -0.000512u | -0.004397u | -0.006386u |
| Si 251.611 | -0.006048u | -0.007709u | -0.007913u |
| Sn 189.927 | -0.000935u | -0.000971u | -0.000393u |
| Sr 216.596 | -0.000338u | -0.000662u | -0.000296u |
| Ti 322.284 | -0.000843u | -0.001056u | -0.000284u |
| Tl 190.794 | 0.002108 | -0.000966u | -0.002383u |
| V 289.164 | -0.000102u | 0.000225 | 0.000369 |
| Zn 206.200 | 0.003478 | 0.000993 | 0.001955 |
| Zr 257.147 | -0.000290u | 0.000148 | 0.000064 |
| Y 361.104 | 0.668183 | 0.664179 | 0.662735 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000000uv | mg/L | 0.000242 | 60883.0 | -15.7476 | -0.000000 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.011818 | mg/L | 0.001427 | 12.1 | 5.57606 | 0.011818 mg/L | Y 361.104 | 1.00000 |



2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.002648uv | mg/L | 0.001215 | 45.9 | -0.746346 | -0.002648 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.002832 | mg/L | 0.000146 | 5.1 | 49.5875 | 0.002832 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.000009uv | mg/L | 0.000075 | 876.7 | 11.7698 | 0.000009 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000060 | mg/L | 0.000038 | 63.7 | -1.55141 | 0.000060 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | -0.018546uv | mg/L | 0.000512 | 2.8 | 452.737 | -0.018546 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | -0.000016uv | mg/L | 0.000215 | 1367.4 | -1.74141 | -0.000016 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.000201 | mg/L | 0.000105 | 52.5 | 8.50128 | 0.000201 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.000150 | mg/L | 0.000078 | 52.2 | -1.06689 | 0.000150 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.000035uv | mg/L | 0.000081 | 235.5 | 126.162 | 0.000035 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 0.008811 | mg/L | 0.002444 | 27.7 | 27.7550 | 0.008811 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | -0.000652uv | mg/L | 0.000800 | 122.7 | -341.234 | -0.000652 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | -0.001043uv | mg/L | 0.000716 | 68.7 | 426.762 | -0.001043 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | -0.016006uv | mg/L | 0.000514 | 3.2 | 3.13623 | -0.016006 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.000264uv | mg/L | 0.000421 | 159.5 | 4.31583 | 0.000264 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | -0.000352uv | mg/L | 0.000216 | 61.4 | -0.160937 | -0.000352 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | -uv | mg/L | 0.006862 | 3.6 | -520.076 | - mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -0.031237uv | mg/L | 0.000017 | 0.1 | 1259.09 | -0.031237 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.000015uv | mg/L | 0.000553 | 3795.7 | -0.198366 | 0.000015 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.000658uv | mg/L | 0.002544 | 386.4 | -0.111456 | 0.000658 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.004872uv | mg/L | 0.001678 | 34.4 | -1.67070 | -0.004872 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.003765uv | mg/L | 0.002988 | 79.4 | 0.401465 | -0.003765 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | -0.007224uv | mg/L | 0.001023 | 14.2 | 26.7740 | -0.007224 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000767uv | mg/L | 0.000324 | 42.3 | 0.333471 | -0.000767 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | -0.000432uv | mg/L | 0.000200 | 46.3 | -1.85418 | -0.000432 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | -0.000728uv | mg/L | 0.000398 | 54.7 | 108.384 | -0.000728 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.000414uv | mg/L | 0.002296 | 554.8 | 0.107249 | -0.000414 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.000164uv | mg/L | 0.000241 | 147.1 | 4.04318 | 0.000164 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.002142 | mg/L | 0.001253 | 58.5 | 1.34859 | 0.002142 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | -0.000026uv | mg/L | 0.000232 | 885.9 | 15.7653 | -0.000026 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.665032 | 172533 | 732.267 | 0.4 |

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**Q2256545 LCS (Samp)** **11/13/2009, 2:41:28 AM** **Rack 1, Tube 36**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.053989 | 0.053119 | 0.053634 |
| Al 237.312 | 2.19474 | 2.15055 | 2.17267 |
| As 188.980 | 2.09071 | 2.04606 | 2.05891 |
| B 249.772 | 1.06000 | 1.01955 | 1.06981 |
| Ba 233.527 | 2.06046 | 1.94640 | 2.02499 |
| Be 234.861 | 0.054298 | 0.053741 | 0.054008 |
| Ca 315.887 | 102.562 | 100.172 | 101.317 |
| Cd 228.802 | 0.050333 | 0.048766 | 0.048987 |
| Co 231.160 | 0.503344 | 0.495362 | 0.500102 |
| Cr 267.716 | 0.207165 | 0.202738 | 0.205106 |
| Cu 324.754 | 0.254660 | 0.246863 | 0.253818 |
| Fe 261.382 | 1.02284 | 0.997440 | 1.00325 |
| K 766.491 | 106.288 | 104.501 | 105.261 |
| Li 610.365 | 1.03123 | 1.00540 | 1.01455 |
| Mg 279.078 | 103.294 | 101.119 | 102.213 |
| Mn 293.305 | 0.516954 | 0.506032 | 0.510597 |
| Mo 202.032 | 1.02039 | 1.00681 | 1.02025 |
| Na 568.821 | 103.998 | 101.649 | 102.753 |
| Na 589.592 | 109.787x | 107.824x | 108.647x |
| Ni 231.604 | 0.509188 | 0.497183 | 0.501109 |
| Pb 220.353 | 0.507434 | 0.494761 | 0.502582 |
| Sb 217.582 | 0.517484 | 0.506792 | 0.518357 |
| Se 196.026 | 2.07624 | 2.09653 | 2.11136 |
| Si 251.611 | 1.04018 | 1.02308 | 1.03300 |
| Sn 189.927 | 4.05304 | 3.97789 | 4.01019 |
| Sr 216.596 | 1.02962 | 1.00959 | 1.01293 |
| Ti 322.284 | 1.01360 | 1.00612 | 1.00108 |
| Tl 190.794 | 2.97219 | 2.96897 | 3.01836 |
| V 289.164 | 0.517217 | 0.506422 | 0.512803 |
| Zn 206.200 | 0.546754 | 0.538536 | 0.538942 |
| Zr 257.147 | 1.03642 | 1.01523 | 1.02728 |
| Y 361.104 | 0.612196 | 0.623068 | 0.618106 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.053581 | mg/L | 0.000437 | 0.8 | 2496.15 | 0.053581 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 2.17265 | mg/L | 0.022098 | 1.0 | 1547.81 | 2.17265 mg/L | Y 361.104 | 1.00000 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.06523 | mg/L | 0.022986 | 1.1 | 787.742 | 2.06523 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.04979 | mg/L | 0.026641 | 2.5 | 12119.1 | 1.04979 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.01062 | mg/L | 0.058370 | 2.9 | 82138.3 | 2.01062 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.054015 | mg/L | 0.000279 | 0.5 | 2884.39 | 0.054015 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 101.350 | mg/L | 1.19536 | 1.2 | 774598 | 101.350 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.049362 | mg/L | 0.000848 | 1.7 | 478.637 | 0.049362 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.499603 | mg/L | 0.004014 | 0.8 | 3021.03 | 0.499603 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.205003 | mg/L | 0.002215 | 1.1 | 7431.27 | 0.205003 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.251780 | mg/L | 0.004280 | 1.7 | 13720.2 | 0.251780 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 1.00784 | mg/L | 0.013308 | 1.3 | 2108.89 | 1.00784 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 105.350 | mg/L | 0.896620 | 0.9 | 3727838 | 105.350 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.01706 | mg/L | 0.013094 | 1.3 | 22509.2 | 1.01706 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 102.209 | mg/L | 1.08729 | 1.1 | 111693 | 102.209 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.511194 | mg/L | 0.005485 | 1.1 | 7859.15 | 0.511194 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.01582 | mg/L | 0.007800 | 0.8 | 3779.17 | 1.01582 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 102.800 | mg/L | 1.17525 | 1.1 | 40066.8 | 102.800 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 0.985482 | 0.9 | 21197438 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.502493 | mg/L | 0.006121 | 1.2 | 1488.15 | 0.502493 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.501592 | mg/L | 0.006394 | 1.3 | 712.259 | 0.501592 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.514211 | mg/L | 0.006440 | 1.3 | 254.391 | 0.514211 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.09471 | mg/L | 0.017629 | 0.8 | 445.088 | 2.09471 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 1.03209 | mg/L | 0.008584 | 0.8 | 2708.52 | 1.03209 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 4.01371 | mg/L | 0.037702 | 0.9 | 2750.87 | 4.01371 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.01738 | mg/L | 0.010734 | 1.1 | 5316.93 | 1.01738 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.00693 | mg/L | 0.006300 | 0.6 | 11158.0 | 1.00693 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 2.98651 | mg/L | 0.027630 | 0.9 | 1097.80 | 2.98651 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.512148 | mg/L | 0.005427 | 1.1 | 4637.14 | 0.512148 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.541411 | mg/L | 0.004632 | 0.9 | 367.929 | 0.541411 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.02631 | mg/L | 0.010630 | 1.0 | 13995.2 | 1.02631 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.617790 | 160276 | 1412.046 | 0.9 |

**A864537 SD-ICP 1:5 (Samp)** **11/13/2009, 2:44:48 AM** **Rack 1, Tube 37**

**Weight: 1** **Volume: 1** **Dilution: 5**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000155 | 0.000067 | 0.000393 |
| Al 237.312 | 1.53939 | 1.59377 | 1.60503 |
| As 188.980 | -0.000011u | 0.002613 | 0.001369 |
| B 249.772 | 0.015099 | 0.013847 | 0.012539 |
| Ba 233.527 | 0.025878 | 0.026979 | 0.026545 |
| Be 234.861 | 0.000376u | 0.000288u | 0.000296u |
| Ca 315.887 | 28.6810 | 29.6245 | 29.6299 |
| Cd 228.802 | 0.000539 | 0.000345 | 0.000366 |
| Co 231.160 | 0.002636 | 0.002289 | 0.002278 |
| Cr 267.716 | 0.035810 | 0.037062 | 0.037105 |
| Cu 324.754 | 0.005276 | 0.005441 | 0.005580 |
| Fe 261.382 | 2.90259 | 3.00811 | 3.01383 |
| K 766.491 | 0.557475 | 0.574707 | 0.574998 |
| Li 610.365 | 0.007916u | 0.006177u | 0.008619u |
| Mg 279.078 | 8.09605 | 8.38761 | 8.36395 |
| Mn 293.305 | 0.081838 | 0.084999 | 0.084708 |
| Mo 202.032 | 0.002984 | 0.003135 | 0.002050 |
| Na 568.821 | 0.769260 | 0.897454 | 0.897847 |
| Na 589.592 | 1.10626 | 1.14529 | 1.14597 |
| Ni 231.604 | 0.022180 | 0.022446 | 0.022340 |
| Pb 220.353 | 0.002412 | 0.000722 | 0.000799 |
| Sb 217.582 | -0.005275u | -0.010254u | -0.002254u |
| Se 196.026 | 0.001437 | -0.008828u | -0.003172u |
| Si 251.611 | 3.64555 | 3.82268 | 3.80921 |
| Sn 189.927 | -0.002246u | 0.002001 | 0.001050 |
| Sr 216.596 | 0.032976 | 0.033582 | 0.033194 |
| Ti 322.284 | 0.041307 | 0.042041 | 0.041316 |
| Tl 190.794 | 0.000782 | -0.001336u | 0.001436 |
| V 289.164 | 0.004509 | 0.005072 | 0.005058 |
| Zn 206.200 | 0.018384 | 0.017120 | 0.022411 |
| Zr 257.147 | 0.001055 | 0.001106 | 0.001238 |
| Y 361.104 | 0.664286 | 0.652382 | 0.650811 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000205 | mg/L | 0.000168 | 82.0 | -7.65299 | 0.001025 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 1.57940 | mg/L | 0.035101 | 2.2 | 1113.44 | 7.89700 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.001324uv | mg/L | 0.001313 | 99.2 | 0.738607 | 0.006618 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.013828 | mg/L | 0.001280 | 9.3 | 183.934 | 0.069142 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.026467 | mg/L | 0.000555 | 2.1 | 1092.52 | 0.132337 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000320uv | mg/L | 0.000049 | 15.2 | -32.2289 | 0.001600 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 29.3118 | mg/L | 0.546293 | 1.9 | 224472 | 146.559 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000416 | mg/L | 0.000106 | 25.5 | 2.14808 | 0.002082 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.002401 | mg/L | 0.000203 | 8.5 | 24.6762 | 0.012005 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.036659 | mg/L | 0.000736 | 2.0 | 1323.43 | 0.183295 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.005432 | mg/L | 0.000152 | 2.8 | 395.779 | 0.027161 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 2.97484 | mg/L | 0.062637 | 2.1 | 6245.82 | 14.8742 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 0.569060 | mg/L | 0.010034 | 1.8 | 19819.9 | 2.84530 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.007571uv | mg/L | 0.001257 | 16.6 | 395.771 | 0.037854 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 8.28253 | mg/L | 0.161934 | 2.0 | 9071.03 | 41.4127 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.083848 | mg/L | 0.001747 | 2.1 | 1289.31 | 0.419242 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.002723 | mg/L | 0.000588 | 21.6 | 11.2843 | 0.013616 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 0.854854 | mg/L | 0.074127 | 8.7 | -13.2659 | 4.27427 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 1.13251 | mg/L | 0.022737 | 2.0 | 228022 | 5.66253 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.022322 | mg/L | 0.000134 | 0.6 | 65.9895 | 0.111609 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.001311 | mg/L | 0.000954 | 72.8 | 0.758925 | 0.006554 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.005927uv | mg/L | 0.004040 | 68.2 | -2.26222 | -0.029637 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.003521uv | mg/L | 0.005142 | 146.0 | 0.479837 | -0.017606 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 3.75914 | mg/L | 0.098608 | 2.6 | 8882.83 | 18.7957 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.000268uv | mg/L | 0.002229 | 831.1 | 1.05392 | 0.001341 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.033250 | mg/L | 0.000307 | 0.9 | 176.099 | 0.166252 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.041555 | mg/L | 0.000421 | 1.0 | 570.813 | 0.207773 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.000294uv | mg/L | 0.001449 | 492.8 | 0.452614 | 0.001470 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.004880 | mg/L | 0.000321 | 6.6 | 45.8750 | 0.024399 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.019305 | mg/L | 0.002763 | 14.3 | 12.8960 | 0.096526 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.001133 | mg/L | 0.000095 | 8.3 | 33.0500 | 0.005665 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.655826 | 170144 | 1911.528 | 1.1 |

2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

**A864537 (Samp)** **11/13/2009, 2:48:08 AM** **Rack 1, Tube 38**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000235u | -0.000333u | -0.000122u |
| Al 237.312 | 7.85242 | 7.93295 | 7.97756 |
| As 188.980 | 0.003538 | 0.004881 | 0.003933 |
| B 249.772 | 0.050038 | 0.052245 | 0.052513 |
| Ba 233.527 | 0.128636 | 0.129593 | 0.129799 |
| Be 234.861 | 0.002044u | 0.001784u | 0.001800u |
| Ca 315.887 | 141.307 | 143.320 | 143.558 |
| Cd 228.802 | 0.001887 | 0.002408 | 0.001929 |
| Co 231.160 | 0.007741 | 0.007943 | 0.008228 |
| Cr 267.716 | 0.176618 | 0.178213 | 0.178524 |
| Cu 324.754 | 0.026522 | 0.026859 | 0.026947 |
| Fe 261.382 | 14.2888 | 14.4143 | 14.4539 |
| K 766.491 | 3.49253 | 3.50648 | 3.51711 |
| Li 610.365 | 0.031959u | 0.029715u | 0.031808u |
| Mg 279.078 | 41.3339 | 41.6322 | 41.7355 |
| Mn 293.305 | 0.399762 | 0.402852 | 0.403131 |
| Mo 202.032 | 0.007535 | 0.008654 | 0.007711 |
| Na 568.821 | 5.74129 | 5.73239 | 5.82917 |
| Na 589.592 | 6.80018 | 6.84834 | 6.86708 |
| Ni 231.604 | 0.104063 | 0.103275 | 0.104456 |
| Pb 220.353 | 0.010790 | 0.008019 | 0.006100 |
| Sb 217.582 | -0.003241u | -0.009804u | -0.007552u |
| Se 196.026 | -0.012534u | -0.000051 | -0.003214u |
| Si 251.611 | 18.9609 | 18.8925 | 18.8983 |
| Sn 189.927 | -0.001145u | -0.000624u | 0.002859 |
| Sr 216.596 | 0.162504 | 0.163432 | 0.162994 |
| Ti 322.284 | 0.195319 | 0.197671 | 0.194421 |
| Tl 190.794 | -0.005350u | 0.002167 | 0.002818 |
| V 289.164 | 0.020411 | 0.019853 | 0.019612 |
| Zn 206.200 | 0.075000 | 0.077626 | 0.074077 |
| Zr 257.147 | 0.005039 | 0.005658 | 0.005304 |
| Y 361.104 | 0.640350 | 0.642554 | 0.637830 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000230uv | mg/L | 0.000106 | 46.0 | -30.1832 | -0.000230 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 7.92097 | mg/L | 0.063422 | 0.8 | 5596.24 | 7.92097 mg/L | Y 361.104 | 1.00000 |



2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.004117 | mg/L | 0.000690 | 16.8 | 1.69017 | 0.004117 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.051599 | mg/L | 0.001358 | 2.6 | 648.512 | 0.051599 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.129342 | mg/L | 0.000621 | 0.5 | 5294.62 | 0.129342 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.001876uv | mg/L | 0.000146 | 7.8 | -120.322 | 0.001876 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 142.728 | mg/L | 1.23653 | 0.9 | 1090728 | 142.728 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.002075 | mg/L | 0.000290 | 14.0 | 16.6753 | 0.002075 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.007970 | mg/L | 0.000245 | 3.1 | 69.5975 | 0.007970 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.177785 | mg/L | 0.001022 | 0.6 | 6443.26 | 0.177785 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.026776 | mg/L | 0.000224 | 0.8 | 1464.09 | 0.026776 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 14.3857 | mg/L | 0.086170 | 0.6 | 30167.7 | 14.3857 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 3.50538 | mg/L | 0.012328 | 0.4 | 123731 | 3.50538 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.031161uv | mg/L | 0.001254 | 4.0 | 57.7277 | 0.031161 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 41.5672 | mg/L | 0.208540 | 0.5 | 45441.3 | 41.5672 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.401915 | mg/L | 0.001870 | 0.5 | 6179.13 | 0.401915 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.007967 | mg/L | 0.000602 | 7.6 | 30.8107 | 0.007967 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 5.76762 | mg/L | 0.053488 | 0.9 | 2283.70 | 5.76762 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 6.83853 | mg/L | 0.034510 | 0.5 | 1339808 | 6.83853 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.103932 | mg/L | 0.000601 | 0.6 | 308.144 | 0.103932 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.008303 | mg/L | 0.002358 | 28.4 | 10.5148 | 0.008303 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.006866uv | mg/L | 0.003335 | 48.6 | -2.99987 | -0.006866 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.005266uv | mg/L | 0.006489 | 123.2 | 0.212625 | -0.005266 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 18.9173 | mg/L | 0.037914 | 0.2 | 44523.6 | 18.9173 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 0.000363uv | mg/L | 0.002177 | 599.1 | 1.16144 | 0.000363 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.162977 | mg/L | 0.000465 | 0.3 | 861.484 | 0.162977 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.195804 | mg/L | 0.001678 | 0.9 | 2257.60 | 0.195804 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.000122uv | mg/L | 0.004539 | 3735.0 | 0.615601 | -0.000122 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.019959 | mg/L | 0.000410 | 2.1 | 179.189 | 0.019959 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.075567 | mg/L | 0.001841 | 2.4 | 50.6974 | 0.075567 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.005334 | mg/L | 0.000310 | 5.8 | 95.9770 | 0.005334 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.640245 | 166102 | 613.218 | 0.4 |

**Q2256546 SPI02 (Samp)** **11/13/2009, 2:51:27 AM** **Rack 1, Tube 39**

**Weight: 1** **Volume: 1** **Dilution: 1**

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| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.054494 | 0.052911 | 0.053181 |
| Al 237.312 | 12.3467 | 11.9753 | 11.9494 |
| As 188.980 | 2.12515 | 2.05310 | 2.08454 |
| B 249.772 | 1.12457 | 1.10785 | 1.11940 |
| Ba 233.527 | 2.18062 | 2.11759 | 2.11716 |
| Be 234.861 | 0.056306 | 0.054342 | 0.055055 |
| Ca 315.887 | 241.442 | 234.525 | 234.521 |
| Cd 228.802 | 0.051666 | 0.049192 | 0.049882 |
| Co 231.160 | 0.508434 | 0.490859 | 0.492246 |
| Cr 267.716 | 0.377630 | 0.365446 | 0.366134 |
| Cu 324.754 | 0.285266 | 0.277510 | 0.279291 |
| Fe 261.382 | 15.5162 | 15.0267 | 15.0544 |
| K 766.491 | 118.012 | 114.425 | 114.318 |
| Li 610.365 | 1.05948 | 1.03272 | 1.03931 |
| Mg 279.078 | 145.652 | 141.317 | 141.690 |
| Mn 293.305 | 0.902471 | 0.877138 | 0.875244 |
| Mo 202.032 | 1.02089 | 0.996838 | 1.00067 |
| Na 568.821 | 114.222 | 111.112 | 111.247 |
| Na 589.592 | 121.616x | 118.031x | 118.695x |
| Ni 231.604 | 0.597685 | 0.577164 | 0.582605 |
| Pb 220.353 | 0.511101 | 0.492860 | 0.501979 |
| Sb 217.582 | 0.521799 | 0.509593 | 0.516688 |
| Se 196.026 | 2.12011 | 2.08483 | 2.12040 |
| Si 251.611 | 23.6799 | 22.9860 | 22.9472 |
| Sn 189.927 | 4.04215 | 3.90969 | 3.90490 |
| Sr 216.596 | 1.19351 | 1.14181 | 1.14417 |
| Ti 322.284 | 1.23421 | 1.19496 | 1.19883 |
| Tl 190.794 | 2.92299 | 2.87306 | 2.88356 |
| V 289.164 | 0.542476 | 0.524772 | 0.525792 |
| Zn 206.200 | 0.598932 | 0.582095 | 0.585402 |
| Zr 257.147 | 1.04024 | 1.01236 | 1.01577 |
| Y 361.104 | 0.602649 | 0.617207 | 0.613134 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.053529 | mg/L | 0.000847 | 1.6 | 2488.42 | 0.053529 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 12.0905 | mg/L | 0.222271 | 1.8 | 8564.95 | 12.0905 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.08760 | mg/L | 0.036125 | 1.7 | 796.187 | 2.08760 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.11727 | mg/L | 0.008562 | 0.8 | 12933.3 | 1.11727 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.13845 | mg/L | 0.036514 | 1.7 | 87360.1 | 2.13845 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.055234 | mg/L | 0.000994 | 1.8 | 2736.25 | 0.055234 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 236.829 | mg/L | 3.99456 | 1.7 | 1809240 | 236.829 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.050247 | mg/L | 0.001277 | 2.5 | 487.441 | 0.050247 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.497180 | mg/L | 0.009771 | 2.0 | 3021.53 | 0.497180 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.369737 | mg/L | 0.006845 | 1.9 | 13407.6 | 0.369737 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.280689 | mg/L | 0.004063 | 1.4 | 15176.2 | 0.280689 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 15.1991 | mg/L | 0.274963 | 1.8 | 31858.9 | 15.1991 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 115.585 | mg/L | 2.10235 | 1.8 | 4090039 | 115.585 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.04384 | mg/L | 0.013944 | 1.3 | 22074.0 | 1.04384 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 142.886 | mg/L | 2.40196 | 1.7 | 156137 | 142.886 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.884951 | mg/L | 0.015202 | 1.7 | 13605.1 | 0.884951 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.00613 | mg/L | 0.012922 | 1.3 | 3743.13 | 1.00613 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 112.194 | mg/L | 1.75797 | 1.6 | 44190.2 | 112.194 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 1.90730 | 1.6 | 23281018 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.585818 | mg/L | 0.010631 | 1.8 | 1735.41 | 0.585818 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.501980 | mg/L | 0.009120 | 1.8 | 712.523 | 0.501980 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.516027 | mg/L | 0.006130 | 1.2 | 254.950 | 0.516027 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.10845 | mg/L | 0.020450 | 1.0 | 448.123 | 2.10845 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 23.2044 | mg/L | 0.412289 | 1.8 | 54836.2 | 23.2044 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 3.95224 | mg/L | 0.077897 | 2.0 | 2708.82 | 3.95224 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.15983 | mg/L | 0.029191 | 2.5 | 6070.64 | 1.15983 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.20933 | mg/L | 0.021629 | 1.8 | 13371.2 | 1.20933 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 2.89321 | mg/L | 0.026324 | 0.9 | 1063.96 | 2.89321 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.531014 | mg/L | 0.009940 | 1.9 | 4804.67 | 0.531014 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.588809 | mg/L | 0.008921 | 1.5 | 399.604 | 0.588809 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.02279 | mg/L | 0.015209 | 1.5 | 13953.8 | 1.02279 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.610996 | 158514 | 1948.548 | 1.2 |

**Q2256547 DPS02 (Samp)** **11/13/2009, 2:54:46 AM** **Rack 1, Tube 40**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.054264 | 0.053788 | 0.053744 |
| Al 237.312 | 12.3022 | 12.1189 | 12.1648 |
| As 188.980 | 2.12513 | 2.09748 | 2.10120 |
| B 249.772 | 1.13712 | 1.13294 | 1.13818 |
| Ba 233.527 | 2.18273 | 2.15016 | 2.15012 |
| Be 234.861 | 0.056740 | 0.055222 | 0.055709 |
| Ca 315.887 | 245.994 | 239.623 | 239.681 |
| Cd 228.802 | 0.051533 | 0.051053 | 0.051027 |
| Co 231.160 | 0.508160 | 0.498552 | 0.498805 |
| Cr 267.716 | 0.380213 | 0.373083 | 0.373747 |
| Cu 324.754 | 0.280014 | 0.281511 | 0.282103 |
| Fe 261.382 | 15.7076 | 15.4506 | 15.4725 |
| K 766.491 | 117.833 | 115.780 | 115.328 |
| Li 610.365 | 1.06942 | 1.05432 | 1.05735 |
| Mg 279.078 | 146.848 | 144.302 | 144.298 |
| Mn 293.305 | 0.914971 | 0.896935 | 0.896404 |
| Mo 202.032 | 1.02902 | 1.00846 | 1.01418 |
| Na 568.821 | 114.319 | 112.119 | 112.340 |
| Na 589.592 | 122.254x | 119.818x | 120.205x |
| Ni 231.604 | 0.597913 | 0.587566 | 0.588802 |
| Pb 220.353 | 0.518782 | 0.503947 | 0.503148 |
| Sb 217.582 | 0.527748 | 0.511914 | 0.514773 |
| Se 196.026 | 2.15656 | 2.13434 | 2.13225 |
| Si 251.611 | 25.1631 | 24.7705 | 24.8862 |
| Sn 189.927 | 4.03674 | 3.96415 | 3.97656 |
| Sr 216.596 | 1.17638 | 1.13659 | 1.16047 |
| Ti 322.284 | 1.24407 | 1.22254 | 1.22855 |
| Tl 190.794 | 2.92414 | 2.89645 | 2.93117 |
| V 289.164 | 0.542152 | 0.531427 | 0.533254 |
| Zn 206.200 | 0.597285 | 0.589057 | 0.587206 |
| Zr 257.147 | 1.04689 | 1.02992 | 1.03180 |
| Y 361.104 | 0.604312 | 0.611471 | 0.609391 |

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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.053932 | mg/L | 0.000288 | 0.5 | 2509.06 | 0.053932 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 12.1953 | mg/L | 0.095414 | 0.8 | 8638.88 | 12.1953 mg/L | Y 361.104 | 1.00000 |



| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.10794 | mg/L | 0.015004 | 0.7 | 803.936 | 2.10794 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 1.13608 | mg/L | 0.002772 | 0.2 | 13151.0 | 1.13608 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 2.16100 | mg/L | 0.018820 | 0.9 | 88281.1 | 2.16100 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.055891 | mg/L | 0.000775 | 1.4 | 2766.36 | 0.055891 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 241.766 | mg/L | 3.66176 | 1.5 | 1846940 | 241.766 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.051204 | mg/L | 0.000285 | 0.6 | 496.128 | 0.051204 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.501839 | mg/L | 0.005476 | 1.1 | 3049.66 | 0.501839 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.375681 | mg/L | 0.003939 | 1.0 | 13623.2 | 0.375681 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.281210 | mg/L | 0.001077 | 0.4 | 15202.2 | 0.281210 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 15.5436 | mg/L | 0.142470 | 0.9 | 32580.7 | 15.5436 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 116.314 | mg/L | 1.33516 | 1.1 | 4115834 | 116.314 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 1.06036 | mg/L | 0.007990 | 0.8 | 22407.3 | 1.06036 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 145.149 | mg/L | 1.47113 | 1.0 | 158610 | 145.149 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.902770 | mg/L | 0.010570 | 1.2 | 13879.1 | 0.902770 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 1.01722 | mg/L | 0.010608 | 1.0 | 3784.38 | 1.01722 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 112.926 | mg/L | 1.21126 | 1.1 | 44492.4 | 112.926 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -x | mg/L | 1.30930 | 1.1 | 23536586 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.591427 | mg/L | 0.005651 | 1.0 | 1752.04 | 0.591427 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.508626 | mg/L | 0.008805 | 1.7 | 721.972 | 0.508626 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | 0.518145 | mg/L | 0.008438 | 1.6 | 255.985 | 0.518145 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | 2.14105 | mg/L | 0.013471 | 0.6 | 455.035 | 2.14105 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 24.9399 | mg/L | 0.201727 | 0.8 | 58918.2 | 24.9399 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | 3.99248 | mg/L | 0.038829 | 1.0 | 2736.40 | 3.99248 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 1.15781 | mg/L | 0.020027 | 1.7 | 6060.32 | 1.15781 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 1.23172 | mg/L | 0.011112 | 0.9 | 13616.4 | 1.23172 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 2.91725 | mg/L | 0.018359 | 0.6 | 1072.81 | 2.91725 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.535611 | mg/L | 0.005738 | 1.1 | 4846.11 | 0.535611 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.591183 | mg/L | 0.005365 | 0.9 | 401.213 | 0.591183 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 1.03620 | mg/L | 0.009300 | 0.9 | 14136.5 | 1.03620 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.608391 | 157838 | 955.393 | 0.6 |

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**A864551 (Samp)** **11/13/2009, 2:58:06 AM** **Rack 1, Tube 41**
**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000204u | -0.000223u | 0.000126u |
| Al 237.312 | 1.63633 | 1.71696 | 1.69859 |
| As 188.980 | -0.000297u | -0.007069u | -0.001767u |
| B 249.772 | 0.070691 | 0.073925 | 0.072776 |
| Ba 233.527 | 0.114923 | 0.121837 | 0.120341 |
| Be 234.861 | 0.000387u | 0.000253u | 0.000467u |
| Ca 315.887 | 90.7304 | 96.0175 | 94.5482 |
| Cd 228.802 | 0.000748 | 0.000095 | -0.000109u |
| Co 231.160 | 0.006193 | 0.007908 | 0.007147 |
| Cr 267.716 | 0.016103 | 0.017268 | 0.016605 |
| Cu 324.754 | 0.009380 | 0.010158 | 0.010106 |
| Fe 261.382 | 3.84408 | 4.07893 | 4.02572 |
| K 766.491 | 3.61074 | 3.81403 | 3.76356 |
| Li 610.365 | 0.021461u | 0.019875u | 0.021253u |
| Mg 279.078 | 22.2802 | 23.6221 | 23.1427 |
| Mn 293.305 | 0.759565 | 0.806002 | 0.793452 |
| Mo 202.032 | 0.009578 | 0.011074 | 0.009957 |
| Na 568.821 | 375.675 | 398.381 | 392.126 |
| Na 589.592 | 230.299o | 229.999o | 232.933o |
| Ni 231.604 | 0.019611 | 0.023067 | 0.022410 |
| Pb 220.353 | 0.007478 | 0.004913 | 0.005733 |
| Sb 217.582 | -0.006138u | 0.002955 | -0.007686u |
| Se 196.026 | -0.008252u | -0.022226u | -0.007715u |
| Si 251.611 | 7.74028 | 8.25322 | 8.26106 |
| Sn 189.927 | 0.000948 | -0.003630u | -0.001648u |
| Sr 216.596 | 0.142246 | 0.150874 | 0.147848 |
| Ti 322.284 | 0.050186 | 0.053912 | 0.052482 |
| Tl 190.794 | 0.011688 | 0.002485 | -0.001423u |
| V 289.164 | 0.006332 | 0.005955 | 0.006225 |
| Zn 206.200 | 0.024547 | 0.027056 | 0.027790 |
| Zr 257.147 | 0.002022 | 0.002876 | 0.002684 |
| Y 361.104 | 0.624835 | 0.605204 | 0.610448 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000100uv | mg/L | 0.000196 | 195.6 | -29.4070 | -0.000100 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 1.68396 | mg/L | 0.042261 | 2.5 | 1185.14 | 1.68396 mg/L | Y 361.104 | 1.00000 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.003044uv | mg/L | 0.003562 | 117.0 | -0.922359 | -0.003044 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.072464 | mg/L | 0.001639 | 2.3 | 862.434 | 0.072464 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.119033 | mg/L | 0.003637 | 3.1 | 4873.53 | 0.119033 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000369uv | mg/L | 0.000108 | 29.3 | -39.3419 | 0.000369 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 93.7654 | mg/L | 2.72908 | 2.9 | 716673 | 93.7654 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000245uv | mg/L | 0.000448 | 183.0 | 0.271001 | 0.000245 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.007083 | mg/L | 0.000859 | 12.1 | 53.8366 | 0.007083 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.016659 | mg/L | 0.000585 | 3.5 | 603.099 | 0.016659 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | 0.009881 | mg/L | 0.000435 | 4.4 | 628.808 | 0.009881 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 3.98291 | mg/L | 0.123139 | 3.1 | 8359.16 | 3.98291 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 3.72944 | mg/L | 0.105853 | 2.8 | 131660 | 3.72944 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.020863uv | mg/L | 0.000862 | 4.1 | 201.194 | 0.020863 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 23.0150 | mg/L | 0.680006 | 3.0 | 25166.6 | 23.0150 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.786340 | mg/L | 0.024022 | 3.1 | 12089.1 | 0.786340 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.010203 | mg/L | 0.000778 | 7.6 | 39.1023 | 0.010203 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 388.727 | mg/L | 11.7281 | 3.0 | 151923 | 388.727 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | -ox | mg/L | 1.61413 | 0.7 | 45020964 | - mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.021696 | mg/L | 0.001835 | 8.5 | 64.1075 | 0.021696 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | 0.006041 | mg/L | 0.001310 | 21.7 | 7.64665 | 0.006041 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.003623uv | mg/L | 0.005749 | 158.7 | -1.15311 | -0.003623 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.012731uv | mg/L | 0.008227 | 64.6 | -1.34061 | -0.012731 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 8.08485 | mg/L | 0.298431 | 3.7 | 19054.8 | 8.08485 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.001443uv | mg/L | 0.002296 | 159.1 | -0.112160 | -0.001443 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.146989 | mg/L | 0.004377 | 3.0 | 771.284 | 0.146989 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | 0.052193 | mg/L | 0.001880 | 3.6 | 684.999 | 0.052193 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | 0.004250uv | mg/L | 0.006731 | 158.4 | 2.26458 | 0.004250 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.006171 | mg/L | 0.000194 | 3.1 | 41.3426 | 0.006171 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.026464 | mg/L | 0.001701 | 6.4 | 17.6235 | 0.026464 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.002527 | mg/L | 0.000448 | 17.7 | 52.7616 | 0.002527 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.613495 | 159162 | 2636.906 | 1.7 |

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**A864561 (Samp)** **11/13/2009, 3:01:25 AM** **Rack 1, Tube 42**
**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000109u | 0.000129 | -0.000020u |
| Al 237.312 | 0.230442 | 0.240569 | 0.235188 |
| As 188.980 | -0.001429u | -0.001320u | -0.004116u |
| B 249.772 | 0.005280 | 0.004752 | 0.004730 |
| Ba 233.527 | 0.000500 | 0.000475 | 0.000311 |
| Be 234.861 | -0.000073u | -0.000003u | 0.000019 |
| Ca 315.887 | 0.502735 | 0.506766 | 0.504949 |
| Cd 228.802 | 0.000744 | -0.000363u | -0.000271u |
| Co 231.160 | 0.000318 | 0.000060 | -0.000382u |
| Cr 267.716 | 0.000232 | 0.000368 | 0.000370 |
| Cu 324.754 | -0.000050u | -0.000176u | -0.000135u |
| Fe 261.382 | 0.003926 | 0.005555 | 0.004191 |
| K 766.491 | 0.042445 | 0.041919 | 0.043002 |
| Li 610.365 | 0.001796 | 0.001290 | 0.002052 |
| Mg 279.078 | 0.079741 | 0.077477 | 0.079169 |
| Mn 293.305 | 0.000745 | 0.001059 | 0.000921 |
| Mo 202.032 | 0.000191 | 0.000910 | 0.000264 |
| Na 568.821 | 0.607705 | 0.641589 | 0.646481 |
| Na 589.592 | 0.704548 | 0.709447 | 0.705482 |
| Ni 231.604 | 0.001583 | -0.000163u | 0.000228 |
| Pb 220.353 | -0.001924u | -0.003328u | -0.002718u |
| Sb 217.582 | -0.004806u | -0.008412u | -0.007898u |
| Se 196.026 | -0.003029u | -0.000023u | -0.004248u |
| Si 251.611 | 1.87931 | 1.92832 | 1.92363 |
| Sn 189.927 | -0.000823u | -0.000933u | -0.000553u |
| Sr 216.596 | 0.003569 | 0.003975 | 0.005025 |
| Ti 322.284 | -0.000503u | -0.000346u | -0.000867u |
| Tl 190.794 | 0.000189 | -0.003032u | 0.000471 |
| V 289.164 | -0.000432u | 0.000145 | 0.000411 |
| Zn 206.200 | 0.001185 | 0.001210 | 0.003012 |
| Zr 257.147 | 0.000041 | 0.000204 | -0.000091u |
| Y 361.104 | 0.670211 | 0.665268 | 0.665704 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000000uv | mg/L | 0.000120 | 96930.3 | -15.9677 | -0.000000 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.235400 | mg/L | 0.005067 | 2.2 | 164.333 | 0.235400 mg/L | Y 361.104 | 1.00000 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.002289uv | mg/L | 0.001584 | 69.2 | -0.610526 | -0.002289 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.004921 | mg/L | 0.000311 | 6.3 | 73.6523 | 0.004921 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.000429 | mg/L | 0.000102 | 23.9 | 28.9251 | 0.000429 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | -0.000019uv | mg/L | 0.000048 | 253.8 | -5.71319 | -0.000019 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 0.504817 | mg/L | 0.002019 | 0.4 | 4460.78 | 0.504817 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000037uv | mg/L | 0.000614 | 1661.2 | -1.28791 | 0.000037 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | -0.000001uv | mg/L | 0.000354 | 37415.8 | 7.17997 | -0.000001 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.000323 | mg/L | 0.000079 | 24.4 | 5.22717 | 0.000323 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | -0.000121uv | mg/L | 0.000065 | 53.6 | 117.859 | -0.000121 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 0.004557 | mg/L | 0.000874 | 19.2 | 18.8674 | 0.004557 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 0.042456 | mg/L | 0.000542 | 1.3 | 1184.26 | 0.042456 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.001713 | mg/L | 0.000388 | 22.6 | 484.615 | 0.001713 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 0.078795 | mg/L | 0.001177 | 1.5 | 106.711 | 0.078795 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.000908 | mg/L | 0.000157 | 17.3 | 14.2219 | 0.000908 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | 0.000455 | mg/L | 0.000396 | 87.0 | 2.84138 | 0.000455 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 0.631925 | mg/L | 0.021117 | 3.3 | -195.762 | 0.631925 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 0.706492 | mg/L | 0.002601 | 0.4 | 144968 | 0.706492 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.000550uv | mg/L | 0.000916 | 166.7 | 1.39290 | 0.000550 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | -0.002657uv | mg/L | 0.000704 | 26.5 | -4.84711 | -0.002657 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.007039uv | mg/L | 0.001951 | 27.7 | -2.73941 | -0.007039 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.002434uv | mg/L | 0.002175 | 89.3 | 0.683629 | -0.002434 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 1.91042 | mg/L | 0.027043 | 1.4 | 4534.09 | 1.91042 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000770uv | mg/L | 0.000196 | 25.5 | 0.331485 | -0.000770 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.004190 | mg/L | 0.000751 | 17.9 | 22.2971 | 0.004190 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | -0.000572uv | mg/L | 0.000267 | 46.7 | 110.100 | -0.000572 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.000791uv | mg/L | 0.001946 | 246.2 | -0.031244 | -0.000791 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.000042uv | mg/L | 0.000431 | 1034.7 | 2.90488 | 0.000042 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.001802 | mg/L | 0.001047 | 58.1 | 1.11986 | 0.001802 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | 0.000051uv | mg/L | 0.000148 | 288.6 | 16.8330 | 0.000051 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.667061 | 173059 | 709.980 | 0.4 |

**A864562 (Samp)** **11/13/2009, 3:04:44 AM** **Rack 1, Tube 43**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000035 | 0.000045 | 0.000104 |
| Al 237.312 | 0.260410 | 0.259051 | 0.257972 |
| As 188.980 | -0.003140u | -0.003252u | 0.003512 |
| B 249.772 | 0.003571 | 0.004055 | 0.004110 |
| Ba 233.527 | 0.000245 | 0.000337 | 0.000325 |
| Be 234.861 | -0.000084u | 0.000108 | 0.000004 |
| Ca 315.887 | 0.470137 | 0.473515 | 0.473490 |
| Cd 228.802 | 0.000034 | -0.000025u | 0.000318 |
| Co 231.160 | 0.000828 | 0.000636 | -0.000728u |
| Cr 267.716 | 0.000305 | 0.000136 | 0.000200 |
| Cu 324.754 | -0.000112u | -0.000041u | 0.000052 |
| Fe 261.382 | 0.004124 | 0.003751 | 0.004746 |
| K 766.491 | 0.037123 | 0.036057 | 0.035434 |
| Li 610.365 | 0.000853 | 0.000916 | -0.000089u |
| Mg 279.078 | 0.068615 | 0.068344 | 0.067878 |
| Mn 293.305 | 0.000902 | 0.001389 | 0.000960 |
| Mo 202.032 | -0.000374u | 0.000128 | -0.000725u |
| Na 568.821 | 0.711259 | 0.594723 | 0.742442 |
| Na 589.592 | 0.719193 | 0.725356 | 0.724383 |
| Ni 231.604 | -0.000062u | 0.001101 | -0.000442u |
| Pb 220.353 | -0.003912u | -0.001710u | 0.001297 |
| Sb 217.582 | -0.002301u | -0.007363u | -0.011101u |
| Se 196.026 | 0.002989 | -0.012682u | 0.000657 |
| Si 251.611 | 1.73089 | 1.75353 | 1.75296 |
| Sn 189.927 | -0.002473u | 0.000130 | 0.000341 |
| Sr 216.596 | 0.002937 | 0.003003 | 0.003199 |
| Ti 322.284 | -0.000233u | -0.000293u | -0.000245u |
| Tl 190.794 | 0.000541 | -0.004112u | -0.000301u |
| V 289.164 | 0.000339 | -0.000246u | 0.000723 |
| Zn 206.200 | -0.001096u | -0.000047u | 0.003648 |
| Zr 257.147 | -0.000084u | -0.000013u | 0.000015 |
| Y 361.104 | 0.672195 | 0.669590 | 0.665261 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000061 | mg/L | 0.000037 | 60.9 | -13.2453 | 0.000061 mg/L | Y 361.104 | 1.00000 |
| Al 237.312 | 0.259145 | mg/L | 0.001221 | 0.5 | 181.192 | 0.259145 mg/L | Y 361.104 | 1.00000 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | DF |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.000960uv | mg/L | 0.003873 | 403.4 | -0.101218 | -0.000960 mg/L | Y 361.104 | 1.00000 |
| B 249.772 | 0.003912 | mg/L | 0.000297 | 7.6 | 62.0277 | 0.003912 mg/L | Y 361.104 | 1.00000 |
| Ba 233.527 | 0.000302 | mg/L | 0.000050 | 16.5 | 23.7755 | 0.000302 mg/L | Y 361.104 | 1.00000 |
| Be 234.861 | 0.000009uv | mg/L | 0.000096 | 1032.9 | -4.19593 | 0.000009 mg/L | Y 361.104 | 1.00000 |
| Ca 315.887 | 0.472381 | mg/L | 0.001943 | 0.4 | 4212.29 | 0.472381 mg/L | Y 361.104 | 1.00000 |
| Cd 228.802 | 0.000109uv | mg/L | 0.000184 | 168.4 | -0.643828 | 0.000109 mg/L | Y 361.104 | 1.00000 |
| Co 231.160 | 0.000245uv | mg/L | 0.000849 | 345.9 | 8.65992 | 0.000245 mg/L | Y 361.104 | 1.00000 |
| Cr 267.716 | 0.000214 | mg/L | 0.000085 | 39.9 | 1.26523 | 0.000214 mg/L | Y 361.104 | 1.00000 |
| Cu 324.754 | -0.000034uv | mg/L | 0.000082 | 244.1 | 122.523 | -0.000034 mg/L | Y 361.104 | 1.00000 |
| Fe 261.382 | 0.004207 | mg/L | 0.000502 | 11.9 | 18.1055 | 0.004207 mg/L | Y 361.104 | 1.00000 |
| K 766.491 | 0.036205 | mg/L | 0.000854 | 2.4 | 963.044 | 0.036205 mg/L | Y 361.104 | 1.00000 |
| Li 610.365 | 0.000560uv | mg/L | 0.000563 | 100.5 | 458.992 | 0.000560 mg/L | Y 361.104 | 1.00000 |
| Mg 279.078 | 0.068279 | mg/L | 0.000373 | 0.5 | 95.2208 | 0.068279 mg/L | Y 361.104 | 1.00000 |
| Mn 293.305 | 0.001084 | mg/L | 0.000266 | 24.6 | 16.9169 | 0.001084 mg/L | Y 361.104 | 1.00000 |
| Mo 202.032 | -0.000324uv | mg/L | 0.000429 | 132.4 | -0.054036 | -0.000324 mg/L | Y 361.104 | 1.00000 |
| Na 568.821 | 0.682808 | mg/L | 0.077861 | 11.4 | -175.941 | 0.682808 mg/L | Y 361.104 | 1.00000 |
| Na 589.592 | 0.722977 | mg/L | 0.003313 | 0.5 | 148179 | 0.722977 mg/L | Y 361.104 | 1.00000 |
| Ni 231.604 | 0.000199uv | mg/L | 0.000803 | 403.5 | 0.351384 | 0.000199 mg/L | Y 361.104 | 1.00000 |
| Pb 220.353 | -0.001441uv | mg/L | 0.002615 | 181.4 | -3.11273 | -0.001441 mg/L | Y 361.104 | 1.00000 |
| Sb 217.582 | -0.006922uv | mg/L | 0.004416 | 63.8 | -2.68166 | -0.006922 mg/L | Y 361.104 | 1.00000 |
| Se 196.026 | -0.003012uv | mg/L | 0.008455 | 280.7 | 0.561108 | -0.003012 mg/L | Y 361.104 | 1.00000 |
| Si 251.611 | 1.74579 | mg/L | 0.012909 | 0.7 | 4147.14 | 1.74579 mg/L | Y 361.104 | 1.00000 |
| Sn 189.927 | -0.000667uv | mg/L | 0.001567 | 234.9 | 0.401658 | -0.000667 mg/L | Y 361.104 | 1.00000 |
| Sr 216.596 | 0.003046 | mg/L | 0.000136 | 4.5 | 16.3238 | 0.003046 mg/L | Y 361.104 | 1.00000 |
| Ti 322.284 | -0.000257uv | mg/L | 0.000032 | 12.3 | 113.532 | -0.000257 mg/L | Y 361.104 | 1.00000 |
| Tl 190.794 | -0.001291uv | mg/L | 0.002479 | 192.1 | -0.213544 | -0.001291 mg/L | Y 361.104 | 1.00000 |
| V 289.164 | 0.000272uv | mg/L | 0.000488 | 179.4 | 4.99763 | 0.000272 mg/L | Y 361.104 | 1.00000 |
| Zn 206.200 | 0.000835uv | mg/L | 0.002492 | 298.5 | 0.463466 | 0.000835 mg/L | Y 361.104 | 1.00000 |
| Zr 257.147 | -0.000027uv | mg/L | 0.000051 | 186.8 | 15.7436 | -0.000027 mg/L | Y 361.104 | 1.00000 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.669015 | 173566 | 908.686 | 0.5 |

2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

**CCV (CCV)** **11/13/2009, 3:08:03 AM** **Rack 1, Tube 44**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.04035 | 1.04365 | 1.03756 |
| Al 237.312 | 5.25296 | 5.25358 | 5.25092 |
| As 188.980 | 2.02281 | 2.02297 | 1.99720 |
| B 249.772 | 2.07247 | 2.11263 | 2.11125 |
| Ba 233.527 | 5.05050 | 5.06365 | 5.04348 |
| Be 234.861 | 2.05794 | 2.07000 | 2.06210 |
| Ca 315.887 | 50.3540 | 50.5232 | 50.3561 |
| Cd 228.802 | 5.16155 | 5.18309 | 5.16153 |
| Co 231.160 | 5.01946 | 5.03383 | 5.01236 |
| Cr 267.716 | 5.04518 | 5.06548 | 5.04246 |
| Cu 324.754 | 5.00847 | 5.05726 | 5.01998 |
| Fe 261.382 | 5.02737 | 5.03656 | 5.02833 |
| K 766.491 | 50.0842 | 50.4002 | 50.0376 |
| Li 610.365 | 4.90343 | 4.91642 | 4.88635 |
| Mg 279.078 | 50.0567 | 50.2878 | 50.0503 |
| Mn 293.305 | 5.07543 | 5.09632 | 5.07267 |
| Mo 202.032 | 1.02034 | 1.03010 | 1.02507 |
| Na 568.821 | 48.4838 | 48.5450 | 48.3268 |
| Na 589.592 | 52.5599 | 52.8330 | 52.4435 |
| Ni 231.604 | 4.93585 | 4.95387 | 4.94022 |
| Pb 220.353 | 5.00777 | 5.02629 | 4.99874 |
| Sb 217.582 | 1.02191 | 1.01447 | 1.03361 |
| Se 196.026 | 2.04413 | 2.09362 | 2.03214 |
| Si 251.611 | 4.96302 | 4.98726 | 4.96625 |
| Sn 189.927 | 5.03978 | 5.04310 | 5.02096 |
| Sr 216.596 | 5.07529 | 5.07910 | 5.00153 |
| Ti 322.284 | 5.07375 | 5.09322 | 5.06923 |
| Tl 190.794 | 1.95809 | 1.99963 | 1.98601 |
| V 289.164 | 2.03243 | 2.04093 | 2.03492 |
| Zn 206.200 | 5.26939 | 5.26092 | 5.20048 |
| Zr 257.147 | 5.16209 | 5.18514 | 5.16656 |
| Y 361.104 | 0.619376 | 0.621559 | 0.623545 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.04052 | mg/L | 0.003051 | 0.3 | 46380.8 | 1.04052 mg/L | Y 361.104 | 104.05212 |
| Al 237.312 | 5.25249 | mg/L | 0.001391 | 0.0 | 3745.84 | 5.25249 mg/L | Y 361.104 | 105.04981 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.01433 | mg/L | 0.014829 | 0.7 | 764.576 | 2.01433 mg/L | Y 361.104 | 100.71634 |
| B 249.772 | 2.09878 | mg/L | 0.022799 | 1.1 | 24207.9 | 2.09878 mg/L | Y 361.104 | 104.93923 |
| Ba 233.527 | 5.05254 | mg/L | 0.010241 | 0.2 | 206391 | 5.05254 mg/L | Y 361.104 | 101.05087 |
| Be 234.861 | 2.06335 | mg/L | 0.006125 | 0.3 | 110723 | 2.06335 mg/L | Y 361.104 | 103.16747 |
| Ca 315.887 | 50.4111 | mg/L | 0.097062 | 0.2 | 385580 | 50.4111 mg/L | Y 361.104 | 100.82217 |
| Cd 228.802 | 5.16872 | mg/L | 0.012441 | 0.2 | 43282.1 | 5.16872 mg/L | Y 361.104 | 103.37448 |
| Co 231.160 | 5.02188 | mg/L | 0.010940 | 0.2 | 30063.8 | 5.02188 mg/L | Y 361.104 | 100.43763 |
| Cr 267.716 | 5.05104 | mg/L | 0.012579 | 0.2 | 183204 | 5.05104 mg/L | Y 361.104 | 101.02082 |
| Cu 324.754 | 5.02857 | mg/L | 0.025506 | 0.5 | 271209 | 5.02857 mg/L | Y 361.104 | 100.57141 |
| Fe 261.382 | 5.03075 | mg/L | 0.005050 | 0.1 | 10450.9 | 5.03075 mg/L | Y 361.104 | 100.61506 |
| K 766.491 | 50.1740 | mg/L | 0.197267 | 0.4 | 1775253 | 50.1740 mg/L | Y 361.104 | 100.34801 |
| Li 610.365 | 4.90206 | mg/L | 0.015079 | 0.3 | 110123 | 4.90206 mg/L | Y 361.104 | 98.04129 |
| Mg 279.078 | 50.1316 | mg/L | 0.135307 | 0.3 | 54793.9 | 50.1316 mg/L | Y 361.104 | 100.26322 |
| Mn 293.305 | 5.08147 | mg/L | 0.012929 | 0.3 | 78120.7 | 5.08147 mg/L | Y 361.104 | 101.62946 |
| Mo 202.032 | 1.02517 | mg/L | 0.004881 | 0.5 | 3814.66 | 1.02517 mg/L | Y 361.104 | 102.51668 |
| Na 568.821 | 48.4519 | mg/L | 0.112539 | 0.2 | 18671.5 | 48.4519 mg/L | Y 361.104 | 96.90375 |
| Na 589.592 | 52.6121 | mg/L | 0.199920 | 0.4 | 10268853 | 52.6121 mg/L | Y 361.104 | 105.22424 |
| Ni 231.604 | 4.94332 | mg/L | 0.009400 | 0.2 | 14645.4 | 4.94332 mg/L | Y 361.104 | 98.86632 |
| Pb 220.353 | 5.01093 | mg/L | 0.014044 | 0.3 | 7138.72 | 5.01093 mg/L | Y 361.104 | 100.21859 |
| Sb 217.582 | 1.02333 | mg/L | 0.009649 | 0.9 | 507.094 | 1.02333 mg/L | Y 361.104 | 102.33337 |
| Se 196.026 | 2.05663 | mg/L | 0.032589 | 1.6 | 437.491 | 2.05663 mg/L | Y 361.104 | 102.83144 |
| Si 251.611 | 4.97218 | mg/L | 0.013164 | 0.3 | 12256.8 | 4.97218 mg/L | Y 361.104 | 99.44355 |
| Sn 189.927 | 5.03461 | mg/L | 0.011940 | 0.2 | 3453.45 | 5.03461 mg/L | Y 361.104 | 100.69228 |
| Sr 216.596 | 5.05198 | mg/L | 0.043727 | 0.9 | 26392.2 | 5.05198 mg/L | Y 361.104 | 101.03951 |
| Ti 322.284 | 5.07873 | mg/L | 0.012748 | 0.3 | 55730.2 | 5.07873 mg/L | Y 361.104 | 101.57469 |
| Tl 190.794 | 1.98124 | mg/L | 0.021174 | 1.1 | 743.445 | 1.98124 mg/L | Y 361.104 | 99.06214 |
| V 289.164 | 2.03609 | mg/L | 0.004369 | 0.2 | 18314.1 | 2.03609 mg/L | Y 361.104 | 101.80472 |
| Zn 206.200 | 5.24360 | mg/L | 0.037580 | 0.7 | 3568.63 | 5.24360 mg/L | Y 361.104 | 104.87200 |
| Zr 257.147 | 5.17126 | mg/L | 0.012223 | 0.2 | 70303.1 | 5.17126 mg/L | Y 361.104 | 103.42529 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.621493 | 161237 | 540.973 | 0.3 |

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**BLA01 (CCB)** **11/13/2009, 3:11:22 AM** **Rack 1, Tube 45**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000072u | -0.000249u | 0.000185 |
| Al 237.312 | 0.005661 | 0.001849 | 0.009057 |
| As 188.980 | -0.005373u | -0.000054u | -0.002610u |
| B 249.772 | 0.011319 | 0.008102 | 0.006039 |
| Ba 233.527 | -0.000046u | -0.000145u | -0.000158u |
| Be 234.861 | -0.000078u | 0.000018 | 0.000076 |
| Ca 315.887 | 0.000933 | 0.002676 | 0.001665 |
| Cd 228.802 | 0.000371 | 0.000203 | 0.000324 |
| Co 231.160 | -0.000889u | 0.000607 | 0.000510 |
| Cr 267.716 | 0.000216 | 0.000240 | -0.000075u |
| Cu 324.754 | 0.000027 | -0.000171u | -0.000378u |
| Fe 261.382 | -0.000189u | -0.000528u | -0.001456u |
| K 766.491 | -0.001559u | -0.002153u | -0.001846u |
| Li 610.365 | -0.000525u | -0.000452u | -0.001388u |
| Mg 279.078 | -0.001710u | 0.002248 | -0.000252u |
| Mn 293.305 | 0.000515 | 0.000580 | 0.000100 |
| Mo 202.032 | 0.000445 | 0.000107 | -0.000725u |
| Na 568.821 | -0.189711u | -0.213018u | -0.236527u |
| Na 589.592 | 0.000400 | 0.000787 | 0.000225 |
| Ni 231.604 | 0.001092 | 0.001015 | 0.000281 |
| Pb 220.353 | -0.002054u | -0.000980u | 0.000726 |
| Sb 217.582 | -0.007611u | -0.008015u | -0.008163u |
| Se 196.026 | -0.005117u | 0.009250 | 0.002687 |
| Si 251.611 | 0.009150 | 0.007749 | 0.005037 |
| Sn 189.927 | 0.000391 | -0.001103u | -0.003385u |
| Sr 216.596 | -0.000335u | -0.000043u | 0.000816 |
| Ti 322.284 | -0.000049u | -0.000468u | -0.000413u |
| Tl 190.794 | 0.005793 | 0.008068 | 0.010437 |
| V 289.164 | 0.000445 | -0.000430u | -0.000177u |
| Zn 206.200 | -0.000183u | -0.002617u | 0.001379 |
| Zr 257.147 | 0.000668 | 0.000001u | 0.000332 |
| Y 361.104 | 0.665835 | 0.660813 | 0.661009 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000045uv | mg/L | 0.000219 | 481.3 | -17.6707 | -0.000045 mg/L | Y 361.104 | -0.00005 |
| Al 237.312 | 0.005522 | mg/L | 0.003606 | 65.3 | 1.12254 | 0.005522 mg/L | Y 361.104 | 0.00552 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.002679uv | mg/L | 0.002660 | 99.3 | -0.758799 | -0.002679 mg/L | Y 361.104 | -0.00268 |
| B 249.772 | 0.008487 | mg/L | 0.002661 | 31.4 | 114.739 | 0.008487 mg/L | Y 361.104 | 0.00849 |
| Ba 233.527 | -0.000116uv | mg/L | 0.000061 | 52.5 | 6.67200 | -0.000116 mg/L | Y 361.104 | -0.00012 |
| Be 234.861 | 0.000005uv | mg/L | 0.000077 | 1456.9 | -4.35623 | 0.000005 mg/L | Y 361.104 | 0.00001 |
| Ca 315.887 | 0.001758 | mg/L | 0.000875 | 49.8 | 607.812 | 0.001758 mg/L | Y 361.104 | 0.00176 |
| Cd 228.802 | 0.000300 | mg/L | 0.000087 | 28.9 | 0.894277 | 0.000300 mg/L | Y 361.104 | 0.00030 |
| Co 231.160 | 0.000076uv | mg/L | 0.000837 | 1105.4 | 7.62637 | 0.000076 mg/L | Y 361.104 | 0.00008 |
| Cr 267.716 | 0.000127uv | mg/L | 0.000175 | 137.8 | -1.89173 | 0.000127 mg/L | Y 361.104 | 0.00013 |
| Cu 324.754 | -0.000174uv | mg/L | 0.000202 | 116.3 | 114.996 | -0.000174 mg/L | Y 361.104 | -0.00017 |
| Fe 261.382 | -0.000724uv | mg/L | 0.000656 | 90.5 | 7.76320 | -0.000724 mg/L | Y 361.104 | -0.00072 |
| K 766.491 | -0.001853uv | mg/L | 0.000297 | 16.0 | -383.747 | -0.001853 mg/L | Y 361.104 | -0.00185 |
| Li 610.365 | -0.000788uv | mg/L | 0.000520 | 66.0 | 432.324 | -0.000788 mg/L | Y 361.104 | -0.00079 |
| Mg 279.078 | 0.000095uv | mg/L | 0.002002 | 2101.3 | 20.7243 | 0.000095 mg/L | Y 361.104 | 0.00010 |
| Mn 293.305 | 0.000398 | mg/L | 0.000260 | 65.4 | 6.37765 | 0.000398 mg/L | Y 361.104 | 0.00040 |
| Mo 202.032 | -0.000057uv | mg/L | 0.000602 | 1048.1 | 0.936014 | -0.000057 mg/L | Y 361.104 | -0.00006 |
| Na 568.821 | -uv | mg/L | 0.023408 | 11.0 | -527.951 | - mg/L | Y 361.104 | - |
| Na 589.592 | 0.000471 | mg/L | 0.000288 | 61.2 | 7435.92 | 0.000471 mg/L | Y 361.104 | 0.00047 |
| Ni 231.604 | 0.000796 | mg/L | 0.000448 | 56.3 | 2.12351 | 0.000796 mg/L | Y 361.104 | 0.00080 |
| Pb 220.353 | -0.000769uv | mg/L | 0.001402 | 182.2 | -2.14894 | -0.000769 mg/L | Y 361.104 | -0.00077 |
| Sb 217.582 | -0.007930uv | mg/L | 0.000286 | 3.6 | -3.17873 | -0.007930 mg/L | Y 361.104 | -0.00793 |
| Se 196.026 | 0.002274uv | mg/L | 0.007192 | 316.3 | 1.68094 | 0.002274 mg/L | Y 361.104 | 0.00227 |
| Si 251.611 | 0.007312 | mg/L | 0.002091 | 28.6 | 60.9656 | 0.007312 mg/L | Y 361.104 | 0.00731 |
| Sn 189.927 | -0.001365uv | mg/L | 0.001902 | 139.3 | -0.076336 | -0.001365 mg/L | Y 361.104 | -0.00137 |
| Sr 216.596 | 0.000146uv | mg/L | 0.000598 | 409.6 | 1.15645 | 0.000146 mg/L | Y 361.104 | 0.00015 |
| Ti 322.284 | -0.000310uv | mg/L | 0.000228 | 73.4 | 112.962 | -0.000310 mg/L | Y 361.104 | -0.00031 |
| Tl 190.794 | 0.008100 | mg/L | 0.002322 | 28.7 | 3.22999 | 0.008100 mg/L | Y 361.104 | 0.00810 |
| V 289.164 | -0.000054uv | mg/L | 0.000450 | 836.9 | 2.06123 | -0.000054 mg/L | Y 361.104 | -0.00005 |
| Zn 206.200 | -0.000474uv | mg/L | 0.002014 | 425.3 | -0.424090 | -0.000474 mg/L | Y 361.104 | -0.00047 |
| Zr 257.147 | 0.000334uv | mg/L | 0.000333 | 99.9 | 20.6488 | 0.000334 mg/L | Y 361.104 | 0.00033 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.662552 | 171889 | 738.001 | 0.4 |

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**DLS (CRI)** **11/13/2009, 3:14:41 AM** **Rack 1, Tube 46**
**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.010668 | 0.010152 | 0.010423 |
| Al 237.312 | 0.050494 | 0.048449 | 0.055759 |
| As 188.980 | 0.008572 | 0.002401 | 0.014637 |
| B 249.772 | 0.049490 | 0.049324 | 0.049766 |
| Ba 233.527 | 0.010140 | 0.010120 | 0.010050 |
| Be 234.861 | 0.004029 | 0.003867 | 0.003904 |
| Ca 315.887 | 0.056136 | 0.055053 | 0.055985 |
| Cd 228.802 | 0.005033 | 0.004669 | 0.004942 |
| Co 231.160 | 0.009730 | 0.010290 | 0.010804 |
| Cr 267.716 | 0.010212 | 0.010623 | 0.010708 |
| Cu 324.754 | 0.010008 | 0.009727 | 0.010182 |
| Fe 261.382 | 0.020511 | 0.021179 | 0.016906 |
| K 766.491 | 0.067442 | 0.066695 | 0.069332 |
| Li 610.365 | 0.007470 | 0.008609 | 0.009694 |
| Mg 279.078 | 0.085232 | 0.081200 | 0.085042 |
| Mn 293.305 | 0.011208 | 0.010750 | 0.010377 |
| Mo 202.032 | 0.009538 | 0.009393 | 0.010167 |
| Na 568.821 | -0.127282u | -0.220167u | -0.069129u |
| Na 589.592 | 0.043714 | 0.043216 | 0.043699 |
| Ni 231.604 | 0.005474 | 0.005804 | 0.005410 |
| Pb 220.353 | 0.009680 | 0.008166 | 0.009990 |
| Sb 217.582 | 0.009131 | 0.009764 | 0.008716 |
| Se 196.026 | 0.003632 | 0.003221 | 0.009037 |
| Si 251.611 | 0.096418 | 0.094724 | 0.095371 |
| Sn 189.927 | 0.009701 | 0.008694 | 0.007207 |
| Sr 216.596 | 0.010780 | 0.009747 | 0.010424 |
| Ti 322.284 | 0.009714 | 0.009921 | 0.009782 |
| Tl 190.794 | 0.019757 | 0.010322 | 0.013492 |
| V 289.164 | 0.009808 | 0.009607 | 0.010063 |
| Zn 206.200 | 0.020059 | 0.022156 | 0.021193 |
| Zr 257.147 | 0.010831 | 0.010721 | 0.010384 |
| Y 361.104 | 0.640041 | 0.649301 | 0.648703 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.010414 | mg/L | 0.000258 | 2.5 | 441.769 | 0.010414 mg/L | Y 361.104 | 104.14402 |
| Al 237.312 | 0.051568 | mg/L | 0.003771 | 7.3 | 33.8357 | 0.051568 mg/L | Y 361.104 | 103.13520 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.008537 | mg/L | 0.006118 | 71.7 | 3.50240 | 0.008537 mg/L | Y 361.104 | 85.36688 |
| B 249.772 | 0.049526 | mg/L | 0.000223 | 0.5 | 587.771 | 0.049526 mg/L | Y 361.104 | 99.05291 |
| Ba 233.527 | 0.010103 | mg/L | 0.000047 | 0.5 | 424.197 | 0.010103 mg/L | Y 361.104 | 101.03281 |
| Be 234.861 | 0.003933 | mg/L | 0.000085 | 2.2 | 206.260 | 0.003933 mg/L | Y 361.104 | 98.32804 |
| Ca 315.887 | 0.055725 | mg/L | 0.000587 | 1.1 | 1020.79 | 0.055725 mg/L | Y 361.104 | 55.72451 |
| Cd 228.802 | 0.004881 | mg/L | 0.000190 | 3.9 | 39.5684 | 0.004881 mg/L | Y 361.104 | 97.62328 |
| Co 231.160 | 0.010275 | mg/L | 0.000537 | 5.2 | 69.3006 | 0.010275 mg/L | Y 361.104 | 102.74811 |
| Cr 267.716 | 0.010514 | mg/L | 0.000265 | 2.5 | 374.832 | 0.010514 mg/L | Y 361.104 | 105.14252 |
| Cu 324.754 | 0.009972 | mg/L | 0.000230 | 2.3 | 662.140 | 0.009972 mg/L | Y 361.104 | 99.72339 |
| Fe 261.382 | 0.019532 | mg/L | 0.002298 | 11.8 | 50.0638 | 0.019532 mg/L | Y 361.104 | 97.66071 |
| K 766.491 | 0.067823 | mg/L | 0.001359 | 2.0 | 2081.96 | 0.067823 mg/L | Y 361.104 | 67.82278 |
| Li 610.365 | 0.008591 | mg/L | 0.001112 | 12.9 | 642.490 | 0.008591 mg/L | Y 361.104 | 85.90964 |
| Mg 279.078 | 0.083825 | mg/L | 0.002275 | 2.7 | 112.206 | 0.083825 mg/L | Y 361.104 | 83.82455 |
| Mn 293.305 | 0.010778 | mg/L | 0.000416 | 3.9 | 165.958 | 0.010778 mg/L | Y 361.104 | 107.78270 |
| Mo 202.032 | 0.009699 | mg/L | 0.000412 | 4.2 | 37.2236 | 0.009699 mg/L | Y 361.104 | 96.99422 |
| Na 568.821 | -uv | mg/L | 0.076182 | 54.9 | -498.990 | - mg/L | Y 361.104 | - |
| Na 589.592 | 0.043543 | mg/L | 0.000283 | 0.7 | 15853.1 | 0.043543 mg/L | Y 361.104 | 43.54276R |
| Ni 231.604 | 0.005562 | mg/L | 0.000212 | 3.8 | 16.2065 | 0.005562 mg/L | Y 361.104 | 111.24955 |
| Pb 220.353 | 0.009279 | mg/L | 0.000976 | 10.5 | 12.1573 | 0.009279 mg/L | Y 361.104 | 92.78618 |
| Sb 217.582 | 0.009204 | mg/L | 0.000528 | 5.7 | 5.27730 | 0.009204 mg/L | Y 361.104 | 92.03657 |
| Se 196.026 | 0.005297 | mg/L | 0.003246 | 61.3 | 2.32263 | 0.005297 mg/L | Y 361.104 | 52.96986 |
| Si 251.611 | 0.095504 | mg/L | 0.000855 | 0.9 | 269.560 | 0.095504 mg/L | Y 361.104 | 95.50435 |
| Sn 189.927 | 0.008534 | mg/L | 0.001255 | 14.7 | 6.71236 | 0.008534 mg/L | Y 361.104 | 85.33892 |
| Sr 216.596 | 0.010317 | mg/L | 0.000525 | 5.1 | 54.3159 | 0.010317 mg/L | Y 361.104 | 103.17113 |
| Ti 322.284 | 0.009806 | mg/L | 0.000106 | 1.1 | 223.874 | 0.009806 mg/L | Y 361.104 | 98.05893 |
| Tl 190.794 | 0.014524 | mg/L | 0.004801 | 33.1 | 5.62262 | 0.014524 mg/L | Y 361.104 | 145.23816 |
| V 289.164 | 0.009826 | mg/L | 0.000228 | 2.3 | 91.2638 | 0.009826 mg/L | Y 361.104 | 98.25916 |
| Zn 206.200 | 0.021136 | mg/L | 0.001050 | 5.0 | 14.2582 | 0.021136 mg/L | Y 361.104 | 105.67891 |
| Zr 257.147 | 0.010645 | mg/L | 0.000233 | 2.2 | 160.994 | 0.010645 mg/L | Y 361.104 | 106.45059 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.646015 | 167599 | 1344.371 | 0.8 |

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**CDL01 (CRI)** **11/13/2009, 3:18:01 AM** **Rack 1, Tube 47**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.021058 | 0.021248 | 0.021429 |
| Al 237.312 | 0.007356 | 0.005562 | 0.005714 |
| As 188.980 | 0.013035 | 0.018439 | 0.022293 |
| B 249.772 | 0.000903 | 0.001237 | 0.000625 |
| Ba 233.527 | -0.000181u | -0.000065u | -0.000181u |
| Be 234.861 | 0.009430 | 0.009698 | 0.009879 |
| Ca 315.887 | -0.038027u | -0.038062u | -0.037760u |
| Cd 228.802 | 0.010103 | 0.010789 | 0.010078 |
| Co 231.160 | 0.100708 | 0.101665 | 0.103996 |
| Cr 267.716 | 0.020393 | 0.020978 | 0.021011 |
| Cu 324.754 | 0.049438 | 0.051344 | 0.052607 |
| Fe 261.382 | 0.002145 | 0.000783 | -0.000724u |
| K 766.491 | -0.002502u | -0.001282u | -0.001436u |
| Li 610.365 | -0.000006u | 0.000450 | 0.001467 |
| Mg 279.078 | -0.018395u | -0.020858u | -0.016163u |
| Mn 293.305 | 0.031039 | 0.031596 | 0.032234 |
| Mo 202.032 | -0.000415u | -0.000750u | -0.000022u |
| Na 568.821 | -0.296342u | -0.198569u | -0.283437u |
| Na 589.592 | -0.033781u | -0.033752u | -0.033663u |
| Ni 231.604 | 0.081386 | 0.082252 | 0.084256 |
| Pb 220.353 | 0.099160 | 0.100499 | 0.106027 |
| Sb 217.582 | 0.109610 | 0.118104 | 0.113291 |
| Se 196.026 | 0.004612 | 0.006692 | 0.002371 |
| Si 251.611 | -0.006190u | -0.007407u | -0.005377u |
| Sn 189.927 | 0.000312 | -0.002122u | -0.001402u |
| Sr 216.596 | 0.000183 | -0.000347u | -0.000724u |
| Ti 322.284 | -0.001294u | 0.000700 | 0.000274 |
| Tl 190.794 | 0.019220 | 0.023452 | 0.019964 |
| V 289.164 | 0.099747 | 0.102586 | 0.104085 |
| Zn 206.200 | 0.042853 | 0.039967 | 0.042752 |
| Zr 257.147 | -0.000061u | 0.000065 | 0.000059 |
| Y 361.104 | 0.648102 | 0.646317 | 0.647218 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.021245 | mg/L | 0.000185 | 0.9 | 914.138 | 0.021245 mg/L | Y 361.104 | 106.22614 |
| Al 237.312 | 0.006210 | mg/L | 0.000995 | 16.0 | 1.64627 | 0.006210 mg/L | Y 361.104 | - |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.017922 | mg/L | 0.004650 | 25.9 | 7.09984 | 0.017922 mg/L | Y 361.104 | 89.61132 |
| B 249.772 | 0.000921 | mg/L | 0.000307 | 33.3 | 27.4999 | 0.000921 mg/L | Y 361.104 | - |
| Ba 233.527 | -0.000142uv | mg/L | 0.000066 | 46.8 | 6.58368 | -0.000142 mg/L | Y 361.104 | - |
| Be 234.861 | 0.009669 | mg/L | 0.000226 | 2.3 | 514.622 | 0.009669 mg/L | Y 361.104 | 96.69226 |
| Ca 315.887 | -0.037949uv | mg/L | 0.000165 | 0.4 | 313.164 | -0.037949 mg/L | Y 361.104 | - |
| Cd 228.802 | 0.010323 | mg/L | 0.000403 | 3.9 | 85.5274 | 0.010323 mg/L | Y 361.104 | 103.23299 |
| Co 231.160 | 0.102123 | mg/L | 0.001691 | 1.7 | 623.685 | 0.102123 mg/L | Y 361.104 | 102.12344 |
| Cr 267.716 | 0.020794 | mg/L | 0.000348 | 1.7 | 747.772 | 0.020794 mg/L | Y 361.104 | 103.97072 |
| Cu 324.754 | 0.051130 | mg/L | 0.001595 | 3.1 | 2879.00 | 0.051130 mg/L | Y 361.104 | 102.25903 |
| Fe 261.382 | 0.000734uv | mg/L | 0.001435 | 195.4 | 9.28061 | 0.000734 mg/L | Y 361.104 | - |
| K 766.491 | -0.001740uv | mg/L | 0.000664 | 38.2 | -379.747 | -0.001740 mg/L | Y 361.104 | - |
| Li 610.365 | 0.000637uv | mg/L | 0.000754 | 118.4 | 464.622 | 0.000637 mg/L | Y 361.104 | - |
| Mg 279.078 | -0.018472uv | mg/L | 0.002349 | 12.7 | 0.431295 | -0.018472 mg/L | Y 361.104 | - |
| Mn 293.305 | 0.031623 | mg/L | 0.000598 | 1.9 | 486.419 | 0.031623 mg/L | Y 361.104 | 105.41073 |
| Mo 202.032 | -0.000396uv | mg/L | 0.000364 | 92.0 | -0.319397 | -0.000396 mg/L | Y 361.104 | - |
| Na 568.821 | -uv | mg/L | 0.053117 | 20.5 | -546.054 | - mg/L | Y 361.104 | - |
| Na 589.592 | -0.033732uv | mg/L | 0.000061 | 0.2 | 773.092 | -0.033732 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.082632 | mg/L | 0.001472 | 1.8 | 244.390 | 0.082632 mg/L | Y 361.104 | 103.28953 |
| Pb 220.353 | 0.101895 | mg/L | 0.003640 | 3.6 | 144.217 | 0.101895 mg/L | Y 361.104 | 101.89549 |
| Sb 217.582 | 0.113668 | mg/L | 0.004260 | 3.7 | 56.8921 | 0.113668 mg/L | Y 361.104 | 94.72369 |
| Se 196.026 | 0.004558 | mg/L | 0.002161 | 47.4 | 2.16217 | 0.004558 mg/L | Y 361.104 | 45.58228R |
| Si 251.611 | -0.006324uv | mg/L | 0.001021 | 16.1 | 28.9098 | -0.006324 mg/L | Y 361.104 | - |
| Sn 189.927 | -0.001071uv | mg/L | 0.001250 | 116.8 | 0.123339 | -0.001071 mg/L | Y 361.104 | - |
| Sr 216.596 | -0.000296uv | mg/L | 0.000456 | 154.0 | -1.45130 | -0.000296 mg/L | Y 361.104 | - |
| Ti 322.284 | -0.000106uv | mg/L | 0.001050 | 986.2 | 115.094 | -0.000106 mg/L | Y 361.104 | - |
| Tl 190.794 | 0.020878 | mg/L | 0.002260 | 10.8 | 8.19251 | 0.020878 mg/L | Y 361.104 | 104.39189 |
| V 289.164 | 0.102139 | mg/L | 0.002203 | 2.2 | 927.437 | 0.102139 mg/L | Y 361.104 | 102.13927 |
| Zn 206.200 | 0.041857 | mg/L | 0.001638 | 3.9 | 28.3310 | 0.041857 mg/L | Y 361.104 | 104.64352 |
| Zr 257.147 | 0.000021uv | mg/L | 0.000071 | 341.9 | 16.3887 | 0.000021 mg/L | Y 361.104 | - |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.647212 | 167910 | 231.644 | 0.1 |

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**ICS-A (ICSA)** **11/13/2009, 3:21:20 AM** **Rack 1, Tube 48**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | -0.000300u | -0.000127 | -0.000532u |
| Al 237.312 | 547.862 | 536.780 | 540.573 |
| As 188.980 | 0.001643 | -0.013950u | -0.009903u |
| B 249.772 | -0.009072 | -0.007787 | -0.008297 |
| Ba 233.527 | 0.004902 | 0.005124 | 0.004767 |
| Be 234.861 | 0.022812u | 0.025430u | 0.020533u |
| Ca 315.887 | 491.354 | 482.729 | 482.508 |
| Cd 228.802 | 0.001453 | 0.001420 | 0.001342 |
| Co 231.160 | -0.012646 | -0.011551 | -0.009741 |
| Cr 267.716 | 0.000852 | 0.001111 | 0.000898 |
| Cu 324.754 | 0.007561u | 0.007816u | 0.007825u |
| Fe 261.382 | 194.709 | 190.539 | 191.823 |
| K 766.491 | 0.003112 | 0.004782 | 0.003866 |
| Li 610.365 | 0.033417u | 0.035330u | 0.035591u |
| Mg 279.078 | 516.582 | 504.600 | 507.643 |
| Mn 293.305 | 0.000770 | 0.001987 | 0.001228 |
| Mo 202.032 | -0.000659u | -0.003048u | -0.002417u |
| Na 568.821 | -0.420636 | -0.479540 | -0.437186 |
| Na 589.592 | -0.023430u | -0.023852u | -0.023651u |
| Ni 231.604 | 0.002788 | 0.001840 | 0.001802 |
| Pb 220.353 | -0.003212u | -0.001540u | 0.000271u |
| Sb 217.582 | -0.006084u | -0.002167u | -0.002219u |
| Se 196.026 | -0.021536u | 0.012585 | 0.008892 |
| Si 251.611 | -0.047909u | -0.048354u | -0.047210u |
| Sn 189.927 | 0.000683 | -0.005463u | -0.000612u |
| Sr 216.596 | -0.003545 | -0.002280 | -0.002327 |
| Ti 322.284 | -0.002427u | -0.002329u | -0.002571u |
| Tl 190.794 | -0.006150u | 0.007252 | 0.010733 |
| V 289.164 | -0.000675 | -0.002565 | -0.002602 |
| Zn 206.200 | 0.010566u | 0.006494u | 0.009468u |
| Zr 257.147 | -0.000805 | -0.001857 | -0.002534 |
| Y 361.104 | 0.555829 | 0.568358 | 0.567112 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | -0.000320uv | mg/L | 0.000203 | 63.6 | -22.5253 | -0.000320 mg/L | Y 361.104 | -0.00032 |
| Al 237.312 | 541.738 | mg/L | 5.63218 | 1.0 | 384298 | 541.738 mg/L | Y 361.104 | - |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.007403uv | mg/L | 0.008092 | 109.3 | -2.56112 | -0.007403 mg/L | Y 361.104 | -0.00740 |
| B 249.772 | -0.008385 | mg/L | 0.000647 | 7.7 | 418.234 | -0.008385 mg/L | Y 361.104 | -0.00839 |
| Ba 233.527 | 0.004931 | mg/L | 0.000180 | 3.7 | 212.943 | 0.004931 mg/L | Y 361.104 | 0.00493 |
| Be 234.861 | 0.022925uv | mg/L | 0.002451 | 10.7 | -1708.02 | 0.022925 mg/L | Y 361.104 | 0.02292 |
| Ca 315.887 | 485.530 | mg/L | 5.04489 | 1.0 | 3710585 | 485.530 mg/L | Y 361.104 | - |
| Cd 228.802 | 0.001405 | mg/L | 0.000057 | 4.1 | 12.2580 | 0.001405 mg/L | Y 361.104 | 0.00141 |
| Co 231.160 | -0.011313 | mg/L | 0.001467 | 13.0 | 135.802 | -0.011313 mg/L | Y 361.104 | -0.01131 |
| Cr 267.716 | 0.000954 | mg/L | 0.000138 | 14.5 | 32.6487 | 0.000954 mg/L | Y 361.104 | 0.00095 |
| Cu 324.754 | 0.007734uv | mg/L | 0.000150 | 1.9 | -878.749 | 0.007734 mg/L | Y 361.104 | 0.00773 |
| Fe 261.382 | 192.357 | mg/L | 2.13576 | 1.1 | 403270 | 192.357 mg/L | Y 361.104 | - |
| K 766.491 | 0.003920 | mg/L | 0.000836 | 21.3 | -179.452 | 0.003920 mg/L | Y 361.104 | 0.00392 |
| Li 610.365 | 0.034779uv | mg/L | 0.001187 | 3.4 | -2485.16 | 0.034779 mg/L | Y 361.104 | 0.03478 |
| Mg 279.078 | 509.609 | mg/L | 6.22818 | 1.2 | 556884 | 509.609 mg/L | Y 361.104 | - |
| Mn 293.305 | 0.001328 | mg/L | 0.000615 | 46.3 | 20.6755 | 0.001328 mg/L | Y 361.104 | 0.00133 |
| Mo 202.032 | -0.002041uv | mg/L | 0.001238 | 60.6 | -6.36710 | -0.002041 mg/L | Y 361.104 | -0.00204 |
| Na 568.821 | -0.445787 | mg/L | 0.030380 | 6.8 | 989.264 | -0.445787 mg/L | Y 361.104 | - |
| Na 589.592 | -0.023644uv | mg/L | 0.000211 | 0.9 | 2750.49 | -0.023644 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.002143 | mg/L | 0.000559 | 26.1 | 6.05656 | 0.002143 mg/L | Y 361.104 | 0.00214 |
| Pb 220.353 | -0.001494uv | mg/L | 0.001742 | 116.6 | -13.7214 | -0.001494 mg/L | Y 361.104 | -0.00149 |
| Sb 217.582 | -0.003490uv | mg/L | 0.002247 | 64.4 | -5.88244 | -0.003490 mg/L | Y 361.104 | -0.00349 |
| Se 196.026 | -0.000019uv | mg/L | 0.018725 | 96642.7 | 1.96056 | -0.000019 mg/L | Y 361.104 | -0.00002 |
| Si 251.611 | -0.047824uv | mg/L | 0.000576 | 1.2 | -28.3941 | -0.047824 mg/L | Y 361.104 | -0.04782 |
| Sn 189.927 | -0.001798uv | mg/L | 0.003240 | 180.2 | -0.369709 | -0.001798 mg/L | Y 361.104 | -0.00180 |
| Sr 216.596 | -0.002718 | mg/L | 0.000717 | 26.4 | 114.449 | -0.002718 mg/L | Y 361.104 | -0.00272 |
| Ti 322.284 | -0.002442uv | mg/L | 0.000122 | 5.0 | 86.2154 | -0.002442 mg/L | Y 361.104 | -0.00244 |
| Tl 190.794 | 0.003945uv | mg/L | 0.008914 | 226.0 | 1.74990 | 0.003945 mg/L | Y 361.104 | 0.00394 |
| V 289.164 | -0.001948 | mg/L | 0.001102 | 56.6 | 115.238 | -0.001948 mg/L | Y 361.104 | -0.00195 |
| Zn 206.200 | 0.008843uv | mg/L | 0.002107 | 23.8 | -5.95013 | 0.008843 mg/L | Y 361.104 | 0.00884 |
| Zr 257.147 | -0.001732 | mg/L | 0.000871 | 50.3 | 125.865 | -0.001732 mg/L | Y 361.104 | -0.00173 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.563766 | 146261 | 1790.656 | 1.2 |

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**ICS-AB (ICSAB)** **11/13/2009, 3:24:40 AM** **Rack 1, Tube 49**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.225174 | 0.228962 | 0.228444 |
| Al 237.312 | 539.334 | 548.485 | 547.184 |
| As 188.980 | 0.104628 | 0.103491 | 0.114384 |
| B 249.772 | -0.009165 | -0.007934 | -0.010041 |
| Ba 233.527 | 0.510712 | 0.521591 | 0.521002 |
| Be 234.861 | 0.552721 | 0.566819 | 0.564479 |
| Ca 315.887 | 481.474 | 491.294 | 490.451 |
| Cd 228.802 | 1.06883 | 1.09036 | 1.09979 |
| Co 231.160 | 0.465570 | 0.476147 | 0.472539 |
| Cr 267.716 | 0.498223 | 0.507384 | 0.506681 |
| Cu 324.754 | 0.549453 | 0.558046 | 0.556415 |
| Fe 261.382 | 191.208 | 194.703 | 194.304 |
| K 766.491 | 0.005419 | 0.003515 | 0.004226 |
| Li 610.365 | 0.035360u | 0.034792u | 0.032026u |
| Mg 279.078 | 505.435 | 515.741 | 511.911 |
| Mn 293.305 | 0.499977 | 0.508656 | 0.507553 |
| Mo 202.032 | -0.002081u | -0.001979u | -0.001910u |
| Na 568.821 | -0.506617 | -0.431201 | -0.454537 |
| Na 589.592 | -0.026897u | -0.026687u | -0.026906u |
| Ni 231.604 | 0.942411 | 0.954263 | 0.945020 |
| Pb 220.353 | 0.948169 | 0.972858 | 0.965367 |
| Sb 217.582 | 0.643748 | 0.645426 | 0.632913 |
| Se 196.026 | 0.056221 | 0.016727 | 0.063384 |
| Si 251.611 | -0.047176u | -0.042758u | -0.045284u |
| Sn 189.927 | 0.000511 | -0.003919u | 0.002972 |
| Sr 216.596 | -0.003080 | -0.000914 | -0.002923 |
| Ti 322.284 | -0.002099u | -0.002300u | -0.003632u |
| Tl 190.794 | 0.083530 | 0.090296 | 0.101255 |
| V 289.164 | 0.499277 | 0.510650 | 0.507259 |
| Zn 206.200 | 0.990724 | 1.00521 | 1.01111 |
| Zr 257.147 | -0.002235 | -0.001639 | -0.001515 |
| Y 361.104 | 0.558916 | 0.555749 | 0.559251 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.227527 | mg/L | 0.002054 | 0.9 | 9950.78 | 0.227527 mg/L | Y 361.104 | 113.76330 |
| Al 237.312 | 545.001 | mg/L | 4.95043 | 0.9 | 386614 | 545.001 mg/L | Y 361.104 | 109.00021 |



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| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 0.107501 | mg/L | 0.005988 | 5.6 | 40.9907 | 0.107501 mg/L | Y 361.104 | 107.50111 |
| B 249.772 | -0.009047 | mg/L | 0.001058 | 11.7 | 412.215 | -0.009047 mg/L | Y 361.104 | - |
| Ba 233.527 | 0.517768 | mg/L | 0.006118 | 1.2 | 21165.5 | 0.517768 mg/L | Y 361.104 | 103.55365 |
| Be 234.861 | 0.561340 | mg/L | 0.007555 | 1.3 | 27189.0 | 0.561340 mg/L | Y 361.104 | 112.26792 |
| Ca 315.887 | 487.740 | mg/L | 5.44240 | 1.1 | 3727533 | 487.740 mg/L | Y 361.104 | 97.54799 |
| Cd 228.802 | 1.08633 | mg/L | 0.015869 | 1.5 | 9086.93 | 1.08633 mg/L | Y 361.104 | 108.63279 |
| Co 231.160 | 0.471419 | mg/L | 0.005377 | 1.1 | 3042.65 | 0.471419 mg/L | Y 361.104 | 94.28373 |
| Cr 267.716 | 0.504096 | mg/L | 0.005098 | 1.0 | 18282.5 | 0.504096 mg/L | Y 361.104 | 100.81912 |
| Cu 324.754 | 0.554638 | mg/L | 0.004564 | 0.8 | 28593.7 | 0.554638 mg/L | Y 361.104 | 110.92760 |
| Fe 261.382 | 193.405 | mg/L | 1.91299 | 1.0 | 405468 | 193.405 mg/L | Y 361.104 | 96.70255 |
| K 766.491 | 0.004387 | mg/L | 0.000962 | 21.9 | -162.937 | 0.004387 mg/L | Y 361.104 | - |
| Li 610.365 | 0.034059uv | mg/L | 0.001784 | 5.2 | -2518.30 | 0.034059 mg/L | Y 361.104 | - |
| Mg 279.078 | 511.029 | mg/L | 5.20921 | 1.0 | 558435 | 511.029 mg/L | Y 361.104 | 102.20579 |
| Mn 293.305 | 0.505395 | mg/L | 0.004725 | 0.9 | 7769.99 | 0.505395 mg/L | Y 361.104 | 101.07905 |
| Mo 202.032 | -0.001990uv | mg/L | 0.000086 | 4.3 | -6.10322 | -0.001990 mg/L | Y 361.104 | - |
| Na 568.821 | -0.464118 | mg/L | 0.038610 | 8.3 | 988.679 | -0.464118 mg/L | Y 361.104 | - |
| Na 589.592 | -0.026830uv | mg/L | 0.000124 | 0.5 | 3407.63 | -0.026830 mg/L | Y 361.104 | - |
| Ni 231.604 | 0.947231 | mg/L | 0.006228 | 0.7 | 2807.84 | 0.947231 mg/L | Y 361.104 | 94.72314 |
| Pb 220.353 | 0.962131 | mg/L | 0.012659 | 1.3 | 1360.67 | 0.962131 mg/L | Y 361.104 | 96.21312 |
| Sb 217.582 | 0.640696 | mg/L | 0.006792 | 1.1 | 312.705 | 0.640696 mg/L | Y 361.104 | 106.78259 |
| Se 196.026 | 0.045444 | mg/L | 0.025126 | 55.3 | 11.6491 | 0.045444 mg/L | Y 361.104 | 90.88834 |
| Si 251.611 | -0.045073uv | mg/L | 0.002216 | 4.9 | -21.6794 | -0.045073 mg/L | Y 361.104 | - |
| Sn 189.927 | -0.000145uv | mg/L | 0.003492 | 2404.0 | 0.715172 | -0.000145 mg/L | Y 361.104 | - |
| Sr 216.596 | -0.002306 | mg/L | 0.001208 | 52.4 | 113.834 | -0.002306 mg/L | Y 361.104 | - |
| Ti 322.284 | -0.002677uv | mg/L | 0.000833 | 31.1 | 82.0896 | -0.002677 mg/L | Y 361.104 | - |
| Tl 190.794 | 0.091694 | mg/L | 0.008945 | 9.8 | 35.4326 | 0.091694 mg/L | Y 361.104 | 91.69366 |
| V 289.164 | 0.505729 | mg/L | 0.005839 | 1.2 | 4696.51 | 0.505729 mg/L | Y 361.104 | 101.14578 |
| Zn 206.200 | 1.00235 | mg/L | 0.010490 | 1.0 | 668.919 | 1.00235 mg/L | Y 361.104 | 100.23490 |
| Zr 257.147 | -0.001796 | mg/L | 0.000385 | 21.4 | 125.731 | -0.001796 mg/L | Y 361.104 | - |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.557972 | 144757 | 501.333 | 0.3 |

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**CCV (CCV)** **11/13/2009, 3:28:00 AM** **Rack 1, Tube 50**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 1.03873 | 1.07169 | 1.05697 |
| Al 237.312 | 5.16928 | 5.33821 | 5.25191 |
| As 188.980 | 1.98949 | 2.04534 | 2.04246 |
| B 249.772 | 2.04914 | 2.14584 | 2.13234 |
| Ba 233.527 | 5.05474 | 5.21114 | 5.12961 |
| Be 234.861 | 2.07173 | 2.14167 | 2.10930 |
| Ca 315.887 | 50.5387 | 52.1054 | 51.3313 |
| Cd 228.802 | 5.17502 | 5.33912 | 5.26730 |
| Co 231.160 | 5.01147 | 5.16265 | 5.09408 |
| Cr 267.716 | 5.04519 | 5.20473 | 5.13229 |
| Cu 324.754 | 4.95479 | 5.11110 | 5.04075 |
| Fe 261.382 | 5.02098 | 5.17425 | 5.11021 |
| K 766.491 | 49.4682 | 50.9999 | 50.3596 |
| Li 610.365 | 4.94021 | 5.09611 | 4.98756 |
| Mg 279.078 | 49.9975 | 51.5622 | 50.8404 |
| Mn 293.305 | 5.07672 | 5.23915 | 5.16588 |
| Mo 202.032 | 1.02254 | 1.04995 | 1.04029 |
| Na 568.821 | 47.7377 | 49.2683 | 48.3902 |
| Na 589.592 | 52.1943 | 53.8742 | 53.1301 |
| Ni 231.604 | 4.92956 | 5.08298 | 5.00930 |
| Pb 220.353 | 5.00495 | 5.15756 | 5.07511 |
| Sb 217.582 | 1.01409 | 1.03556 | 1.02583 |
| Se 196.026 | 2.02497 | 2.07010 | 2.05613 |
| Si 251.611 | 4.85673 | 4.98067 | 4.89723 |
| Sn 189.927 | 5.00044 | 5.15597 | 5.07704 |
| Sr 216.596 | 4.97958 | 5.16820 | 5.17986 |
| Ti 322.284 | 5.04968 | 5.20718 | 5.13600 |
| Tl 190.794 | 1.95369 | 2.02132 | 1.99805 |
| V 289.164 | 2.02929 | 2.09264 | 2.06072 |
| Zn 206.200 | 5.19339 | 5.41091 | 5.25546 |
| Zr 257.147 | 5.14034 | 5.30873 | 5.23492 |
| Y 361.104 | 0.620197 | 0.611507 | 0.617922 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 1.05579 | mg/L | 0.016512 | 1.6 | 47058.2 | 1.05579 mg/L | Y 361.104 | 105.57941 |
| Al 237.312 | 5.25313 | mg/L | 0.084474 | 1.6 | 3746.52 | 5.25313 mg/L | Y 361.104 | 105.06264 |



2009_11_12JPK. All Data Report 11/13/2009, 7:22:06 PM

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | 2.02577 | mg/L | 0.031446 | 1.6 | 768.868 | 2.02577 mg/L | Y 361.104 | 101.28829 |
| B 249.772 | 2.10911 | mg/L | 0.052371 | 2.5 | 24326.9 | 2.10911 mg/L | Y 361.104 | 105.45536 |
| Ba 233.527 | 5.13183 | mg/L | 0.078222 | 1.5 | 209629 | 5.13183 mg/L | Y 361.104 | 102.63657 |
| Be 234.861 | 2.10757 | mg/L | 0.034999 | 1.7 | 113097 | 2.10757 mg/L | Y 361.104 | 105.37838 |
| Ca 315.887 | 51.3251 | mg/L | 0.783367 | 1.5 | 392560 | 51.3251 mg/L | Y 361.104 | 102.65026 |
| Cd 228.802 | 5.26048 | mg/L | 0.082262 | 1.6 | 44049.6 | 5.26048 mg/L | Y 361.104 | 105.20960 |
| Co 231.160 | 5.08940 | mg/L | 0.075698 | 1.5 | 30467.0 | 5.08940 mg/L | Y 361.104 | 101.78798 |
| Cr 267.716 | 5.12740 | mg/L | 0.079884 | 1.6 | 185973 | 5.12740 mg/L | Y 361.104 | 102.54806 |
| Cu 324.754 | 5.03555 | mg/L | 0.078280 | 1.6 | 271584 | 5.03555 mg/L | Y 361.104 | 100.71091 |
| Fe 261.382 | 5.10182 | mg/L | 0.076977 | 1.5 | 10598.5 | 5.10182 mg/L | Y 361.104 | 102.03630 |
| K 766.491 | 50.2759 | mg/L | 0.769280 | 1.5 | 1778858 | 50.2759 mg/L | Y 361.104 | 100.55177 |
| Li 610.365 | 5.00796 | mg/L | 0.079927 | 1.6 | 112493 | 5.00796 mg/L | Y 361.104 | 100.15918 |
| Mg 279.078 | 50.8000 | mg/L | 0.783135 | 1.5 | 55524.2 | 50.8000 mg/L | Y 361.104 | 101.60000 |
| Mn 293.305 | 5.16058 | mg/L | 0.081347 | 1.6 | 79336.9 | 5.16058 mg/L | Y 361.104 | 103.21168 |
| Mo 202.032 | 1.03759 | mg/L | 0.013903 | 1.3 | 3860.87 | 1.03759 mg/L | Y 361.104 | 103.75906 |
| Na 568.821 | 48.4654 | mg/L | 0.768060 | 1.6 | 18679.6 | 48.4654 mg/L | Y 361.104 | 96.93075 |
| Na 589.592 | 53.0662 | mg/L | 0.841771 | 1.6 | 10357507 | 53.0662 mg/L | Y 361.104 | 106.13241 |
| Ni 231.604 | 5.00728 | mg/L | 0.076732 | 1.5 | 14834.9 | 5.00728 mg/L | Y 361.104 | 100.14559 |
| Pb 220.353 | 5.07921 | mg/L | 0.076391 | 1.5 | 7236.01 | 5.07921 mg/L | Y 361.104 | 101.58411 |
| Sb 217.582 | 1.02516 | mg/L | 0.010749 | 1.0 | 508.028 | 1.02516 mg/L | Y 361.104 | 102.51592 |
| Se 196.026 | 2.05040 | mg/L | 0.023106 | 1.1 | 436.181 | 2.05040 mg/L | Y 361.104 | 102.52014 |
| Si 251.611 | 4.91154 | mg/L | 0.063196 | 1.3 | 12119.6 | 4.91154 mg/L | Y 361.104 | 98.23089 |
| Sn 189.927 | 5.07782 | mg/L | 0.077766 | 1.5 | 3483.09 | 5.07782 mg/L | Y 361.104 | 101.55637 |
| Sr 216.596 | 5.10921 | mg/L | 0.112417 | 2.2 | 26691.2 | 5.10921 mg/L | Y 361.104 | 102.18428 |
| Ti 322.284 | 5.13095 | mg/L | 0.078872 | 1.5 | 56302.0 | 5.13095 mg/L | Y 361.104 | 102.61903 |
| Tl 190.794 | 1.99102 | mg/L | 0.034353 | 1.7 | 747.240 | 1.99102 mg/L | Y 361.104 | 99.55093 |
| V 289.164 | 2.06089 | mg/L | 0.031676 | 1.5 | 18536.2 | 2.06089 mg/L | Y 361.104 | 103.04434 |
| Zn 206.200 | 5.28659 | mg/L | 0.112051 | 2.1 | 3597.98 | 5.28659 mg/L | Y 361.104 | 105.73174 |
| Zr 257.147 | 5.22800 | mg/L | 0.084409 | 1.6 | 71074.3 | 5.22800 mg/L | Y 361.104 | 104.55992 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.616542 | 159953 | 1169.109 | 0.7 |

**BLA01 (CCB)** **11/13/2009, 3:31:19 AM** **Rack 1, Tube 51**

**Weight: 1** **Volume: 1** **Dilution: 1**

| Label | Replicates Concentration | | |
|---|---|---|---|
| Ag 328.068 | 0.000163 | -0.000159u | 0.000062 |
| Al 237.312 | 0.006178 | 0.007696 | 0.000641 |
| As 188.980 | 0.000130 | -0.002335u | -0.004604u |
| B 249.772 | 0.014299 | 0.010224 | 0.007183 |
| Ba 233.527 | -0.000073u | -0.000087u | 0.000072 |
| Be 234.861 | 0.000088 | 0.000008 | 0.000022 |
| Ca 315.887 | 0.011558 | 0.010547 | 0.006153 |
| Cd 228.802 | 0.000346 | 0.000093 | -0.000068u |
| Co 231.160 | 0.000921 | 0.000443 | 0.000411 |
| Cr 267.716 | 0.000171 | 0.000050 | -0.000022u |
| Cu 324.754 | -0.000154u | -0.000100u | -0.000125u |
| Fe 261.382 | 0.000334 | 0.001123 | 0.000400 |
| K 766.491 | 0.000167 | -0.001310u | -0.000589u |
| Li 610.365 | 0.002769 | 0.001008 | -0.000841u |
| Mg 279.078 | 0.002392 | 0.001198 | 0.000009 |
| Mn 293.305 | 0.001112 | 0.000947 | -0.000369u |
| Mo 202.032 | 0.000643 | 0.001375 | -0.000973u |
| Na 568.821 | -0.092037u | -0.148551u | -0.193781u |
| Na 589.592 | 0.001236 | 0.000681 | -0.001799u |
| Ni 231.604 | 0.000133 | 0.000450 | -0.000144u |
| Pb 220.353 | -0.001386u | -0.000105u | -0.004329u |
| Sb 217.582 | 0.001118 | -0.006305u | -0.006673u |
| Se 196.026 | -0.006981u | -0.005508u | -0.004068u |
| Si 251.611 | 0.006835 | 0.005076 | 0.003357 |
| Sn 189.927 | -0.000736u | -0.000600u | -0.000308u |
| Sr 216.596 | 0.000097 | 0.000148 | 0.000125 |
| Ti 322.284 | 0.000052 | 0.000370 | 0.000187 |
| Tl 190.794 | 0.004260 | 0.000478 | 0.007656 |
| V 289.164 | -0.000241u | 0.000811 | -0.000293u |
| Zn 206.200 | 0.002031 | 0.000294 | 0.001452 |
| Zr 257.147 | 0.000124 | -0.000040u | 0.000033 |
| Y 361.104 | 0.654770 | 0.658182 | 0.689066 |

| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| Ag 328.068 | 0.000022uv | mg/L | 0.000165 | 751.7 | -14.7932 | 0.000022 mg/L | Y 361.104 | 0.00002 |
| Al 237.312 | 0.004838 | mg/L | 0.003713 | 76.7 | 0.634173 | 0.004838 mg/L | Y 361.104 | 0.00484 |





| Label | Sol'n Conc. | Units | SD | %RSD | Int. (c/s) | Calc Conc. | IS | QC Value |
|---|---|---|---|---|---|---|---|---|
| As 188.980 | -0.002270uv | mg/L | 0.002368 | 104.3 | -0.603120 | -0.002270 mg/L | Y 361.104 | -0.00227 |
| B 249.772 | 0.010568 | mg/L | 0.003571 | 33.8 | 138.730 | 0.010568 mg/L | Y 361.104 | 0.01057 |
| Ba 233.527 | -0.000029uv | mg/L | 0.000088 | 301.0 | 10.2210 | -0.000029 mg/L | Y 361.104 | -0.00003 |
| Be 234.861 | 0.000039 | mg/L | 0.000043 | 108.4 | -2.55012 | 0.000039 mg/L | Y 361.104 | 0.00004 |
| Ca 315.887 | 0.009419 | mg/L | 0.002874 | 30.5 | 666.374 | 0.009419 mg/L | Y 361.104 | 0.00942 |
| Cd 228.802 | 0.000124uv | mg/L | 0.000209 | 169.1 | -0.562894 | 0.000124 mg/L | Y 361.104 | 0.00012 |
| Co 231.160 | 0.000592 | mg/L | 0.000285 | 48.2 | 10.8258 | 0.000592 mg/L | Y 361.104 | 0.00059 |
| Cr 267.716 | 0.000067uv | mg/L | 0.000097 | 146.1 | -4.08569 | 0.000067 mg/L | Y 361.104 | 0.00007 |
| Cu 324.754 | -0.000126uv | mg/L | 0.000027 | 21.3 | 117.560 | -0.000126 mg/L | Y 361.104 | -0.00013 |
| Fe 261.382 | 0.000619 | mg/L | 0.000438 | 70.7 | 10.5954 | 0.000619 mg/L | Y 361.104 | 0.00062 |
| K 766.491 | -0.000577uv | mg/L | 0.000739 | 128.0 | -338.607 | -0.000577 mg/L | Y 361.104 | -0.00058 |
| Li 610.365 | 0.000979uv | mg/L | 0.001805 | 184.4 | 471.942 | 0.000979 mg/L | Y 361.104 | 0.00098 |
| Mg 279.078 | 0.001199 | mg/L | 0.001191 | 99.3 | 21.9310 | 0.001199 mg/L | Y 361.104 | 0.00120 |
| Mn 293.305 | 0.000563uv | mg/L | 0.000811 | 144.0 | 8.91653 | 0.000563 mg/L | Y 361.104 | 0.00056 |
| Mo 202.032 | 0.000348uv | mg/L | 0.001201 | 344.7 | 2.44557 | 0.000348 mg/L | Y 361.104 | 0.00035 |
| Na 568.821 | -uv | mg/L | 0.050976 | 35.2 | -501.223 | - mg/L | Y 361.104 | - |
| Na 589.592 | 0.000039uv | mg/L | 0.001616 | 4123.7 | 7352.17 | 0.000039 mg/L | Y 361.104 | 0.00004 |
| Ni 231.604 | 0.000146uv | mg/L | 0.000297 | 203.1 | 0.191230 | 0.000146 mg/L | Y 361.104 | 0.00015 |
| Pb 220.353 | -0.001940uv | mg/L | 0.002166 | 111.6 | -3.82108 | -0.001940 mg/L | Y 361.104 | -0.00194 |
| Sb 217.582 | -0.003953uv | mg/L | 0.004396 | 111.2 | -1.21772 | -0.003953 mg/L | Y 361.104 | -0.00395 |
| Se 196.026 | -0.005519uv | mg/L | 0.001457 | 26.4 | 0.029804 | -0.005519 mg/L | Y 361.104 | -0.00552 |
| Si 251.611 | 0.005089 | mg/L | 0.001739 | 34.2 | 55.8015 | 0.005089 mg/L | Y 361.104 | 0.00509 |
| Sn 189.927 | -0.000548uv | mg/L | 0.000219 | 39.9 | 0.483566 | -0.000548 mg/L | Y 361.104 | -0.00055 |
| Sr 216.596 | 0.000123 | mg/L | 0.000025 | 20.5 | 1.04113 | 0.000123 mg/L | Y 361.104 | 0.00012 |
| Ti 322.284 | 0.000203 | mg/L | 0.000159 | 78.6 | 118.581 | 0.000203 mg/L | Y 361.104 | 0.00020 |
| Tl 190.794 | 0.004131 | mg/L | 0.003591 | 86.9 | 1.77569 | 0.004131 mg/L | Y 361.104 | 0.00413 |
| V 289.164 | 0.000093uv | mg/L | 0.000623 | 672.6 | 3.37537 | 0.000093 mg/L | Y 361.104 | 0.00009 |
| Zn 206.200 | 0.001259 | mg/L | 0.000884 | 70.2 | 0.750561 | 0.001259 mg/L | Y 361.104 | 0.00126 |
| Zr 257.147 | 0.000039uv | mg/L | 0.000082 | 209.5 | 16.6536 | 0.000039 mg/L | Y 361.104 | 0.00004 |

| Label | Ratio | Int. (c/s) | SD(Int) | %RSD |
|---|---|---|---|---|
| Y 361.104 | 0.667339 | 173131 | 4901.501 | 2.8 |

SDG # 59169

DUE DATE

PKG TYPE QCB

# GC/MS REPORT PACKAGE WORKSHEET

CLIENT ID Keramida

SAMPLE RANGE A864527-531, 534-536, 539-550

A864 533-559

PROJECT MANAGER

SUBMITTER # PROJECT #

DESCRIPTION

TEST CODES

VOLATILE SEMI-VOLATILE

DATE TO LISA: DATE TO F:

SPECIAL COMMENTS:

sdg59169

SDG 59169 - KERAMIDA ENVIRONMENTAL

| SVCGRP | INSTR | RUN | RUNDATE | SAMPLEID | CLIENTID | TEST | PREP | ST | DATA_FILE |
|---|---|---|---|---|---|---|---|---|---|
| SVL | PREP | R559937 | 06-NOV-09 | A864527 | 132 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864528 | 148 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864529 | 153 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864530 | DUP-03 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864534 | 152 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864535 | 146 | P233.9.0 | | 7 | SVL3607-465 |
| | | | | A864536 | 150 | P233.9.0 | | 7 | SVL3607-465 |
| | GC/MS 8 | R560105 | 09-NOV-09 | A864529 | 153 | O517.4.0 | P233.9.0 | 7 | 5691H.D |
| | | | | A864527 | 132 | O517.4.0 | P233.9.0 | 7 | 5694H.D |
| | | | | A864528 | 148 | O517.4.0 | P233.9.0 | 7 | 5695H.D |
| | | | | A864530 | DUP-03 | O517.4.0 | P233.9.0 | 7 | 5696H.D |
| | | R560106 | 10-NOV-09 | A864534 | 152 | O517.4.0 | P233.9.0 | 7 | 5707H.D |
| | | | | A864535 | 146 | O517.4.0 | P233.9.0 | 7 | 5708H.D |
| | | | | A864536 | 150 | O517.4.0 | P233.9.0 | 7 | 5709H.D |
| VOL | GC/MS #17( | R560090 | 06-NOV-09 | A864529 | 153 | O510.5.0 | | 7 | 2669V.D |
| | | | | A864527 | 132 | O510.5.0 | | 7 | 2673V.D |
| | | | | A864528 | 148 | O510.5.0 | | 7 | 2674V.D |
| | | | | A864530 | DUP-03 | O510.5.0 | | 7 | 2675V.D |
| | | | | A864531 | 302 | O510.5.0 | | 7 | 2676V.D |
| | | | | A864534 | 152 | O510.5.0 | | 7 | 2679V.D |
| | | | | A864535 | 146 | O510.5.0 | | 7 | 2680V.D |
| | | | | A864536 | 150 | O510.5.0 | | 7 | 2681V.D |
| | | | | A864539 | 169D | O510.5.0 | | 7 | 2684V.D |
| | | R560098 | 07-NOV-09 | A864529 | 153 | O510.5.1 | | 7 | 2710V.D |
| | | | | A864528 | 148 | O510.5.1 | | 7 | 2711V.D |
| | | | | A864530 | DUP-03 | O510.5.1 | | 7 | 2712V.D |
| | | | | A864534 | 152 | O510.5.1 | | 7 | 2713V.D |
| | AGILENT GC | R559983 | 06-NOV-09 | A864555 | 156 | O510.5.0 | | 7 | 5197T.D |
| | | | | A864556 | 151 | O510.5.0 | | 7 | 5198T.D |
| | | | | A864557 | 164 | O510.5.0 | | 7 | 5199T.D |
| | | | | A864558 | 157 | O510.5.0 | | 7 | 5200T.D |
| | | | | A864559 | 161 | O510.5.0 | | 7 | 5201T.D |
| | | R560082 | 07-NOV-09 | A864555 | 156 | O510.5.1 | | 7 | 5216T.D |
| | | | | A864558 | 157 | O510.5.1 | | 7 | 5217T.D |
| | | | | A864559 | 161 | O510.5.1 | | 7 | 5218T.D |
| | | | | A864540 | 169S | O510.5.0 | | 7 | 5221T.D |
| | | | | A864541 | 170S | O510.5.0 | | 7 | 5222T.D |
| | | | | A864542 | DUP-01 | O510.5.0 | | 7 | 5225T.D |
| | | | | A864543 | 170D | O510.5.0 | | 7 | 5226T.D |
| | | | | A864544 | 167S | O510.5.0 | | 7 | 5227T.D |
| | | | | A864545 | 167D | O510.5.0 | | 7 | 5228T.D |
| | | | | A864546 | DUP-02 | O510.5.0 | | 7 | 5229T.D |
| | | | | A864547 | 165S | O510.5.0 | | 7 | 5230T.D |
| | | | | A864548 | 165D | O510.5.0 | | 7 | 5231T.D |
| | | | | A864549 | 166D | O510.5.0 | | 7 | 5232T.D |
| | | | | A864550 | 166S | O510.5.0 | | 7 | 5233T.D |
| | | R560121 | 09-NOV-09 | A864543 | 170D | O510.5.1 | | 7 | 5244T.D |
| | | | | A864545 | 167D | O510.5.1 | | 7 | 5245T.D |
| | | | | A864546 | DUP-02 | O510.5.1 | | 7 | 5246T.D |
| | | | | A864548 | 165D | O510.5.1 | | 7 | 5247T.D |
| | | | | A864549 | 166D | O510.5.1 | | 7 | 5248T.D |
| | | | | A864550 | 166S | O510.5.1 | | 7 | 5249T.D |

Bla Q2255318 5689H 11/9

LCS Q2255319 5690H 11/9



MS/MSD Q2255320 5703H 11/10

A864524 321 5704H

SDG # 59169

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CASE NARRATIVE
GC/MS VOLATILES and SEMI-VOLATILES
SW846-8260B and SW846-8270C
A864527 – A864531, A864534 – A864536, A864539 – A864550 and A864555 – A864559
11/14/09

**Volatile Analysis**

Samples A864527 – A864531, A864354 – A864536, A864539 – A864550 and A864555 – A864559 were analyzed for volatile organic compounds by GC/MS. The samples were analyzed and reported from five runs. Samples A864527 – A864531, A864534 – A864536 and A864539 were analyzed and reported from the first run. The MS and MSD analyzed on this run were prepared using sample A864529. The internal standard areas and surrogate recoveries for the method blank, LCS, MS, MSD and samples A864527 – A864531, A864534 – A864536 and A864539 were within QC acceptance limits. The method blank was BDL for all compounds. The recoveries of trichloroethene were not reportable in the MS and MSD because of the concentration of this compound in the sample matrix. The recovery of m/p-xylene was below the laboratory generated control limit in the MSD. The recoveries of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and carbon disulfide were below the laboratory generated control limits in the MS and MSD. The recoveries for all other compounds were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. An LCS was analyzed on this run to determine system performance for the compounds outside of control limits in the MS and MSD. The recovery of hexachlorobutadiene exceeded the laboratory generated control limit in the LCS. The recoveries of all other compounds were within the laboratory generated control limits in the LCS. The compound exceeding control limits in the LCS was within control limits in the MS and MSD and was BDL in all associated samples. The compounds outside of control limits in the MS and MSD were within control limits in the LCS. Samples A864529, A864530 and A864534 reported trichloroethene as exceeding the calibration range. Sample A864528 reported cis-1,2-dichloroethene and trichloroethene as exceeding the calibration range. These samples were diluted and reanalyzed on a subsequent run.

The dilutions for samples A864528, A864529, A864530 and A864534 were analyzed and reported from the second run. The MS and MSD analyzed on this run were prepared using a sample from a different submitter. The internal standard areas and surrogate recoveries for the method blank, LCS, MS, MSD and samples A864528, A864529, A864530 and A864534 were within QC acceptance limits. The method blank was BDL for all compounds. The

recoveries for all target compounds for the dilutions of these samples were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. An LCS was analyzed on this run to determine system performance for the compounds outside of control limits in the MS and MSD. The recoveries of all target compounds for the dilutions of these samples were within the laboratory generated control limits in the LCS. Samples A864529, A864530 and A864534 were analyzed at 1:10 dilutions in order to report trichloroethene within the calibration range. Sample A864528 was analyzed at a 1:10 dilution in order to report trichloroethene and cis-1.2-dichloroethene within the calibration range. These dilutions are reported as replicate analyses (Rep1).

Samples A864555 – A864559 were analyzed and reported from the third run. The MS and MSD analyzed on this run were prepared using a sample from a different submitter. The internal standard areas and surrogate recoveries for the method blank, LCS, MS, MSD and samples A864555 – A864559 were within QC acceptance limits. The method blank was BDL for all compounds. The recoveries of benzene, chlorobenzene, 1,2-dichloropropane, toluene and 4-methyl-2-pentanone exceeded the laboratory generated control limits in the MS. The recoveries of 1,3-dichloropropane, 1,1,2,2-tetrachloroethane, 2-hexanone and 1,2-dibromo-ethane exceeded the laboratory generated control limits in the MS and MSD. The recoveries for all other target compounds were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. An LCS was analyzed on this run to determine system performance for the compounds outside of control limits in the MS and MSD. The recoveries of all compounds were within the laboratory generated control limits in the LCS. The compounds outside of control limits in the MS and MSD were within control limits in the LCS. Samples A864555 and A864558 reported trichloroethene as exceeding the calibration range. Sample A864559 reported trichloroethene and cis-1,2-dichloroethene as exceeding the calibration range. These samples were diluted and reanalyzed on a subsequent run.

Samples A864540 – A864550 and the dilutions for samples A864555, A864558 and A864559 were analyzed and reported from the fourth run. The MS and MSD analyzed on this run were prepared using sample A864541. The internal standard areas and surrogate recoveries for the method blank, LCS and samples A864555 – A864559 were within QC acceptance limits. The internal standard areas for the MS and MSD were within method acceptance limits, however the surrogate recoveries were outside of the laboratory generated control limits. The method blank was BDL for all compounds. The recoveries of 1,2-dichloropropane, 1,3-dichloro-propane, 1,1,2,2-tetrachloroethene, 2-hexanone and 12,-dibromoethane exceeded the laboratory generated control limits in the MS. The recovery of vinyl acetate was below the laboratory generated control limit in the MSD. The recoveries for all other target compounds were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. An LCS was analyzed on this run to determine system performance for the compounds outside of control limits in the MS and MSD. The recoveries of all compounds were within the laboratory generated control limits in the LCS. The compounds outside of control limits in the MS and MSD were within control limits in the LCS. Samples A864555 and A864558 were analyzed at 1:10 dilutions in order to report trichloroethene within the calibration range. Sample A864559 was

analyzed at a 1:10 dilution in order to report trichloroethene and cis-1,2-dichloroethene within the calibration range. These dilutions are reported as replicate analyses (Rep1). Sample A864543 reported vinyl chloride as exceeding the calibration range. Samples A864545, A864546 and A864550 reported cis-1,2-dichloroethene as exceeding the calibration range. Samples A864548 and A864549 reported cis-1,2-dichloroethene and vinyl chloride as exceeding the calibration range. These samples were diluted and reanalyzed on the subsequent run.

The dilutions for samples A864543, A864545, A864546, A864548, A864549 and A864550 were analyzed and reported from the fifth run. The MS and MSD analyzed on this run were prepared using a sample from a different submitter. The internal standard areas and surrogate recoveries for the method blank, LCS and samples A864543, A864545, A864546, A864548, A864549 and A864550 were within QC acceptance limits. The method blank was BDL for all compounds. The recoveries for all compounds were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. An LCS was analyzed on this run to determine system performance for the compounds outside of control limits in the MS and MSD. The recoveries of all compounds were within the laboratory generated control limits in the LCS. Sample A864543 was analyzed at a 1:10 dilution in order to report vinyl chloride within the calibration range. Samples A864545, A864546 and A864550 were analyzed at 1:10 dilutions in order to report cis-1,2-dichloroethene within the calibration range. Sample A864548 was analyzed at a 1:20 dilution in order to report cis-1,2-dichloroethene and vinyl chloride within the calibration range. Sample A864549 was analyzed at a 1:10 dilution in order to report cis-1,2-dichloroethene and vinyl chloride within the calibration range. These dilutions are reported as replicate analyses (Re01).

There were no other QC problems encountered with the volatile analysis of these samples.

**Semi-Volatile Analysis**

Samples A864527 – A864530 and A864534 – A864536 were analyzed for the polynuclear aromatic hydrocarbon semi-volatile organic compounds by GC/MS following liquid/liquid extraction. The samples were extracted as one prep batch. The MS and MSD associated with this prep batch were prepared using sample A864529. The samples and their associated QC were analyzed and reported from two runs. The internal standard areas and surrogate recoveries for the method blank, LCS, MS, MSD and samples A864527 – A864530 and A864534 – A864536 were within QC acceptance limits. The method blank was BDL for all compounds. The recoveries of all compounds were within the laboratory generated control limits in the LCS. The recoveries for all compounds were within the laboratory generated control limits in the MS and MSD. The RPDs for all compounds were within the laboratory control limits in the MS/MSD. There were no QC problems encountered with the semi-volatile analysis of these samples.

Lisa A Smith
GCMS Group Supervisor

ACCREDITED IN ACCORDANCE WITH nelac

SDG 59169 - KERAMIDA
A864527-531, 534-536, A864539-550, A863555-559

VOLATILE

GCMS# 17
11/05/09

| | |
|---|---|
| Initial Calibration | |
| BFB Tune Check | Form5 |
| BFB | 2641V |
| Initial Calibration Summary | |
| VSTD01 | 2642V |
| VSTD010 | 2646V |
| VSTD025 | 2647V |
| VSTD050 | 2648V |
| VSTD100 | 2649V |
| VSTD05 | 2645V |

GCMS#17
11/06/09

| | |
|---|---|
| BFB Tune Check | Form5 |
| Internal Standard Summary | Form8 |
| Surrogate Summary | Form2 |
| BFB | 2659V |
| Continuing Calibration Summary | |
| VSTD010 | 2660V |
| BLA01 | 2661V |
| LCS | 2662V |
| A864529 | 2669V |
| A864529 MS/MSD SUMMARY | |
| A864529 MS | 2670V |
| A864529 MSD | 2671V |
| A864527 | 2673V |
| A864528 | 2674V |
| A864530 | 2675V |
| A864531 | 2676V |
| A864534 | 2679V |
| A864535 | 2680V |
| A864536 | 2681V |
| A864539 | 2684V |

GCMS#17
11/07/09

| | |
|---|---|
| BFB Tune Check | Form5 |
| Internal Standard Summary | Form8 |
| Surrogate Summary | Form2 |
| BFB | 2689V |
| Continuing Calibration Summary | |
| VSTD010 | 2690V |
| BLA01 | 2691V |
| LCS | 2692V |
| A864635 MS/MSD SUMMARY | |

SDG 59169 - KERAMIDA
A864527-531, 534-536, A864539-550, A863555-559 VOLATILE

| | | |
|---|---|---|
| | A864635 MS | 2698V |
| | A864635 MSD | 2699V |
| | A864529 | 2710V |
| | A864528 | 2711V |
| | A864530 | 2712V |
| | A864534 | 2713V |

GCMS#16
10/31/09

| | | |
|---|---|---|
| | Initial Calibration | |
| | BFB Tune Check | Form5 |
| | BFB | 4989T |
| | Initial Calibration Summary | |
| | VSTD025 | 4995T |
| | VSTD050 | 4996T |
| | VSTD100 | 4997T |
| | VSTD001 | 4991T |
| | VSTD005 | 4993T |
| | VSTD010 | 5003T |

GCMS#16
11/06/09

| | | |
|---|---|---|
| | BFB Tune Check | Form5 |
| | Internal Standard Summary | Form8 |
| | Surrogate Summary | Form2 |
| | BFB | 5179T |
| | Continuing Calibration Summary | |
| | VSTD010 | 5180T |
| | BLA01 | 5181T |
| | LCS | 5182T |
| | A864552 MS/MSD SUMMARY | |
| | A864552 MS | 5193T |
| | A864552 MSD | 5194T |
| | A864555 | 5197T |
| | A864556 | 5198T |
| | A864557 | 5199T |
| | A864558 | 5200T |
| | A864559 | 5201T |

GCMS#16
11/07/09

| | | |
|---|---|---|
| | BFB Tune Check | Form5 |
| | Internal Standard Summary | Form8 |
| | Surrogate Summary | Form2 |
| | BFB | 5209T |
| | Continuing Calibration Summary | |
| | VSTD010 | 5210T |

SDG 59169 - KERAMIDA
A864527-531, 534-536, A864539-550, A863555-559 VOLATILE

| | |
|---|---|
| BLA01 | 5211T |
| LCS | 5212T |
| A864555 | 5216T |
| A864558 | 5217T |
| A864559 | 5218T |
| A864540 | 5221T |
| A864541 | 5222T |
| A864541 MS/MSD SUMMARY | |
| A864541 | 5223T |
| A864541 | 5224T |
| A864542 | 5225T |
| A864543 | 5226T |
| A864544 | 5227T |
| A864545 | 5228T |
| A864546 | 5229T |
| A864547 | 5230T |
| A864548 | 5231T |
| A864549 | 5232T |
| A864550 | 5233T |

GCMS#16
11/09/09

| | |
|---|---|
| BFB Tune Check | Form5 |
| Internal Standard Summary | Form8 |
| Surrogate Summary | Form2 |
| BFB | 5239T |
| Continuing Calibration Summary | |
| VSTD010 | 5240T |
| BLA01 | 5241T |
| LCS | 5242T |
| A864543 | 5244T |
| A864545 | 5245T |
| A864546 | 5246T |
| A864548 | 5247T |
| A864549 | 5248T |
| A864550 | 5249T |
| A864665 MS/MSD SUMMARY | |
| A864665 MS | 5252T |
| A864665 MSD | 5253T |

SDG 59169 - KERAMIDA
A864527-530, 534-536

SEMI-VOLATILE

GCMS#8
11/09/09

| | |
|---|---|
| DFTPP Tune Check | Form5 |
| ISTD Summary | Form8 |
| Surrogate Summary | Form2 |
| DFTPP | 5681H |
| Initial Calibration Summary | |
| SSTD 1.0 | 5683H |
| SSTD 0.1 | 5684H |
| SSTD 0.5 | 5685H |
| SSTD 2.0 | 5686H |
| SSTD 5.0 | 5687H |
| SSTD 0.02 | 5688H |
| Q2255318 BLA02 | 5689H |
| Q2255019 LCS | 5690H |
| A864529 | 5691H |
| A864527 | 5694H |
| A864528 | 5695H |
| A864530 | 5696H |

GCMS#8
11/10/09

| | |
|---|---|
| DFTPP Tune Check | Form5 |
| ISTD Summary | Form8 |
| Surrogate Summary | Form2 |
| DFTPP | 5700H |
| Continuing Calibration Summary | |
| SSTD 1.0 | 5701H |
| A864529 MS/MSD SUMMARY | |
| A864529 MS | 5703H |
| A864529 MSD | 5704H |
| A864534 | 5707H |
| A864535 | 5708H |
| A864536 | 5709H |

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 2641V.D BFB Injection Date: 11/05/09

Instrument ID: GCMS#17 BFB Injection Time: 06:43

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 22.1 |
| 75 | 30.0 - 60.0% of mass 95 | 53.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 98.2 |
| 175 | 5.0 - 9.0% of mass 174 | 8.4 ( 8.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 98.5 ( 100.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.5 ( 5.6)2 |

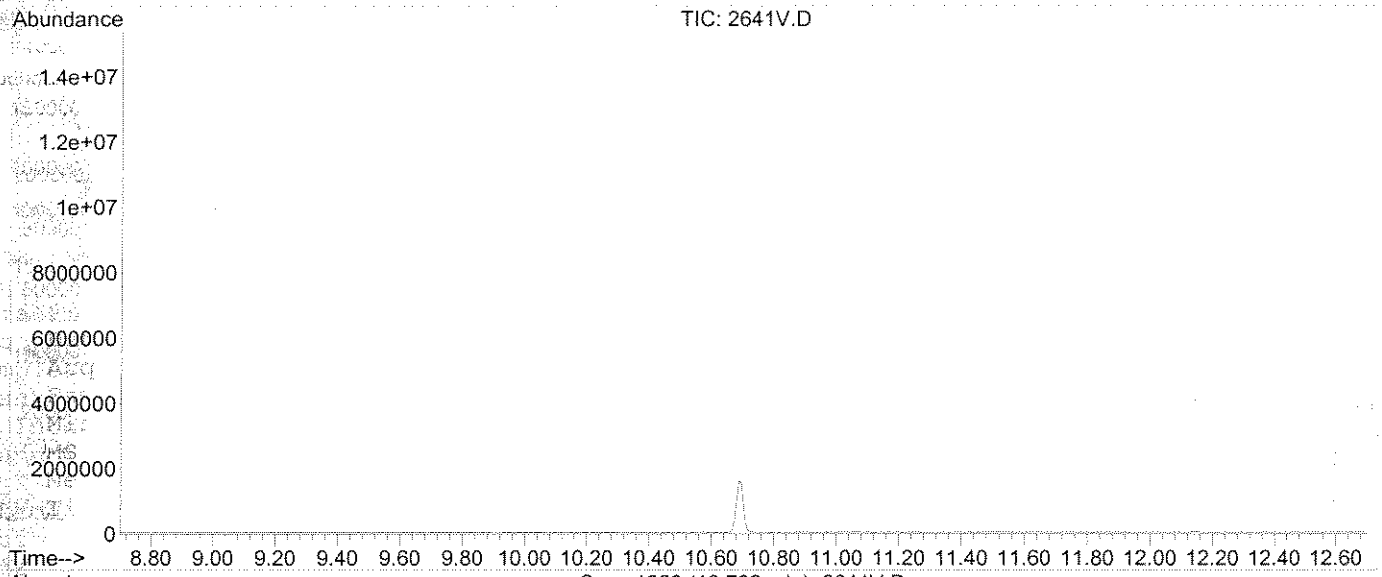
1-Value is % mass 174 2-Value is % mass 176

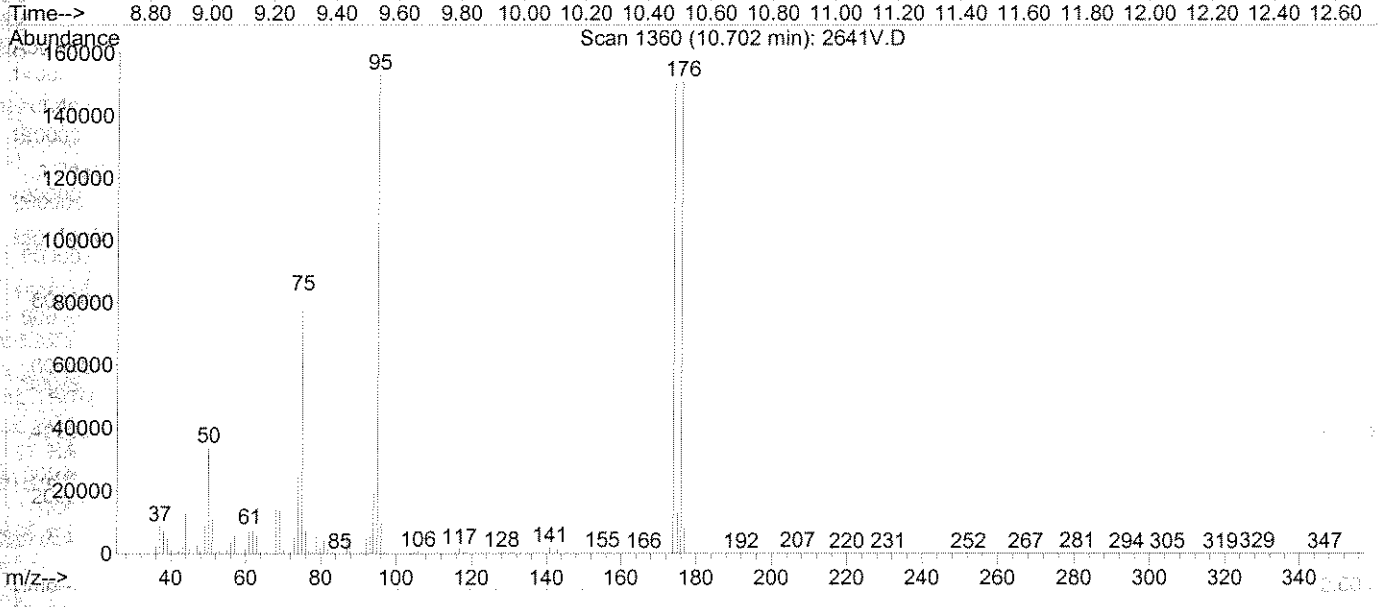
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD01 | VSTD01 | 2642V.D | 11/05/09 | 07:13 |
| 02 | VSTD05 | VSTD05 | 2645V.D | 11/05/09 | 08:28 |
| 03 | VSTD010 | VSTD010 | 2646V.D | 11/05/09 | 08:53 |
| 04 | VSTD025 | VSTD025 | 2647V.D | 11/05/09 | 09:18 |
| 05 | VSTD050 | VSTD050 | 2648V.D | 11/05/09 | 09:42 |
| 06 | VSTD100 | VSTD100 | 2649V.D | 11/05/09 | 10:07 |

JK 11-6-09

Data File : C:\HPCHEM\DATA\V110509\2641V.D  Vial: 1
Acq On : 5 Nov 2009 6:43  Operator: REGI
Sample : BLANK  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES




Spectrum Information: Scan 1360

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.1 | 33864 | PASS |
| 75 | 95 | 30 | 60 | 53.9 | 82544 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 153216 | PASS |
| 96 | 95 | 5 | 9 | 7.0 | 10781 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 98.2 | 150528 | PASS |
| 175 | 174 | 5 | 9 | 8.5 | 12800 | PASS |
| 176 | 174 | 95 | 101 | 100.3 | 150976 | PASS |
| 177 | 176 | 5 | 9 | 5.6 | 8449 | PASS |

2641V.D 8260VOI.M Thu Nov 05 06:58:34 2009

59169b

BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.00 | 2209 | 47.90 | 1239 | 58.60 | 117 | 70.20 | 1300 |
| 37.00 | 8825 | 49.00 | 9428 | 59.90 | 2053 | 71.30 | 159 |
| 38.10 | 7555 | 50.00 | 33864 | 61.00 | 7945 | 71.90 | 902 |
| 39.10 | 4892 | 51.10 | 11128 | 62.00 | 7170 | 73.00 | 5993 |
| 40.10 | 1255 | 52.10 | 849 | 62.90 | 6400 | 74.00 | 25496 |
| 41.10 | 2189 | 53.00 | 608 | 64.00 | 653 | 75.00 | 82544 |
| 42.20 | 873 | 54.00 | 374 | 65.10 | 310 | 76.00 | 7200 |
| 43.10 | 2268 | 55.10 | 1195 | 65.70 | 355 | 76.90 | 1077 |
| 44.00 | 13274 | 56.00 | 3730 | 65.90 | 359 | 77.90 | 603 |
| 45.00 | 1503 | 57.10 | 5972 | 68.00 | 14468 | 78.90 | 5639 |
| 47.10 | 2854 | 58.00 | 630 | 69.00 | 14008 | 79.80 | 1919 |

Scan 1360 (10.702 min): 2641V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 80.90 | 4586 | 90.20 | 151 | 103.00 | 158 | 113.10 | 257 |
| 82.00 | 1420 | 91.00 | 1080 | 103.90 | 501 | 113.70 | 143 |
| 83.10 | 496 | 92.00 | 5188 | 104.80 | 419 | 114.70 | 349 |
| 83.80 | 168 | 93.00 | 6096 | 105.30 | 454 | 115.80 | 747 |
| 84.40 | 137 | 94.00 | 20208 | 105.90 | 752 | 116.80 | 1596 |
| 85.00 | 194 | 95.00 | 153216 | 106.70 | 254 | 117.80 | 753 |
| 85.60 | 235 | 96.00 | 10781 | 107.60 | 102 | 118.30 | 413 |
| 87.00 | 5328 | 96.70 | 395 | 109.80 | 127 | 118.90 | 740 |
| 87.90 | 6401 | 97.00 | 358 | 111.00 | 194 | 120.90 | 155 |
| 89.30 | 246 | 97.90 | 374 | 111.60 | 143 | 122.90 | 315 |
| 90.00 | 165 | 99.00 | 200 | 112.10 | 203 | 124.00 | 248 |

Scan 1360 (10.702 min): 2641V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 125.20 | 107 | 133.00 | 266 | 144.00 | 175 | 155.00 | 528 |
| 125.50 | 148 | 133.30 | 187 | 144.80 | 421 | 156.10 | 115 |
| 125.80 | 157 | 135.00 | 671 | 145.80 | 363 | 156.90 | 461 |
| 127.00 | 262 | 136.70 | 498 | 146.90 | 261 | 158.20 | 101 |
| 128.00 | 714 | 137.60 | 106 | 147.80 | 487 | 159.00 | 514 |
| 128.60 | 295 | 137.80 | 111 | 148.90 | 130 | 160.90 | 108 |
| 129.20 | 306 | 139.10 | 216 | 150.00 | 193 | 162.30 | 187 |
| 129.90 | 600 | 139.70 | 106 | 151.00 | 181 | 165.60 | 138 |
| 130.90 | 404 | 140.90 | 2105 | 152.50 | 340 | 166.10 | 209 |
| 131.30 | 236 | 142.20 | 536 | 153.90 | 279 | 168.70 | 144 |
| 131.90 | 223 | 142.90 | 1633 | 154.50 | 212 | 169.00 | 140 |

Scan 1360 (10.702 min): 2641V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 170.60 | 116 | 187.10 | 136 | 209.20 | 232 | 253.80 | 110 |
| 171.20 | 124 | 191.20 | 133 | 214.40 | 213 | 263.20 | 134 |
| 171.50 | 136 | 191.90 | 164 | 220.00 | 108 | 264.50 | 105 |
| 173.90 | 150528 | 192.10 | 162 | 224.20 | 167 | 267.40 | 143 |
| 175.00 | 12800 | 193.40 | 161 | 231.00 | 211 | 276.90 | 128 |
| 175.90 | 150976 | 199.10 | 125 | 231.20 | 161 | 280.90 | 357 |
| 176.90 | 8449 | 200.20 | 110 | 234.20 | 187 | 282.00 | 237 |
| 178.10 | 313 | 203.20 | 183 | 243.00 | 149 | 292.70 | 107 |
| 181.20 | 220 | 204.80 | 148 | 249.30 | 121 | 294.00 | 166 |
| 182.30 | 155 | 207.00 | 498 | 250.90 | 129 | 302.10 | 167 |
| 183.00 | 350 | 208.10 | 156 | 252.30 | 177 | 303.00 | 174 |

Scan 1360 (10.702 min): 2641V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 304.70 | 183 | 335.40 | 142 | | | | |
| 307.70 | 111 | 340.60 | 113 | | | | |
| 311.40 | 108 | 342.10 | 149 | | | | |
| 311.60 | 113 | 346.90 | 164 | | | | |
| 312.80 | 100 | | | | | | |

| | |
|---|---|
| 318.80 | 136 |
| 319.10 | 124 |
| 320.50 | 108 |
| 324.60 | 215 |
| 328.70 | 332 |

Response Factor Report Instrumen

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

Calibration Files
1 =2642V.D 10 =2646V.D 25 =2647V.D
50 =2648V.D 5 =2645V.D 100 =2649V.D

| | Compound | 1 | 10 | 25 | 50 | 5 | 100 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1)I | FLUOROBENZENE | ----------ISTD---------- | | | | | | | | |
| 2) | Dichlorodifluoromet | 0.1809 | 0.1916 | 0.1758 | 0.1771 | 0.1767 | 0.1725 | 0.1791 | 3.7 | |
| 3)P | Chloromethane | 0.3983 | 0.3731 | 0.3522 | 0.3662 | 0.3557 | 0.3633 | 0.3681 | 4.5 | |
| 4)C | VINYL CHLORIDE | 0.3154 | 0.3168 | 0.3076 | 0.3029 | 0.3184 | 0.3067 | 0.3113 | 2.0 | |
| 5) | Bromomethane | 0.1389 | 0.1230 | 0.1163 | 0.0915 | 0.1299 | | 0.1199 | 15.0 | |
| 6) | Chloroethane | 0.1555 | 0.1478 | 0.1303 | 0.1069 | 0.1488 | | 0.1379 | 14.3 | |
| 7) | Trichlorofluorometh | 0.2827 | 0.2820 | 0.2583 | 0.2362 | 0.2779 | 0.2258 | 0.2605 | 9.5 | |
| 8) | Acrolein | 0.0195 | 0.0191 | 0.0196 | 0.0182 | 0.0187 | 0.0190 | 0.0190 | 2.8 | |
| 9) | Acetone | 0.1604 | 0.1330 | 0.1347 | 0.1260 | 0.1296 | 0.1351 | 0.1365 | 9.0 | |
| 10)C | 1,1-DICHLOROETHENE | 0.2178 | 0.2024 | 0.2020 | 0.2006 | 0.1962 | 0.1954 | 0.2024 | 4.0 | |
| 11) | Trichlorotrifluoroe | 0.2590 | 0.2380 | 0.2270 | 0.2281 | 0.2422 | 0.2242 | 0.2364 | 5.5 | |
| 12) | Acrylonitrile | 0.0554 | 0.0571 | 0.0603 | 0.0558 | 0.0574 | 0.0601 | 0.0577 | 3.6 | |
| 13) | Carbon Disulfide | 0.6326 | 0.6116 | 0.5877 | 0.5794 | 0.5926 | 0.6165 | 0.6034 | 3.3 | |
| 14) | Methylene Chloride | r = 0.02064 + 0.21351*a | | | | | | rE2 = 1.000 | | L |
| 15) | Allyl Chloride | 0.9544 | 0.9269 | 0.9442 | 1.0023 | 0.9095 | 1.0625 | 0.9666 | 5.8 | |
| 16) | Vinyl Acetate | r = -0.00344 + 0.02729*a | | | | | | rE2 = 0.997 | | L |
| 17) | MTBE | 0.7028 | 0.7013 | 0.7090 | 0.6999 | 0.6881 | 0.7344 | 0.7059 | 2.2 | |
| 18) | trans-1,2-Dichloroe | 0.2258 | 0.2227 | 0.2097 | 0.2058 | 0.2136 | 0.2122 | 0.2150 | 3.6 | |
| 19) | n-Hexane | 0.4258 | 0.4086 | 0.3863 | 0.3918 | 0.4035 | 0.4050 | 0.4035 | 3.4 | |
| 20)P | 1,1-Dichloroethane | 0.4195 | 0.4315 | 0.4260 | 0.4196 | 0.4132 | 0.4267 | 0.4228 | 1.5 | |
| 21) | 2-Butanone | 0.0404 | 0.0401 | 0.0401 | 0.0393 | 0.0374 | 0.0392 | 0.0394 | 2.8 | |
| 22) | Ethyl Acetate | 0.4202 | 0.3985 | 0.4316 | 0.4880 | 0.3882 | 0.4688 | 0.4326 | 9.0 | |
| 23) | cis-1,2-Dichloroeth | 0.2236 | 0.2297 | 0.2264 | 0.2166 | 0.2260 | 0.2195 | 0.2236 | 2.2 | |
| 24) | Ethyl Cyanide | 0.0589 | 0.0589 | 0.0605 | 0.0614 | 0.0588 | 0.0625 | 0.0602 | 2.6 | |
| 25)C | CHLOROFORM | 0.4394 | 0.3907 | 0.3847 | 0.3815 | 0.3889 | 0.3806 | 0.3943 | 5.7 | |
| 26) | Methacrylonitrile | 0.2256 | 0.2268 | 0.2503 | 0.2493 | 0.2196 | 0.1924 | 0.2273 | 9.4 | |
| 27) | Tetrahydrofuran | 0.1136 | 0.1102 | 0.1195 | 0.1251 | 0.1102 | 0.1258 | 0.1174 | 6.0 | |
| 28) | Bromochloromethane | 0.1151 | 0.1064 | 0.1061 | 0.1039 | 0.1056 | 0.1035 | 0.1068 | 4.0 | |
| 29) | 2,2-Dichloropropane | 0.2433 | 0.2271 | 0.2206 | 0.2097 | 0.2296 | 0.2120 | 0.2237 | 5.6 | |
| 30) | Diethyl ether | 0.2167 | 0.2162 | 0.2178 | 0.2151 | 0.2170 | 0.2102 | 0.2155 | 1.3 | |
| 31) | 1,1,1-Trichloroetha | 0.3386 | 0.3262 | 0.3234 | 0.3142 | 0.3116 | 0.3312 | 0.3242 | 3.1 | |
| 32) | Iodomethane | 0.3403 | 0.3321 | 0.3316 | 0.3171 | 0.3323 | 0.3276 | 0.3302 | 2.3 | |
| 33)S | Dibromofluoromethan | 0.2332 | 0.2387 | 0.2349 | 0.2352 | 0.2368 | 0.2315 | 0.2350 | 1.1 | |
| 34) | 1,1-Dichloropropene | 0.1155 | 0.1065 | 0.1061 | 0.1055 | 0.1079 | 0.1062 | 0.1079 | 3.5 | |
| 35)S | 1,2-Dichloroethane- | 0.3557 | 0.3610 | 0.3627 | 0.3559 | 0.3609 | 0.3627 | 0.3598 | 0.9 | |
| 36) | Carbon Tetrachlorid | 0.2936 | 0.2820 | 0.2898 | 0.2894 | 0.2744 | 0.2999 | 0.2882 | 3.1 | |
| 37) | 1,2-Dichloroethane | 0.3915 | 0.3878 | 0.3921 | 0.3904 | 0.3727 | 0.3862 | 0.3868 | 1.9 | |
| 38) | Isobutanol | 0.0205 | 0.0205 | 0.0221 | 0.0220 | 0.0203 | 0.0226 | 0.0213 | 4.8 | |
| 39) | Benzene | 0.9274 | 0.8796 | 0.8905 | 0.8797 | 0.8808 | 0.8819 | 0.8900 | 2.1 | |
| 40) | Trichloroethene | 0.2555 | 0.2325 | 0.2298 | 0.2288 | 0.2302 | 0.2270 | 0.2340 | 4.6 | |
| 41) | n-Butanol | 0.0167 | 0.0166 | 0.0181 | 0.0182 | 0.0162 | 0.0193 | 0.0175 | 6.8 | |
| 42)C | 1,2-DICHLOROPROPANE | 0.2323 | 0.2381 | 0.2409 | 0.2410 | 0.2318 | 0.2435 | 0.2379 | 2.0 | |
| 43) | 1,4-Dioxane | 0.0087 | 0.0091 | 0.0090 | 0.0091 | 0.0082 | 0.0097 | 0.0090 | 5.5 | |
| 44) | Methyl Methacrylate | 0.3176 | 0.3084 | 0.3316 | 0.3501 | 0.3008 | 0.3557 | 0.3273 | 6.8 | |
| 45) | Bromodichloromethan | 0.2697 | 0.2676 | 0.2789 | 0.2847 | 0.2568 | 0.2926 | 0.2750 | 4.7 | |

(#) = Out of Range (Advisory for non CCC, SPCC) Page 1 of 3

Response Factor Report Instrumen

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

Calibration Files
1 =2642V.D 10 =2646V.D 25 =2647V.D
50 =2648V.D 5 =2645V.D 100 =2649V.D

Compound 1 10 25 50 5 100 Avg %RSD

JM 11/6/09

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46) | Dibromomethane | 0.1542 | 0.1410 | 0.1443 | 0.1423 | 0.1388 | 0.1427 | 0.1439 | 3.7 |
| 47) | 4-Methyl-2-Pentanon | 0.4649 | 0.4500 | 0.4797 | 0.4853 | 0.4429 | 0.3804 | 0.4505 | 8.5 |
| 48) | 2-Chloroethylvinyle | 0.1713 | 0.1815 | 0.1918 | 0.1991 | 0.1637 | 0.2036 | 0.1852 | 8.5 |
| 49) | cis-1,3-Dichloropro | 0.3472 | 0.3311 | 0.3486 | 0.3603 | 0.3126 | 0.3674 | 0.3445 | 5.8 |
| 50)S | Toluene-d8 | 0.9898 | 0.9921 | 1.0078 | 1.0209 | 0.9909 | 1.0146 | 1.0027 | 1.4 |
| 51)C | TOLUENE | 0.9684 | 0.9733 | 0.9721 | 0.9901 | 0.9329 | 1.0189 | 0.9759 | 2.9 |
| 52) | trans-1,3-Dichlorop | 0.2985 | 0.2920 | 0.3117 | 0.3249 | 0.2741 | 0.3407 | 0.3070 | 7.8 |
| 53) | 1,1,2-Trichloroetha | 0.2085 | 0.2040 | 0.2044 | 0.2064 | 0.1988 | 0.2057 | 0.2046 | 1.6 |
| 54) | 1,2-Dibromoethane | 0.2174 | 0.2279 | 0.2295 | 0.2302 | 0.2157 | 0.2285 | 0.2249 | 2.9 |
| 55)I | 2-Bromo-1-chloropropa | ----------ISTD---------- | | | | | | | |
| 56) | 2-Hexanone | 1.0495 | 0.9678 | 1.0180 | 0.9911 | 0.9979 | 0.8530 | 0.9795 | 6.9 |
| 57) | 1,3-Dichloropropane | 1.1078 | 1.0225 | 1.0185 | 1.0012 | 1.0141 | 0.9726 | 1.0228 | 4.4 |
| 58) | Ethyl Methacrylate | 0.8841 | 0.8454 | 0.8825 | 0.8906 | 0.8292 | 0.8849 | 0.8695 | 2.9 |
| 59) | Tetrachloroethene | 0.8126 | 0.7835 | 0.7362 | 0.7191 | 0.7911 | 0.6966 | 0.7565 | 6.0 |
| 60) | Dibromochloromethan | 0.5123 | 0.5137 | 0.5711 | 0.5914 | 0.5188 | 0.5923 | 0.5499 | 7.1 |
| 61)P | Chlorobenzene | 1.8223 | 1.8069 | 1.7801 | 1.7319 | 1.8225 | 1.7360 | 1.7833 | 2.3 |
| 62) | 1,1,1,2-Tetrachloro | 0.5647 | 0.6028 | 0.6123 | 0.5859 | 0.5918 | 0.5986 | 0.5927 | 2.8 |
| 63)C | ETHYL BENZENE | 1.0522 | 1.0136 | 1.0008 | 0.9685 | 1.0288 | 0.9669 | 1.0051 | 3.4 |
| 64) | m,p-Xylene | 1.2695 | 1.2666 | 1.2429 | 1.2324 | 1.2573 | 1.2593 | 1.2547 | 1.1 |
| 65) | o-Xylene | 1.2825 | 1.2468 | 1.2267 | 1.1983 | 1.2426 | 1.2276 | 1.2374 | 2.3 |
| 66) | Styrene | 1.9859 | 2.0597 | 2.0971 | 2.0903 | 1.9924 | 2.1641 | 2.0649 | 3.3 |
| 67)P | Bromoform | 0.3897 | 0.3988 | 0.4362 | 0.4510 | 0.3653 | 0.4829 | 0.4206 | 10.4 |
| 68)P | 1,1,2,2-Tetrachloro | 0.9779 | 0.9624 | 0.9584 | 0.9073 | 0.9722 | 0.9344 | 0.9521 | 2.8 |
| 69)S | 4-Bromofluorobenzen | 0.9623 | 0.9701 | 0.9466 | 0.9462 | 0.9911 | 0.9344 | 0.9585 | 2.1 |
| 70) | Isopropylbenzene | 2.9618 | 3.0053 | 2.9179 | 2.8704 | 3.0171 | 2.9894 | 2.9603 | 1.9 |
| 71) | trans-1,4-Dichloro- | 0.4351 | 0.4627 | 0.5068 | 0.4911 | 0.4524 | 0.5053 | 0.4756 | 6.3 |
| 72) | Bromobenzene | 1.3171 | 1.3524 | 1.3331 | 1.2942 | 1.3431 | 1.3131 | 1.3255 | 1.6 |
| 73) | 1,2,3-Trichloroprop | 0.3559 | 0.3071 | 0.3099 | 0.2846 | 0.3329 | 0.2863 | 0.3128 | 8.8 |
| 74) | n-Propylbenzene | 0.4451 | 0.4502 | 0.4334 | 0.4091 | 0.4354 | 0.4227 | 0.4326 | 3.5 |
| 75) | 1,3,5-Trimethylbenz | 2.9163 | 2.9964 | 2.9521 | 2.8262 | 3.0137 | 2.8697 | 2.9291 | 2.5 |
| 76) | 2-Chlorotoluene | 0.8375 | 0.8291 | 0.7978 | 0.7701 | 0.8582 | 0.7842 | 0.8128 | 4.2 |
| 77) | 4-Chlorotoluene | 0.8563 | 0.8275 | 0.8200 | 0.7801 | 0.8438 | 0.7907 | 0.8198 | 3.6 |
| 78) | t-Butylbenzene | 1.7865 | 1.8375 | 1.7563 | 1.6440 | 1.8419 | 1.7152 | 1.7636 | 4.3 |
| 79) | 1,2,4-Trimethylbenz | 2.9904 | 3.0553 | 2.9629 | 2.8683 | 3.0258 | 2.8354 | 2.9563 | 3.0 |
| 80) | sec-Butylbenzene | 3.9641 | 4.0620 | 3.8579 | 3.7178 | 4.0450 | 3.2537 | 3.8168 | 8.0 |
| 81) | p-Isopropyltoluene | 3.0623 | 3.3309 | 3.1336 | 3.0413 | 3.2646 | 2.8707 | 3.1172 | 5.3 |
| 82) | 1,3-Dichlorobenzene | 1.6842 | 1.6379 | 1.5898 | 1.5100 | 1.6600 | 1.5701 | 1.6087 | 4.0 |
| 83) | 1,4-Dichlorobenzene | 1.7227 | 1.6489 | 1.6432 | 1.5497 | 1.6946 | 1.6255 | 1.6474 | 3.6 |
| 84) | n-Butylbenzene | 1.6793 | 1.7259 | 1.6334 | 1.5673 | 1.7161 | 1.6869 | 1.6681 | 3.5 |
| 85) | 1,2-Dichlorobenzene | 1.6385 | 1.5946 | 1.4831 | 1.3979 | 1.6142 | 1.4814 | 1.5349 | 6.2 |
| 86) | 1,2-Dibromo-3-chlor | 0.2197 | 0.2202 | 0.2072 | 0.1834 | 0.1983 | 0.2037 | 0.2054 | 6.8 |
| 87) | 1,2,4-Trichlorobenz | 1.1436 | 1.1799 | 1.0156 | 0.8709 | 1.1837 | 0.9061 | 1.0500 | 13.3 |
| 88) | Naphthalene | r = 0.52477 + 2.34109*a | | | | | | rE2 = 0.997 | |
| 89) | Hexachlorobutadiene | r = 0.13606 + 0.48199*a | | | | | | rE2 = 0.997 | |
| 90) | 1,2,3-Trichlorobenzen | r = 0.28284 + 0.65902*a | | | | | | rE2 = 0.995 | |

(#) = Out of Range (Advisory for non CCC, SPCC) Page 2 of 3

Response Factor Report Instrumen

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 1 | =2642V.D | 10 | =2646V.D | 25 | =2647V.D |
| 50 | =2648V.D | 5 | =2645V.D | 100 | =2649V.D |

| Compound | 1 | 10 | 25 | 50 | 5 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|

(#) = Out of Range ### Number of calibration levels exceeded format ###
0 SPCC fail 0 CCC fail
8260VOI.M Fri Nov 06 09:22:28 2009 RPT01
Average RSD= 5.58 Page 3 of 3

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

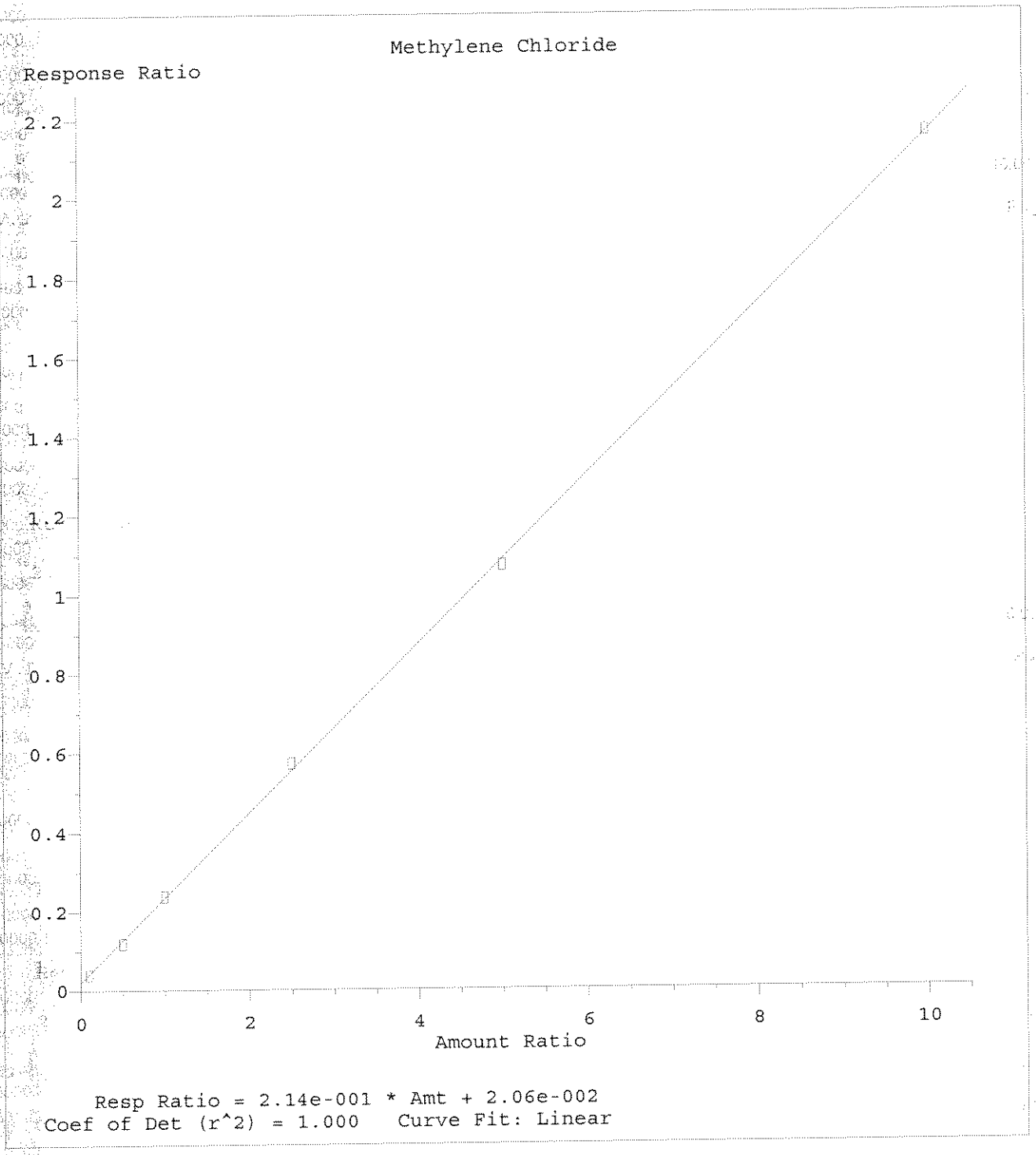
Calibration Files
1 =2642V.D 10 =2646V.D 25 =2647V.D
50 =2648V.D 5 =2645V.D 100 =2649V.D

| | | Compound | 1 | 10 | 25 | 50 | 5 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | FLUOROBENZENE | ----------ISTD---------- | | | | | | | |
| 2) | | Dichlorodifluorom | 0.181 | 0.192 | 0.176 | 0.177 | 0.177 | 0.172 | 0.179 | 3.74 |
| 3) | P | Chloromethane | 0.398 | 0.373 | 0.352 | 0.366 | 0.356 | 0.363 | 0.368 | 4.50 |
| 4) | C | VINYL CHLORIDE | 0.315 | 0.317 | 0.308 | 0.303 | 0.318 | 0.307 | 0.311 | 2.04# |
| 5) | | Bromomethane | 0.139 | 0.123 | 0.116 | 0.092 | 0.130 | | 0.120 | 14.97 |
| 6) | | Chloroethane | 0.155 | 0.148 | 0.130 | 0.107 | 0.149 | | 0.138 | 14.25 |
| 7) | | Trichlorofluorome | 0.283 | 0.282 | 0.258 | 0.236 | 0.278 | 0.226 | 0.260 | 9.50 |
| 8) | | Acrolein | 0.020 | 0.019 | 0.020 | 0.018 | 0.019 | 0.019 | 0.019 | 2.77 |
| 9) | | Acetone | 0.160 | 0.133 | 0.135 | 0.126 | 0.130 | 0.135 | 0.136 | 8.96 |
| 10) | C | 1,1-DICHLOROETHEN | 0.218 | 0.202 | 0.202 | 0.201 | 0.196 | 0.195 | 0.202 | 4.00# |
| 11) | | Trichlorotrifluor | 0.259 | 0.238 | 0.227 | 0.228 | 0.242 | 0.224 | 0.236 | 5.53 |
| 12) | | Acrylonitrile | 0.055 | 0.057 | 0.060 | 0.056 | 0.057 | 0.060 | 0.058 | 3.61 |
| 13) | | Carbon Disulfide | 0.633 | 0.612 | 0.588 | 0.579 | 0.593 | 0.617 | 0.603 | 3.34 |
| 14) | | Methylene Chlorid | 0.400 | 0.239 | 0.229 | 0.214 | 0.238 | 0.216 | 0.256 | 27.89 L |
| 15) | | Allyl Chloride | 0.954 | 0.927 | 0.944 | 1.002 | 0.910 | 1.062 | 0.967 | 5.84 |
| 16) | | Vinyl Acetate | 0.039 | 0.023 | 0.025 | 0.025 | 0.024 | 0.027 | 0.027 | 21.37 L |
| 17) | | MTBE | 0.703 | 0.701 | 0.709 | 0.700 | 0.688 | 0.734 | 0.706 | 2.20 |
| 18) | | trans-1,2-Dichlor | 0.226 | 0.223 | 0.210 | 0.206 | 0.214 | 0.212 | 0.215 | 3.60 |
| 19) | | n-Hexane | 0.426 | 0.409 | 0.386 | 0.392 | 0.403 | 0.405 | 0.404 | 3.43 |
| 20) | P | 1,1-Dichloroethan | 0.420 | 0.431 | 0.426 | 0.420 | 0.413 | 0.427 | 0.423 | 1.55 |
| 21) | | 2-Butanone | 0.040 | 0.040 | 0.040 | 0.039 | 0.037 | 0.039 | 0.039 | 2.78 |
| 22) | | Ethyl Acetate | 0.420 | 0.399 | 0.432 | 0.488 | 0.388 | 0.469 | 0.433 | 9.05 |
| 23) | | cis-1,2-Dichloroe | 0.224 | 0.230 | 0.226 | 0.217 | 0.226 | 0.219 | 0.224 | 2.15 |
| 24) | | Ethyl Cyanide | 0.059 | 0.059 | 0.061 | 0.061 | 0.059 | 0.063 | 0.060 | 2.57 |
| 25) | C | CHLOROFORM | 0.439 | 0.391 | 0.385 | 0.381 | 0.389 | 0.381 | 0.394 | 5.70# |
| 26) | | Methacrylonitrile | 0.226 | 0.227 | 0.250 | 0.249 | 0.220 | 0.192 | 0.227 | 9.42 |
| 27) | | Tetrahydrofuran | 0.114 | 0.110 | 0.119 | 0.125 | 0.110 | 0.126 | 0.117 | 6.03 |
| 28) | | Bromochloromethan | 0.115 | 0.106 | 0.106 | 0.104 | 0.106 | 0.104 | 0.107 | 3.99 |
| 29) | | 2,2-Dichloropropa | 0.243 | 0.227 | 0.221 | 0.210 | 0.230 | 0.212 | 0.224 | 5.57 |
| 30) | | Diethyl ether | 0.217 | 0.216 | 0.218 | 0.215 | 0.217 | 0.210 | 0.215 | 1.27 |
| 31) | | 1,1,1-Trichloroet | 0.339 | 0.326 | 0.323 | 0.314 | 0.312 | 0.331 | 0.324 | 3.15 |
| 32) | | Iodomethane | 0.340 | 0.332 | 0.332 | 0.317 | 0.332 | 0.328 | 0.330 | 2.31 |
| 33) | S | Dibromofluorometh | 0.233 | 0.239 | 0.235 | 0.235 | 0.237 | 0.231 | 0.235 | 1.08 |
| 34) | | 1,1-Dichloroprope | 0.116 | 0.106 | 0.106 | 0.106 | 0.108 | 0.106 | 0.108 | 3.51 |
| 35) | S | 1,2-Dichloroethan | 0.356 | 0.361 | 0.363 | 0.356 | 0.361 | 0.363 | 0.360 | 0.89 |
| 36) | | Carbon Tetrachlor | 0.294 | 0.282 | 0.290 | 0.289 | 0.274 | 0.300 | 0.288 | 3.10 |
| 37) | | 1,2-Dichloroethan | 0.392 | 0.388 | 0.392 | 0.390 | 0.373 | 0.386 | 0.387 | 1.88 |
| 38) | | Isobutanol | 0.020 | 0.020 | 0.022 | 0.022 | 0.020 | 0.023 | 0.021 | 4.84 |
| 39) | | Benzene | 0.927 | 0.880 | 0.890 | 0.880 | 0.881 | 0.882 | 0.890 | 2.11 |
| 40) | | Trichloroethene | 0.256 | 0.232 | 0.230 | 0.229 | 0.230 | 0.227 | 0.234 | 4.58 |
| 41) | | n-Butanol | 0.017 | 0.017 | 0.018 | 0.018 | 0.016 | 0.019 | 0.018 | 6.77 |
| 42) | C | 1,2-DICHLOROPROPA | 0.232 | 0.238 | 0.241 | 0.241 | 0.232 | 0.244 | 0.238 | 2.04# |
| 43) | | 1,4-Dioxane | 0.009 | 0.009 | 0.009 | 0.009 | 0.008 | 0.010 | 0.009 | 5.48 |
| 44) | | Methyl Methacryla | 0.318 | 0.308 | 0.332 | 0.350 | 0.301 | 0.356 | 0.327 | 6.84 |
| 45) | | Bromodichlorometh | 0.270 | 0.268 | 0.279 | 0.285 | 0.257 | 0.293 | 0.275 | 4.70 |
| 46) | | Dibromomethane | 0.154 | 0.141 | 0.144 | 0.142 | 0.139 | 0.143 | 0.144 | 3.73 |
| 47) | | 4-Methyl-2-Pentan | 0.465 | 0.450 | 0.480 | 0.485 | 0.443 | 0.380 | 0.451 | 8.45 |
| 48) | | 2-Chloroethylviny | 0.171 | 0.182 | 0.192 | 0.199 | 0.164 | 0.204 | 0.185 | 8.51 |
| 49) | | cis-1,3-Dichlorop | 0.347 | 0.331 | 0.349 | 0.360 | 0.313 | 0.367 | 0.345 | 5.79 |
| 50) | S | Toluene-d8 | 0.990 | 0.992 | 1.008 | 1.021 | 0.991 | 1.015 | 1.003 | 1.35 |
| 51) | C | TOLUENE | 0.968 | 0.973 | 0.972 | 0.990 | 0.933 | 1.019 | 0.976 | 2.89# |
| 52) | | trans-1,3-Dichlor | 0.299 | 0.292 | 0.312 | 0.325 | 0.274 | 0.341 | 0.307 | 7.79 |
| 53) | | 1,1,2-Trichloroet | 0.209 | 0.204 | 0.204 | 0.206 | 0.199 | 0.206 | 0.205 | 1.60 |
| 54) | | 1,2-Dibromoethane | 0.217 | 0.228 | 0.230 | 0.230 | 0.216 | 0.229 | 0.225 | 2.89 |
| 55) | I | 2-Bromo-1-chloropropa | ----------ISTD---------- | | | | | | | |
| 56) | | 2-Hexanone | 1.049 | 0.968 | 1.018 | 0.991 | 0.998 | 0.853 | 0.980 | 6.92 |
| 57) | | 1,3-Dichloropropa | 1.108 | 1.023 | 1.019 | 1.001 | 1.014 | 0.973 | 1.023 | 4.44 |

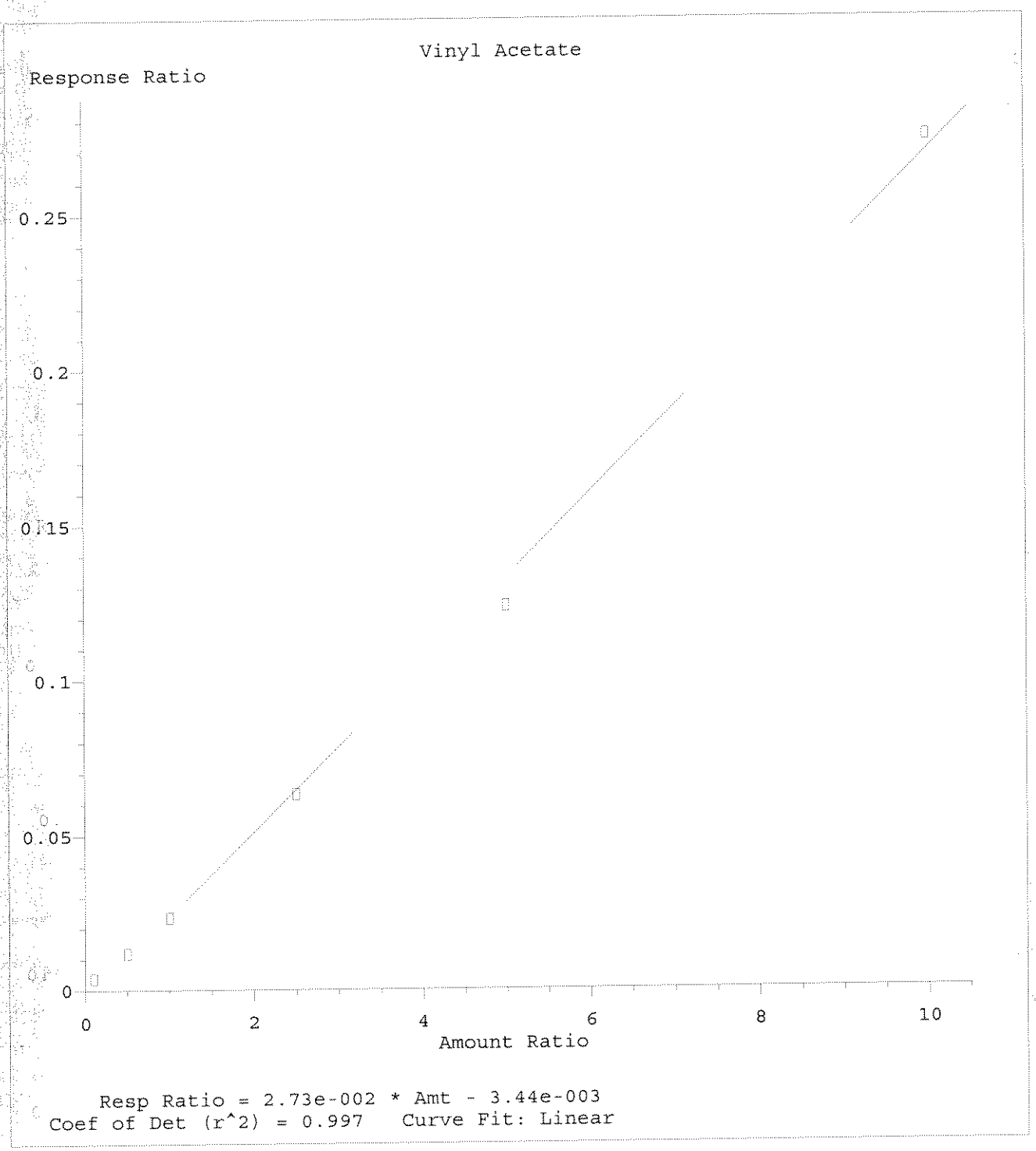
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 59) | | Tetrachloroethene | 0.813 | 0.784 | 0.736 | 0.719 | 0.791 | 0.697 | 0.757 | 6.05 |
| 60) | | Dibromochlorometh | 0.512 | 0.514 | 0.571 | 0.591 | 0.519 | 0.592 | 0.550 | 7.12 |
| 61) | P | Chlorobenzene | 1.822 | 1.807 | 1.780 | 1.732 | 1.822 | 1.736 | 1.783 | 2.31 |
| 62) | | 1,1,1,2-Tetrachlo | 0.565 | 0.603 | 0.612 | 0.586 | 0.592 | 0.599 | 0.593 | 2.77 |
| 63) | C | ETHYL BENZENE | 1.052 | 1.014 | 1.001 | 0.969 | 1.029 | 0.967 | 1.005 | 3.35# |
| 64) | | m,p-Xylene | 1.269 | 1.267 | 1.243 | 1.232 | 1.257 | 1.259 | 1.255 | 1.14 |
| 65) | | o-Xylene | 1.282 | 1.247 | 1.227 | 1.198 | 1.243 | 1.228 | 1.237 | 2.25 |
| 66) | | Styrene | 1.986 | 2.060 | 2.097 | 2.090 | 1.992 | 2.164 | 2.065 | 3.29 |
| 67) | P | Bromoform | 0.390 | 0.399 | 0.436 | 0.451 | 0.365 | 0.483 | 0.421 | 10.38 |
| 68) | P | 1,1,2,2-Tetrachlo | 0.978 | 0.962 | 0.958 | 0.907 | 0.972 | 0.934 | 0.952 | 2.79 |
| 69) | S | 4-Bromofluorobenz | 0.962 | 0.970 | 0.947 | 0.946 | 0.991 | 0.934 | 0.958 | 2.13 |
| 70) | | Isopropylbenzene | 2.962 | 3.005 | 2.918 | 2.870 | 3.017 | 2.989 | 2.960 | 1.91 |
| 71) | | trans-1,4-Dichlor | 0.435 | 0.463 | 0.507 | 0.491 | 0.452 | 0.505 | 0.476 | 6.27 |
| 72) | | Bromobenzene | 1.317 | 1.352 | 1.333 | 1.294 | 1.343 | 1.313 | 1.326 | 1.62 |
| 73) | | 1,2,3-Trichloropr | 0.356 | 0.307 | 0.310 | 0.285 | 0.333 | 0.286 | 0.313 | 8.82 |
| 74) | | n-Propylbenzene | 0.445 | 0.450 | 0.433 | 0.409 | 0.435 | 0.423 | 0.433 | 3.46 |
| 75) | | 1,3,5-Trimethylbe | 2.916 | 2.996 | 2.952 | 2.826 | 3.014 | 2.870 | 2.929 | 2.49 |
| 76) | | 2-Chlorotoluene | 0.837 | 0.829 | 0.798 | 0.770 | 0.858 | 0.784 | 0.813 | 4.19 |
| 77) | | 4-Chlorotoluene | 0.856 | 0.828 | 0.820 | 0.780 | 0.844 | 0.791 | 0.820 | 3.61 |
| 78) | | t-Butylbenzene | 1.786 | 1.838 | 1.756 | 1.644 | 1.842 | 1.715 | 1.764 | 4.31 |
| 79) | | 1,2,4-Trimethylbe | 2.990 | 3.055 | 2.963 | 2.868 | 3.026 | 2.835 | 2.956 | 2.96 |
| 80) | | sec-Butylbenzene | 3.964 | 4.062 | 3.858 | 3.718 | 4.045 | 3.254 | 3.817 | 7.97 |
| 81) | P | p-Isopropyltoluen | 3.062 | 3.331 | 3.134 | 3.041 | 3.265 | 2.871 | 3.117 | 5.31 |
| 82) | | 1,3-Dichlorobenze | 1.684 | 1.638 | 1.590 | 1.510 | 1.660 | 1.570 | 1.609 | 4.01 |
| 83) | C | 1,4-Dichlorobenze | 1.723 | 1.649 | 1.643 | 1.550 | 1.695 | 1.625 | 1.647 | 3.64 |
| 84) | | n-Butylbenzene | 1.679 | 1.726 | 1.633 | 1.567 | 1.716 | 1.687 | 1.668 | 3.55 |
| 85) | | 1,2-Dichlorobenze | 1.639 | 1.595 | 1.483 | 1.398 | 1.614 | 1.481 | 1.535 | 6.18 |
| 86) | | 1,2-Dibromo-3-chl | 0.220 | 0.220 | 0.207 | 0.183 | 0.198 | 0.204 | 0.205 | 6.76 |
| 87) | S | 1,2,4-Trichlorobe | 1.144 | 1.180 | 1.016 | 0.871 | 1.184 | 0.906 | 1.050 | 13.30 |
| 88) | | Naphthalene | 3.120 | 3.338 | 2.746 | 2.329 | 3.273 | 2.407 | 2.869 | 15.33 |
| 89) | S | Hexachlorobutadie | 0.686 | 0.697 | 0.596 | 0.491 | 0.706 | 0.496 | 0.612 | 16.31 |
| 90) | | 1,2,3-Trichlorobe | 1.121 | 1.132 | 0.864 | 0.692 | 1.121 | 0.686 | 0.936 | 23.12 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

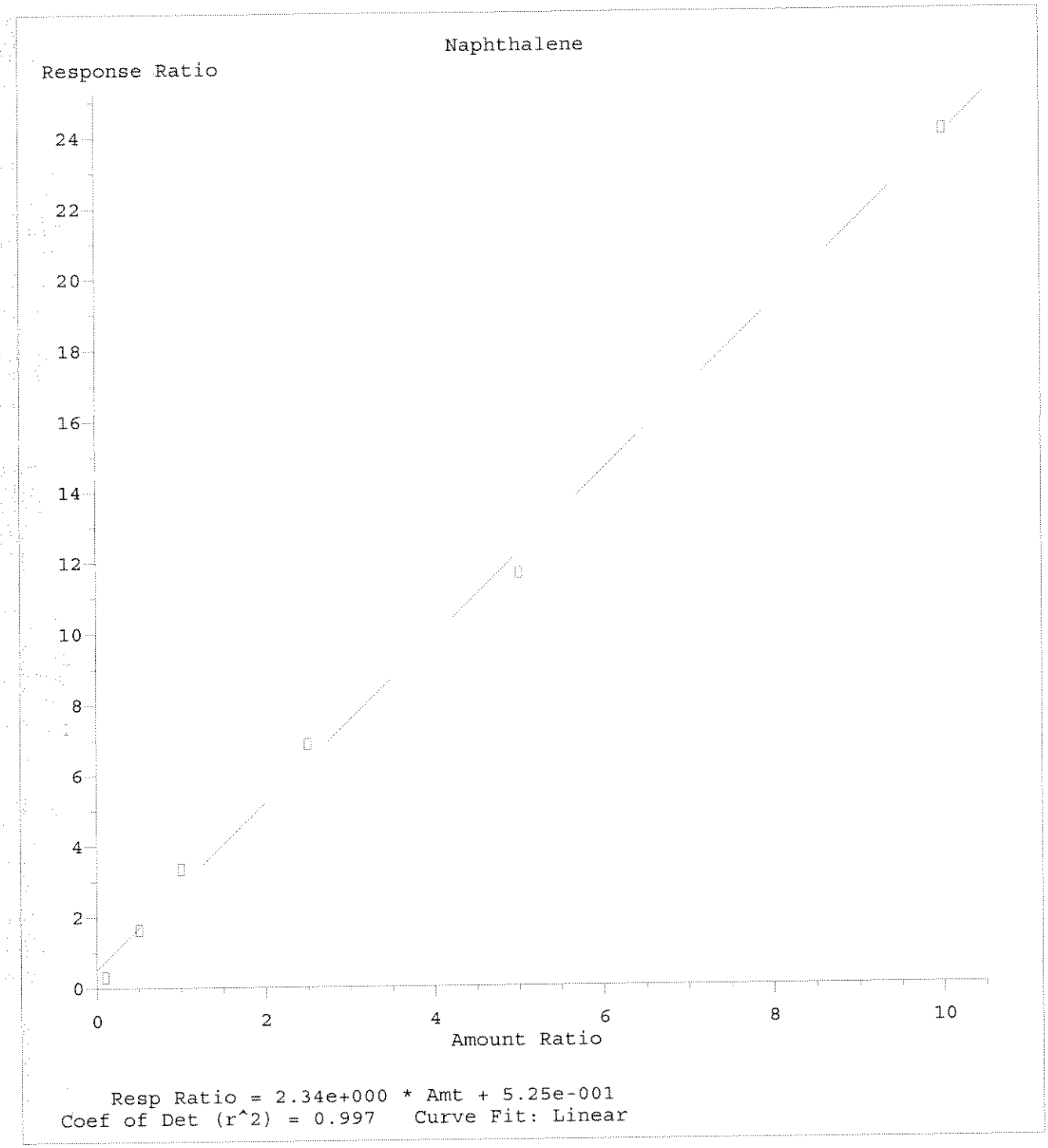
8260VOI.M Thu Nov 05 11:57:59 2009



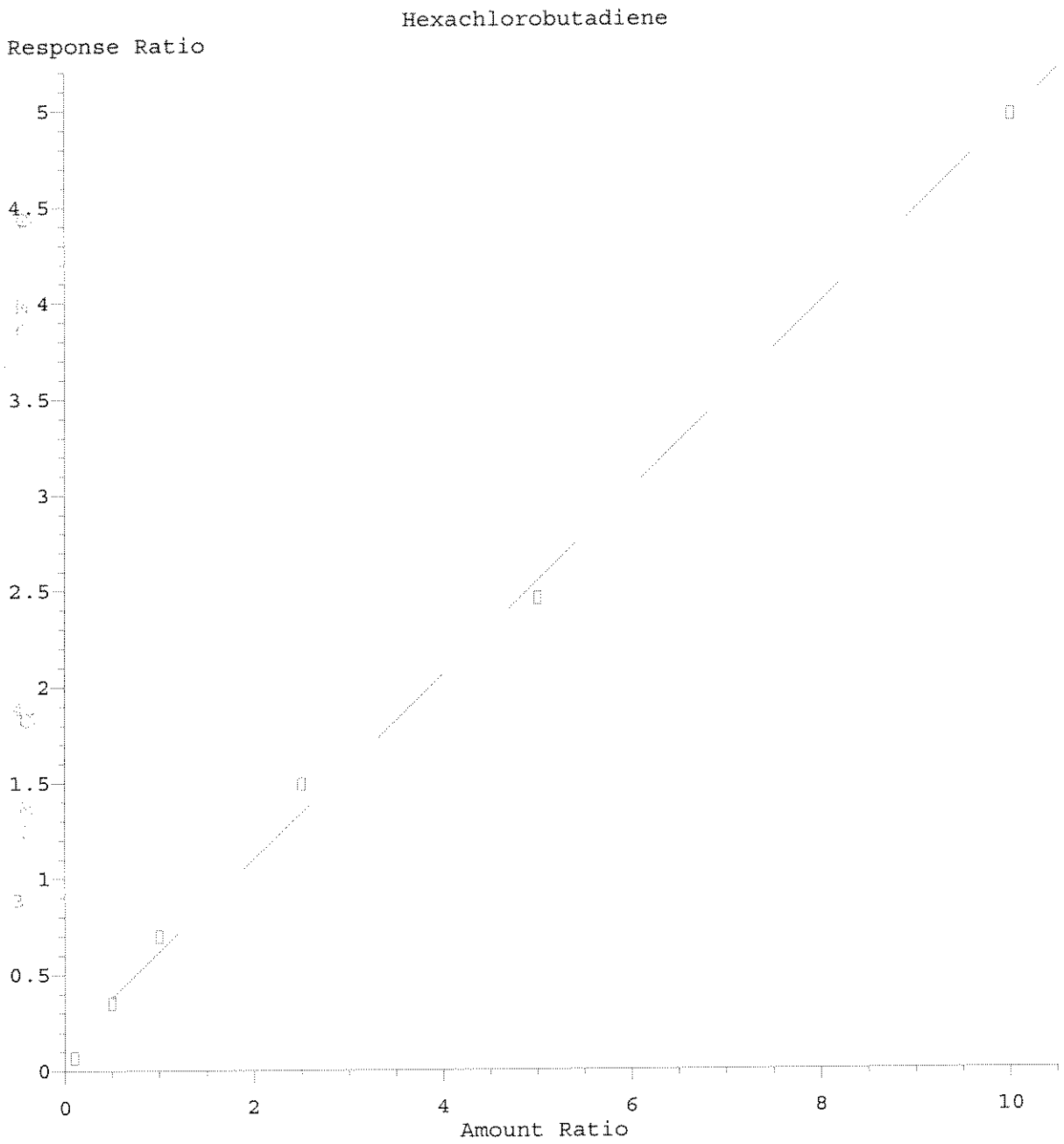

Method Name: C:\MSDCHEM\1\METHODS\8260VOI.M
Calibration Table Last Updated: Thu Nov 05 11:56:09 2009




Method Name: C:\MSDCHEM\1\METHODS\8260VOI.M
Calibration Table Last Updated: Thu Nov 05 11:56:28 2009

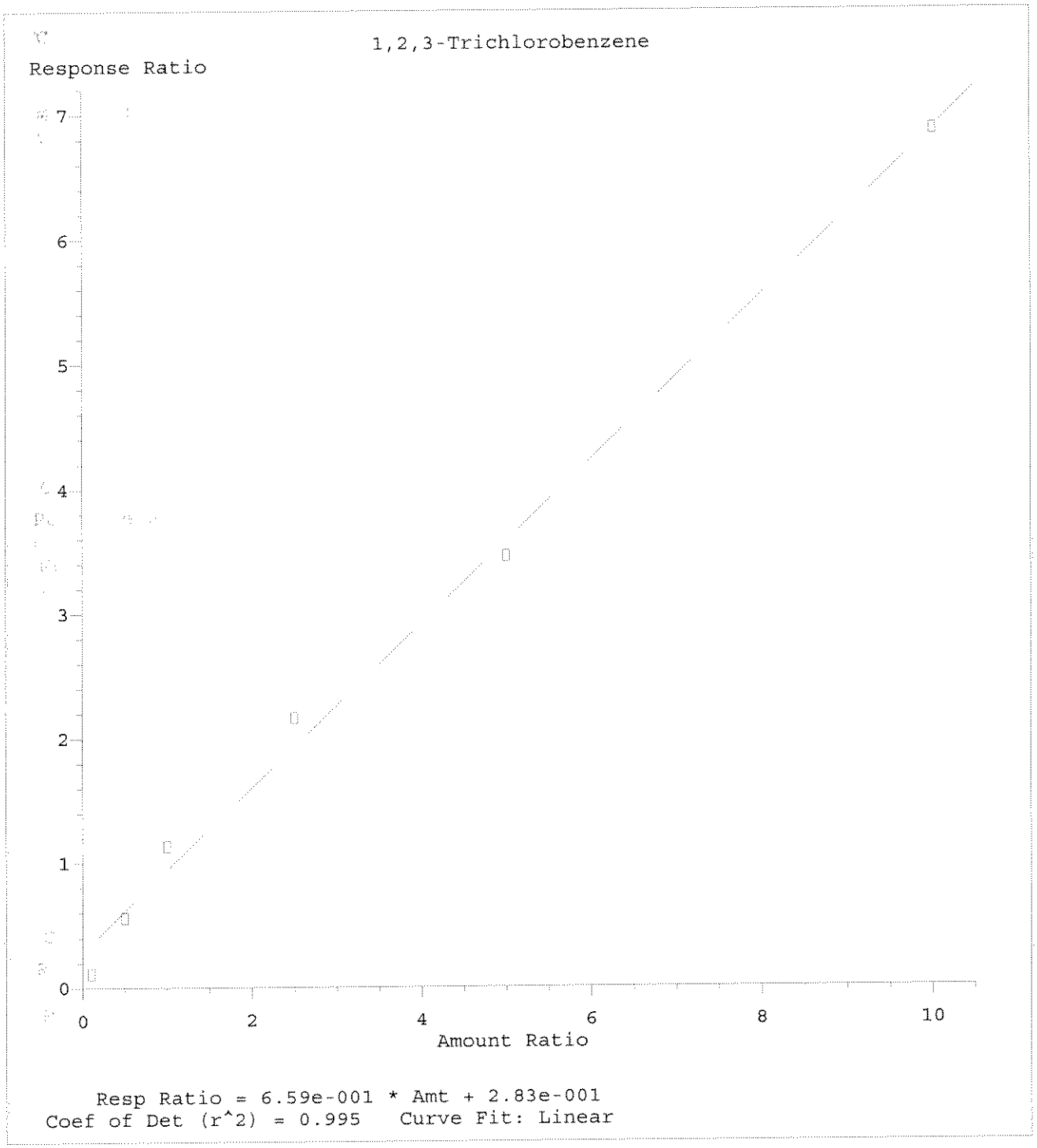



Method Name: C:\MSDCHEM\1\METHODS\8260VOI.M
Calibration Table Last Updated: Thu Nov 05 11:56:39 2009




Resp Ratio = 4.82e-001 * Amt + 1.36e-001
Coef of Det (r^2) = 0.997  Curve Fit: Linear

Method Name: C:\MSDCHEM\1\METHODS\8260VOI.M
Calibration Table Last Updated: Thu Nov 05 11:56:53 2009




Method Name: C:\MSDCHEM\1\METHODS\8260VOI.M
Calibration Table Last Updated: Thu Nov 05 11:57:00 2009

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:47:04 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1143023 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 406875m | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 266511 | 9.94 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 99.40% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 406577 | 9.85 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.50% | |
| 50) Toluene-d8 | 7.45 | 98 | 1131333 | 9.89 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.90% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 391554 | 9.94 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 99.40% | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 20682 | 1.02 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 45527 | 1.09 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 36051 | 1.02 | UG/L | 97 |
| 5) Bromomethane | 1.79 | 94 | 15876 | 1.27 | UG/L | 92 |
| 6) Chloroethane | 1.89 | 64 | 17769 | Below Cal | # | 69 |
| 7) Trichlorofluoromethane | 2.14 | 101 | 32312m | 1.08 | UG/L | |
| 8) Acrolein | 2.50 | 56 | 22329 | 10.18 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 91672 | 5.98 | UG/L | 92 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 24895 | 1.09 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 29606 | 1.12 | UG/L | 83 |
| 12) Acrylonitrile | 3.32 | 53 | 63301 | 9.75 | UG/L | 100 |
| 13) Carbon Disulfide | 2.80 | 76 | 72311 | 1.06 | UG/L | 96 |
| 14) Methylene Chloride | 3.08 | 84 | 45761 | 0.97 | UG/L | 98 |
| 15) Allyl Chloride | 2.95 | 41 | 109094 | 0.99 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 4424m | 2.78 | UG/L | |
| 17) MTBE | 3.38 | 73 | 80333 | 0.99 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 25813 | 1.04 | UG/L | 93 |
| 19) n-Hexane | 3.66 | 57 | 48674 | 1.05 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 47953 | 1.00 | UG/L | 100 |
| 21) 2-Butanone | 4.42 | 72 | 23079 | 5.11 | UG/L | 91 |
| 22) Ethyl Acetate | 4.50 | 43 | 48029 | 0.96 | UG/L # | 92 |
| 23) cis-1,2-Dichloroethene | 4.37 | 96 | 25561 | 1.00 | UG/L | 77 |
| 24) Ethyl Cyanide | 4.46 | 54 | 67377 | 9.70 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 50226 | 1.11 | UG/L | 98 |
| 26) Methacrylonitrile | 4.62 | 41 | 257871 | 9.96 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 162313 | 12.10 | UG/L | 98 |
| 28) Bromochloromethane | 4.62 | 128 | 13161 | 1.09 | UG/L | 90 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 27813 | 1.10 | UG/L | 91 |
| 30) Diethyl ether | 2.40 | 59 | 24767 | 0.99 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 38707 | 1.04 | UG/L | 97 |
| 32) Iodomethane | 2.74 | 142 | 38895 | 1.03 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 13202 | 1.08 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 33561 | 1.03 | UG/L | 91 |
| 37) 1,2-Dichloroethane | 5.33 | 62 | 44754 | 1.02 | UG/L | 95 |
| 38) Isobutanol | 5.28 | 43 | 192883 | 79.28 | UG/L # | 97 |
| 39) Benzene | 5.30 | 78 | 106002 | 1.05 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 29205 | 1.10 | UG/L | 93 |

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

Data File : C:\HPCHEM\DATA\V110509\2642V.D  Vial: 1
Acq On : 5 Nov 2009 7:13  Operator: REGI
Sample : VSTD01  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:47:04 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.02 | 56 | 98875 | 49.69 UG/L | 97 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 26557 | 0.97 UG/L | 100 |
| 43) 1,4-Dioxane | 6.46 | 88 | 19941 | 19.51 UG/L | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 36301 | 0.98 UG/L # | 60 |
| 45) Bromodichloromethane | 6.59 | 83 | 30827 | 1.00 UG/L | 100 |
| 46) Dibromomethane | 6.39 | 93 | 17622 | 1.06 UG/L | 84 |
| 47) 4-Methyl-2-Pentanone | 7.34 | 43 | 265717 | 5.16 UG/L | 97 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 19583 | 0.93 UG/L | 99 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 39684 | 1.03 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 110688 | 0.99 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 34120 | 0.98 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.02 | 97 | 23834 | 1.01 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.63 | 107 | 24855 | 0.97 UG/L | 95 |
| 56) 2-Hexanone | 8.38 | 43 | 213500 | 5.34 UG/L | 99 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 45074 | 1.08 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.97 | 69 | 35973 | 1.02 UG/L # | 74 |
| 59) Tetrachloroethene | 8.20 | 166 | 33061 | 1.07 UG/L | 94 |
| 60) Dibromochloromethane | 8.51 | 129 | 20843 | 0.93 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 74143 | 1.02 UG/L | 98 |
| 62) 1,1,1,2-Tetrachloroethane | 9.40 | 131 | 22977 | 0.95 UG/L | 100 |
| 63) ETHYL BENZENE | 9.46 | 106 | 42812 | 1.05 UG/L | 90 |
| 64) m,p-Xylene | 9.62 | 106 | 103302 | 2.04 UG/L # | 62 |
| 65) o-Xylene | 10.10 | 106 | 52181 | 1.04 UG/L | 81 |
| 66) Styrene | 10.12 | 104 | 80803 | 0.97 UG/L # | 81 |
| 67) Bromoform | 10.30 | 173 | 15854 | 2.40 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 39789 | 1.03 UG/L | 98 |
| 70) Isopropylbenzene | 10.55 | 105 | 120507 | 1.00 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 35403 | 2.74 UG/L # | 1 |
| 72) Bromobenzene | 10.84 | 77 | 53590 | 0.99 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 14480 | 1.14 UG/L | 100 |
| 74) n-Propylbenzene | 10.99 | 92 | 18109 | 1.03 UG/L | 90 |
| 75) 1,3,5-Trimethylbenzene | 11.18 | 105 | 118655 | 0.99 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 34075 | 1.02 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.17 | 126 | 34842 | 1.05 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 72687 | 1.01 UG/L # | 61 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 121671 | 1.01 UG/L | 100 |
| 80) sec-Butylbenzene | 11.73 | 105 | 161288 | 1.04 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.88 | 119 | 124597 | 0.98 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 68526 | 1.05 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 70094 | 1.05 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 68326 | 1.01 UG/L | 99 |
| 85) 1,2-Dichlorobenzene | 12.24 | 146 | 66668 | 1.06 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 8941 | 1.07 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 46532 | 1.09 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 126948 | 1.09 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 27893 | 1.12 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 45592 | 1.18 UG/L | 100 |

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

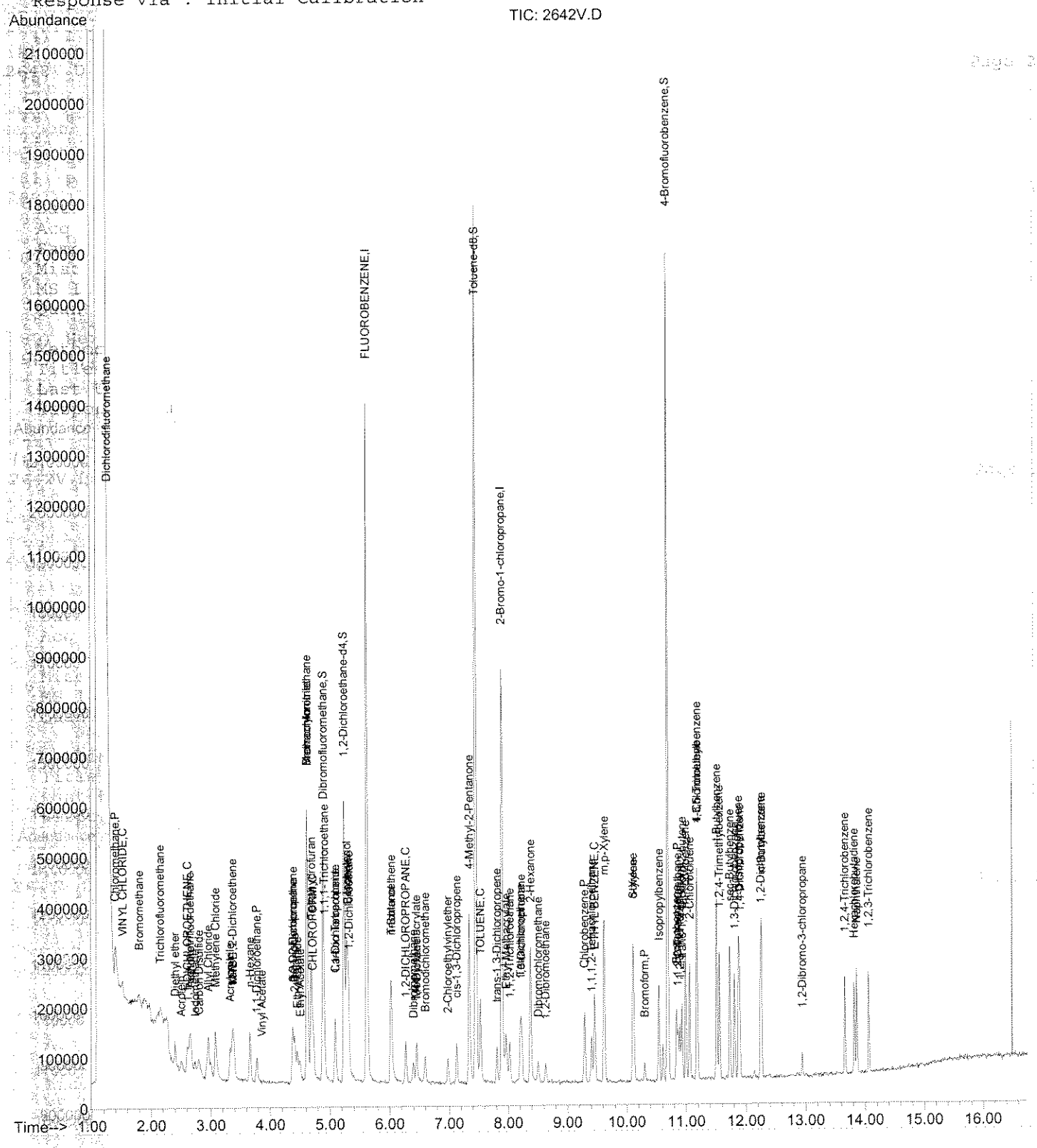


59169b

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:48 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



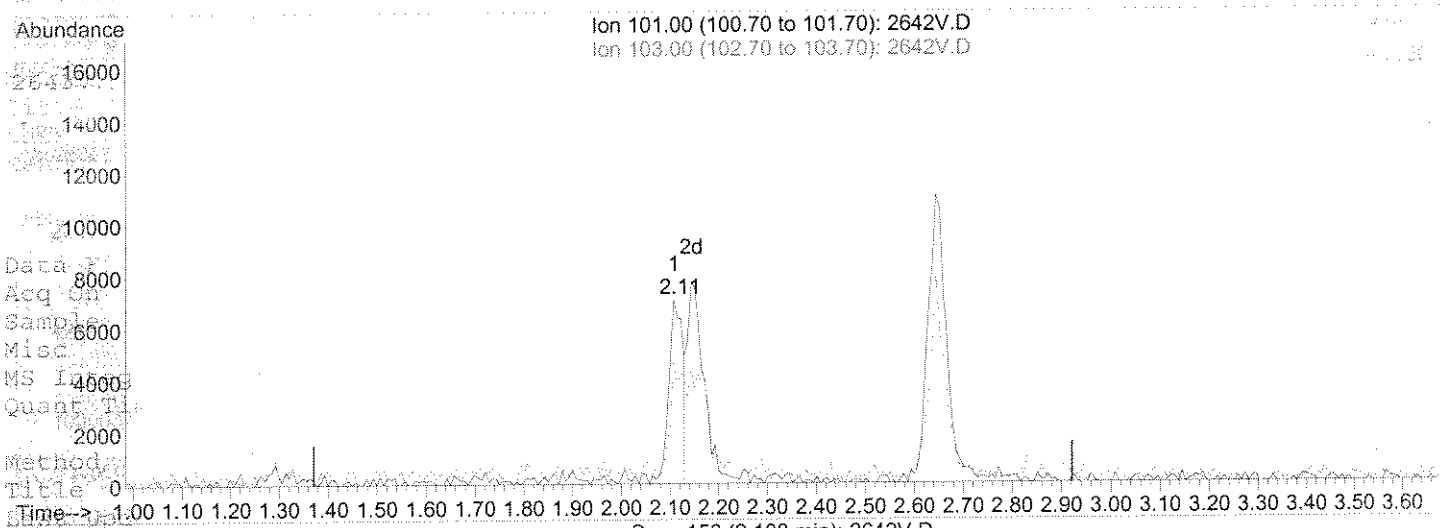


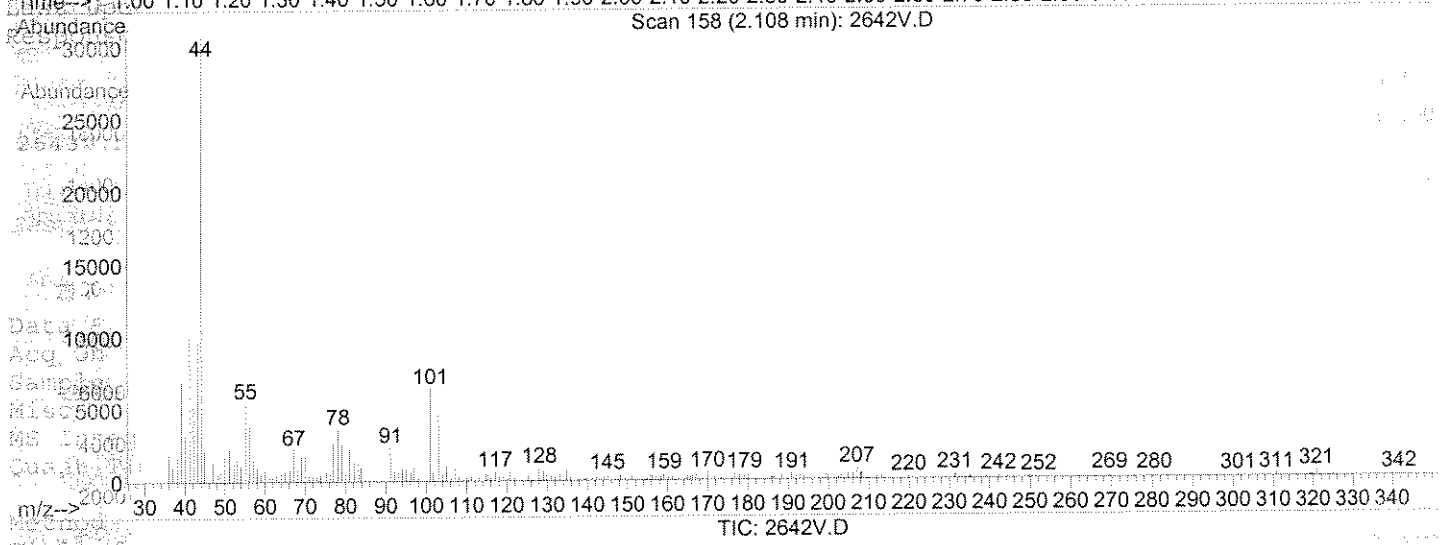

59169b

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:47 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.11min 0.48UG/L

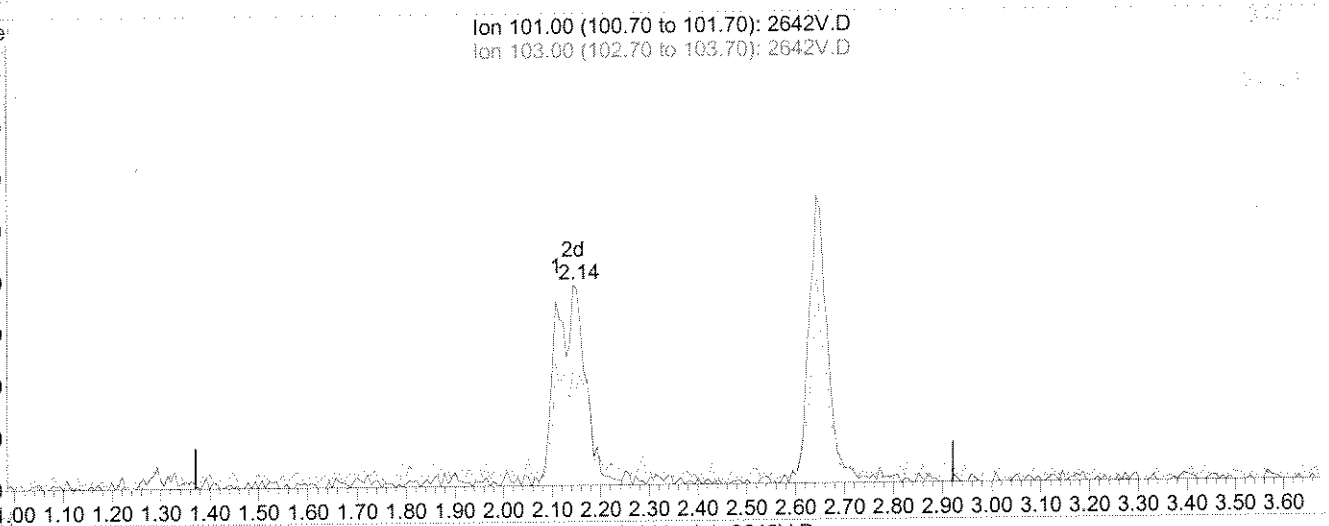
response 14283

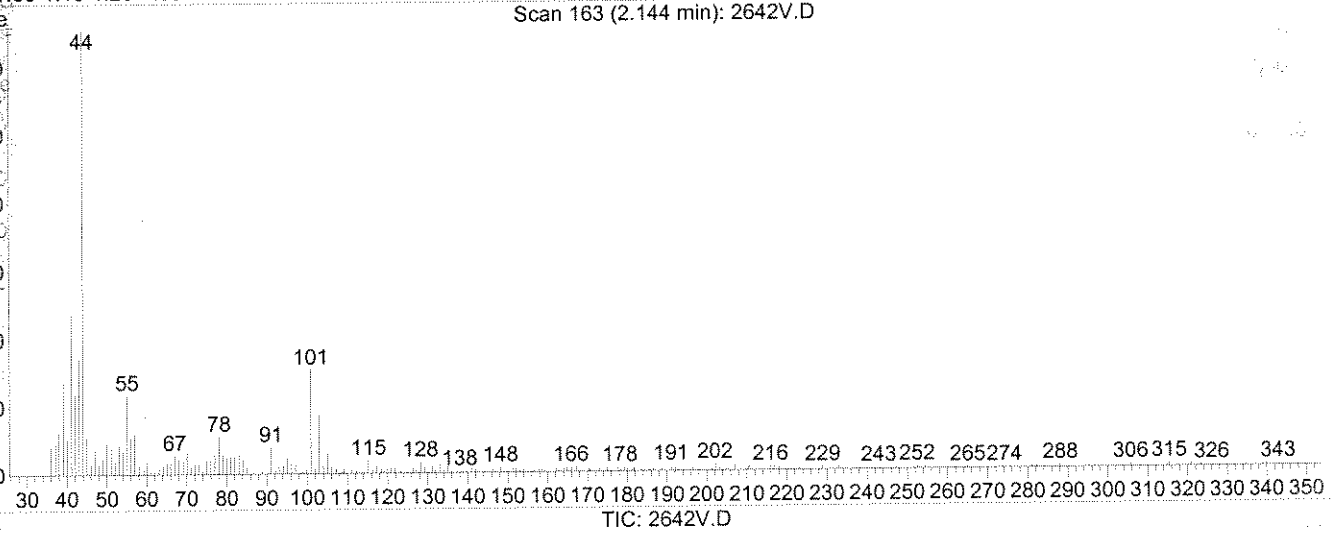
| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 66.14# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:47 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.14min 1.08UG/L m

response 32312

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 29.24# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

```
Data File : C:\HPCHEM\DATA\V110509\2642V.D                Vial: 1
Acq On    :  5 Nov 2009   7:13                         Operator: REGI
Sample    : VSTD01                                     Inst    : Instrumen
Misc      : 11/5/09                                    Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov  5 10:47 2009                 Quant Results File: temp.res

Method       : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title        : 8260 VOLATILES
Last Update  : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration
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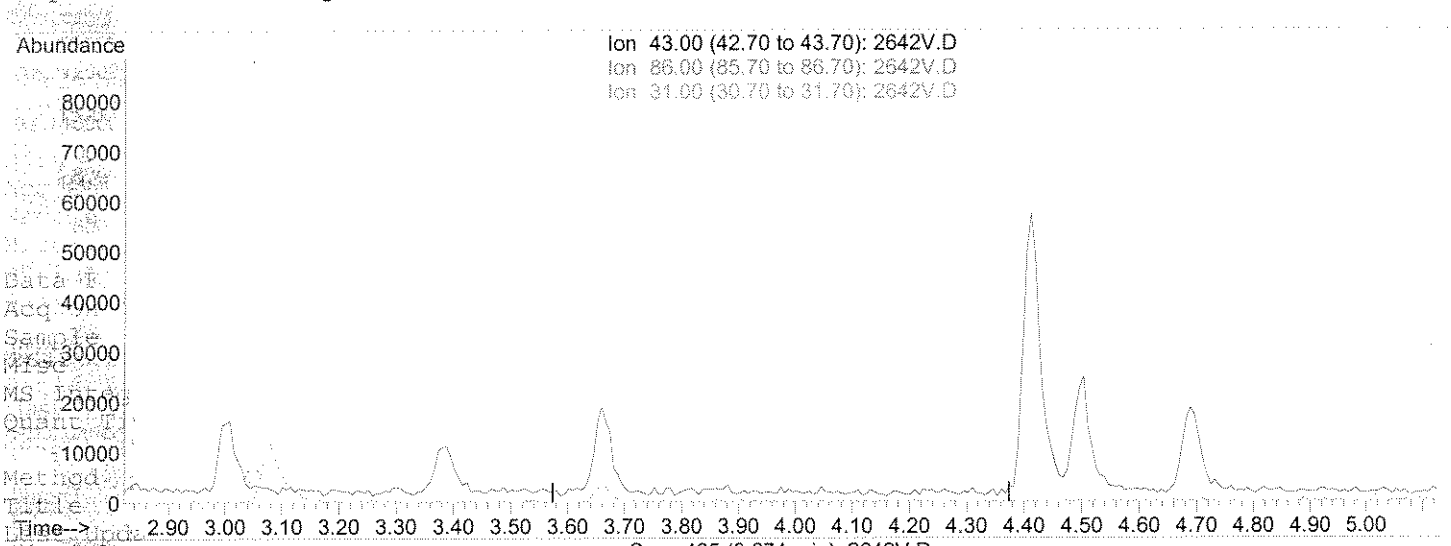
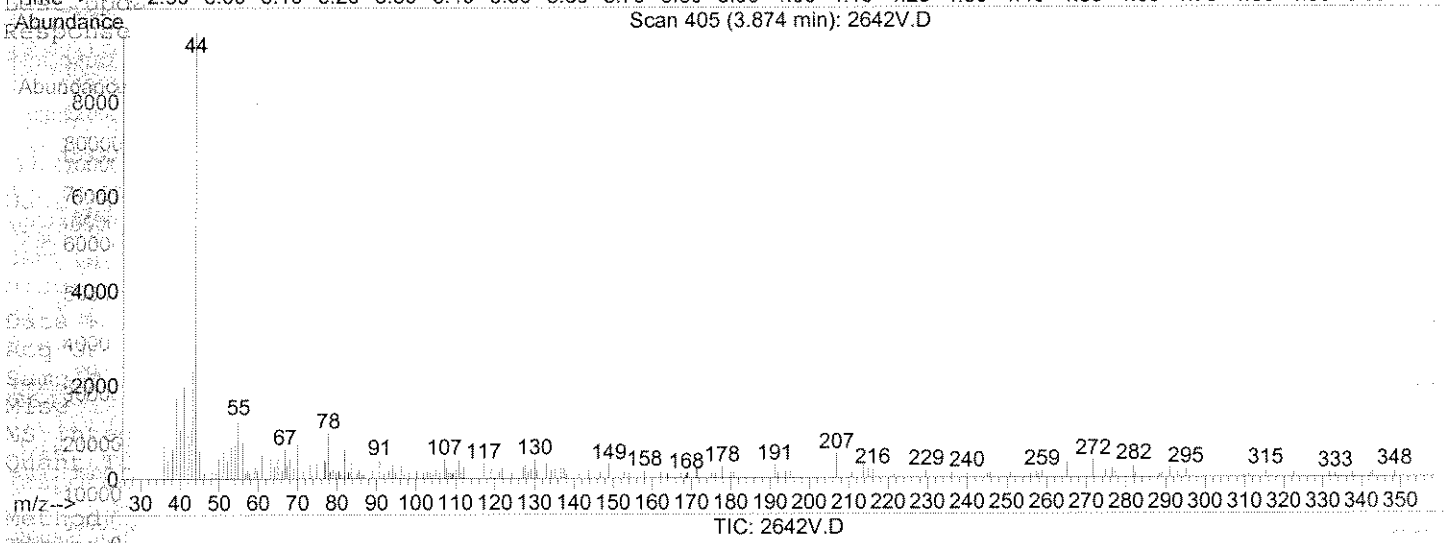



(16) Vinyl Acetate

3.87min 0.00UG/L

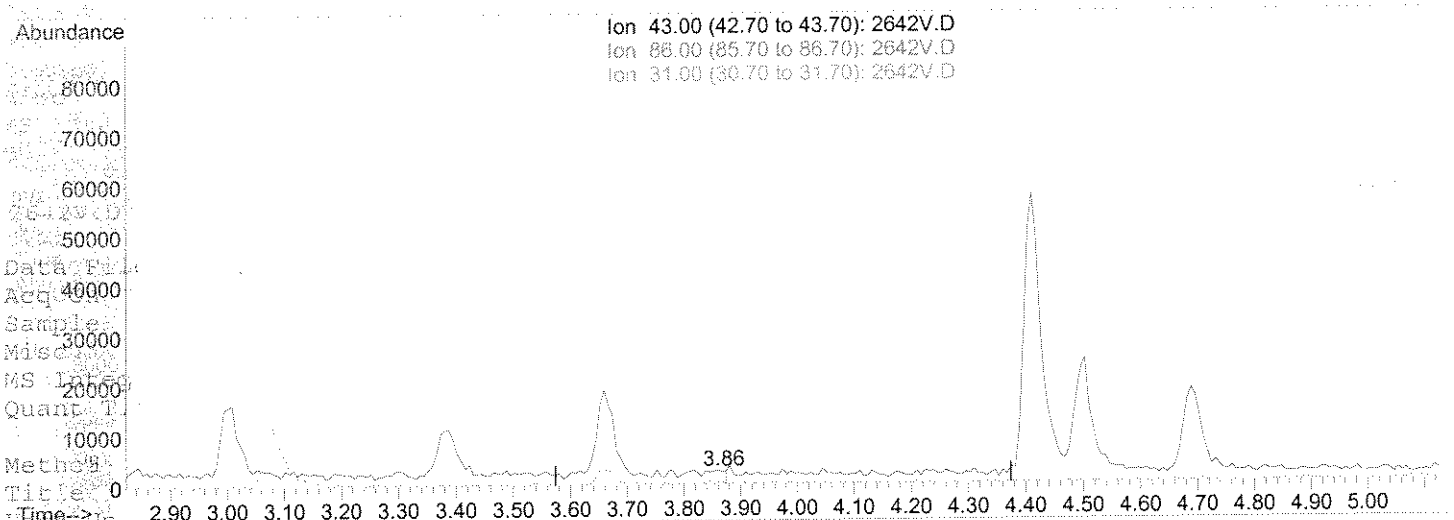
response 0

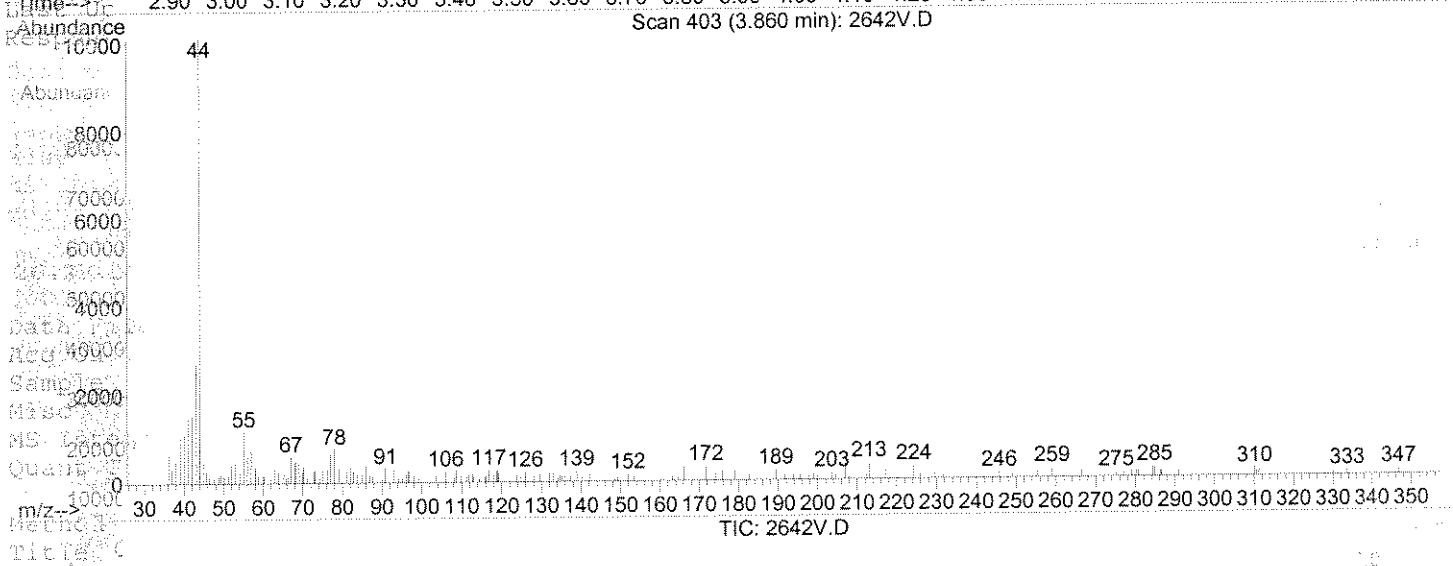
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 0.00 |
| 86.00 | 4.40 | 0.00# |
| 31.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:47 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration




(16) Vinyl Acetate

3.86min 2.78UG/L m

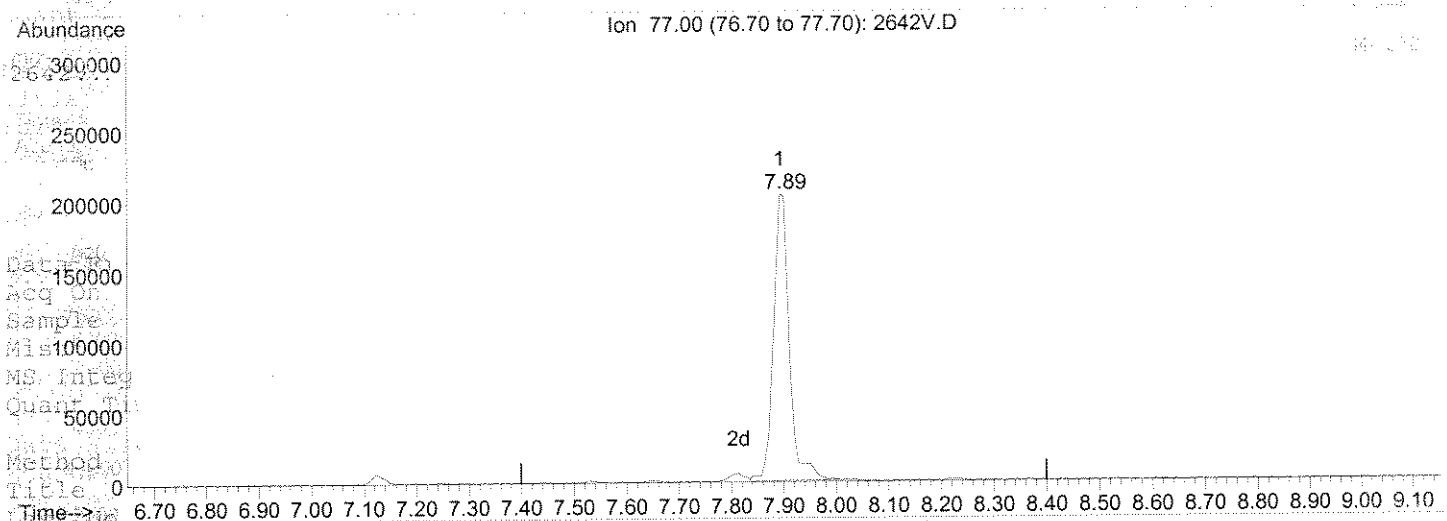
response 4424

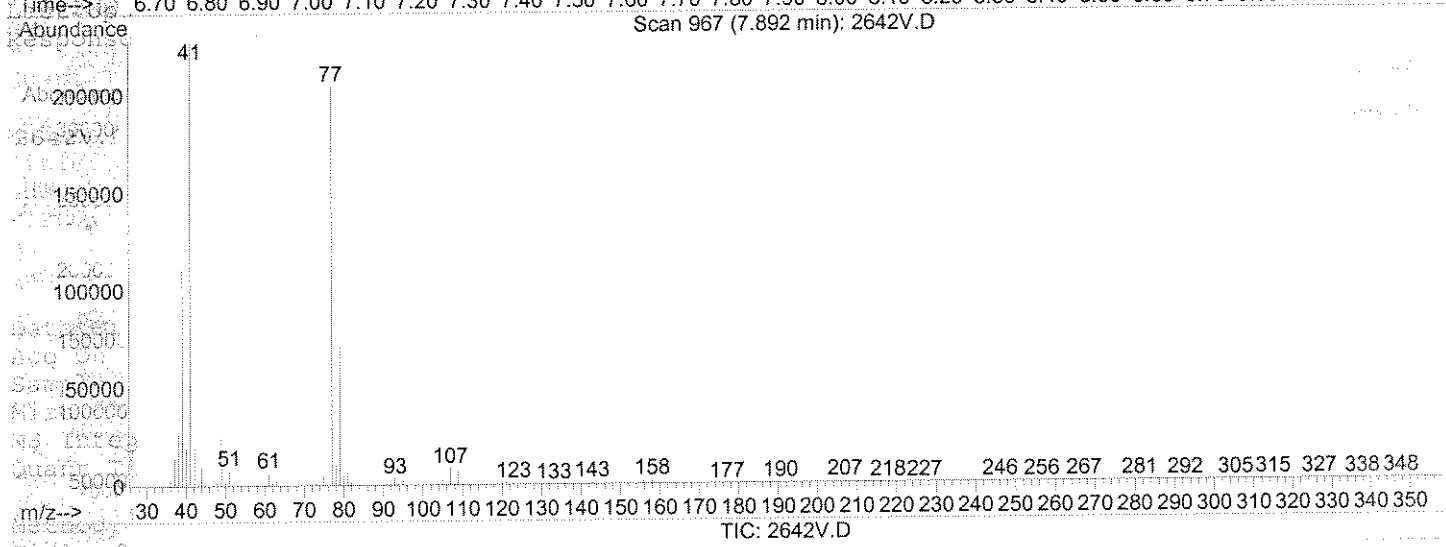
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 86.00 | 4.40 | 0.00# |
| 31.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2642V.D
Acq On : 5 Nov 2009 7:13
Sample : VSTD01
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:47 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.89min 10.00UG/L

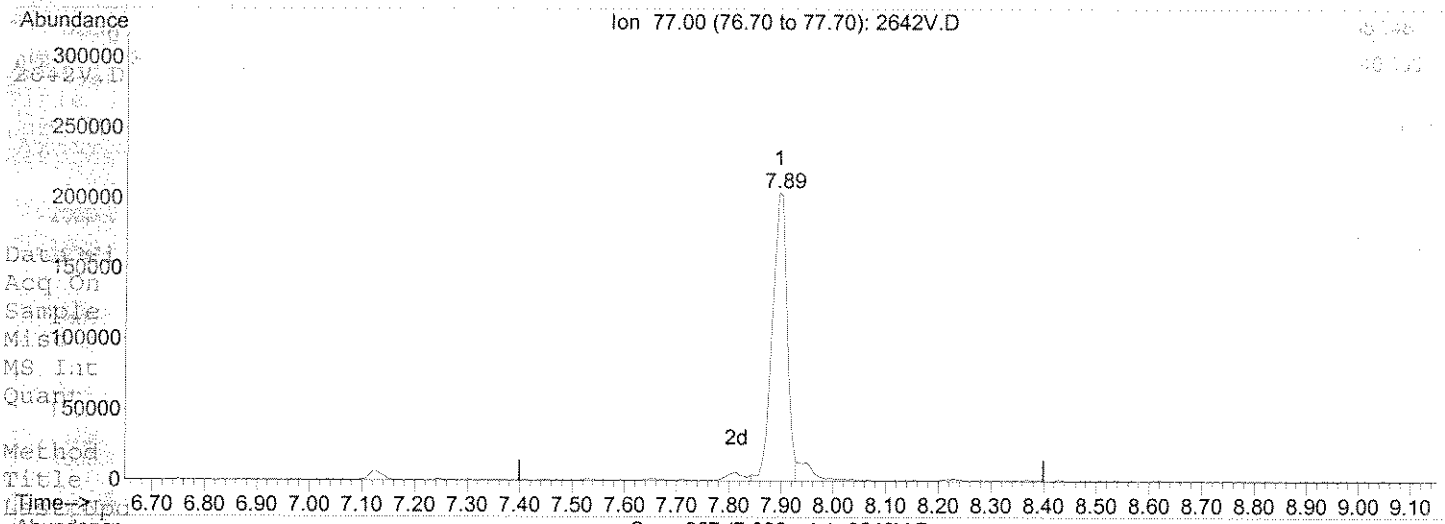
response 428687

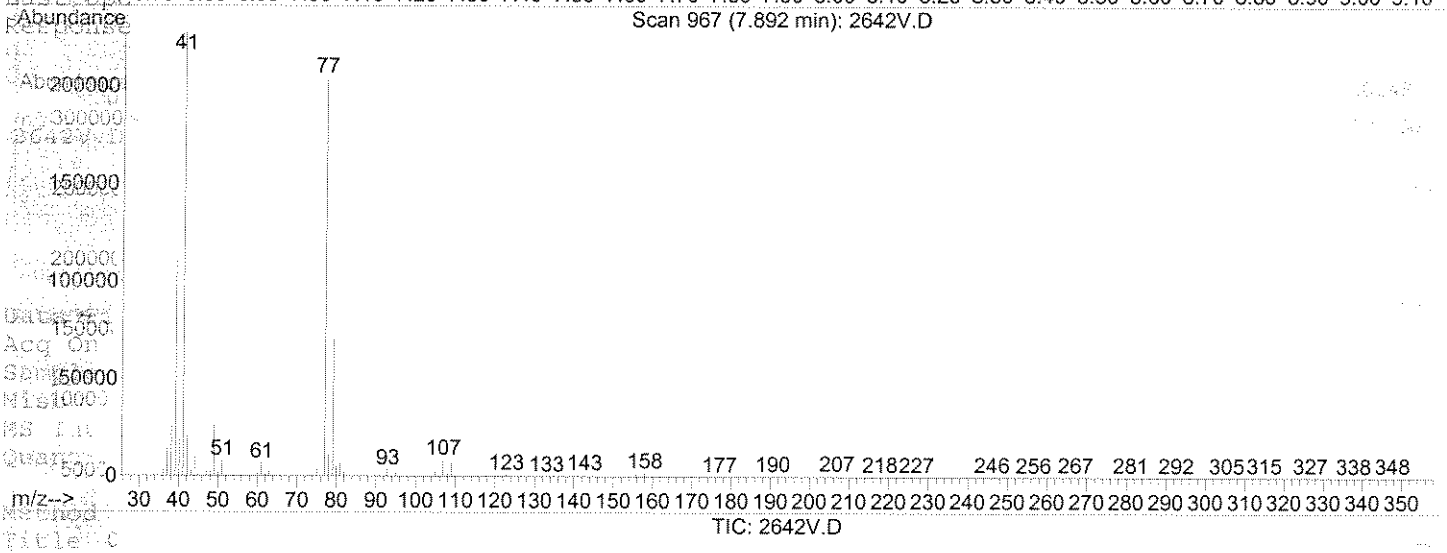
| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2642V.D 8260VOI.M Thu Nov 05 10:48:05 2009

Data File : C:\HPCHEM\DATA\V110509\2642V.D Vial: 1
Acq On : 5 Nov 2009 7:13 Operator: REGI
Sample : VSTD01 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:48 2009 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:46:58 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.89min 10.00UG/L m

response 406875

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2645V.D  Vial: 4
Acq On : 5 Nov 2009 8:28  Operator: REGI
Sample : VSTD05  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:43:48 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:43:43 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1116936 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 391127m | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 264452 | 10.07 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.70% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 403095 | 10.02 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.20% | |
| 50) Toluene-d8 | 7.46 | 98 | 1106759 | 10.04 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.40% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 387638 | 10.46 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 104.60% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 98696 | 4.73 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 198672 | 4.93 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 177797 | 5.05 | UG/L | 95 |
| 5) Bromomethane | 1.79 | 94 | 72569 | 6.17 | UG/L | 98 |
| 6) Chloroethane | 1.89 | 64 | 83075 | Below | Cal | 93 |
| 7) Trichlorofluoromethane | 2.16 | 101 | 155224 | 5.60 | UG/L | 87 |
| 8) Acrolein | 2.51 | 56 | 104418 | 55.84 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 361937 | 27.03 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 109582 | 4.76 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 135242 | 5.12 | UG/L | 87 |
| 12) Acrylonitrile | 3.32 | 53 | 320583 | 37.49 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 330958 | 4.95 | UG/L | 100 |
| 14) Methylene Chloride | 3.08 | 84 | 133104 | 4.28 | UG/L | 95 |
| 15) Allyl Chloride | 2.96 | 41 | 507933 | 5.22 | UG/L | 100 |
| 16) Vinyl Acetate | 3.87 | 43 | 13217 | 5.54 | UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 384293 | 4.80 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 119294 | 4.91 | UG/L | 87 |
| 19) n-Hexane | 3.67 | 57 | 225324 | 4.61 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 230766 | 4.71 | UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 104475 | 25.54 | UG/L | 81 |
| 22) Ethyl Acetate | 4.50 | 43 | 216818 | 4.14 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 126227 | 4.86 | UG/L | 86 |
| 24) Ethyl Cyanide | 4.45 | 54 | 328633 | 50.93 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 217177 | 4.71 | UG/L | 99 |
| 26) Methacrylonitrile | 4.62 | 41 | 1226171 | 42.08 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 769611 | 60.34 | UG/L | 97 |
| 28) Bromochloromethane | 4.62 | 128 | 58970 | 4.84 | UG/L # | 72 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 128226 | 5.05 | UG/L # | 88 |
| 30) Diethyl ether | 2.40 | 59 | 121182 | 4.78 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 173999 | 4.79 | UG/L | 96 |
| 32) Iodomethane | 2.74 | 142 | 185565 | 4.99 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 60254 | 4.84 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 153242 | 4.88 | UG/L | 90 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 208138 | 4.66 | UG/L | 98 |
| 38) Isobutanol | 5.28 | 43 | 934311 | 416.45 | UG/L # | 94 |
| 39) Benzene | 5.31 | 78 | 491900 | 4.88 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 128563 | 4.85 | UG/L | 95 |

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



59169b

Data File : C:\HPCHEM\DATA\V110509\2645V.D Vial: 4
Acq On : 5 Nov 2009 8:28 Operator: REGI
Sample : VSTD05 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:43:48 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:43:43 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.02 | 56 | 469136 | 265.98 UG/L # | 96 |
| 42) 1,2-DICHLOROPROPANE | 6.28 | 63 | 129475 | 4.66 UG/L | 100 |
| 43) 1,4-Dioxane | 6.46 | 88 | 91321 | 104.27 UG/L | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 167967 | 4.67 UG/L # | 60 |
| 45) Bromodichloromethane | 6.60 | 83 | 143397 | 4.63 UG/L | 99 |
| 46) Dibromomethane | 6.40 | 93 | 77495 | 4.77 UG/L | 98 |
| 47) 4-Methyl-2-Pentanone | 7.34 | 43 | 1236824 | 24.38 UG/L | 98 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 91449 | 4.51 UG/L | 98 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 174593 | 4.73 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 520998 | 4.71 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 153097 | 4.66 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.03 | 97 | 111044 | 4.85 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.64 | 107 | 120473 | 4.82 UG/L | 100 |
| 56) 2-Hexanone | 8.38 | 43 | 975808 | 24.86 UG/L | 100 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 198319 | 4.74 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.97 | 69 | 162171 | 4.79 UG/L | 99 |
| 59) Tetrachloroethene | 8.21 | 166 | 154707 | 5.08 UG/L | 100 |
| 60) Dibromochloromethane | 8.51 | 129 | 101449 | 4.72 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 356407 | 5.01 UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 115729 | 4.97 UG/L | 100 |
| 63) ETHYL BENZENE | 9.47 | 106 | 201202 | 5.01 UG/L | 79 |
| 64) m,p-Xylene | 9.62 | 106 | 491770 | 9.68 UG/L # | 60 |
| 65) o-Xylene | 10.10 | 106 | 243009 | 4.88 UG/L | 78 |
| 66) Styrene | 10.12 | 104 | 389644 | 4.67 UG/L # | 79 |
| 67) Bromoform | 10.30 | 173 | 71444 | 5.46 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 190124 | 5.05 UG/L | 97 |
| 70) Isopropylbenzene | 10.55 | 105 | 590031 | 4.98 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 176949 | 11.14 UG/L # | 1 |
| 72) Bromobenzene | 10.84 | 77 | 262669 | 4.93 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 65109 | 5.39 UG/L | 100 |
| 74) n-Propylbenzene | 11.00 | 92 | 85146 | 4.88 UG/L | 84 |
| 75) 1,3,5-Trimethylbenzene | 11.19 | 105 | 589372 | 5.03 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 167826 | 5.18 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.17 | 126 | 165014 | 5.02 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 360216 | 5.07 UG/L # | 60 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 591731 | 4.93 UG/L | 100 |
| 80) sec-Butylbenzene | 11.73 | 105 | 791059 | 5.14 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.88 | 119 | 638429 | 5.07 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 324626 | 5.13 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 331405 | 5.13 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 335602 | 4.93 UG/L | 95 |
| 85) 1,2-Dichlorobenzene | 12.24 | 146 | 315675 | 5.18 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.94 | 157 | 38783 | 5.05 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 231485 | 5.44 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 640162 | 5.89 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 137983 | 5.34 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 219282 | 5.70 UG/L | 100 |

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

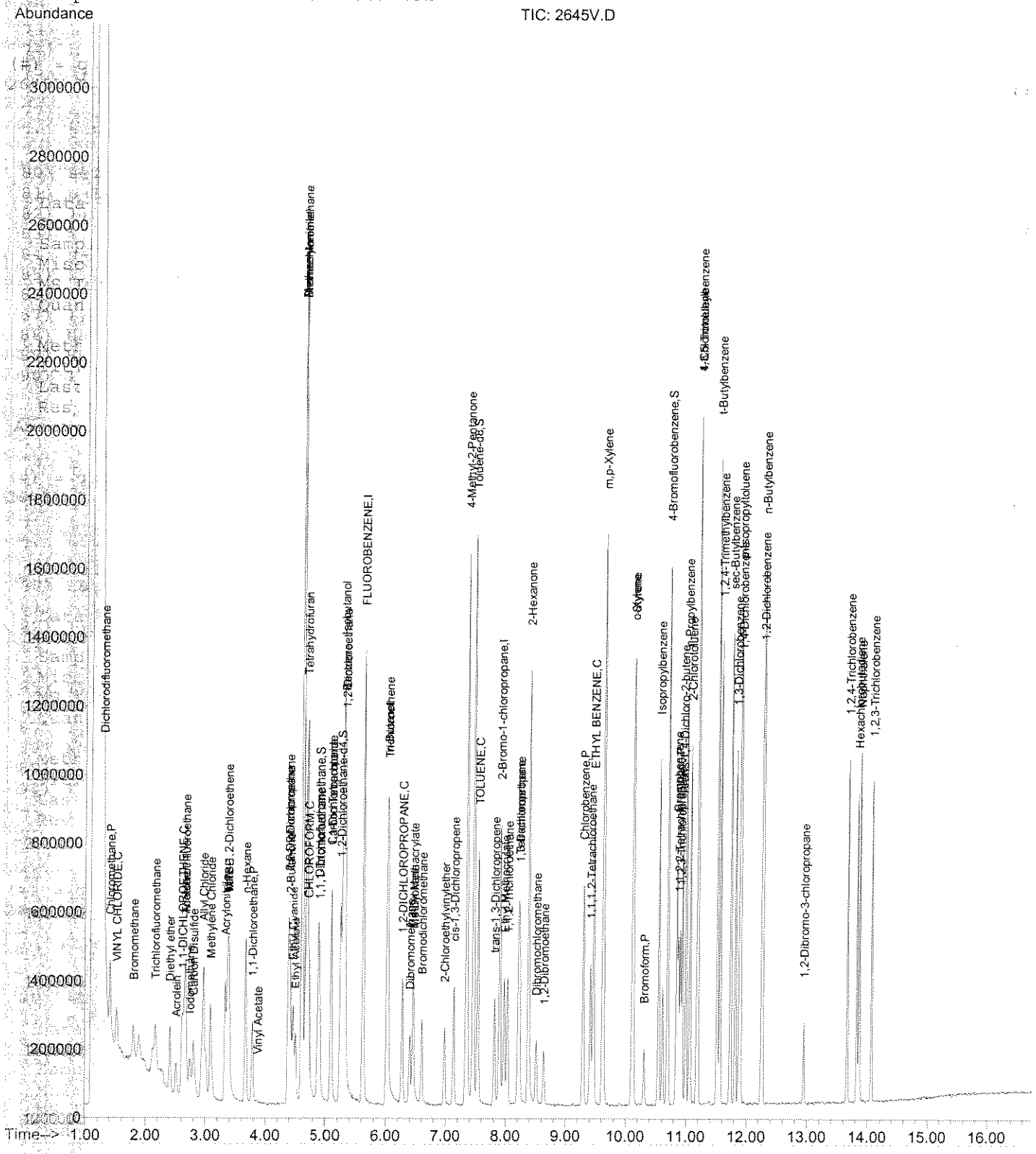


59169b

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\DATA\V110509\2645V.D Vial: 4
Acq On : 5 Nov 2009 8:28 Operator: REGI
Sample : VSTD05 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:44 2009 Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



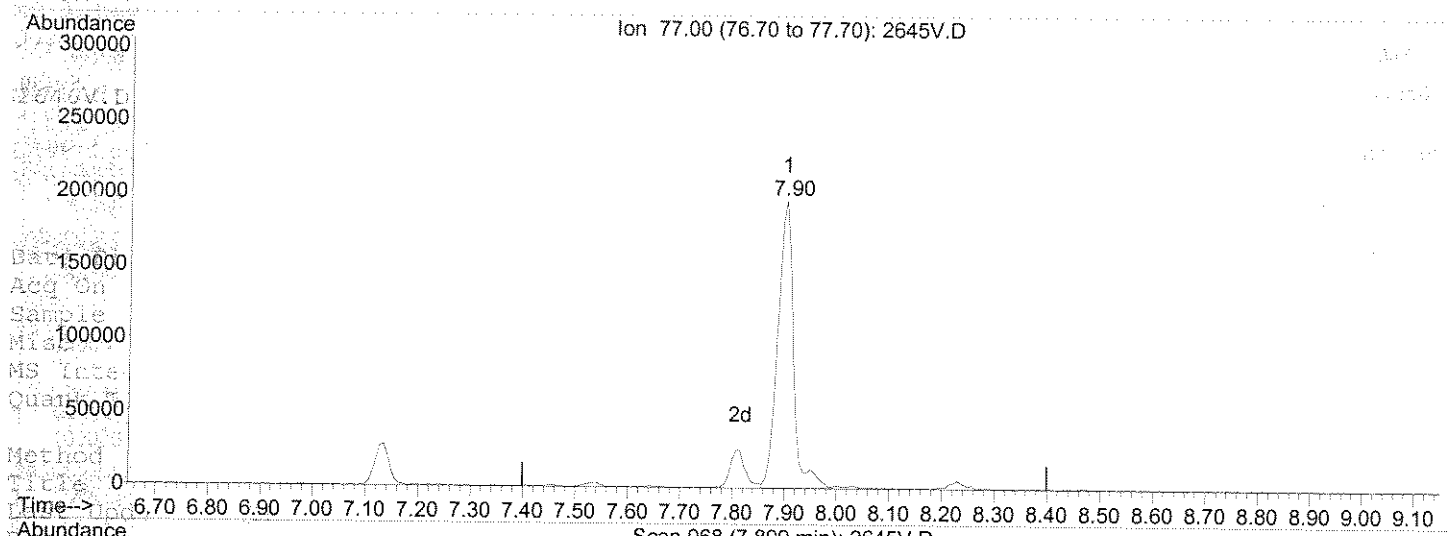


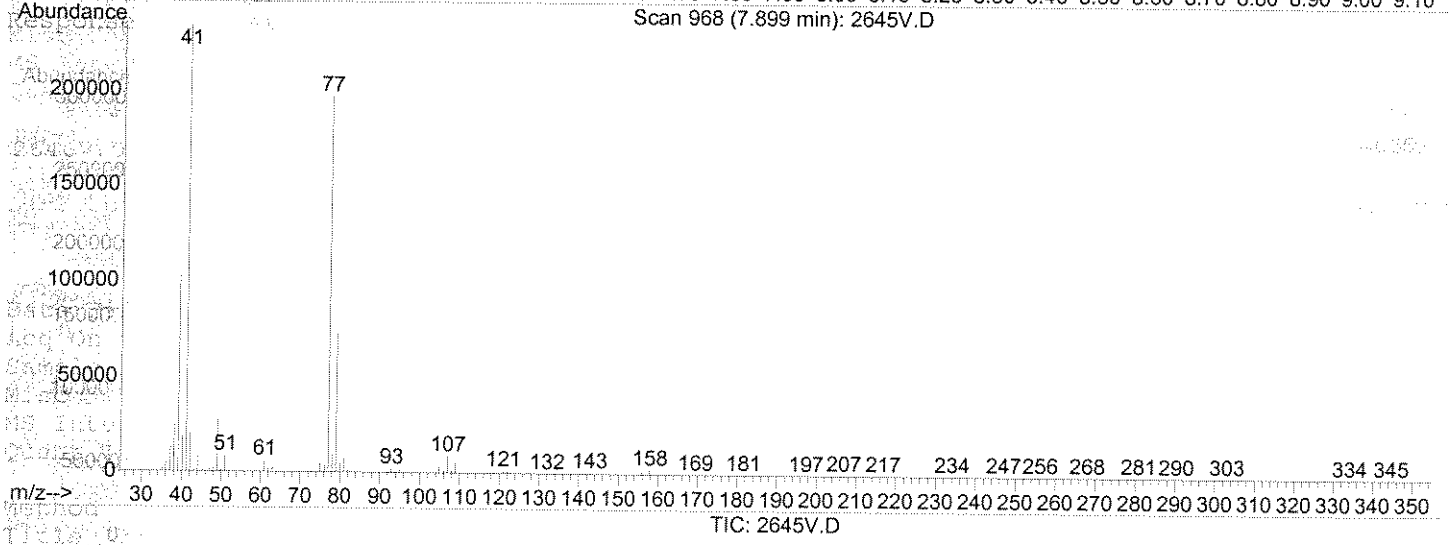

59169b

Data File : C:\HPCHEM\DATA\V110509\2645V.D
Acq On : 5 Nov 2009 8:28
Sample : VSTD05
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:43 2009

Vial: 4
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:43:43 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L

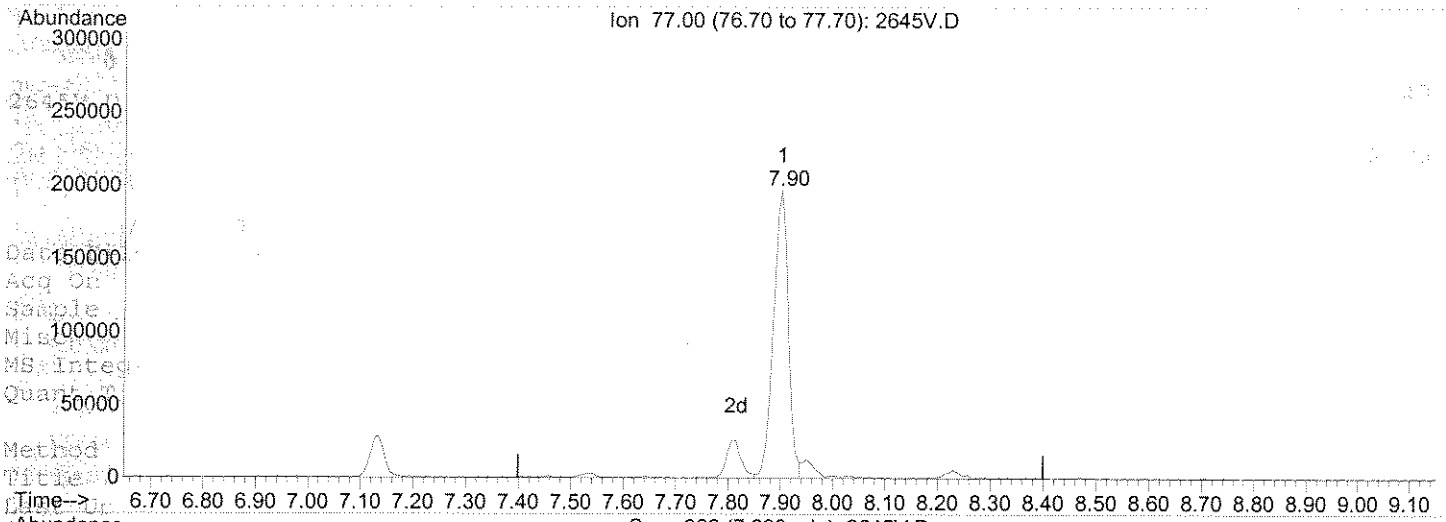
response 410715

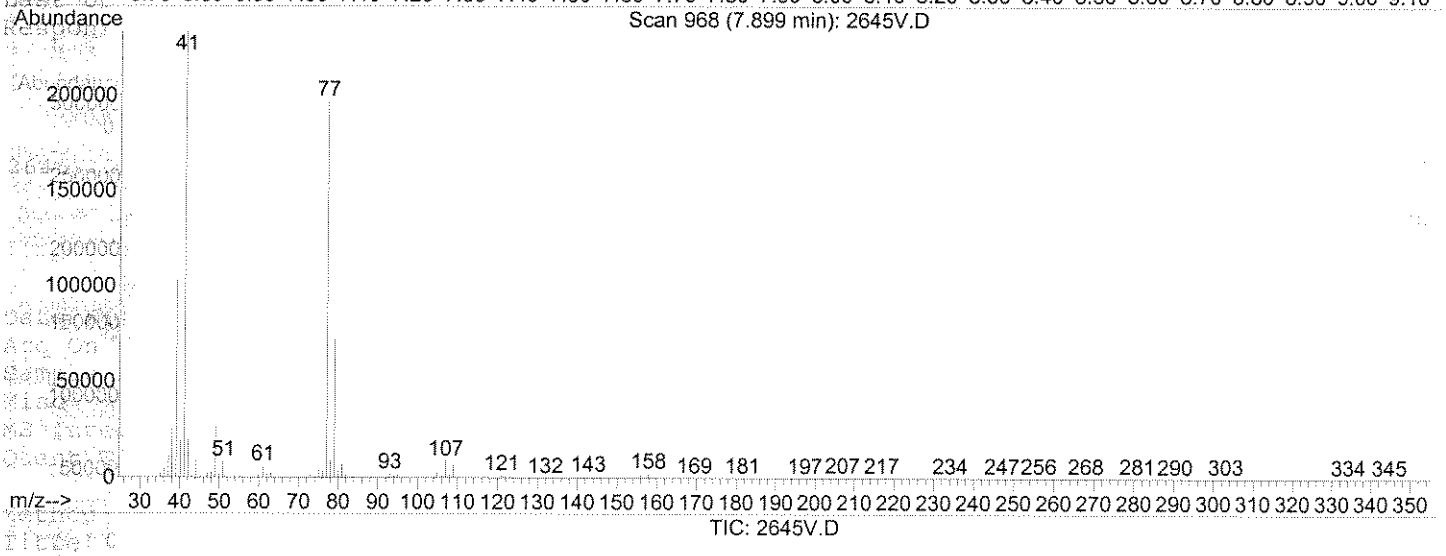
| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data File : C:\HPCHEM\DATA\V110509\2645V.D  Vial: 4
Acq On : 5 Nov 2009 8:28  Operator: REGI
Sample : VSTD05  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:44 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:43:43 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L m

response 391127

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2646V.D
Acq On : 5 Nov 2009 8:53
Sample : VSTD010
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:41:46 2009

Vial: 5
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:41:31 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1089449 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 394109m | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 260034 | 10.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 101.20% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 393267 | 10.02 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.20% | |
| 50) Toluene-d8 | 7.46 | 98 | 1080795 | 10.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 101.20% | |
| 60) 4-Bromofluorobenzene | 10.70 | 174 | 382344 | 10.33 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 103.30% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 208770 | 10.19 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 406444 | 10.58 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 345190 | 10.09 | UG/L | 98 |
| 5) Bromomethane | 1.79 | 94 | 133949 | 11.96 | UG/L | 97 |
| 6) Chloroethane | 1.89 | 64 | 161050 | 10.26 | UG/L | 92 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 307253 | 11.79 | UG/L # | 76 |
| 8) Acrolein | 2.51 | 56 | 207552 | 123.21 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 724670 | 59.26 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 220539 | 9.87 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 259309 | 10.06 | UG/L | 89 |
| 12) Acrylonitrile | 3.32 | 53 | 622334 | 67.53 | UG/L | 100 |
| 13) Carbon Disulfide | 2.80 | 76 | 666255 | 10.32 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 259861 | 9.74 | UG/L | 96 |
| 15) Allyl Chloride | 2.96 | 41 | 1009830 | 11.15 | UG/L | 100 |
| 16) Vinyl Acetate | 3.87 | 43 | 25438 | 10.03 | UG/L # | 87 |
| 17) MTBE | 3.39 | 73 | 764053 | 9.78 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 242598 | 10.21 | UG/L | 86 |
| 19) n-Hexane | 3.67 | 57 | 445202 | 9.04 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 470085 | 9.74 | UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 218427 | 56.74 | UG/L | 77 |
| 22) Ethyl Acetate | 4.50 | 43 | 434196 | 8.16 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 250199 | 9.82 | UG/L | 86 |
| 24) Ethyl Cyanide | 4.45 | 54 | 642148 | 106.42 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 425614 | 9.29 | UG/L | 100 |
| 26) Methacrylonitrile | 4.62 | 41 | 2470583 | 81.78 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 1501037 | 120.06 | UG/L | 97 |
| 28) Bromochloromethane | 4.62 | 128 | 115947 | 9.67 | UG/L # | 67 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 247455 | 9.83 | UG/L | 89 |
| 30) Diethyl ether | 2.41 | 59 | 235491 | 9.38 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 355412 | 9.99 | UG/L | 100 |
| 32) Iodomethane | 2.74 | 142 | 361833 | 9.99 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.10 | 110 | 116023 | 9.39 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 307185 | 10.11 | UG/L | 91 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 422468 | 9.57 | UG/L | 98 |
| 38) Isobutanol | 5.28 | 43 | 1840776 | 886.74 | UG/L # | 97 |
| 39) Benzene | 5.31 | 78 | 958234 | 9.64 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 253294 | 9.70 | UG/L | 94 |

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



59169b

Data File : C:\HPCHEM\DATA\V110509\2646V.D  Vial: 5
Acq On : 5 Nov 2009 8:53  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:41:46 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:41:31 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.01 | 56 | 938257 | 587.79 UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 259384 | 9.48 UG/L | 100 |
| 43) 1,4-Dioxane | 6.46 | 88 | 198226 | 257.28 UG/L | 100 |
| 44) Methyl Methacrylate | 6.46 | 41 | 335937 | 9.67 UG/L # | 65 |
| 45) Bromodichloromethane | 6.60 | 83 | 291515 | 9.62 UG/L | 98 |
| 46) Dibromomethane | 6.40 | 93 | 153649 | 9.63 UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.34 | 43 | 2451479 | 49.46 UG/L | 99 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 197745 | 10.09 UG/L | 98 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 360758 | 10.08 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 1060391 | 9.82 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 318108 | 10.06 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.03 | 97 | 222197 | 9.95 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.64 | 107 | 248267 | 10.25 UG/L | 99 |
| 55) 2-Hexanone | 8.38 | 43 | 1907153 | 47.87 UG/L | 99 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 402986 | 9.44 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.97 | 69 | 333173 | 9.71 UG/L | 95 |
| 59) Tetrachloroethene | 8.21 | 166 | 308789 | 9.96 UG/L | 99 |
| 60) Dibromochloromethane | 8.51 | 129 | 202453 | 9.28 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 712114 | 9.83 UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 237573 | 10.10 UG/L | 100 |
| 63) ETHYL BENZENE | 9.47 | 106 | 399475 | 9.77 UG/L | 77 |
| 64) m,p-Xylene | 9.62 | 106 | 998322 | 19.30 UG/L # | 59 |
| 65) o-Xylene | 10.11 | 106 | 491360 | 9.73 UG/L | 80 |
| 66) Styrene | 10.12 | 104 | 811760 | 9.55 UG/L # | 82 |
| 67) Bromoform | 10.30 | 173 | 157170 | 10.17 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 379295 | 9.96 UG/L | 99 |
| 69) Isopropylbenzene | 10.54 | 105 | 1184421 | 9.86 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 364680 | 21.87 UG/L # | 2 |
| 72) Bromobenzene | 10.84 | 77 | 533011 | 9.87 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 121026 | 9.89 UG/L | 100 |
| 74) n-Propylbenzene | 11.00 | 92 | 177418 | 10.00 UG/L | 88 |
| 75) 1,3,5-Trimethylbenzene | 11.19 | 105 | 1180910 | 9.90 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 326773 | 9.95 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.18 | 126 | 326126 | 9.76 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 724181 | 10.06 UG/L # | 60 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 1204136 | 9.87 UG/L | 100 |
| 80) sec-Butylbenzene | 11.73 | 105 | 1600864 | 10.28 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.87 | 119 | 1312744 | 10.29 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 645519 | 10.11 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 649839 | 9.93 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 680198 | 9.75 UG/L | 93 |
| 85) 1,2-Dichlorobenzene | 12.25 | 146 | 628449 | 10.12 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 86779 | 11.56 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 465006 | 10.70 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 1315644 | 12.22 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 274755 | 10.29 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 446045 | 11.38 UG/L | 100 |

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



591696

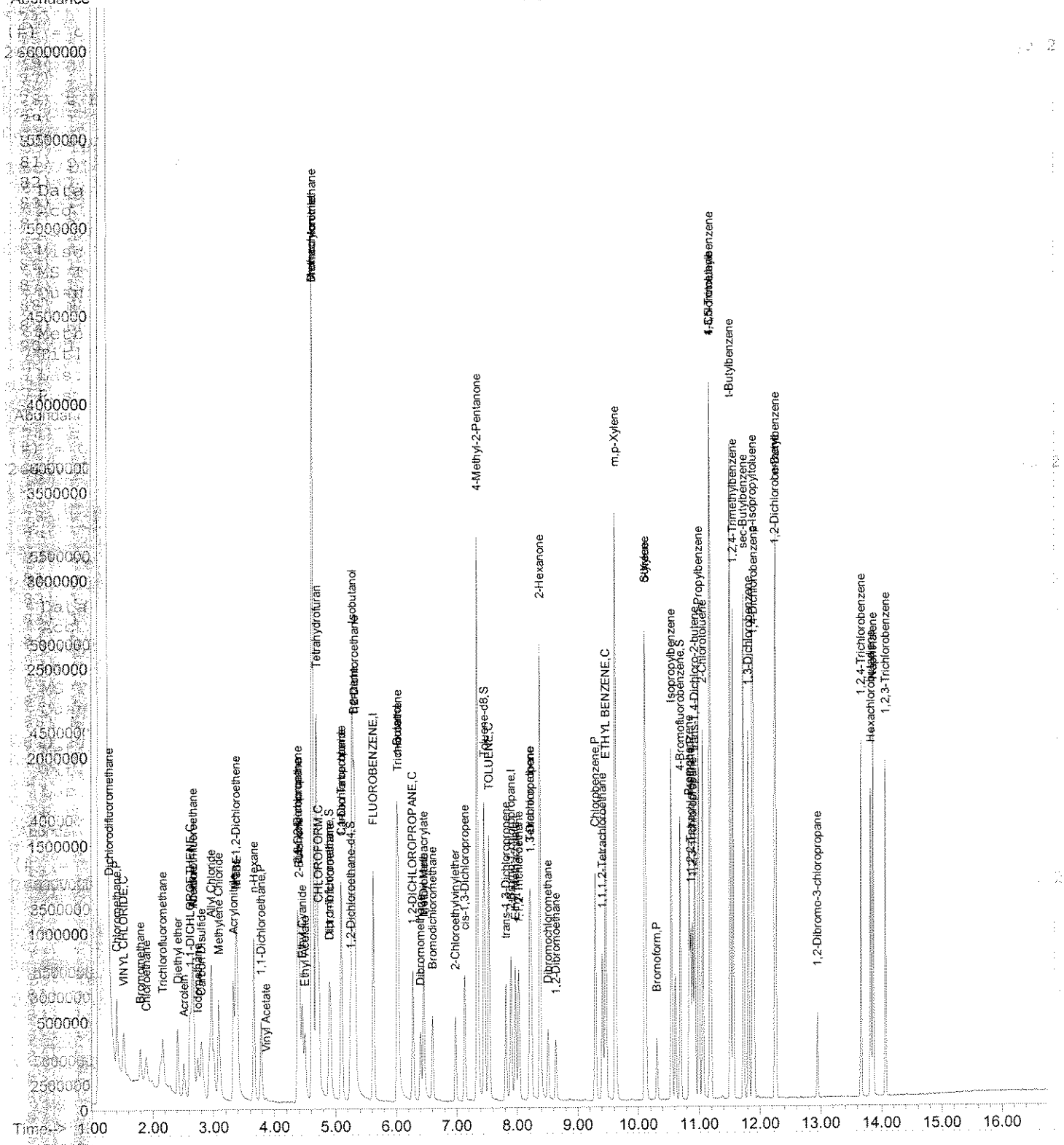
Data File : C:\HPCHEM\DATA\V110509\2646V.D
Acq On : 5 Nov 2009 8:53
Sample : VSTD010
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 11:46 2009

Vial: 5
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

TIC: 2646V.D

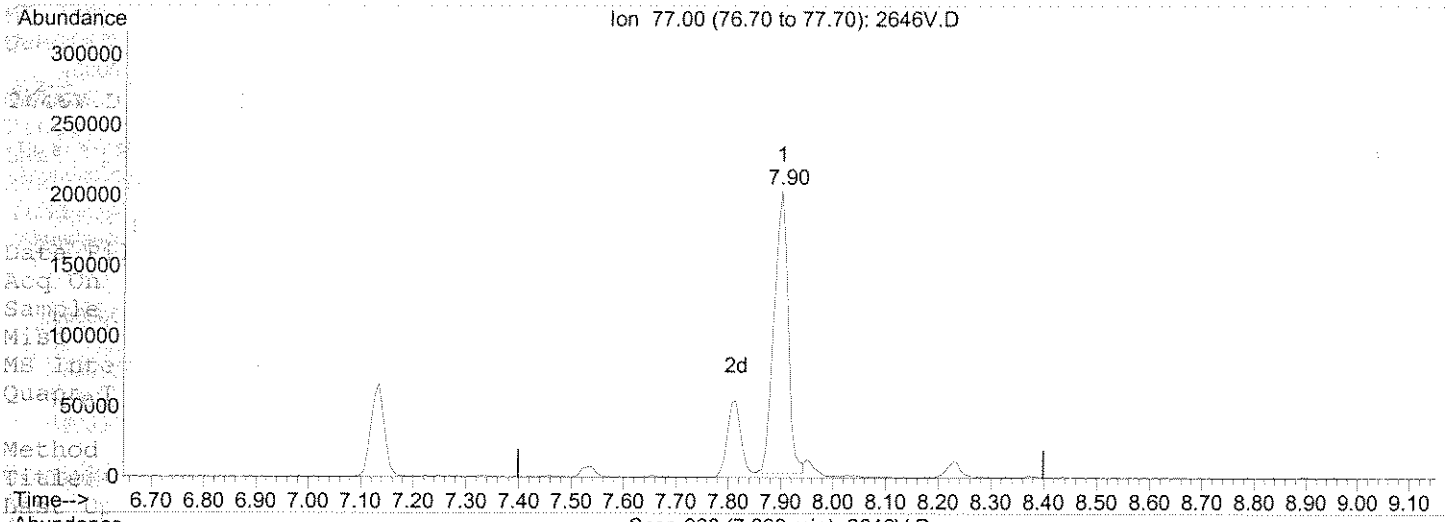


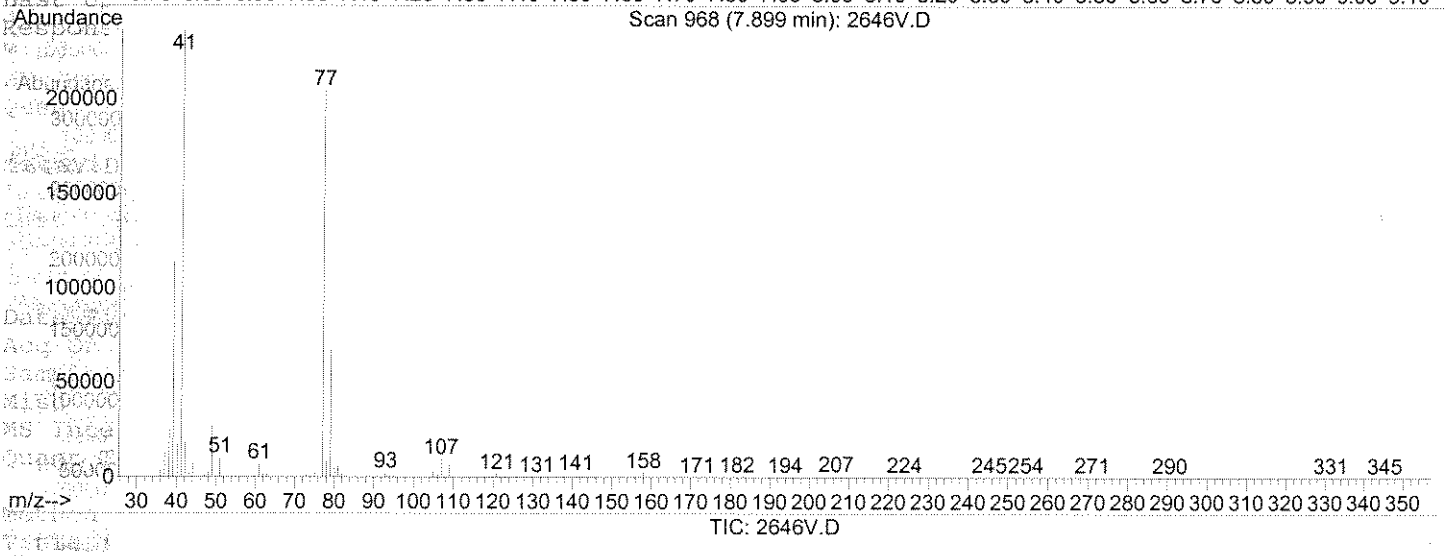



59169b

Data File : C:\HPCHEM\DATA\V110509\2646V.D Vial: 5
Acq On : 5 Nov 2009 8:53 Operator: REGI
Sample : VSTD010 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:41 2009 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:41:31 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L

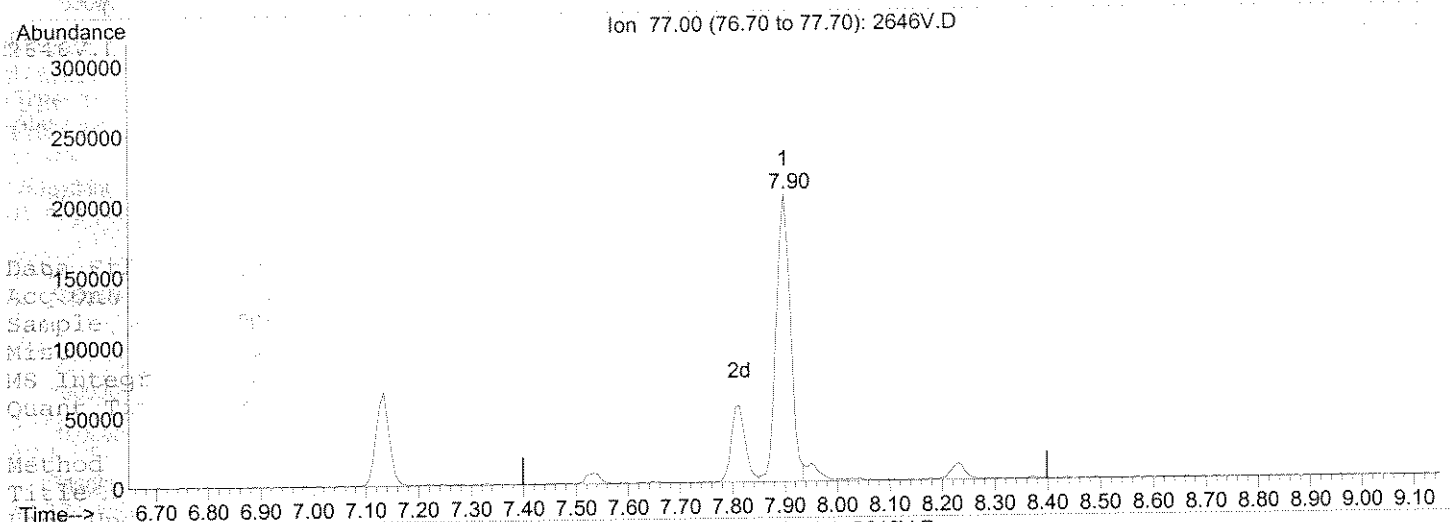
response 375248

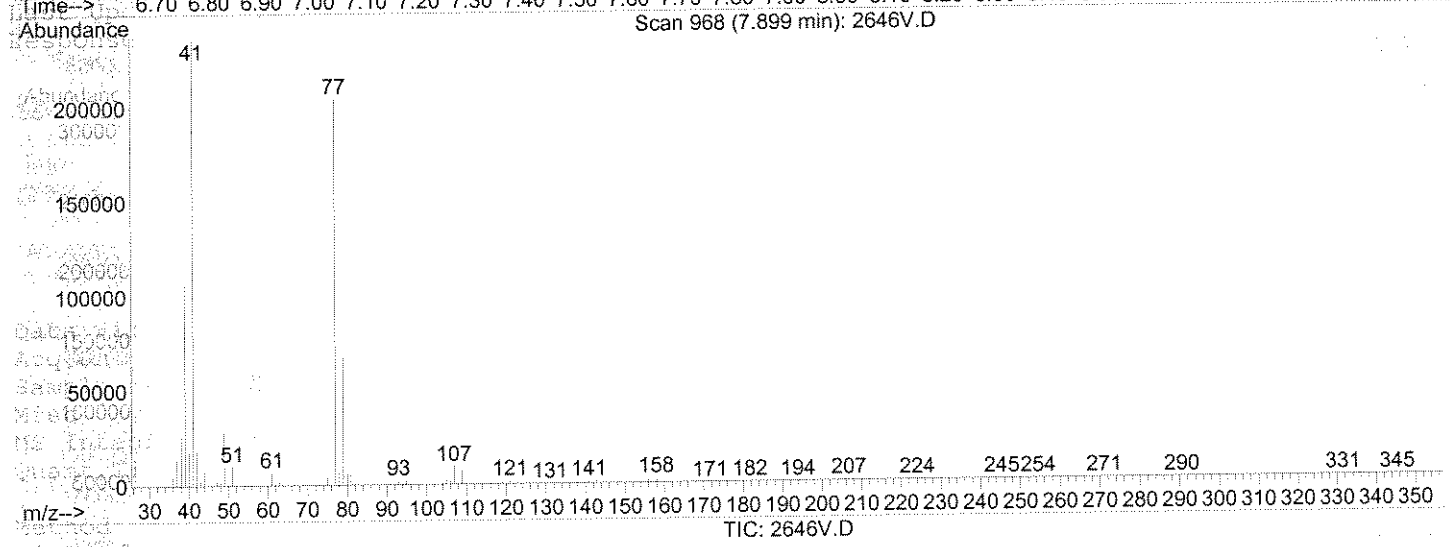
| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2646V.D
Acq On : 5 Nov 2009 8:53
Sample : VSTD010
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:43 2009

Vial: 5
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:41:31 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L m

response 389763

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2646V.D 8260VOI.M Thu Nov 05 10:43:28 2009

59169b

Data File : C:\HPCHEM\DATA\V110509\2647V.D Vial: 6
Acq On : 5 Nov 2009 9:18 Operator: REGI
Sample : VSTD025 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:40:48 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:41 2009
Response via : Initial Calibration
Data Acq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1103500 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 399166m | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 259240 | 9.94 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 99.40% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 400272 | 10.11 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 101.10% | | | |
| 50) Toluene-d8 | 7.46 | 98 | 1112091 | 10.38 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 103.80% | | | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 377868 | 10.20 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 102.00% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 485109 | 22.98 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 971624 | 25.42 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.52 | 62 | 848604 | 24.62 | UG/L | 95 |
| 5) Bromomethane | 1.79 | 94 | 320931 | 28.68 | UG/L | 98 |
| 6) Chloroethane | 1.89 | 64 | 359557 | 37.49 | UG/L | 93 |
| 7) Trichlorofluoromethane | 2.16 | 101 | 712645 | 27.86 | UG/L # | 80 |
| 8) Acrolein | 2.51 | 56 | 541673 | 338.89 | UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 1857765 | 154.52 | UG/L | 96 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 557248 | 24.67 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 626291 | 23.80 | UG/L | 89 |
| 12) Acrylonitrile | 3.32 | 53 | 1662688 | 163.00 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 1621205 | 24.82 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 632040 | 25.61 | UG/L | 96 |
| 15) Allyl Chloride | 2.96 | 41 | 2604777 | 29.55 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 69970 | 25.48 | UG/L # | 86 |
| 17) MTBE | 3.39 | 73 | 1955850 | 24.82 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 578533 | 23.86 | UG/L # | 81 |
| 19) n-Hexane | 3.66 | 57 | 1065748 | 20.51 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 1175284 | 23.90 | UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 553686 | 145.47 | UG/L | 85 |
| 22) Ethyl Acetate | 4.50 | 43 | 1190786 | 22.00 | UG/L # | 100 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 624473 | 24.13 | UG/L | 87 |
| 24) Ethyl Cyanide | 4.45 | 54 | 1669876 | 280.37 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 1061173 | 22.67 | UG/L | 99 |
| 26) Methacrylonitrile | 4.62 | 41 | 6904050 | 215.52 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 4119723 | 325.13 | UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 292839 | 23.98 | UG/L # | 59 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 608491 | 23.62 | UG/L # | 88 |
| 30) Diethyl ether | 2.41 | 59 | 600793 | 23.51 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 892309 | 24.75 | UG/L | 100 |
| 32) Iodomethane | 2.74 | 142 | 914890 | 25.10 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.10 | 110 | 292745 | 23.15 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 799550 | 26.19 | UG/L | 91 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 1081684 | 24.10 | UG/L | 98 |
| 38) Isobutanol | 5.27 | 43 | 5038301 | 2521.96 | UG/L # | 98 |
| 39) Benzene | 5.31 | 78 | 2456585 | 24.27 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 634002 | 23.83 | UG/L | 94 |

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



59169b

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\DATA\V110509\2647V.D Vial: 6
Acq On : 5 Nov 2009 9:18 Operator: REGI
Sample : VSTD025 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:40:48 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:41 2009
Response via : Initial Calibration
Data Acq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.01 | 56 | 2588525 | 1725.55 UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 664510 | 23.87 UG/L | 100 |
| 43) 1,4-Dioxane | 6.45 | 88 | 498326 | 710.97 UG/L | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 914694 | 26.43 UG/L # | 63 |
| 45) Bromodichloromethane | 6.60 | 83 | 769390 | 25.11 UG/L | 99 |
| 46) Dibromomethane | 6.40 | 93 | 398163 | 24.68 UG/L | 90 |
| 47) 4-Methyl-2-Pentanone | 7.34 | 43 | 6617152 | 133.94 UG/L | 99 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 529206 | 27.08 UG/L | 99 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 961630 | 26.77 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 2681701 | 24.53 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 860016 | 27.36 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.03 | 97 | 563992 | 25.06 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.64 | 107 | 633248 | 26.19 UG/L | 100 |
| 56) 2-Hexanone | 8.38 | 43 | 5079236 | 127.61 UG/L | 100 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 1016389 | 23.41 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.97 | 69 | 880652 | 25.56 UG/L | 94 |
| 59) Tetrachloroethene | 8.21 | 166 | 734712 | 23.10 UG/L | 99 |
| 60) Dibromochloromethane | 8.51 | 129 | 569915 | 25.98 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 1776374 | 24.15 UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 610984 | 25.83 UG/L | 100 |
| 63) ETHYL BENZENE | 9.46 | 106 | 998726 | 24.13 UG/L | 77 |
| 64) m,p-Xylene | 9.62 | 106 | 2480662 | 47.09 UG/L # | 57 |
| 65) o-Xylene | 10.11 | 106 | 1224162 | 23.85 UG/L | 78 |
| 66) Styrene | 10.12 | 104 | 2092690 | 24.21 UG/L # | 82 |
| 67) Bromoform | 10.31 | 173 | 435276 | 25.01 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 956416 | 24.94 UG/L | 99 |
| 70) Isopropylbenzene | 10.54 | 105 | 2911821 | 23.80 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 1011450 | 55.72 UG/L # | 2 |
| 72) Bromobenzene | 10.84 | 77 | 1330292 | 24.37 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.89 | 110 | 309287 | 25.15 UG/L | 100 |
| 74) n-Propylbenzene | 10.99 | 92 | 432468 | 24.00 UG/L | 88 |
| 75) 1,3,5-Trimethylbenzene | 11.19 | 105 | 2945907 | 24.24 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 796184 | 23.84 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.18 | 126 | 818312 | 24.12 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 1752600 | 23.88 UG/L # | 61 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 2956675 | 23.70 UG/L | 100 |
| 80) sec-Butylbenzene | 11.73 | 105 | 3849905 | 24.16 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.87 | 119 | 3127040 | 23.90 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 1586497 | 24.50 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 1639765 | 24.69 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 1629973 | 22.60 UG/L | 94 |
| 85) 1,2-Dichlorobenzene | 12.25 | 146 | 1480003 | 23.30 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 206765 | 27.35 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 1013503 | 22.29 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 2740409 | 24.66 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 594813 | 21.18 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 862434 | 20.73 UG/L | 100 |

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



59169b

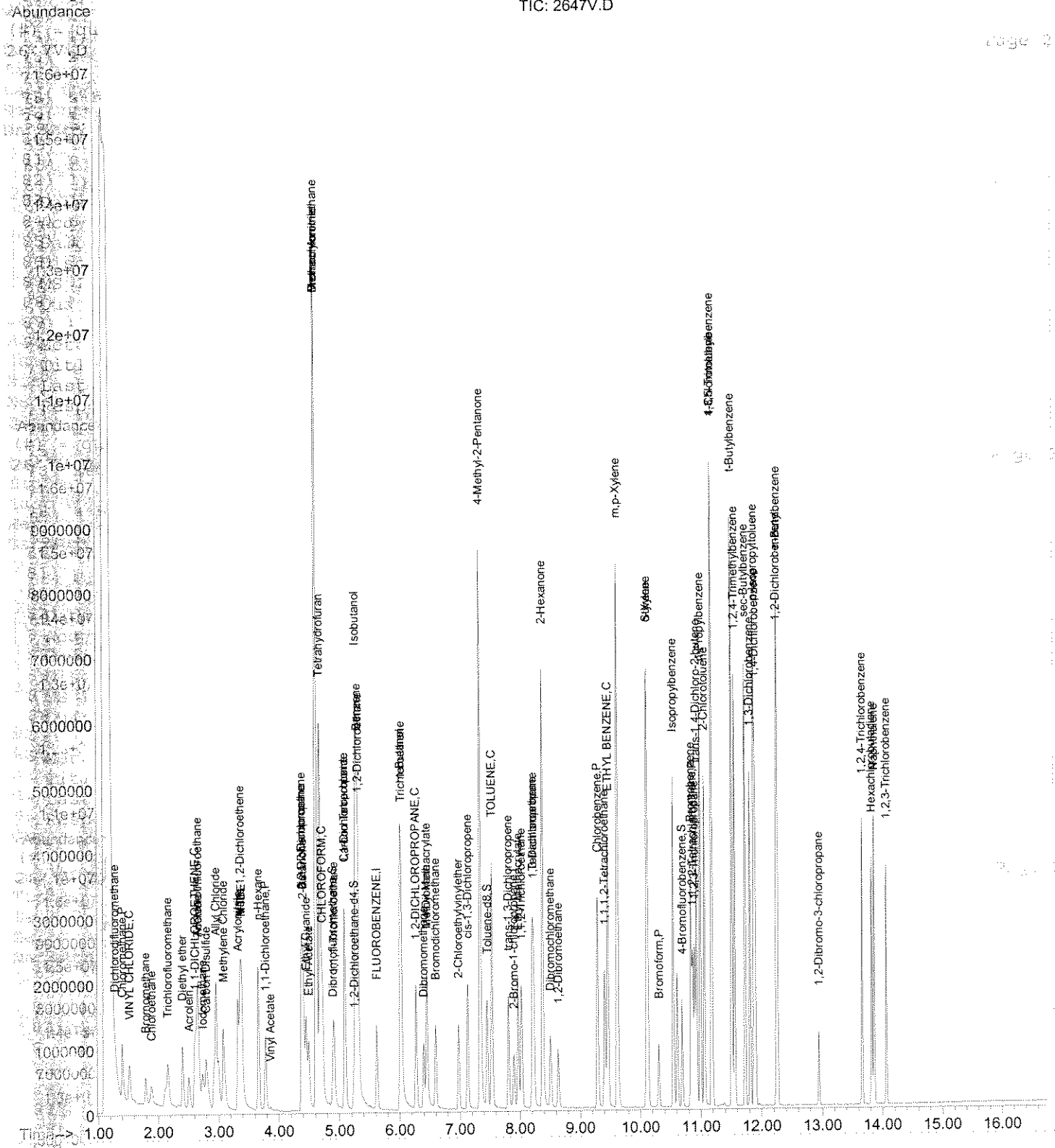
Data File : C:\HPCHEM\DATA\V110509\2647V.D
Acq On : 5 Nov 2009 9:18
Sample : VSTD025
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:41 2009

Vial: 6
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

TIC: 2647V.D



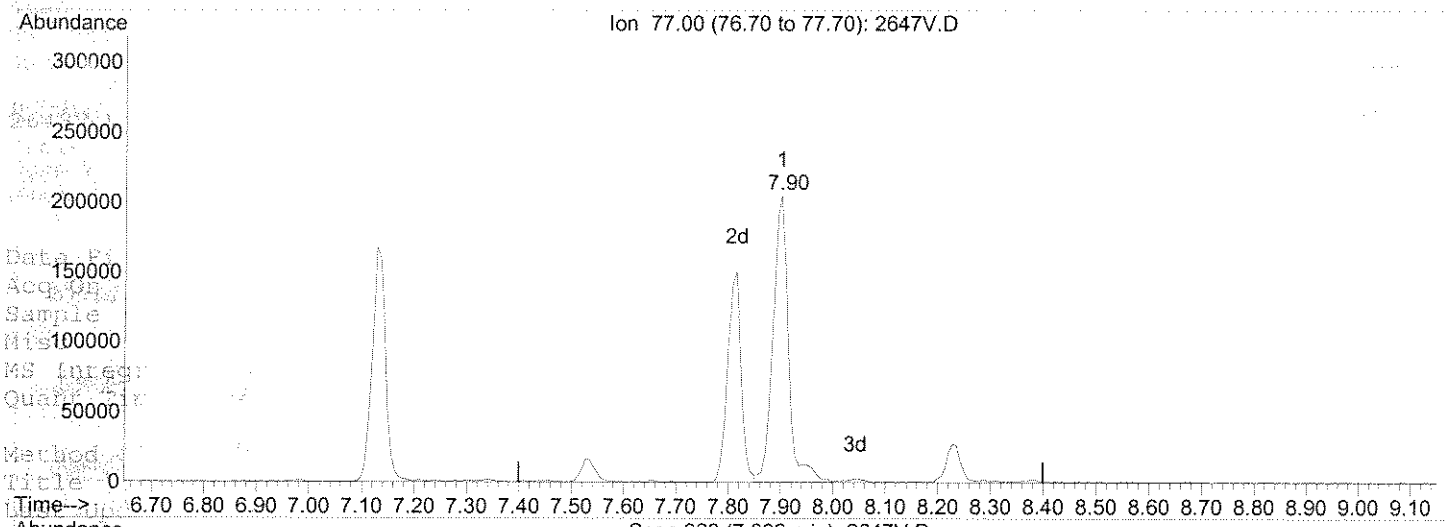


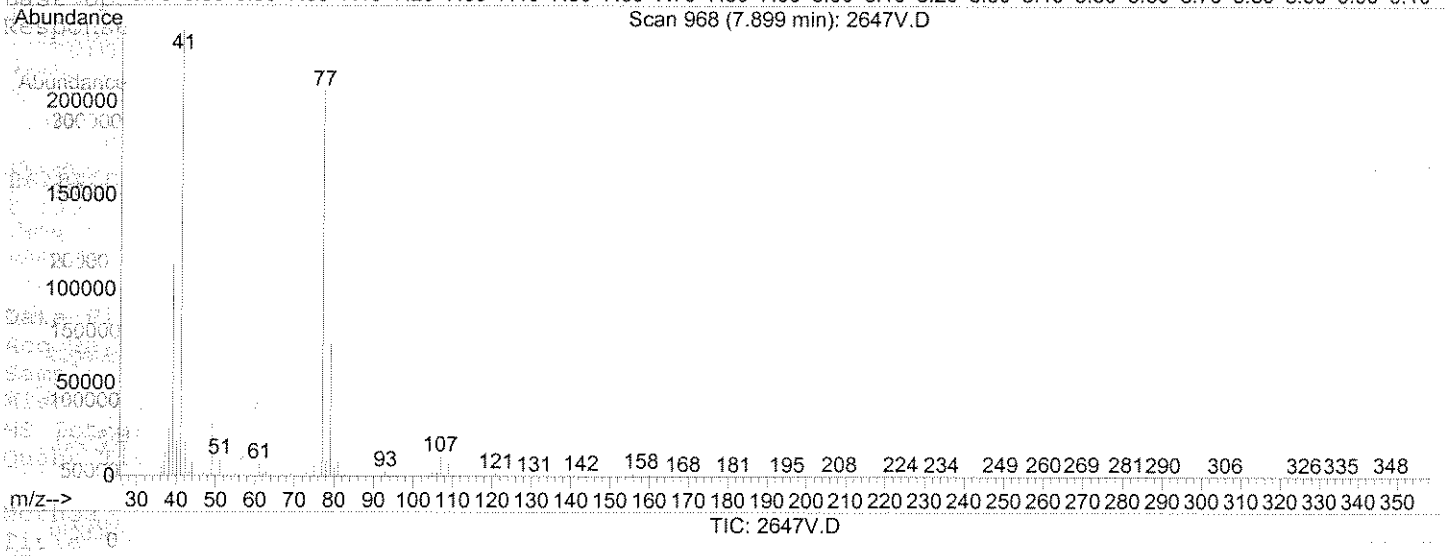

591696

Quantitation Report (Qedit)

Data File : C:\HPCHEM\DATA\V110509\2647V.D  Vial: 6
Acq On : 5 Nov 2009 9:18  Operator: REGI
Sample : VSTD025  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:40 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:41 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

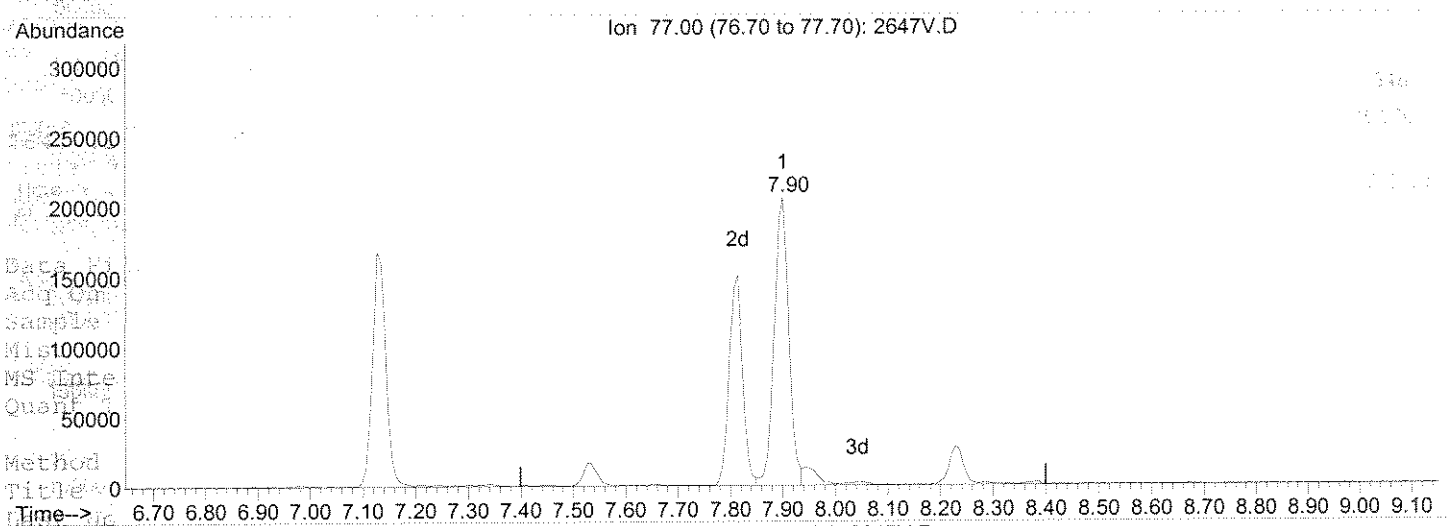
7.90min 10.00UG/L

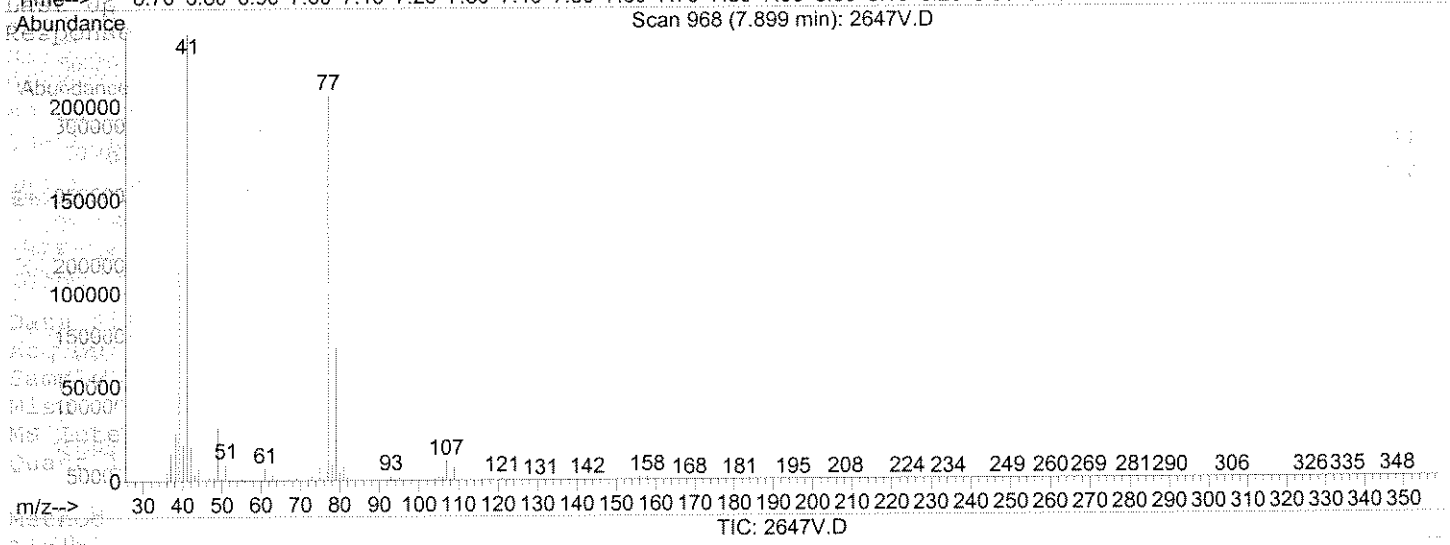
response 421817

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2647V.D  Vial: 6
Acq On : 5 Nov 2009 9:18  Operator: REGI
Sample : VSTD025  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:41 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:41 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L m

response 399166

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2647V.D 8260VOI.M Thu Nov 05 10:41:24 2009

Data File : C:\HPCHEM\DATA\V110509\2648V.D
Acq On : 5 Nov 2009 9:42
Sample : VSTD050
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:32:50 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1133808 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 419627m | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 266719 | 9.92 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 99.20% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 403481 | 10.02 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.20% | |
| 50) Toluene-d8 | 7.46 | 98 | 1157474 | 10.74 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 107.40% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 397055 | 10.41 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 104.10% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 1003855 | 45.42 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 2075993 | 55.62 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.52 | 62 | 1717281 | 48.80 | UG/L | 96 |
| 5) Bromomethane | 1.79 | 94 | 518865 | 42.93 | UG/L | 99 |
| 6) Chloroethane | 1.89 | 64 | 605928m | 46.41 | UG/L | |
| 7) Trichlorofluoromethane | 2.15 | 101 | 1338804 | 52.00 | UG/L # | 77 |
| 8) Acrolein | 2.51 | 56 | 1032813 | 719.69 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 3570216 | 299.37 | UG/L | 97 |
| 10) 1,1-DICHLOROETHENE | 2.60 | 96 | 1137033 | 49.34 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 1293146 | 47.18 | UG/L | 88 |
| 12) Acrylonitrile | 3.32 | 53 | 3162546 | 253.13 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 3284696 | 48.24 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 1215756 | 47.45 | UG/L | 95 |
| 15) Allyl Chloride | 2.96 | 41 | 5682250 | 68.20 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 140335 | 50.08 | UG/L # | 91 |
| 17) MTBE | 3.39 | 73 | 3967696 | 48.76 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 1166449 | 46.14 | UG/L # | 81 |
| 19) n-Hexane | 3.66 | 57 | 2221401 | 38.60 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 2378751 | 45.93 | UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 1114887 | 293.84 | UG/L | 83 |
| 22) Ethyl Acetate | 4.50 | 43 | 2766245 | 51.28 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 1227983 | 45.16 | UG/L | 84 |
| 24) Ethyl Cyanide | 4.45 | 54 | 3480159 | 595.50 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 2162631 | 43.88 | UG/L | 100 |
| 26) Methacrylonitrile | 4.62 | 41 | 14132452 | 394.65 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 8861969 | 688.76 | UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 588957 | 45.79 | UG/L # | 59 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 1188527 | 43.07 | UG/L # | 89 |
| 30) Diethyl ether | 2.40 | 59 | 1219459 | 45.72 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 1781264 | 47.66 | UG/L | 99 |
| 32) Iodomethane | 2.73 | 142 | 1797749 | 47.61 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 5.09 | 110 | 598209 | 45.03 | UG/L | 100 |
| 34) Carbon Tetrachloride | 5.09 | 117 | 1640880 | 52.21 | UG/L | 92 |
| 35) 1,2-Dichloroethane | 5.33 | 62 | 2213464 | 47.28 | UG/L | 99 |
| 36) Isobutanol | 5.28 | 43 | 10307646 | 5445.61 | UG/L # | 97 |
| 37) Benzene | 5.30 | 78 | 4986856 | 46.73 | UG/L | 100 |
| 38) Trichloroethene | 6.03 | 130 | 1296872 | 46.65 | UG/L | 94 |

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



59169b

Data File : C:\HPCHEM\DATA\V110509\2648V.D  Vial: 7
Acq On : 5 Nov 2009 9:42  Operator: REGI
Sample : VSTD050  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:32:50 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.01 | 56 | 5339712 | 3961.81 UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 1366502 | 47.00 UG/L | 100 |
| 43) 1,4-Dioxane | 6.45 | 88 | 1037076 | 1854.23 UG/L | 100 |
| 44) Methyl Methacrylate | 6.46 | 41 | 1984672 | 57.49 UG/L # | 63 |
| 45) Bromodichloromethane | 6.60 | 83 | 1614000 | 50.84 UG/L | 99 |
| 46) Dibromomethane | 6.40 | 93 | 806545 | 48.15 UG/L | 91 |
| 47) 4-Methyl-2-Pentanone | 7.34 | 43 | 13755351 | 279.53 UG/L | 99 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 1128619 | 57.01 UG/L | 100 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 2042324 | 55.22 UG/L | 100 |
| 50) TOLUENE | 7.53 | 91 | 5612646 | 49.57 UG/L | 100 |
| 51) trans-1,3-Dichloropropene | 7.81 | 75 | 1842089 | 57.66 UG/L | 100 |
| 52) 1,1,2-Trichloroethane | 8.03 | 97 | 1169989 | 50.69 UG/L | 100 |
| 53) 1,2-Dibromoethane | 8.64 | 107 | 1305172 | 53.06 UG/L | 99 |
| 54) 2-Hexanone | 8.38 | 43 | 10397103 | 255.27 UG/L | 99 |
| 55) 1,3-Dichloropropane | 8.23 | 76 | 2100580 | 45.24 UG/L | 100 |
| 56) Ethyl Methacrylate | 7.97 | 69 | 1868638 | 51.89 UG/L | 94 |
| 57) Tetrachloroethene | 8.21 | 166 | 1508779 | 44.28 UG/L | 100 |
| 58) Dibromochloromethane | 8.51 | 129 | 1240872 | 53.67 UG/L | 100 |
| 59) Chlorobenzene | 9.29 | 112 | 3633791 | 46.22 UG/L | 99 |
| 60) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 1229366 | 48.75 UG/L | 100 |
| 61) ETHYL BENZENE | 9.47 | 106 | 2032072 | 46.05 UG/L | 76 |
| 62) m,p-Xylene | 9.62 | 106 | 5171368 | 91.81 UG/L # | 56 |
| 63) o-Xylene | 10.11 | 106 | 2514131 | 45.92 UG/L | 78 |
| 64) Styrene | 10.12 | 104 | 4385829 | 47.37 UG/L # | 83 |
| 65) Bromoform | 10.31 | 173 | 946195 | 51.79 UG/L | 100 |
| 66) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 1903679 | 46.78 UG/L | 100 |
| 67) Isopropylbenzene | 10.55 | 105 | 6022481 | 46.42 UG/L | 100 |
| 68) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 2060684 | 119.91 UG/L # | 5 |
| 69) Bromobenzene | 10.84 | 77 | 2715476 | 46.84 UG/L | 100 |
| 70) 1,2,3-Trichloropropane | 10.90 | 110 | 597033 | 45.92 UG/L | 100 |
| 71) n-Propylbenzene | 11.00 | 92 | 858439 | 44.42 UG/L | 79 |
| 72) 1,3,5-Trimethylbenzene | 11.19 | 105 | 5929650 | 45.69 UG/L | 100 |
| 73) 2-Chlorotoluene | 11.06 | 126 | 1615705 | 45.18 UG/L | 100 |
| 74) 4-Chlorotoluene | 11.18 | 126 | 1636844 | 44.89 UG/L | 100 |
| 75) t-Butylbenzene | 11.51 | 91 | 3449276 | 43.16 UG/L # | 61 |
| 76) 1,2,4-Trimethylbenzene | 11.56 | 105 | 6018058 | 45.24 UG/L | 100 |
| 77) sec-Butylbenzene | 11.73 | 105 | 7800388 | 45.63 UG/L | 100 |
| 78) p-Isopropyltoluene | 11.88 | 119 | 6381138 | 45.23 UG/L | 100 |
| 79) 1,3-Dichlorobenzene | 11.81 | 146 | 3168147 | 45.37 UG/L | 100 |
| 80) 1,4-Dichlorobenzene | 11.90 | 146 | 3251443 | 45.27 UG/L | 100 |
| 81) n-Butylbenzene | 12.26 | 92 | 3288356 | 41.15 UG/L | 94 |
| 82) 1,2-Dichlorobenzene | 12.25 | 146 | 2932882 | 42.16 UG/L | 100 |
| 83) 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 384852 | 46.48 UG/L | 100 |
| 84) 1,2,4-Trichlorobenzene | 13.66 | 180 | 1827201 | 34.78 UG/L | 100 |
| 85) Naphthalene | 13.86 | 128 | 4886280 | 39.44 UG/L | 100 |
| 86) Hexachlorobutadiene | 13.82 | 225 | 1030257 | 31.26 UG/L | 100 |
| 87) 1,2,3-Trichlorobenzene | 14.06 | 180 | 1450949 | 29.39 UG/L | 100 |

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

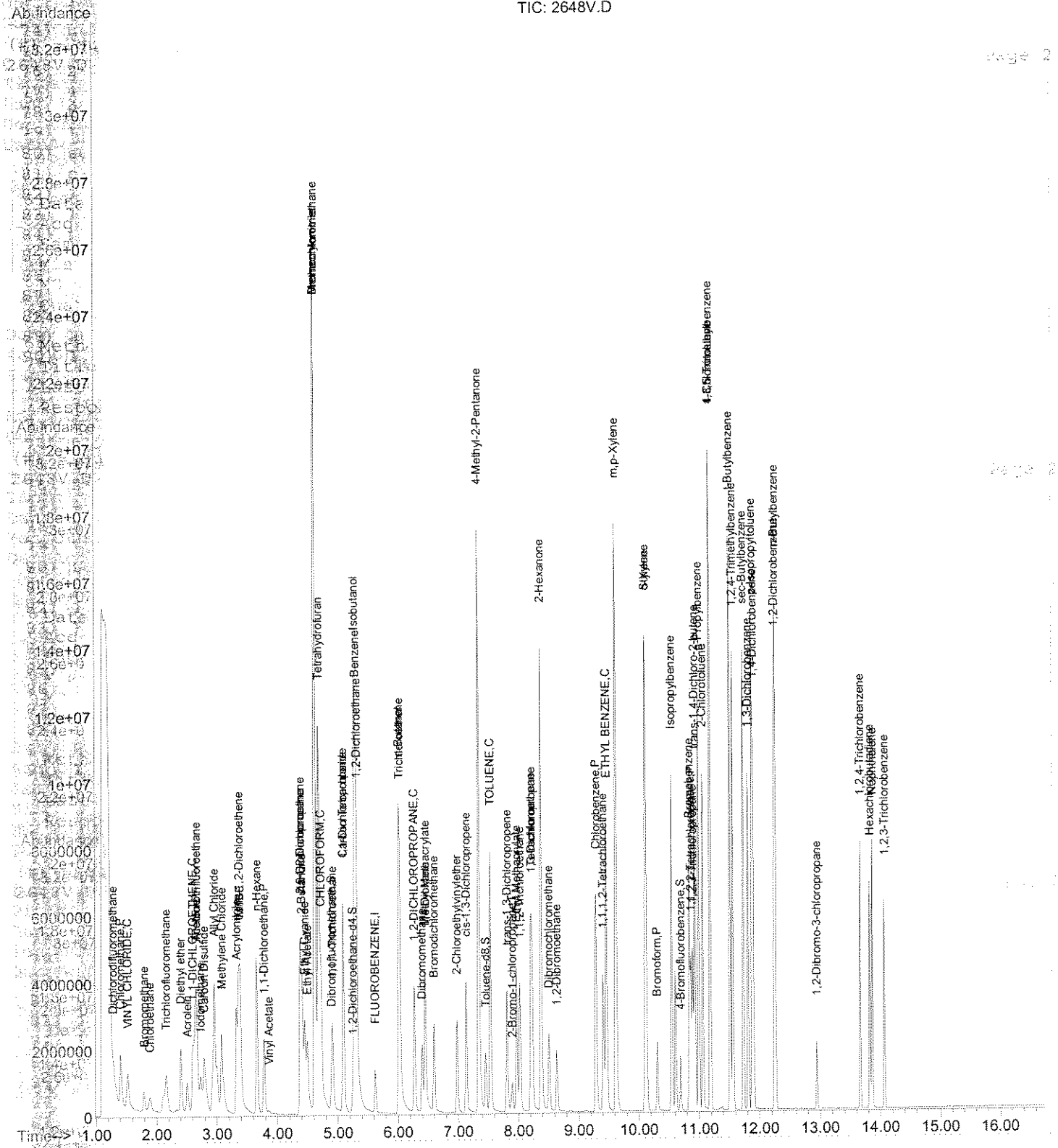
Data File : C:\HPCHEM\DATA\V110509\2648V.D
Acq On : 5 Nov 2009 9:42
Sample : VSTD050
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 11:44 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

TIC: 2648V.D

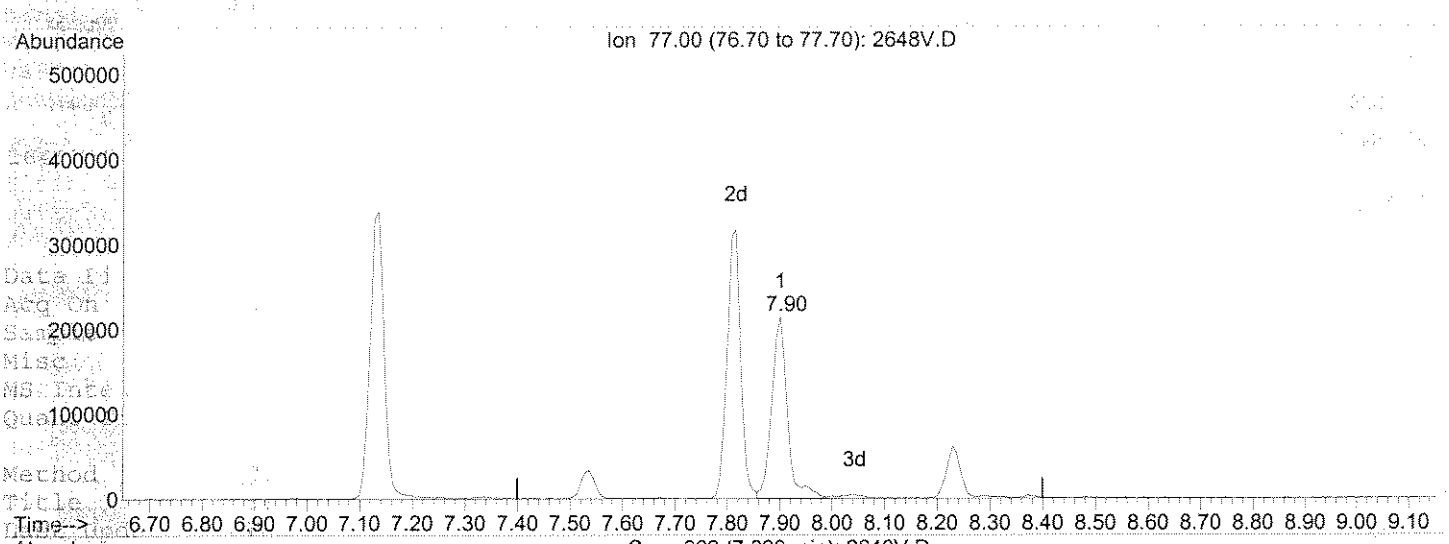


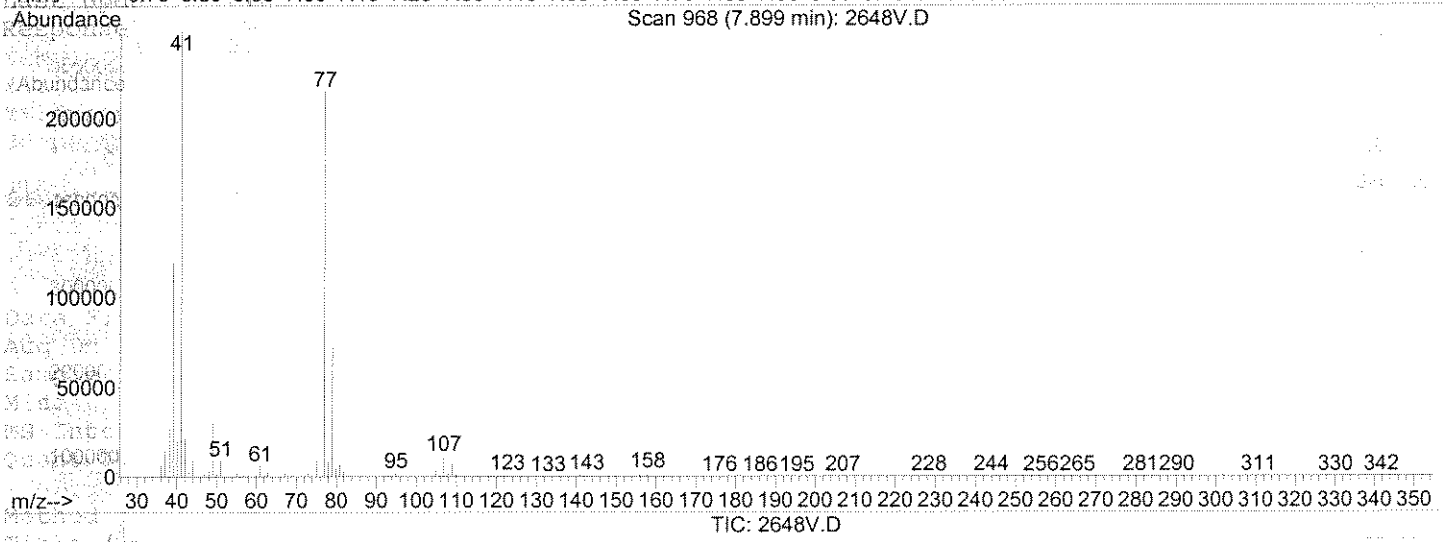



59169b

Data File : C:\HPCHEM\DATA\V110509\2648V.D  Vial: 7
Acq On : 5 Nov 2009 9:42  Operator: REGI
Sample : VSTD050  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:32 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:00 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L

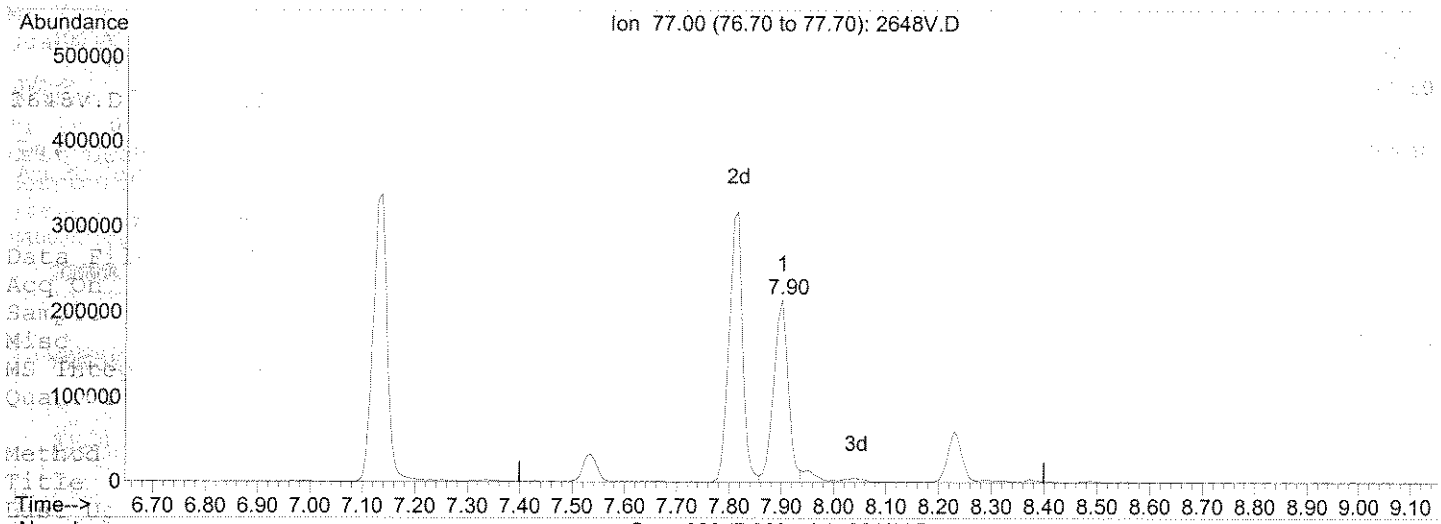
response 443564

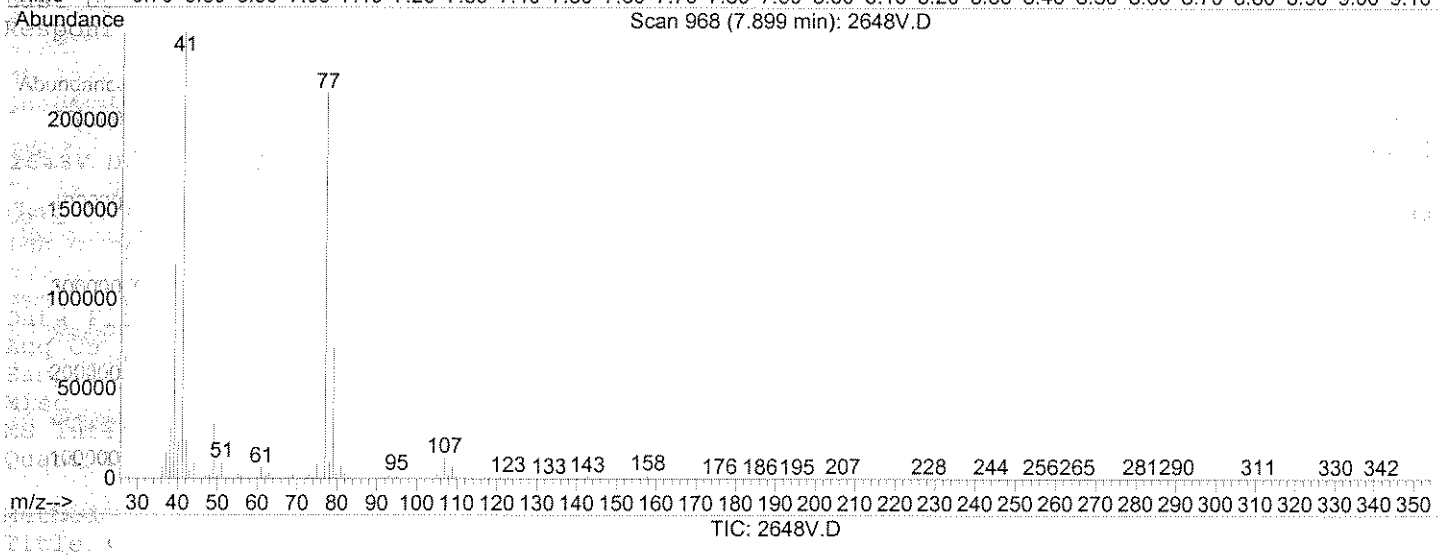
| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data File : C:\HPCHEM\DATA\V110509\2648V.D  Vial: 7
Acq On : 5 Nov 2009 9:42  Operator: REGI
Sample : VSTD050  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:40 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:40:00 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L m

response 419627

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\DATA\V110509\2649V.D Vial: 8
Acq On : 5 Nov 2009 10:07 Operator: REGI
Sample : VSTD100 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:30:58 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1142518 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 435922m | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 264473 | 9.76 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 97.60% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 414358 | 10.21 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 102.10% | | | |
| 50) Toluene-d8 | 7.46 | 98 | 1159151 | 10.67 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 106.70% | | | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 407325 | 10.28 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 102.80% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 1970756 | 88.49 | UG/L | 100 |
| 3) Chloromethane | 1.41 | 50 | 4150728 | 110.35 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.52 | 62 | 3504000 | 98.81 | UG/L | 96 |
| 5) Bromomethane | 1.79 | 94 | 866895 | 71.17 | UG/L | 99 |
| 6) Chloroethane | 1.88 | 64 | 764227 | 58.70 | UG/L | 94 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 2579449 | 99.43 | UG/L # | 77 |
| 8) Acrolein | 2.51 | 56 | 2175918 | 1504.68 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 7716655 | 642.12 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 2232421 | 96.14 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 2561201 | 92.73 | UG/L | 89 |
| 12) Acrylonitrile | 3.33 | 53 | 6863474 | 545.16 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 7043745 | 102.67 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 2466819 | 96.63 | UG/L | 93 |
| 15) Allyl Chloride | 2.96 | 41 | 12139001 | 144.59 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 313397m | 108.70 | UG/L | |
| 17) MTBE | 3.39 | 73 | 8390977 | 102.33 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 2424662 | 95.17 | UG/L # | 80 |
| 19) n-Hexane | 3.66 | 57 | 4626934 | 79.79 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 4875476 | 93.43 | UG/L | 100 |
| 21) 2-Butanone | 4.42 | 72 | 2237143 | 585.13 | UG/L | 91 |
| 22) Ethyl Acetate | 4.50 | 43 | 5355961 | 98.54 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 2507515 | 91.51 | UG/L | 83 |
| 24) Ethyl Cyanide | 4.46 | 54 | 7144107 | 1213.14 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 4348556 | 87.57 | UG/L | 100 |
| 26) Methacrylonitrile | 4.62 | 41 | 21980016 | 609.11 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 17968816 | 1385.90 | UG/L | 97 |
| 28) Bromochloromethane | 4.62 | 128 | 1183004 | 91.28 | UG/L # | 61 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 2422585 | 87.13 | UG/L # | 88 |
| 30) Diethyl ether | 2.41 | 59 | 2401552 | 89.35 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 3783817 | 100.48 | UG/L | 100 |
| 32) Iodomethane | 2.74 | 142 | 3742554 | 98.35 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 1212879 | 90.61 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 3426615 | 108.19 | UG/L | 92 |
| 37) 1,2-Dichloroethane | 5.33 | 62 | 4412130 | 93.53 | UG/L | 99 |
| 38) Isobutanol | 5.29 | 43 | 21291826 | 11162.88 | UG/L # | 98 |
| 39) Benzene | 5.31 | 78 | 10076380 | 93.70 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 2593220 | 92.58 | UG/L | 93 |

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



59169b

Data File : C:\HPCHEM\DATA\V110509\2649V.D Vial: 8
Acq On : 5 Nov 2009 10:07 Operator: REGI
Sample : VSTD100 Inst : Instrumen
Misc : 11/5/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 05 10:30:58 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| n-Butanol | 6.02 | 56 | 11399442 | 8393.37 | UG/L | | 100 |
| 1,2-DICHLOROPROPANE | 6.28 | 63 | 2782046 | 94.96 | UG/L | | 100 |
| 1,4-Dioxane | 6.45 | 88 | 2205554 | 3913.34 | UG/L | | 100 |
| Methyl Methacrylate | 6.45 | 41 | 4064304 | 116.83 | UG/L | # | 60 |
| Bromodichloromethane | 6.60 | 83 | 3343128 | 104.49 | UG/L | | 100 |
| Dibromomethane | 6.40 | 93 | 1630608 | 96.61 | UG/L | | 90 |
| 4-Methyl-2-Pentanone | 7.33 | 43 | 21728520 | 438.19 | UG/L | # | 85 |
| 2-Chloroethylvinylether | 6.98 | 63 | 2326578 | 116.62 | UG/L | | 98 |
| cis-1,3-Dichloropropene | 7.13 | 75 | 4197323 | 112.62 | UG/L | | 100 |
| TOLUENE | 7.53 | 91 | 11641271 | 102.02 | UG/L | | 100 |
| trans-1,3-Dichloropropene | 7.81 | 75 | 3892989 | 120.93 | UG/L | | 100 |
| 1,1,2-Trichloroethane | 8.03 | 97 | 2350680 | 101.06 | UG/L | | 100 |
| 1,2-Dibromoethane | 8.64 | 107 | 2610693 | 105.33 | UG/L | | 99 |
| 2-Hexanone | 8.38 | 43 | 18592090 | 439.41 | UG/L | | 91 |
| 1,3-Dichloropropane | 8.24 | 76 | 4239860 | 87.90 | UG/L | | 100 |
| Ethyl Methacrylate | 7.97 | 69 | 3857477 | 103.12 | UG/L | | 88 |
| Tetrachloroethene | 8.21 | 166 | 3036762 | 85.79 | UG/L | | 99 |
| Dibromochloromethane | 8.51 | 129 | 2582180 | 107.52 | UG/L | | 100 |
| Chlorobenzene | 9.29 | 112 | 7567412 | 92.66 | UG/L | | 99 |
| 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 2609569 | 99.61 | UG/L | | 100 |
| ETHYL BENZENE | 9.47 | 106 | 4214878 | 91.95 | UG/L | | 72 |
| m,p-Xylene | 9.62 | 106 | 10979146 | 187.64 | UG/L | | 82 |
| o-Xylene | 10.11 | 106 | 5351511 | 94.10 | UG/L | | 77 |
| Styrene | 10.12 | 104 | 9433993 | 98.09 | UG/L | # | 85 |
| Bromoform | 10.31 | 173 | 2104904 | 108.26 | UG/L | | 100 |
| 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 4073332 | 96.35 | UG/L | | 99 |
| Isopropylbenzene | 10.54 | 105 | 13031639 | 96.69 | UG/L | | 100 |
| trans-1,4-Dichloro-2-buten | 10.93 | 53 | 4405755 | 241.69 | UG/L | # | 8 |
| Bromobenzene | 10.84 | 77 | 5724002 | 95.05 | UG/L | | 100 |
| 1,2,3-Trichloropropane | 10.90 | 110 | 1247995 | 92.40 | UG/L | | 100 |
| n-Propylbenzene | 11.00 | 92 | 1842749 | 91.78 | UG/L | | 79 |
| 1,3,5-Trimethylbenzene | 11.19 | 105 | 12509809 | 92.78 | UG/L | | 100 |
| 2-Chlorotoluene | 11.07 | 126 | 3418404 | 92.01 | UG/L | | 100 |
| 4-Chlorotoluene | 11.18 | 126 | 3446970 | 90.99 | UG/L | | 100 |
| t-Butylbenzene | 11.51 | 91 | 7476739 | 90.07 | UG/L | # | 64 |
| 1,2,4-Trimethylbenzene | 11.56 | 105 | 12359951 | 89.44 | UG/L | | 100 |
| sec-Butylbenzene | 11.72 | 105 | 14183636 | 79.87 | UG/L | | 100 |
| p-Isopropyltoluene | 11.87 | 119 | 12514026 | 85.39 | UG/L | | 100 |
| 1,3-Dichlorobenzene | 11.81 | 146 | 6844291 | 94.36 | UG/L | | 100 |
| 1,4-Dichlorobenzene | 11.90 | 146 | 7085702 | 94.97 | UG/L | | 100 |
| n-Butylbenzene | 12.26 | 92 | 7353389 | 88.58 | UG/L | | 89 |
| 1,2-Dichlorobenzene | 12.25 | 146 | 6457608 | 89.35 | UG/L | | 100 |
| 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 887801 | 103.22 | UG/L | | 100 |
| 1,2,4-Trichlorobenzene | 13.66 | 180 | 3949714 | 72.38 | UG/L | | 100 |
| Naphthalene | 13.86 | 128 | 10491280 | 81.51 | UG/L | | 100 |
| Hexachlorobutadiene | 13.82 | 225 | 2161537 | 63.13 | UG/L | | 100 |
| 1,2,3-Trichlorobenzene | 14.06 | 180 | 2991131 | 58.32 | UG/L | | 100 |

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

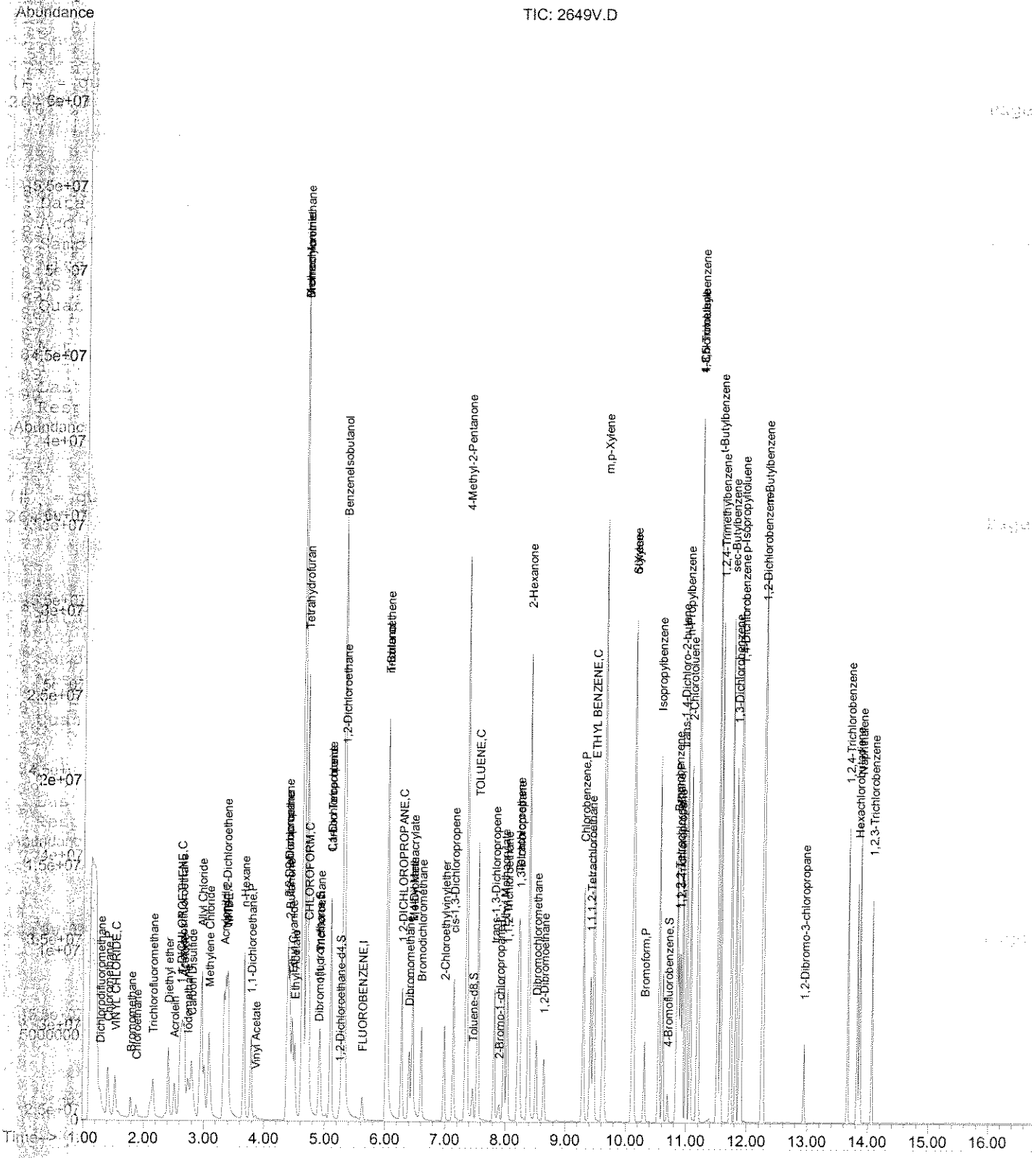
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\DATA\V110509\2649V.D
Acq On : 5 Nov 2009 10:07
Sample : VSTD100
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:39 2009

Vial: 8
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

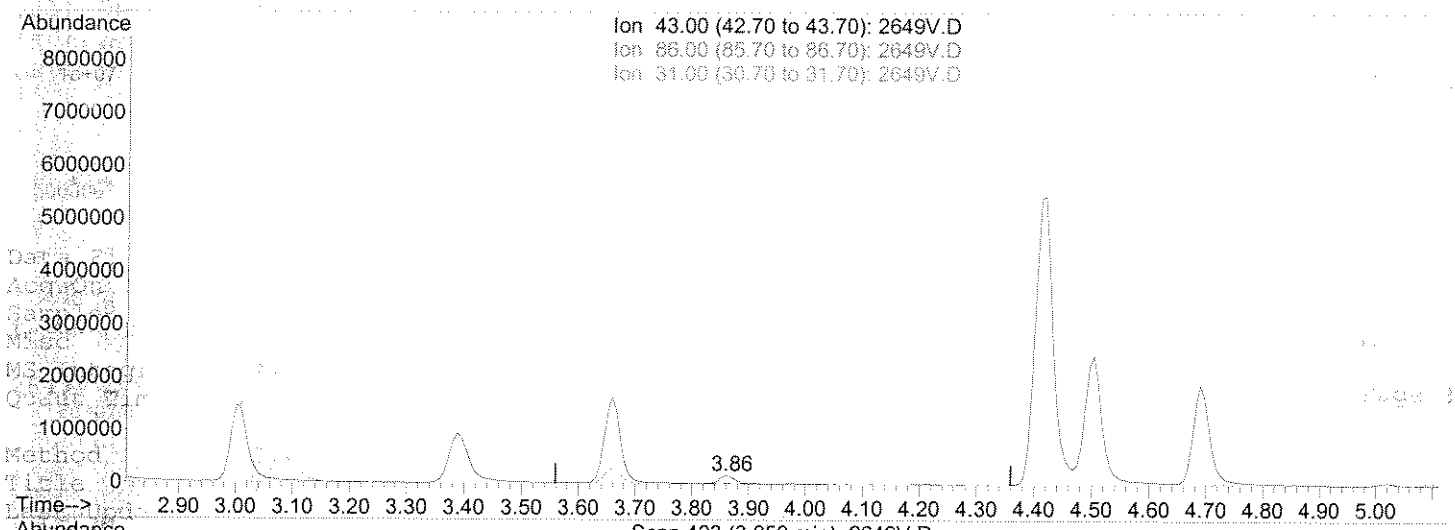


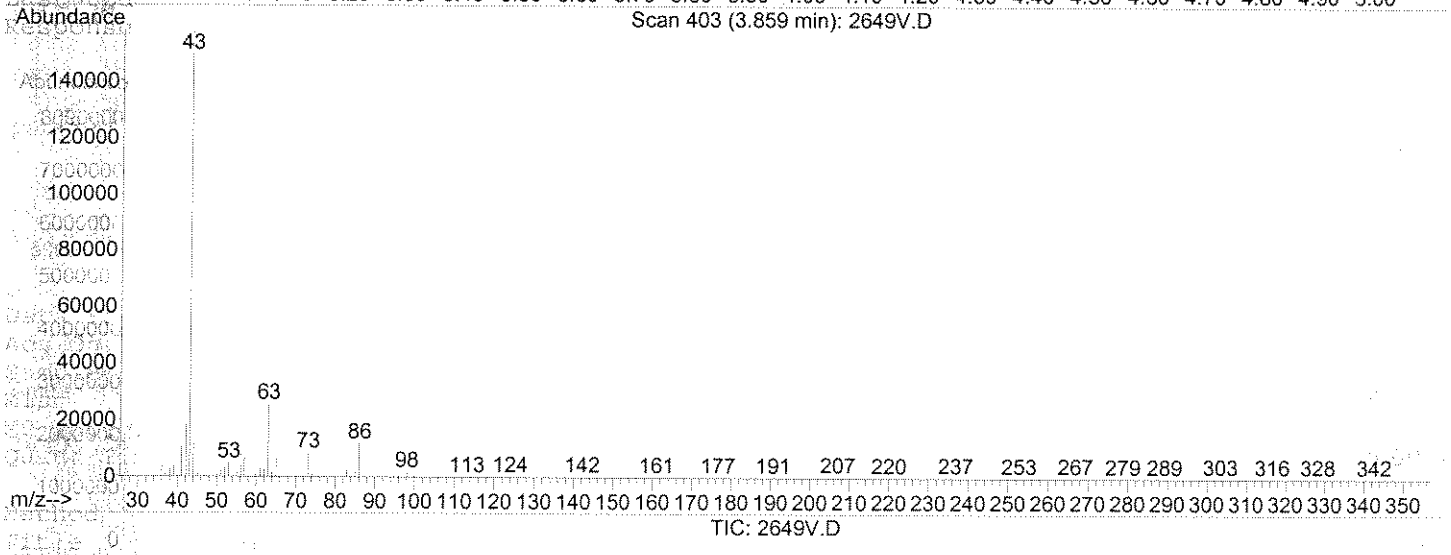



59169b

Data File : C:\HPCHEM\DATA\V110509\2649V.D  Vial: 8
Acq On : 5 Nov 2009 10:07  Operator: REGI
Sample : VSTD100  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:30 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Multiple Level Calibration




(16) Vinyl Acetate

3.86min 107.24UG/L

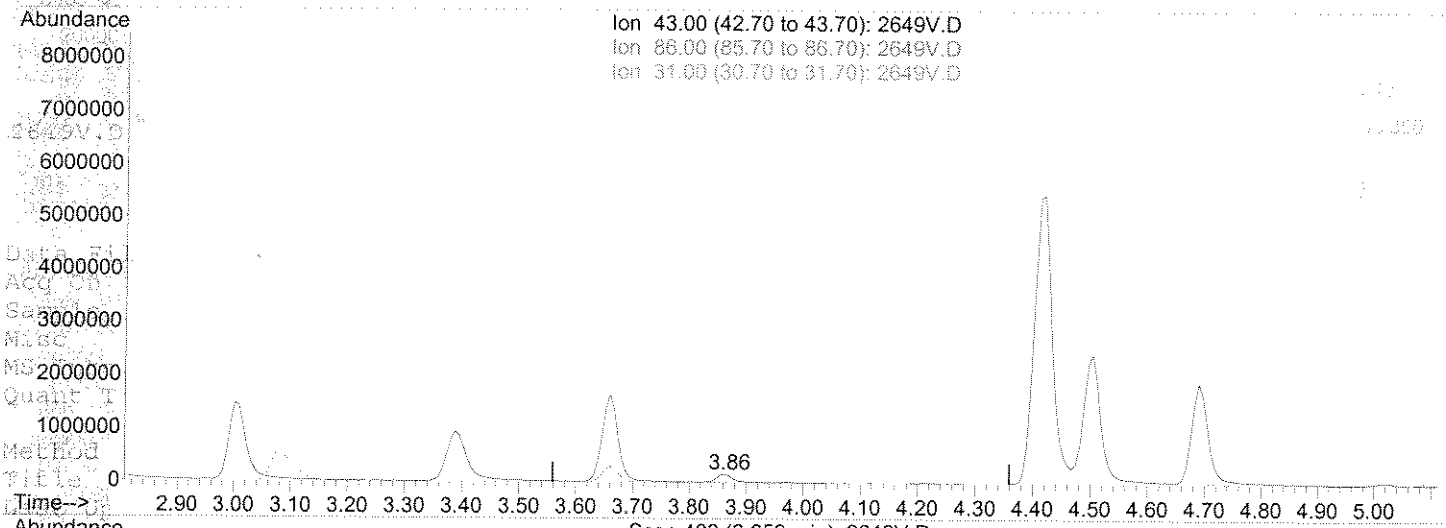
response 309122

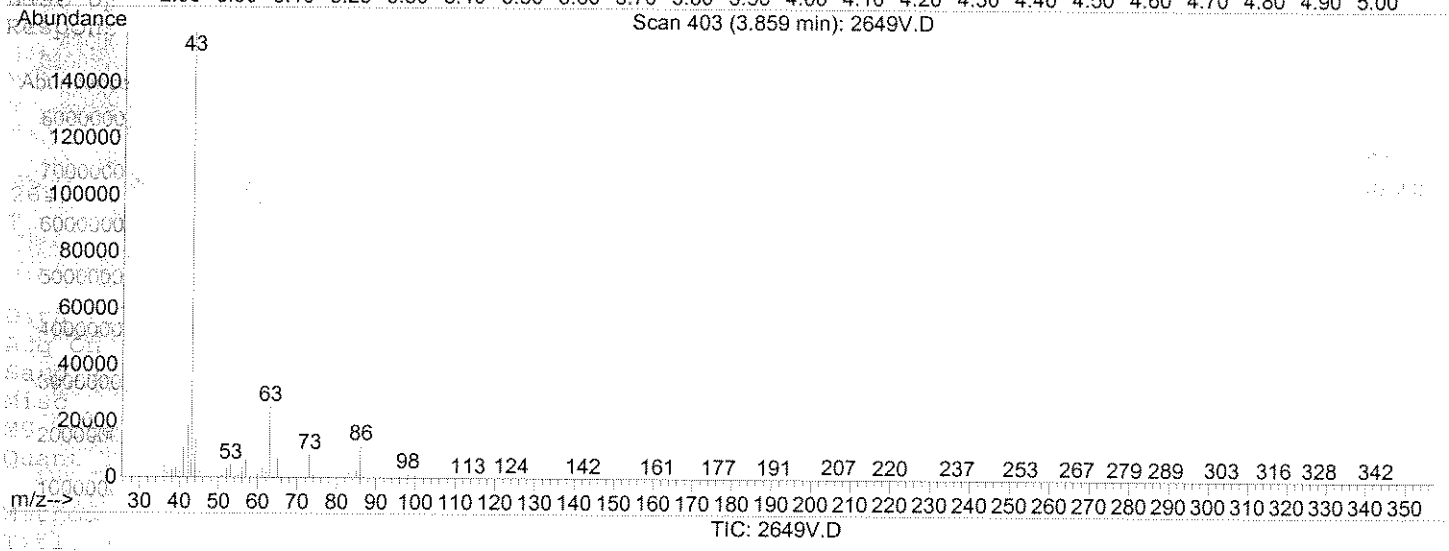
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 86.00 | 4.40 | 7.42# |
| 31.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2649V.D
Acq On : 5 Nov 2009 10:07
Sample : VSTD100
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:39 2009

Vial: 8
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Multiple Level Calibration




(16) Vinyl Acetate

3.86min 108.70UG/L m

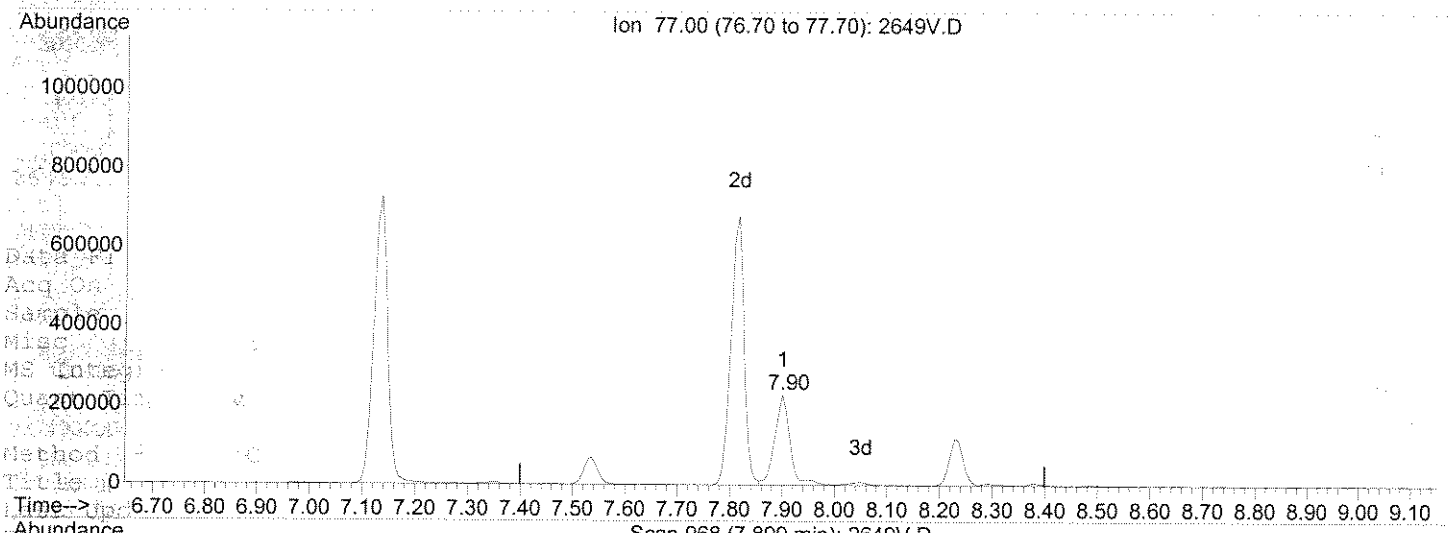
response 313397

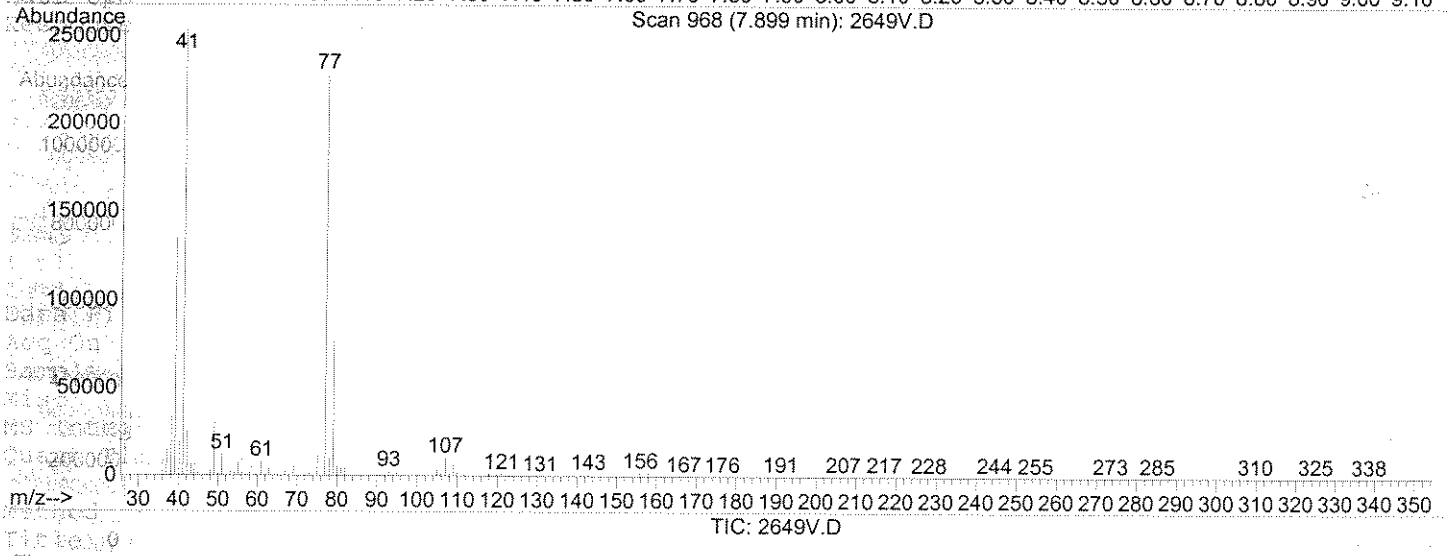
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 86.00 | 4.40 | 7.32# |
| 31.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data File : C:\HPCHEM\DATA\V110509\2649V.D  Vial: 8
Acq On : 5 Nov 2009 10:07  Operator: REGI
Sample : VSTD100  Inst : Instrumen
Misc : 11/5/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:39 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L

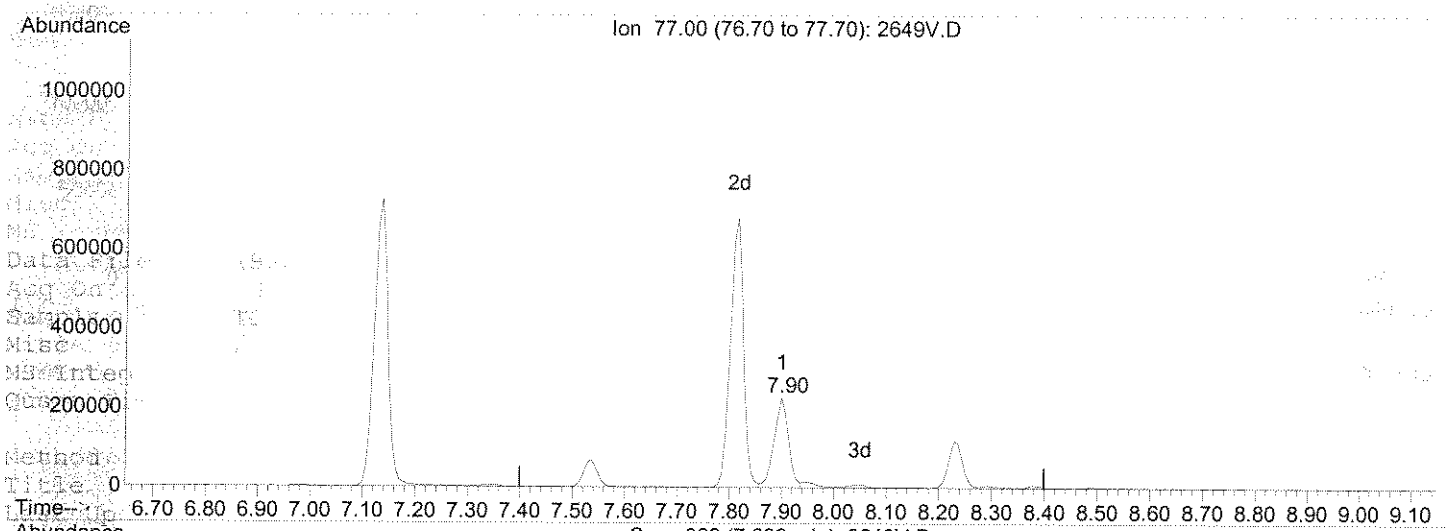
response 462083

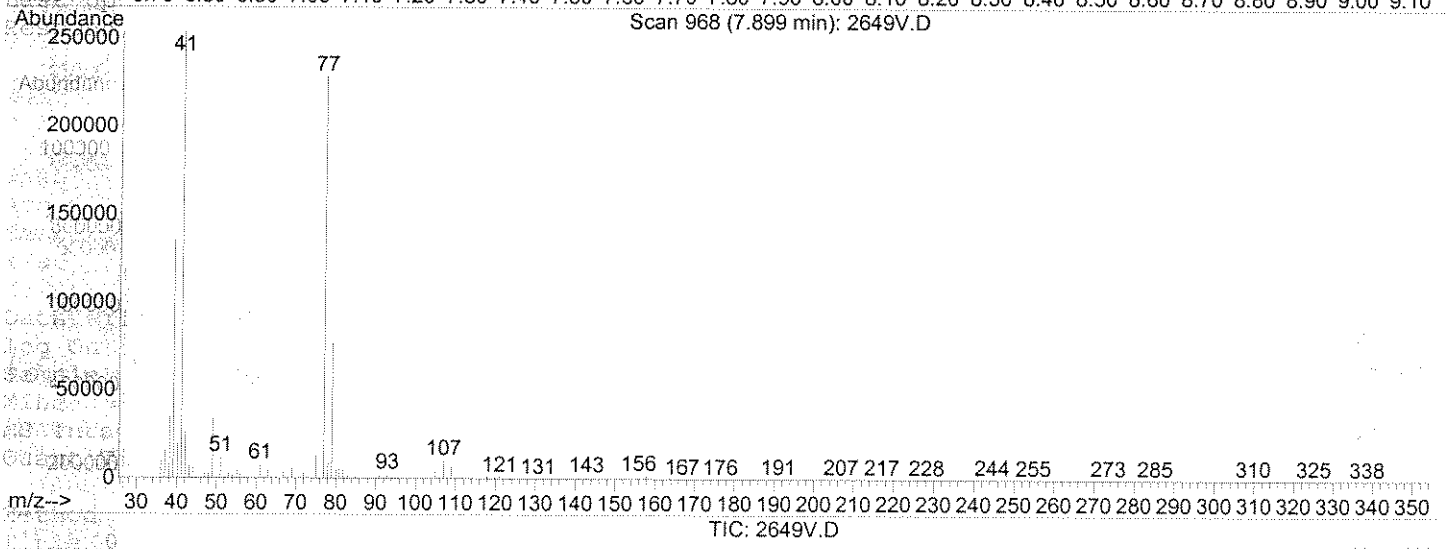
| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110509\2649V.D
Acq On : 5 Nov 2009 10:07
Sample : VSTD100
Misc : 11/5/09
MS Integration Params: rteint2.p
Quant Time: Nov 5 10:39 2009

Vial: 8
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 10:30:39 2009
Response via : Multiple Level Calibration




(55) 2-Bromo-1-chloropropane (I)

7.90min 10.00UG/L m

response 435922

| Ion | Exp% | Act% |
|---|---|---|
| 77.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

R560090 Heritage Environmental Services, LLC A864534

GC/MS VOA

Method SW846-8260B
Sample Description 152
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2679V.D Date/Time 06Nov09 14:44:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

JS 11-11-09

R560090 Heritage Environmental Services, LLC A864534

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | EX | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 103 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 97 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 97 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 97 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

EX Exceeds calibration range. See Replicate

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2679V.D
Acq On : 6 Nov 2009 14:44
Sample : A864534
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 15:01:50 2009

Vial: 17
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

8216 Rm 1:10

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 978778 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 341151 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 223004 | 9.69 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.90% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 362741 | 10.30 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 103.00% | |
| 50) Toluene-d8 | 7.46 | 98 | 952946 | 9.71 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.10% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 316433 | 9.68 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.80% | |
| Target Compounds | | | | | Qvalue |
| 3) ~~Chloromethane~~ | 1.40 | 50 | 6029 | 0.17 UG/L | 100 |
| 9) ~~Acetone~~ | 2.68 | 43 | 19871 | 1.49 UG/L # | 46 |
| 14) ~~Methylene Chloride~~ | 3.07 | 84 | 9891 | Below Cal | 88 |
| 23) ~~cis-1,2-Dichloroethene~~ | 4.37 | 96 | 11507 | 0.53 UG/L | 100 |
| 40) Trichloroethene EY | 6.03 | 130 | 2892808 | 126.33 UG/L | 93 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.46 | 43 | 8355 | 0.19 UG/L # | 1 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.90 | 75 | 8230 | 0.27 UG/L | 100 |

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



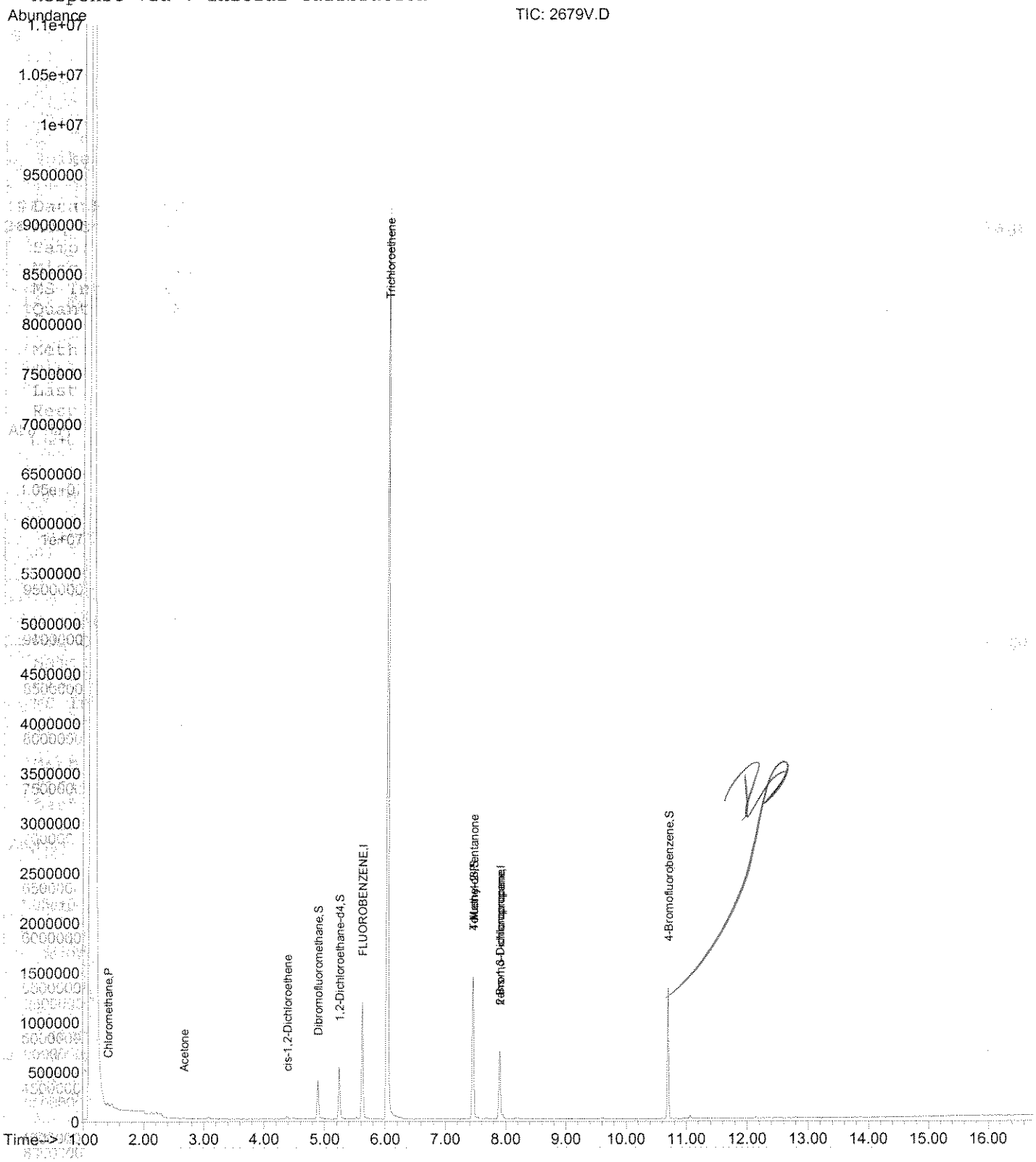
59169b

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2679V.D
Acq On : 6 Nov 2009 14:44
Sample : A864534
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 15:01 2009

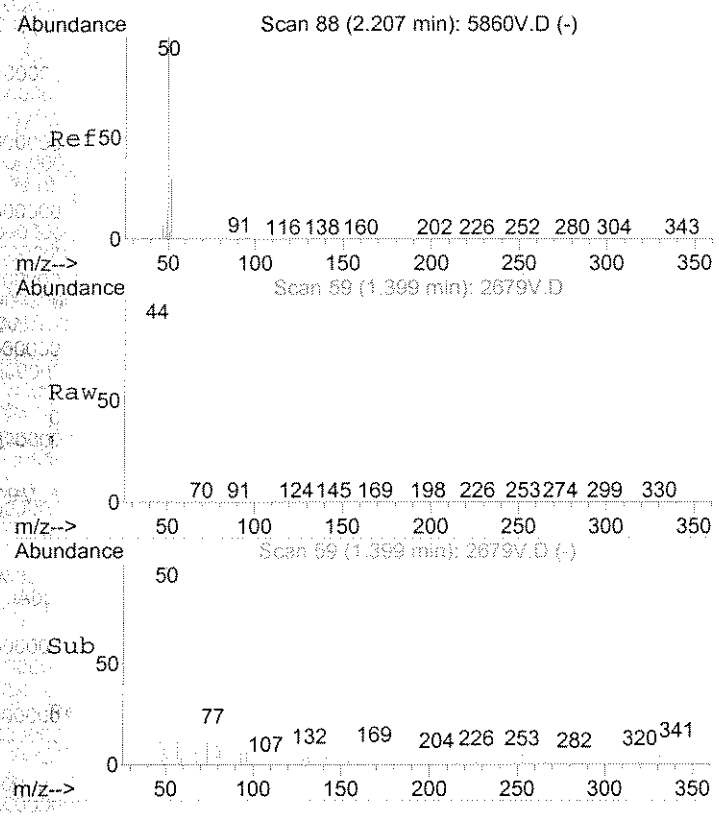
Vial: 17
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



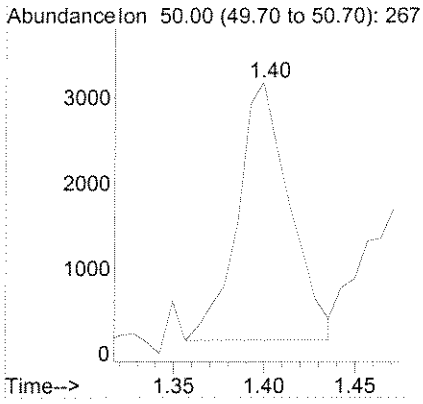


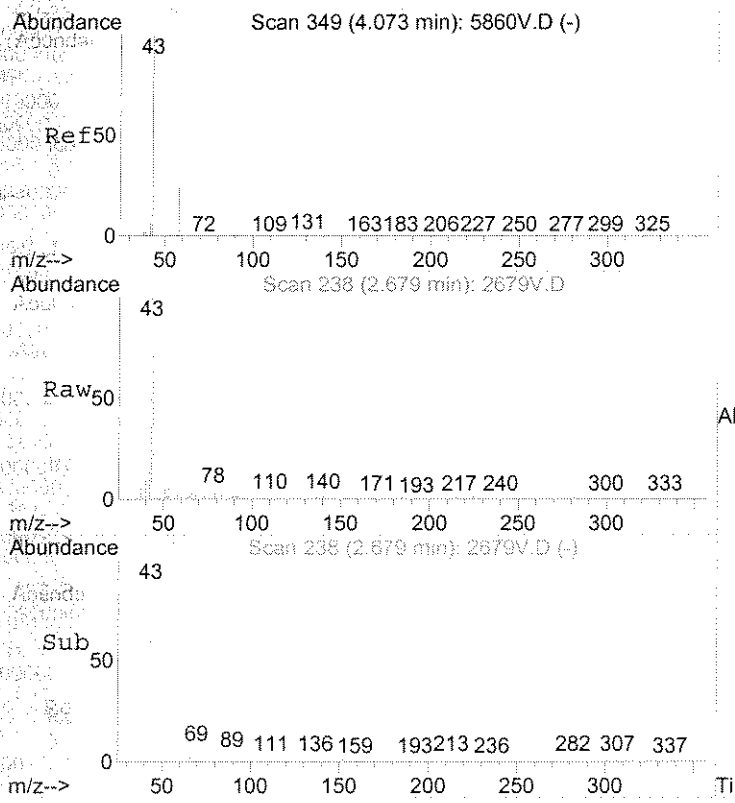

59169b




#3
Chloromethane
Concen: 0.17 UG/L
RT: 1.40 min Scan# 59
Delta R.T. -0.00 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 50 Resp: 6029

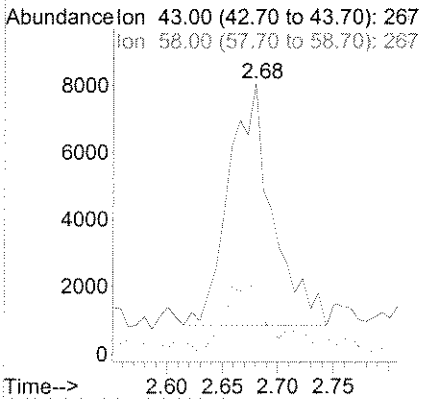


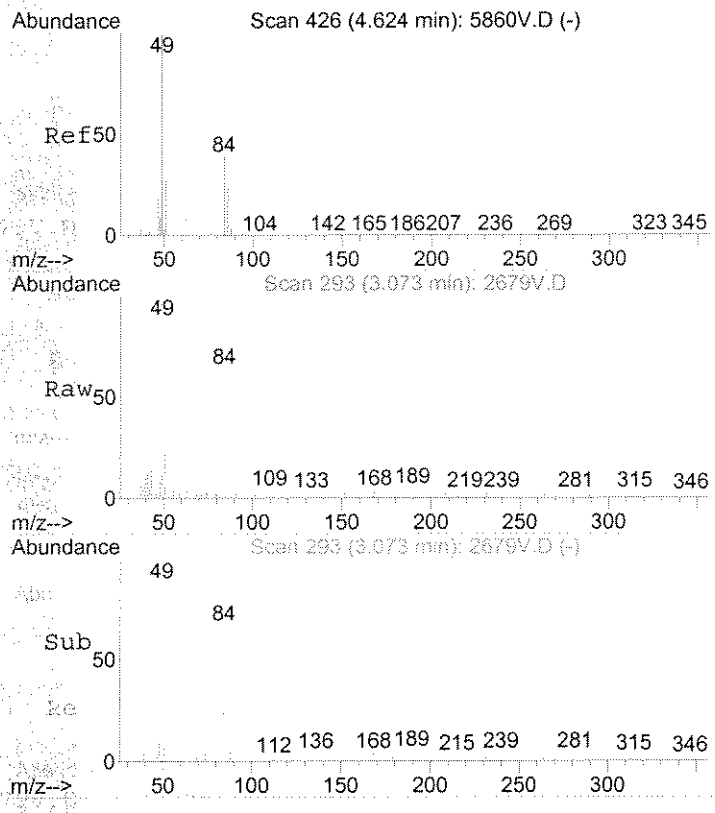




#9
Acetone
Concen: 1.49 UG/L
RT: 2.68 min Scan# 238
Delta R.T. 0.01 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 43 Resp: 19871

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 23.1 | 34.7# |

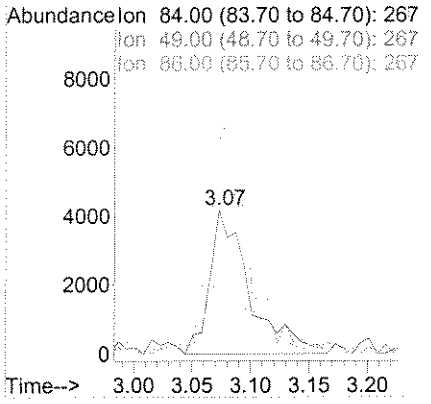


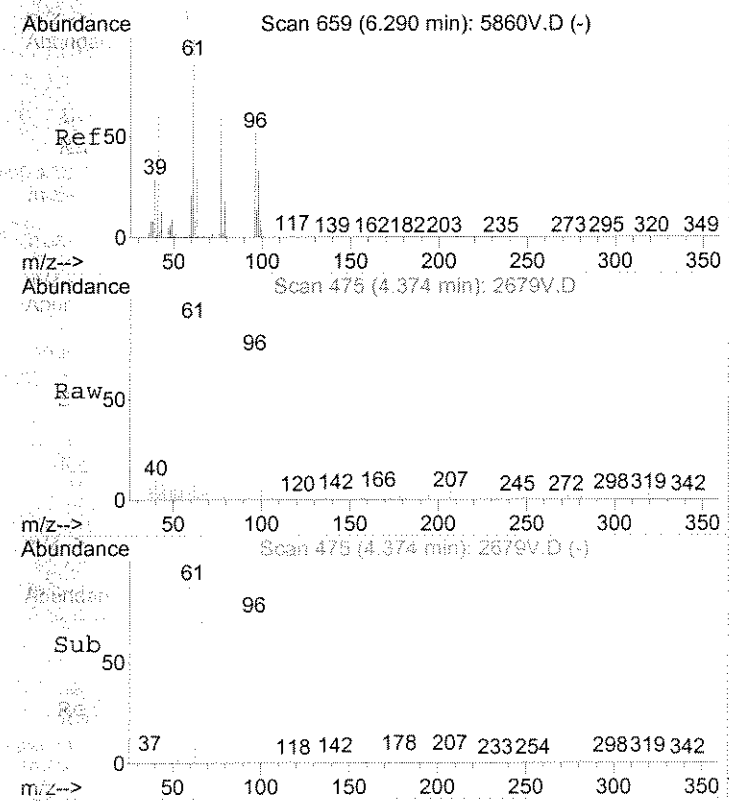



#14
Methylene Chloride
Concen: Below Cal
RT: 3.07 min Scan# 293
Delta R.T. -0.01 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 84 Resp: 9891

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 153.9 | 140.2 | 210.2 |
| 86 | 62.5 | 51.1 | 76.7 |

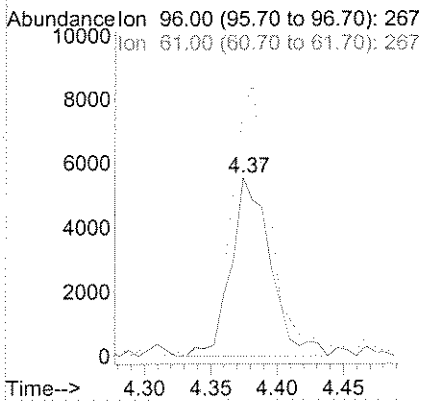


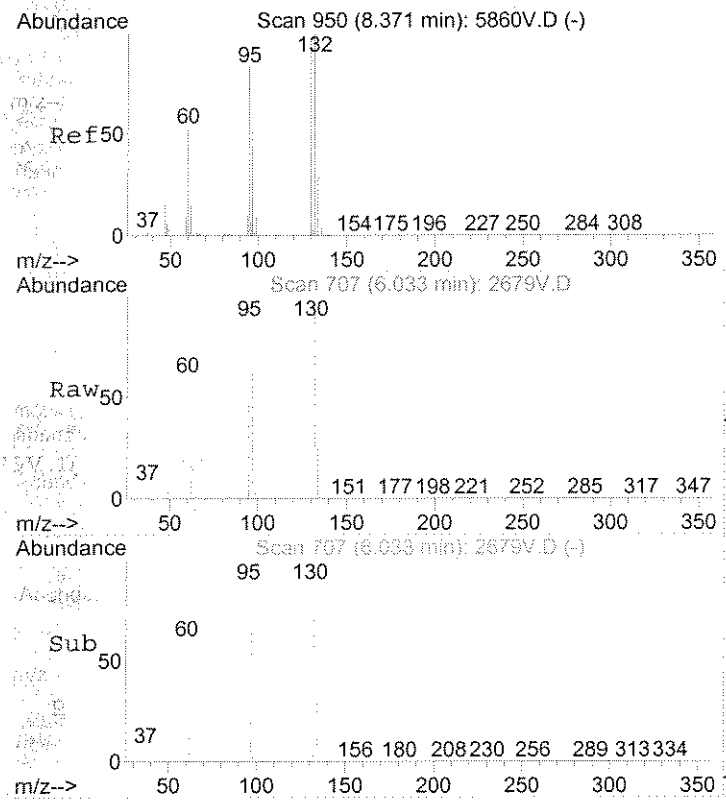




#23
cis-1,2-Dichloroethene
Concen: 0.53 UG/L
RT: 4.37 min Scan# 475
Delta R.T. -0.00 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 96 Resp: 11507

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 152.6 | 121.8 | 182.6 |

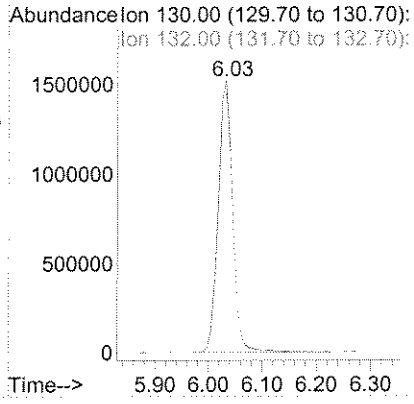


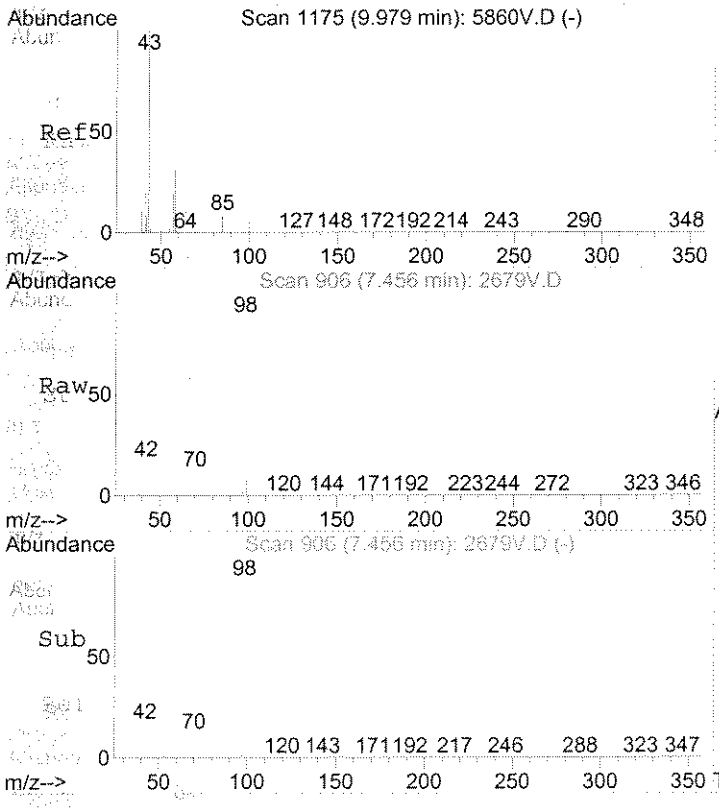



#40
Trichloroethene
Concen: 126.33 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion:130 Resp: 2892808

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.4 | 82.0 | 123.0 |

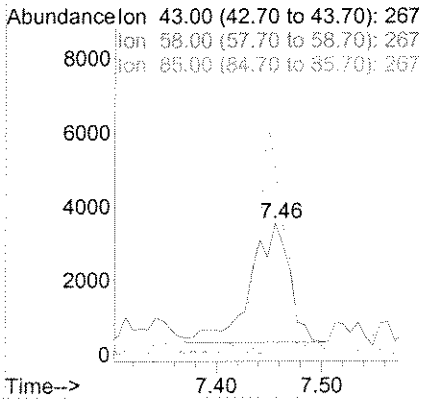


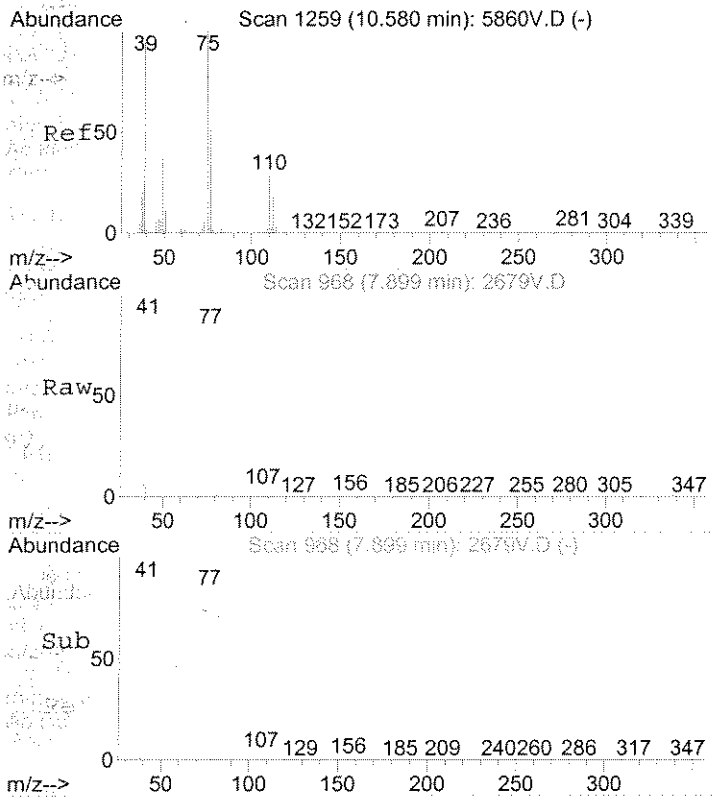




#47
4-Methyl-2-Pentanone
Concen: 0.19 UG/L
RT: 7.46 min Scan# 906
Delta R.T. 0.11 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 43 Resp: 8355

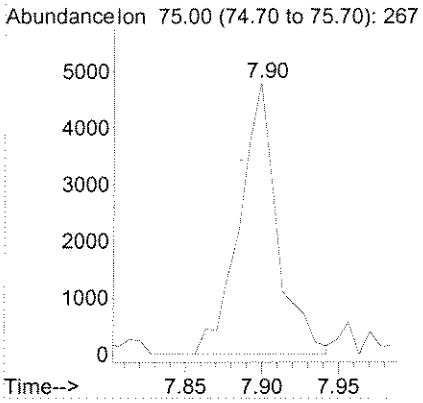
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 133.1 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |






#52
trans-1,3-Dichloropropene
Concen: 0.27 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2679V.D
Acq: 6 Nov 2009 14:44

Tgt Ion: 75 Resp: 8230



R560090 Heritage Environmental Services, LLC A864535

GC/MS VOA

Method SW846-8260B
Sample Description 146
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2680V.D Date/Time 06Nov09 15:09:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

JK 11/11/09

R560090 Heritage Environmental Services, LLC A864535

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 45 | | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 104 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 99 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 98 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 96 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2680V.D
Acq On : 6 Nov 2009 15:09
Sample : A864535
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 15:26:40 2009

Vial: 18
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 965552 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 339069 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 218524 | 9.63 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.30% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 361735 | 10.41 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 104.10% | |
| 50) Toluene-d8 | 7.46 | 98 | 953287 | 9.85 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.50% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 317048 | 9.76 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.60% | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 3) Chloromethane | 1.41 | 50 | 6023 | 0.17 | UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 16203 | 1.23 | UG/L | 95 |
| 14) Methylene Chloride | 3.07 | 84 | 6959 | Below Cal | # | 73 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 5461 | 0.25 | UG/L | 96 |
| 40) Trichloroethene 45 | 6.03 | 130 | 1005770 | 44.52 | UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 9037 | 0.21 | UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 7964 | 0.27 | UG/L | 100 |

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



59169b

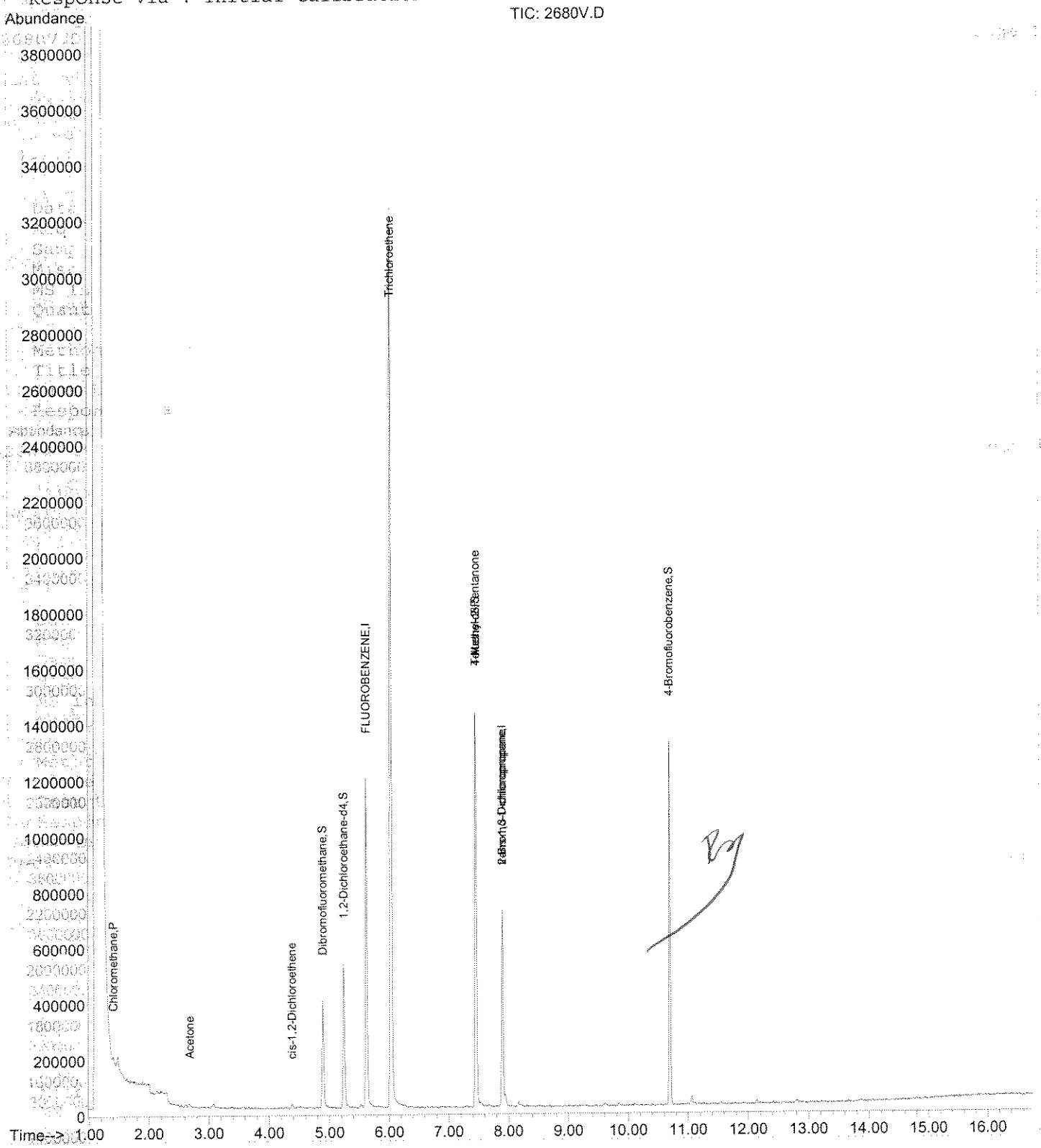
Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2680V.D
Acq On : 6 Nov 2009 15:09
Sample : A864535
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 15:26 2009

Vial: 18
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

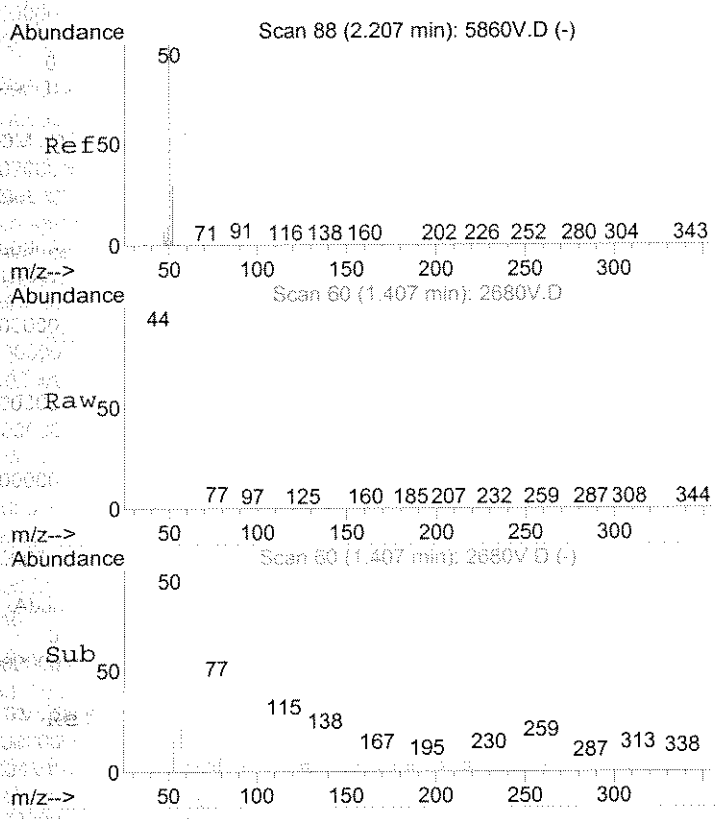
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



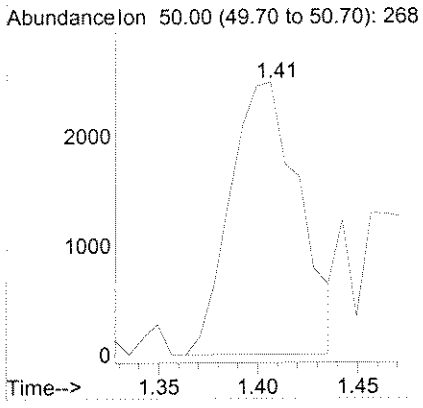


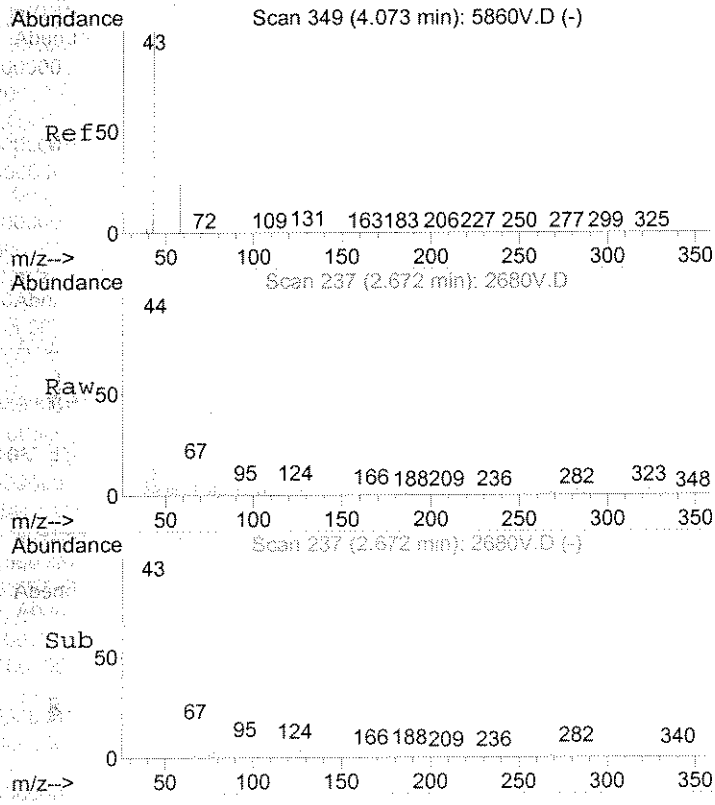

591696




#3
Chloromethane
Concen: 0.17 UG/L
RT: 1.41 min Scan# 60
Delta R.T. 0.01 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 50 Resp: 6023

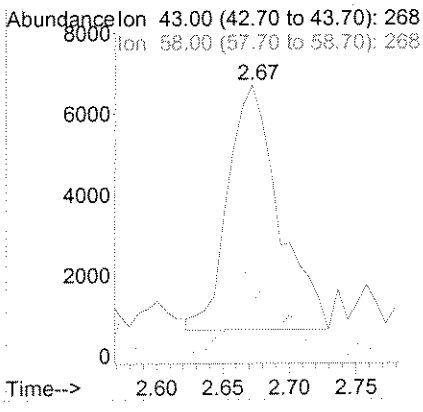


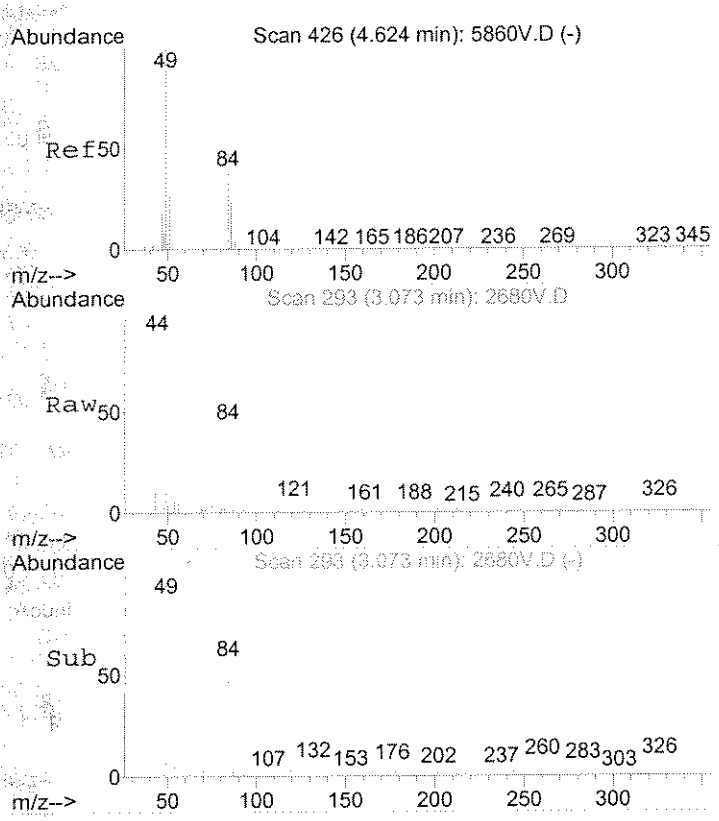




#9
Acetone
Concen: 1.23 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 43 Resp: 16203

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.4 | 23.1 | 34.7 |

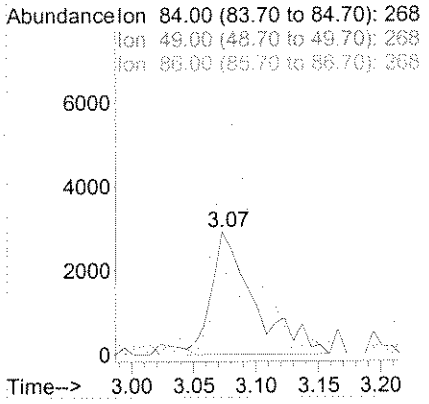


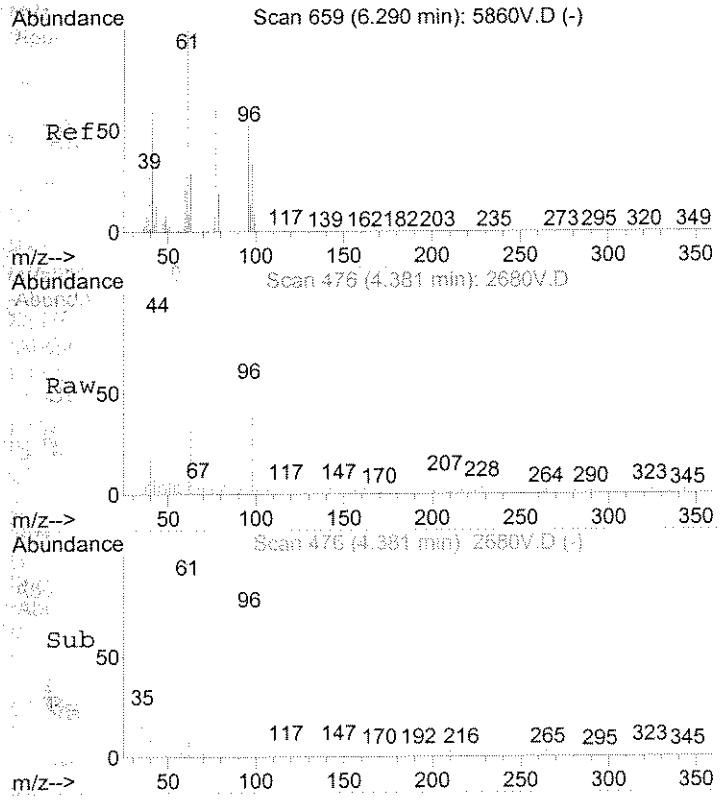



#14
Methylene Chloride
Concen: Below Cal
RT: 3.07 min Scan# 293
Delta R.T. -0.01 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 84 Resp: 6959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 185.3 | 140.2 | 210.2 |
| 86 | 0.0 | 51.1 | 76.7# |

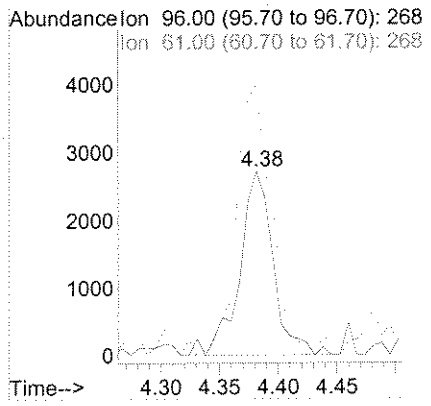


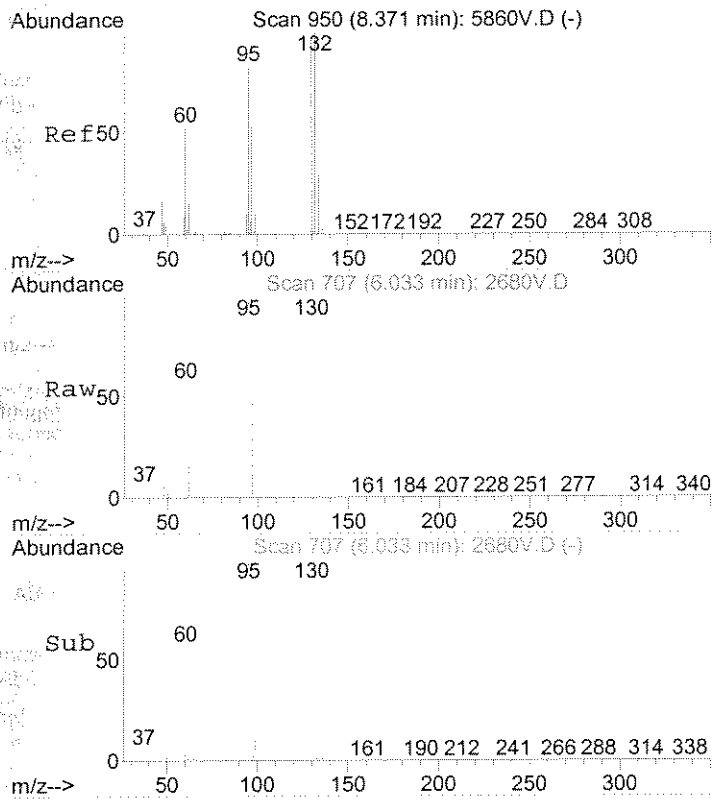




#23
cis-1,2-Dichloroethene
Concen: 0.25 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 96 Resp: 5461

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 146.7 | 121.8 | 182.6 |

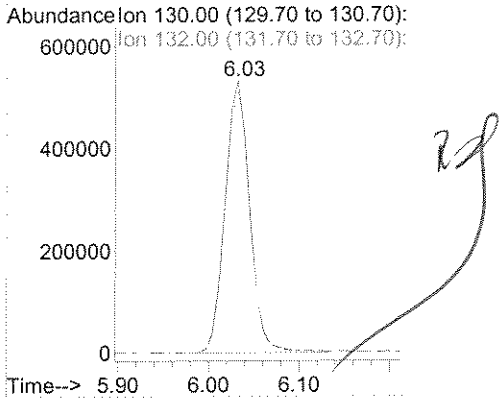


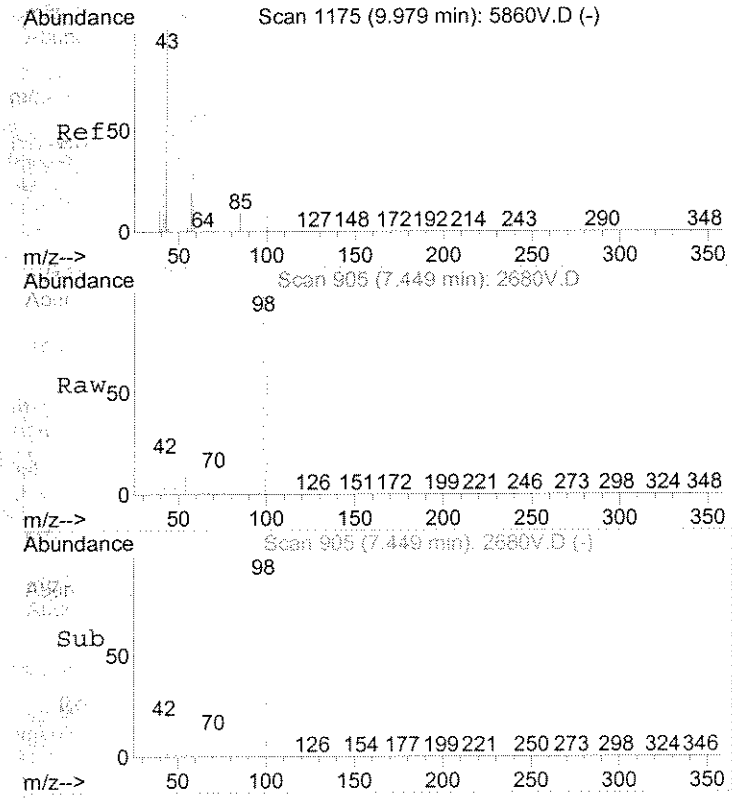



#40
Trichloroethene
Concen: 44.52 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion:130 Resp: 1005770

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.8 | 82.0 | 123.0 |

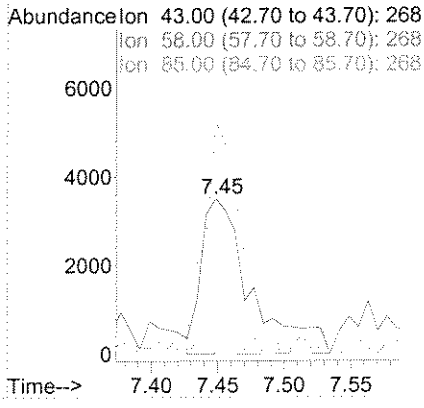


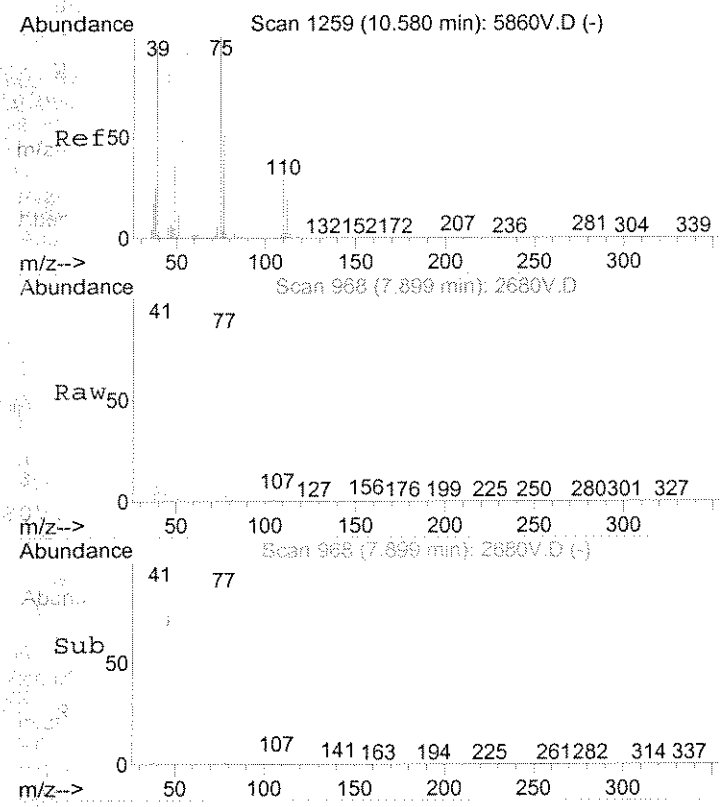




#47
4-Methyl-2-Pentanone
Concen: 0.21 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 43 Resp: 9037

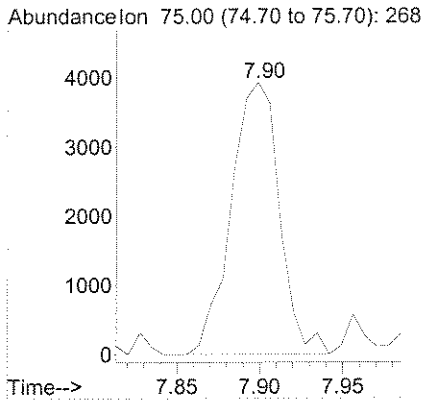
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 109.4 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |






#52
trans-1,3-Dichloropropene
Concen: 0.27 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2680V.D
Acq: 6 Nov 2009 15:09

Tgt Ion: 75 Resp: 7964



R560090 Heritage Environmental Services, LLC A864536

GC/MS VOA

Method SW846-8260B
Sample Description 150
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2681V.D Date/Time 06Nov09 15:34:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

KJ 11-11-09

R560090 Heritage Environmental Services, LLC A864536

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 7.3 | | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 95 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 103 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2681V.D
Acq On : 6 Nov 2009 15:34
Sample : A864536
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 15:51:34 2009

Vial: 19
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 996960 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 323030 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 220745 | 9.42 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.20% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 365151 | 10.18 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.80% | |
| 50) Toluene-d8 | 7.46 | 98 | 946516 | 9.47 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.70% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 318013 | 10.27 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.70% | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 9) Acetone | 2.67 | 43 | 16121 | 1.18 UG/L # | 82 |
| 14) ~~Methylene Chloride~~ | 3.08 | 84 | 6579 | Below Cal # | 77 |
| 23) ~~cis-1,2-Dichloroethene~~ | 4.38 | 96 | 11674 | 0.52 UG/L | 93 |
| 40) Trichloroethene 7.3 | 6.03 | 130 | 170058 | 7.29 UG/L | 91 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.45 | 43 | 7561 | 0.17 UG/L # | 1 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.90 | 75 | 6695 | 0.22 UG/L | 100 |

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



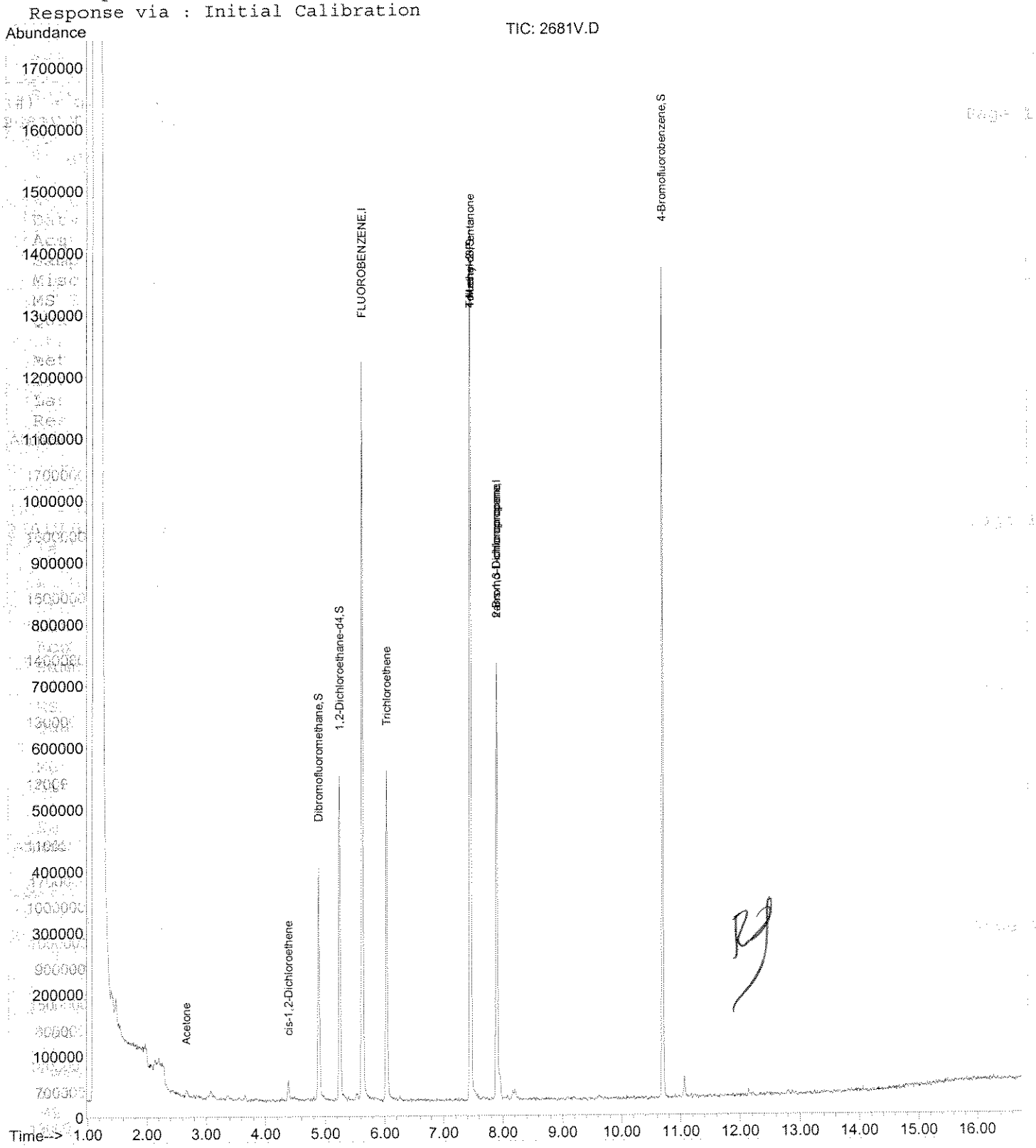
59169b

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2681V.D
Acq On : 6 Nov 2009 15:34
Sample : A864536
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 15:51 2009

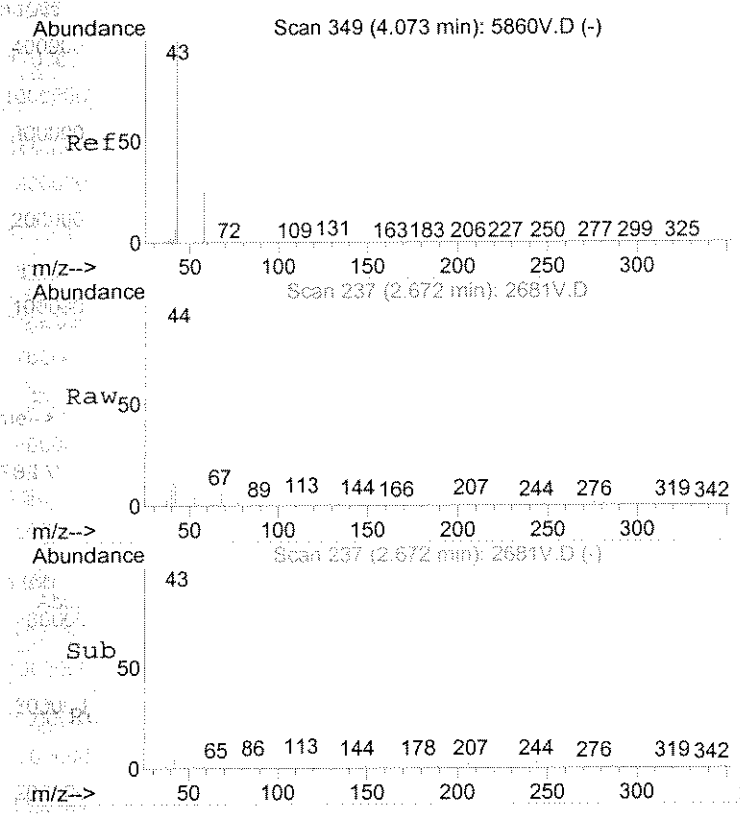
Vial: 19
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





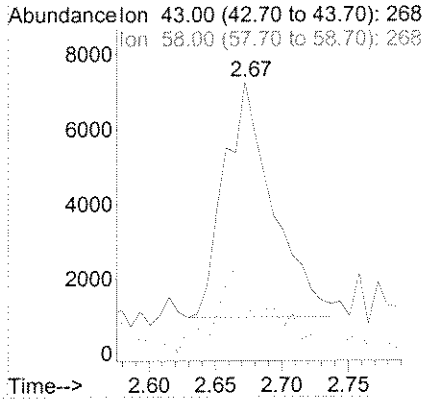

59169b

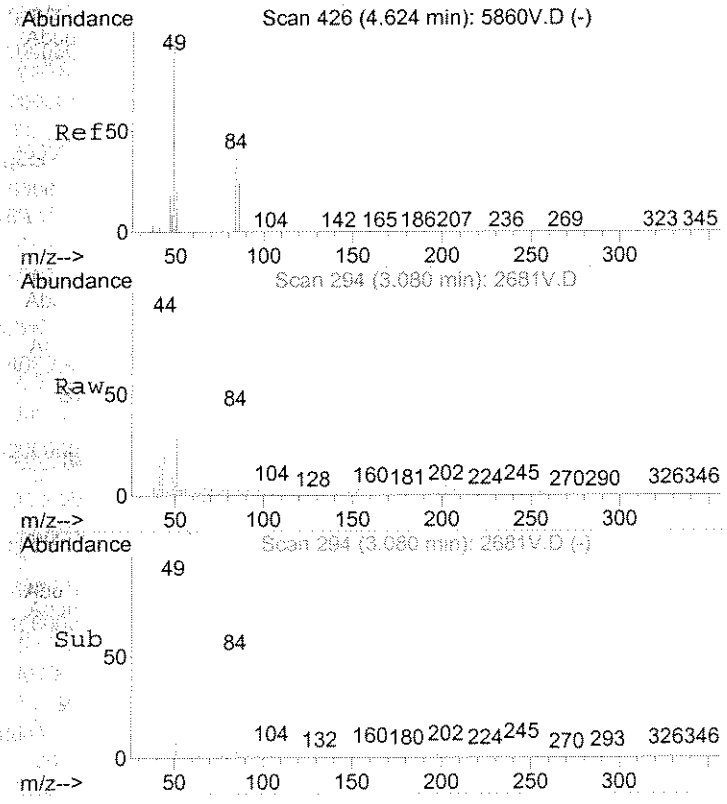



#9
Acetone
Concen: 1.18 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion: 43 Resp: 16121

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 38.6 | 23.1 | 34.7# |

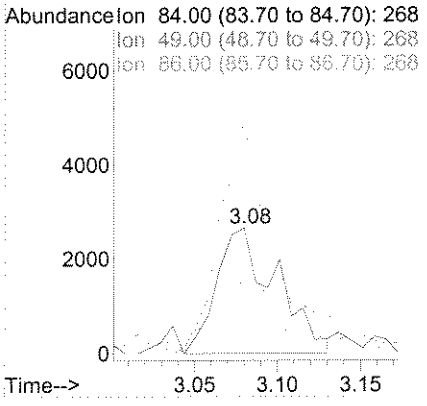


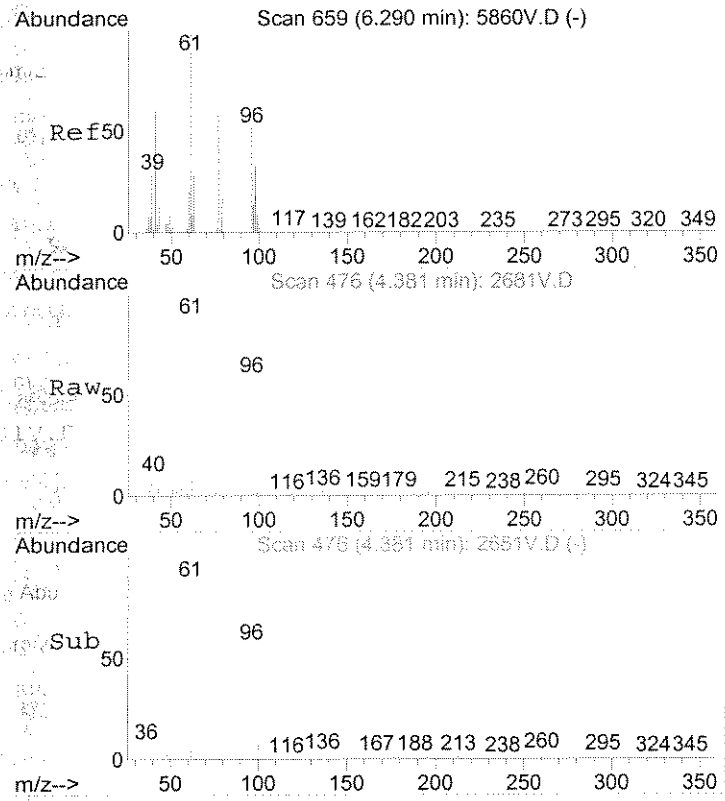




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion: 84 Resp: 6579

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 173.8 | 140.2 | 210.2 |
| 86 | 0.0 | 51.1 | 76.7# |

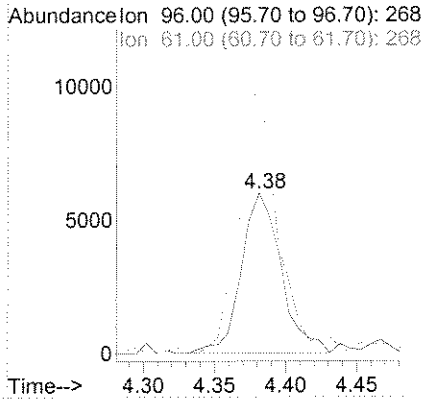


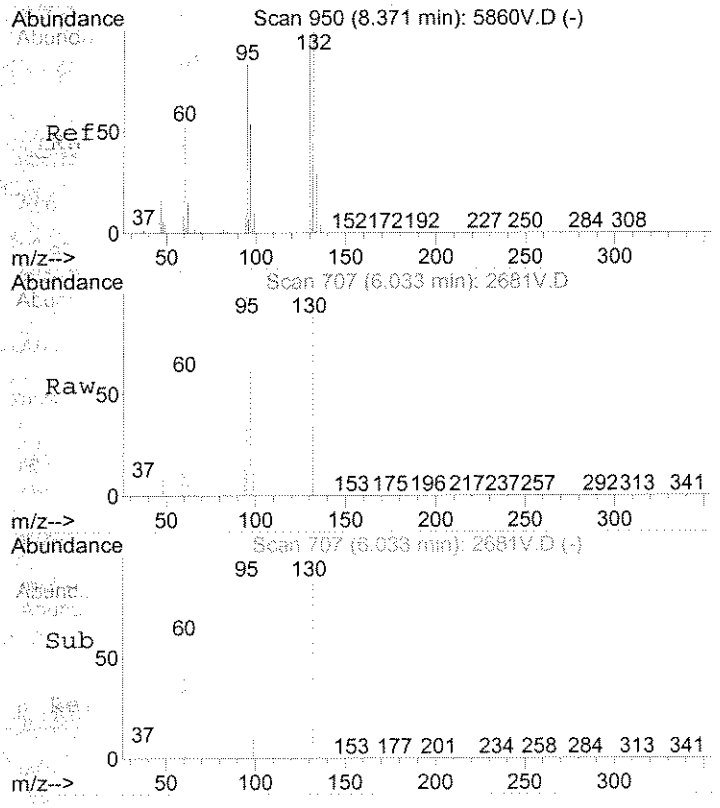



#23
cis-1,2-Dichloroethene
Concen: 0.52 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion: 96 Resp: 11674

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 161.0 | 121.8 | 182.6 |

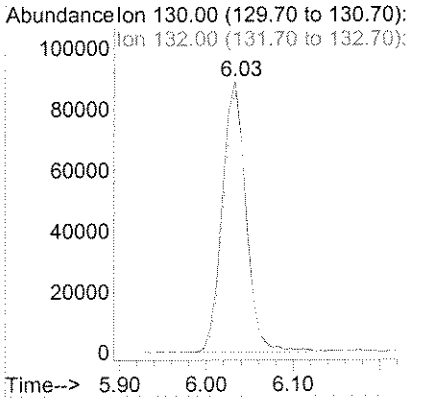


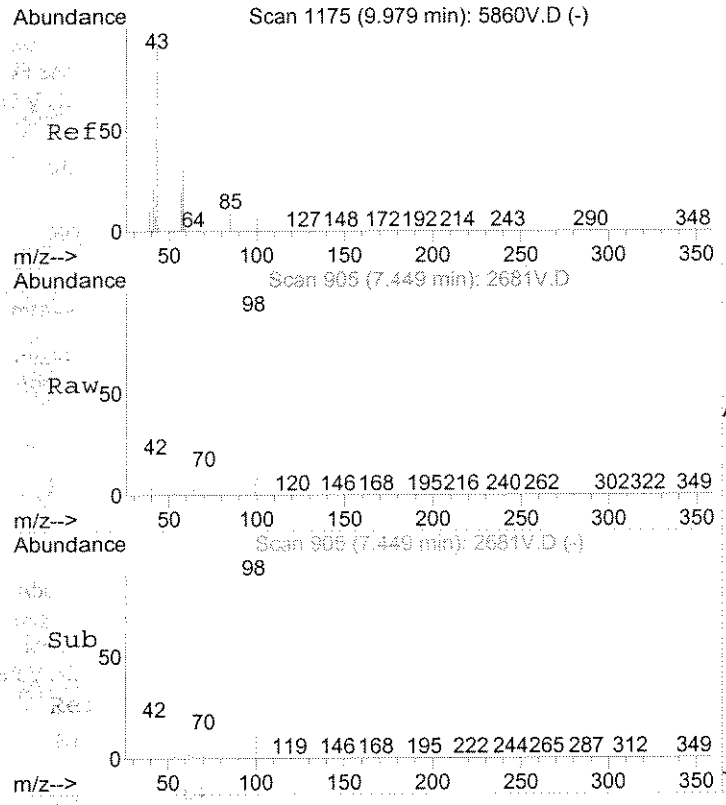




#40
Trichloroethene
Concen: 7.29 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion:130 Resp: 170058

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 93.5 | 82.0 | 123.0 |

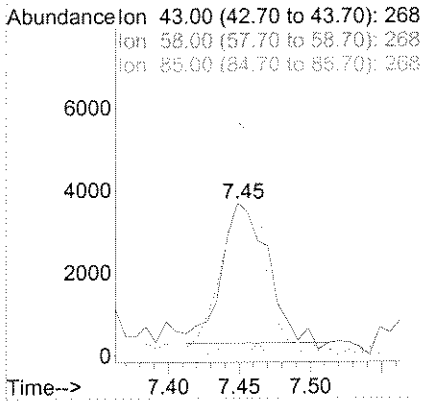


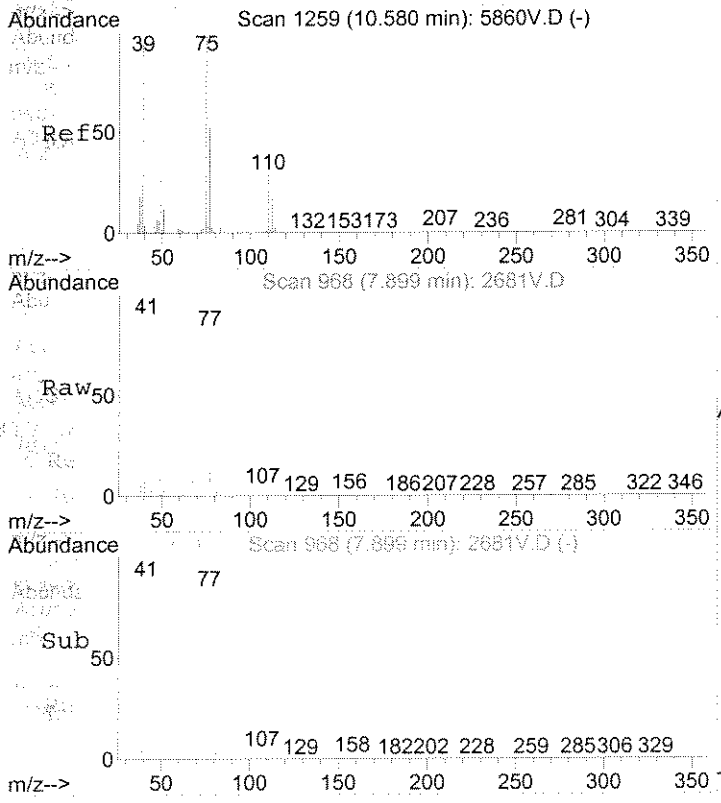



#47
4-Methyl-2-Pentanone
Concen: 0.17 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion: 43 Resp: 7561

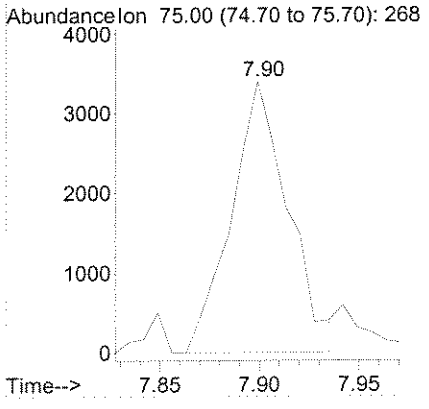
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 138.9 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |




#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2681V.D
Acq: 6 Nov 2009 15:34

Tgt Ion: 75 Resp: 6695



R560090 Heritage Environmental Services, LLC A864539

GC/MS VOA

Method SW846-8260B
Sample Description 169D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2684V.D Date/Time 06Nov09 16:49:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

UKS 11/11/09

R560090 Heritage Environmental Services, LLC A864539

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 14 | | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 94 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 102 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2684V.D
Acq On : 6 Nov 2009 16:49
Sample : A864539
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 17:06:07 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

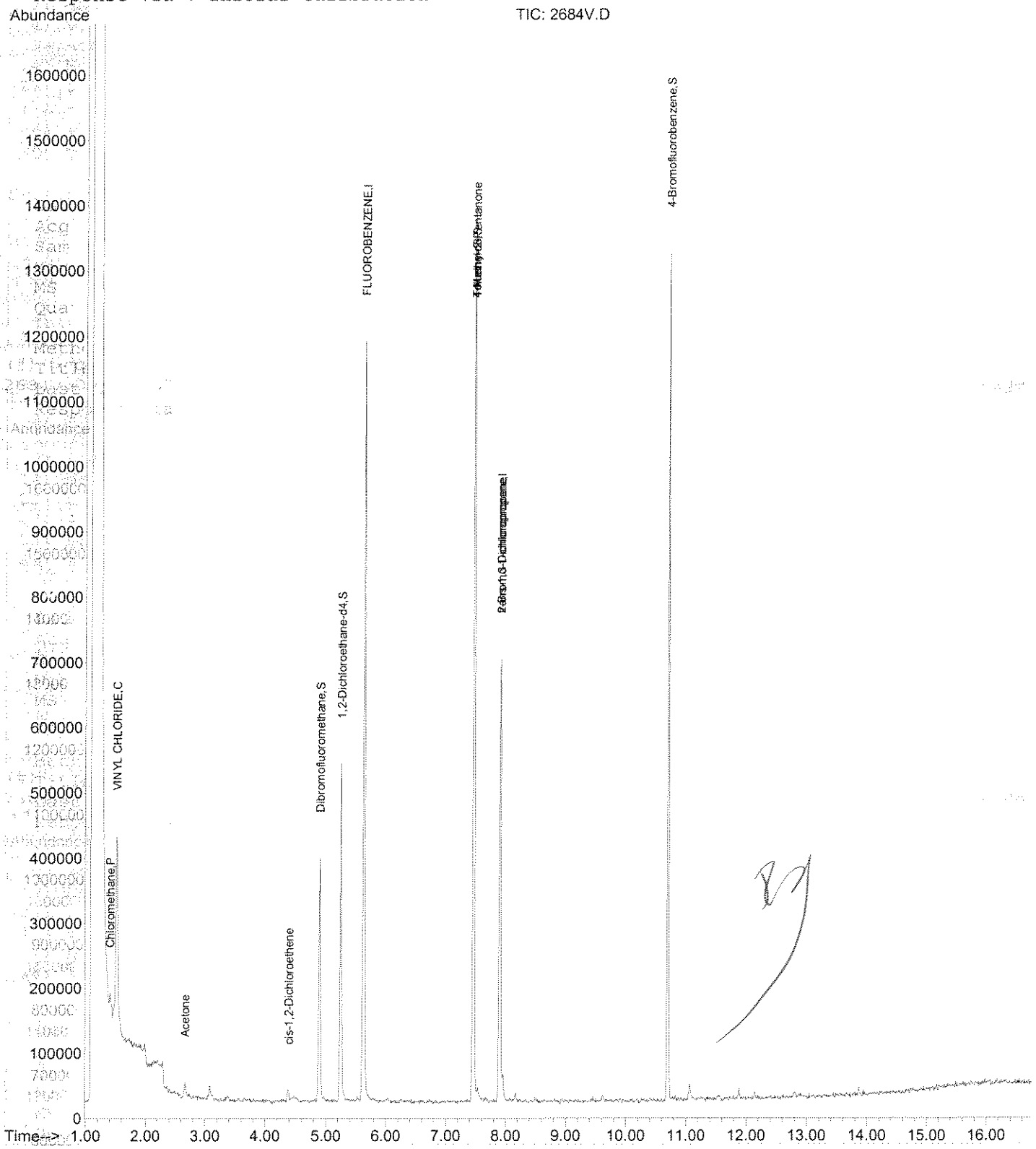
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 962901 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 312873 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 213695 | 9.44 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 94.40% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 352532 | 10.18 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 101.80% | | | |
| 50) Toluene-d8 | 7.46 | 98 | 911685 | 9.44 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 94.40% | | | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 306396 | 10.22 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 102.20% | | | |
| Target Compounds | | | | | | Qvalue |
| 3) Chloromethane | 1.40 | 50 | 7810 | 0.22 | UG/L | 100 |
| 4) VINYL CHLORIDE 14 | 1.51 | 62 | 428069 | 14.28 | UG/L | 96 |
| 9) Acetone | 2.67 | 43 | 35700 | 2.72 | UG/L | 96 |
| 14) Methylene Chloride | 3.08 | 84 | 8277 | Below Cal | | 96 |
| 23) cis-1,2-Dichloroethene | 4.39 | 96 | 8649 | 0.40 | UG/L | 94 |
| 47) 4-Methyl-2-Pentanone | 7.46 | 43 | 5915 | 0.14 | UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 7255 | 0.25 | UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 7817 | Below Cal | | 100 |

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

Quantitation Report (Not Reviewed)

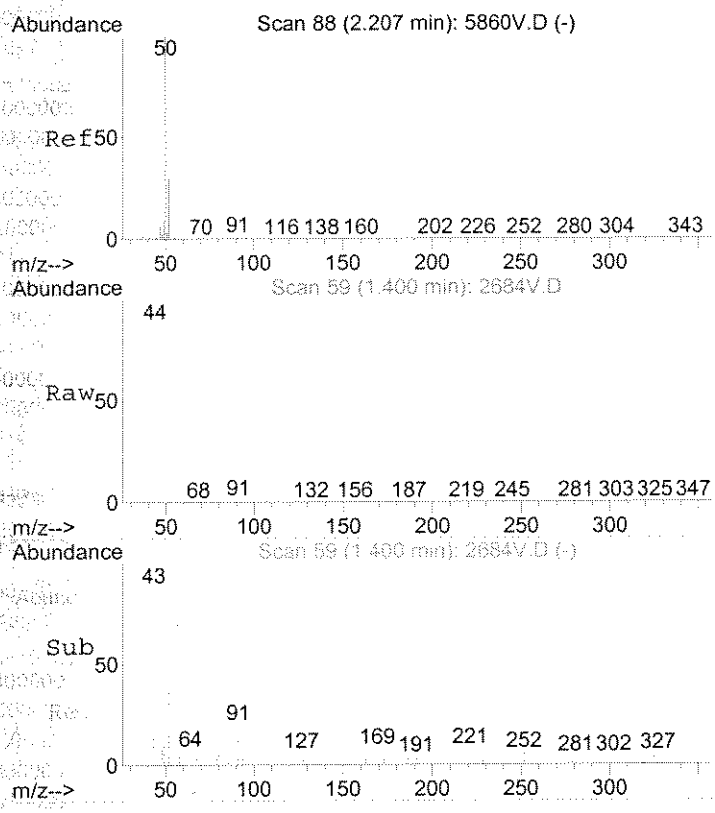
Data File : C:\HPCHEM\DATA\V110609\2684V.D Vial: 22
Acq On : 6 Nov 2009 16:49 Operator: REGI
Sample : A864539 Inst : Instrumen
Misc : 11/6/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 17:06 2009 Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



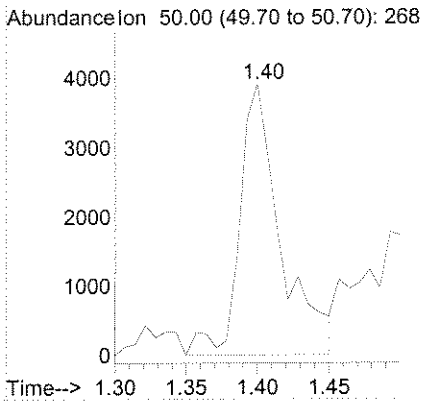


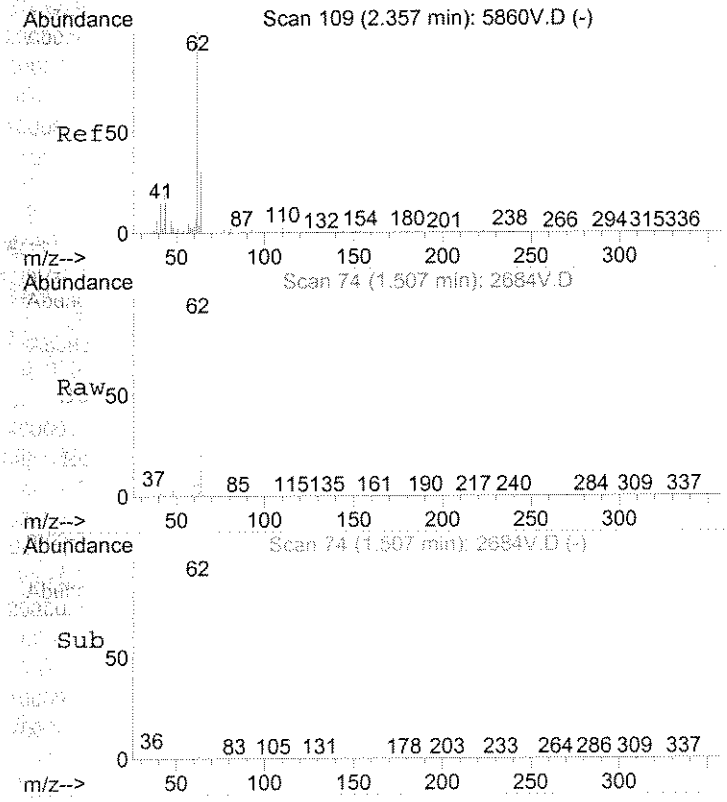

59169b




#3
Chloromethane
Concen: 0.22 UG/L
RT: 1.40 min Scan# 59
Delta R.T. 0.00 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 50 Resp: 7810

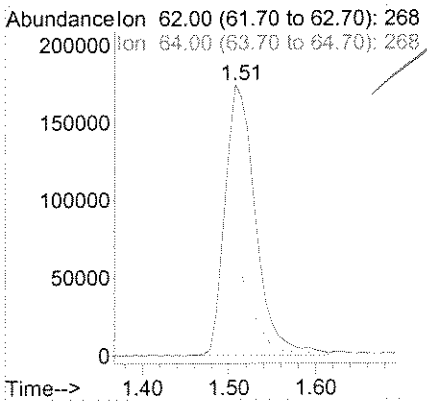


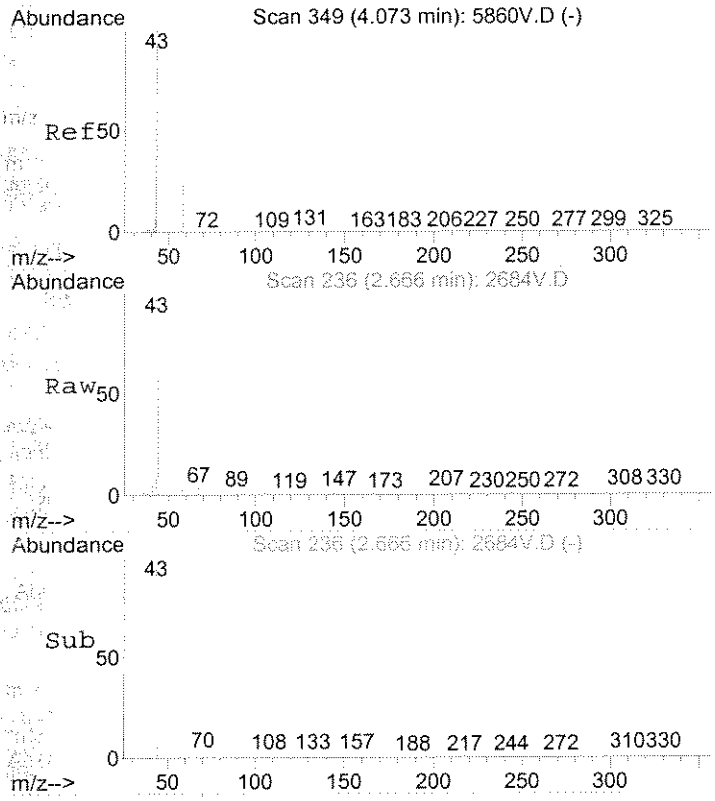




#4
VINYL CHLORIDE
Concen: 14.28 UG/L
RT: 1.51 min Scan# 74
Delta R.T. -0.01 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 62 Resp: 428069

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 28.8 | 24.9 | 37.3 |

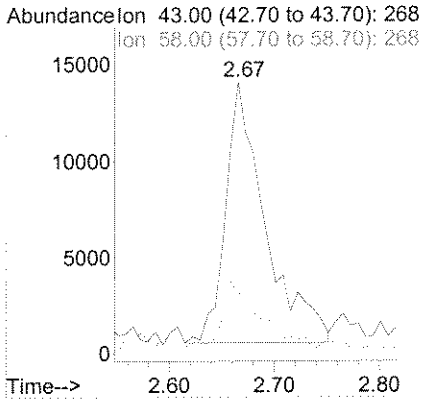


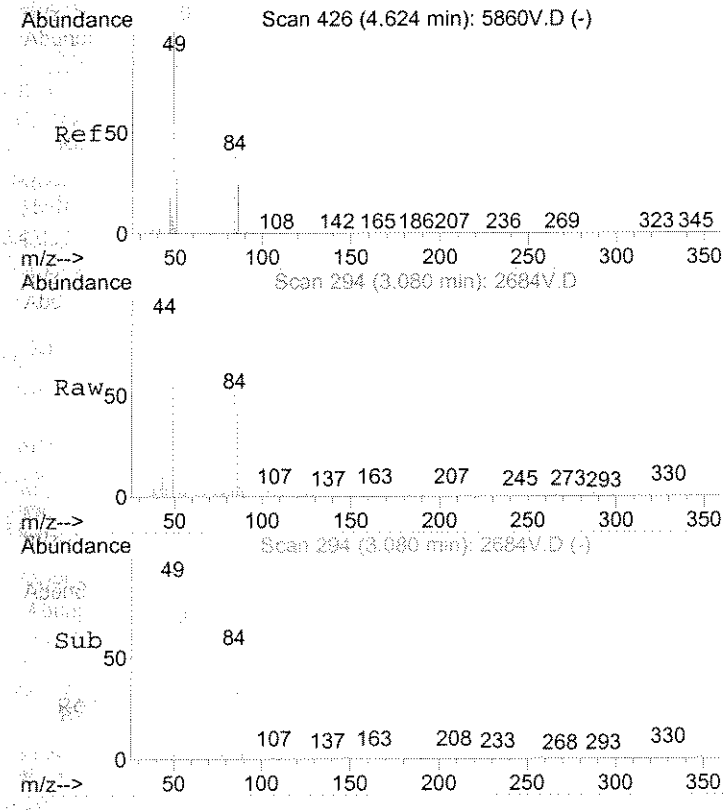



#9
Acetone
Concen: 2.72 UG/L
RT: 2.67 min Scan# 236
Delta R.T. 0.00 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 43 Resp: 35700

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 27.0 | 23.1 | 34.7 |

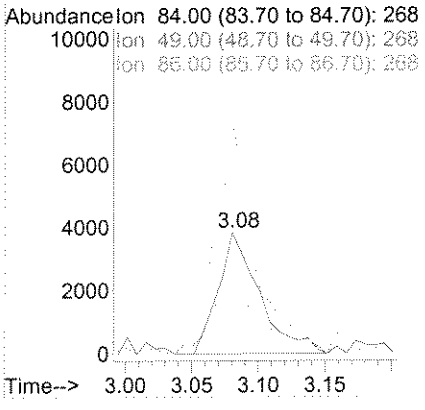


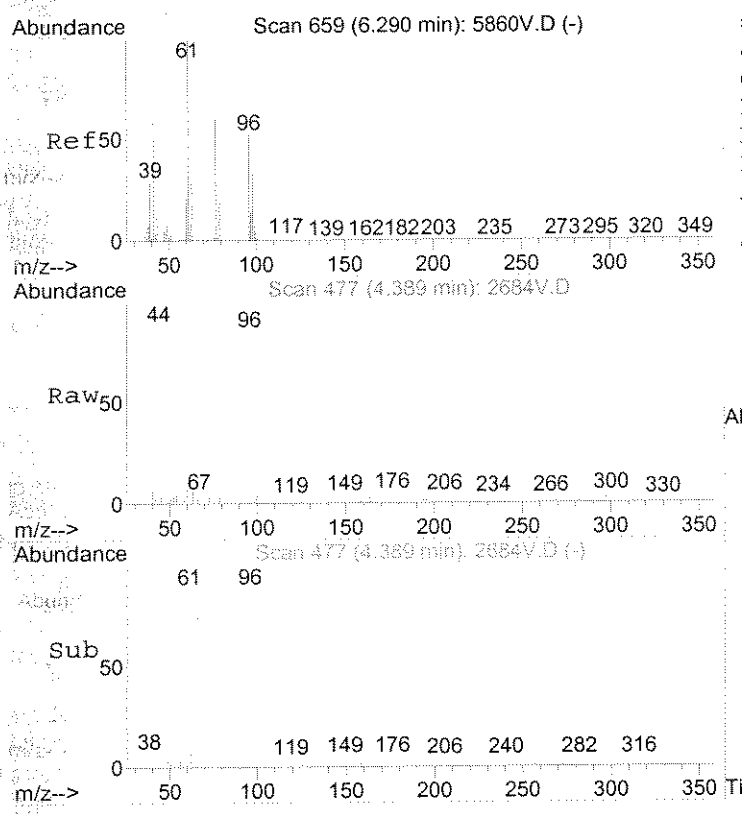




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. 0.00 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 84 Resp: 8277

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 174.5 | 140.2 | 210.2 |
| 86 | 73.7 | 51.1 | 76.7 |

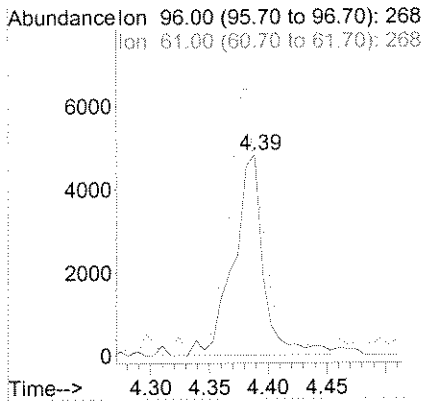


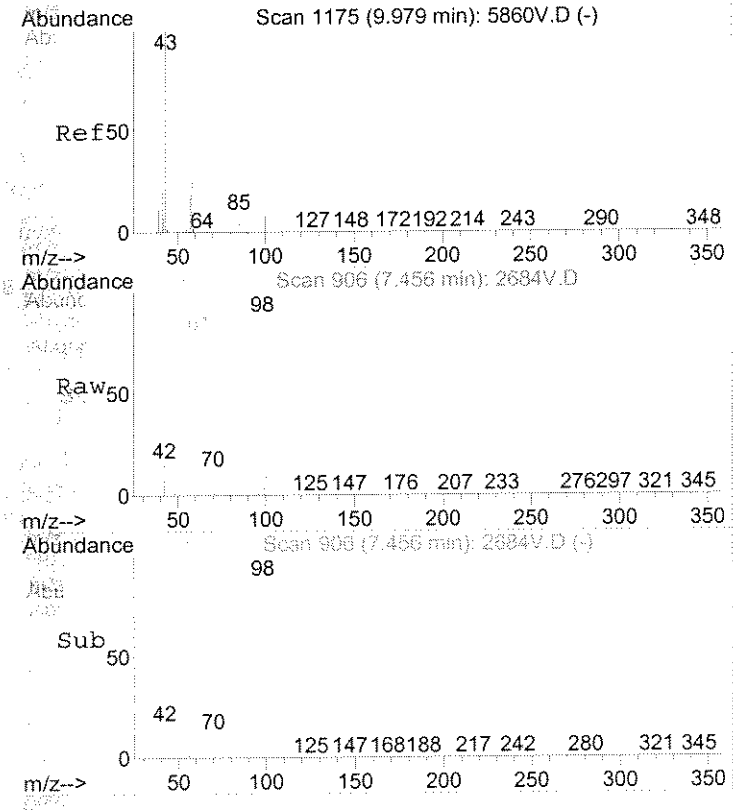



#23
cis-1,2-Dichloroethene
Concen: 0.40 UG/L
RT: 4.39 min Scan# 477
Delta R.T. 0.01 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 96 Resp: 8649

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 145.1 | 121.8 | 182.6 |

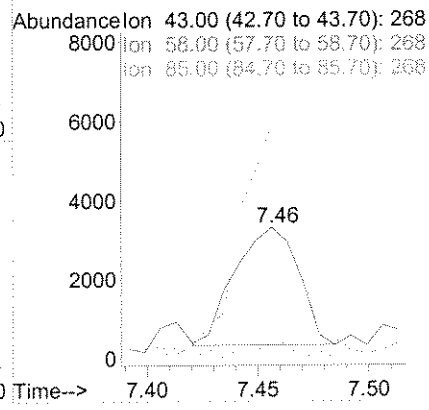


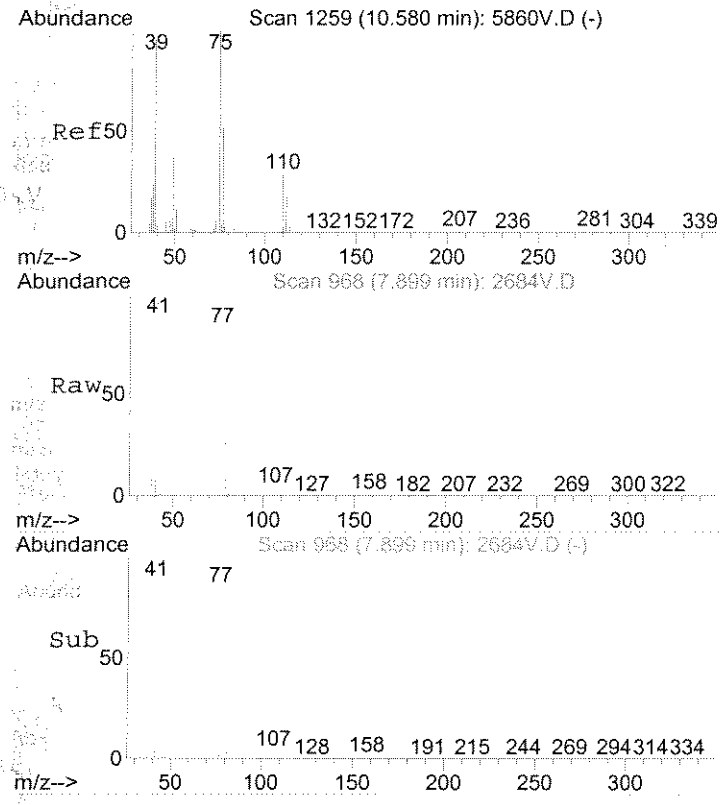




#47
4-Methyl-2-Pentanone
Concen: 0.14 UG/L
RT: 7.46 min Scan# 906
Delta R.T. 0.11 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion: 43 Resp: 5915

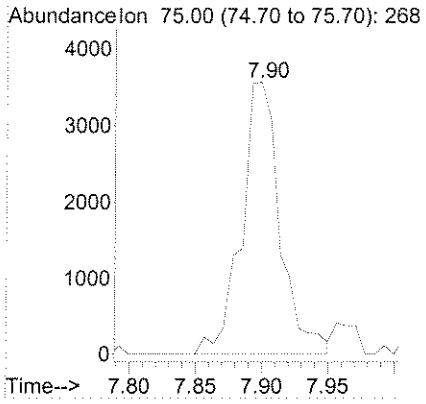
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 163.6 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

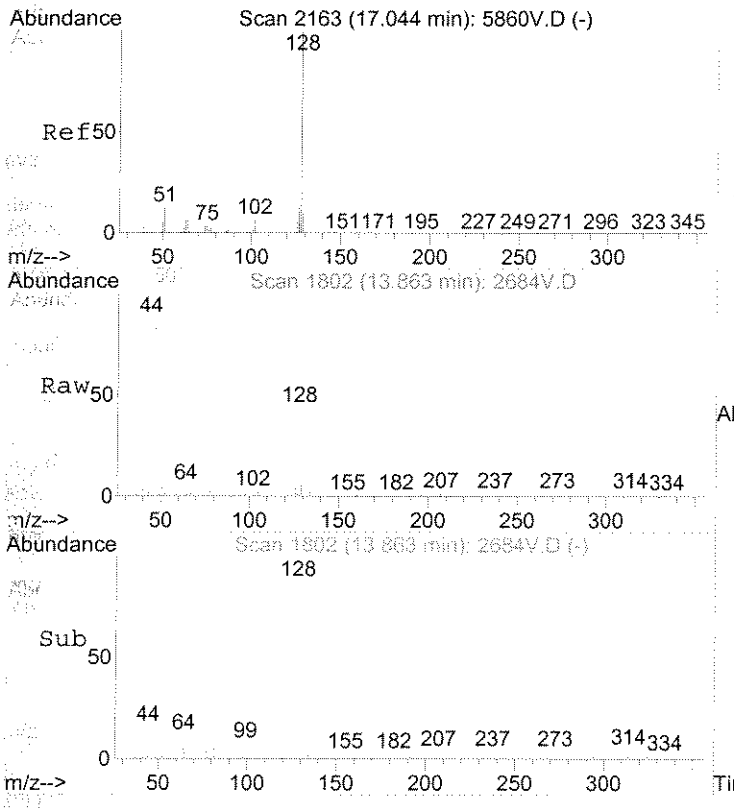





#52
trans-1,3-Dichloropropene
Concen: 0.25 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

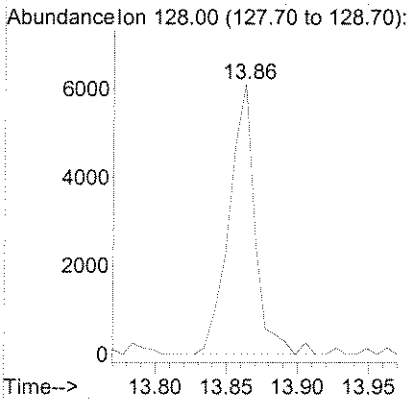
Tgt Ion: 75 Resp: 7255




#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2684V.D
Acq: 6 Nov 2009 16:49

Tgt Ion:128 Resp: 7817



QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL Water

Laboratory Sample # : A864529 Q2256355 Q2256356
Data File :2669V. MS Data File : 2670V. MSD Data File : 2671V.
Date/Time : 6 Nov 2009 10:35 MS Date/Time : 6 Nov 2009 11:00 MSD Date/Time : 6 Nov 2009 11:25
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery * | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0 | 9.22 | 92.2 | 9.08 | 90.8 | 1.5 | 75 | 127.9 |
| Carbon Tetrachloride | 0 | 8.8 | 88.0 | 8.74 | 87.4 | 0.7 | 71 | 163.4 |
| 1,4-Dichlorobenzene | 0 | 9.14 | 91.4 | 8.73 | 87.3 | 4.6 | 80 | 121.8 |
| 1,2-Dichloroethane | 0 | 9.42 | 94.2 | 9.34 | 93.4 | 0.9 | 71 | 163.2 |
| 1,1-DICHLOROETHENE | 0 | 9.07 | 90.7 | 8.92 | 89.2 | 1.7 | 66 | 134.3 |
| 1,1,1-Trichloroethane | 0 | 9.15 | 91.5 | 8.93 | 89.3 | 2.4 | 79 | 156.2 |
| Trichloroethene NQR | 220 | 223 | ~~30.0 !~~ | ~~218~~ | ~~-20.0 !~~ | ~~######~~ | 67 | 149.3 |
| VINYL CHLORIDE | 0 | 8.84 | 88.4 | 8.94 | 89.4 | 1.1 | 46 | 154 |
| Bromobenzene | 0 | 9.13 | 91.3 | 9 | 90.0 | 1.4 | 78 | 126.6 |
| Bromodichloromethane | 0 | 8.7 | 87.0 | 8.44 | 84.4 | 3.0 | 68 | 157.1 |
| Bromoform | 0 | 7.21 | 72.1 | 6.89 | 68.9 | 4.5 | 52 | 171.7 |
| Bromomethane | 0 | 10.2 | 102.0 | 10 | 100.0 | 2.0 | 17 | 175.4 |
| Chlorobenzene | 0 | 9.15 | 91.5 | 8.81 | 88.1 | 3.8 | 81 | 123.4 |
| Dibromochloromethane | 0 | 8.27 | 82.7 | 7.74 | 77.4 | 6.6 | 64 | 152.5 |
| Chloroethane | 0 | 10.7 | 107.0 | 10.9 | 109.0 | 1.9 | 79 | 145.1 |
| CHLOROFORM | 0 | 8.98 | 89.8 | 8.91 | 89.1 | 0.8 | 79 | 146.2 |
| Chloromethane | 0 | 9.03 | 90.3 | 8.7 | 87.0 | 3.7 | 31 | 139.9 |
| 2-Chlorotoluene | 0 | 9.08 | 90.8 | 8.77 | 87.7 | 3.5 | 70 | 126.1 |
| 4-Chlorotoluene | 0 | 9.16 | 91.6 | 8.85 | 88.5 | 3.4 | 73 | 123.4 |
| Dibromomethane | 0 | 9.28 | 92.8 | 9.29 | 92.9 | 0.1 | 60 | 156.9 |
| 1,3-Dichlorobenzene | 0 | 9.06 | 90.6 | 8.92 | 89.2 | 1.6 | 80 | 127.4 |
| 1,2-Dichlorobenzene | 0 | 9.24 | 92.4 | 9.17 | 91.7 | 0.8 | 81 | 125.8 |
| trans-1,2-Dichloroethene | 2.1 | 11.3 | 92.0 | 11.2 | 91.0 | 1.1 | 76 | 136.3 |
| cis-1,2-Dichloroethene | 25 | 34.2 | 92.0 | 34 | 90.0 | 2.2 | 67 | 151.6 |
| Methylene Chloride | 0 | 9.74 | 97.4 | 9.73 | 97.3 | 0.1 | 65 | 145 |
| 1,1-Dichloroethane | 0 | 9.68 | 96.8 | 9.53 | 95.3 | 1.6 | 79 | 140.1 |
| 1,1-Dichloropropene | 0 | 9.07 | 90.7 | 9.1 | 91.0 | 0.3 | 76 | 133.2 |
| 1,2-DICHLOROPROPANE | 0 | 9.4 | 94.0 | 8.95 | 89.5 | 4.9 | 77 | 123.2 |
| 1,3-Dichloropropane | 0 | 9.28 | 92.8 | 8.86 | 88.6 | 4.6 | 81 | 121.5 |
| cis-1,3-Dichloropropene | 0 | 8.84 | 88.4 | 8.59 | 85.9 | 2.9 | 69 | 125.1 |
| trans-1,3-Dichloropropene | 0 | 8.16 | 81.6 | 7.99 | 79.9 | 2.1 | 68 | 129.6 |
| 2,2-Dichloropropane | 0 | 9.23 | 92.3 | 9.01 | 90.1 | 2.4 | 64 | 130.7 |
| ETHYL BENZENE | 0 | 8.84 | 88.4 | 8.71 | 87.1 | 1.5 | 37 | 176.4 |
| Styrene | 0 | 3.51 | 35.1 | 2.99 | 29.9 | 16.0 | 29 | 159.9 |
| 1,1,2-Trichloroethane | 0 | 9.15 | 91.5 | 9.31 | 93.1 | 1.7 | 70 | 140.6 |
| 1,1,1,2-Tetrachloroethane | 0 | 8.92 | 89.2 | 8.68 | 86.8 | 2.7 | 68 | 154.5 |
| 1,1,2,2-Tetrachloroethane | 0 | 9.49 | 94.9 | 9.31 | 93.1 | 1.9 | 73 | 122.6 |
| Tetrachloroethene | 0 | 8.41 | 84.1 | 8.33 | 83.3 | 1.0 | 82 | 141.4 |
| 1,2,3-Trichloropropane | 0 | 9.3 | 93.0 | 8.79 | 87.9 | 5.6 | 73 | 136.1 |

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864529
Data File :2669V. MS Data File : 2670V. MSD Data File : 2671V.
Date/Time : 6 Nov 2009 10:35 MS Date/Time : 6 Nov 2009 11:00 MSD Date/Time : 6 Nov 2009 11:25
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery * | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| TOLUENE | 0 | 8.87 | 88.7 | 8.9 | 89.0 | 0.3 | 77 | 126.5 |
| m,p-Xylene | 0 | 16.6 | 83.0 | 15.8 | 79.0 ! | 4.9 | 80 | 127 |
| o-Xylene | 0 | 8.55 | 85.5 | 8.03 | 80.3 | 6.3 | 78 | 130.1 |
| Bromochloromethane | 0 | 9.63 | 96.3 | 9.82 | 98.2 | 2.0 | 70 | 155.2 |
| n-Butylbenzene | 0 | 9.11 | 91.1 | 9.03 | 90.3 | 0.9 | 71 | 121.5 |
| Dichlorodifluoromethane | 0 | 8.31 | 83.1 | 8.02 | 80.2 | 3.6 | 4 | 176.7 |
| Trichlorofluoromethane | 0 | 9.91 | 99.1 | 10 | 100.0 | 0.9 | 77 | 170.6 |
| Hexachlorobutadiene | 0 | 9.76 | 97.6 | 9.77 | 97.7 | 0.1 | 62 | 157.6 |
| Isopropylbenzene | 0 | 8.78 | 87.8 | 8.52 | 85.2 | 3.0 | 68 | 128.4 |
| p-Isopropyltoluene | 0 | 8.53 | 85.3 | 8.49 | 84.9 | 0.5 | 72 | 127.2 |
| Naphthalene | 0 | 10.8 | 108.0 | 10.3 | 103.0 | 4.7 | 46 | 113.1 |
| n-Propylbenzene | 0 | 8.87 | 88.7 | 8.76 | 87.6 | 1.2 | 64 | 127.4 |
| sec-Butylbenzene | 0 | 9.22 | 92.2 | 9.13 | 91.3 | 1.0 | 71 | 126.1 |
| t-Butylbenzene | 0 | 9.29 | 92.9 | 9.24 | 92.4 | 0.5 | 72 | 131.7 |
| 1,2,3-Trichlorobenzene | 0 | 11.3 | 113.0 | 10.9 | 109.0 | 3.6 | 43 | 149 |
| 1,2,4-Trichlorobenzene | 0 | 9.97 | 99.7 | 9.95 | 99.5 | 0.2 | 54 | 137.9 |
| 1,2,4-Trimethylbenzene | 0 | 5.55 | 55.5 ! | 5.04 | 50.4 ! | 9.6 | 74 | 126.7 |
| 1,3,5-Trimethylbenzene | 0 | 7.22 | 72.2 ! | 6.9 | 69.0 ! | 4.5 | 74 | 125.9 |
| Acrolein | 0 | 105 | 105.0 | 103 | 103.0 | 1.9 | D | 400.3 |
| Acetone | 0 | 49 | 98.0 | 46.9 | 93.8 | 4.4 | 52 | 162.9 |
| Acrylonitrile | 0 | 111 | 111.0 | 108 | 108.0 | 2.7 | D | 472.1 |
| Carbon Disulfide | 0 | 6.47 | 64.7 ! | 6.21 | 62.1 ! | 4.1 | 65 | 135.1 |
| Vinyl Acetate | 0 | 8.52 | 85.2 | 7.91 | 79.1 | 7.4 | 58 | 113.1 |
| 2-Butanone | 0 | 48.5 | 97.0 | 46.8 | 93.6 | 3.6 | 38 | 143.2 |
| 4-Methyl-2-Pentanone | 0 | 47.1 | 94.2 | 46.1 | 92.2 | 2.1 | 68 | 130.7 |
| 2-Hexanone | 0 | 46.7 | 93.4 | 44.1 | 88.2 | 5.7 | 69 | 118.4 |
| 2-Chloroethylvinylether | 0 | 0 | 0.0 ! | 0 | 0.0 ! | | D | 39.3 |
| trans-1,4-Dichloro-2-butene | 0 | 18 | 90.0 | 16.9 | 84.5 | 6.3 | 24 | 138 |
| 1,2-Dibromoethane | 0 | 9.07 | 90.7 | 8.94 | 89.4 | 1.4 | 75 | 121.6 |
| 1,2-Dibromo-3-chloropropar | 0 | 8.74 | 87.4 | 8.35 | 83.5 | 4.6 | 59 | 129.5 |
| Iodomethane | 0 | 9.55 | 95.5 | 9.56 | 95.6 | 0.1 | 18 | 155.7 |
| Allyl Chloride | 0 | 8.97 | 89.7 | 8.78 | 87.8 | 2.1 | 25 | 154.8 |
| Ethyl Cyanide | 0 | 94.8 | 94.8 | 92.3 | 92.3 | 2.7 | 27 | 160.5 |
| Methacrylonitrile | 0 | 88.2 | 88.2 | 85.1 | 85.1 | 3.6 | 24 | 136.7 |
| Methyl Methacrylate | 0 | 7.44 | 74.4 | 7.07 | 70.7 | 5.1 | 41 | 149.1 |
| Ethyl Methacrylate | 0 | 7.32 | 73.2 | 6.98 | 69.8 | 4.8 | 38 | 137.8 |

Recovery limit

R560090

# Heritage Environmental Services, LLC

Q2256355

QC Report

QCType SPI01
Date Entered 11Nov09
Analysis Date/Time 06Nov0911:00:00

Duplicate SampleID A864529
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 2670V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 9.22 | | 92.2 | |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 8.8 | | 88 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 9.14 | | 91.4 | |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 9.42 | | 94.2 | |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 9.07 | | 90.7 | |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 9.15 | | 91.5 | |
| 750 | TRICHLOROETHENE | 216 | 10 | | NQR | 70 | |
| 768 | VINYL CHLORIDE | 0 | 10 | 8.84 | | 88.4 | |
| 193 | BROMOBENZENE | 0 | 10 | 9.13 | | 91.3 | |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 8.7 | | 87 | |
| 197 | BROMOFORM | 0 | 10 | 7.21 | | 72.1 | |
| 198 | BROMOMETHANE | 0 | 10 | 10.2 | | 102 | |
| 231 | CHLOROBENZENE | 0 | 10 | 9.15 | | 91.5 | |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 8.27 | | 82.7 | |
| 234 | CHLOROETHANE | 0 | 10 | 10.7 | | 107 | |
| 235 | CHLOROFORM | 0 | 10 | 8.98 | | 89.8 | |
| 236 | CHLOROMETHANE | 0 | 10 | 9.03 | | 90.3 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 9.08 | | 90.8 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 9.16 | | 91.6 | |
| 296 | DIBROMOMETHANE | 0 | 10 | 9.28 | | 92.8 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 9.06 | | 90.6 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 9.24 | | 92.4 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | 11.3 | | 92.1 | |
| 246 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | 34.2 | | 97 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.74 | | 97.4 | |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 9.68 | | 96.8 | |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 9.07 | | 90.7 | |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 9.4 | | 94 | |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 9.28 | | 92.8 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 8.84 | | 88.4 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 8.16 | | 81.6 | |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.23 | | 92.3 | |
| 349 | ETHYL BENZENE | 0 | 10 | 8.84 | | 88.4 | |
| 680 | STYRENE | 0 | 10 | 3.51 | | 35.1 | |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 9.15 | | 91.5 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 8.92 | | 89.2 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 9.49 | | 94.9 | |
| 703 | TETRACHLOROETHENE | 0 | 10 | 8.41 | | 84.1 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 9.3 | | 93 | |
| 724 | TOLUENE | 0 | 10 | 8.87 | | 88.7 | |
| 492 | M/P-XYLENE | 0 | 20 | 16.6 | | 83 | |
| 549 | O-XYLENE | 0 | 10 | 8.55 | | 85.5 | |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 9.63 | | 96.3 | |
| 519 | N-BUTYLBENZENE | 0 | 10 | 9.11 | | 91.1 | |

JK 11-11-09

R560090

# Heritage Environmental Services, LLC

Q2256355

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 8.31 | | 83.1 | |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 9.91 | | 99.1 | |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 9.76 | | 97.6 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 8.78 | | 87.8 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 8.53 | | 85.3 | |
| 493 | NAPHTHALENE | 0 | 10 | 10.8 | | 108 | |
| 532 | N-PROPYLBENZENE | 0 | 10 | 8.87 | | 88.7 | |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 9.22 | | 92.2 | |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 9.29 | | 92.9 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 11.3 | | 113 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 9.97 | | 99.7 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 5.55 | ! | 55.5 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 7.22 | ! | 72.2 | |
| 105 | ACROLEIN | 0 | 100 | 105 | | 105 | |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 49 | | 98 | |
| 106 | ACRYLONITRILE | 0 | 100 | 111 | | 111 | |
| 216 | CARBON DISULFIDE | 0 | 10 | 6.47 | ! | 64.7 | |
| 767 | VINYL ACETATE | 0 | 10 | 8.52 | | 85.2 | |
| 52 | 2-BUTANONE | 0 | 50 | 48.5 | | 97 | |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 47.1 | | 94.2 | |
| 60 | 2-HEXANONE | 0 | 50 | 46.7 | | 93.4 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 18 | | 90 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 9.07 | | 90.7 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 8.74 | | 87.4 | |
| 422 | IODOMETHANE | 0 | 10 | 9.55 | | 95.5 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 9.26 | | 92.6 | |
| 30 | 1,4-DIOXANE | 0 | 200 | 81.7 | | 40.9 | |
| 709 | TETRAHYDROFURAN | 0 | 125 | 114 | | 91.2 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 8.97 | | 89.7 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 94.8 | | 94.8 | |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 88.2 | | 88.2 | |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 7.44 | | 74.4 | |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 7.32 | | 73.2 | |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 25.2 | ! | 84.0 | |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

NQR No QC Result. High Sample Concentration.

! Outside Lab Generated Control Limits

R560090

# Heritage Environmental Services, LLC

Q2256356

QC Report

QCType DPS01
Date Entered 11Nov09
Analysis Date/Time 06Nov0911:25:00

Duplicate SampleID A864529
Duplicate QCSampleID Q2256355
Method 309 Matrix 1

DataFile 2671V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 9.08 | | 90.8 | 1.5 |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 8.74 | | 87.4 | .7 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 8.73 | | 87.3 | 4.6 |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 9.34 | | 93.4 | .9 |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 8.92 | | 89.2 | 1.7 |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 8.93 | | 89.3 | 2.4 |
| 750 | TRICHLOROETHENE | 216 | 10 | | NQR | | |
| 768 | VINYL CHLORIDE | 0 | 10 | 8.94 | | 89.4 | 1.1 |
| 193 | BROMOBENZENE | 0 | 10 | 9 | | 90 | 1.4 |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 8.44 | | 84.4 | 3 |
| 197 | BROMOFORM | 0 | 10 | 6.89 | | 68.9 | 4.5 |
| 198 | BROMOMETHANE | 0 | 10 | 10 | | 100.4 | 1.2 |
| 231 | CHLOROBENZENE | 0 | 10 | 8.81 | | 88.1 | 3.8 |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 7.74 | | 77.4 | 6.6 |
| 234 | CHLOROETHANE | 0 | 10 | 10.9 | | 109 | 1.8 |
| 235 | CHLOROFORM | 0 | 10 | 8.91 | | 89.1 | .8 |
| 236 | CHLOROMETHANE | 0 | 10 | 8.7 | | 87 | 3.7 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 8.77 | | 87.7 | 3.5 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 8.85 | | 88.5 | 3.4 |
| 296 | DIBROMOMETHANE | 0 | 10 | 9.29 | | 92.9 | .1 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 8.92 | | 89.2 | 1.6 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 9.17 | | 91.7 | .8 |
| 746 | TRANS-1,2-DICHLOROETHENE | 2.09 | 10 | 11.2 | | 91.3 | 1.3 |
| 246 | CIS-1,2-DICHLOROETHENE | 24.5 | 10 | 34 | | 94.4 | 2.5 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.73 | | 97.3 | .1 |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 9.53 | | 95.3 | 1.6 |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 9.1 | | 91 | .3 |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 8.95 | | 89.5 | 4.9 |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 8.86 | | 88.6 | 4.6 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 8.59 | | 85.9 | 2.9 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 7.99 | | 79.9 | 2.1 |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.01 | | 90.1 | 2.4 |
| 349 | ETHYL BENZENE | 0 | 10 | 8.71 | | 87.1 | 1.5 |
| 680 | STYRENE | 0 | 10 | 2.99 | | 29.9 | 16 |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 9.31 | | 93.1 | 1.7 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 8.68 | | 86.8 | 2.7 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 9.31 | | 93.1 | 1.9 |
| 703 | TETRACHLOROETHENE | 0 | 10 | 8.33 | | 83.3 | 1 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 8.79 | | 87.9 | 5.6 |
| 724 | TOLUENE | 0 | 10 | 8.9 | | 89 | .3 |
| 492 | M/P-XYLENE | 0 | 20 | 15.8 | | 79.1 | 4.6 |
| 549 | O-XYLENE | 0 | 10 | 8.03 | ! | 80.3 | 6.3 |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 9.82 | | 98.2 | 2 |
| 519 | N-BUTYLBENZENE | 0 | 10 | 9.03 | | 90.3 | .9 |

R560090

# Heritage Environmental Services, LLC

Q2256356

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 8.02 | | 80.2 | 3.6 |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 10 | | 100.4 | 1.3 |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 9.77 | | 97.7 | .1 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 8.52 | | 85.2 | 3 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 8.49 | | 84.9 | .5 |
| 493 | NAPHTHALENE | 0 | 10 | 10.3 | | 103.1 | 4.5 |
| 532 | N-PROPYLBENZENE | 0 | 10 | 8.76 | | 87.6 | 1.2 |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 9.13 | | 91.3 | 1 |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 9.24 | | 92.4 | .5 |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 10.9 | | 109.3 | 3.2 |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 9.95 | | 99.5 | .2 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 5.04 | ! | 50.4 | 9.6 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 6.9 | ! | 69 | 4.5 |
| 105 | ACROLEIN | 0 | 100 | 103 | | 102.6 | 2.2 |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 46.9 | | 93.7 | 4.5 |
| 106 | ACRYLONITRILE | 0 | 100 | 108 | | 107.8 | 2.6 |
| 216 | CARBON DISULFIDE | 0 | 10 | 6.21 | ! | 62.1 | 4.1 |
| 767 | VINYL ACETATE | 0 | 10 | 7.91 | | 79.1 | 7.4 |
| 52 | 2-BUTANONE | 0 | 50 | 46.8 | | 93.6 | 3.7 |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 46.1 | | 92.2 | 2.1 |
| 60 | 2-HEXANONE | 0 | 50 | 44.1 | | 88.2 | 5.7 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 16.9 | | 84.3 | 6.3 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 8.94 | | 89.4 | 1.4 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 8.35 | | 83.5 | 4.6 |
| 422 | IODOMETHANE | 0 | 10 | 9.56 | | 95.6 | .1 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 9.03 | | 90.3 | 2.5 |
| 30 | 1,4-DIOXANE | 0 | 200 | 74.2 | | 37.1 | 9.7 |
| 709 | TETRAHYDROFURAN | 0 | 125 | 109 | | 86.8 | 5.1 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 8.78 | | 87.8 | 2.1 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 92.3 | | 92.3 | 2.7 |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 85.1 | | 85.1 | 3.6 |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 7.07 | | 70.7 | 5.1 |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 6.98 | | 69.8 | 4.8 |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 23.8 | ! | 79.3 | 5.8 |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

NQR No QC Result. High Sample Concentration.

Data File : C:\HPCHEM\DATA\V110609\2670V.D
Acq On : 6 Nov 2009 11:00
Sample : A864529 MS
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 11:17:21 2009

Vial: 8
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1040549 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 377466 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 238261 | 9.74 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 97.40% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 377405 | 10.08 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 100.80% | |
| 50) Toluene-d8 | 7.46 | 98 | 1005177 | 9.63 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 96.30% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 365069 | 10.09 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 100.90% | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 154905 | 8.31 UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 346048 | 9.03 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 286333 | 8.84 UG/L | 98 |
| 5) Bromomethane | 1.79 | 94 | 126777 | 10.16 UG/L | 98 |
| 6) Chloroethane | 1.89 | 64 | 153590 | 10.71 UG/L | 96 |
| 7) Trichlorofluoromethane | 2.16 | 101 | 268645 | 9.91 UG/L # | 78 |
| 8) Acrolein | 2.51 | 56 | 207687 | 104.88 UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 695598 | 48.99 UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 190979 | 9.07 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 226323 | 9.20 UG/L | 88 |
| 12) Acrylonitrile | 3.32 | 53 | 663661 | 110.59 UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 406381 | 6.47 UG/L | 98 |
| 14) Methylene Chloride | 3.08 | 84 | 237942 | 9.74 UG/L | 93 |
| 15) Allyl Chloride | 2.96 | 41 | 902166 | 8.97 UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 20609 | 8.52 UG/L # | 87 |
| 17) MTBE | 3.39 | 73 | 679859 | 9.26 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 253593 | 11.34 UG/L # | 83 |
| 19) n-Hexane | 3.67 | 57 | 368003 | 8.76 UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 425982 | 9.68 UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 199095 | 48.54 UG/L | 80 |
| 22) Ethyl Acetate | 4.50 | 43 | 374047 | 8.31 UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 795473 | 34.19 UG/L | 94 |
| 24) Ethyl Cyanide | 4.45 | 54 | 593645 | 94.77 UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 368234 | 8.98 UG/L | 100 |
| 26) Methacrylonitrile | 4.62 | 41 | 2085159 | 88.16 UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 1394391 | 114.14 UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 107039 | 9.63 UG/L # | 68 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 214916 | 9.23 UG/L | 89 |
| 30) Diethyl ether | 2.41 | 59 | 212487 | 9.48 UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 308536 | 9.15 UG/L | 97 |
| 32) Iodomethane | 2.74 | 142 | 327999 | 9.55 UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 101893 | 9.07 UG/L | 100 |
| 36) Carbon Tetrachloride | 5.09 | 117 | 263871 | 8.80 UG/L | 95 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 379053 | 9.42 UG/L | 99 |
| 38) Isobutanol | 5.28 | 43 | 1655042 | 745.69 UG/L # | 98 |
| 39) Benzene | 5.31 | 78 | 853489 | 9.22 UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 5432939 | 223.17 UG/L | 96 |

(#) = qualifier out of range (m) = manual integration
2670V.D 8260VOI.M Fri Nov 06 11:17:23 2009



591696

Data File : C:\HPCHEM\DATA\V110609\2670V.D  Vial: 8
Acq On : 6 Nov 2009 11:00  Operator: REGI
Sample : A864529 MS  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 06 11:17:21 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 41) | n-Butanol | 6.01 | 56 | 843647 | 462.49 UG/L | | 97 |
| 42) | 1,2-DICHLOROPROPANE | 6.27 | 63 | 232767 | 9.40 UG/L | | 100 |
| 43) | 1,4-Dioxane | 6.46 | 88 | 76283 | 81.72 UG/L | | 100 |
| 44) | Methyl Methacrylate | 6.46 | 41 | 253350 | 7.44 UG/L | # | 64 |
| 45) | Bromodichloromethane | 6.60 | 83 | 249068 | 8.70 UG/L | | 99 |
| 46) | Dibromomethane | 6.40 | 93 | 138902 | 9.28 UG/L | | 90 |
| 47) | 4-Methyl-2-Pentanone | 7.34 | 43 | 2207087 | 47.08 UG/L | | 99 |
| 49) | cis-1,3-Dichloropropene | 7.13 | 75 | 316909 | 8.84 UG/L | | 100 |
| 51) | TOLUENE | 7.53 | 91 | 901110 | 8.87 UG/L | | 100 |
| 52) | trans-1,3-Dichloropropene | 7.81 | 75 | 260807 | 8.16 UG/L | | 100 |
| 53) | 1,1,2-Trichloroethane | 8.03 | 97 | 194741 | 9.15 UG/L | | 100 |
| 54) | 1,2-Dibromoethane | 8.64 | 107 | 212163 | 9.07 UG/L | | 100 |
| 56) | 2-Hexanone | 8.38 | 43 | 1726458 | 46.69 UG/L | | 99 |
| 57) | 1,3-Dichloropropane | 8.23 | 76 | 358442 | 9.28 UG/L | | 100 |
| 58) | Ethyl Methacrylate | 7.97 | 69 | 240249 | 7.32 UG/L | | 99 |
| 59) | Tetrachloroethene | 8.21 | 166 | 240018 | 8.41 UG/L | | 98 |
| 60) | Dibromochloromethane | 8.51 | 129 | 171736 | 8.27 UG/L | | 100 |
| 61) | Chlorobenzene | 9.29 | 112 | 616007 | 9.15 UG/L | | 99 |
| 62) | 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 199621 | 8.92 UG/L | | 100 |
| 63) | ETHYL BENZENE | 9.47 | 106 | 335463 | 8.84 UG/L | | 77 |
| 64) | m,p-Xylene | 9.62 | 106 | 783708 | 16.55 UG/L | # | 58 |
| 65) | o-Xylene | 10.11 | 106 | 399431 | 8.55 UG/L | | 78 |
| 66) | Styrene | 10.12 | 104 | 273439 | 3.51 UG/L | # | 63 |
| 67) | Bromoform | 10.31 | 173 | 114541 | 7.21 UG/L | | 100 |
| 68) | 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 341228 | 9.49 UG/L | | 100 |
| 70) | Isopropylbenzene | 10.54 | 105 | 981513 | 8.78 UG/L | | 100 |
| 71) | trans-1,4-Dichloro-2-buten | 10.93 | 53 | 322271 | 17.95 UG/L | # | 1 |
| 72) | Bromobenzene | 10.84 | 77 | 456630 | 9.13 UG/L | | 100 |
| 73) | 1,2,3-Trichloropropane | 10.90 | 110 | 109789 | 9.30 UG/L | | 100 |
| 74) | n-Propylbenzene | 11.00 | 92 | 144884 | 8.87 UG/L | | 84 |
| 75) | 1,3,5-Trimethylbenzene | 11.19 | 105 | 798230 | 7.22 UG/L | | 100 |
| 76) | 2-Chlorotoluene | 11.06 | 126 | 278627 | 9.08 UG/L | | 100 |
| 77) | 4-Chlorotoluene | 11.17 | 126 | 283312 | 9.16 UG/L | | 100 |
| 78) | t-Butylbenzene | 11.51 | 91 | 618561 | 9.29 UG/L | # | 63 |
| 79) | 1,2,4-Trimethylbenzene | 11.56 | 105 | 619198 | 5.55 UG/L | | 100 |
| 80) | sec-Butylbenzene | 11.73 | 105 | 1328632 | 9.22 UG/L | | 100 |
| 81) | p-Isopropyltoluene | 11.87 | 119 | 1003742 | 8.53 UG/L | | 100 |
| 82) | 1,3-Dichlorobenzene | 11.81 | 146 | 549921 | 9.06 UG/L | | 100 |
| 83) | 1,4-Dichlorobenzene | 11.90 | 146 | 568242 | 9.14 UG/L | | 100 |
| 84) | n-Butylbenzene | 12.26 | 92 | 573449 | 9.11 UG/L | | 97 |
| 85) | 1,2-Dichlorobenzene | 12.25 | 146 | 535638 | 9.24 UG/L | | 100 |
| 86) | 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 67752 | 8.74 UG/L | | 100 |
| 87) | 1,2,4-Trichlorobenzene | 13.66 | 180 | 395327 | 9.97 UG/L | | 100 |
| 88) | Naphthalene | 13.86 | 128 | 1151493 | 10.79 UG/L | | 100 |
| 89) | Hexachlorobutadiene | 13.82 | 225 | 228989 | 9.76 UG/L | | 100 |
| 90) | 1,2,3-Trichlorobenzene | 14.06 | 180 | 387677 | 11.29 UG/L | | 100 |

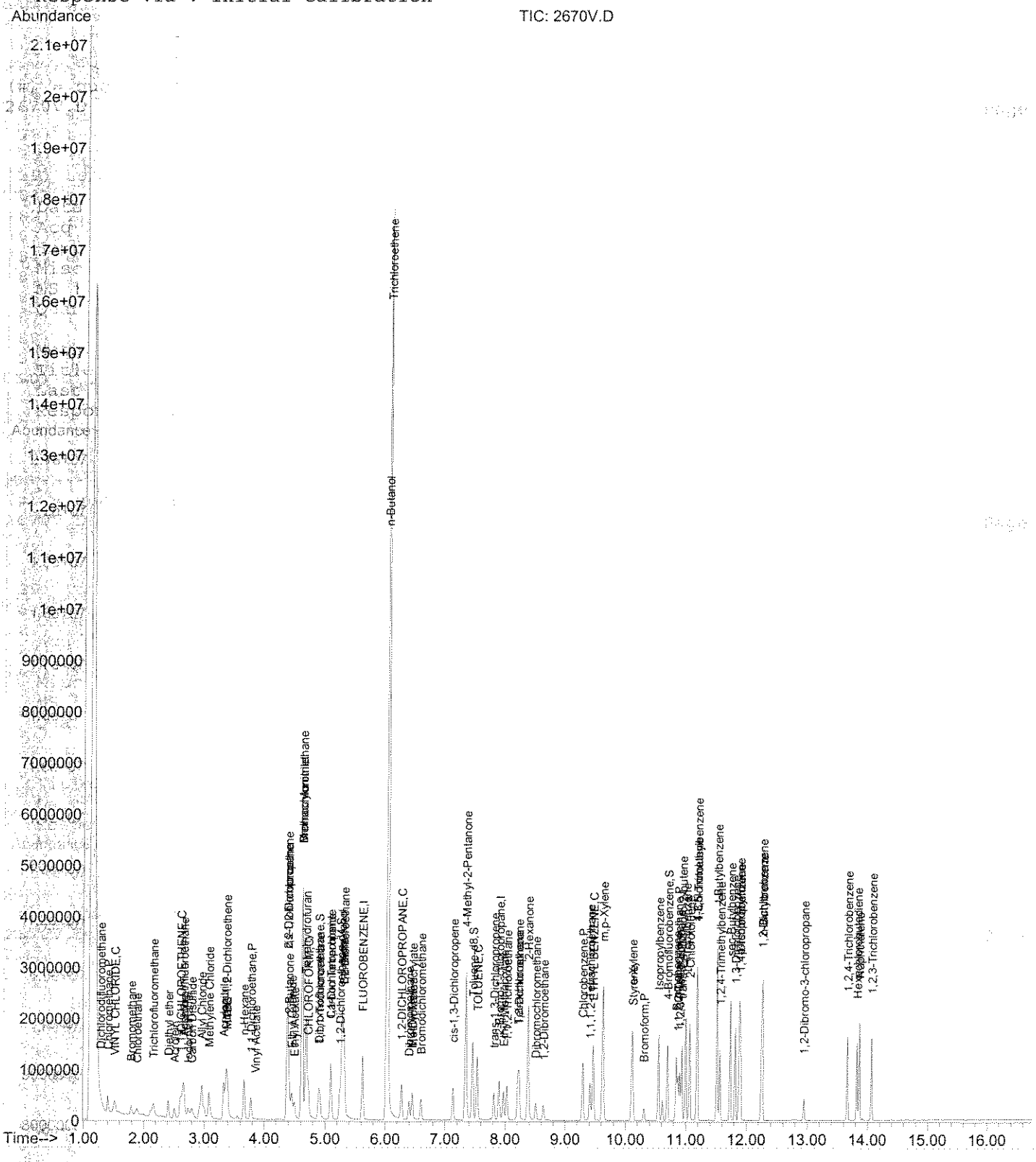
(#) = qualifier out of range (m) = manual integration



59169b

Data File : C:\HPCHEM\DATA\V110609\2670V.D  Vial: 8
Acq On : 6 Nov 2009 11:00  Operator: REGI
Sample : A864529 MS  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 11:17 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration






59169b

Data File : C:\HPCHEM\DATA\V110609\2671V.D
Acq On : 6 Nov 2009 11:25
Sample : A864529 MSD
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 11:42:15 2009

Vial: 9
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1023265 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 375769 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 236917 | 9.85 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 98.50% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 371751 | 10.10 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 101.00% | | | |
| 50) Toluene-d8 | 7.46 | 98 | 1007017 | 9.82 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 98.20% | | | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 347888 | 9.66 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 96.60% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 146962 | 8.02 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 327556 | 8.70 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 284941 | 8.94 | UG/L | 97 |
| 5) Bromomethane | 1.79 | 94 | 123266 | 10.04 | UG/L | 100 |
| 6) Chloroethane | 1.88 | 64 | 153708 | 10.90 | UG/L | 93 |
| 7) Trichlorofluoromethane | 2.14 | 101 | 267554 | 10.04 | UG/L # | 80 |
| 8) Acrolein | 2.51 | 56 | 199825 | 102.62 | UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 654344 | 46.86 | UG/L | 97 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 184845 | 8.92 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 215008 | 8.89 | UG/L | 90 |
| 12) Acrylonitrile | 3.32 | 53 | 636117 | 107.79 | UG/L | 100 |
| 13) Carbon Disulfide | 2.80 | 76 | 383239 | 6.21 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 233607 | 9.73 | UG/L | 96 |
| 15) Allyl Chloride | 2.96 | 41 | 868658 | 8.78 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 18565 | 7.91 | UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 652321 | 9.03 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 246799 | 11.22 | UG/L # | 84 |
| 19) n-Hexane | 3.67 | 57 | 361654 | 8.76 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 412091 | 9.53 | UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 188884 | 46.82 | UG/L | 77 |
| 22) Ethyl Acetate | 4.50 | 43 | 356435 | 8.05 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 776828 | 33.95 | UG/L | 92 |
| 24) Ethyl Cyanide | 4.45 | 54 | 568437 | 92.28 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 359536 | 8.91 | UG/L | 99 |
| 26) Methacrylonitrile | 4.62 | 41 | 1979687 | 85.11 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 1303795 | 108.53 | UG/L | 97 |
| 28) Bromochloromethane | 4.62 | 128 | 107274 | 9.82 | UG/L # | 71 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 206309 | 9.01 | UG/L # | 87 |
| 30) Diethyl ether | 2.40 | 59 | 210471 | 9.55 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 296160 | 8.93 | UG/L | 100 |
| 32) Iodomethane | 2.74 | 142 | 322911 | 9.56 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 100555 | 9.10 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 257723 | 8.74 | UG/L | 90 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 369587 | 9.34 | UG/L | 97 |
| 38) Isobutanol | 5.27 | 43 | 1594538 | 730.57 | UG/L # | 98 |
| 39) Benzene | 5.31 | 78 | 827043 | 9.08 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 5228767 | 218.41 | UG/L | 95 |

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



59169b

Data File : C:\HPCHEM\DATA\V110609\2671V.D Vial: 9
Acq On : 6 Nov 2009 11:25 Operator: REGI
Sample : A864529 MSD Inst : Instrumen
Misc : 11/6/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 06 11:42:15 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 41) | n-Butanol | 6.01 | 56 | 816944 | 455.42 UG/L | | 97 |
| 42) | 1,2-DICHLOROPROPANE | 6.27 | 63 | 217966 | 8.95 UG/L | | 100 |
| 43) | 1,4-Dioxane | 6.45 | 88 | 68074 | 74.16 UG/L | | 100 |
| 44) | Methyl Methacrylate | 6.45 | 41 | 236938 | 7.07 UG/L | # | 61 |
| 45) | Bromodichloromethane | 6.60 | 83 | 237604 | 8.44 UG/L | | 99 |
| 46) | Dibromomethane | 6.40 | 93 | 136810 | 9.29 UG/L | | 87 |
| 47) | 4-Methyl-2-Pentanone | 7.34 | 43 | 2125913 | 46.11 UG/L | | 99 |
| 49) | cis-1,3-Dichloropropene | 7.13 | 75 | 302821 | 8.59 UG/L | | 100 |
| 51) | TOLUENE | 7.53 | 91 | 889278 | 8.90 UG/L | | 100 |
| 52) | trans-1,3-Dichloropropene | 7.81 | 75 | 250862 | 7.99 UG/L | | 100 |
| 53) | 1,1,2-Trichloroethane | 8.03 | 97 | 195002 | 9.31 UG/L | | 100 |
| 54) | 1,2-Dibromoethane | 8.64 | 107 | 205665 | 8.94 UG/L | | 98 |
| 56) | 2-Hexanone | 8.38 | 43 | 1623243 | 44.10 UG/L | | 99 |
| 57) | 1,3-Dichloropropane | 8.23 | 76 | 340398 | 8.86 UG/L | | 100 |
| 58) | Ethyl Methacrylate | 7.97 | 69 | 228035 | 6.98 UG/L | | 98 |
| 59) | Tetrachloroethene | 8.21 | 166 | 236709 | 8.33 UG/L | | 99 |
| 60) | Dibromochloromethane | 8.51 | 129 | 159955 | 7.74 UG/L | | 100 |
| 61) | Chlorobenzene | 9.29 | 112 | 590684 | 8.81 UG/L | | 100 |
| 62) | 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 193232 | 8.68 UG/L | | 100 |
| 63) | ETHYL BENZENE | 9.46 | 106 | 329019 | 8.71 UG/L | | 79 |
| 64) | m,p-Xylene | 9.62 | 106 | 746350 | 15.83 UG/L | # | 57 |
| 65) | o-Xylene | 10.11 | 106 | 373478 | 8.03 UG/L | | 78 |
| 66) | Styrene | 10.12 | 104 | 232345 | 2.99 UG/L | # | 61 |
| 67) | Bromoform | 10.30 | 173 | 108827 | 6.89 UG/L | | 100 |
| 68) | 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 333176 | 9.31 UG/L | | 100 |
| 70) | Isopropylbenzene | 10.54 | 105 | 947688 | 8.52 UG/L | | 100 |
| 71) | trans-1,4-Dichloro-2-buten | 10.93 | 53 | 301153 | 16.85 UG/L | # | 1 |
| 72) | Bromobenzene | 10.84 | 77 | 448469 | 9.00 UG/L | | 100 |
| 73) | 1,2,3-Trichloropropane | 10.89 | 110 | 103277 | 8.79 UG/L | | 100 |
| 74) | n-Propylbenzene | 10.99 | 92 | 142439 | 8.76 UG/L | | 88 |
| 75) | 1,3,5-Trimethylbenzene | 11.19 | 105 | 759042 | 6.90 UG/L | | 100 |
| 76) | 2-Chlorotoluene | 11.06 | 126 | 267947 | 8.77 UG/L | | 100 |
| 77) | 4-Chlorotoluene | 11.17 | 126 | 272540 | 8.85 UG/L | | 100 |
| 78) | t-Butylbenzene | 11.51 | 91 | 612261 | 9.24 UG/L | # | 62 |
| 79) | 1,2,4-Trimethylbenzene | 11.56 | 105 | 559657 | 5.04 UG/L | | 100 |
| 80) | sec-Butylbenzene | 11.73 | 105 | 1309699 | 9.13 UG/L | | 100 |
| 81) | p-Isopropyltoluene | 11.88 | 119 | 994568 | 8.49 UG/L | | 100 |
| 82) | 1,3-Dichlorobenzene | 11.81 | 146 | 539106 | 8.92 UG/L | | 100 |
| 83) | 1,4-Dichlorobenzene | 11.90 | 146 | 540313 | 8.73 UG/L | | 100 |
| 84) | n-Butylbenzene | 12.26 | 92 | 565832 | 9.03 UG/L | | 98 |
| 85) | 1,2-Dichlorobenzene | 12.25 | 146 | 529181 | 9.17 UG/L | | 100 |
| 86) | 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 64439 | 8.35 UG/L | | 100 |
| 87) | 1,2,4-Trichlorobenzene | 13.66 | 180 | 392728 | 9.95 UG/L | | 100 |
| 88) | Naphthalene | 13.86 | 128 | 1103773 | 10.31 UG/L | | 100 |
| 89) | Hexachlorobutadiene | 13.82 | 225 | 228009 | 9.77 UG/L | | 100 |
| 90) | 1,2,3-Trichlorobenzene | 14.06 | 180 | 376944 | 10.93 UG/L | | 100 |

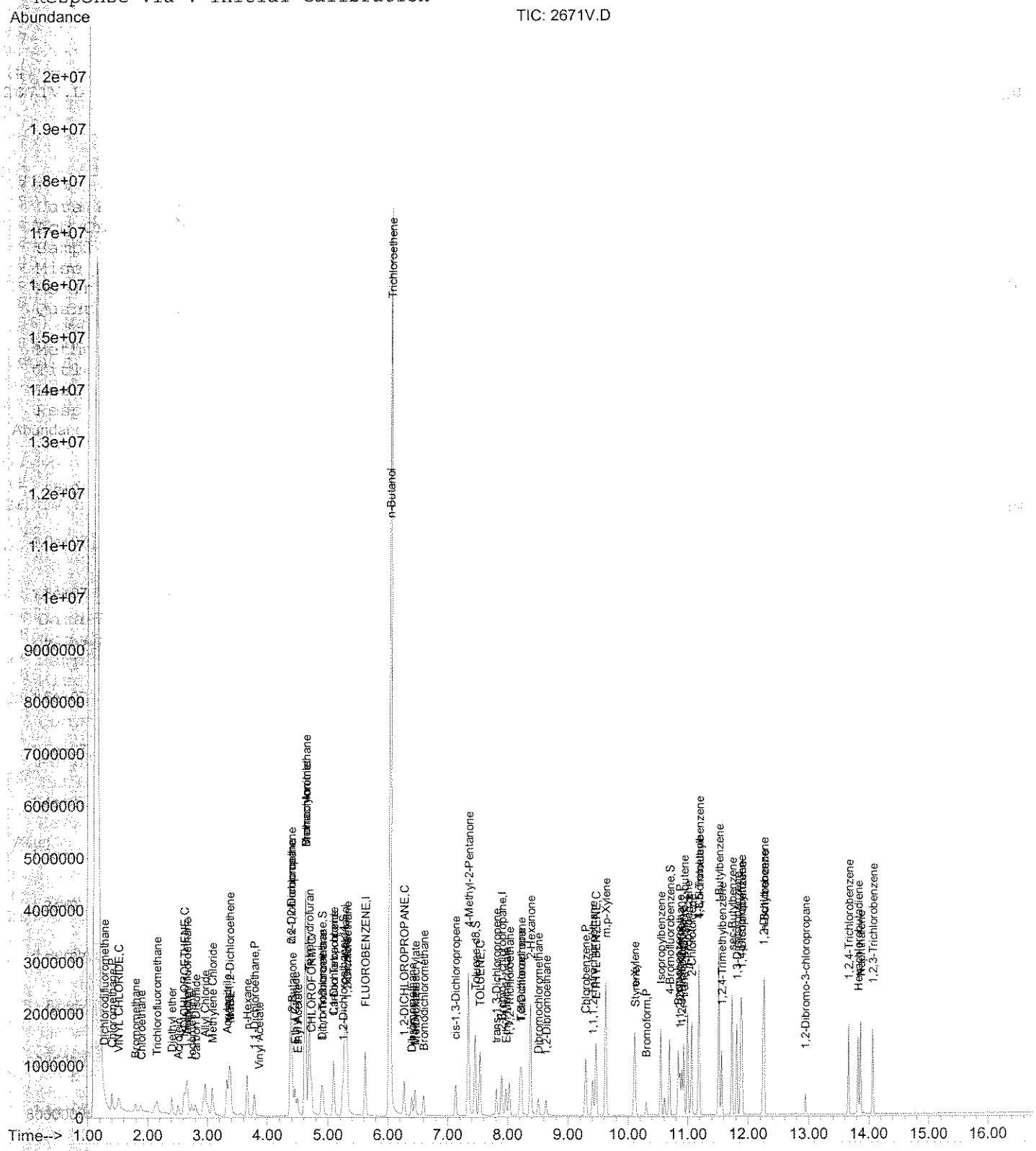
(#) = qualifier out of range (m) = manual integration



59169b

Data File : C:\HPCHEM\DATA\V110609\2671V.D  Vial: 9
Acq On : 6 Nov 2009 11:25  Operator: REGI
Sample : A864529 MSD  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 11:42 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration






59169b

R560090

# Heritage Environmental Services, LLC

A864526

GC/MS VOA

Method SW846-8260B
Sample Description 147
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2672V.D Date/Time 06Nov09 11:50:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

KB 11/11/09

R560090

# Heritage Environmental Services, LLC

A864526

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 1.0 | UG/L | |
| | 1804 | ... | | BDL | 2.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 100 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 95 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 98 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 95 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Data File : C:\HPCHEM\DATA\V110609\2672V.D  Vial: 10
Acq On : 6 Nov 2009 11:50  Operator: REGI
Sample : A864526  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 06 12:07:12 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1034424 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 362722 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 231782 | 9.53 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 95.30% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 370329 | 9.95 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 99.50% | |
| 50) Toluene-d8 | 7.46 | 98 | 984869 | 9.50 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 95.00% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 339085 | 9.75 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.50% | |
| Target Compounds | | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 24823 | 1.76 | UG/L # | 87 |
| 14) Methylene Chloride | 3.09 | 84 | 8914 | Below Cal | | 98 |
| 19) n-Hexane | 3.67 | 57 | 5653 | 0.14 | UG/L | 100 |
| 23) cis-1,2-Dichloroethene | 4.39 | 96 | 5935 | 0.26 | UG/L | 97 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 10271 | 0.22 | UG/L # | 1 |
| 51) TOLUENE | 7.53 | 91 | 14413 | 0.14 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.91 | 75 | 8119 | 0.26 | UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 19134 | Below Cal | | 100 |

(#) = qualifier out of range (m) = manual integration
2672V.D 8260VOI.M Fri Nov 06 12:07:16 2009

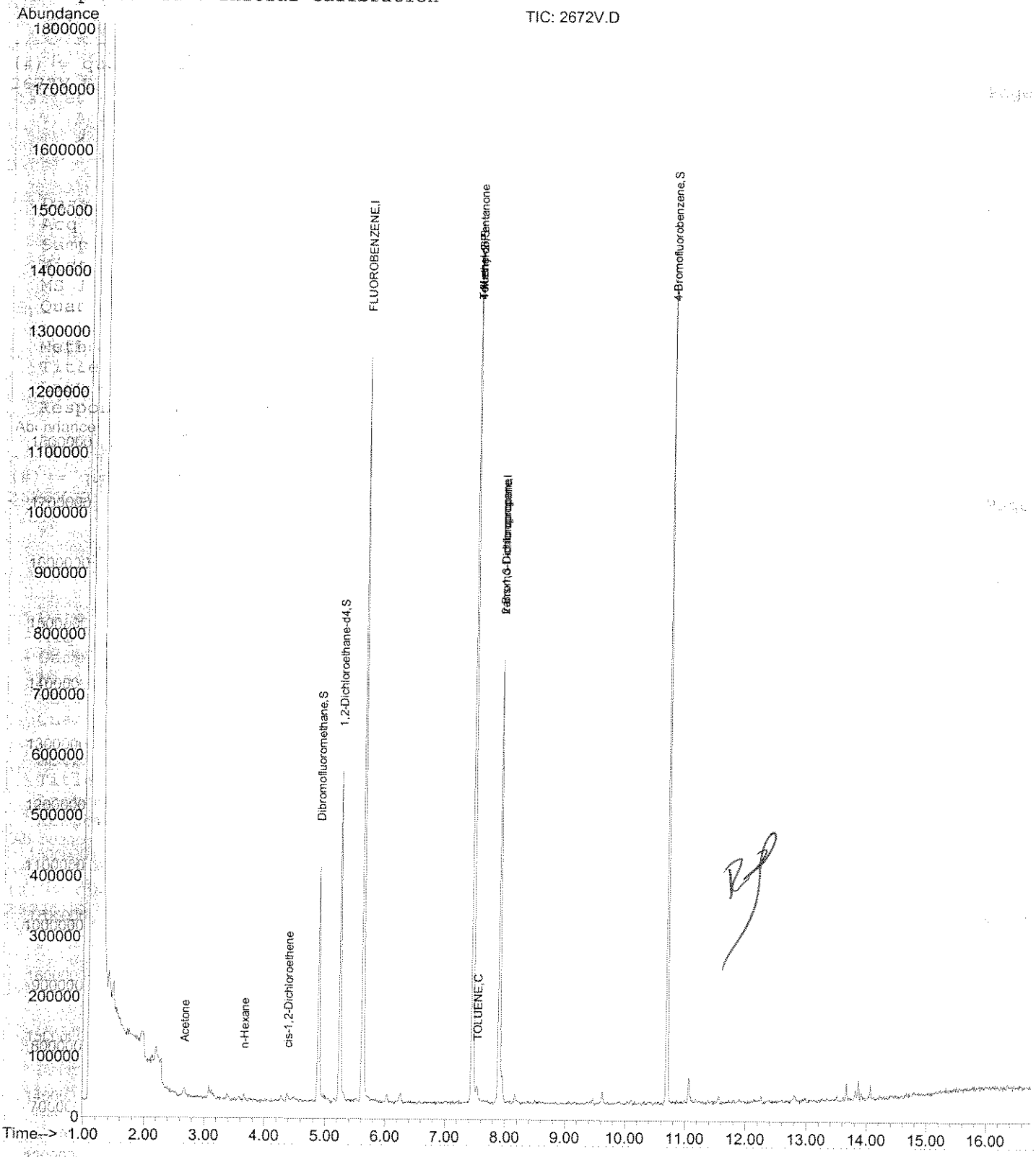


59169b

Data File : C:\HPCHEM\DATA\V110609\2672V.D
Acq On : 6 Nov 2009 11:50
Sample : A864526
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 12:07 2009

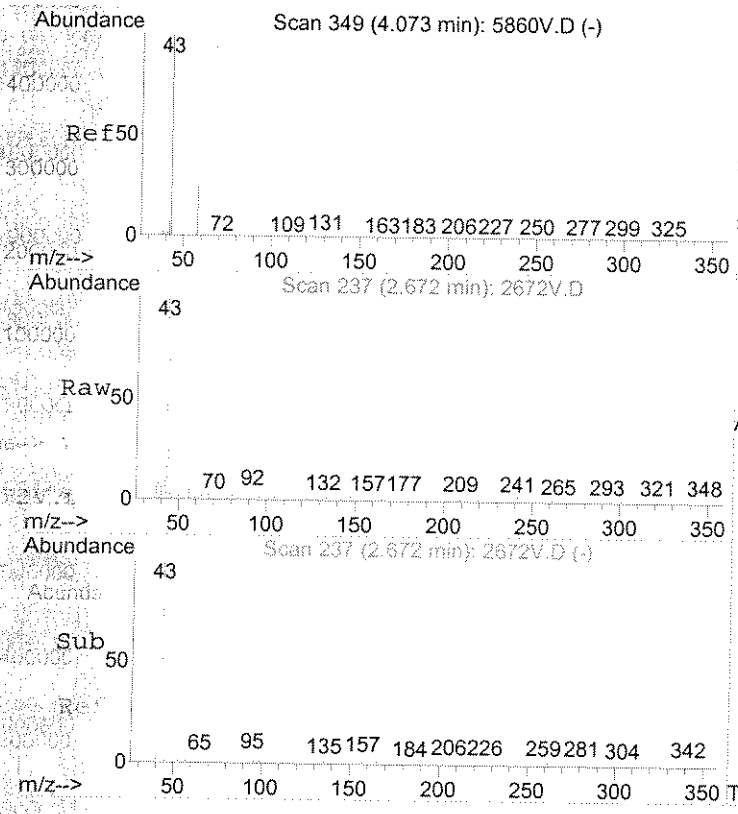
Vial: 10
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





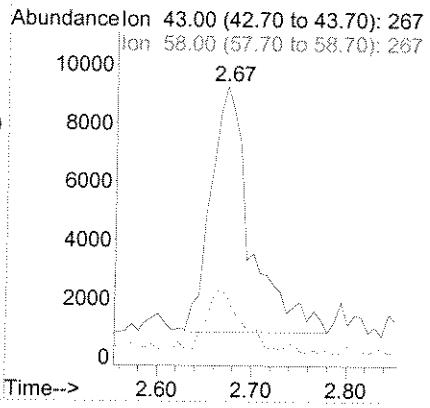

59169b

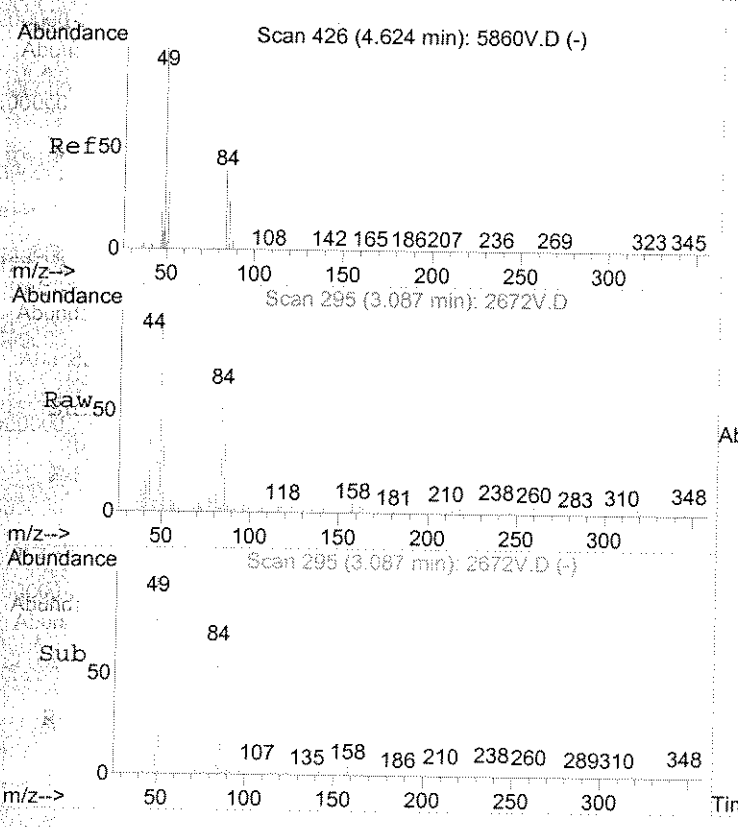



#9
Acetone
Concen: 1.76 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

Tgt Ion: 43 Resp: 24823

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 21.9 | 23.1 | 34.7# |

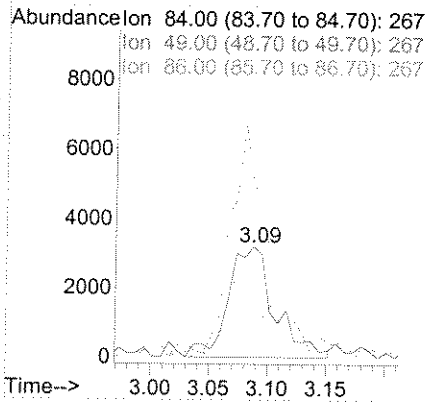


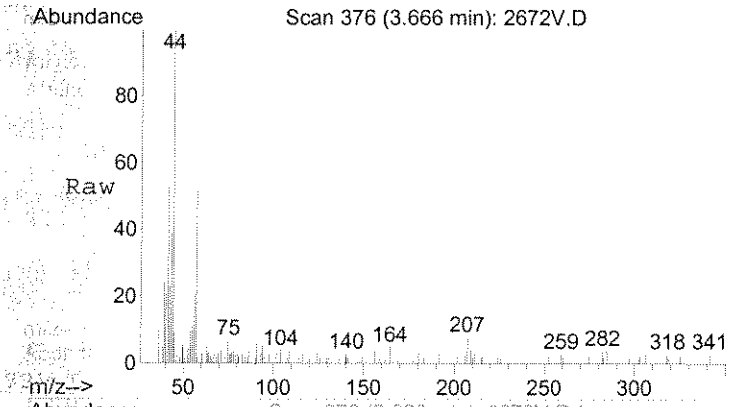




#14
Methylene Chloride
Concen: Below Cal
RT: 3.09 min Scan# 295
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

Tgt Ion: 84 Resp: 8914

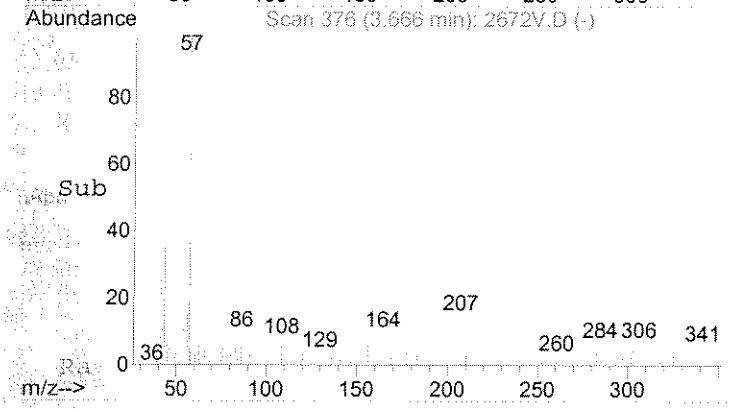
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 174.1 | 140.2 | 210.2 |
| 86 | 69.4 | 51.1 | 76.7 |

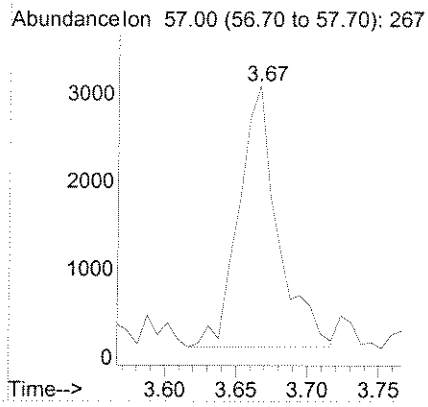


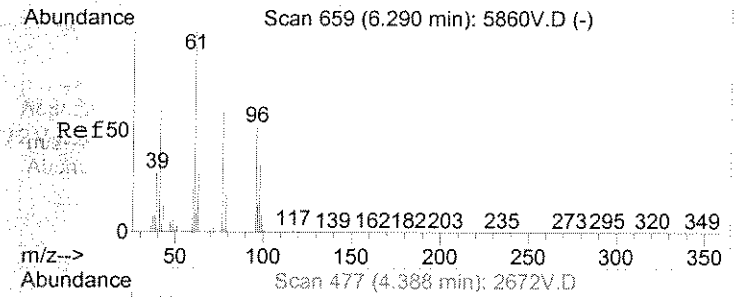



#19
n-Hexane
Concen: 0.14 UG/L
RT: 3.67 min Scan# 376
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

Tgt Ion: 57 Resp: 5653



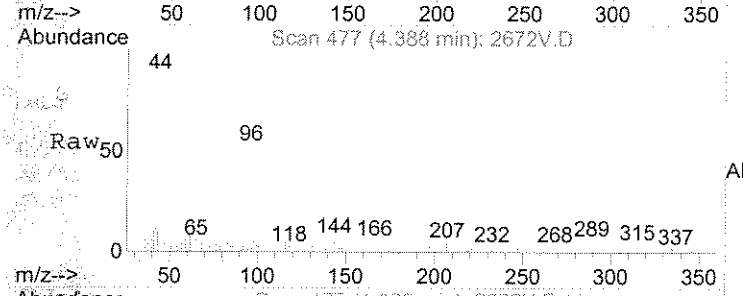



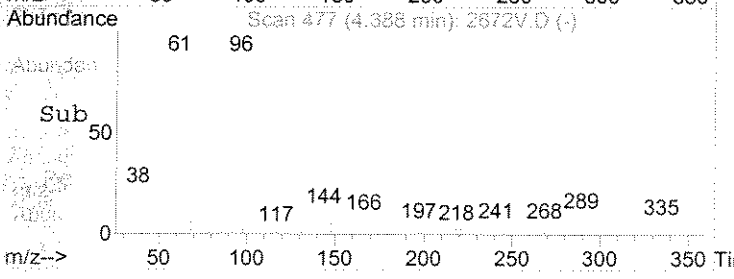



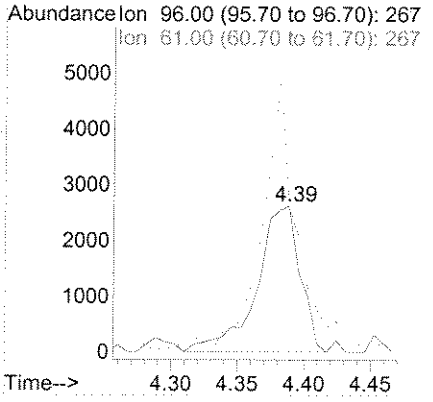

#23
cis-1,2-Dichloroethene
Concen: 0.26 UG/L
RT: 4.39 min Scan# 477
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

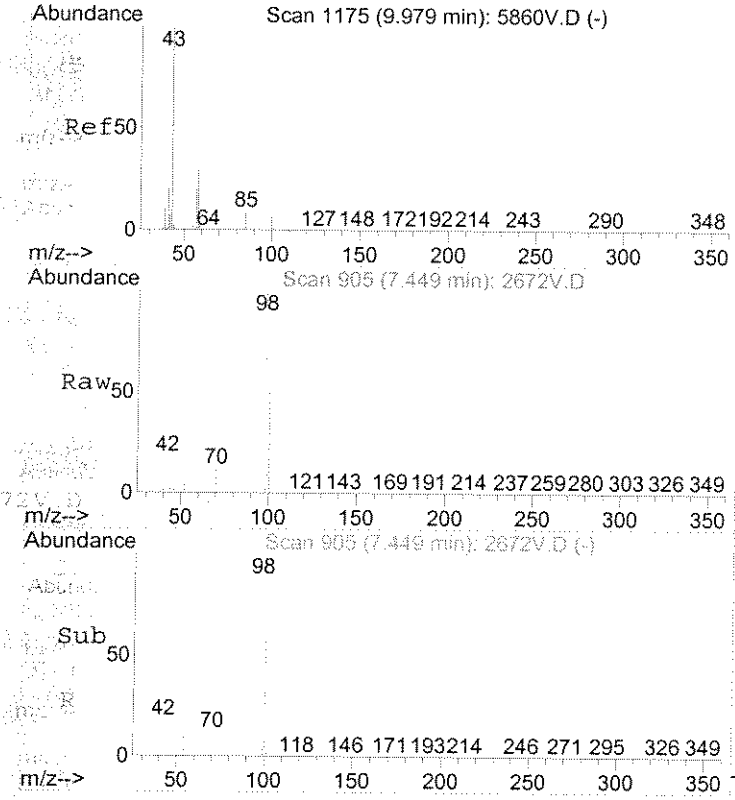
Tgt Ion: 96 Resp: 5935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 148.9 | 121.8 | 182.6 |



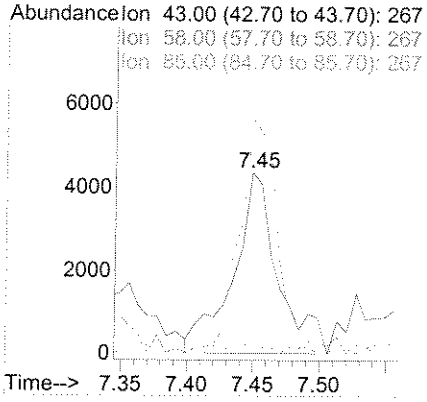



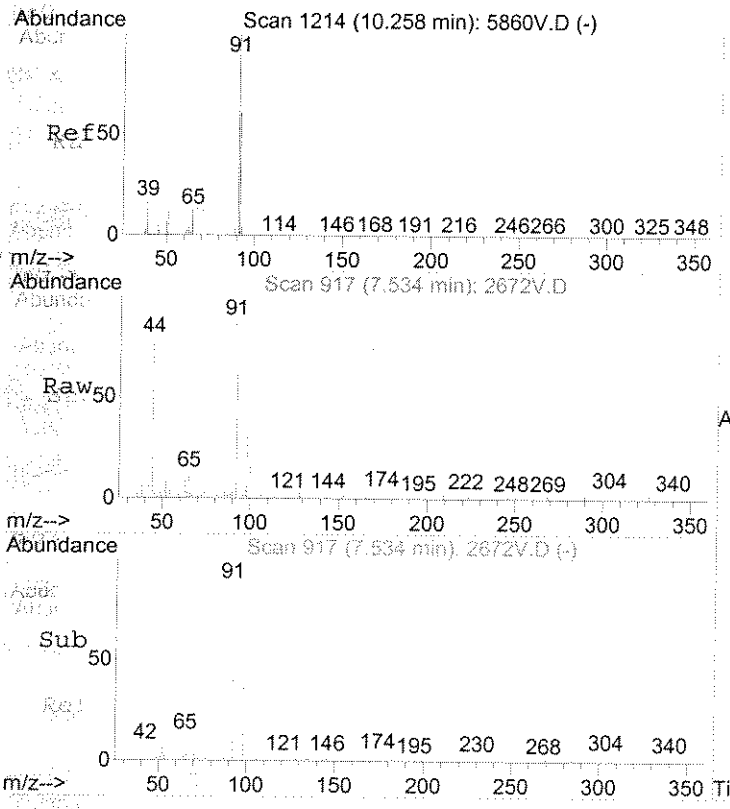



#47
4-Methyl-2-Pentanone
Concen: 0.22 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

Tgt Ion: 43 Resp: 10271

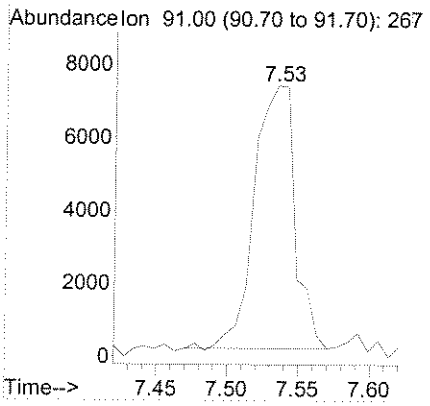
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 108.2 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

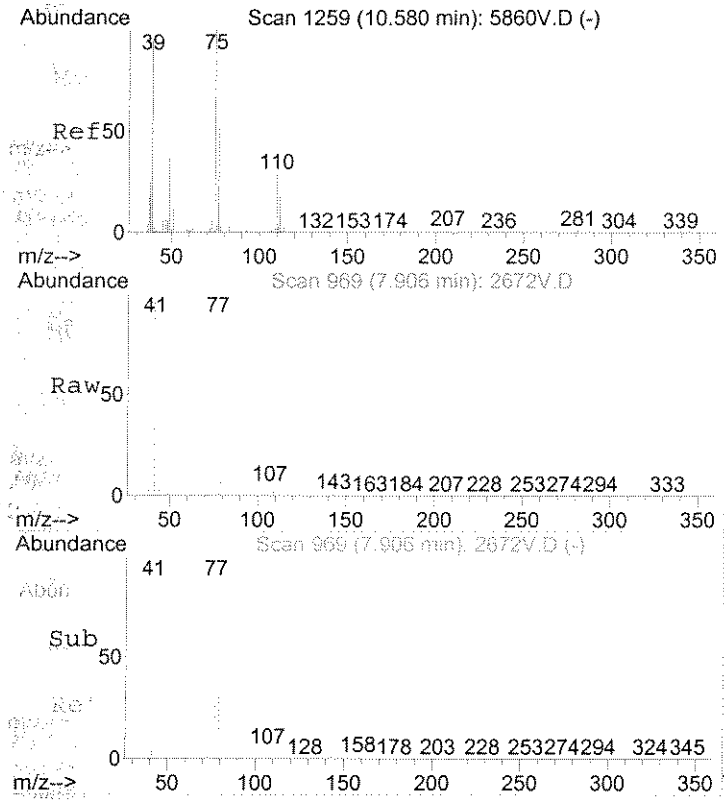



#51
TOLUENE
Concen: 0.14 UG/L
RT: 7.53 min Scan# 917
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

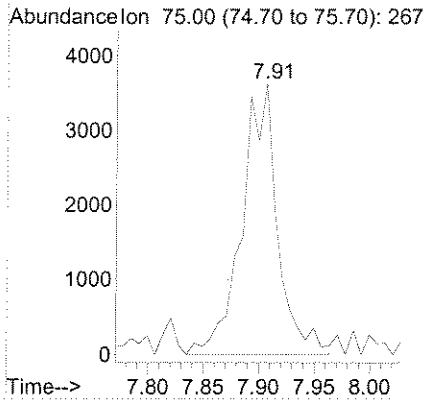
Tgt Ion: 91 Resp: 14413

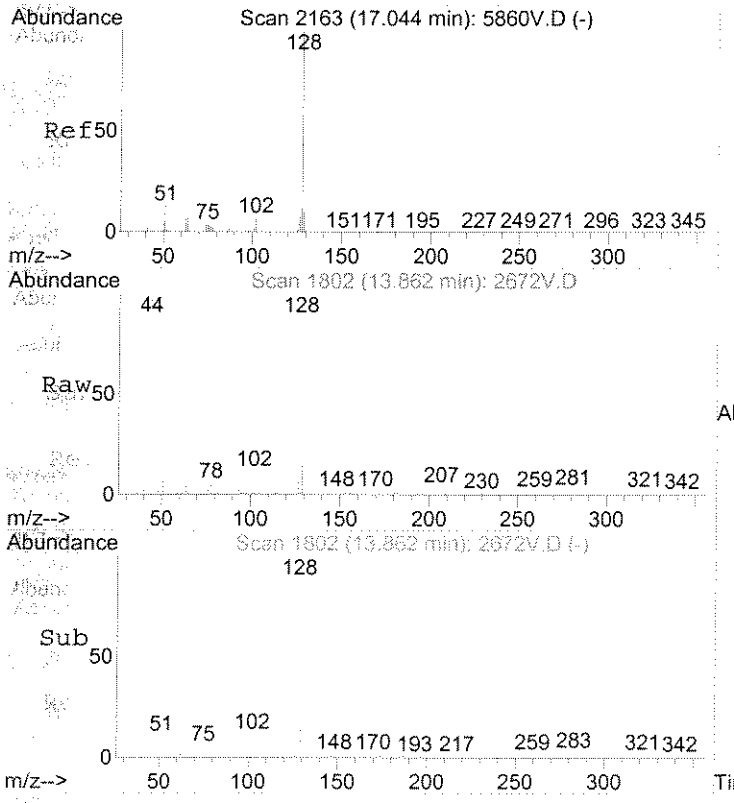





#52
trans-1,3-Dichloropropene
Concen: 0.26 UG/L
RT: 7.91 min Scan# 969
Delta R.T. 0.10 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

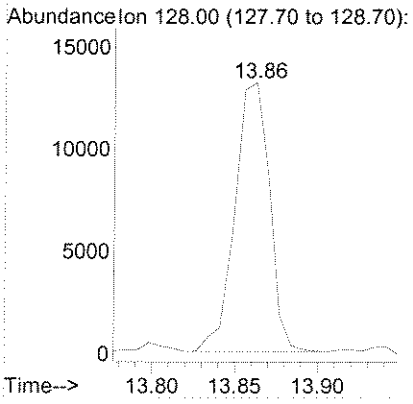
Tgt Ion: 75 Resp: 8119




#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2672V.D
Acq: 6 Nov 2009 11:50

Tgt Ion:128 Resp: 19134



R560090

# Heritage Environmental Services, LLC

A864527

GC/MS VOA

Method SW846-8260B
Sample Description 132
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2673V.D Date/Time 06Nov09 12:15:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | 2.5 | | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 9.8 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 1.8 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

KS 11/7/09

R560090

# Heritage Environmental Services, LLC

A864527

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 33 | | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 95 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 96 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Data File : C:\HPCHEM\DATA\V110609\2673V.D
Acq On : 6 Nov 2009 12:15
Sample : A864527
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 12:32:00 2009

Vial: 11
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1026629 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 369331 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 230606 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.60% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 375508 | 10.17 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 101.70% | |
| 50) Toluene-d8 | 7.46 | 98 | 983814 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.60% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 337808 | 9.54 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.40% | |
| **Target Compounds** | | | | | Qvalue |
| 3) ~~Chloromethane~~ | 1.40 | 50 | 8179 | 0.22 UG/L | 100 |
| 9) ~~Acetone~~ | 2.67 | 43 | 19434 | 1.39 UG/L | 98 |
| 14) ~~Methylene Chloride~~ | 3.08 | 84 | 6813 | Below Cal # | 81 |
| 18) trans-1,2-Dichloroethene 1.8 | 3.36 | 96 | 40167 | 1.82 UG/L | 84 |
| 20) 1,1-Dichloroethane 2.5 | 3.78 | 63 | 109643 | 2.53 UG/L | 100 |
| 23) cis-1,2-Dichloroethene 9.8 | 4.38 | 96 | 223999 | 9.76 UG/L | 97 |
| 31) ~~1,1,1-Trichloroethane~~ | 4.91 | 97 | 25006 | 0.75 UG/L | 93 |
| 40) Trichloroethene 33 | 6.03 | 130 | 794446 | 33.08 UG/L | 95 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.44 | 43 | 10971 | 0.24 UG/L # | 13 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.91 | 75 | 8268 | 0.26 UG/L | 100 |
| 88) ~~Naphthalene~~ | 13.86 | 128 | 15216 | Below Cal | 100 |

(#) = qualifier out of range (m) = manual integration
2673V.D 8260VOI.M Fri Nov 06 12:32:02 2009



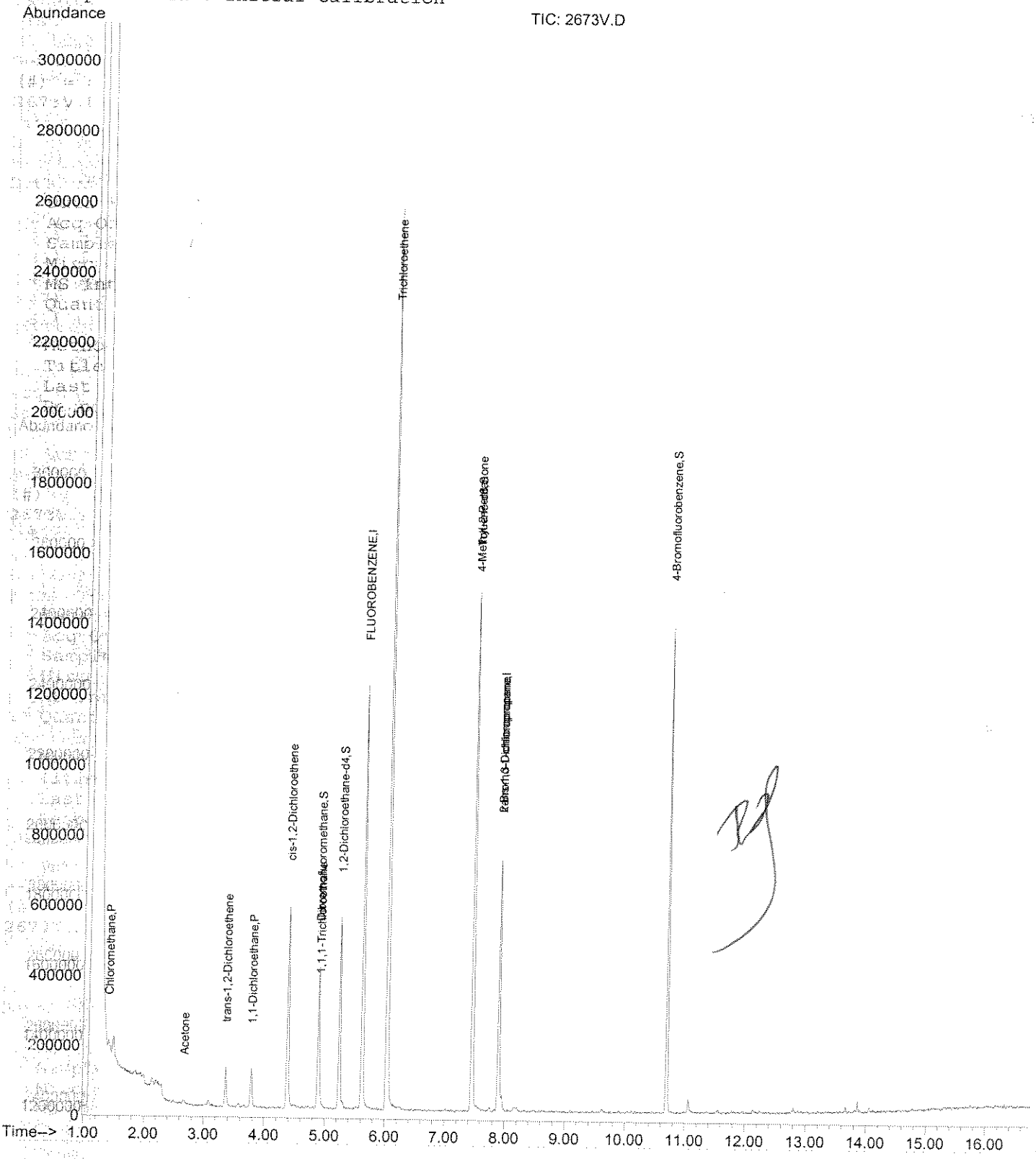
59169b

Data File : C:\HPCHEM\DATA\V110609\2673V.D
Acq On : 6 Nov 2009 12:15
Sample : A864527
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 12:32 2009

Vial: 11
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

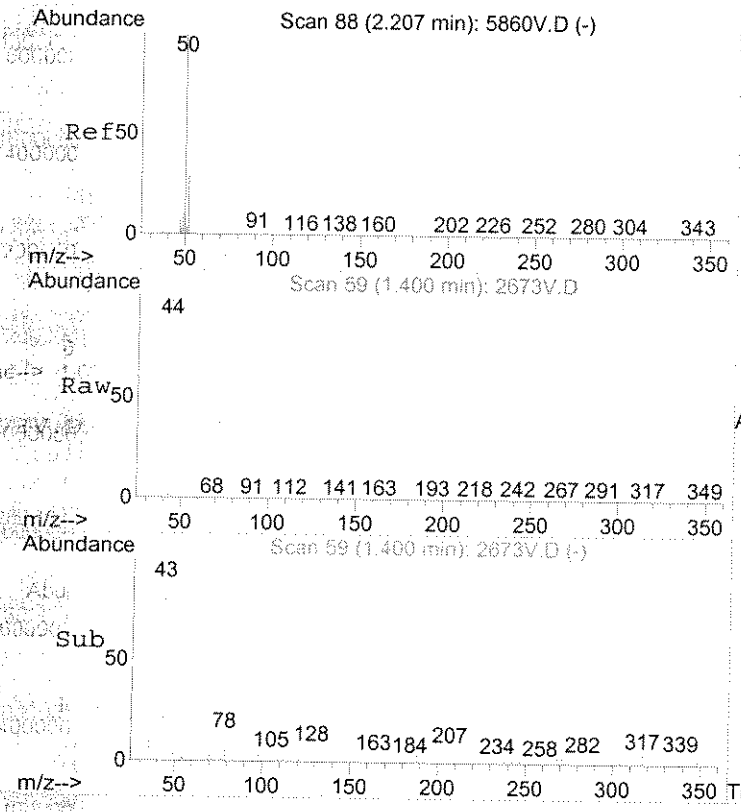
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



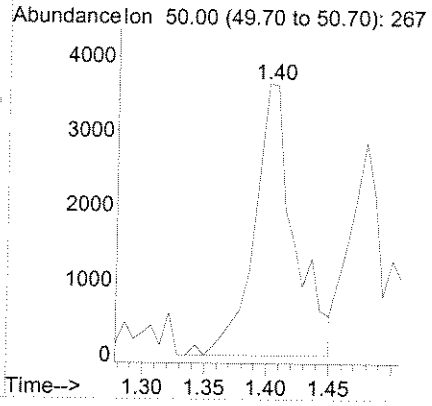


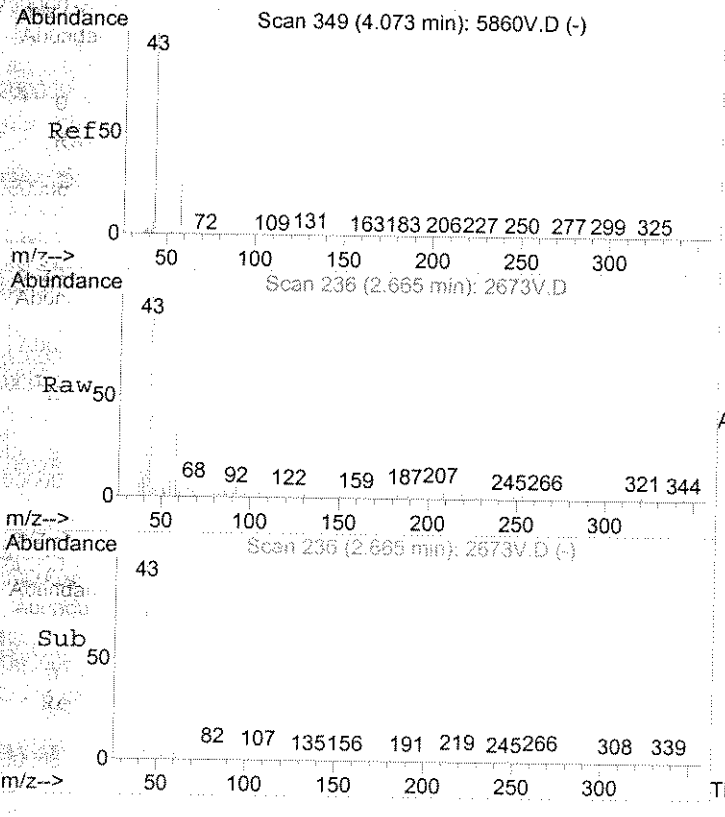

59169b




#3
Chloromethane
Concen: 0.22 UG/L
RT: 1.40 min Scan# 59
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 50 Resp: 8179

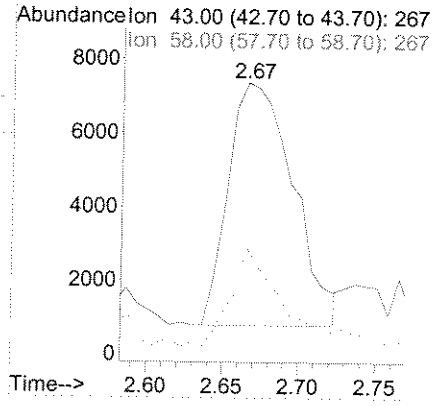


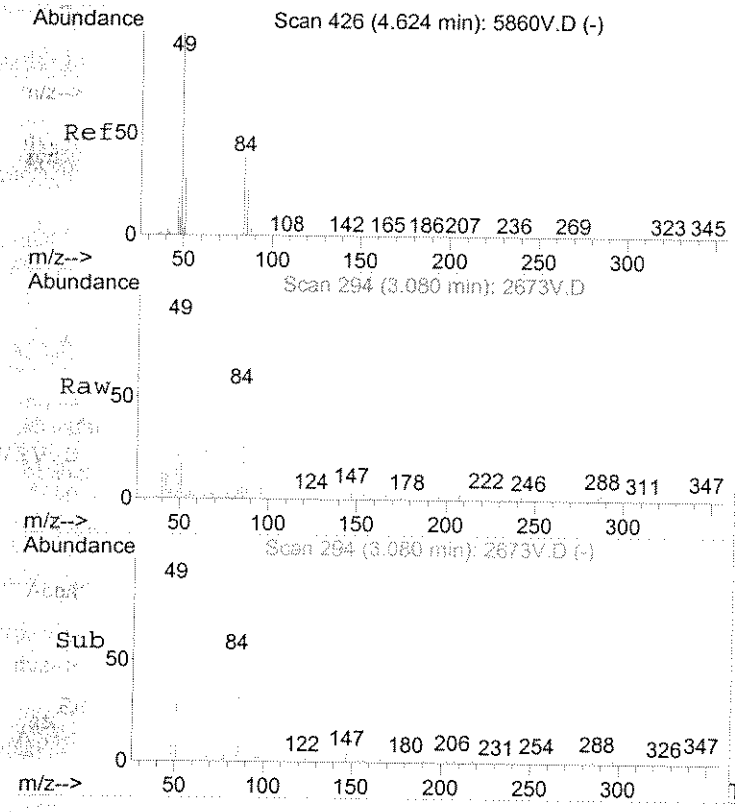




#9
Acetone
Concen: 1.39 UG/L
RT: 2.67 min Scan# 236
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 43 Resp: 19434

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.1 | 23.1 | 34.7 |

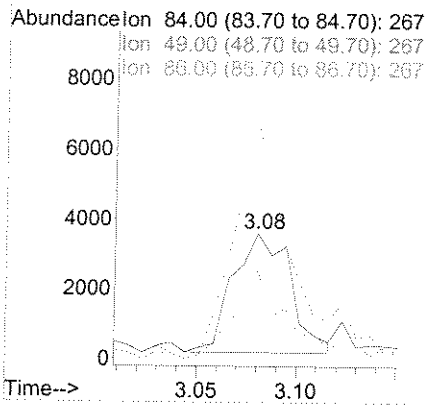


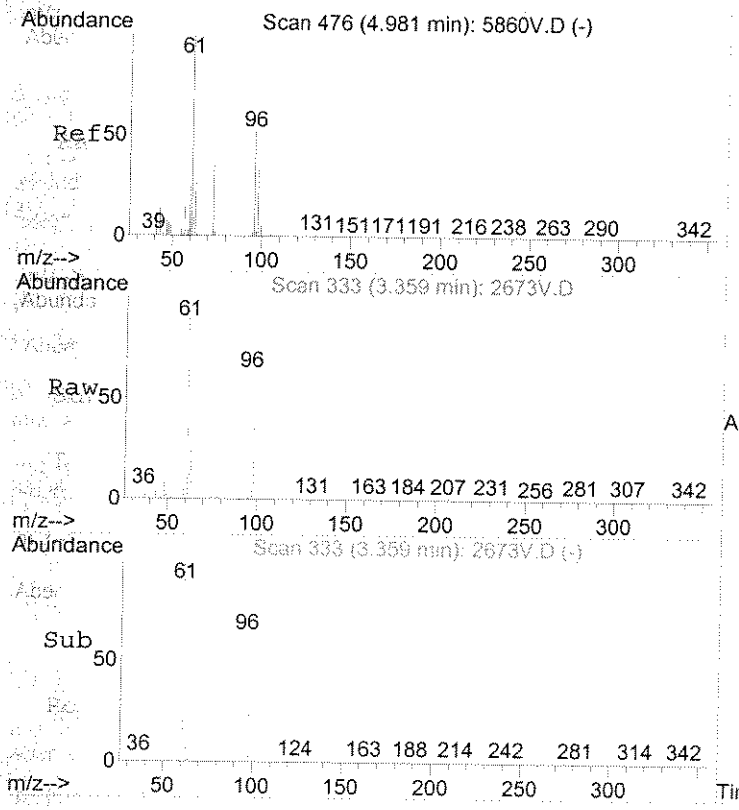



#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 84 Resp: 6813

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 201.1 | 140.2 | 210.2 |
| 86 | 79.9 | 51.1 | 76.7# |

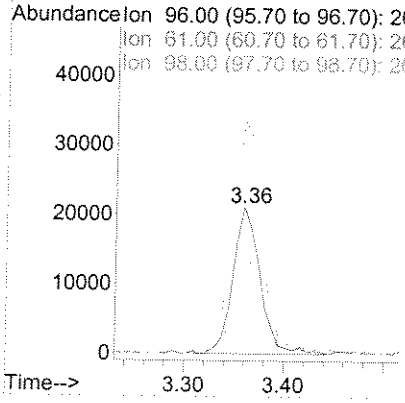


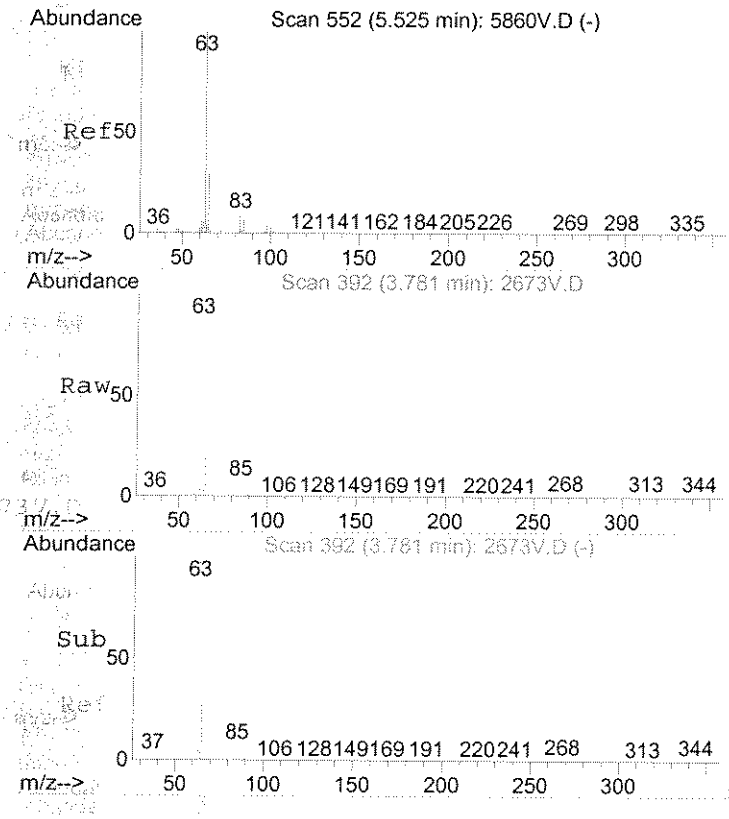




#18
trans-1,2-Dichloroethene
Concen: 1.82 UG/L
RT: 3.36 min Scan# 333
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 96 Resp: 40167

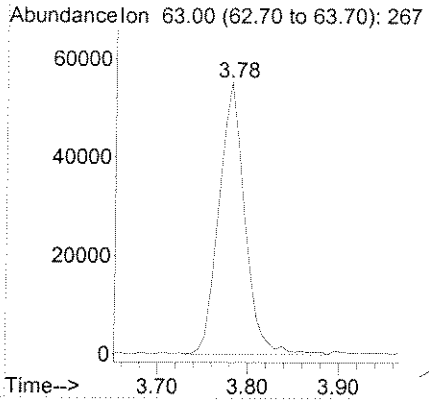
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 169.3 | 114.1 | 171.1 |
| 98 | 65.0 | 50.7 | 76.1 |

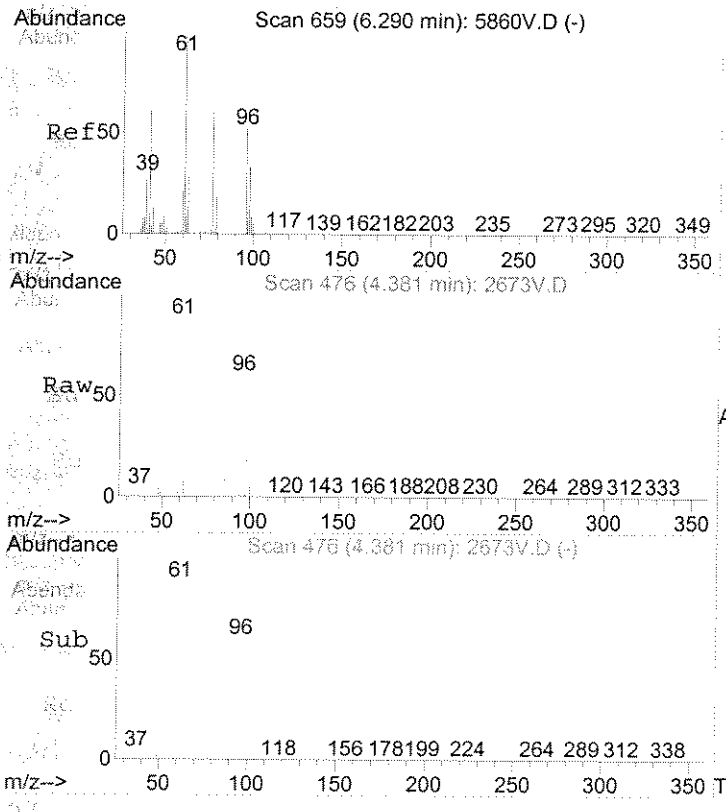





#20
1,1-Dichloroethane
Concen: 2.53 UG/L
RT: 3.78 min Scan# 392
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 63 Resp: 109643

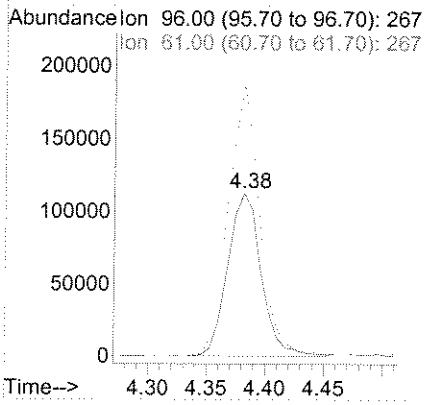


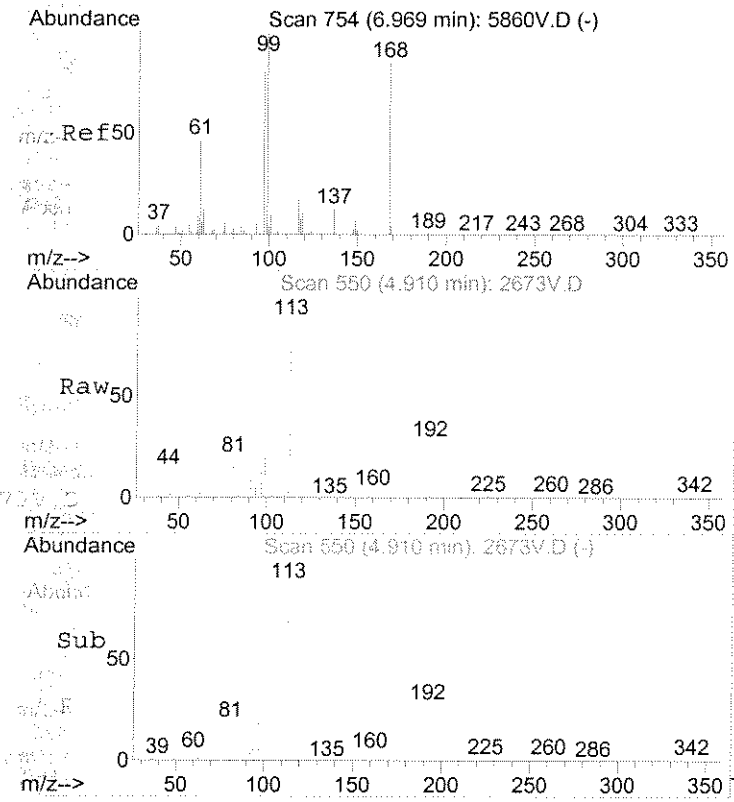




#23
cis-1,2-Dichloroethene
Concen: 9.76 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 96 Resp: 223999

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 156.2 | 121.8 | 182.6 |

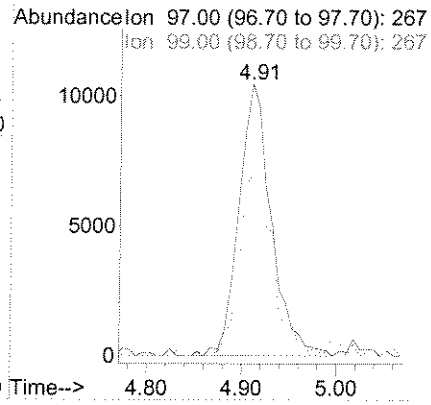


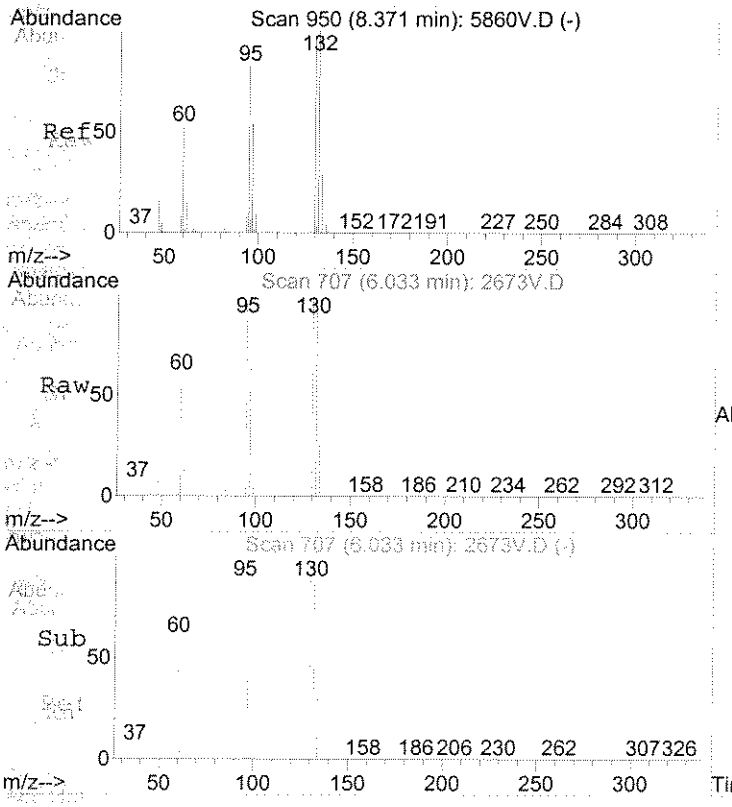



#31
1,1,1-Trichloroethane
Concen: 0.75 UG/L
RT: 4.91 min Scan# 550
Delta R.T. -0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 97 Resp: 25006

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 69.6 | 51.1 | 76.7 |

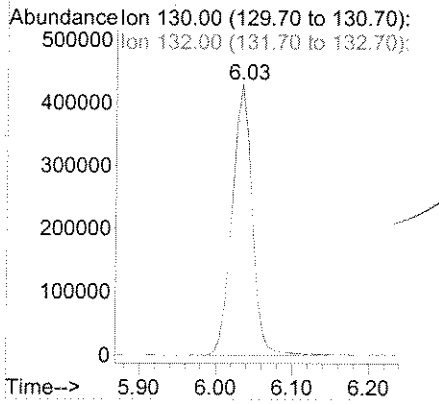


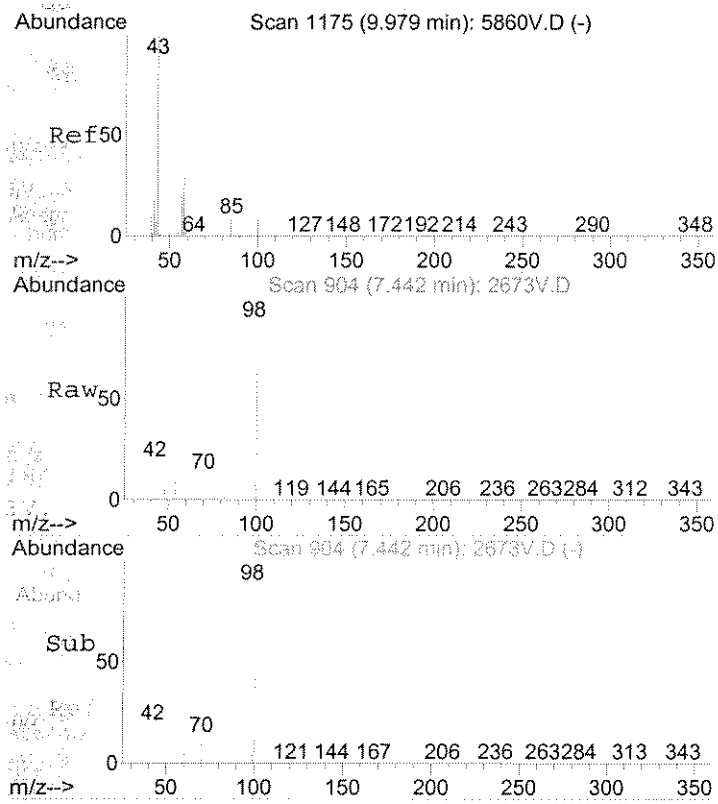




#40
Trichloroethene
Concen: 33.08 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion:130 Resp: 794446

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 97.0 | 82.0 | 123.0 |

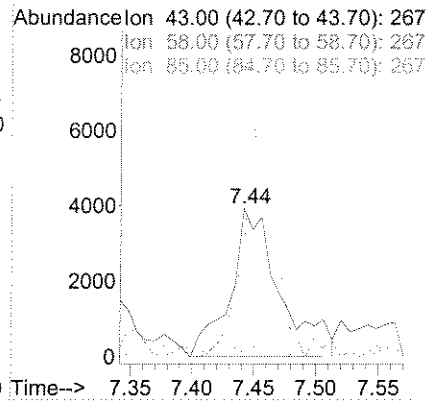


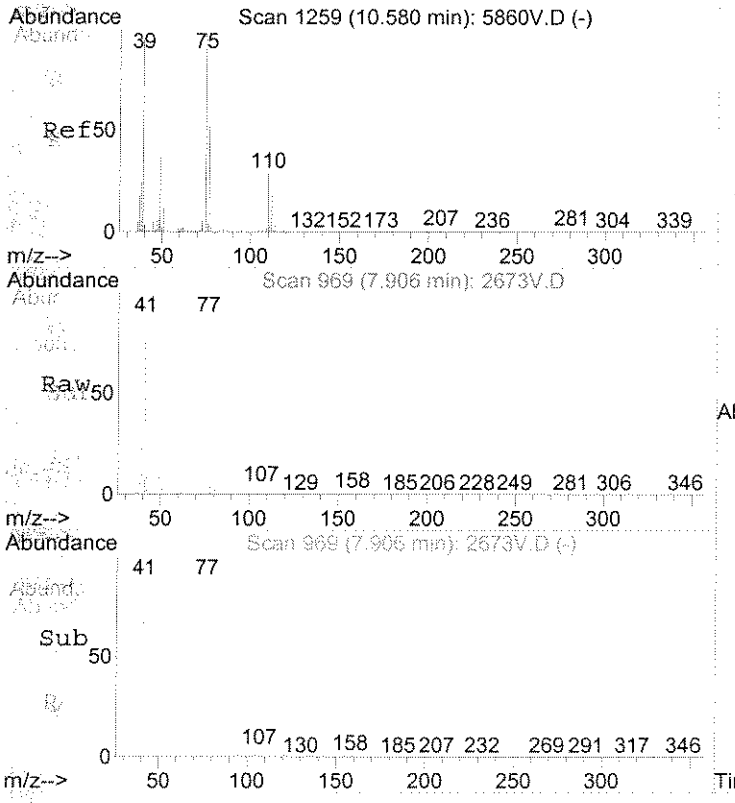



#47
4-Methyl-2-Pentanone
Concen: 0.24 UG/L
RT: 7.44 min Scan# 904
Delta R.T. 0.10 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion: 43 Resp: 10971

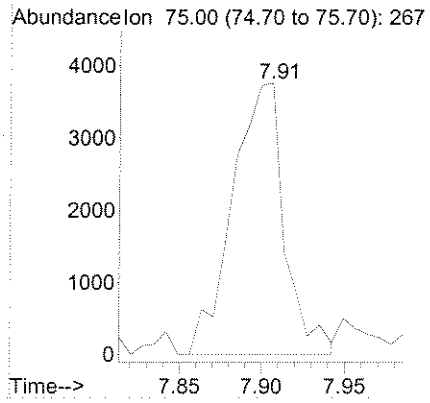
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 95.9 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

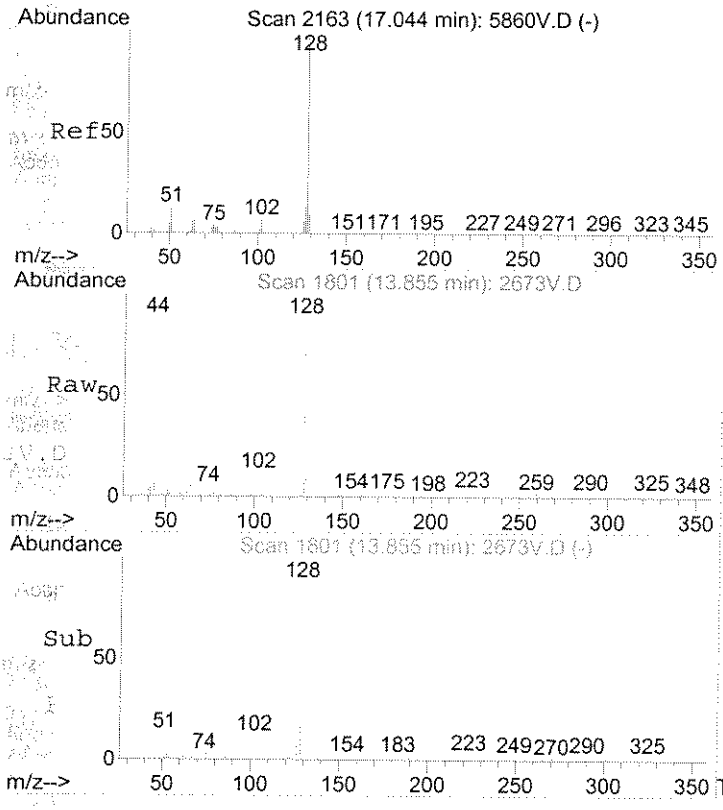



#52
trans-1,3-Dichloropropene
Concen: 0.26 UG/L
RT: 7.91 min Scan# 969
Delta R.T. 0.10 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

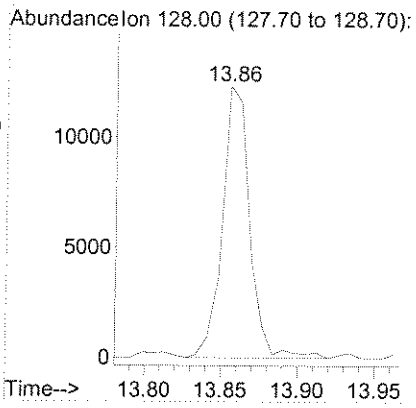
Tgt Ion: 75 Resp: 8268






#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1801
Delta R.T. 0.00 min
Lab File: 2673V.D
Acq: 6 Nov 2009 12:15

Tgt Ion:128 Resp: 15216



R560090

# Heritage Environmental Services, LLC

A864528

GC/MS VOA

Method SW846-8260B
Sample Description 148
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2674V.D Date/Time 06Nov09 12:40:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | 4.9 | | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 39 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11-11-09

R560090

# Heritage Environmental Services, LLC

A864528

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | EX | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | 48 | | 1.0 | UG/L | |
| | 1804 | ... | | BDL | 2.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 101 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 99 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Data File : C:\HPCHEM\DATA\V110609\2674V.D
Acq On : 6 Nov 2009 12:40
Sample : A864528
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 12:56:53 2009

Vial: 12
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

Dilute 1:10

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1005482 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 340774 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 234306 | 9.91 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 99.10% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 369959 | 10.23 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 102.30% | |
| 50) Toluene-d8 | 7.46 | 98 | 965042 | 9.57 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.70% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 328316 | 10.05 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 100.50% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE 48 | 1.52 | 62 | 1508166 | 48.18 UG/L | 97 |
| 9) ~~Acetone~~ | 2.67 | 43 | 32128 | 2.34 UG/L | 99 |
| 10) ~~1,1-DICHLOROETHENE~~ | 2.61 | 96 | 17968 | 0.88 UG/L | 100 |
| 14) ~~Methylene Chloride~~ | 3.08 | 84 | 9211 | Below Cal | 89 |
| 18) trans-1,2-Dichloroethene 39 | 3.36 | 96 | 837426 | 38.74 UG/L | 84 |
| 20) 1,1-Dichloroethane 4.9 | 3.78 | 63 | 209126 | 4.92 UG/L | 100 |
| 21) ~~2-Butanone~~ | 4.38 | 72 | 117844 | 29.73 UG/L # | 1 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 11417408 | 507.78 UG/L | 93 |
| 40) Trichloroethene | 6.03 | 130 | 2800444 | 119.04 UG/L | 93 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.46 | 43 | 8256 | 0.18 UG/L # | 1 |
| 51) ~~TOLUENE~~ | 7.53 | 91 | 11358 | 0.12 UG/L | 100 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.89 | 75 | 5828 | 0.19 UG/L | 100 |
| 59) Tetrachloroethene | 8.20 | 166 | 7172 | 0.28 UG/L | 94 |
| 88) Naphthalene | 13.86 | 128 | 11856 | Below Cal | 100 |

(#) = qualifier out of range (m) = manual integration
2674V.D 8260VOI.M Fri Nov 06 12:56:55 2009



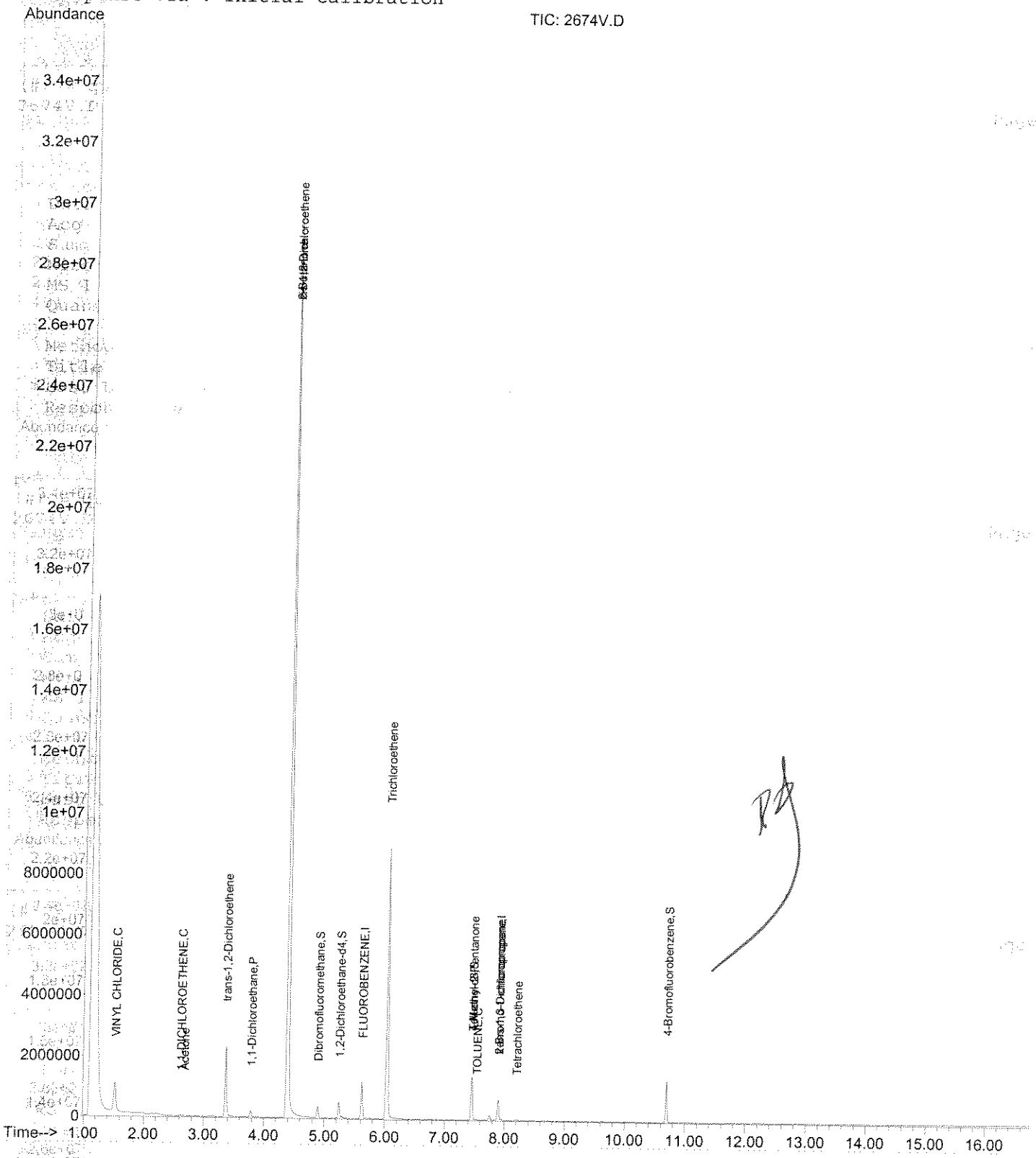
59169b

Data File : C:\HPCHEM\DATA\V110609\2674V.D
Acq On : 6 Nov 2009 12:40
Sample : A864528
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 12:56 2009

Vial: 12
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

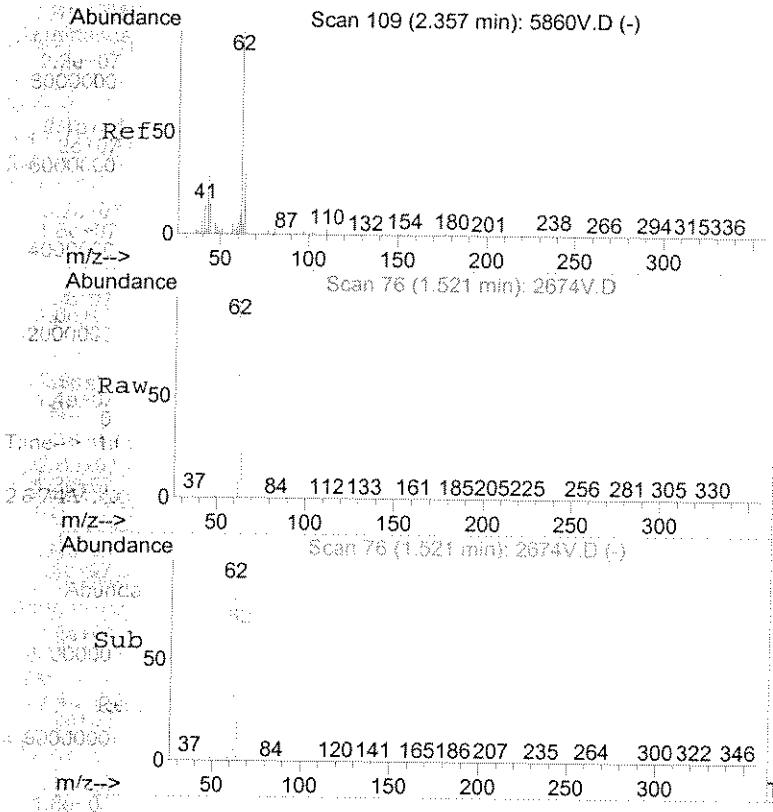
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





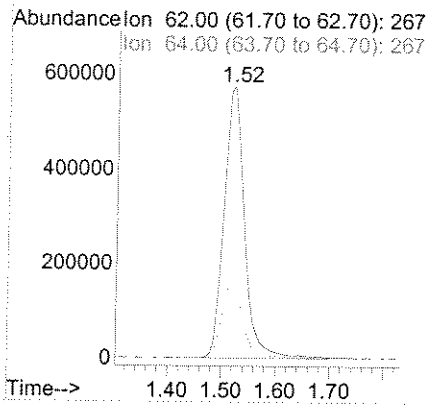

59169b

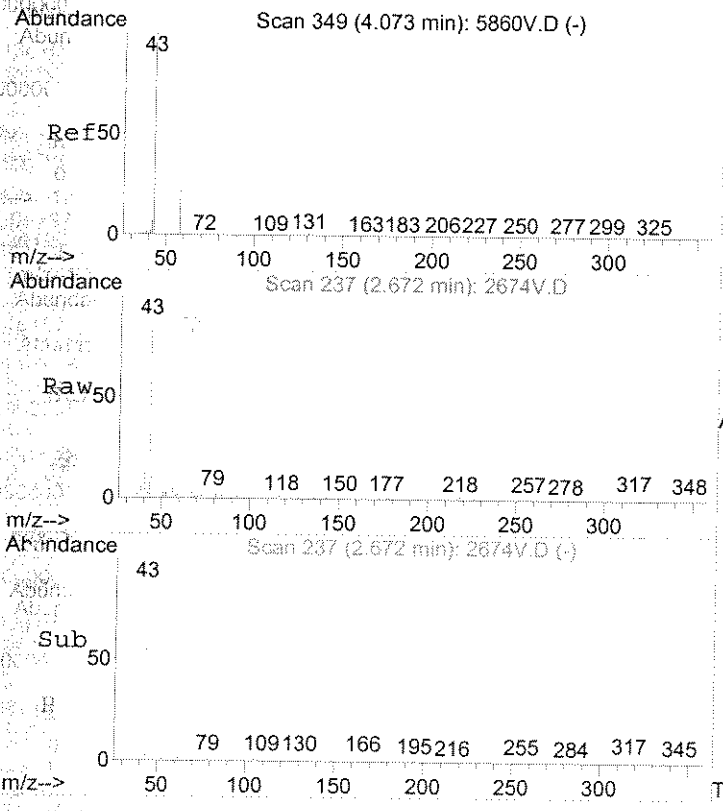



#4
VINYL CHLORIDE
Concen: 48.18 UG/L
RT: 1.52 min Scan# 76
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 62 Resp: 1508166

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 29.4 | 24.9 | 37.3 |

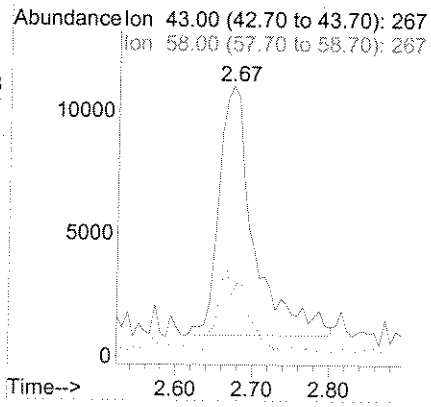


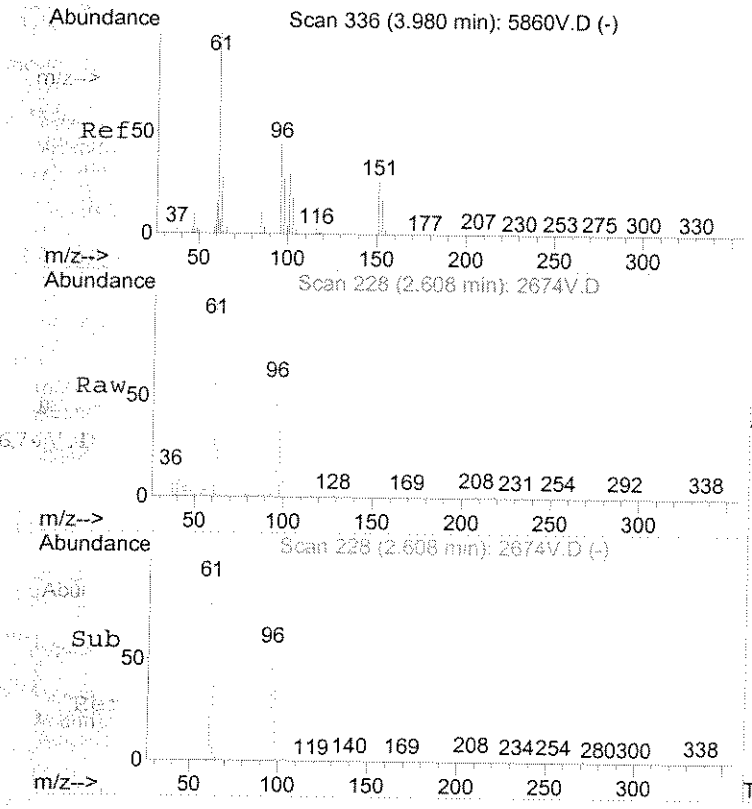




#9
Acetone
Concen: 2.34 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 43 Resp: 32128

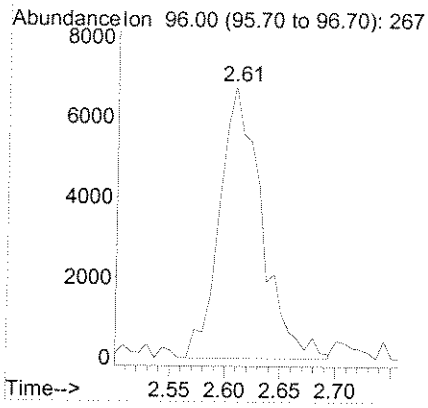
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 28.6 | 23.1 | 34.7 |

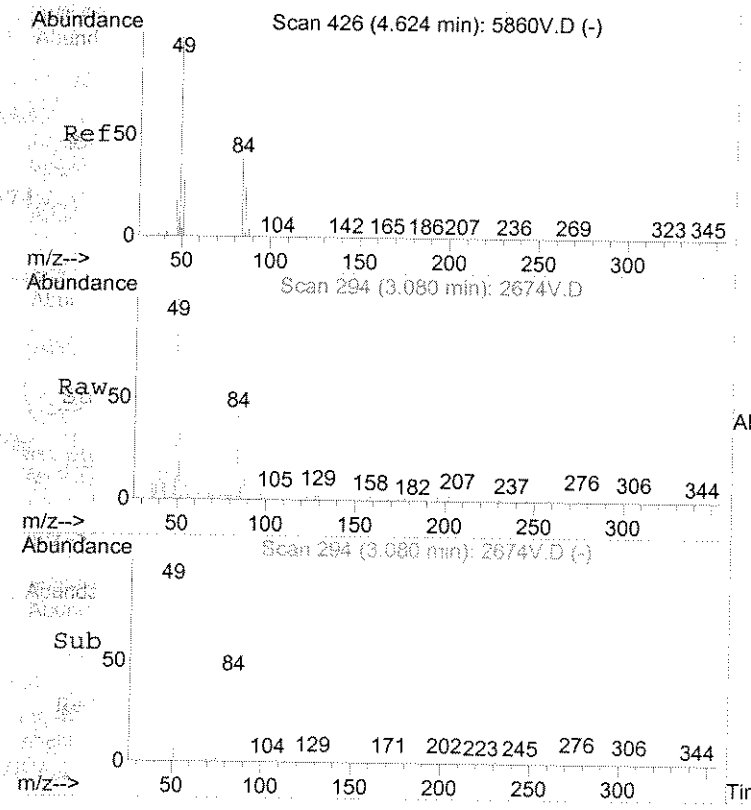





#10
1,1-DICHLOROETHENE
Concen: 0.88 UG/L
RT: 2.61 min Scan# 228
Delta R.T. -0.00 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 96 Resp: 17968

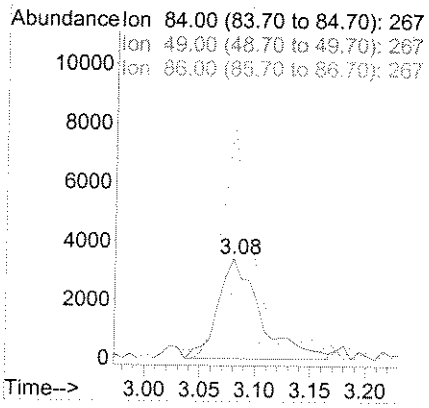


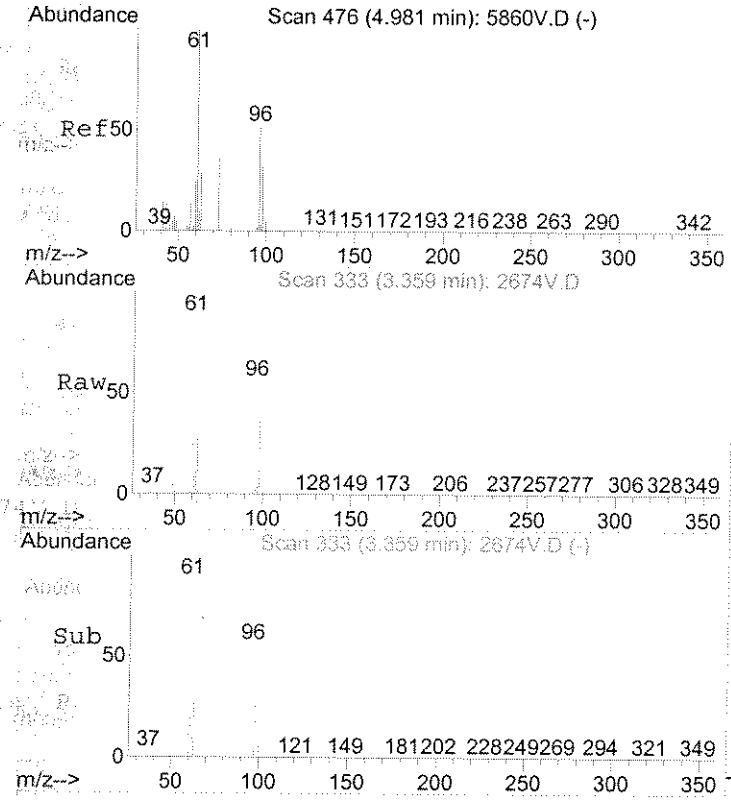




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 84 Resp: 9211

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 192.0 | 140.2 | 210.2 |
| 86 | 70.2 | 51.1 | 76.7 |

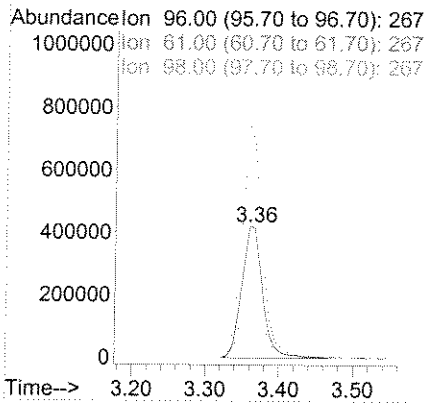


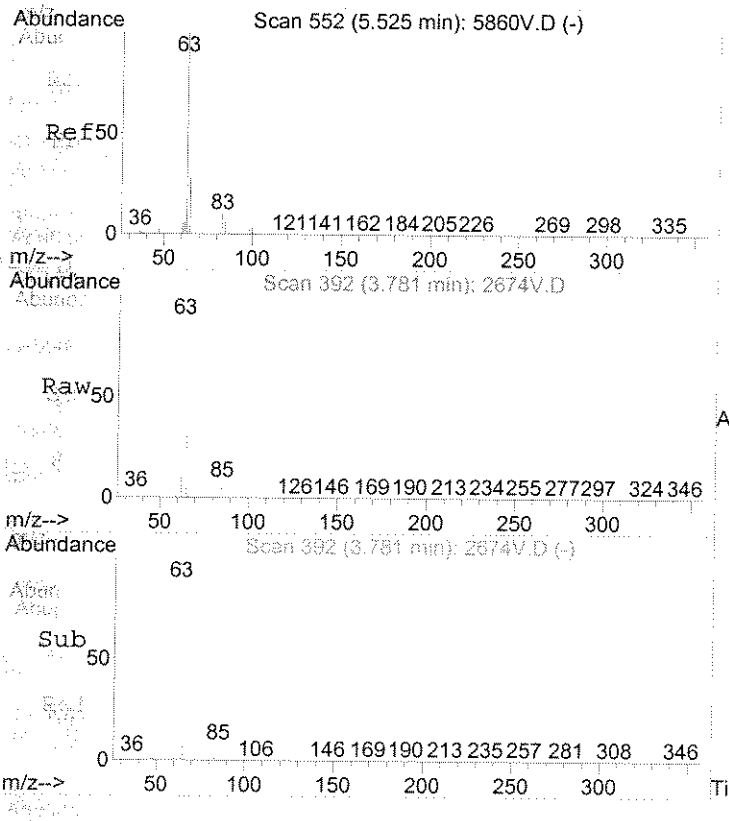



#18
trans-1,2-Dichloroethene
Concen: 38.74 UG/L
RT: 3.36 min Scan# 333
Delta R.T. -0.00 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 96 Resp: 837426

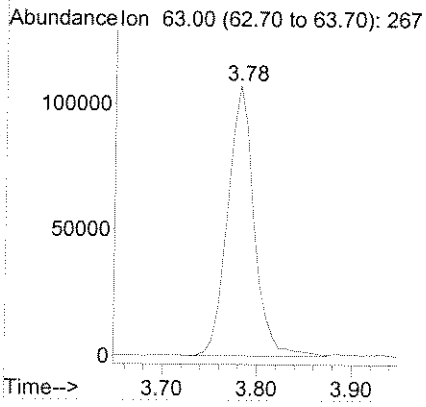
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 170.8 | 114.1 | 171.1 |
| 98 | 64.4 | 50.7 | 76.1 |

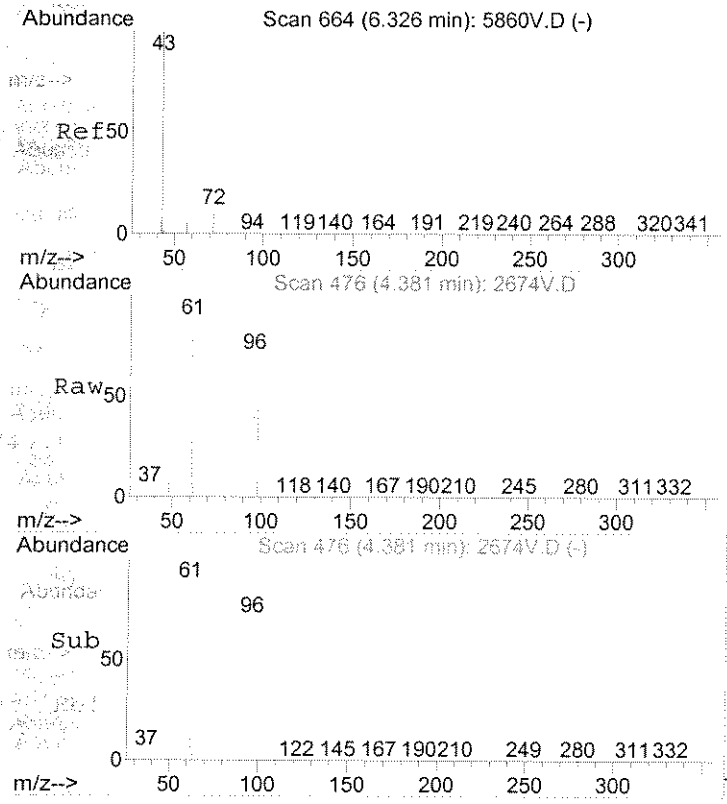



#20
1,1-Dichloroethane
Concen: 4.92 UG/L
RT: 3.78 min Scan# 392
Delta R.T. -0.00 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 63 Resp: 209126

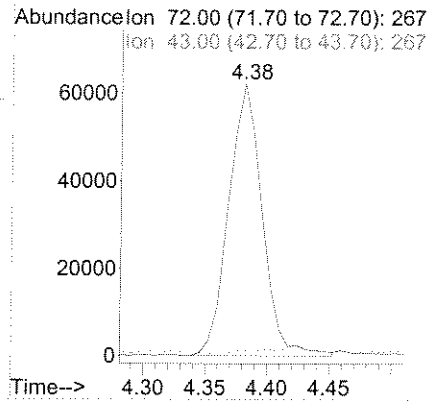


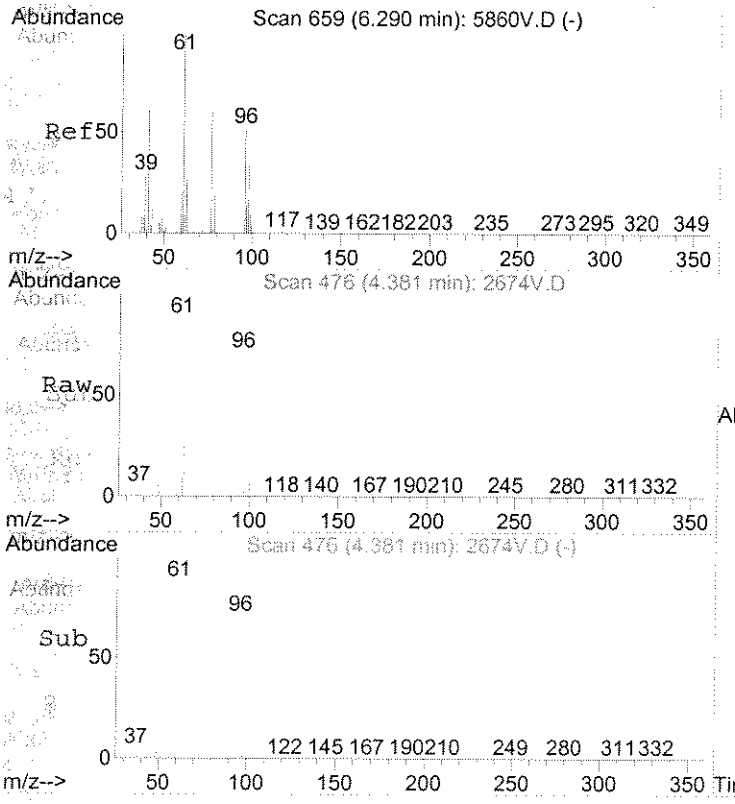



#21
2-Butanone
Concen: 29.73 UG/L
RT: 4.38 min Scan# 476
Delta R.T. -0.04 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 72 Resp: 117844

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |

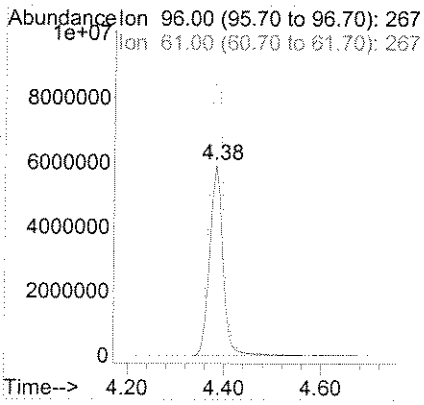


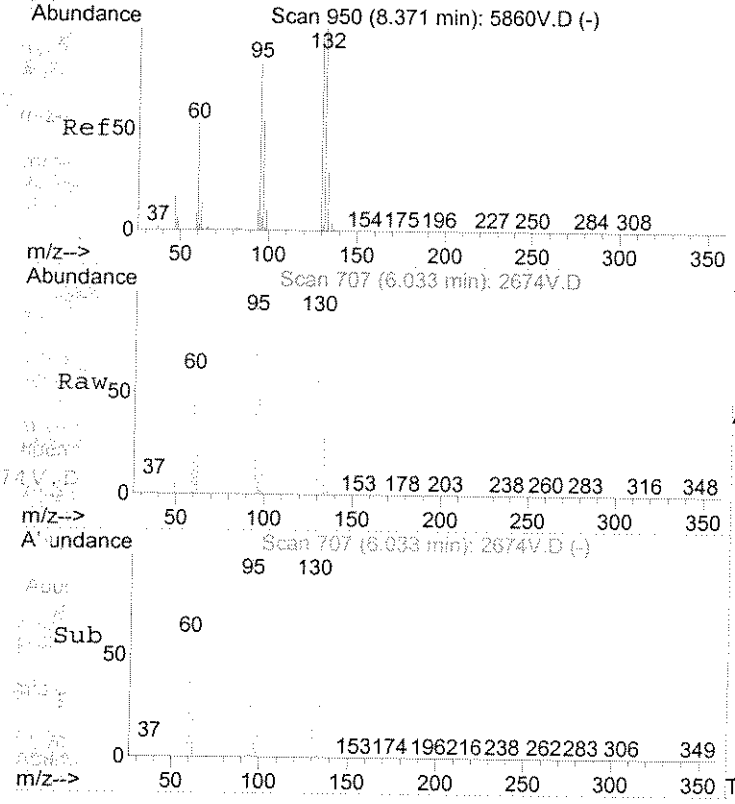




#23
cis-1,2-Dichloroethene
Concen: 507.78 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 96 Resp:11417408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 160.7 | 121.8 | 182.6 |

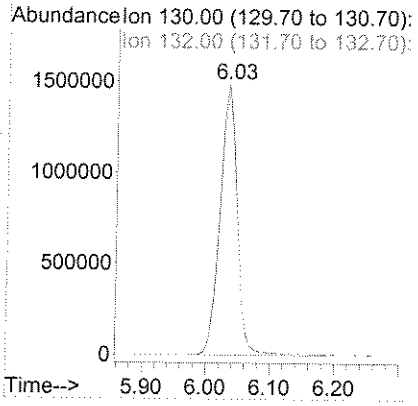


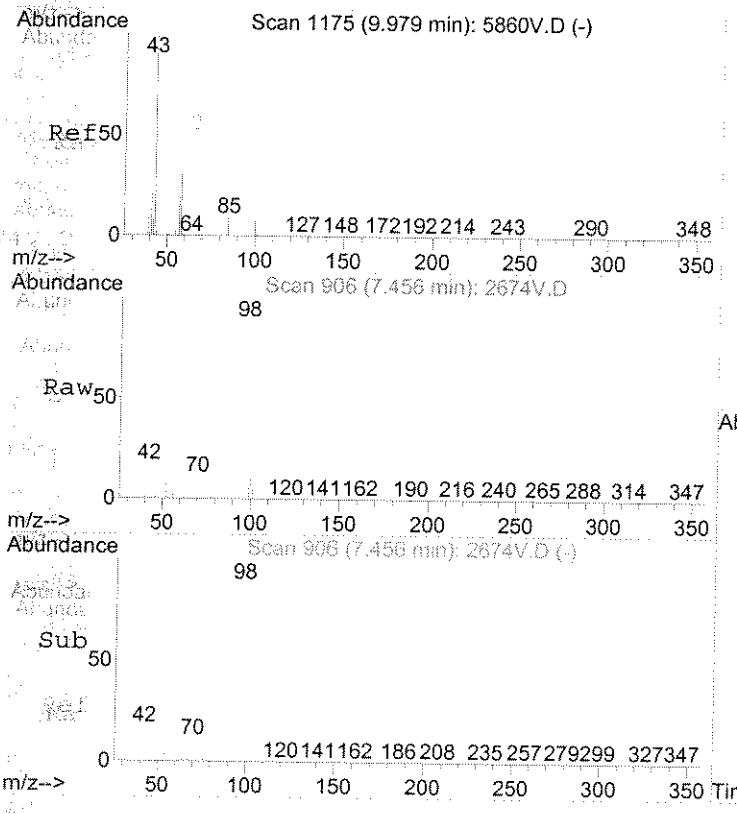



#40
Trichloroethene
Concen: 119.04 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion:130 Resp: 2800444

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.7 | 82.0 | 123.0 |

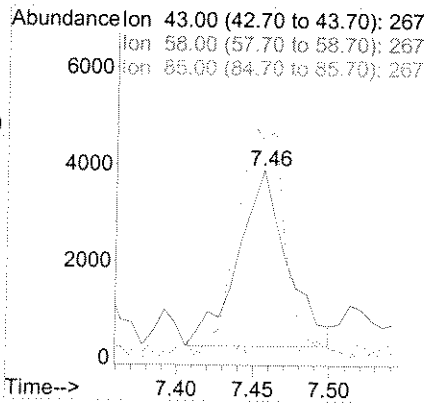


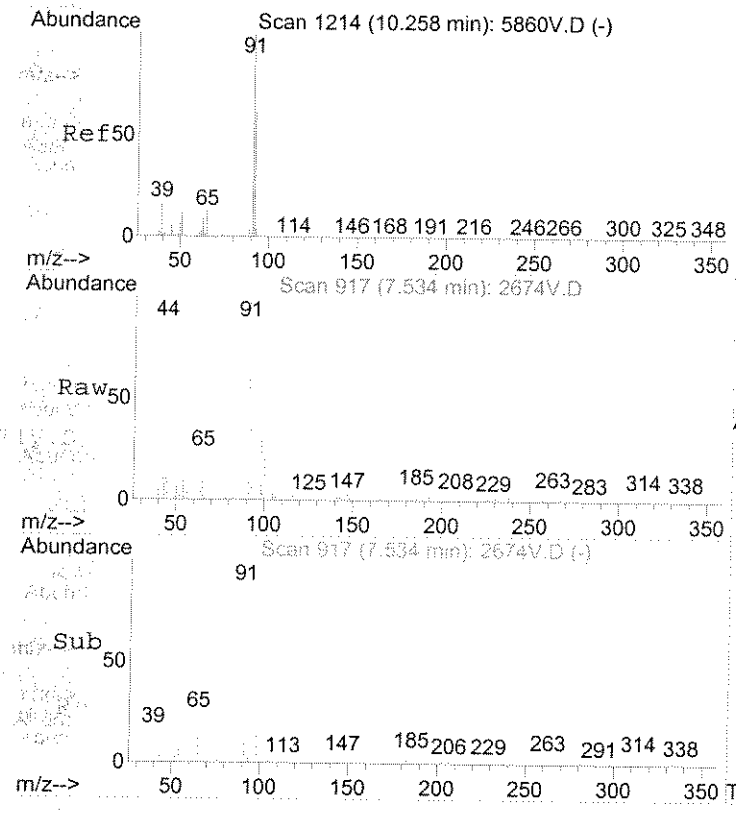




#47
4-Methyl-2-Pentanone
Concen: 0.18 UG/L
RT: 7.46 min Scan# 906
Delta R.T. 0.11 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 43 Resp: 8256

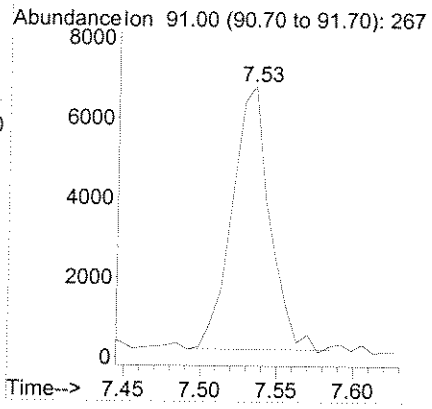
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 132.8 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

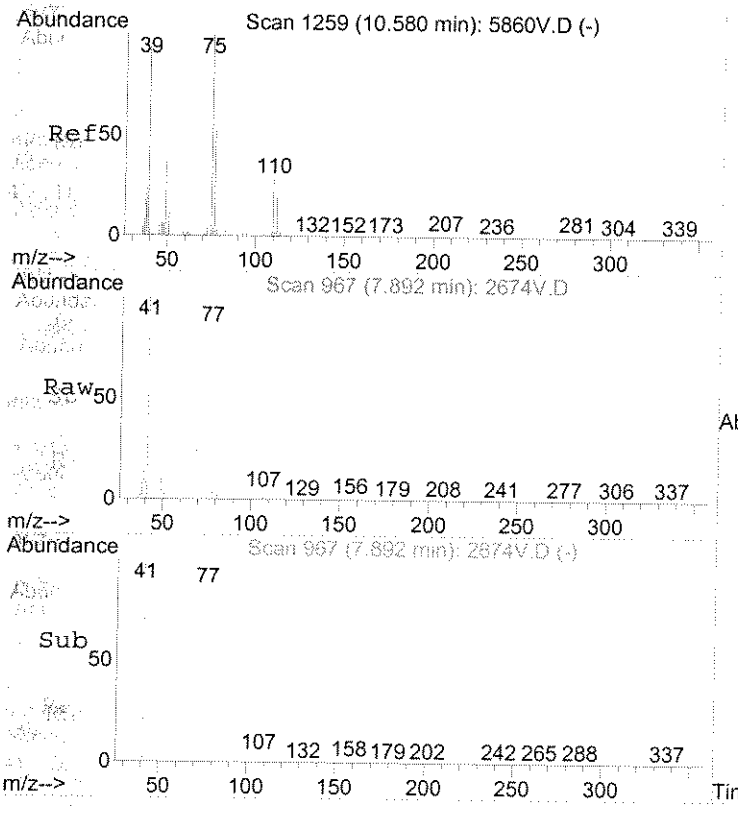





#51
TOLUENE
Concen: 0.12 UG/L
RT: 7.53 min Scan# 917
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

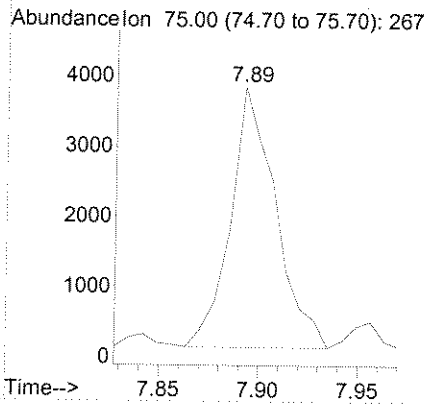
Tgt Ion: 91 Resp: 11358

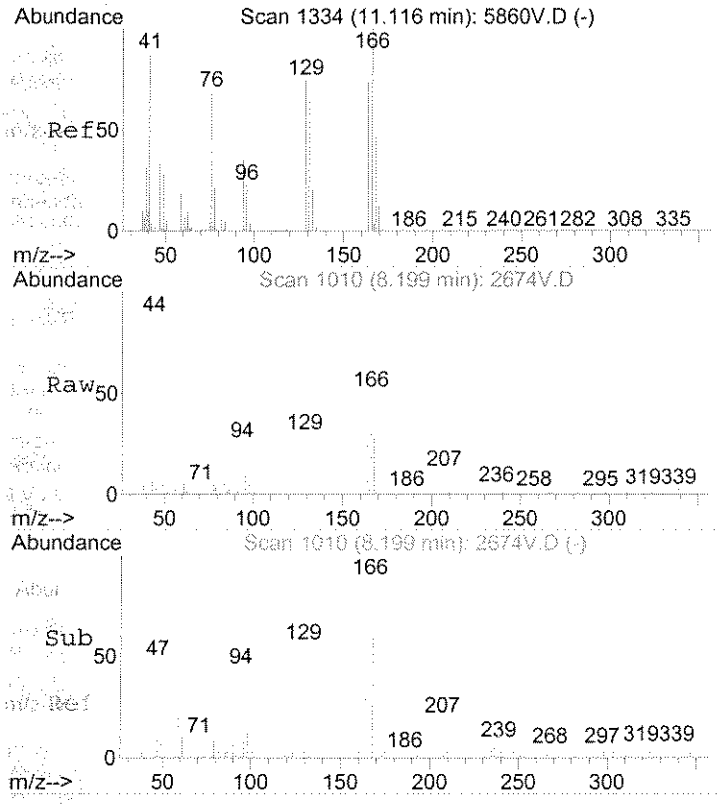



#52
trans-1,3-Dichloropropene
Concen: 0.19 UG/L
RT: 7.89 min Scan# 967
Delta R.T. 0.09 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion: 75 Resp: 5828

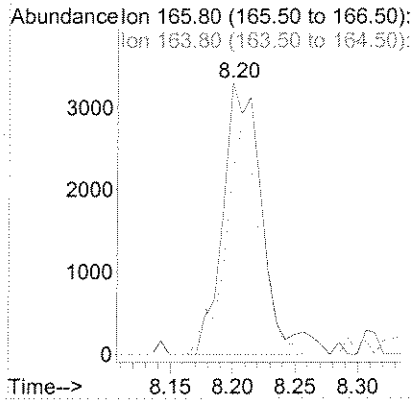


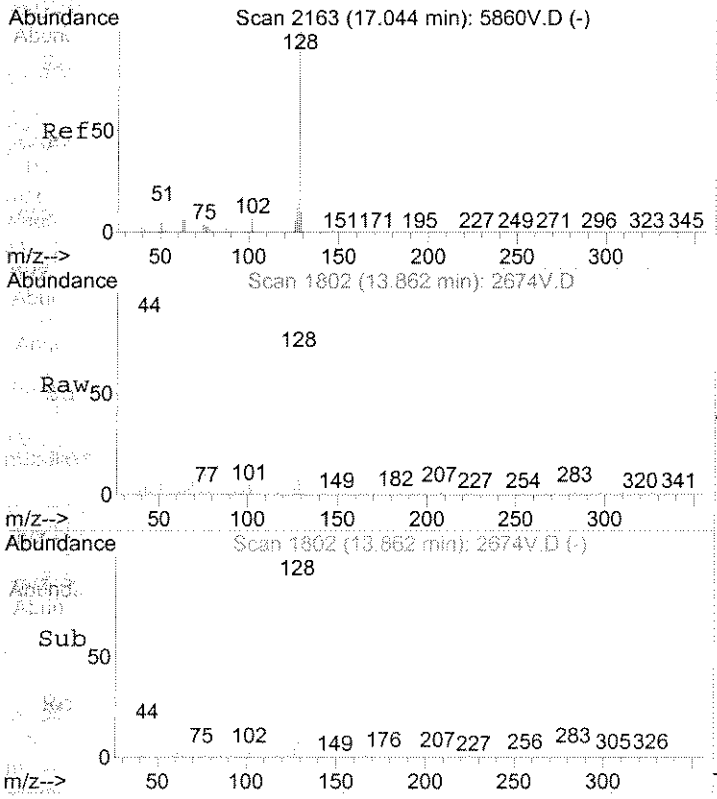



#59
Tetrachloroethene
Concen: 0.28 UG/L
RT: 8.20 min Scan# 1010
Delta R.T. -0.00 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion:166 Resp: 7172

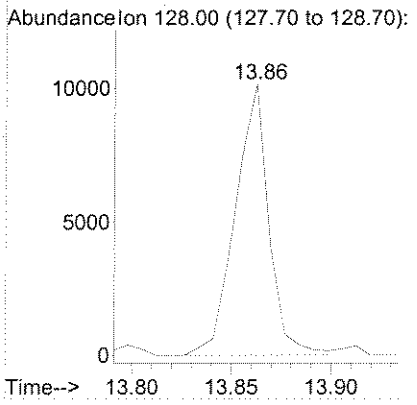
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 74.2 | 63.4 | 95.0 |




#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2674V.D
Acq: 6 Nov 2009 12:40

Tgt Ion:128 Resp: 11856



R560090

# Heritage Environmental Services, LLC

A864530

GC/MS VOA

Method SW846-8260B
Sample Description DUP-03
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2675V.D Date/Time 06Nov09 13:05:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 24 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 2.2 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

JK 11-11-09

R560090

# Heritage Environmental Services, LLC

A864530

## GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | EX | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 95 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 98 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 96 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Data File : C:\HPCHEM\DATA\V110609\2675V.D
Acq On : 6 Nov 2009 13:05
Sample : A864530
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 13:22:13 2009

Vial: 13
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

0216 [illegible] 1:10

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1014429 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 353423 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 228768 | 9.59 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.90% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 372953 | 10.22 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.20% | |
| 50) Toluene-d8 | 7.46 | 98 | 961839 | 9.46 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.60% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 331287 | 9.78 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.80% | |
| **Target Compounds** | | | | | Qvalue |
| 9) ~~Acetone~~ | 2.67 | 43 | 25825 | 1.87 UG/L | 90 |
| 14) ~~Methylene Chloride~~ | 3.08 | 84 | 7948 | Below Cal # | 65 |
| 18) trans-1,2-Dichloroethene 2.2 | 3.36 | 96 | 48467 | 2.22 UG/L | 87 |
| 20) ~~1,1-Dichloroethane~~ | 3.77 | 63 | 8886 | 0.21 UG/L | 100 |
| 21) ~~2-Butanone~~ | 4.37 | 72 | 6944 | 1.74 UG/L # | 1 |
| 22) ~~Ethyl Acetate~~ | 4.44 | 43 | 6834 | 0.16 UG/L # | 92 |
| 23) cis-1,2-Dichloroethene 24 | 4.38 | 96 | 548154 | 24.16 UG/L | 97 |
| 40) Trichloroethene EX | 6.03 | 130 | 5062837 | 213.32 UG/L | 93 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.46 | 43 | 9810 | 0.21 UG/L # | 1 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.89 | 75 | 8236 | 0.26 UG/L | 100 |
| 88) ~~Naphthalene~~ | 13.86 | 128 | 6555 | Below Cal | 100 |

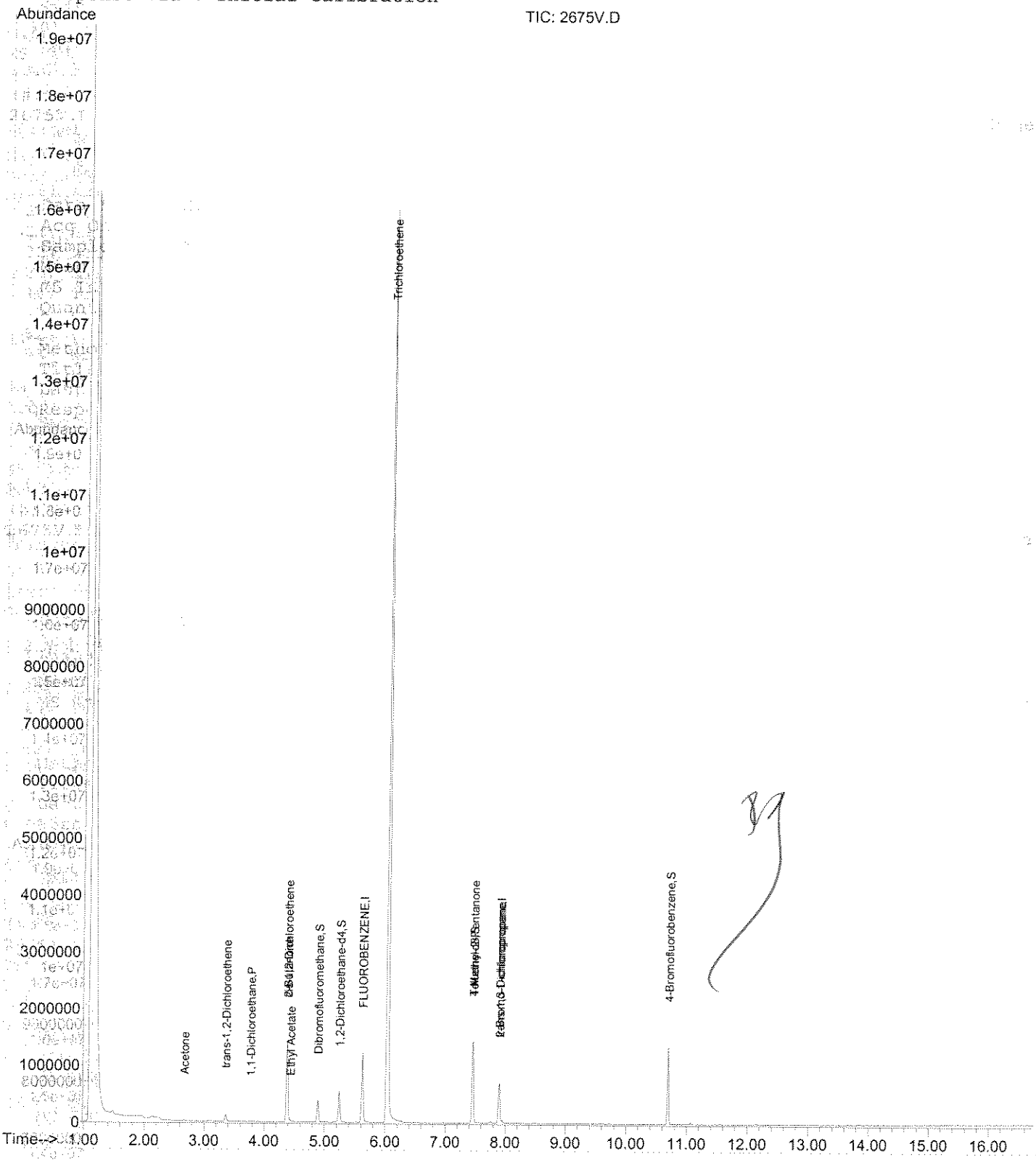
(#) = qualifier out of range (m) = manual integration
2675V.D 8260VOI.M Fri Nov 06 13:22:16 2009



59169b

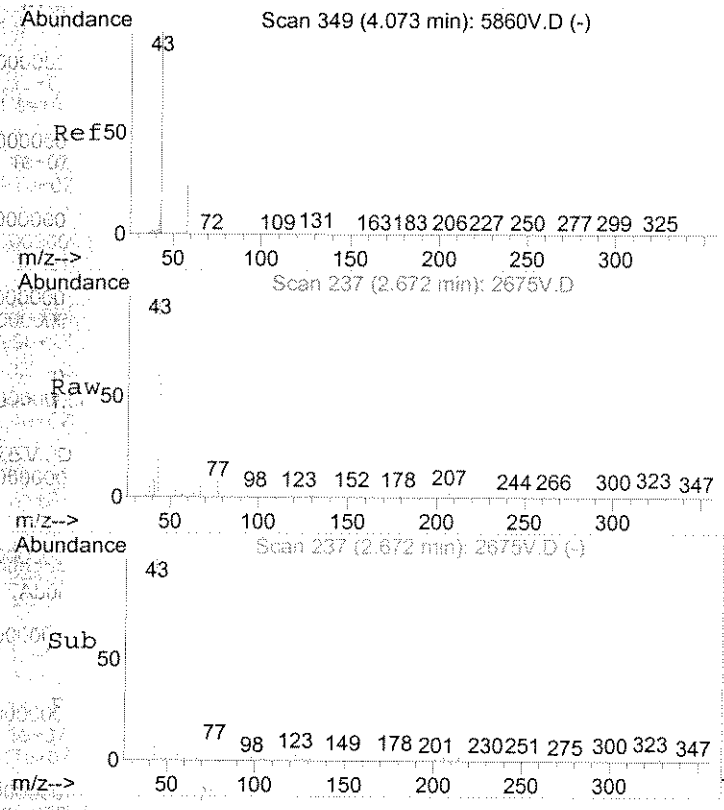
Data File : C:\HPCHEM\DATA\V110609\2675V.D  Vial: 13
Acq On : 6 Nov 2009 13:05  Operator: REGI
Sample : A864530  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 13:22 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





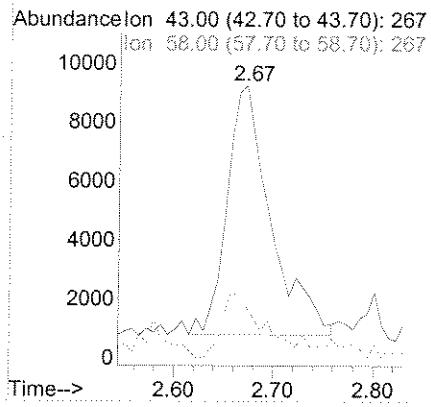

59169b

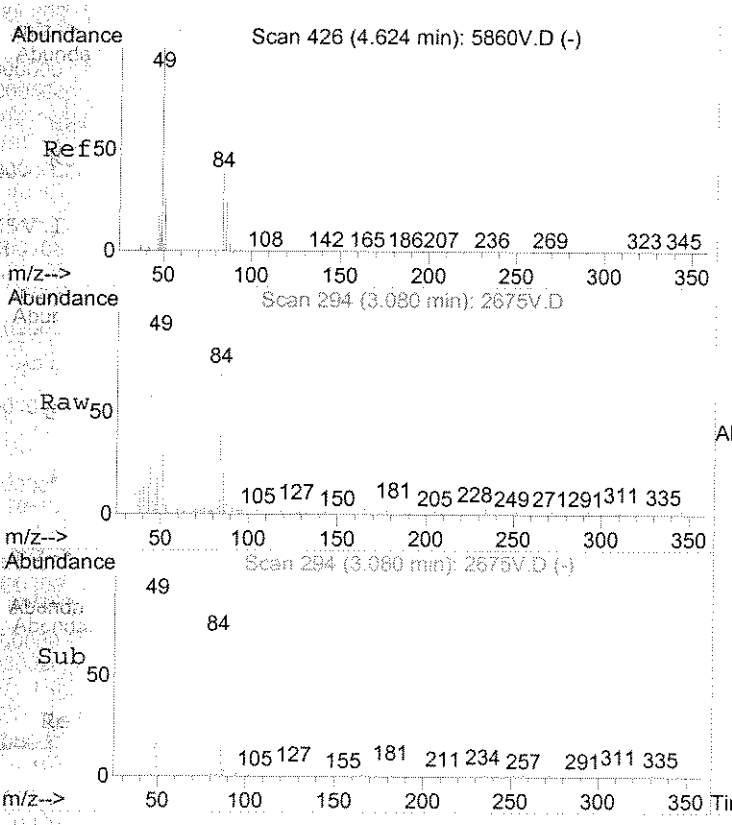



#9
Acetone
Concen: 1.87 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 43 Resp: 25825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 23.6 | 23.1 | 34.7 |

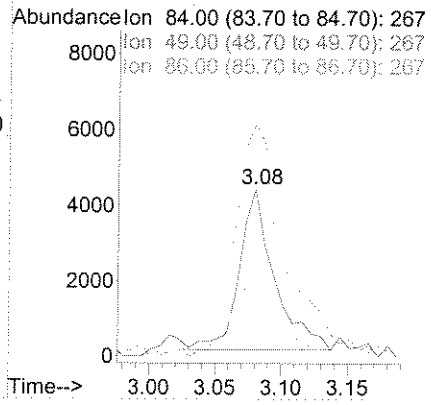


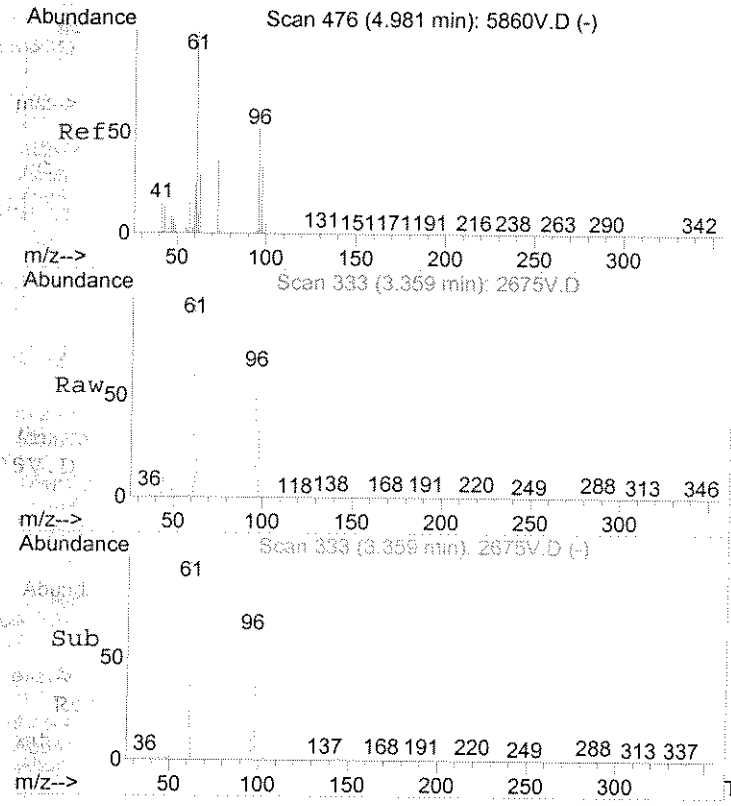




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 84 Resp: 7948

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 201.0 | 140.2 | 210.2 |
| 86 | 0.0 | 51.1 | 76.7# |

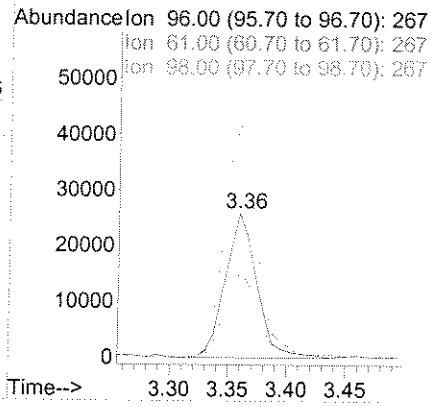


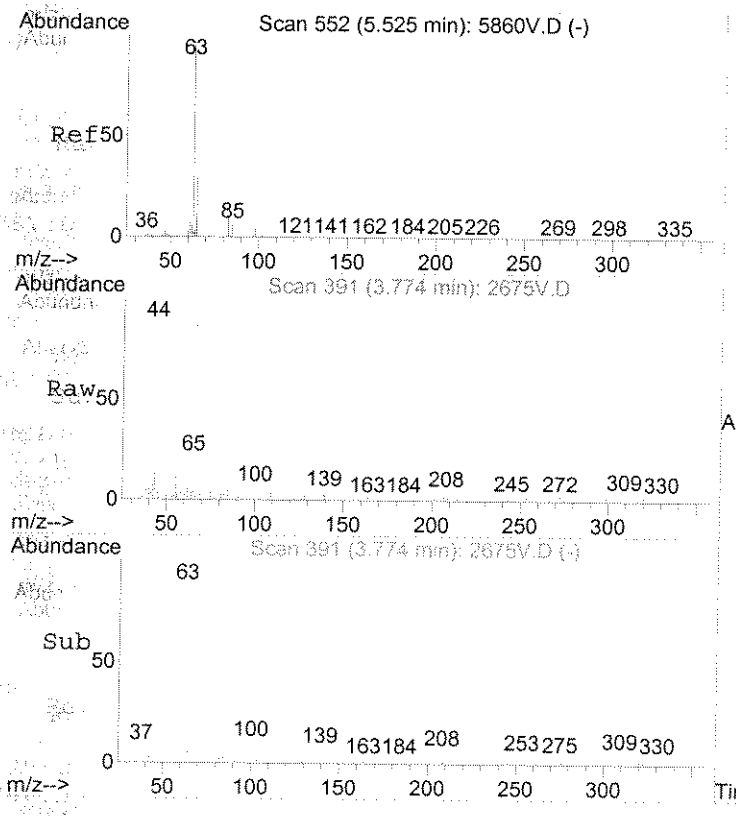



#18
trans-1,2-Dichloroethene
Concen: 2.22 UG/L
RT: 3.36 min Scan# 333
Delta R.T. -0.00 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 96 Resp: 48467

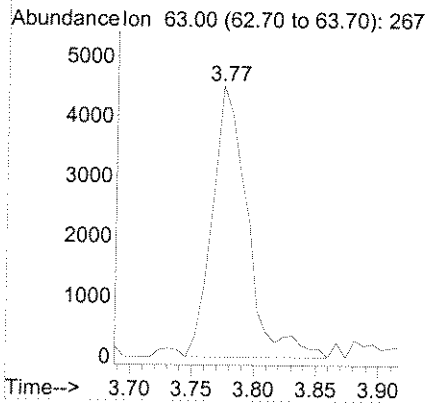
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 165.5 | 114.1 | 171.1 |
| 98 | 63.9 | 50.7 | 76.1 |

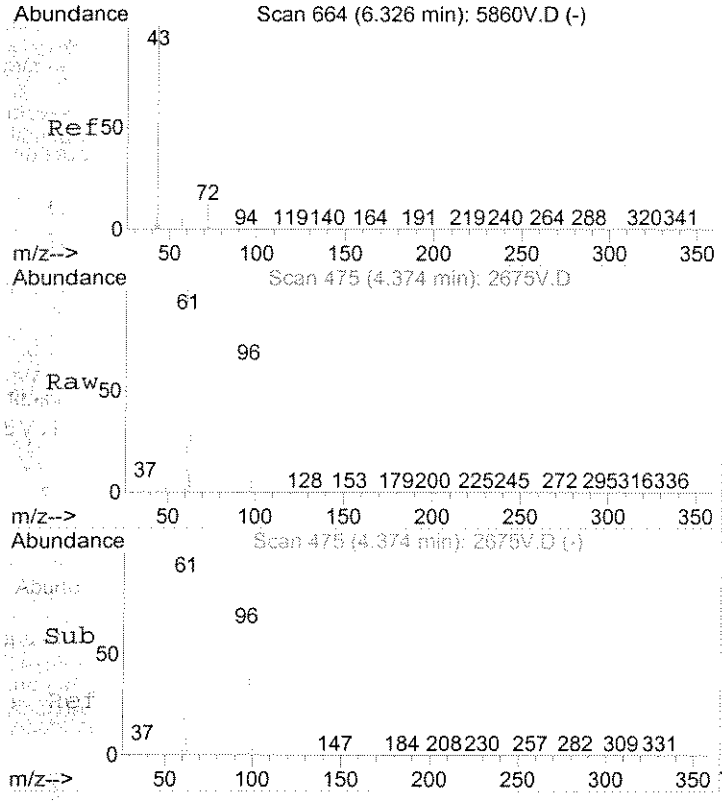



#20
1,1-Dichloroethane
Concen: 0.21 UG/L
RT: 3.77 min Scan# 391
Delta R.T. -0.01 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 63 Resp: 8886

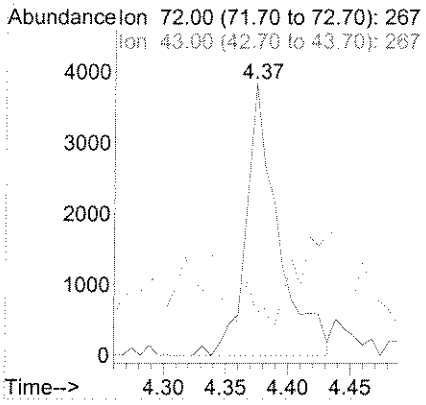


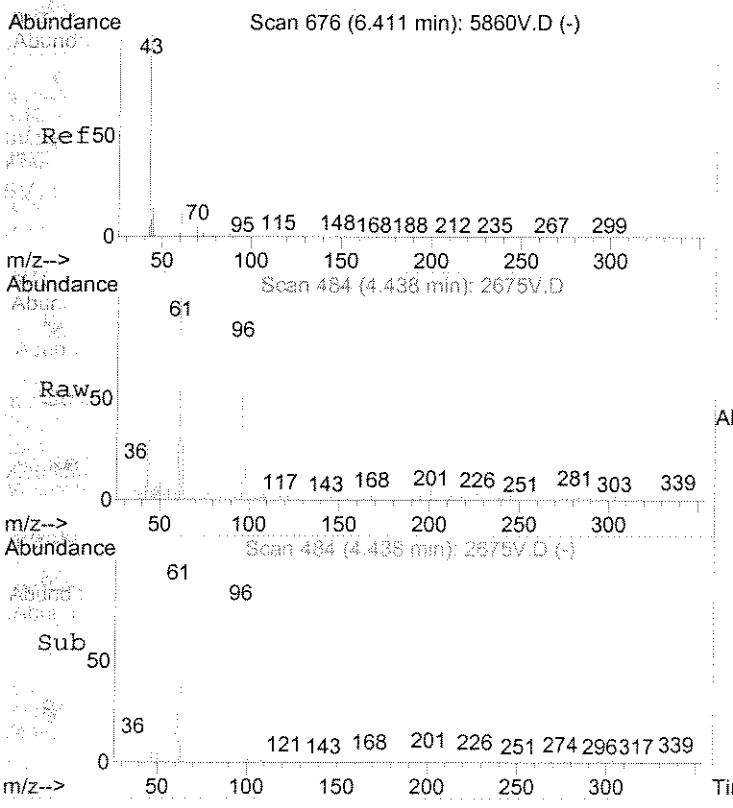



#21
2-Butanone
Concen: 1.74 UG/L
RT: 4.37 min Scan# 475
Delta R.T. -0.04 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 72 Resp: 6944

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |

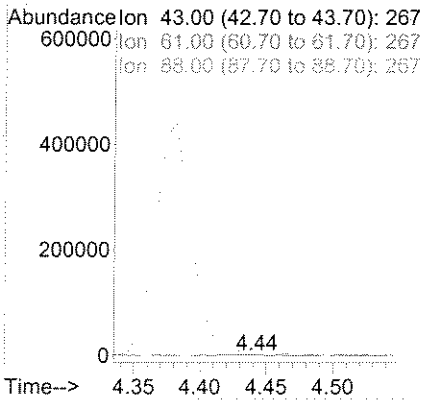


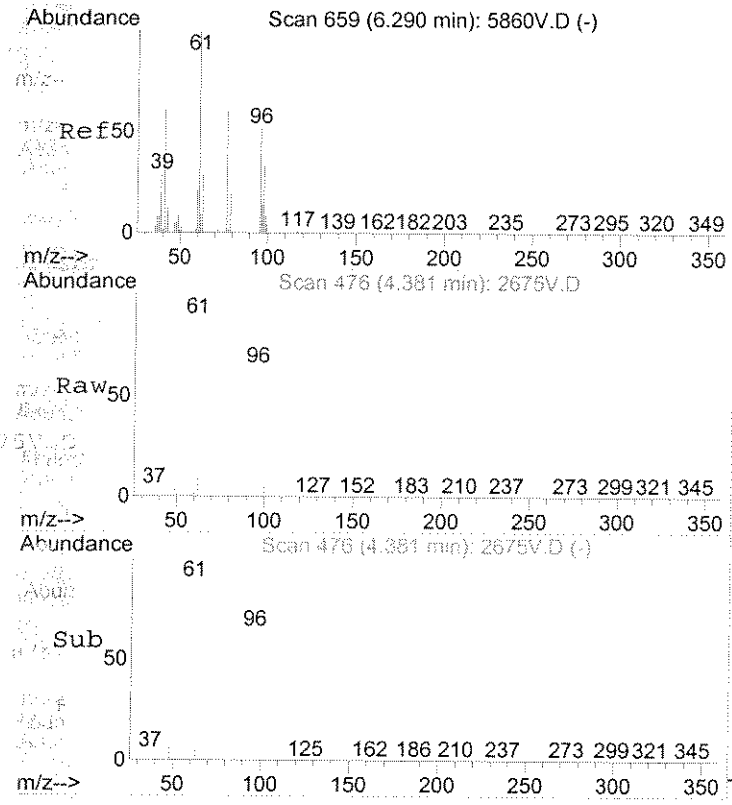




#22
Ethyl Acetate
Concen: 0.16 UG/L
RT: 4.44 min Scan# 484
Delta R.T. -0.06 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 43 Resp: 6834

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 61 | 0.0 | 0.0 | 0.0 |
| 88 | 0.0 | 2.2 | 3.4# |

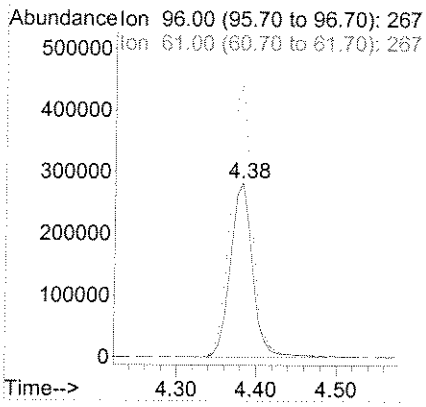


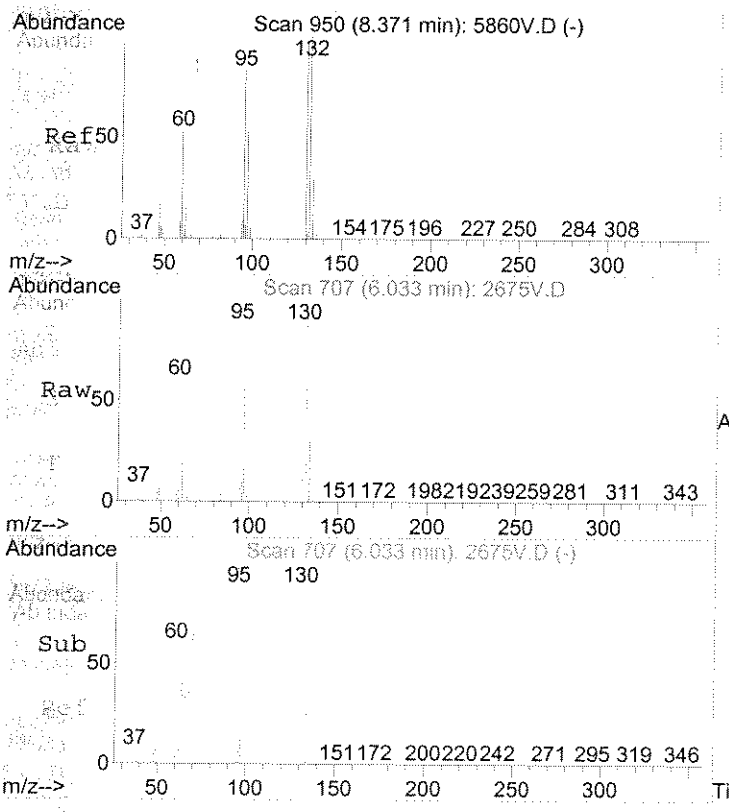



#23
cis-1,2-Dichloroethene
Concen: 24.16 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 96 Resp: 548154

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 155.6 | 121.8 | 182.6 |

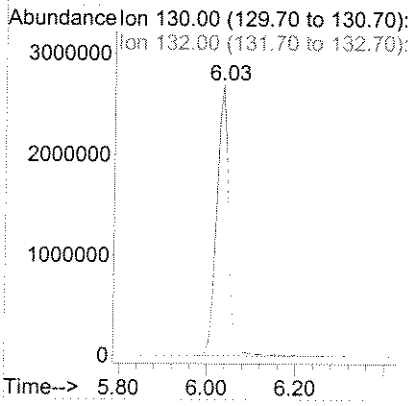


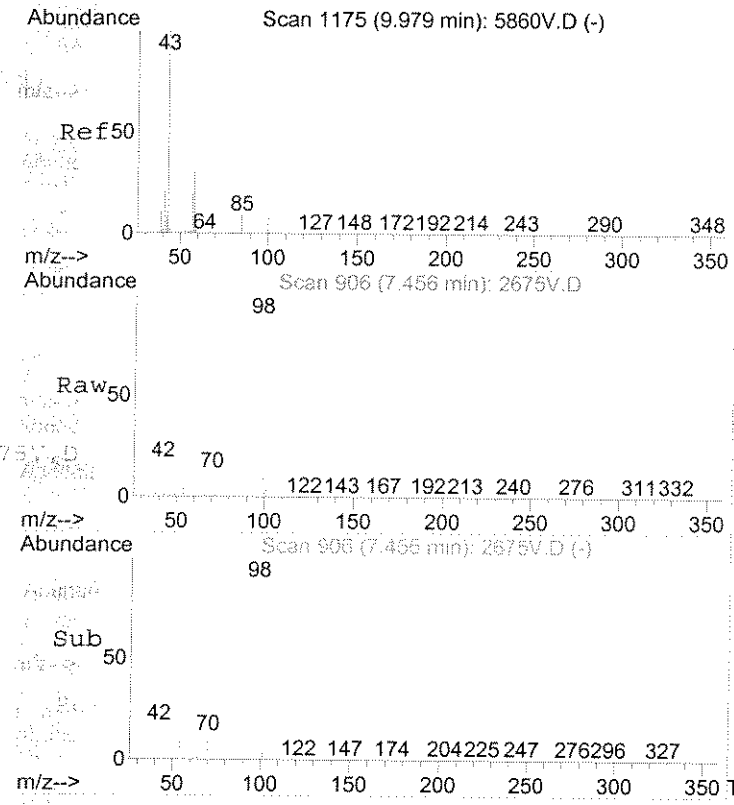




#40
Trichloroethene
Concen: 213.32 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion:130 Resp: 5062837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.4 | 82.0 | 123.0 |

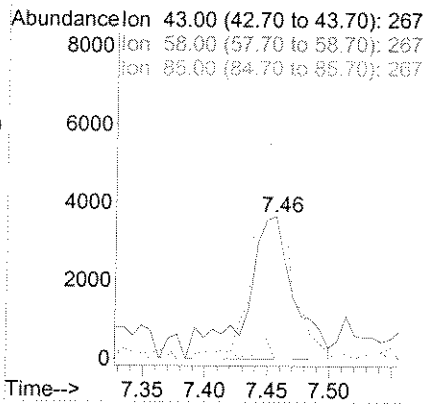


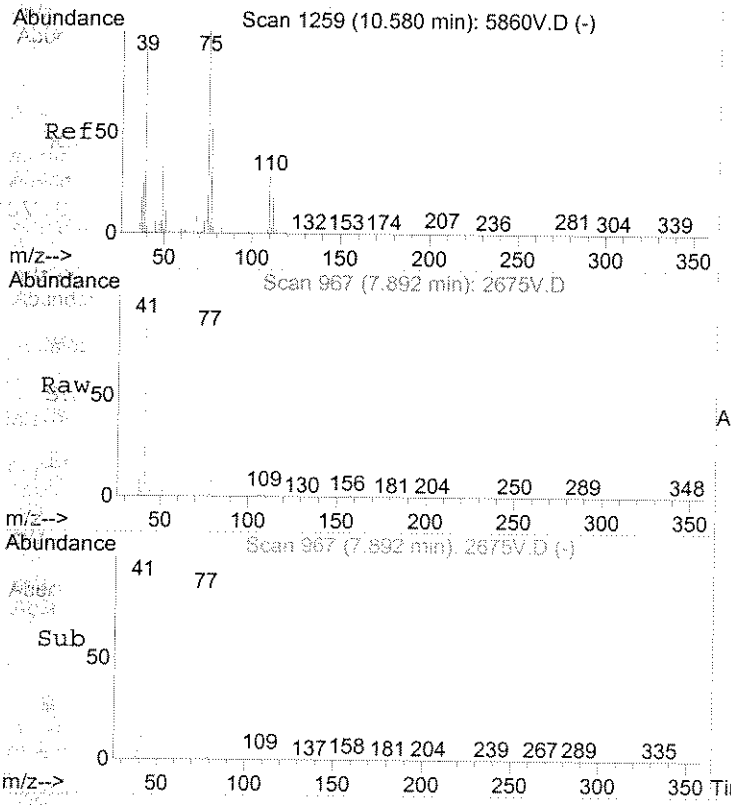



#47
4-Methyl-2-Pentanone
Concen: 0.21 UG/L
RT: 7.46 min Scan# 906
Delta R.T. 0.11 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion: 43 Resp: 9810

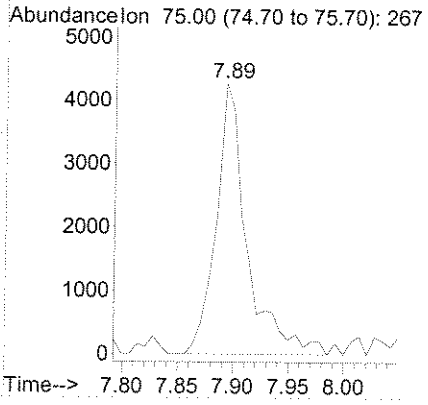
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 121.6 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

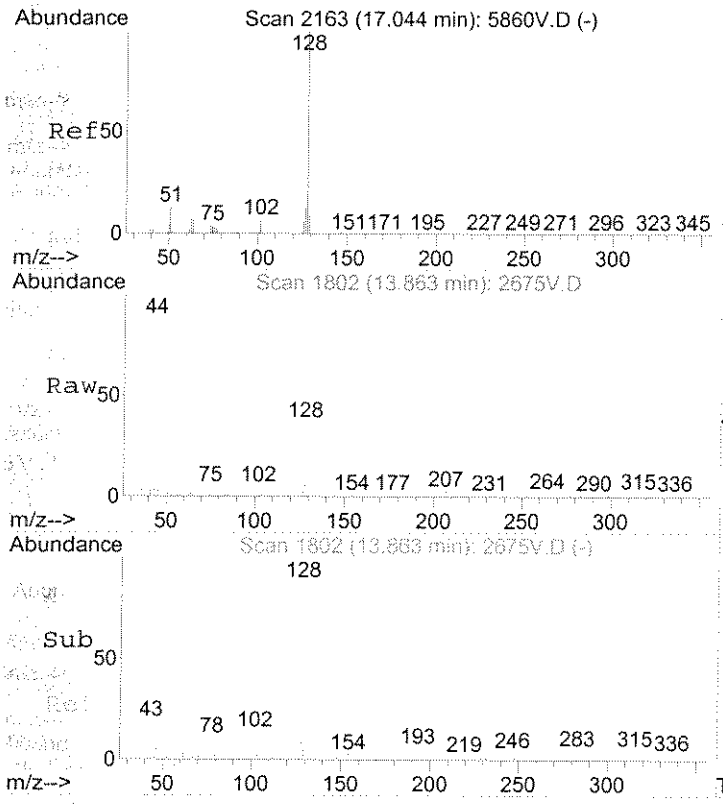



#52
trans-1,3-Dichloropropene
Concen: 0.26 UG/L
RT: 7.89 min Scan# 967
Delta R.T. 0.09 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

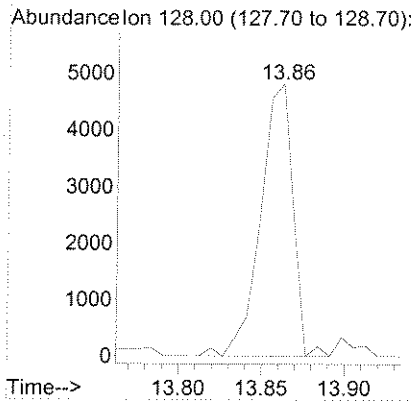
Tgt Ion: 75 Resp: 8236






#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2675V.D
Acq: 6 Nov 2009 13:05

Tgt Ion:128 Resp: 6555



R560090

# Heritage Environmental Services, LLC

A864531

GC/MS VOA

Method SW846-8260B
Sample Description 302
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2676V.D Date/Time 06Nov09 13:30:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

UK 11/11/09

R560090

# Heritage Environmental Services, LLC

A864531

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 98 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 95 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Data File : C:\HPCHEM\DATA\V110609\2676V.D
Acq On : 6 Nov 2009 13:30
Sample : A864531
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 13:47:11 2009

Vial: 14
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 996359 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 349139 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 222992 | 9.52 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.20% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 365768 | 10.20 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 102.00% | |
| 50) Toluene-d8 | 7.46 | 98 | 957934 | 9.59 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.90% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 329168 | 9.84 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 98.40% | |
| Target Compounds | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 39853 | 2.93 UG/L | 90 |
| 14) Methylene Chloride | 3.08 | 84 | 8208 | Below Cal # | 82 |
| 40) Trichloroethene | 6.03 | 130 | 11154 | 0.48 UG/L | 97 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 5828 | 0.13 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 8027 | 0.26 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 6522 | Below Cal | 100 |

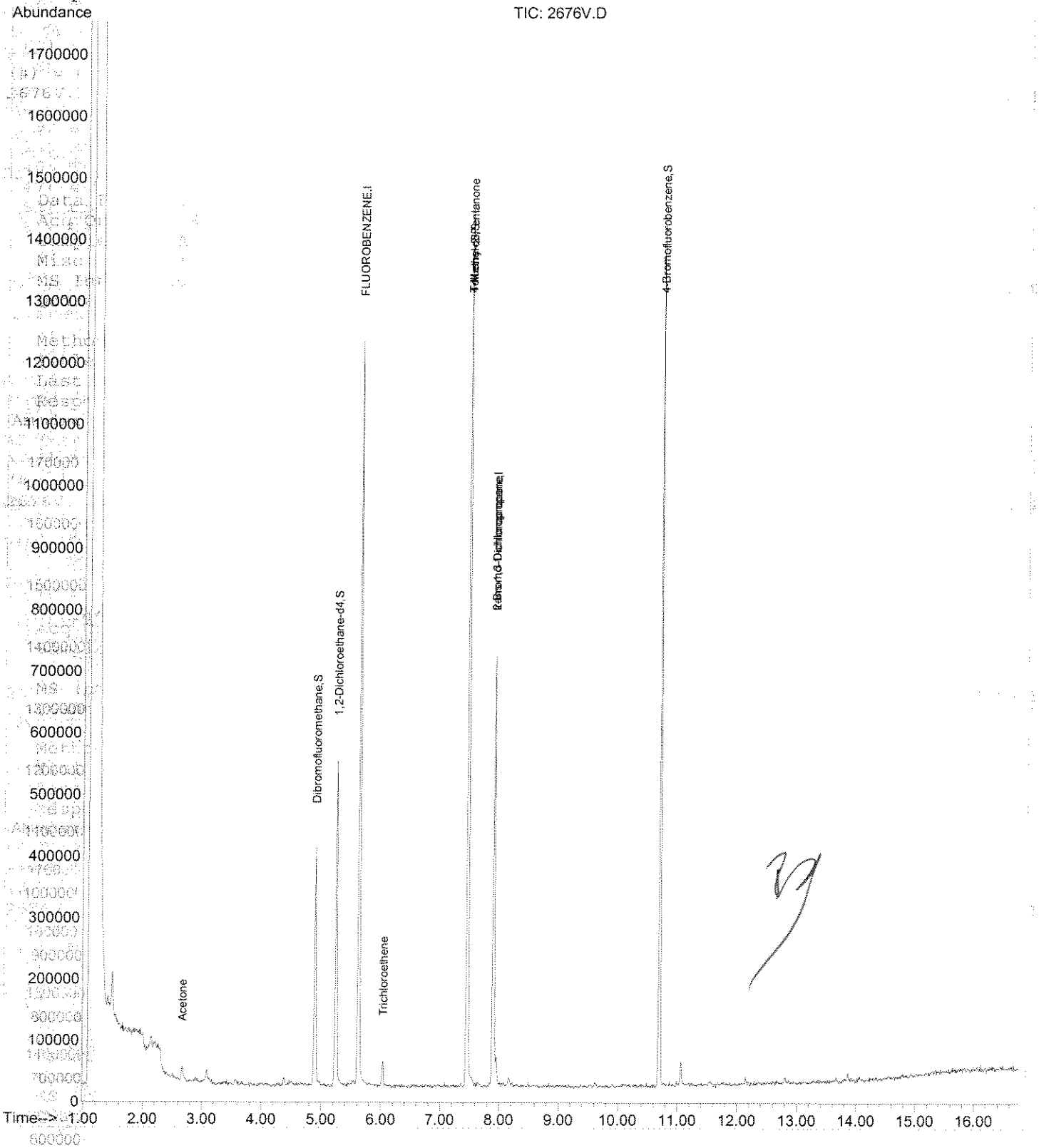
(#) = qualifier out of range (m) = manual integration
2676V.D 8260VOI.M Fri Nov 06 13:47:15 2009



59169b

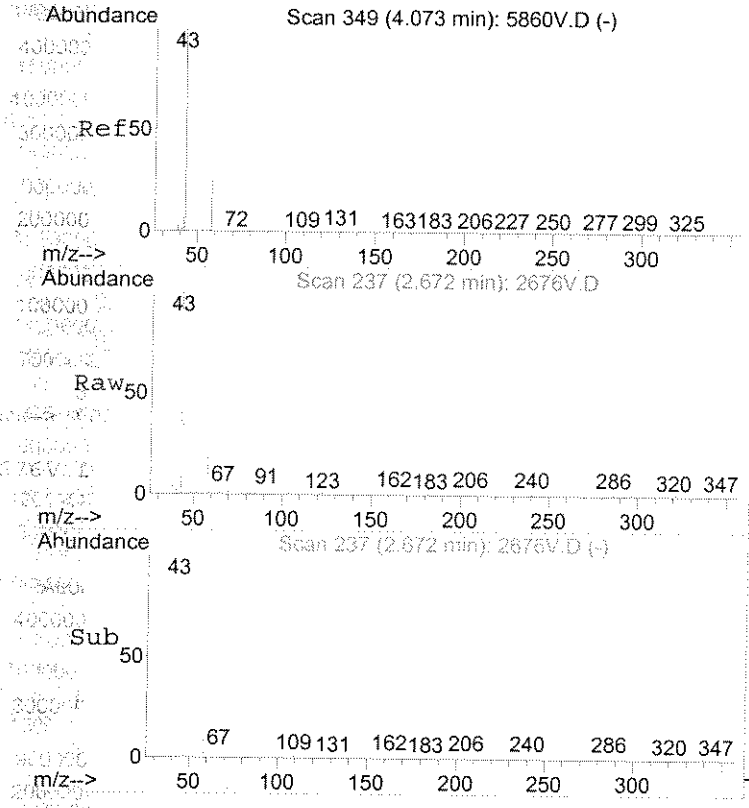
Data File : C:\HPCHEM\DATA\V110609\2676V.D  Vial: 14
Acq On : 6 Nov 2009 13:30  Operator: REGI
Sample : A864531  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 13:47 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





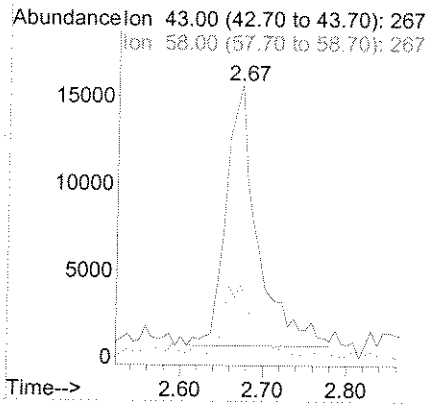

59169b

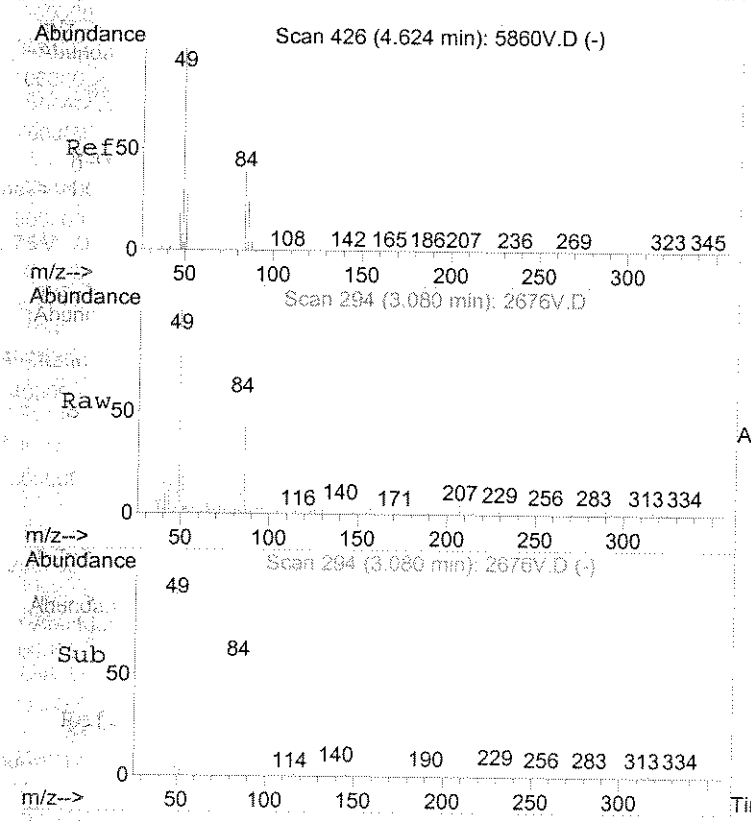



#9
Acetone
Concen: 2.93 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

Tgt Ion: 43 Resp: 39853

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 23.7 | 23.1 | 34.7 |

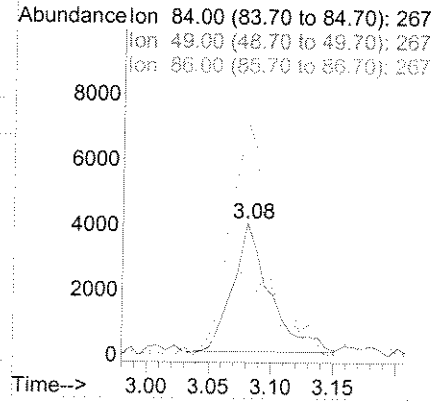


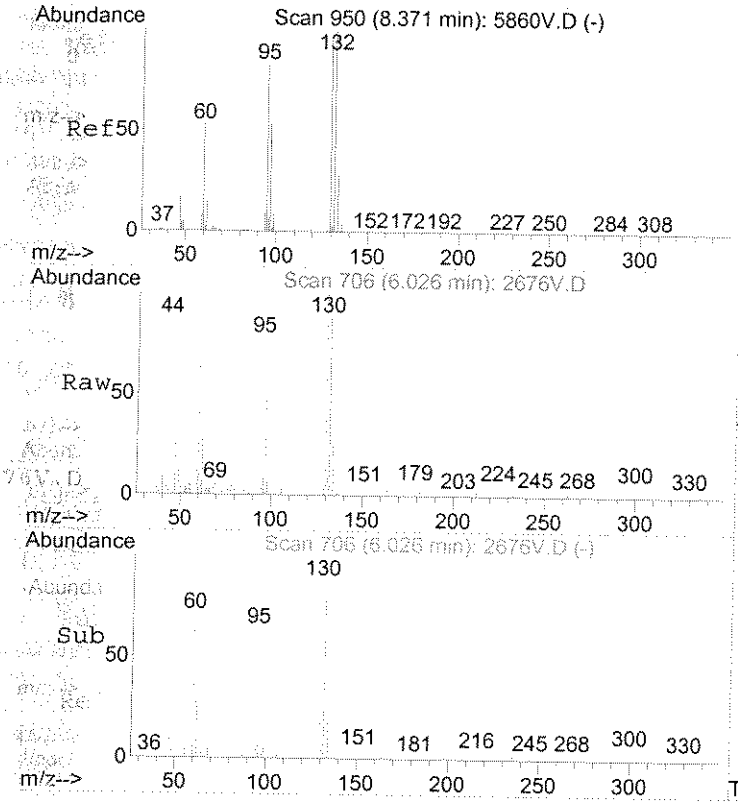




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

Tgt Ion: 84 Resp: 8208

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 194.4 | 140.2 | 210.2 |
| 86 | 88.0 | 51.1 | 76.7# |

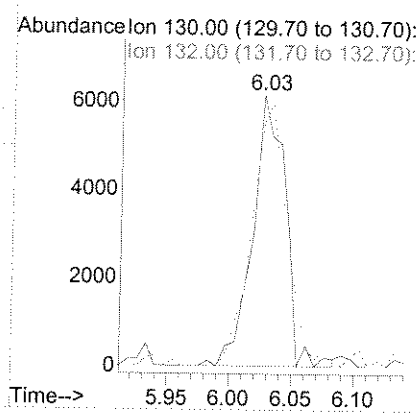


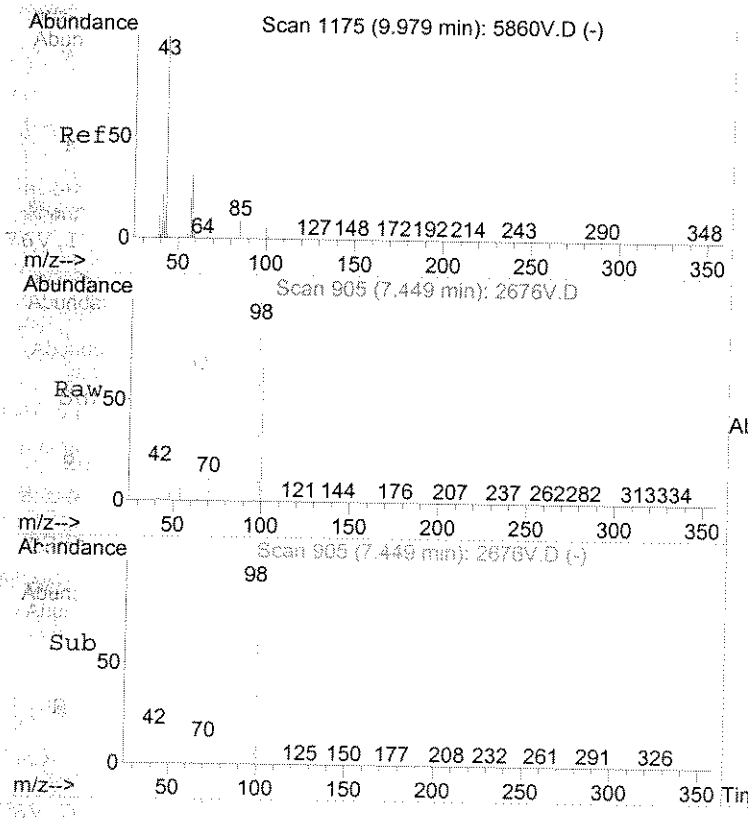



#40
Trichloroethene
Concen: 0.48 UG/L
RT: 6.03 min Scan# 706
Delta R.T. -0.00 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

Tgt Ion:130 Resp: 11154

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 105.3 | 82.0 | 123.0 |

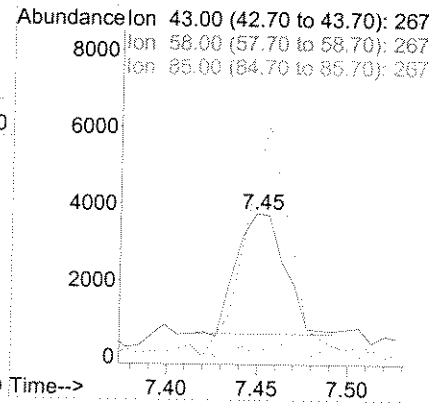


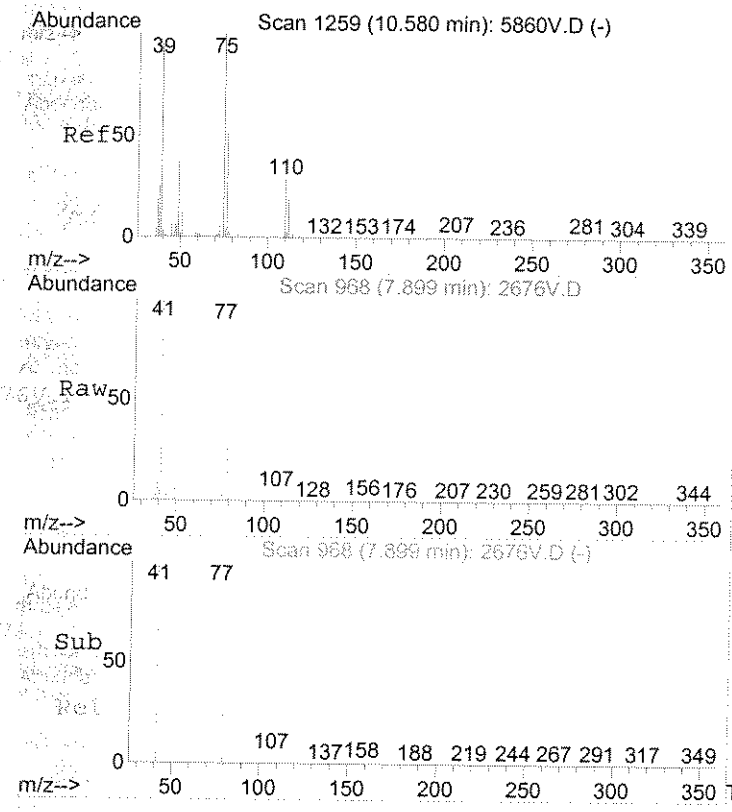




#47
4-Methyl-2-Pentanone
Concen: 0.13 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

Tgt Ion: 43 Resp: 5828

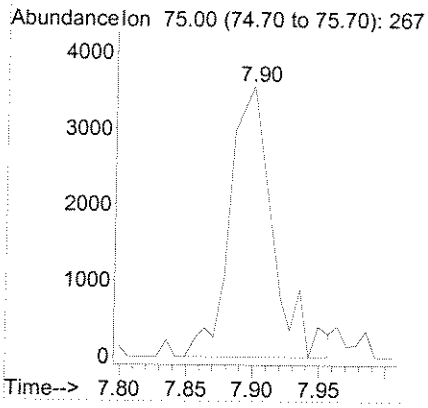
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 190.2 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

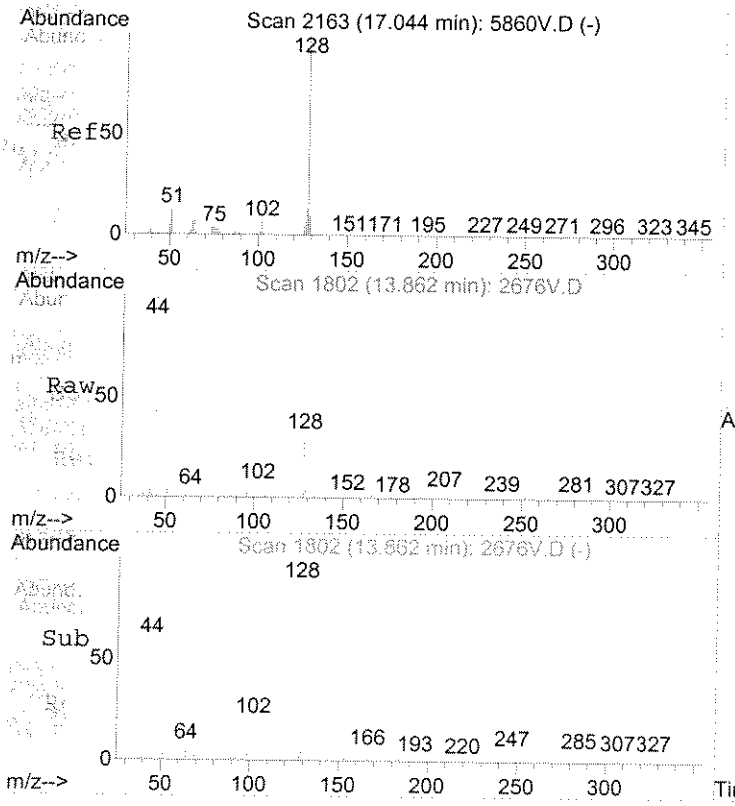





#52
trans-1,3-Dichloropropene
Concen: 0.26 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

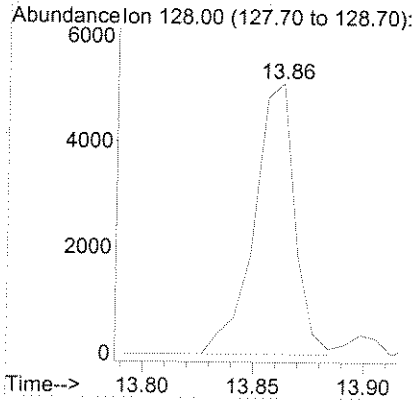
Tgt Ion: 75 Resp: 8027




#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2676V.D
Acq: 6 Nov 2009 13:30

Tgt Ion:128 Resp: 6522



R560090 Heritage Environmental Services, LLC Q2256337

QC Report

QCType BLA01 Duplicate SampleID DataFile 2661V.D
Date Entered 11Nov09 Duplicate QCSampleID Analyst 1062 R. SHAMP
Analysis Date/Time 06Nov0906:55:00 Method 0 Matrix 1 Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | | | 1.0 | BDL | | |
| 236 | CHLOROMETHANE | | | 1.0 | BDL | | |
| 768 | VINYL CHLORIDE | | | 1.0 | BDL | | |
| 198 | BROMOMETHANE | | | 1.0 | BDL | | |
| 234 | CHLOROETHANE | | | 1.0 | BDL | | |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | BDL | | |
| 105 | ACROLEIN | | | 25. | BDL | | |
| 8 | 1,1-DICHLOROETHENE | | | 1.0 | BDL | | |
| 99 | ACETONE (2-PROPANONE) | | | 10. | BDL | | |
| 422 | IODOMETHANE | | | 1.0 | BDL | | |
| 216 | CARBON DISULFIDE | | | 1.0 | BDL | | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | | | 1.0 | BDL | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | 1.0 | BDL | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 106 | ACRYLONITRILE | | | 5.0 | BDL | | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | BDL | | |
| 7 | 1,1-DICHLOROETHANE | | | 1.0 | BDL | | |
| 767 | VINYL ACETATE | | | 1.0 | BDL | | |
| 33 | 2,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 52 | 2-BUTANONE | | | 5.0 | BDL | | |
| 348 | ETHYL ACETATE | | | 1.0 | BDL | | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | | | 10. | BDL | | |
| 194 | BROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 471 | METHACRYLONITRILE | | | 10. | BDL | | |
| 3457 | 2-METHYL-2-PROPENENITRILE | | | 10. | BDL | | |
| 709 | TETRAHYDROFURAN | | | 20. | BDL | | |
| 235 | CHLOROFORM | | | 1.0 | BDL | | |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 217 | CARBON TETRACHLORIDE | | | 1.0 | BDL | | |
| 10 | 1,1-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 151 | BENZENE | | | 1.0 | BDL | | |
| 21 | 1,2-DICHLOROETHANE | | | 1.0 | BDL | | |
| 1525 | 2-BUTANOL | | | 100 | BDL | | |
| 750 | TRICHLOROETHENE | | | 1.0 | BDL | | |
| 517 | N-BUTANOL | | | 100 | BDL | | |
| 23 | 1,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 296 | DIBROMOMETHANE | | | 1.0 | BDL | | |
| 30 | 1,4-DIOXANE | | | 100 | BDL | | |
| 1147 | METHYL METHACRYLATE | | | 1.0 | BDL | | |
| 195 | BROMODICHLOROMETHANE | | | 1.0 | BDL | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | 1.0 | BDL | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 91 | 4-METHYL-2-PENTANONE | | | 5.0 | BDL | | |

JS 11/11/09

R560090 Heritage Environmental Services, LLC Q2256337

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | | | 1.0 | BDL | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 4 | 1,1,2-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 351 | ETHYL METHACRYLATE | | | 1.0 | BDL | | |
| 703 | TETRACHLOROETHENE | | | 1.0 | BDL | | |
| 27 | 1,3-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 60 | 2-HEXANONE | | | 5.0 | BDL | | |
| 295 | DIBROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | 1.0 | BDL | | |
| 231 | CHLOROBENZENE | | | 1.0 | BDL | | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 349 | ETHYL BENZENE | | | 1.0 | BDL | | |
| 492 | M/P-XYLENE | | | 1.1 | BDL | | |
| 803 | XYLENES (O/M/P-XYLENE) | | | 1.1 | BDL | | |
| 549 | O-XYLENE | | | 1.0 | BDL | | |
| 680 | STYRENE | | | 1.0 | BDL | | |
| 197 | BROMOFORM | | | 1.0 | BDL | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | 1.0 | BDL | | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 193 | BROMOBENZENE | | | 1.0 | BDL | | |
| 14 | 1,2,3-TRICHLOROPROPANE | | | 1.0 | BDL | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | 2.0 | BDL | | |
| 532 | N-PROPYLBENZENE | | | 1.0 | BDL | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 702 | TERT-BUTYLBENZENE | | | 1.0 | BDL | | |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 644 | SEC-BUTYLBENZENE | | | 1.0 | BDL | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | 1.0 | BDL | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 519 | N-BUTYLBENZENE | | | 1.0 | BDL | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | 1.0 | BDL | | |
| 16 | 1,2,4-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 398 | HEXACHLOROBUTADIENE | | | 1.0 | BDL | | |
| 493 | NAPHTHALENE | | | 1.0 | BDL | | |
| 13 | 1,2,3-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | | | 1.0 | BDL | | |
| 305 | DIETHYL ETHER | | | 1.0 | BDL | | |
| 866 | HEXANE | | | 1.0 | BDL | | |
| 301 | DICHLOROETHANE-D4 | | | | | 102 | |
| 726 | TOLUENE-D8 | | | | | 97 | |
| 196 | 4-BROMOFLUOROBENZENE | | | | | 97 | |
| 3362 | DIBROMOFLUOROMETHANE | | | | | 96 | |

**Qualifiers**

BDL Below Detection Limit

Data File : C:\HPCHEM\DATA\V110609\2661V.D
Acq On : 6 Nov 2009 6:55
Sample : VBLK
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 07:11:41 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

Q225633 7

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1076980 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 390271 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.88 | 113 | 243603 | 9.62 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.20% | |
| 35) 1,2-Dichloroethane-d4 | 5.23 | 65 | 394155 | 10.17 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.70% | |
| 50) Toluene-d8 | 7.45 | 98 | 1048012 | 9.71 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.10% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 361874 | 9.67 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.70% | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 9) ~~Acetone~~ | 2.67 | 43 | 9948 | 0.68 UG/L # | 46 |
| 14) ~~Methylene Chloride~~ | 3.08 | 84 | 16068 | Below Cal | 97 |
| 25) ~~CHLOROFORM~~ | 4.72 | 83 | 5722 | 0.13 UG/L # | 18 |
| 38) ~~Isobutanol~~ | 5.28 | 43 | 5108 | 2.22 UG/L # | 25 |
| 47) ~~4-Methyl-2-Pentanone~~ | 7.45 | 43 | 7134 | 0.15 UG/L # | 1 |
| 52) ~~trans-1,3-Dichloropropene~~ | 7.89 | 75 | 7384 | 0.22 UG/L | 100 |
| 87) ~~1,2,4-Trichlorobenzene~~ | 13.66 | 180 | 6770 | 0.17 UG/L | 100 |
| 88) ~~Naphthalene~~ | 13.86 | 128 | 19510 | Below Cal | 100 |
| 90) ~~1,2,3-Trichlorobenzene~~ | 14.06 | 180 | 7397 | Below Cal | 100 |

(#) = qualifier out of range (m) = manual integration
2661V.D 8260VOI.M Fri Nov 06 07:11:43 2009



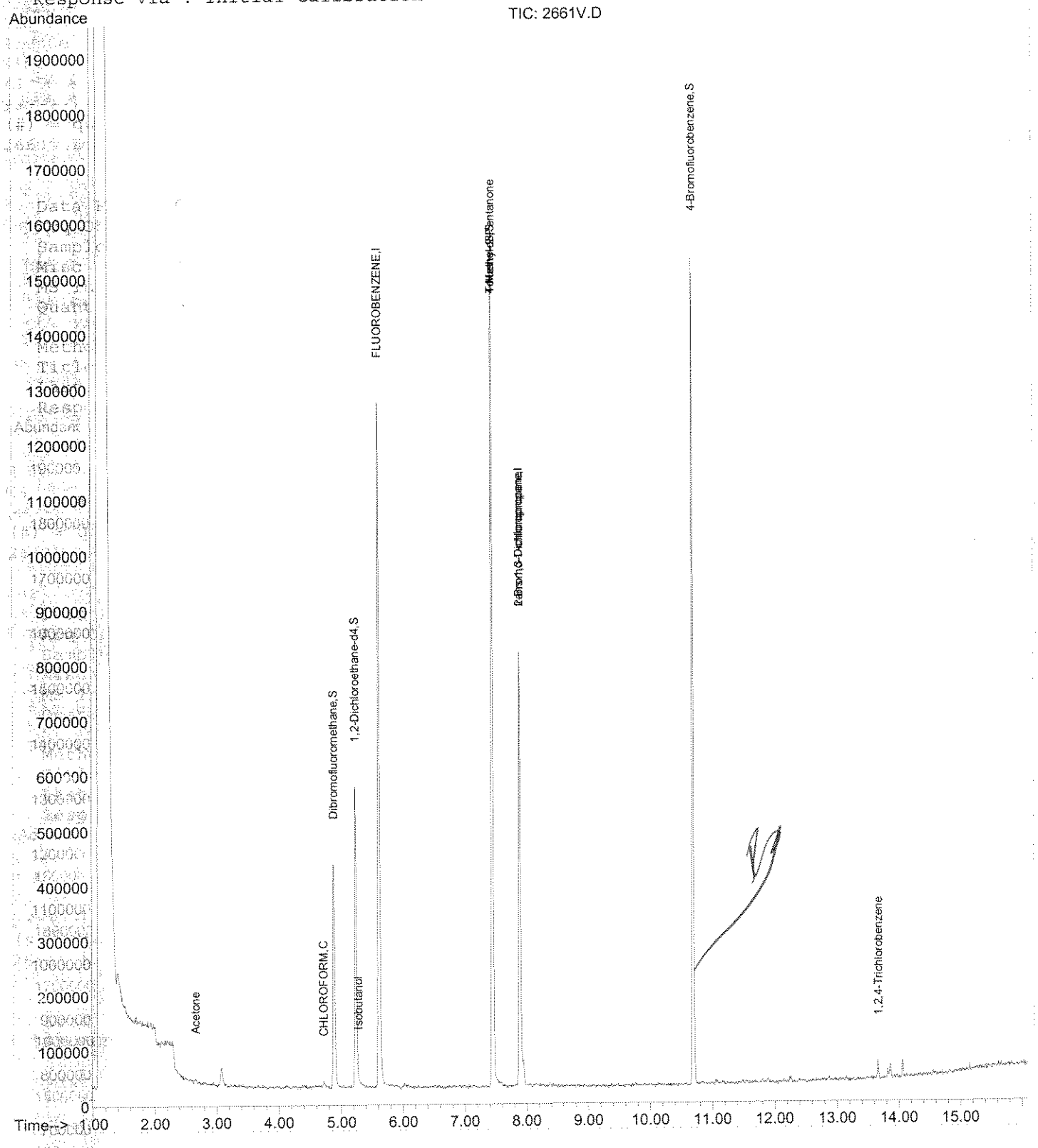
59169b

Data File : C:\HPCHEM\DATA\V110609\2661V.D
Acq On : 6 Nov 2009 6:55
Sample : VBLK
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 7:11 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

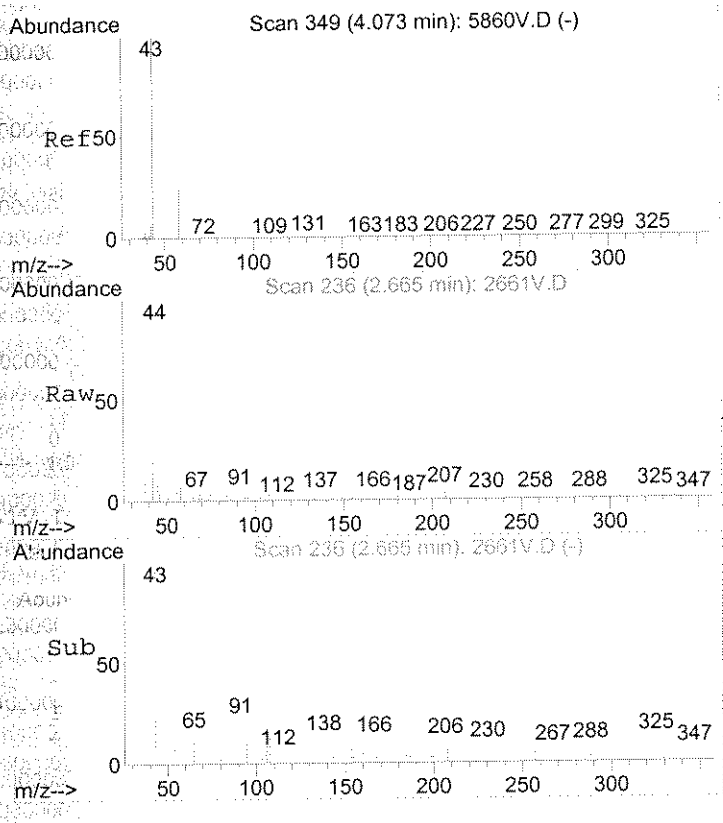
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





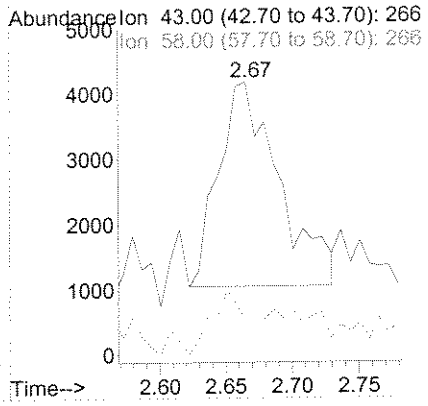

59169b

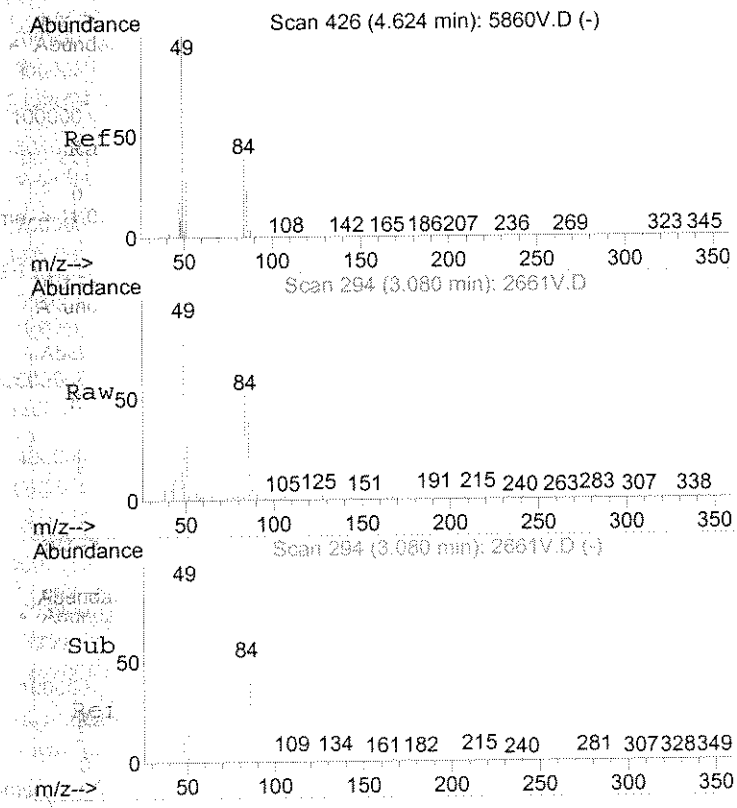



#9
Acetone
Concen: 0.68 UG/L
RT: 2.67 min Scan# 236
Delta R.T. -0.00 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion: 43 Resp: 9948

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 23.1 | 34.7# |

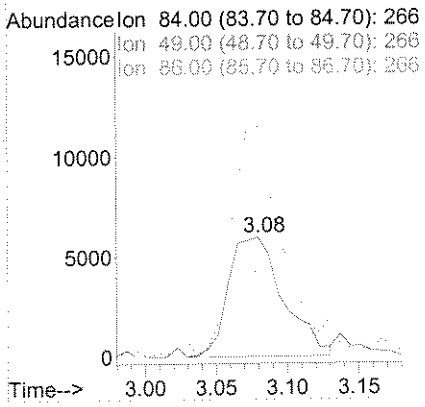


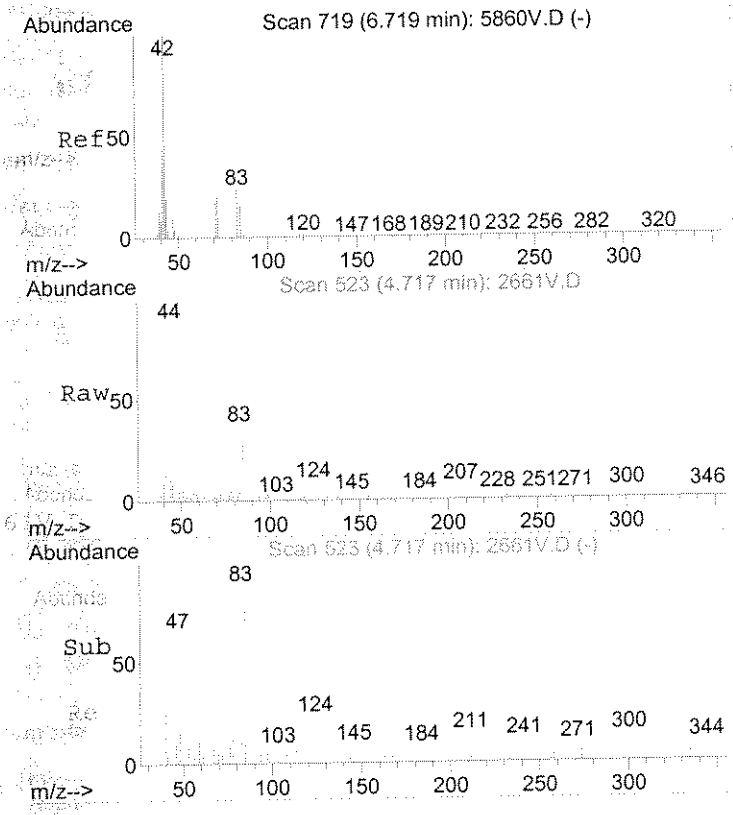




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion: 84 Resp: 16068

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 180.8 | 140.2 | 210.2 |
| 86 | 62.6 | 51.1 | 76.7 |

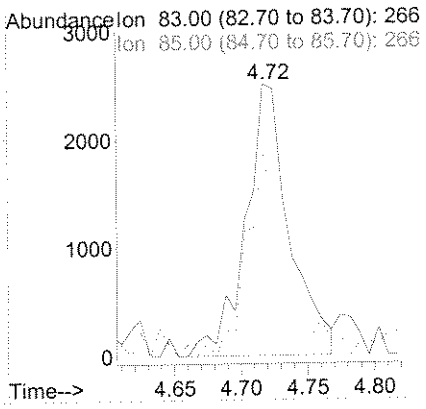


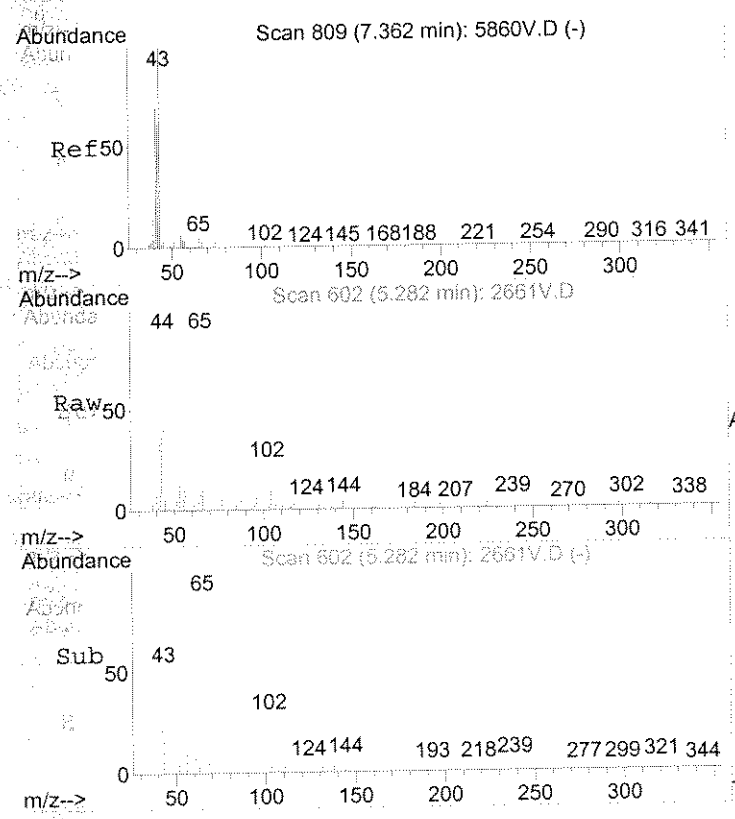



#25
CHLOROFORM
Concen: 0.13 UG/L
RT: 4.72 min Scan# 523
Delta R.T. -0.00 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion: 83 Resp: 5722

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 0.0 | 51.3 | 76.9# |

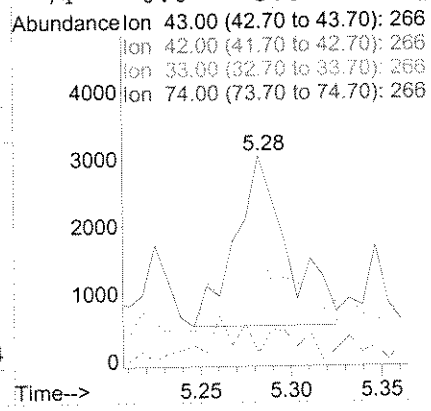


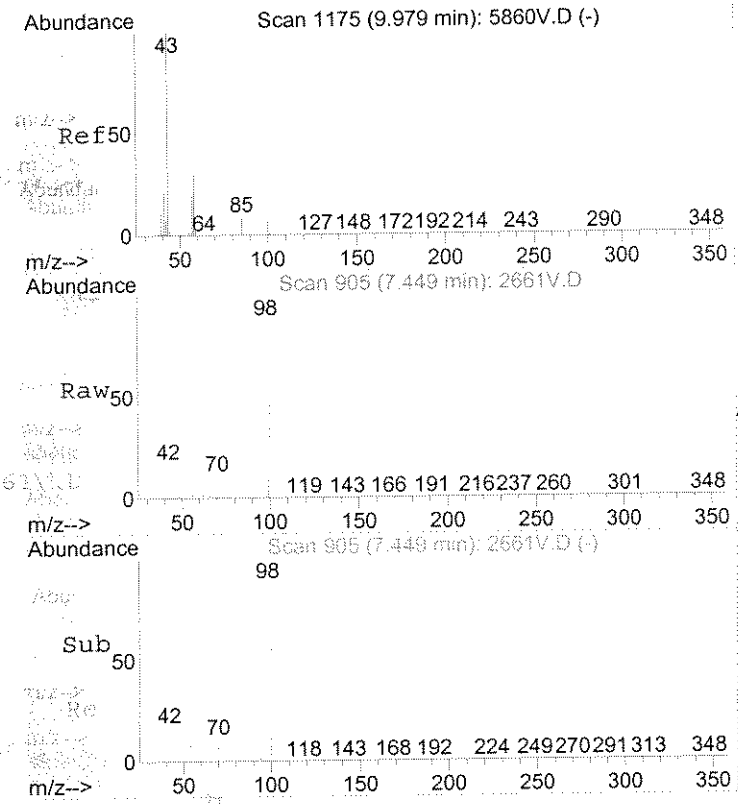




#38
Isobutanol
Concen: 2.22 UG/L
RT: 5.28 min Scan# 602
Delta R.T. -0.00 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion: 43 Resp: 5108

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |

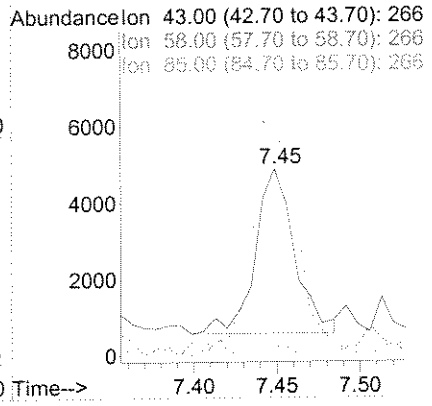


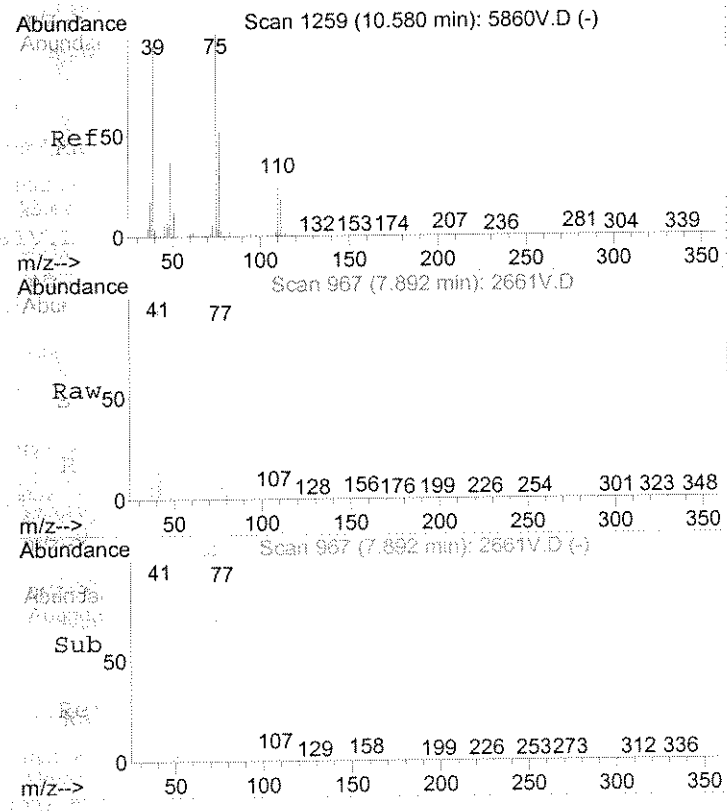



#47
4-Methyl-2-Pentanone
Concen: 0.15 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion: 43 Resp: 7134

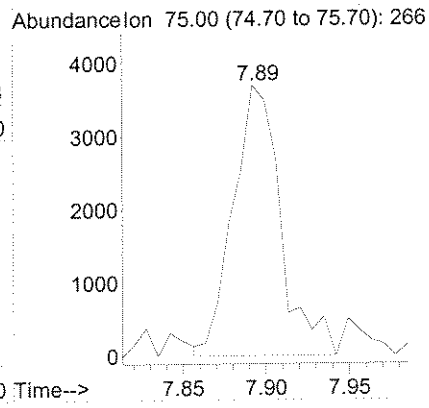
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 162.8 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

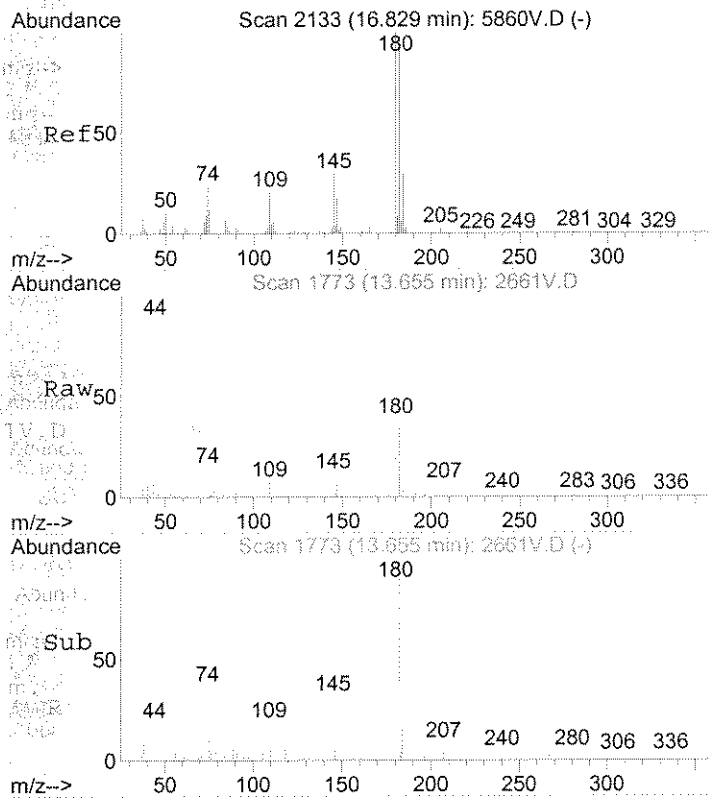



#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.89 min Scan# 967
Delta R.T. 0.09 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

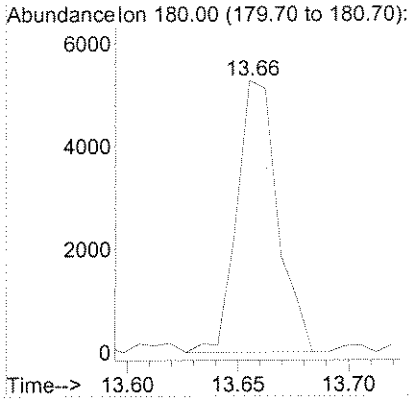
Tgt Ion: 75 Resp: 7384

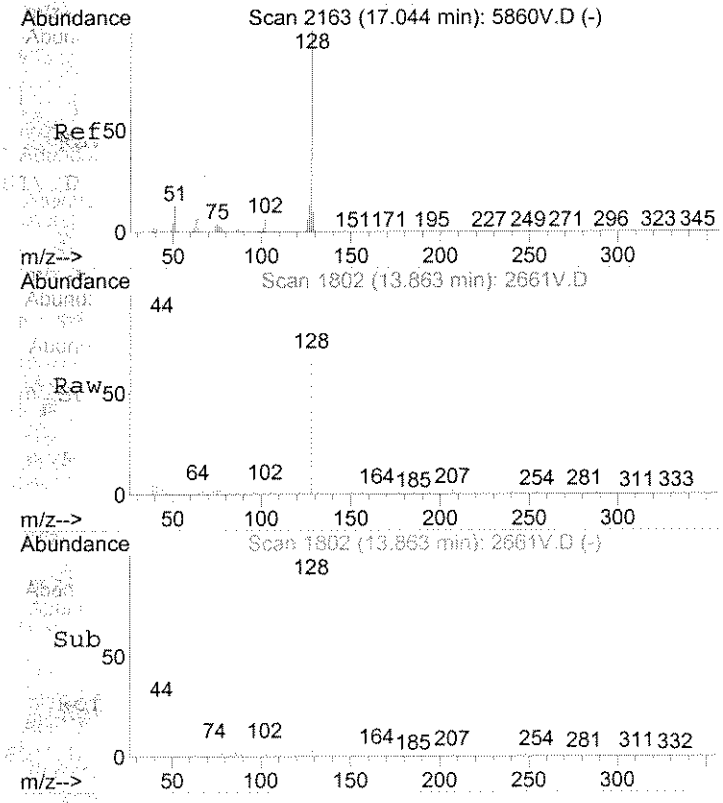





#87
1,2,4-Trichlorobenzene
Concen: 0.17 UG/L
RT: 13.66 min Scan# 1773
Delta R.T. -0.01 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

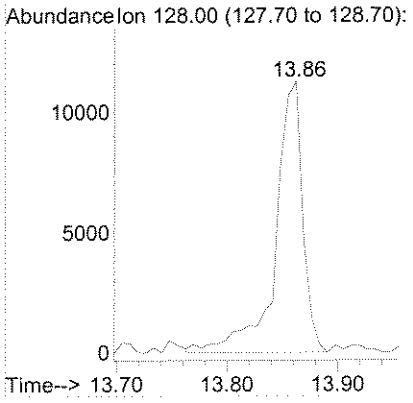
Tgt Ion:180 Resp: 6770

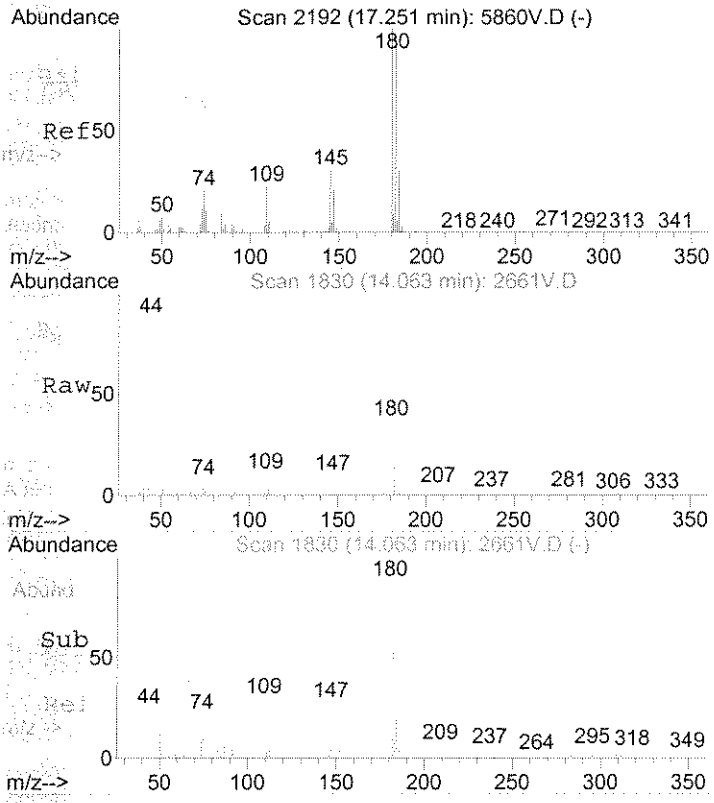



#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

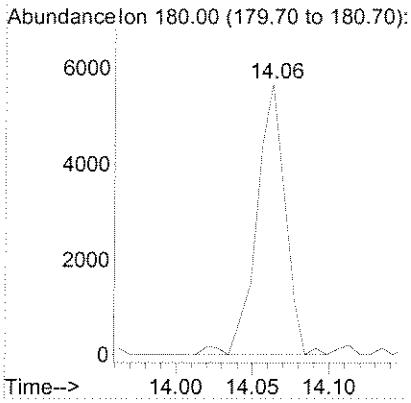
Tgt Ion:128 Resp: 19510






#90
1,2,3-Trichlorobenzene
Concen: Below Cal
RT: 14.06 min Scan# 1830
Delta R.T. 0.01 min
Lab File: 2661V.D
Acq: 6 Nov 2009 6:55

Tgt Ion:180 Resp: 7397



QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 2662V.
LCS Date/Time : 6 Nov 2009 7:26

Q2254338

Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| Benzene | 10.1 | 101.0 | 73 | 131.5 |
| Carbon Tetrachloride | 10.2 | 102.0 | 63 | 144.9 |
| 1,4-Dichlorobenzene | 10.5 | 105.0 | 74 | 136.7 |
| 1,2-Dichloroethane | 10.1 | 101.0 | 65 | 133.8 |
| 1,1-DICHLOROETHENE | 9.78 | 97.8 | 59 | 128.5 |
| 1,1,1-Trichloroethane | 10.2 | 102.0 | 65 | 135.2 |
| Trichloroethene | 10.2 | 102.0 | 67 | 120.9 |
| VINYL CHLORIDE | 8.78 | 87.8 | 43 | 144 |
| Bromobenzene | 10.3 | 103.0 | 56 | 159.4 |
| Bromodichloromethane | 9.93 | 99.3 | 70 | 129.4 |
| Bromoform | 9.7 | 97.0 | 59 | 163.5 |
| Bromomethane | 9.52 | 95.2 | 54 | 135.8 |
| Chlorobenzene | 10.7 | 107.0 | 76 | 132.6 |
| Dibromochloromethane | 10.3 | 103.0 | 67 | 145.6 |
| Chloroethane | 10.2 | 102.0 | 64 | 142.7 |
| CHLOROFORM | 10.1 | 101.0 | 73 | 136.2 |
| Chloromethane | 8.36 | 83.6 | 42 | 138.5 |
| 2-Chlorotoluene | 10.7 | 107.0 | 76 | 134.4 |
| 4-Chlorotoluene | 10.6 | 106.0 | 76 | 139.9 |
| Dibromomethane | 10.7 | 107.0 | 72 | 126 |
| 1,3-Dichlorobenzene | 10.6 | 106.0 | 74 | 140 |
| 1,2-Dichlorobenzene | 10.9 | 109.0 | 78 | 136.7 |
| trans-1,2-Dichloroethene | 10 | 100.0 | 57 | 116.1 |
| cis-1,2-Dichloroethene | 10.6 | 106.0 | 72 | 167.4 |
| Methylene Chloride | 10.2 | 102.0 | 71 | 133 |
| 1,1-Dichloroethane | 10.4 | 104.0 | 72 | 132.7 |
| 1,1-Dichloropropene | 10.3 | 103.0 | 68 | 124.6 |
| 1,2-DICHLOROPROPANE | 10.3 | 103.0 | 70 | 125.6 |
| 1,3-Dichloropropane | 10.3 | 103.0 | 74 | 127 |
| cis-1,3-Dichloropropene | 10 | 100.0 | 70 | 119.1 |
| trans-1,3-Dichloropropene | 10.3 | 103.0 | 72 | 131.8 |
| 2,2-Dichloropropane | 11 | 110.0 | 64 | 135 |
| ETHYL BENZENE | 10.5 | 105.0 | 47 | 155.6 |
| Styrene | 10.1 | 101.0 | 48 | 158.2 |
| 1,1,2-Trichloroethane | 10 | 100.0 | 73 | 121.4 |
| 1,1,1,2-Tetrachloroethane | 10.8 | 108.0 | 75 | 129.5 |
| 1,1,2,2-Tetrachloroethane | 10.9 | 109.0 | 76 | 126.3 |
| Tetrachloroethene | 10.6 | 106.0 | 69 | 135.2 |
| 1,2,3-Trichloropropane | 9.58 | 95.8 | 73 | 132.7 |

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 2662V.
LCS Date/Time : 6 Nov 2009 7:26
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| TOLUENE | 9.99 | 99.9 | 73 | 130 |
| m,p-Xylene | 21.1 | 105.5 | 73 | 137.2 |
| o-Xylene | 10.5 | 105.0 | 78 | 143.5 |
| Bromochloromethane | 10.5 | 105.0 | 65 | 141.4 |
| n-Butylbenzene | 11.2 | 112.0 | 77 | 137.1 |
| Dichlorodifluoromethane | 7.66 | 76.6 | 15 | 123.1 |
| Trichlorofluoromethane | 10.1 | 101.0 | 51 | 149.1 |
| Hexachlorobutadiene | 13.8 | 138.0 ! | 66 | 130.5 |
| Isopropylbenzene | 12.2 | 122.0 | 84 | 148.4 |
| p-Isopropyltoluene | 11.2 | 112.0 | 75 | 137.2 |
| Naphthalene | 12.9 | 129.0 | 75 | 133.3 |
| n-Propylbenzene | 10.9 | 109.0 | 74 | 140.8 |
| sec-Butylbenzene | 11.2 | 112.0 | 74 | 129.3 |
| t-Butylbenzene | 11 | 110.0 | 47 | 155.9 |
| 1,2,3-Trichlorobenzene | 13.6 | 136.0 | 69 | 143.8 |
| 1,2,4-Trichlorobenzene | 11.9 | 119.0 | 75 | 132.1 |
| 1,2,4-Trimethylbenzene | 10.8 | 108.0 | 77 | 136.1 |
| 1,3,5-Trimethylbenzene | 10.8 | 108.0 | 77 | 134.7 |
| Acrolein | 101 | 101.0 | D | 672 |
| Acetone | 48.4 | 96.8 | 62 | 135.2 |
| Acrylonitrile | 107 | 107.0 | D | 597.8 |
| Carbon Disulfide | 9.38 | 93.8 | 65 | 161.9 |
| Vinyl Acetate | 9.32 | 93.2 | 71 | 127.6 |
| 2-Butanone | 46.6 | 93.2 | 74 | 128.8 |
| 4-Methyl-2-Pentanone | 48.1 | 96.2 | 70 | 131.2 |
| 2-Hexanone | 48.8 | 97.6 | 76 | 131.7 |
| 2-Chloroethylvinylether | 8.53 | 85.3 | 49 | 136.5 |
| trans-1,4-Dichloro-2-butene | 19.5 | 97.5 | D | 114.1 |
| 1,2-Dibromoethane | 10.2 | 102.0 | 73 | 124 |
| 1,2-Dibromo-3-chloropropane | 10.9 | 109.0 | 67 | 127.4 |
| Iodomethane | 9.37 | 93.7 | 67 | 135.8 |

Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 100 uG/L

R560090

# Heritage Environmental Services, LLC

Q2256338

QC Report

QCType LCS01
Date Entered 11Nov09
Analysis Date/Time 06Nov0907:26:00

Duplicate SampleID
Duplicate QCSampleID
Method 0 Matrix 1

DataFile 2662V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 10 | | 10.1 | | 101 | |
| 217 | CARBON TETRACHLORIDE | 10 | | 10.2 | | 102 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | 10.5 | | 105 | |
| 21 | 1,2-DICHLOROETHANE | 10 | | 10.1 | | 101 | |
| 8 | 1,1-DICHLOROETHENE | 10 | | 9.78 | | 97.8 | |
| 2 | 1,1,1-TRICHLOROETHANE | 10 | | 10.2 | | 102 | |
| 750 | TRICHLOROETHENE | 10 | | 10.2 | | 102 | |
| 768 | VINYL CHLORIDE | 10 | | 8.78 | | 87.8 | |
| 193 | BROMOBENZENE | 10 | | 10.3 | | 103 | |
| 195 | BROMODICHLOROMETHANE | 10 | | 9.93 | | 99.3 | |
| 197 | BROMOFORM | 10 | | 9.7 | | 97 | |
| 198 | BROMOMETHANE | 10 | | 9.52 | | 95.2 | |
| 231 | CHLOROBENZENE | 10 | | 10.7 | | 107 | |
| 295 | DIBROMOCHLOROMETHANE | 10 | | 10.3 | | 103 | |
| 234 | CHLOROETHANE | 10 | | 10.2 | | 102 | |
| 235 | CHLOROFORM | 10 | | 10.1 | | 101 | |
| 236 | CHLOROMETHANE | 10 | | 8.36 | | 83.6 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | 10.7 | | 107 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | 10.6 | | 106 | |
| 296 | DIBROMOMETHANE | 10 | | 10.7 | | 107 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | 10.6 | | 106 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | 10.9 | | 109 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 10 | | 10 | | 100 | |
| 246 | CIS-1,2-DICHLOROETHENE | 10 | | 10.6 | | 106 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 10.2 | | 102 | |
| 7 | 1,1-DICHLOROETHANE | 10 | | 10.4 | | 104 | |
| 10 | 1,1-DICHLOROPROPENE | 10 | | 10.3 | | 103 | |
| 23 | 1,2-DICHLOROPROPANE | 10 | | 10.3 | | 103 | |
| 27 | 1,3-DICHLOROPROPANE | 10 | | 10.3 | | 103 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 10 | | 10 | | 100 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 10 | | 10.3 | | 103 | |
| 33 | 2,2-DICHLOROPROPANE | 10 | | 11 | | 110 | |
| 349 | ETHYL BENZENE | 10 | | 10.5 | | 105 | |
| 680 | STYRENE | 10 | | 10.1 | | 101 | |
| 4 | 1,1,2-TRICHLOROETHANE | 10 | | 10 | | 100 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 10 | | 10.8 | | 108 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 10 | | 10.9 | | 109 | |
| 703 | TETRACHLOROETHENE | 10 | | 10.6 | | 106 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 10 | | 9.58 | | 95.8 | |
| 724 | TOLUENE | 10 | | 9.99 | | 99.9 | |
| 492 | M/P-XYLENE | 20 | | 21.1 | | 105.5 | |
| 549 | O-XYLENE | 10 | | 10.5 | | 105 | |
| 194 | BROMOCHLOROMETHANE | 10 | | 10.4 | | 104 | |
| 519 | N-BUTYLBENZENE | 10 | | 11.2 | | 112 | |

JK 11/11/09

R560090 Heritage Environmental Services, LLC Q2256338

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 10 | | 7.66 | | 76.6 | |
| 372 | TRICHLOROFLUOROMETHANE | 10 | | 10.1 | | 101 | |
| 398 | HEXACHLOROBUTADIENE | 10 | | 13.8 | ! | 138 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 10 | | 12.2 | | 122 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | 11.2 | | 112 | |
| 493 | NAPHTHALENE | 10 | | 12.9 | | 129 | |
| 532 | N-PROPYLBENZENE | 10 | | 10.9 | | 109 | |
| 644 | SEC-BUTYLBENZENE | 10 | | 11.2 | | 112 | |
| 702 | TERT-BUTYLBENZENE | 10 | | 11 | | 110 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 13.6 | | 136 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 10 | | 11.9 | | 119 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 10 | | 10.8 | | 108 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 10 | | 10.8 | | 108 | |
| 105 | ACROLEIN | 100 | | 101 | | 101 | |
| 99 | ACETONE (2-PROPANONE) | 50 | | 48.4 | | 96.8 | |
| 106 | ACRYLONITRILE | 100 | | 107 | | 107 | |
| 216 | CARBON DISULFIDE | 10 | | 9.38 | | 93.8 | |
| 767 | VINYL ACETATE | 10 | | 9.32 | | 93.2 | |
| 52 | 2-BUTANONE | 50 | | 46.6 | | 93.2 | |
| 91 | 4-METHYL-2-PENTANONE | 50 | | 48.1 | | 96.2 | |
| 60 | 2-HEXANONE | 50 | | 48.8 | | 97.6 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 10 | | 8.53 | | 85.3 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | 19.5 | | 97.5 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 10 | | 10.2 | | 102 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | 10.9 | | 109 | |
| 422 | IODOMETHANE | 10 | | 9.37 | | 93.7 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | 9.54 | | 95.4 | |
| 30 | 1,4-DIOXANE | 200 | | 183 | | 91.5 | |
| 709 | TETRAHYDROFURAN | 125 | | 115 | | 92 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 10 | | 10.1 | | 101 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 100 | | 100 | | 100 | |
| 975 | METHYLACRYLONITRILE | 100 | | 102 | | 102 | |
| 1147 | METHYL METHACRYLATE | 10 | | 9.31 | | 93.1 | |
| 351 | ETHYL METHACRYLATE | 10 | | 9.73 | | 97.3 | |
| 803 | XYLENES (O/M/P-XYLENE) | 30 | | 31.6 | | 105.3 | |

**Qualifiers**

! Outside Lab Generated Control Limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2662V.D
Acq On : 6 Nov 2009 7:26
Sample : DI MS
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 07:42:09 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1057828 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 374602 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 243829 | 9.81 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 98.10% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.23 | 65 | 388071 | 10.20 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 102.00% | | | |
| 50) Toluene-d8 | 7.45 | 98 | 1033263 | 9.74 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 97.40% | | | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 361843 | 10.08 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 100.80% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 145072 | 7.66 | UG/L | 100 |
| 3) Chloromethane | 1.39 | 50 | 325684 | 8.36 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 289218 | 8.78 | UG/L | 98 |
| 5) Bromomethane | 1.79 | 94 | 120748 | 9.52 | UG/L | 98 |
| 6) Chloroethane | 1.88 | 64 | 148680 | 10.20 | UG/L | 90 |
| 7) Trichlorofluoromethane | 2.14 | 101 | 276984m | 10.05 | UG/L | |
| 8) Acrolein | 2.51 | 56 | 202945 | 100.81 | UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 698210 | 48.37 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 209371 | 9.78 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 241853 | 9.67 | UG/L | 89 |
| 12) Acrylonitrile | 3.32 | 53 | 652206 | 106.91 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 598736 | 9.38 | UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 252586 | 10.22 | UG/L | 95 |
| 15) Allyl Chloride | 2.96 | 41 | 1029030 | 10.06 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 23270 | 9.32 | UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 712030 | 9.54 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 228267 | 10.04 | UG/L # | 83 |
| 19) n-Hexane | 3.66 | 57 | 462880 | 10.84 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.77 | 63 | 466844 | 10.44 | UG/L | 100 |
| 21) 2-Butanone | 4.40 | 72 | 194278 | 46.59 | UG/L | 88 |
| 22) Ethyl Acetate | 4.50 | 43 | 399883 | 8.74 | UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.37 | 96 | 249900 | 10.56 | UG/L | 85 |
| 24) Ethyl Cyanide | 4.45 | 54 | 639286 | 100.39 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 422341 | 10.12 | UG/L | 100 |
| 26) Methacrylonitrile | 4.61 | 41 | 2450065 | 101.89 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 1426426 | 114.86 | UG/L | 98 |
| 28) Bromochloromethane | 4.62 | 128 | 118025 | 10.45 | UG/L # | 68 |
| 29) 2,2-Dichloropropane | 4.37 | 77 | 259392 | 10.96 | UG/L | 89 |
| 30) Diethyl ether | 2.40 | 59 | 222518 | 9.76 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 350859 | 10.23 | UG/L | 97 |
| 32) Iodomethane | 2.73 | 142 | 327235 | 9.37 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 117197 | 10.26 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.09 | 117 | 310602 | 10.19 | UG/L | 93 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 414263 | 10.12 | UG/L | 99 |
| 38) Isobutanol | 5.28 | 43 | 487716 | 216.16 | UG/L # | 96 |
| 39) Benzene | 5.30 | 78 | 947591 | 10.07 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 252277 | 10.19 | UG/L | 94 |

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



591696

Data File : C:\HPCHEM\DATA\V110609\2662V.D
Acq On : 6 Nov 2009 7:26
Sample : DI MS
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 07:42:09 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 41) | n-Butanol | 6.03 | 56 | 8732 | 4.71 UG/L | # | 80 |
| 42) | 1,2-DICHLOROPROPANE | 6.27 | 63 | 259786 | 10.32 UG/L | | 100 |
| 43) | 1,4-Dioxane | 6.45 | 88 | 173250 | 182.56 UG/L | | 100 |
| 44) | Methyl Methacrylate | 6.45 | 41 | 322530 | 9.31 UG/L | # | 63 |
| 45) | Bromodichloromethane | 6.59 | 83 | 288892 | 9.93 UG/L | | 99 |
| 46) | Dibromomethane | 6.39 | 93 | 162295 | 10.66 UG/L | | 89 |
| 47) | 4-Methyl-2-Pentanone | 7.33 | 43 | 2292829 | 48.11 UG/L | | 99 |
| 48) | 2-Chloroethylvinylether | 6.98 | 63 | 167018 | 8.53 UG/L | | 99 |
| 49) | cis-1,3-Dichloropropene | 7.13 | 75 | 364638 | 10.01 UG/L | | 100 |
| 51) | TOLUENE | 7.53 | 91 | 1031673 | 9.99 UG/L | | 100 |
| 52) | trans-1,3-Dichloropropene | 7.81 | 75 | 333380 | 10.27 UG/L | | 100 |
| 53) | 1,1,2-Trichloroethane | 8.02 | 97 | 216458 | 10.00 UG/L | | 100 |
| 54) | 1,2-Dibromoethane | 8.63 | 107 | 243166 | 10.22 UG/L | | 99 |
| 56) | 2-Hexanone | 8.37 | 43 | 1789968 | 48.78 UG/L | | 100 |
| 57) | 1,3-Dichloropropane | 8.23 | 76 | 393210 | 10.26 UG/L | | 100 |
| 58) | Ethyl Methacrylate | 7.96 | 69 | 317013 | 9.73 UG/L | | 92 |
| 59) | Tetrachloroethene | 8.21 | 166 | 298889 | 10.55 UG/L | | 100 |
| 60) | Dibromochloromethane | 8.51 | 129 | 212873 | 10.33 UG/L | | 100 |
| 61) | Chlorobenzene | 9.29 | 112 | 712927 | 10.67 UG/L | | 99 |
| 62) | 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 239121 | 10.77 UG/L | | 100 |
| 63) | ETHYL BENZENE | 9.46 | 106 | 393998 | 10.46 UG/L | | 76 |
| 64) | m,p-Xylene | 9.62 | 106 | 991991 | 21.11 UG/L | # | 60 |
| 65) | o-Xylene | 10.10 | 106 | 486098 | 10.49 UG/L | | 80 |
| 66) | Styrene | 10.12 | 104 | 783500 | 10.13 UG/L | # | 79 |
| 67) | Bromoform | 10.30 | 173 | 152847 | 9.70 UG/L | | 100 |
| 68) | 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 387357 | 10.86 UG/L | | 99 |
| 70) | Isopropylbenzene | 10.55 | 105 | 1357255 | 12.24 UG/L | | 100 |
| 71) | trans-1,4-Dichloro-2-buten | 10.93 | 53 | 347328 | 19.50 UG/L | # | 8 |
| 72) | Bromobenzene | 10.84 | 77 | 513513 | 10.34 UG/L | | 100 |
| 73) | 1,2,3-Trichloropropane | 10.90 | 110 | 112277 | 9.58 UG/L | | 100 |
| 74) | n-Propylbenzene | 10.99 | 92 | 176611 | 10.90 UG/L | | 89 |
| 75) | 1,3,5-Trimethylbenzene | 11.19 | 105 | 1181169 | 10.77 UG/L | | 100 |
| 76) | 2-Chlorotoluene | 11.06 | 126 | 324151 | 10.65 UG/L | | 100 |
| 77) | 4-Chlorotoluene | 11.17 | 126 | 324636 | 10.57 UG/L | | 100 |
| 78) | t-Butylbenzene | 11.51 | 91 | 727198 | 11.01 UG/L | # | 61 |
| 79) | 1,2,4-Trimethylbenzene | 11.56 | 105 | 1190599 | 10.75 UG/L | | 100 |
| 80) | sec-Butylbenzene | 11.72 | 105 | 1603809 | 11.22 UG/L | | 100 |
| 81) | p-Isopropyltoluene | 11.88 | 119 | 1311079 | 11.23 UG/L | | 100 |
| 82) | 1,3-Dichlorobenzene | 11.81 | 146 | 638648 | 10.60 UG/L | | 100 |
| 83) | 1,4-Dichlorobenzene | 11.90 | 146 | 650601 | 10.54 UG/L | | 100 |
| 84) | n-Butylbenzene | 12.26 | 92 | 696450 | 11.15 UG/L | | 96 |
| 85) | 1,2-Dichlorobenzene | 12.24 | 146 | 628975 | 10.94 UG/L | | 100 |
| 86) | 1,2-Dibromo-3-chloropropan | 12.94 | 157 | 84194 | 10.94 UG/L | | 100 |
| 87) | 1,2,4-Trichlorobenzene | 13.66 | 180 | 467814 | 11.89 UG/L | | 100 |
| 88) | Naphthalene | 13.86 | 128 | 1325304 | 12.87 UG/L | | 100 |
| 89) | Hexachlorobutadiene | 13.82 | 225 | 299327 | 13.76 UG/L | | 100 |
| 90) | 1,2,3-Trichlorobenzene | 14.06 | 180 | 441718 | 13.60 UG/L | | 100 |

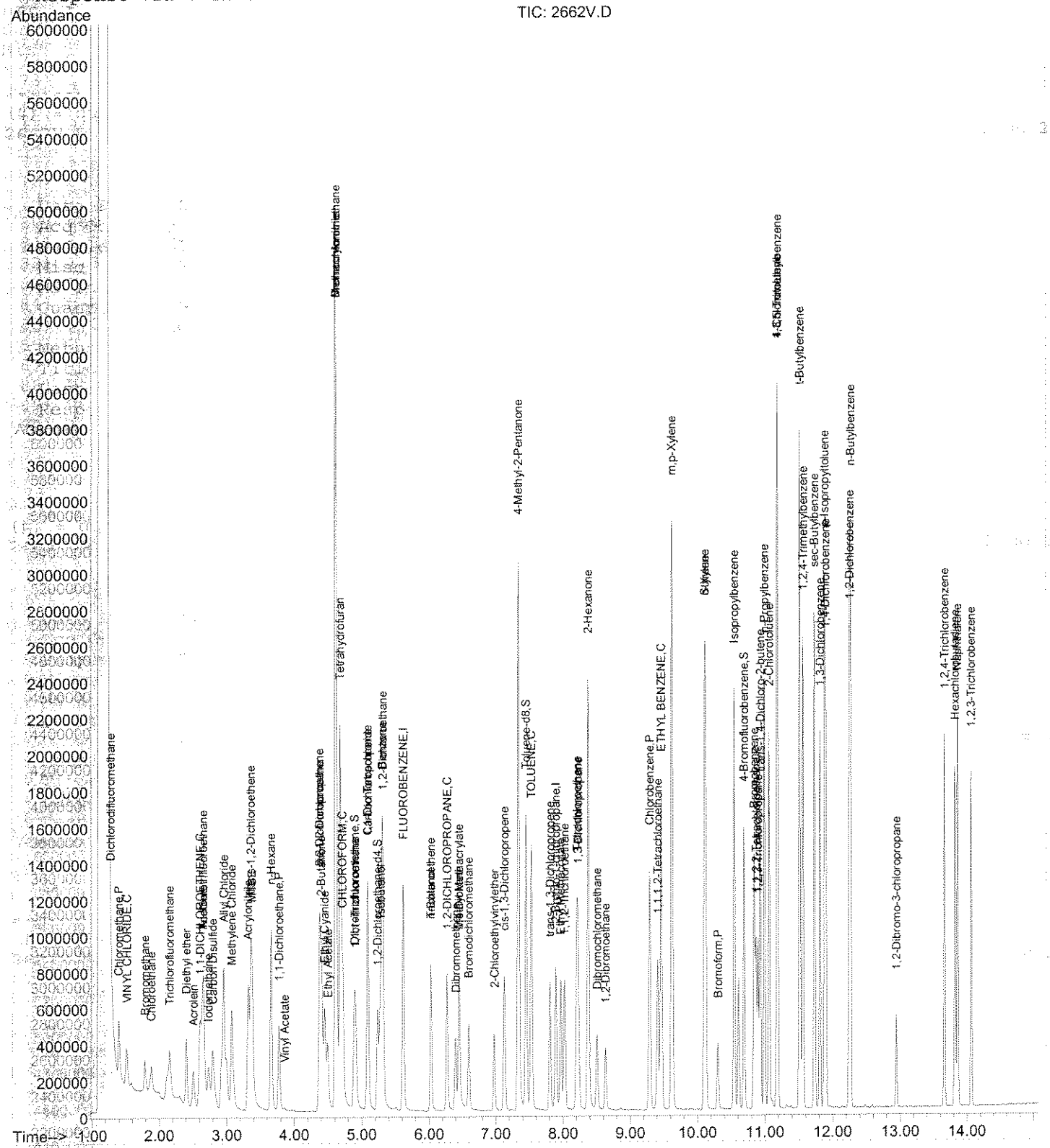
(#) = qualifier out of range (m) = manual integration



59169b

Data File : C:\HPCHEM\DATA\V110609\2662V.D  Vial: 1
Acq On : 6 Nov 2009 7:26  Operator: REGI
Sample : DI MS  Inst : Instrumen
Misc : 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 7:42 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





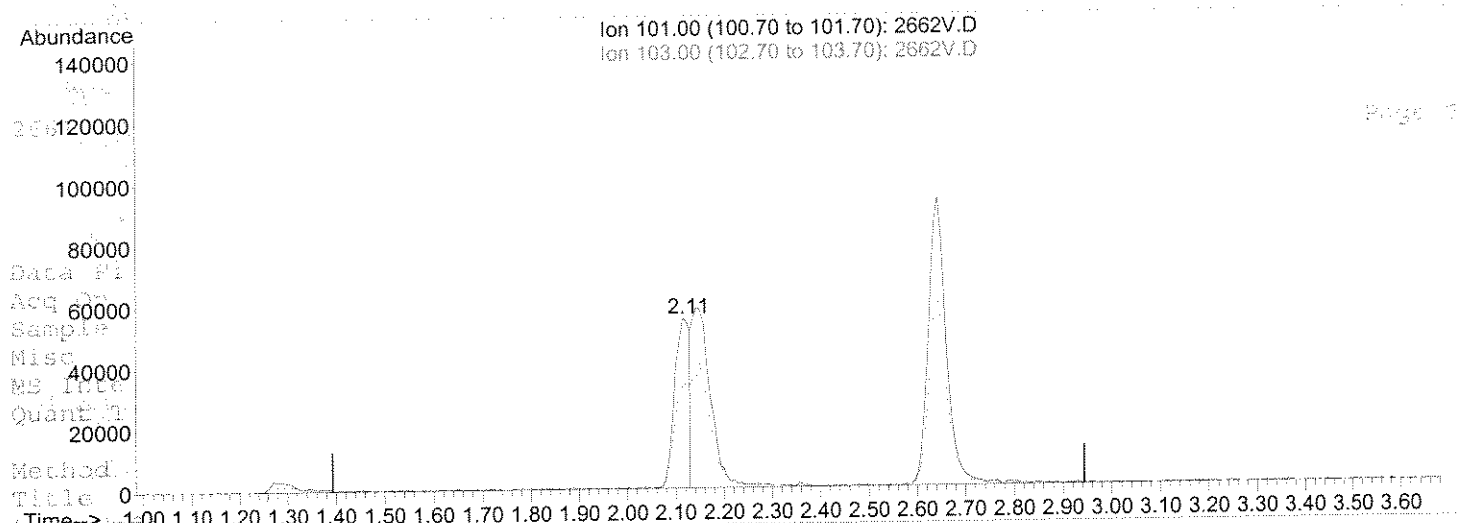

59169b

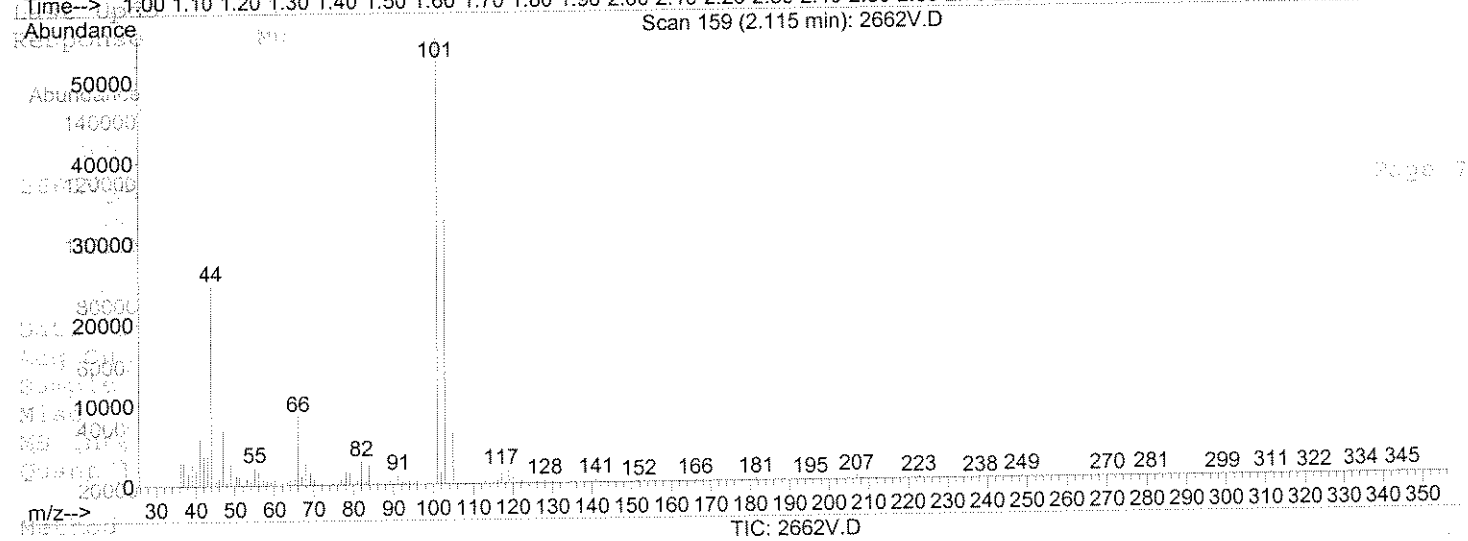
Data File : C:\HPCHEM\DATA\V110609\2662V.D
Acq On : 6 Nov 2009 7:26
Sample : DI MS
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 7:42 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.11min 4.42UG/L

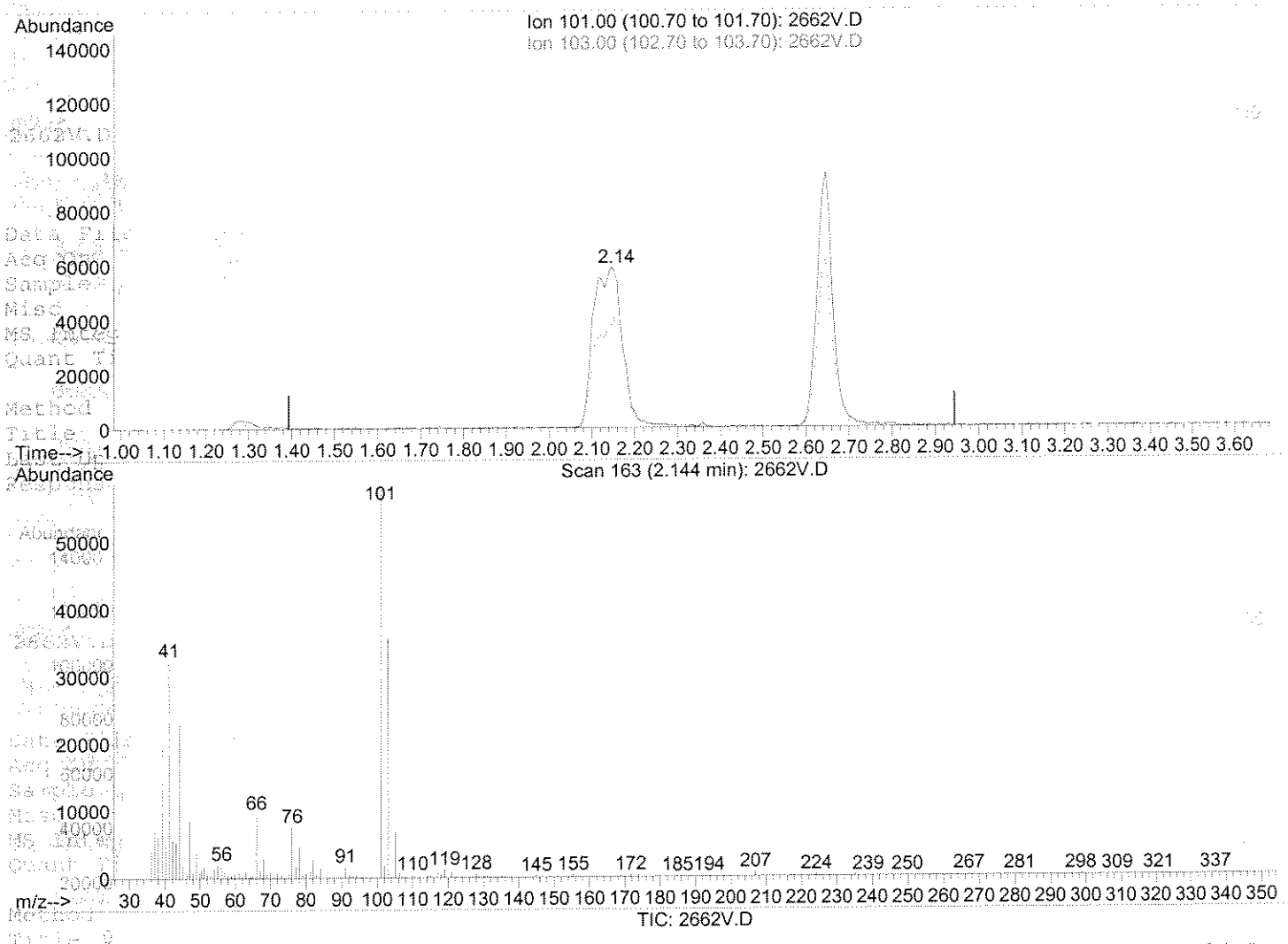
response 121863

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110609\2662V.D
Acq On : 6 Nov 2009 7:26
Sample : DI MS
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 7:42 2009

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.14min 10.05UG/L m

response 276984

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2662V.D 8260VOI.M Fri Nov 06 07:42:30 2009

R560090

# Heritage Environmental Services, LLC

A864529

GC/MS VOA

Method SW846-8260B
Sample Description 153
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.0
Analyst 1062 R. SHAMP
File 2669V.D Date/Time 06Nov09 10:35:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 25 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 2.1 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

11/11/09

R560090

# Heritage Environmental Services, LLC

A864529

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | EX | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 101 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 95 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 97 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 95 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

EX Exceeds calibration range. See Replicate

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

6-LT AMBERS, 3-500ML HNO3 SQPL, 12-HCL VIALS

**********MS/MSD THIS SAMPLE**********

**********REPORT ALL RESULTS IN UG/L.**********

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\DATA\V110609\2669V.D
Acq On : 6 Nov 2009 10:35
Sample : A864529
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 06 10:52:36 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

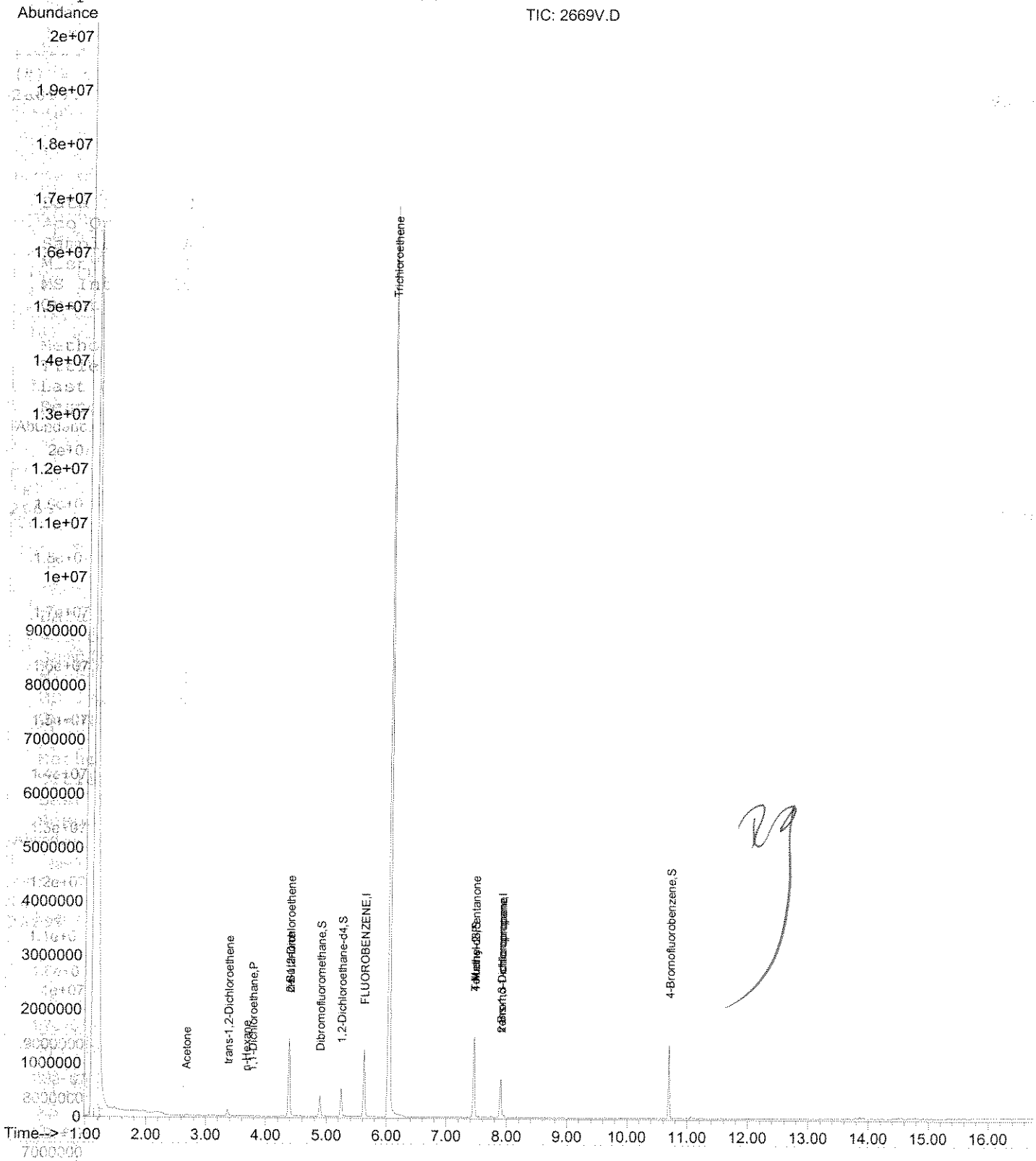
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1046445 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 365716 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 233233 | 9.48 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.80% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 378922 | 10.06 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.60% | |
| 50) Toluene-d8 | 7.46 | 98 | 996555 | 9.50 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.00% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 338134 | 9.65 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.50% | |
| **Target Compounds** | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 39445 | 2.76 UG/L | 94 |
| 14) Methylene Chloride | 3.08 | 84 | 8889 | Below Cal | 88 |
| 18) trans-1,2-Dichloroethene 2.1 | 3.37 | 96 | 46936 | 2.09 UG/L | 85 |
| 19) n-Hexane | 3.67 | 57 | 5490 | 0.13 UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.77 | 63 | 8435 | 0.19 UG/L | 100 |
| 21) 2-Butanone | 4.38 | 72 | 5953 | 1.44 UG/L # | 1 |
| 23) cis-1,2-Dichloroethene 2.0 | 4.38 | 96 | 573447 | 24.51 UG/L | 98 |
| 40) Trichloroethene EX | 6.03 | 130 | 5294906 | 216.27 UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 6953 | 0.15 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 7579 | 0.24 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 22531 | Below Cal | 100 |

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

Data File : C:\HPCHEM\DATA\V110609\2669V.D
Acq On : 6 Nov 2009 10:35
Sample : A864529
Misc : 11/6/09
MS Integration Params: rteint2.p
Quant Time: Nov 6 10:52 2009

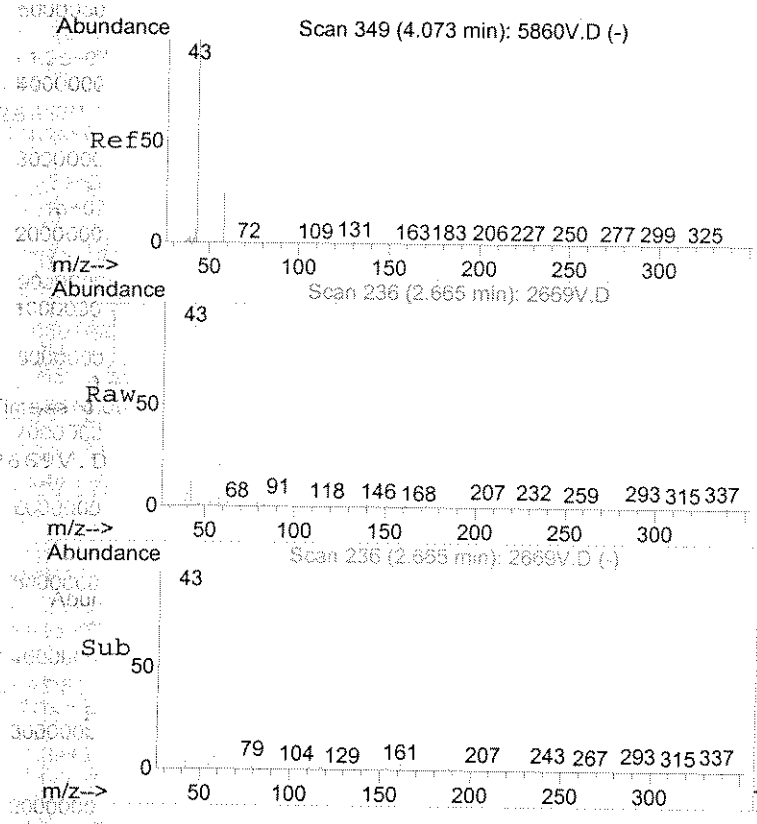
Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





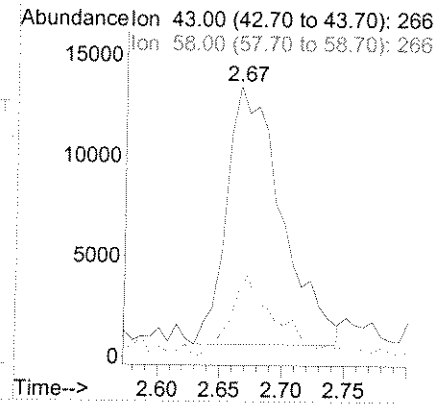

59169b

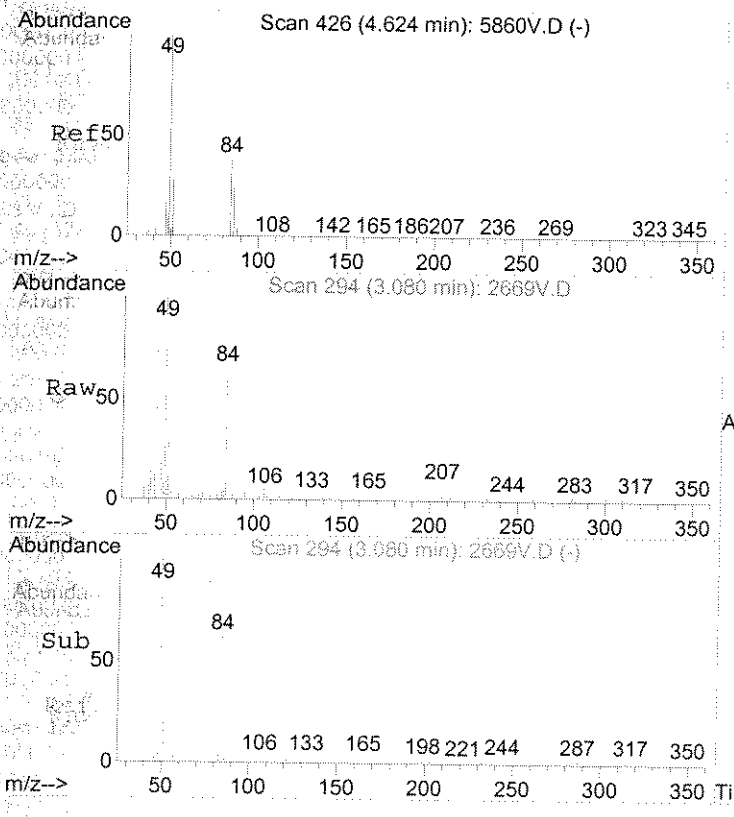



#9
Acetone
Concen: 2.76 UG/L
RT: 2.67 min Scan# 236
Delta R.T. -0.00 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 43 Resp: 39445

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.5 | 23.1 | 34.7 |

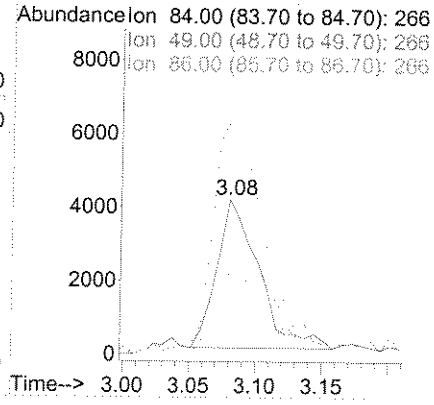


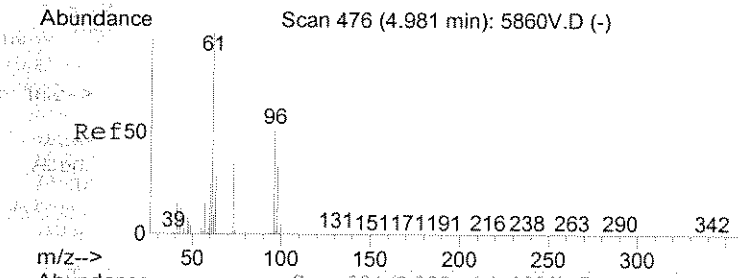



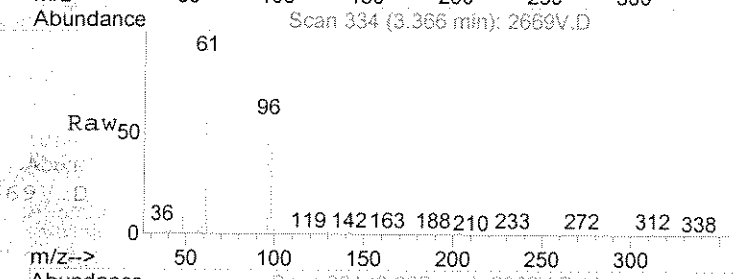

#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

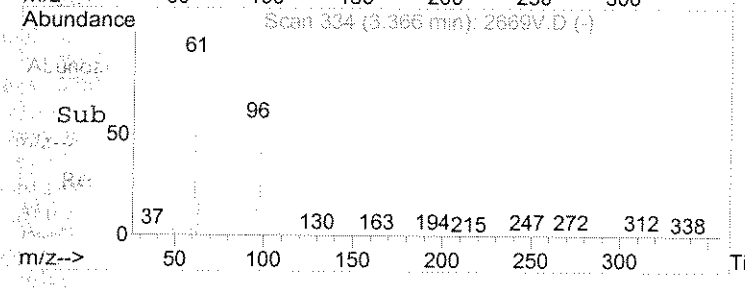
Tgt Ion: 84 Resp: 8889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 193.9 | 140.2 | 210.2 |
| 86 | 71.2 | 51.1 | 76.7 |





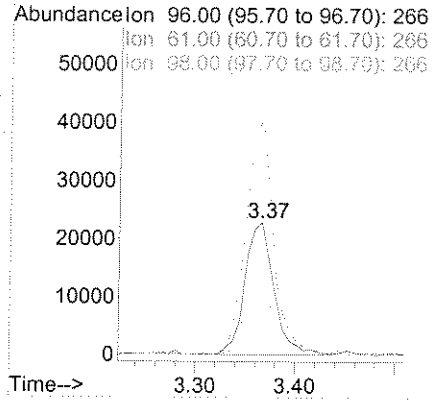



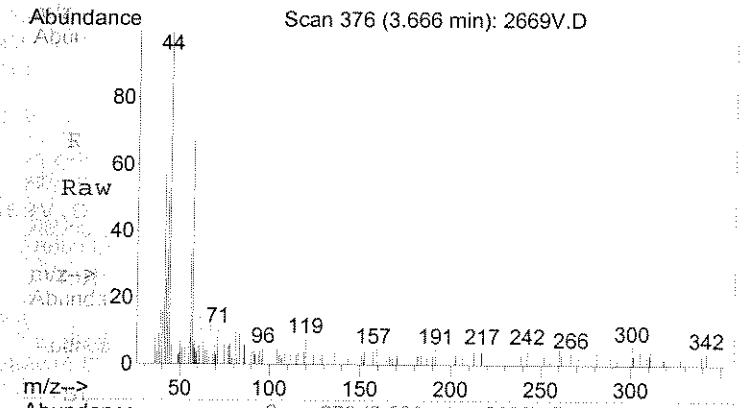




#18
trans-1,2-Dichloroethene
Concen: 2.09 UG/L
RT: 3.37 min Scan# 334
Delta R.T. 0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 96 Resp: 46936

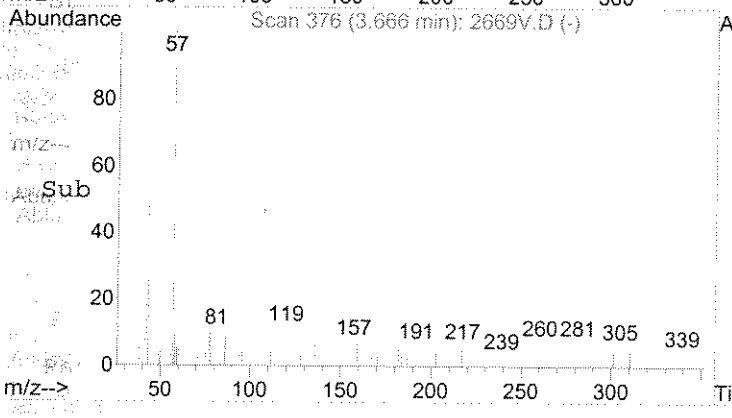
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 167.6 | 114.1 | 171.1 |
| 98 | 62.0 | 50.7 | 76.1 |

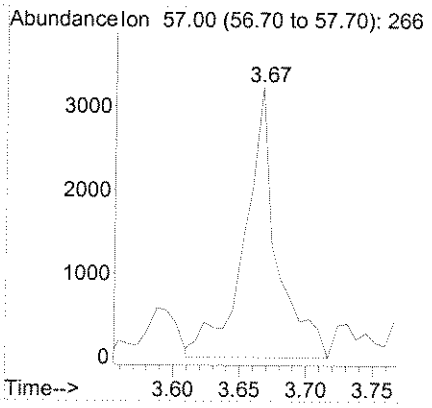


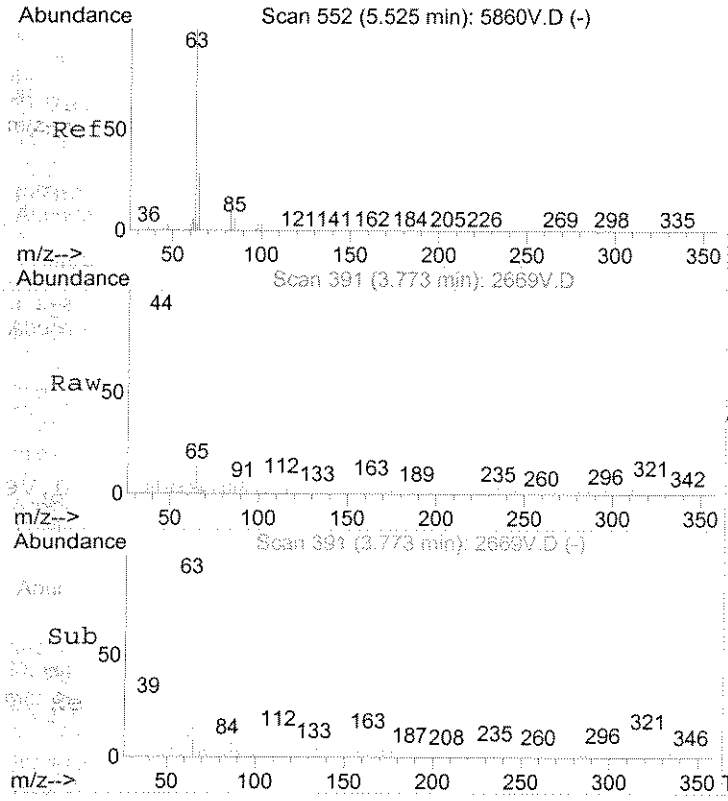




#19
n-Hexane
Concen: 0.13 UG/L
RT: 3.67 min Scan# 376
Delta R.T. 0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 57 Resp: 5490

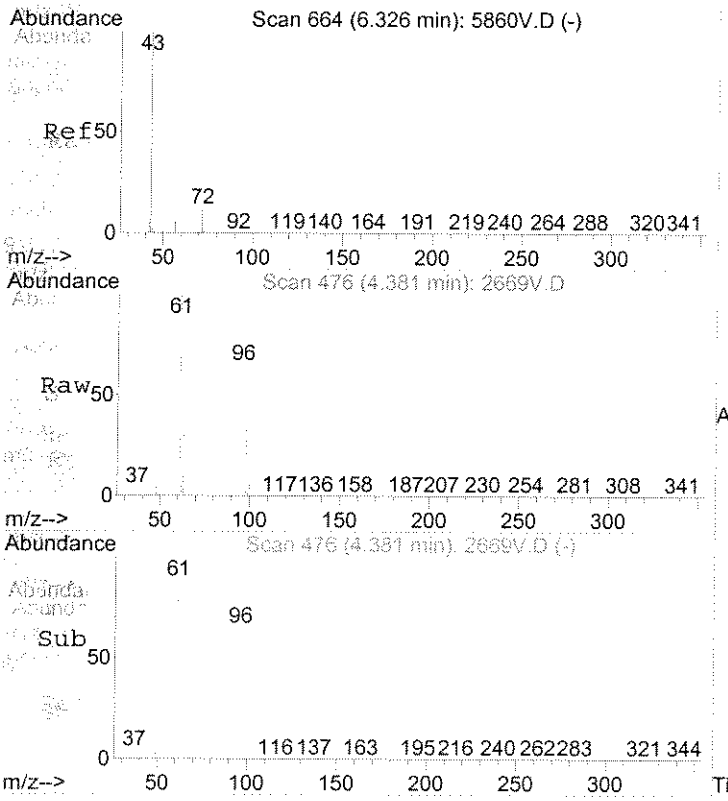





#20
1,1-Dichloroethane
Concen: 0.19 UG/L
RT: 3.77 min Scan# 391
Delta R.T. -0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

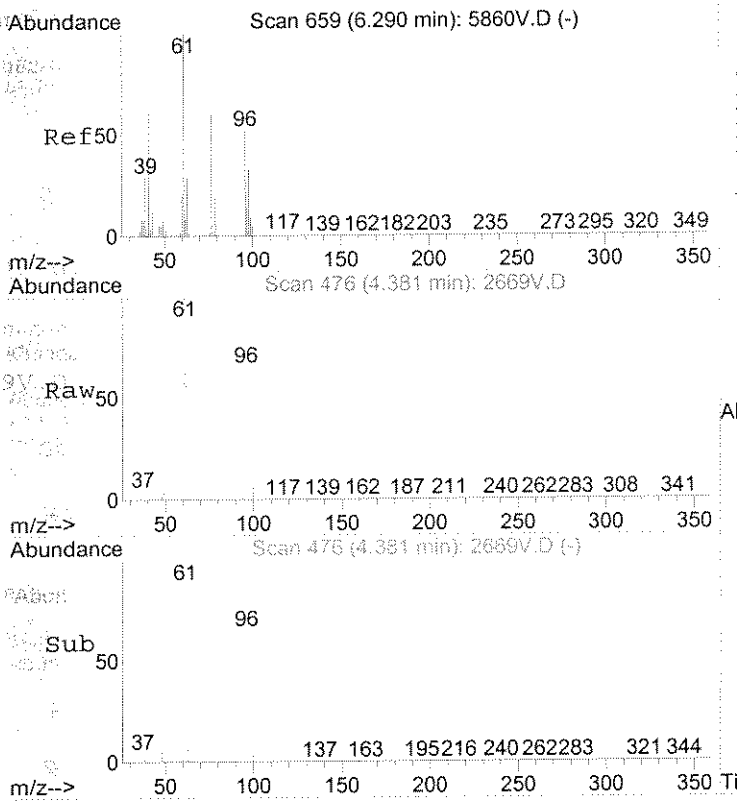
Tgt Ion: 63 Resp: 8435




#21
2-Butanone
Concen: 1.44 UG/L
RT: 4.38 min Scan# 476
Delta R.T. -0.04 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 72 Resp: 5953

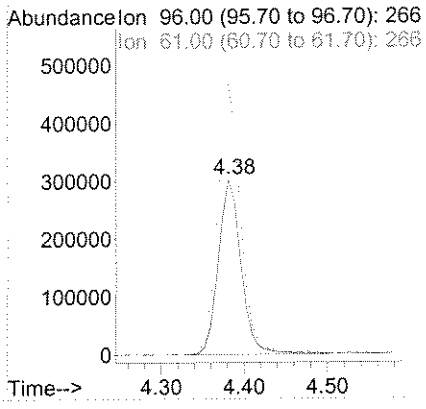
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |

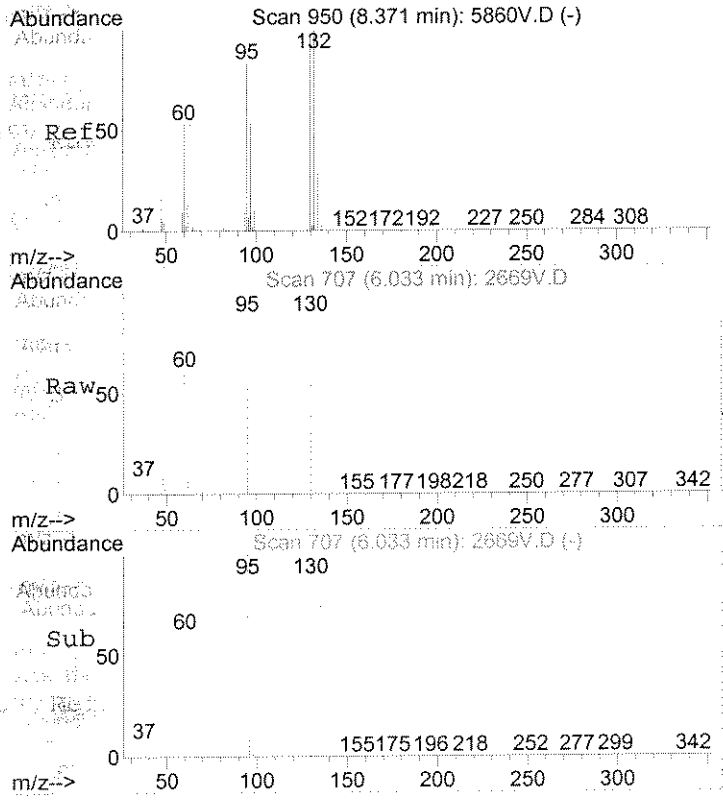



#23
cis-1,2-Dichloroethene
Concen: 24.51 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 96 Resp: 573447

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 155.1 | 121.8 | 182.6 |

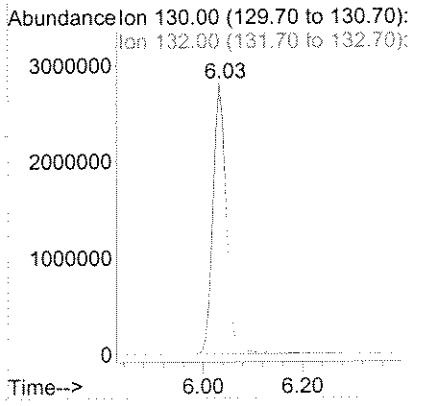


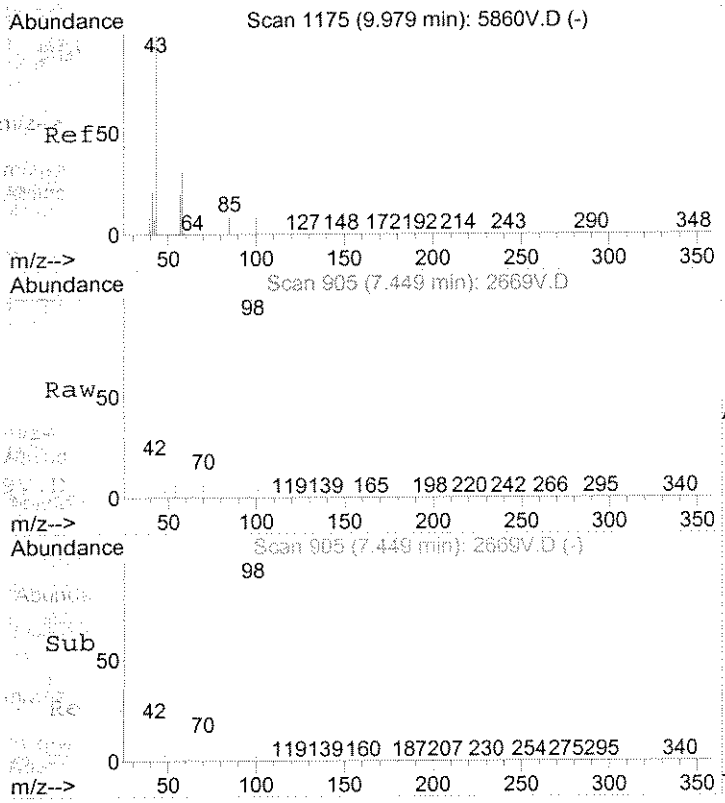




#40
Trichloroethene
Concen: 216.27 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion:130 Resp: 5294906

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.8 | 82.0 | 123.0 |

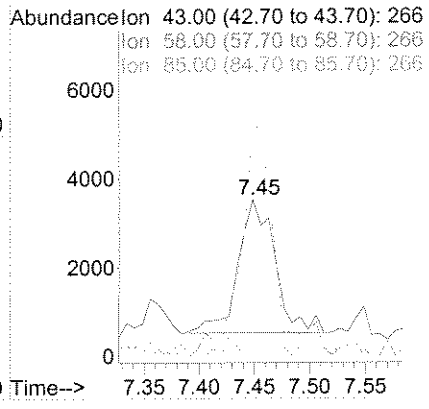


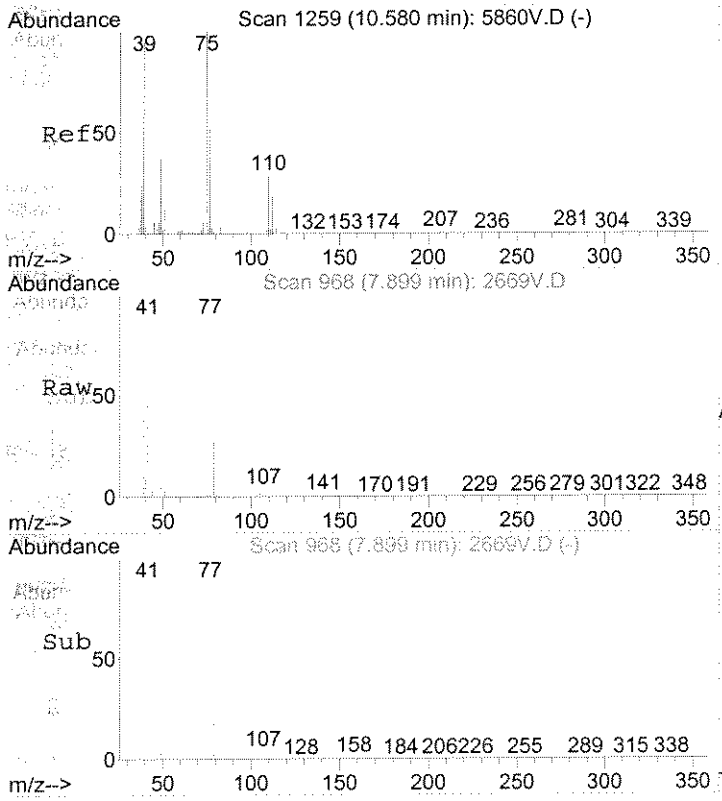



#47
4-Methyl-2-Pentanone
Concen: 0.15 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion: 43 Resp: 6953

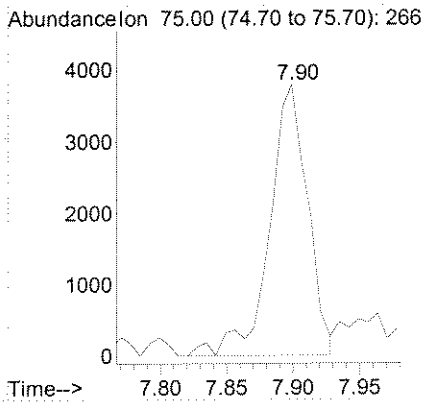
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 152.4 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

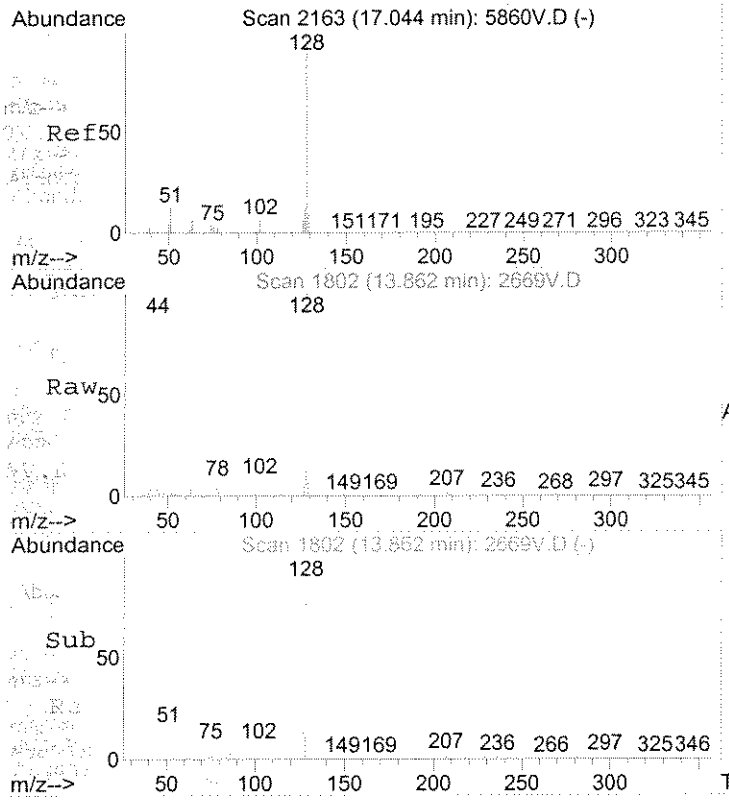



#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

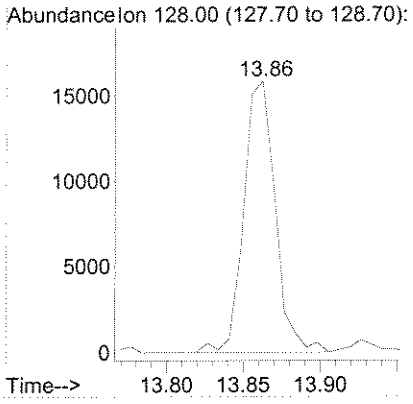
Tgt Ion: 75 Resp: 7579






#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1802
Delta R.T. 0.01 min
Lab File: 2669V.D
Acq: 6 Nov 2009 10:35

Tgt Ion:128 Resp: 22531






59169b

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 2659V.D BFB Injection Date: 11/06/09

Instrument ID: GCMS#17 BFB Injection Time: 06:01

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 26.2 |
| 75 | 30.0 - 60.0% of mass 95 | 52.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 78.6 |
| 175 | 5.0 - 9.0% of mass 174 | 6.5 ( 8.2)1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.0 ( 98.0)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.8 ( 6.2)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD010 | VSTD010 | 2660V.D | 11/06/09 | 06:28 |
| 02 | VBLK01 | VBLK | 2661V.D | 11/06/09 | 06:55 |
| 03 | DI MS | DI MS | 2662V.D | 11/06/09 | 07:26 |
| 04 | A864443 | A864443 | 2663V.D | 11/06/09 | 08:06 |
| 05 | A864566 | A864566 | 2664V.D | 11/06/09 | 08:31 |
| 06 | A864567 | A864567 | 2665V.D | 11/06/09 | 08:56 |
| 07 | A864568 | A864568 | 2666V.D | 11/06/09 | 09:21 |
| 08 | A864569 | A864569 1:10 | 2667V.D | 11/06/09 | 09:46 |
| 09 | A864570 | A864570 1:10 | 2668V.D | 11/06/09 | 10:10 |
| 10 | A864529 | A864529 | 2669V.D | 11/06/09 | 10:35 |
| 11 | A864529 MS | A864529 MS | 2670V.D | 11/06/09 | 11:00 |
| 12 | A864529 MSD | A864529 MSD | 2671V.D | 11/06/09 | 11:25 |
| 13 | A864526 | A864526 | 2672V.D | 11/06/09 | 11:50 |
| 14 | A864527 | A864527 | 2673V.D | 11/06/09 | 12:15 |
| 15 | A864528 | A864528 | 2674V.D | 11/06/09 | 12:40 |
| 16 | A864530 | A864530 | 2675V.D | 11/06/09 | 13:05 |
| 17 | A864531 | A864531 | 2676V.D | 11/06/09 | 13:30 |
| 18 | A864532 | A864532 | 2677V.D | 11/06/09 | 13:55 |
| 19 | A864533 | A864533 | 2678V.D | 11/06/09 | 14:20 |
| 20 | A864534 | A864534 | 2679V.D | 11/06/09 | 14:44 |
| 21 | A864535 | A864535 | 2680V.D | 11/06/09 | 15:09 |
| 22 | A864536 | A864536 | 2681V.D | 11/06/09 | 15:34 |

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 2659V.D BFB Injection Date: 11/06/09

Instrument ID: GCMS#17 BFB Injection Time: 06:01

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 26.2 |
| 75 | 30.0 - 60.0% of mass 95 | 52.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 78.6 |
| 175 | 5.0 - 9.0% of mass 174 | 6.5 ( 8.2)1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.0 ( 98.0)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.8 ( 6.2)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 23 | A864537 | A864537 | 2682V.D | 11/06/09 | 15:59 |
| 24 | A864538 | A864538 | 2683V.D | 11/06/09 | 16:24 |
| 25 | A864539 | A864539 | 2684V.D | 11/06/09 | 16:49 |

/ 11-11-09

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 2660V.D Date Analyzed: 11/06/09

Instrument ID: GCMS#17 Time Analyzed: 06:28

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1064918 | 5.62 | 361256 | 7.89 | | |
| | UPPER LIMIT | 2129836 | 6.12 | 722512 | 8.39 | | |
| | LOWER LIMIT | 532459 | 5.12 | 180628 | 7.39 | | |
| | EPA SAMPLE NO. | | | | | | |
| 01 | VBLK01 | 1076980 | 5.62 | 390271 | 7.89 | | |
| 02 | DI MS | 1057828 | 5.62 | 374602 | 7.89 | | |
| 03 | A864443 | 1061081 | 5.62 | 376910 | 7.89 | | |
| 04 | A864566 | 1086914 | 5.62 | 381968 | 7.90 | | |
| 05 | A864567 | 1033228 | 5.62 | 372260 | 7.90 | | |
| 06 | A864568 | 1020426 | 5.62 | 374393 | 7.90 | | |
| 07 | A864569 | 1031464 | 5.62 | 371178 | 7.90 | | |
| 08 | A864570 | 1055942 | 5.62 | 380339 | 7.90 | | |
| 09 | A864529 | 1046445 | 5.62 | 365716 | 7.90 | | |
| 10 | A864529 MS | 1040549 | 5.62 | 377466 | 7.90 | | |
| 11 | A864529 MS | 1023265 | 5.62 | 375769 | 7.90 | | |
| 12 | A864526 | 1034424 | 5.62 | 362722 | 7.90 | | |
| 13 | A864527 | 1026629 | 5.62 | 369331 | 7.90 | | |
| 14 | A864528 | 1005482 | 5.62 | 340774 | 7.90 | | |
| 15 | A864530 | 1014429 | 5.62 | 353423 | 7.90 | | |
| 16 | A864531 | 996359 | 5.62 | 349139 | 7.90 | | |
| 17 | A864532 | 1011185 | 5.62 | 344746 | 7.90 | | |
| 18 | A864533 | 1004737 | 5.62 | 336589 | 7.90 | | |
| 19 | A864534 | 978778 | 5.62 | 341151 | 7.90 | | |
| 20 | A864535 | 965552 | 5.62 | 339069 | 7.90 | | |
| 21 | A864536 | 996960 | 5.62 | 323030 | 7.90 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

/ JS 11/11/09

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 2660V.D Date Analyzed: 11/06/09

Instrument ID: GCMS#17 Time Analyzed: 06:28

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1064918 | 5.62 | 361256 | 7.89 | | |
| | UPPER LIMIT | 2129836 | 6.12 | 722512 | 8.39 | | |
| | LOWER LIMIT | 532459 | 5.12 | 180628 | 7.39 | | |
| | EPA SAMPLE NO. | | | | | | |
| 22 | A864537 | 991907 | 5.62 | 341392 | 7.90 | | |
| 23 | A864538 | ~~991907~~ 974646 | 5.62 | ~~341392~~ 335249 | 7.90 | | |
| 24 | A864539 | ~~991907~~ 962901 | 5.62 | ~~341392~~ 312873 | 7.90 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

/ KS 11/1/09

2A

# WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: HERITAGE Contract:

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

Date Injected: 06-Nov-09 Instrument: GCMS#17

| | EPA SAMPLE NO. | SMC1 # | SMC2 # | SMC3 # | SMC4 # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VBLK01 | 96 | 102 | 97 | 97 | 0 |
| 02 | DI MS | 98 | 102 | 97 | 101 | 0 |
| 03 | A864443 | 95 | 101 | 96 | 97 | 0 |
| 04 | A864566 | 95 | 101 | 99 | 103 | 0 |
| 05 | A864567 | 99 | 104 | 96 | 104 | 0 |
| 06 | A864568 | 98 | 100 | 94 | 97 | 0 |
| 07 | A864569 | 95 | 101 | 101 | 101 | 0 |
| 08 | A864570 | 96 | 100 | 98 | 96 | 0 |
| 09 | A864529 | 95 | 101 | 95 | 97 | 0 |
| 10 | A864529 MS | 97 | 101 | 96 | 101 | 0 |
| 11 | A864529 MS | 99 | 101 | 98 | 97 | 0 |
| 12 | A864526 | 95 | 100 | 95 | 98 | 0 |
| 13 | A864527 | 96 | 102 | 96 | 95 | 0 |
| 14 | A864528 | 99 | 102 | 96 | 101 | 0 |
| 15 | A864530 | 96 | 102 | 95 | 98 | 0 |
| 16 | A864531 | 95 | 102 | 96 | 98 | 0 |
| 17 | A864532 | 93 | 101 | 95 | 98 | 0 |
| 18 | A864533 | 96 | 103 | 94 | 100 | 0 |
| 19 | A864534 | 97 | 103 | 97 | 97 | 0 |
| 20 | A864535 | 96 | 104 | 99 | 98 | 0 |
| 21 | A864536 | 94 | 102 | 95 | 103 | 0 |
| 22 | A864537 | 94 | 105 | 95 | 97 | 0 |
| 23 | A864538 | 97 | 104 | 96 | 96 | 0 |
| 24 | A864539 | 94 | 102 | 94 | 102 | 0 |

QC LIMITS

| | | | |
|---|---|---|---|
| SMC1 | = | Dibromofluoromethane | (83-139) |
| SMC2 | = | 1,2-Dichloroethane-d4 | (79-137) |
| SMC3 | = | toluene-d8 | (85-123) |
| SMC4 | = | 4-bromofluorobenzene | (76-129) |

# Column to be used to flag recovery values

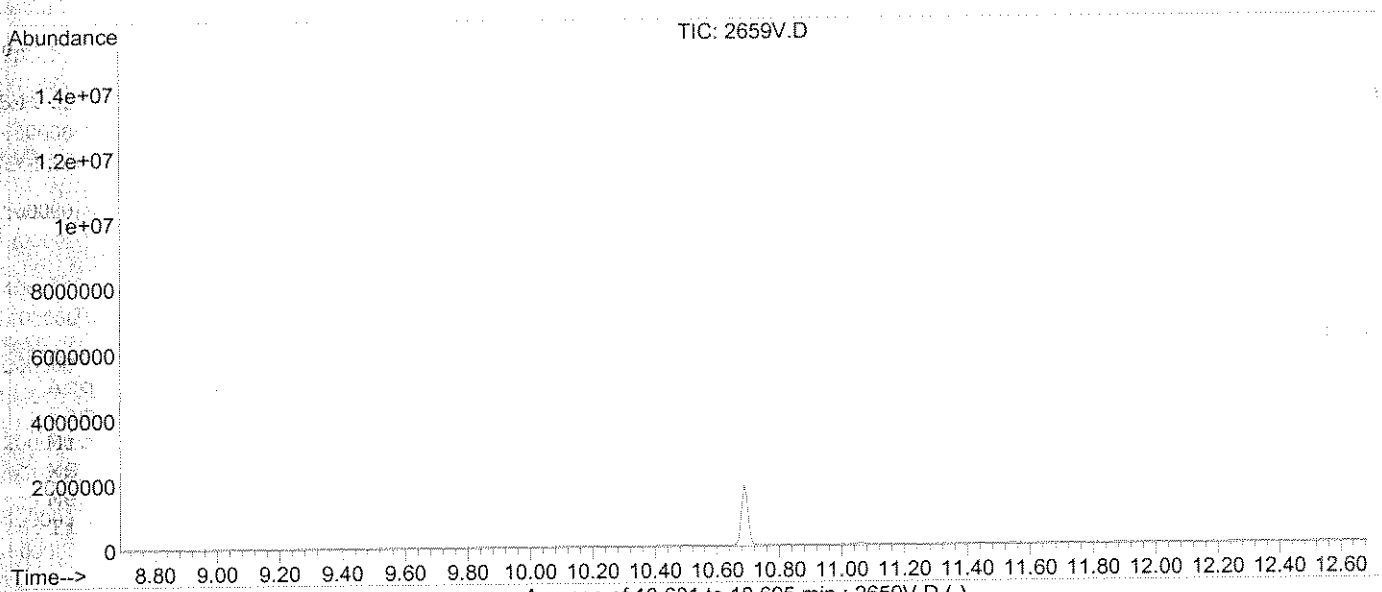
* Values outside of contract required QC limits

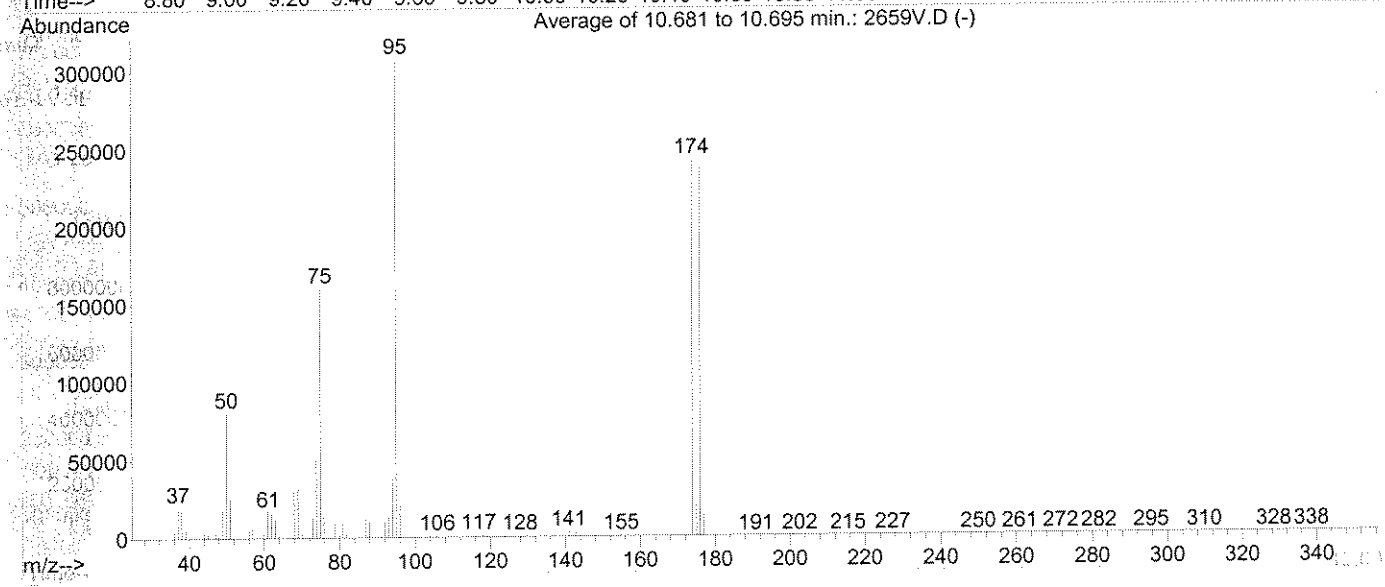
D System Monitoring Compound diluted out

JK 11/1/09

Data File : C:\HPCHEM\DATA\V110609\2659V.D
Acq On : 6 Nov 2009 6:01
Sample : BLANK
Misc : 11/6/09
MS Integration Params: rteint2.p
Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00




Spectrum Information: Average of 10.681 to 10.695 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 26.2 | 80833 | PASS |
| 75 | 95 | 30 | 60 | 52.2 | 160981 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 308330 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 20981 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 78.6 | 242325 | PASS |
| 175 | 174 | 5 | 9 | 8.2 | 19984 | PASS |
| 176 | 174 | 95 | 101 | 98.0 | 237418 | PASS |
| 177 | 176 | 5 | 9 | 6.2 | 14739 | PASS |

11/1/09

2659V.D 8260VOI.M Fri Nov 06 06:14:42 2009

BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 35.10 | 83 | 45.00 | 3163 | 53.00 | 33 | 64.00 | 1249 |
| 36.00 | 3751 | 45.70 | 188 | 53.30 | 37 | 65.10 | 32 |
| 37.00 | 20464 | 46.05 | 173 | 54.95 | 1378 | 65.90 | 54 |
| 38.00 | 17779 | 47.05 | 4604 | 56.00 | 6236 | 66.05 | 9 |
| 39.05 | 6319 | 47.90 | 1527 | 56.95 | 9366 | 67.10 | 899 |
| 40.00 | 154 | 48.10 | 985 | 58.10 | 718 | 68.00 | 31821 |
| 40.90 | 301 | 49.00 | 18457 | 59.00 | 106 | 69.00 | 31599 |
| 42.05 | 436 | 50.00 | 80833 | 60.05 | 3267 | 70.05 | 2864 |
| 42.30 | 280 | 51.00 | 25318 | 61.00 | 17133 | 70.85 | 71 |
| 43.05 | 250 | 52.00 | 1536 | 62.00 | 17038 | 72.00 | 2245 |
| 44.00 | 3731 | 52.60 | 58 | 63.00 | 12306 | 73.00 | 13019 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 73.95 | 53099 | 85.90 | 559 | 95.00 | 308330 | 106.85 | 299 |
| 75.00 | 160981 | 87.00 | 11945 | 96.00 | 20981 | 107.10 | 10 |
| 76.00 | 14278 | 87.95 | 10713 | 97.00 | 644 | 108.00 | 35 |
| 76.90 | 1596 | 89.30 | 49 | 99.00 | 63 | 109.90 | 111 |
| 78.00 | 895 | 89.65 | 99 | 99.80 | 35 | 110.15 | 236 |
| 78.90 | 9816 | 89.90 | 41 | 102.50 | 49 | 110.65 | 298 |
| 79.95 | 2471 | 90.95 | 1073 | 102.80 | 85 | 111.10 | 110 |
| 80.90 | 9951 | 91.20 | 330 | 103.10 | 174 | 111.50 | 105 |
| 81.90 | 2241 | 92.00 | 9808 | 103.95 | 1086 | 111.75 | 196 |
| 82.90 | 137 | 93.00 | 13676 | 104.90 | 203 | 112.10 | 83 |
| 84.00 | 52 | 94.00 | 39181 | 105.85 | 1555 | 112.70 | 137 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 113.00 | 190 | 120.95 | 102 | 129.20 | 330 | 138.10 | 60 |
| 113.20 | 107 | 121.95 | 163 | 129.85 | 978 | 138.75 | 196 |
| 114.80 | 74 | 122.60 | 57 | 130.90 | 596 | 139.00 | 51 |
| 114.95 | 199 | 122.90 | 93 | 131.90 | 113 | 139.80 | 105 |
| 115.90 | 957 | 123.90 | 233 | 133.30 | 43 | 140.90 | 3581 |
| 116.90 | 2049 | 124.95 | 212 | 133.70 | 37 | 141.60 | 114 |
| 117.95 | 1199 | 125.40 | 47 | 134.70 | 100 | 142.05 | 131 |
| 118.90 | 1601 | 125.85 | 109 | 135.00 | 694 | 142.85 | 3507 |
| 119.90 | 85 | 126.10 | 38 | 135.60 | 62 | 143.70 | 127 |
| 120.15 | 77 | 127.90 | 1311 | 135.85 | 120 | 143.90 | 158 |
| 120.50 | 60 | 128.80 | 306 | 136.90 | 589 | 144.20 | 51 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 144.75 | 437 | 151.90 | 88 | 159.00 | 125 | 171.20 | 157 |
| 145.95 | 400 | 152.80 | 57 | 160.80 | 450 | 171.80 | 184 |
| 146.50 | 49 | 153.20 | 87 | 162.40 | 128 | 172.20 | 589 |
| 146.90 | 211 | 153.85 | 340 | 163.30 | 47 | 173.90 | 242325 |
| 147.90 | 748 | 154.90 | 1096 | 165.70 | 98 | 175.00 | 19984 |
| 148.80 | 266 | 155.90 | 133 | 166.10 | 33 | 175.90 | 237418 |
| 149.60 | 72 | 156.05 | 98 | 166.90 | 52 | 176.90 | 14739 |
| 149.90 | 234 | 156.65 | 430 | 167.30 | 70 | 177.85 | 407 |
| 150.30 | 50 | 156.95 | 358 | 169.35 | 106 | 178.40 | 38 |
| 151.10 | 63 | 157.95 | 182 | 170.40 | 189 | 179.10 | 51 |
| 151.50 | 87 | 158.75 | 353 | 170.95 | 141 | 179.40 | 34 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 181.50 | 78 | 192.80 | 35 | 209.70 | 50 | 219.60 | 72 |
| 182.00 | 78 | 193.80 | 73 | 211.80 | 68 | 221.20 | 46 |
| 182.60 | 42 | 194.80 | 44 | 212.40 | 92 | 225.30 | 68 |
| 183.80 | 58 | 195.60 | 81 | 212.80 | 54 | 226.00 | 61 |
| 184.30 | 34 | 197.70 | 59 | 213.00 | 73 | 226.60 | 34 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 186.50 | 54 | 202.60 | 61 | 215.80 | 34 | 228.35 | 73 |
| 188.30 | 41 | 204.30 | 51 | 216.40 | 48 | 228.70 | 51 |
| 190.90 | 99 | 205.30 | 35 | 216.70 | 52 | 230.30 | 42 |
| 192.00 | 66 | 207.95 | 14 | 217.60 | 50 | 230.80 | 44 |
| 192.40 | 49 | 208.80 | 39 | 219.15 | 79 | 231.30 | 42 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 232.80 | 47 | 258.20 | 33 | 273.40 | 44 | 291.10 | 45 |
| 235.20 | 51 | 259.90 | 34 | 274.20 | 36 | 292.30 | 36 |
| 241.00 | 35 | 260.90 | 57 | 276.00 | 43 | 295.60 | 115 |
| 243.70 | 46 | 262.40 | 46 | 281.10 | 125 | 298.60 | 34 |
| 249.20 | 92 | 264.80 | 52 | 281.75 | 183 | 299.80 | 36 |
| 249.90 | 103 | 265.00 | 59 | 282.90 | 124 | 301.20 | 47 |
| 253.70 | 40 | 265.20 | 58 | 284.40 | 73 | 303.00 | 55 |
| 255.10 | 89 | 267.80 | 38 | 285.10 | 49 | 303.80 | 40 |
| 255.80 | 38 | 269.40 | 51 | 286.40 | 43 | 308.00 | 49 |
| 256.00 | 38 | 270.90 | 53 | 288.80 | 38 | 309.05 | 108 |
| 256.80 | 38 | 271.65 | 108 | 290.20 | 34 | 309.80 | 121 |

Average of 10.681 to 10.695 min.: 2659V.D
BLANK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 313.20 | 54 | 339.00 | 63 | | | | |
| 314.60 | 37 | 339.80 | 56 | | | | |
| 316.40 | 39 | 340.20 | 47 | | | | |
| 317.90 | 33 | 340.40 | 48 | | | | |
| 319.10 | 45 | 341.80 | 59 | | | | |
| 328.40 | 51 | 344.50 | 38 | | | | |
| 336.00 | 40 | 345.50 | 34 | | | | |
| 336.40 | 49 | 346.50 | 40 | | | | |
| 337.50 | 83 | | | | | | |
| 338.20 | 40 | | | | | | |
| 338.60 | 89 | | | | | | |

R560090 Heritage Environmental Services, LLC Q2256336

QC Report

QCType CCVD | Duplicate SampleID | DataFile 2660V.D
Date Entered 11Nov09 | Duplicate QCSampleID | Analyst 1062 R. SHAMP
Analysis Date/Time 06Nov0906:28:00 | Method | Matrix 1 | Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0.1791 | | 0.1697 | | | 5.2 |
| 236 | CHLOROMETHANE | 0.3681 | | 0.3386 | | | 8 |
| 768 | VINYL CHLORIDE | 0.3113 | | 0.3025 | | | 2.8 |
| 198 | BROMOMETHANE | 0.1126 | | 0.1105 | | | 1.9 |
| 234 | CHLOROETHANE | 0.1260 | | 0.1446 | | | 14.8 |
| 372 | TRICHLOROFLUOROMETHANE | 0.2605 | | 0.2731 | | | 4.8 |
| 105 | ACROLEIN | 0.0190 | | 0.0201 | | | 5.8 |
| 8 | 1,1-DICHLOROETHENE | 0.2024 | | 0.2000 | | | 1.2 |
| 99 | ACETONE (2-PROPANONE) | 0.1365 | | 0.1340 | | | 1.8 |
| 422 | IODOMETHANE | 0.3302 | | 0.3304 | | | .1 |
| 216 | CARBON DISULFIDE | 0.6034 | | 0.5934 | | | 1.7 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0.9666 | | 0.9533 | | | 1.4 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 9.88 | LIN | | 1.2 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0.2150 | | 0.2121 | | | 1.3 |
| 106 | ACRYLONITRILE | 0.0577 | | 0.0594 | | | 2.9 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | 0.6894 | | | 2.3 |
| 7 | 1,1-DICHLOROETHANE | 0.4227 | | 0.4349 | | | 2.9 |
| 767 | VINYL ACETATE | 10 | | 7.88 | LIN | | 21.2 |
| 33 | 2,2-DICHLOROPROPANE | 0.2237 | | 0.2334 | | | 4.3 |
| 246 | CIS-1,2-DICHLOROETHENE | 0.2236 | | 0.2259 | | | 1 |
| 52 | 2-BUTANONE | 0.0394 | | 0.0367 | | | 6.9 |
| 348 | ETHYL ACETATE | 0.4326 | | 0.3883 | | | 10.2 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0.0602 | | 0.0589 | | | 2.2 |
| 194 | BROMOCHLOROMETHANE | 0.1068 | | 0.1053 | | | 1.4 |
| 471 | METHACRYLONITRILE | 0.2273 | | 0.2233 | | | 1.8 |
| 3457 | 2-METHYL-2-PROPENENITRILE | 0.2273 | | 0.2233 | | | 1.8 |
| 709 | TETRAHYDROFURAN | 0.1174 | | 0.1114 | | | 5.1 |
| 235 | CHLOROFORM | 0.3943 | | 0.3778 | | | 4.2 |
| 2 | 1,1,1-TRICHLOROETHANE | 0.3242 | | 0.3180 | | | 1.9 |
| 217 | CARBON TETRACHLORIDE | 0.2882 | | 0.2931 | | | 1.7 |
| 10 | 1,1-DICHLOROPROPENE | 0.1079 | | 0.1083 | | | .4 |
| 151 | BENZENE | 0.8900 | | 0.8420 | | | 5.4 |
| 21 | 1,2-DICHLOROETHANE | 0.3868 | | 0.3833 | | | .9 |
| 1525 | 2-BUTANOL | 0.0213 | | 0.0206 | | | 3.3 |
| 750 | TRICHLOROETHENE | 0.2340 | | 0.2256 | | | 3.6 |
| 517 | N-BUTANOL | 0.0175 | | 0.0167 | | | 4.6 |
| 23 | 1,2-DICHLOROPROPANE | 0.2379 | | 0.2233 | | | 6.1 |
| 296 | DIBROMOMETHANE | 0.1439 | | 0.1362 | | | 5.4 |
| 30 | 1,4-DIOXANE | 0.0090 | | 0.0094 | | | 4.4 |
| 1147 | METHYL METHACRYLATE | 0.3274 | | 0.2982 | | | 8.9 |
| 195 | BROMODICHLOROMETHANE | 0.2750 | | 0.2567 | | | 6.7 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0.1852 | | 0.1661 | | | 10.3 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0.3445 | | 0.3228 | | | 6.3 |
| 91 | 4-METHYL-2-PENTANONE | 0.4505 | | 0.4379 | | | 2.8 |

JS 11/11/09

R560090

# Heritage Environmental Services, LLC

Q2256336

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | 0.9760 | | 0.9363 | | | 4.1 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | 0.2884 | | | 6.1 |
| 4 | 1,1,2-TRICHLOROETHANE | 0.2046 | | 0.1916 | | | 6.4 |
| 351 | ETHYL METHACRYLATE | 0.8695 | | 0.8349 | | | 4 |
| 703 | TETRACHLOROETHENE | 0.7565 | | 0.7679 | | | 1.5 |
| 27 | 1,3-DICHLOROPROPANE | 1.0228 | | 1.0506 | | | 2.7 |
| 60 | 2-HEXANONE | 0.9796 | | 0.9894 | | | 1 |
| 295 | DIBROMOCHLOROMETHANE | 0.5499 | | 0.5565 | | | 1.2 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | 0.2154 | | | 4.2 |
| 231 | CHLOROBENZENE | 1.7833 | | 1.8711 | | | 4.9 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | 0.6196 | | | 4.5 |
| 349 | ETHYL BENZENE | 1.0051 | | 1.0593 | | | 5.4 |
| 492 | M/P-XYLENE | 1.2547 | | 1.3130 | | | 4.6 |
| 549 | O-XYLENE | 1.2374 | | 1.2675 | | | 2.4 |
| 680 | STYRENE | 2.0649 | | 2.0991 | | | 1.7 |
| 197 | BROMOFORM | 0.4207 | | 0.4214 | | | .2 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | 3.0672 | | | 3.6 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | 0.9940 | | | 4.4 |
| 193 | BROMOBENZENE | 1.3255 | | 1.3529 | | | 2.1 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0.3128 | | 0.3174 | | | 1.5 |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | 0.5036 | | | 5.9 |
| 532 | N-PROPYLBENZENE | 0.4327 | | 0.4731 | | | 9.3 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | 0.8407 | | | 3.4 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | 3.1029 | | | 5.9 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | 0.8478 | | | 3.4 |
| 702 | TERT-BUTYLBENZENE | 1.7636 | | 1.8926 | | | 7.3 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | 3.1387 | | | 6.2 |
| 644 | SEC-BUTYLBENZENE | 3.8168 | | 4.1329 | | | 8.3 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | 1.6672 | | | 3.6 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | 3.4056 | | | 9.3 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | 1.6972 | | | 3 |
| 519 | N-BUTYLBENZENE | 1.6681 | | 1.8360 | | | 10.1 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | 1.6504 | | | 7.5 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | 0.2282 | | | 11.1 |
| 16 | 1,2,4-TRICHLOROBENZENE | 1.0500 | | 1.2678 | | | 20.7 |
| 398 | HEXACHLOROBUTADIENE | 10 | | 12.59 | LIN | | 25.9 |
| 493 | NAPHTHALENE | 10 | | 12.56 | LIN | | 25.6 |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 13.90 | LIN | | 39 |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | 0.2364 | | 0.2429 | | | 2.7 |
| 305 | DIETHYL ETHER | 0.2155 | | 0.2215 | | | 2.8 |
| 866 | HEXANE | 0.4035 | | 0.4185 | | | 3.7 |
| 301 | DICHLOROETHANE-D4 | 0.3598 | | 0.3746 | | | 4.1 |
| 726 | TOLUENE-D8 | 1.0027 | | 0.9961 | | | .7 |
| 196 | 4-BROMOFLUOROBENZENE | 0.9585 | | 1.0298 | | | 7.4 |
| 3362 | DIBROMOFLUOROMETHANE | 0.2351 | | 0.2422 | | | 3 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration ( ).

**Qualifiers**

LIN Linear Regression Used

Continuing Calibration Report

Data File : E:\V110609\2660V.D
Acq On : 6 Nov 09 6:28
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Q2254334

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff | |
|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 | |
| 2 | | Dichlorodifluoromethane | 0.17912 | 0.16971 | 5.3 | |
| 3 | P | Chloromethane | 0.36814 | 0.33860 | 8.0 | |
| 4 | C | VINYL CHLORIDE | 0.31131 | 0.30250 | 2.8 | |
| 5 | | Bromomethane | 0.11993 | 0.11055 | 7.8 | |
| 6 | | Chloroethane | 0.13785 | 0.14455 | 4.9 | |
| 7 | | Trichlorofluoromethane | 0.26049 | 0.27307 | 4.8 | |
| 8 | | Acrolein | 0.01903 | 0.02005 | 5.4 | |
| 9 | | Acetone | 0.13646 | 0.13402 | 1.8 | |
| 10 | C | 1,1-DICHLOROETHENE | 0.20240 | 0.19997 | 1.2 | |
| 11 | | Trichlorotrifluoroethane | 0.23642 | 0.24288 | 2.7 | |
| 12 | | Acrylonitrile | 0.05767 | 0.05938 | 3.0 | |
| 13 | | Carbon Disulfide | 0.60340 | 0.59341 | 1.7 | |
| 14 | | Methylene Chloride | 10.000 | 9.883 | | 1.2 |
| 15 | | Allyl Chloride | 0.96664 | 0.95328 | 1.4 | |
| 16 | | Vinyl Acetate | 10.000 | 7.879 | | 21.2# |
| 17 | | MTBE | 0.70592 | 0.68945 | 2.3 | |
| 18 | | trans-1,2-Dichloroethene | 0.21497 | 0.21211 | 1.3 | |
| 19 | | n-Hexane | 0.40352 | 0.41854 | 3.7 | |
| 20 | P | 1,1-Dichloroethane | 0.42276 | 0.43489 | 2.9 | |
| 21 | | 2-Butanone | 0.03942 | 0.03668 | 7.0 | |
| 22 | | Ethyl Acetate | 0.43256 | 0.38832 | 10.2 | |
| 23 | | cis-1,2-Dichloroethene | 0.22363 | 0.22588 | 1.0 | |
| 24 | | Ethyl Cyanide | 0.06020 | 0.05887 | 2.2 | |
| 25 | C | CHLOROFORM | 0.39429 | 0.37778 | 4.2 | |
| 26 | | Methacrylonitrile | 0.22731 | 0.22332 | 1.8 | |
| 27 | | Tetrahydrofuran | 0.11740 | 0.11140 | 5.1 | |
| 28 | | Bromochloromethane | 0.10679 | 0.10529 | 1.4 | |
| 29 | | 2,2-Dichloropropane | 0.22372 | 0.23341 | 4.3 | |
| 30 | | Diethyl ether | 0.21548 | 0.22151 | 2.8 | |
| 31 | | 1,1,1-Trichloroethane | 0.32421 | 0.31799 | 1.9 | |
| 32 | | Iodomethane | 0.33017 | 0.33037 | 0.1 | |
| 33 | S | Dibromofluoromethane | 0.23504 | 0.24219 | 3.0 | |
| 34 | | 1,1-Dichloropropene | 0.10795 | 0.10834 | 0.4 | |
| 35 | S | 1,2-Dichloroethane-d4 | 0.35981 | 0.37465 | 4.1 | |
| 36 | | Carbon Tetrachloride | 0.28819 | 0.29310 | 1.7 | |
| 37 | | 1,2-Dichloroethane | 0.38679 | 0.38333 | 0.9 | |
| 38 | | Isobutanol | 0.02133 | 0.02062 | 3.3 | |
| 39 | | Benzene | 0.88997 | 0.84199 | 5.4 | |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : E:\V110609\2660V.D
Acq On : 6 Nov 09 6:28
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.23396 | 0.22563 | 3.6 |
| 41 | | n-Butanol | 0.01753 | 0.01667 | 4.9 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.23795 | 0.22326 | 6.2 |
| 43 | | 1,4-Dioxane | 0.00897 | 0.00935 | 4.2 |
| 44 | | Methyl Methacrylate | 0.32735 | 0.29817 | 8.9 |
| 45 | | Bromodichloromethane | 0.27504 | 0.25671 | 6.7 |
| 46 | | Dibromomethane | 0.14388 | 0.13620 | 5.3 |
| 47 | | 4-Methyl-2-Pentanone | 0.45055 | 0.43789 | 2.8 |
| 48 | | 2-Chloroethylvinylether | 0.18519 | 0.16611 | 10.3 |
| 49 | | cis-1,3-Dichloropropene | 0.34453 | 0.32284 | 6.3 |
| 50 | S | Toluene-d8 | 1.00266 | 0.99605 | 0.7 |
| 51 | C | TOLUENE | 0.97594 | 0.93633 | 4.1 |
| 52 | | trans-1,3-Dichloropropene | 0.30701 | 0.28843 | 6.1 |
| 53 | | 1,1,2-Trichloroethane | 0.20465 | 0.19162 | 6.4 |
| 54 | | 1,2-Dibromoethane | 0.22489 | 0.21539 | 4.2 |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | | 2-Hexanone | 0.97955 | 0.98939 | 1.0 |
| 57 | | 1,3-Dichloropropane | 1.02279 | 1.05060 | 2.7 |
| 58 | | Ethyl Methacrylate | 0.86946 | 0.83494 | 4.0 |
| 59 | | Tetrachloroethene | 0.75652 | 0.76790 | 1.5 |
| 60 | | Dibromochloromethane | 0.54993 | 0.55651 | 1.2 |
| 61 | P | Chlorobenzene | 1.78326 | 1.87109 | 4.9 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.59269 | 0.61957 | 4.5 |
| 63 | C | ETHYL BENZENE | 1.00515 | 1.05931 | 5.4 |
| 64 | | m,p-Xylene | 1.25465 | 1.31299 | 4.6 |
| 65 | | o-Xylene | 1.23741 | 1.26751 | 2.4 |
| 66 | | Styrene | 2.06494 | 2.09905 | 1.7 |
| 67 | P | Bromoform | 0.42063 | 0.42140 | 0.2 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.95211 | 0.99397 | 4.4 |
| 69 | S | 4-Bromofluorobenzene | 0.95847 | 1.02983 | 7.4 |
| 70 | | Isopropylbenzene | 2.96032 | 3.06723 | 3.6 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.47555 | 0.50357 | 5.9 |
| 72 | | Bromobenzene | 1.32551 | 1.35288 | 2.1 |
| 73 | | 1,2,3-Trichloropropane | 0.31278 | 0.31744 | 1.5 |
| 74 | | n-Propylbenzene | 0.43265 | 0.47309 | 9.3 |
| 75 | | 1,3,5-Trimethylbenzene | 2.92905 | 3.10293 | 5.9 |
| 76 | | 2-Chlorotoluene | 0.81281 | 0.84071 | 3.4 |
| 77 | | 4-Chlorotoluene | 0.81975 | 0.84783 | 3.4 |
| 78 | | t-Butylbenzene | 1.76355 | 1.89261 | 7.3 |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : E:\V110609\2660V.D
Acq On : 6 Nov 09 6:28
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 1
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.95633 | 3.13867 | 6.2 |
| 80 | sec-Butylbenzene | 3.81675 | 4.13294 | 8.3 |

| | | | | | |
|---|---|---|---|---|---|
| 81 | p-Isopropyltoluene | 3.11723 | 3.40560 | 9.3 | |
| 82 | 1,3-Dichlorobenzene | 1.60866 | 1.66719 | 3.6 | |
| 83 | 1,4-Dichlorobenzene | 1.64743 | 1.69724 | 3.0 | |
| 84 | n-Butylbenzene | 1.66813 | 1.83605 | 10.1 | |
| 85 | 1,2-Dichlorobenzene | 1.53494 | 1.65042 | 7.5 | |
| 86 | 1,2-Dibromo-3-chloropropane | 0.20542 | 0.22821 | 11.1 | |
| 87 | 1,2,4-Trichlorobenzene | 1.04996 | 1.26781 | 20.7# | |
| 88 | Naphthalene | 10.000 | 12.557 | | 25.6# |
| 89 | Hexachlorobutadiene | 10.000 | 12.591 | | 25.9# |
| 90 | 1,2,3-Trichlorobenzene | 10.000 | 13.896 | | 39.0# |

---

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

2646V.D 8260VOI.M Wed Nov 11 09:46:39 2009 RPT01
Average RPD= 5.49

Data File : C:\HPCHEM\DATA\V110609\2660V.D  Vial: 1
Acq On : 6 Nov 2009 6:28  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF | CCRF | %Dev |
|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 |
| 2 | | Dichlorodifluoromethane | 0.17912 | 0.16971 | 5.3 |
| 3 | P | Chloromethane | 0.36814 | 0.33860 | 8.0 |
| 4 | C | VINYL CHLORIDE | 0.31131 | 0.30250 | 2.8 |
| 5 | | Bromomethane | 0.11993 | 0.11055 | 7.8 |
| 6 | | Chloroethane | 0.13785 | 0.14455 | 4.9 |
| 7 | | Trichlorofluoromethane | 0.26049 | 0.27307 | 4.8 |
| 8 | | Acrolein | 0.01903 | 0.02005 | 5.4 |
| 9 | | Acetone | 0.13646 | 0.13402 | 1.8 |
| 10 | C | 1,1-DICHLOROETHENE | 0.20240 | 0.19997 | 1.2 |
| 11 | | Trichlorotrifluoroethane | 0.23642 | 0.24288 | 2.7 |
| 12 | | Acrylonitrile | 0.05767 | 0.05938 | 3.0 |
| 13 | | Carbon Disulfide | 0.60340 | 0.59341 | 1.7 |
| 14 | | Methylene Chloride | 0.25611 | 0.23164 | 9.6 |
| 15 | | Allyl Chloride | 0.96664 | 0.95328 | 1.4 |
| 16 | | Vinyl Acetate | 0.02721 | 0.01806 | 33.6# |
| 17 | | MTBE | 0.70592 | 0.68945 | 2.3 |
| 18 | | trans-1,2-Dichloroethene | 0.21497 | 0.21211 | 1.3 |
| 19 | | n-Hexane | 0.40352 | 0.41854 | 3.7 |
| 20 | P | 1,1-Dichloroethane | 0.42276 | 0.43489 | 2.9 |
| 21 | | 2-Butanone | 0.03942 | 0.03668 | 7.0 |
| 22 | | Ethyl Acetate | 0.43256 | 0.38832 | 10.2 |
| 23 | | cis-1,2-Dichloroethene | 0.22363 | 0.22588 | 1.0 |
| 24 | | Ethyl Cyanide | 0.06020 | 0.05887 | 2.2 |
| 25 | C | CHLOROFORM | 0.39429 | 0.37778 | 4.2 |
| 26 | | Methacrylonitrile | 0.22731 | 0.22332 | 1.8 |
| 27 | | Tetrahydrofuran | 0.11740 | 0.11140 | 5.1 |
| 28 | | Bromochloromethane | 0.10679 | 0.10529 | 1.4 |
| 29 | | 2,2-Dichloropropane | 0.22372 | 0.23341 | 4.3 |
| 30 | | Diethyl ether | 0.21548 | 0.22151 | 2.8 |
| 31 | | 1,1,1-Trichloroethane | 0.32421 | 0.31799 | 1.9 |
| 32 | | Iodomethane | 0.33017 | 0.33037 | 0.1 |
| 33 | S | Dibromofluoromethane | 0.23504 | 0.24219 | 3.0 |
| 34 | | 1,1-Dichloropropene | 0.10795 | 0.10834 | 0.4 |
| 35 | S | 1,2-Dichloroethane-d4 | 0.35981 | 0.37465 | 4.1 |
| 36 | | Carbon Tetrachloride | 0.28819 | 0.29310 | 1.7 |
| 37 | | 1,2-Dichloroethane | 0.38679 | 0.38333 | 0.9 |
| 38 | | Isobutanol | 0.02133 | 0.02062 | 3.3 |
| 39 | | Benzene | 0.88997 | 0.84199 | 5.4 |

(#) = Out of Range (Advisory for non CCC, SPCC)  Page 1 of 3

Continuing Calibration Report

Data File : C:\HPCHEM\DATA\V110609\2660V.D  Vial: 1
Acq On : 6 Nov 2009 6:28  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES

Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF | CCRF | %Dev |
|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.23396 | 0.22563 | 3.6 |
| 41 | | n-Butanol | 0.01753 | 0.01667 | 4.9 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.23795 | 0.22326 | 6.2 |
| 43 | | 1,4-Dioxane | 0.00897 | 0.00935 | 4.2 |
| 44 | | Methyl Methacrylate | 0.32735 | 0.29817 | 8.9 |
| 45 | | Bromodichloromethane | 0.27504 | 0.25671 | 6.7 |
| 46 | | Dibromomethane | 0.14388 | 0.13620 | 5.3 |
| 47 | | 4-Methyl-2-Pentanone | 0.45055 | 0.43789 | 2.8 |
| 48 | | 2-Chloroethylvinylether | 0.18519 | 0.16611 | 10.3 |
| 49 | | cis-1,3-Dichloropropene | 0.34453 | 0.32284 | 6.3 |
| 50 | S | Toluene-d8 | 1.00266 | 0.99605 | 0.7 |
| 51 | C | TOLUENE | 0.97594 | 0.93633 | 4.1 |
| 52 | | trans-1,3-Dichloropropene | 0.30701 | 0.28843 | 6.1 |
| 53 | | 1,1,2-Trichloroethane | 0.20465 | 0.19162 | 6.4 |
| 54 | | 1,2-Dibromoethane | 0.22489 | 0.21539 | 4.2 |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | | 2-Hexanone | 0.97955 | 0.98939 | 1.0 |
| 57 | | 1,3-Dichloropropane | 1.02279 | 1.05060 | 2.7 |
| 58 | | Ethyl Methacrylate | 0.86946 | 0.83494 | 4.0 |
| 59 | | Tetrachloroethene | 0.75652 | 0.76790 | 1.5 |
| 60 | | Dibromochloromethane | 0.54993 | 0.55651 | 1.2 |
| 61 | P | Chlorobenzene | 1.78326 | 1.87109 | 4.9 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.59269 | 0.61957 | 4.5 |
| 63 | C | ETHYL BENZENE | 1.00515 | 1.05931 | 5.4 |
| 64 | | m,p-Xylene | 1.25465 | 1.31299 | 4.6 |
| 65 | | o-Xylene | 1.23741 | 1.26751 | 2.4 |
| 66 | | Styrene | 2.06494 | 2.09905 | 1.7 |
| 67 | P | Bromoform | 0.42063 | 0.42140 | 0.2 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.95211 | 0.99397 | 4.4 |
| 69 | S | 4-Bromofluorobenzene | 0.95847 | 1.02983 | 7.4 |
| 70 | | Isopropylbenzene | 2.96032 | 3.06723 | 3.6 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.47555 | 0.50357 | 5.9 |
| 72 | | Bromobenzene | 1.32551 | 1.35288 | 2.1 |
| 73 | | 1,2,3-Trichloropropane | 0.31278 | 0.31744 | 1.5 |
| 74 | | n-Propylbenzene | 0.43265 | 0.47309 | 9.3 |
| 75 | | 1,3,5-Trimethylbenzene | 2.92905 | 3.10293 | 5.9 |
| 76 | | 2-Chlorotoluene | 0.81281 | 0.84071 | 3.4 |
| 77 | | 4-Chlorotoluene | 0.81975 | 0.84783 | 3.4 |
| 78 | | t-Butylbenzene | 1.76355 | 1.89261 | 7.3 |

(#) = Out of Range (Advisory for non CCC, SPCC) Page 2 of 3

Continuing Calibration Report

Data File : C:\HPCHEM\DATA\V110609\2660V.D Vial: 1
Acq On : 6 Nov 2009 6:28 Operator: REGI
Sample : VSTD010 Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09 Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | | | |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.95633 | 3.13867 | 6.2 |
| 80 | sec-Butylbenzene | 3.81675 | 4.13294 | 8.3 |
| 81 | p-Isopropyltoluene | 3.11723 | 3.40560 | 9.3 |
| 82 | 1,3-Dichlorobenzene | 1.60866 | 1.66719 | 3.6 |
| 83 | 1,4-Dichlorobenzene | 1.64743 | 1.69724 | 3.0 |
| 84 | n-Butylbenzene | 1.66813 | 1.83605 | 10.1 |
| 85 | 1,2-Dichlorobenzene | 1.53494 | 1.65042 | 7.5 |
| 86 | 1,2-Dibromo-3-chloropropane | 0.20542 | 0.22821 | 11.1 |
| 87 | 1,2,4-Trichlorobenzene | 1.04996 | 1.26781 | 20.7# |
| 88 | Naphthalene | 2.86891 | 3.46443 | 20.8# |
| 89 | Hexachlorobutadiene | 0.61187 | 0.74291 | 21.4# |
| 90 | 1,2,3-Trichlorobenzene | 0.93592 | 1.19862 | 28.1# |

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

2646V.D 8260VOI.M Fri Nov 06 06:42:50 2009

Average RPD= 5.50

Data File : C:\HPCHEM\DATA\V110609\2660V.D  Vial: 1
Acq On : 6 Nov 2009 6:28  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 06 06:42:38 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1064918 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 361256 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.88 | 113 | 257917 | 10.30 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 103.00% | | | |
| 35) 1,2-Dichloroethane-d4 | 5.23 | 65 | 398970 | 10.41 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 104.10% | | | |
| 50) Toluene-d8 | 7.45 | 98 | 1060715 | 9.93 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 99.30% | | | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 372033 | 10.74 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 107.40% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 180723 | 9.47 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 360586 | 9.20 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 322133 | 9.72 | UG/L | 96 |
| 5) Bromomethane | 1.79 | 94 | 117723 | 9.22 | UG/L | 95 |
| 6) Chloroethane | 1.89 | 64 | 153934 | 10.49 | UG/L | 97 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 290795 | 10.48 | UG/L # | 78 |
| 8) Acrolein | 2.51 | 56 | 213541 | 105.37 | UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 713618 | 49.11 | UG/L | 97 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 212950 | 9.88 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 258642 | 10.27 | UG/L | 86 |
| 12) Acrylonitrile | 3.32 | 53 | 632300 | 102.95 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 631933 | 9.83 | UG/L | 99 |
| 14) Methylene Chloride | 3.07 | 84 | 246680 | 9.88 | UG/L | 96 |
| 15) Allyl Chloride | 2.96 | 41 | 1015167 | 9.86 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 19230 | 7.88 | UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 734207 | 9.77 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.35 | 96 | 225884 | 9.87 | UG/L # | 82 |
| 19) n-Hexane | 3.66 | 57 | 445708 | 10.37 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.77 | 63 | 463118 | 10.29 | UG/L | 100 |
| 21) 2-Butanone | 4.40 | 72 | 195306 | 46.52 | UG/L | 90 |
| 22) Ethyl Acetate | 4.50 | 43 | 413524 | 8.98 | UG/L # | 100 |
| 23) cis-1,2-Dichloroethene | 4.37 | 96 | 240541 | 10.10 | UG/L | 85 |
| 24) Ethyl Cyanide | 4.45 | 54 | 626936 | 97.80 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 402303 | 9.58 | UG/L | 97 |
| 26) Methacrylonitrile | 4.61 | 41 | 2378216 | 98.25 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 1482919 | 118.61 | UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 112126 | 9.86 | UG/L # | 69 |
| 29) 2,2-Dichloropropane | 4.37 | 77 | 248563 | 10.43 | UG/L | 90 |
| 30) Diethyl ether | 2.40 | 59 | 235890 | 10.28 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 338634 | 9.81 | UG/L | 99 |
| 32) Iodomethane | 2.73 | 142 | 351816 | 10.01 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 115369 | 10.04 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.09 | 117 | 312132 | 10.17 | UG/L | 90 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 408218 | 9.91 | UG/L | 100 |
| 38) Isobutanol | 5.28 | 43 | 1811891 | 797.68 | UG/L # | 97 |
| 39) Benzene | 5.30 | 78 | 896654 | 9.46 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 240282 | 9.64 | UG/L | 94 |

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



59169b

Data File : C:\HPCHEM\DATA\V110609\2660V.D  Vial: 1
Acq On : 6 Nov 2009 6:28  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 06 06:42:38 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.00 | 56 | 918482 | 491.99 UG/L | 97 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 237751 | 9.38 UG/L | 100 |
| 43) 1,4-Dioxane | 6.45 | 88 | 199155 | 208.46 UG/L | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 317529 | 9.11 UG/L # | 62 |
| 45) Bromodichloromethane | 6.59 | 83 | 273372 | 9.33 UG/L | 97 |
| 46) Dibromomethane | 6.39 | 93 | 145047 | 9.47 UG/L | 91 |
| 47) 4-Methyl-2-Pentanone | 7.33 | 43 | 2331561 | 48.60 UG/L | 99 |
| 48) 2-Chloroethylvinylether | 6.97 | 63 | 176890 | 8.97 UG/L | 99 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 343803 | 9.37 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 997111 | 9.59 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 307149 | 9.39 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.02 | 97 | 204057 | 9.36 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.63 | 107 | 229370 | 9.58 UG/L | 98 |
| 56) 2-Hexanone | 8.37 | 43 | 1787112 | 50.50 UG/L | 99 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 379535 | 10.27 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.96 | 69 | 301626 | 9.60 UG/L | 97 |
| 59) Tetrachloroethene | 8.21 | 166 | 277410 | 10.15 UG/L | 100 |
| 60) Dibromochloromethane | 8.51 | 129 | 201042 | 10.12 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 675944 | 10.49 UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 223823 | 10.45 UG/L | 100 |
| 63) ETHYL BENZENE | 9.46 | 106 | 382683 | 10.54 UG/L | 82 |
| 64) m,p-Xylene | 9.62 | 106 | 948649 | 20.93 UG/L # | 62 |
| 65) o-Xylene | 10.10 | 106 | 457895 | 10.24 UG/L | 78 |
| 66) Styrene | 10.12 | 104 | 758296 | 10.17 UG/L # | 82 |
| 67) Bromoform | 10.30 | 173 | 152234 | 10.02 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 359079 | 10.44 UG/L | 100 |
| 70) Isopropylbenzene | 10.54 | 105 | 1108056 | 10.36 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 363833 | 21.18 UG/L # | 5 |
| 72) Bromobenzene | 10.84 | 77 | 488737 | 10.21 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 114676 | 10.15 UG/L | 100 |
| 74) n-Propylbenzene | 10.99 | 92 | 170906 | 10.93 UG/L | 96 |
| 75) 1,3,5-Trimethylbenzene | 11.18 | 105 | 1120953 | 10.59 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 303713 | 10.34 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.17 | 126 | 306282 | 10.34 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 683715 | 10.73 UG/L # | 62 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 1133864 | 10.62 UG/L | 100 |
| 80) sec-Butylbenzene | 11.72 | 105 | 1493049 | 10.83 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.87 | 119 | 1230295 | 10.93 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 602283 | 10.36 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 613138 | 10.30 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 663283 | 11.01 UG/L | 97 |
| 85) 1,2-Dichlorobenzene | 12.24 | 146 | 596225 | 10.75 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.94 | 157 | 82444 | 11.11 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 458003 | 12.07 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 1251547 | 12.56 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 268382 | 12.59 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 433010 | 13.90 UG/L | 100 |

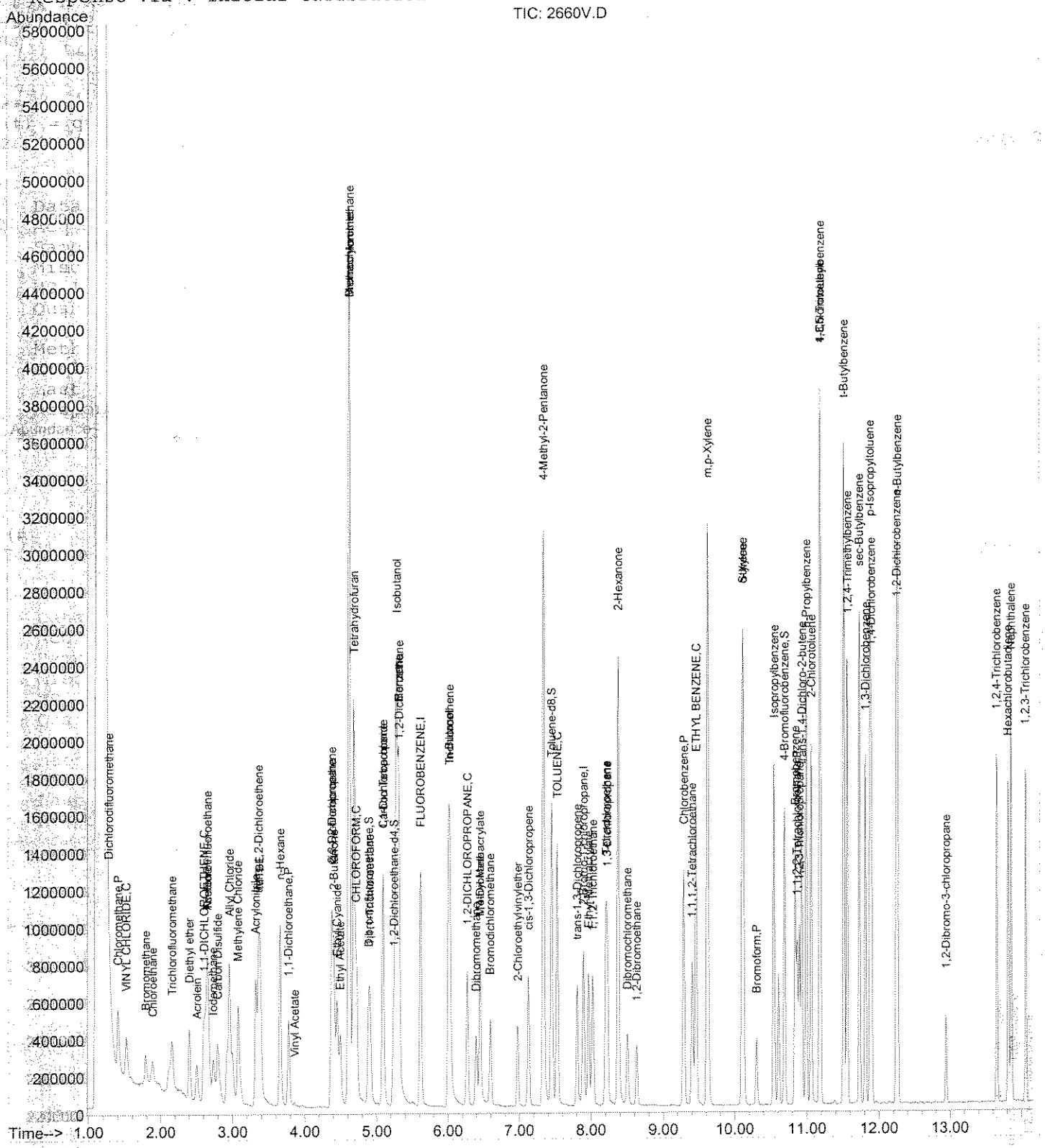
(#) = qualifier out of range (m) = manual integration



59169b

Data File : C:\HPCHEM\DATA\V110609\2660V.D  Vial: 1
Acq On : 6 Nov 2009 6:28  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/6/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 6 6:42 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration






59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864635
Data File :2697V. MS Data File : 2698V. MSD Data File : 2699V.
Date/Time : 7 Nov 2009 10:50 MS Date/Time : 7 Nov 2009 11:15 MSD Date/Time : 7 Nov 2009 11:40
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery * | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| TOLUENE | 0 | 9.14 | 91.4 | 9.35 | 93.5 | 2.3 | 77 | 126.5 |
| m,p-Xylene | 0 | 18.2 | 91.0 | 18.2 | 91.0 | 0.0 | 80 | 127 |
| o-Xylene | 0 | 8.98 | 89.8 | 9.01 | 90.1 | 0.3 | 78 | 130.1 |
| Bromochloromethane | 0 | 9.61 | 96.1 | 9.92 | 99.2 | 3.2 | 70 | 155.2 |
| n-Butylbenzene | 0 | 9.97 | 99.7 | 9.76 | 97.6 | 2.1 | 71 | 121.5 |
| Dichlorodifluoromethane | 0 | 8.34 | 83.4 | 8.39 | 83.9 | 0.6 | 4 | 176.7 |
| Trichlorofluoromethane | 0 | 8.89 | 88.9 | 8.89 | 88.9 | 0.0 | 77 | 170.6 |
| Hexachlorobutadiene | 0 | 10.1 | 101.0 | 10.5 | 105.0 | 3.9 | 62 | 157.6 |
| Isopropylbenzene | 0 | 9.4 | 94.0 | 9.23 | 92.3 | 1.8 | 68 | 128.4 |
| p-Isopropyltoluene | 0 | 9.55 | 95.5 | 9.5 | 95.0 | 0.5 | 72 | 127.2 |
| Naphthalene | 0 | 11.3 | 113.0 | 11.3 | 113.0 | 0.0 | 46 | 113.1 |
| n-Propylbenzene | 0 | 9.5 | 95.0 | 9.38 | 93.8 | 1.3 | 64 | 127.4 |
| sec-Butylbenzene | 0 | 10 | 100.0 | 9.7 | 97.0 | 3.0 | 71 | 126.1 |
| t-Butylbenzene | 0 | 9.78 | 97.8 | 9.72 | 97.2 | 0.6 | 72 | 131.7 |
| 1,2,3-Trichlorobenzene | 0 | 11.7 | 117.0 | 11.9 | 119.0 | 1.7 | 43 | 149 |
| 1,2,4-Trichlorobenzene | 0 | 10.3 | 103.0 | 10.6 | 106.0 | 2.9 | 54 | 137.9 |
| 1,2,4-Trimethylbenzene | 0 | 8.86 | 88.6 | 8.67 | 86.7 | 2.2 | 74 | 126.7 |
| 1,3,5-Trimethylbenzene | 0 | 8.71 | 87.1 | 8.46 | 84.6 | 2.9 | 74 | 125.9 |
| Acrolein | 0 | 60.1 | 60.1 | 57.6 | 57.6 | 4.2 | D | 400.3 |
| Acetone | 0 | 53.4 | 106.8 | 54.1 | 108.2 | 1.3 | 52 | 162.9 |
| Acrylonitrile | 0 | 76 | 76.0 | 75.8 | 75.8 | 0.3 | D | 472.1 |
| Carbon Disulfide | 0 | 8.49 | 84.9 | 8.85 | 88.5 | 4.2 | 65 | 135.1 |
| Vinyl Acetate | 0 | 10.2 | 102.0 | 10.4 | 104.0 | 1.9 | 58 | 113.1 |
| 2-Butanone | 0 | 47.7 | 95.4 | 47.6 | 95.2 | 0.2 | 38 | 143.2 |
| 4-Methyl-2-Pentanone | 0 | 48.8 | 97.6 | 49.9 | 99.8 | 2.2 | 68 | 130.7 |
| 2-Hexanone | 0 | 49.2 | 98.4 | 47.3 | 94.6 | 3.9 | 69 | 118.4 |
| 2-Chloroethylvinylether | 0 | 0 | 0.0 ! | 0 | 0.0 ! | | D | 39.3 |
| trans-1,4-Dichloro-2-butene | 0 | 7.41 | 37.1 | 6.1 | 30.5 | 19.5 | 24 | 138 |
| 1,2-Dibromoethane | 0 | 9.01 | 90.1 | 9.23 | 92.3 | 2.4 | 75 | 121.6 |
| 1,2-Dibromo-3-chloropropar | 0 | 8.99 | 89.9 | 9.1 | 91.0 | 1.2 | 59 | 129.5 |
| Iodomethane | 0 | 9.3 | 93.0 | 9.65 | 96.5 | 3.7 | 18 | 155.7 |
| Allyl Chloride | 0 | 8.42 | 84.2 | 8.58 | 85.8 | 1.9 | 25 | 154.8 |
| Ethyl Cyanide | 0 | 102 | 102.0 | 99.7 | 99.7 | 2.3 | 27 | 160.5 |
| Methacrylonitrile | 0 | 83.2 | 83.2 | 85.9 | 85.9 | 3.2 | 24 | 136.7 |
| Methyl Methacrylate | 0 | 6.98 | 69.8 | 7.04 | 70.4 | 0.9 | 41 | 149.1 |
| Ethyl Methacrylate | 0 | 6.96 | 69.6 | 7.02 | 70.2 | 0.9 | 38 | 137.8 |

Recovery limit

R560098

# Heritage Environmental Services, LLC

Q2256395

QC Report

QCType SPI01
Date Entered 11Nov09
Analysis Date/Time 07Nov0911:15:00

Duplicate SampleID A864635
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 2698V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 9.51 | | 95.1 | |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 8.37 | | 83.7 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 9.88 | | 98.8 | |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 9.65 | | 96.5 | |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 9.39 | | 93.9 | |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 9.26 | | 92.6 | |
| 750 | TRICHLOROETHENE | 0 | 10 | 9.28 | | 92.8 | |
| 768 | VINYL CHLORIDE | 0 | 10 | 9.2 | | 92 | |
| 193 | BROMOBENZENE | 0 | 10 | 9.56 | | 95.6 | |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 8.48 | | 84.8 | |
| 197 | BROMOFORM | 0 | 10 | 6.29 | | 62.9 | |
| 198 | BROMOMETHANE | 0 | 10 | 9.17 | | 91.7 | |
| 231 | CHLOROBENZENE | 0 | 10 | 9.42 | | 94.2 | |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 7.72 | | 77.2 | |
| 234 | CHLOROETHANE | 0 | 10 | 10.6 | | 106 | |
| 235 | CHLOROFORM | 0 | 10 | 9.39 | | 93.9 | |
| 236 | CHLOROMETHANE | 0 | 10 | 9.25 | | 92.5 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 9.42 | | 94.2 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 9.37 | | 93.7 | |
| 296 | DIBROMOMETHANE | 0 | 10 | 9.49 | | 94.9 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 9.74 | | 97.4 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 9.84 | | 98.4 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 9.39 | | 93.9 | |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 9.54 | | 95.4 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.48 | | 94.8 | |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 9.64 | | 96.4 | |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 9.6 | | 96 | |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 9.45 | | 94.5 | |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 9.42 | | 94.2 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 6.77 | ! | 67.7 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 6.3 | ! | 63 | |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.98 | | 99.8 | |
| 349 | ETHYL BENZENE | 0 | 10 | 9.15 | | 91.5 | |
| 680 | STYRENE | 0 | 10 | 5.57 | | 55.7 | |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 9.27 | | 92.7 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 8.84 | | 88.4 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 9.93 | | 99.3 | |
| 703 | TETRACHLOROETHENE | 0 | 10 | 8.68 | | 86.8 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 9.57 | | 95.7 | |
| 724 | TOLUENE | 0 | 10 | 9.14 | | 91.4 | |
| 492 | M/P-XYLENE | 0 | 20 | 18.2 | | 91 | |
| 549 | O-XYLENE | 0 | 10 | 8.98 | | 89.8 | |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 9.61 | | 96.1 | |
| 519 | N-BUTYLBENZENE | 0 | 10 | 9.97 | | 99.7 | |

KS 11/11/09

R560098

# Heritage Environmental Services, LLC

Q2256395

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 8.34 | | 83.4 | |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 8.89 | | 88.9 | |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.1 | | 101 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 9.4 | | 94 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 9.55 | | 95.5 | |
| 493 | NAPHTHALENE | 0 | 10 | 11.3 | | 113 | |
| 532 | N-PROPYLBENZENE | 0 | 10 | 9.5 | | 95 | |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 10 | | 100 | |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 9.78 | | 97.8 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 11.7 | | 117 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 10.3 | | 103 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 8.86 | | 88.6 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 8.71 | | 87.1 | |
| 105 | ACROLEIN | 0 | 100 | 60.1 | | 60.1 | |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 53.4 | | 106.8 | |
| 106 | ACRYLONITRILE | 0 | 100 | 76 | | 76 | |
| 216 | CARBON DISULFIDE | 0 | 10 | 8.49 | | 84.9 | |
| 767 | VINYL ACETATE | 0 | 10 | 10.2 | | 102 | |
| 52 | 2-BUTANONE | 0 | 50 | 47.7 | | 95.4 | |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 48.8 | | 97.6 | |
| 60 | 2-HEXANONE | 0 | 50 | 49.2 | | 98.4 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 7.41 | | 37.1 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 9.01 | | 90.1 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 8.99 | | 89.9 | |
| 422 | IODOMETHANE | 0 | 10 | 9.3 | | 93 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 9.34 | | 93.4 | |
| 30 | 1,4-DIOXANE | 0 | 200 | 86.3 | | 43.2 | |
| 709 | TETRAHYDROFURAN | 0 | 125 | 120 | | 96 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 8.42 | | 84.2 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 102 | | 102 | |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 83.2 | | 83.2 | |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 6.98 | | 69.8 | |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 6.96 | | 69.6 | |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 27.2 | | 90.7 | |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

R560098

# Heritage Environmental Services, LLC

Q2256396

QC Report

QCType DPS01
Date Entered 11Nov09
Analysis Date/Time 07Nov0911:40:00

Duplicate SampleID A864635
Duplicate QCSampleID Q2256395
Method 309 Matrix 1

DataFile 2699V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 9.76 | | 97.6 | 2.6 |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 8.16 | | 81.6 | 2.5 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 9.46 | | 94.6 | 4.3 |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 9.92 | | 99.2 | 2.8 |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 9.68 | | 96.8 | 3 |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 9.78 | | 97.8 | 5.5 |
| 750 | TRICHLOROETHENE | 0 | 10 | 9.83 | | 98.3 | 5.8 |
| 768 | VINYL CHLORIDE | 0 | 10 | 9.71 | | 97.1 | 5.4 |
| 193 | BROMOBENZENE | 0 | 10 | 9.61 | | 96.1 | .5 |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 8.89 | | 88.9 | 4.7 |
| 197 | BROMOFORM | 0 | 10 | 6.09 | | 60.9 | 3.2 |
| 198 | BROMOMETHANE | 0 | 10 | 9.71 | | 97.1 | 5.7 |
| 231 | CHLOROBENZENE | 0 | 10 | 9.37 | | 93.7 | .5 |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 7.68 | | 76.8 | .5 |
| 234 | CHLOROETHANE | 0 | 10 | 11.3 | | 112.8 | 6.2 |
| 235 | CHLOROFORM | 0 | 10 | 9.52 | | 95.2 | 1.4 |
| 236 | CHLOROMETHANE | 0 | 10 | 9.62 | | 96.2 | 3.9 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 9.49 | | 94.9 | .7 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 9.33 | | 93.3 | .4 |
| 296 | DIBROMOMETHANE | 0 | 10 | 9.76 | | 97.6 | 2.8 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 9.52 | | 95.2 | 2.3 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 9.69 | | 96.9 | 1.5 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 9.87 | | 98.7 | 5 |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 10.2 | | 102.1 | 6.8 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.97 | | 99.7 | 5 |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 10.1 | | 101.1 | 4.8 |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 9.79 | | 97.9 | 2 |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 9.82 | | 98.2 | 3.8 |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 9.48 | | 94.8 | .6 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 7.31 | | 73.1 | 7.7 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 6.7 | ! | 67 | 6.2 |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.89 | | 98.9 | .9 |
| 349 | ETHYL BENZENE | 0 | 10 | 9.28 | | 92.8 | 1.4 |
| 680 | STYRENE | 0 | 10 | 5.33 | | 53.3 | 4.4 |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 9.64 | | 96.4 | 3.9 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 8.92 | | 89.2 | .9 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 9.68 | | 96.8 | 2.5 |
| 703 | TETRACHLOROETHENE | 0 | 10 | 8.57 | | 85.7 | 1.3 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 9.35 | | 93.5 | 2.3 |
| 724 | TOLUENE | 0 | 10 | 9.35 | | 93.5 | 2.3 |
| 492 | M/P-XYLENE | 0 | 20 | 18.2 | | 90.9 | .1 |
| 549 | O-XYLENE | 0 | 10 | 9.01 | | 90.1 | .3 |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 9.92 | | 99.2 | 3.2 |
| 519 | N-BUTYLBENZENE | 0 | 10 | 9.76 | | 97.6 | 2.1 |

AB 11/11/09

R560098

# Heritage Environmental Services, LLC

Q2256396

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 8.39 | | 83.9 | .6 |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 8.89 | | 88.9 | 0 |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.5 | | 104.8 | 4.1 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 9.23 | | 92.3 | 1.8 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 9.5 | | 95 | .5 |
| 493 | NAPHTHALENE | 0 | 10 | 11.3 | | 113 | .4 |
| 532 | N-PROPYLBENZENE | 0 | 10 | 9.38 | | 93.8 | 1.3 |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 9.7 | | 97 | 3.3 |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 9.72 | | 97.2 | .6 |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 11.9 | | 118.6 | 1.5 |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 10.6 | | 105.5 | 2.4 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 8.67 | | 86.7 | 2.2 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 8.46 | | 84.6 | 2.9 |
| 105 | ACROLEIN | 0 | 100 | 57.6 | | 57.6 | 4.1 |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 54.1 | | 108.2 | 1.4 |
| 106 | ACRYLONITRILE | 0 | 100 | 75.8 | | 75.8 | .3 |
| 216 | CARBON DISULFIDE | 0 | 10 | 8.85 | | 88.5 | 4.2 |
| 767 | VINYL ACETATE | 0 | 10 | 10.4 | | 104 | 1.6 |
| 52 | 2-BUTANONE | 0 | 50 | 47.6 | | 95.2 | .2 |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 49.9 | | 99.9 | 2.3 |
| 60 | 2-HEXANONE | 0 | 50 | 47.3 | | 94.6 | 4 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 6.1 | | 30.5 | 19.5 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 9.23 | | 92.3 | 2.4 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 9.1 | | 91 | 1.2 |
| 422 | IODOMETHANE | 0 | 10 | 9.65 | | 96.5 | 3.7 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 9.47 | | 94.7 | 1.4 |
| 30 | 1,4-DIOXANE | 0 | 200 | 90.5 | | 45.3 | 4.7 |
| 709 | TETRAHYDROFURAN | 0 | 125 | 121 | | 97 | 1 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 8.58 | | 85.8 | 1.9 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 99.7 | | 99.7 | 2 |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 85.9 | | 85.9 | 3.2 |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 7.04 | | 70.4 | .9 |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 7.02 | | 70.2 | .9 |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 27.2 | | 90.7 | 0 |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

Data File : C:\HPCHEM\DATA\V110709\2698V.D
Acq On : 7 Nov 2009 11:15
Sample : A864635 MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 11:32:02 2009

Vial: 6
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 971258 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 344457 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 232250 | 10.17 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.70% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 364292 | 10.42 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 104.20% | |
| 50) Toluene-d8 | 7.46 | 98 | 948099 | 9.74 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.40% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 329778 | 9.99 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.90% | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 145143 | 8.34 UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 330723 | 9.25 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.52 | 62 | 278074 | 9.20 UG/L | 100 |
| 5) Bromomethane | 1.79 | 94 | 106845 | 9.17 UG/L | 95 |
| 6) Chloroethane | 1.89 | 64 | 141953 | 10.60 UG/L | 91 |
| 7) Trichlorofluoromethane | 2.12 | 101 | 224925m | 8.89 UG/L | |
| 8) Acrolein | 2.51 | 56 | 110983 | 60.05 UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 707265 | 53.36 UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.62 | 96 | 184523 | 9.39 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 217944 | 9.49 UG/L | 90 |
| 12) Acrylonitrile | 3.32 | 53 | 425593 | 75.98 UG/L | 100 |
| 13) Carbon Disulfide | 2.80 | 76 | 497455 | 8.49 UG/L | 98 |
| 14) Methylene Chloride | 3.08 | 84 | 216534 | 9.48 UG/L | 93 |
| 15) Allyl Chloride | 2.96 | 41 | 790649 | 8.42 UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 23790 | 10.24 UG/L # | 87 |
| 17) MTBE | 3.39 | 73 | 640205 | 9.34 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 196151 | 9.39 UG/L # | 82 |
| 19) n-Hexane | 3.67 | 57 | 383021 | 9.77 UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 395840 | 9.64 UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 182568 | 47.68 UG/L | 89 |
| 22) Ethyl Acetate | 4.50 | 43 | 389326 | 9.27 UG/L # | 99 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 207236 | 9.54 UG/L | 82 |
| 24) Ethyl Cyanide | 4.45 | 54 | 594657 | 101.71 UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 359650 | 9.39 UG/L | 100 |
| 26) Methacrylonitrile | 4.62 | 41 | 1835706 | 83.15 UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 1367873 | 119.96 UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 99670 | 9.61 UG/L # | 63 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 216818 | 9.98 UG/L # | 88 |
| 30) Diethyl ether | 2.41 | 59 | 208778 | 9.98 UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 291730 | 9.26 UG/L | 99 |
| 32) Iodomethane | 2.74 | 142 | 298166 | 9.30 UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.10 | 110 | 100636 | 9.60 UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 234237 | 8.37 UG/L | 91 |
| 37) 1,2-Dichloroethane | 5.33 | 62 | 362537 | 9.65 UG/L | 99 |
| 38) Isobutanol | 5.28 | 43 | 1670382 | 806.30 UG/L # | 99 |
| 39) Benzene | 5.31 | 78 | 822282 | 9.51 UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 210895 | 9.28 UG/L | 92 |

(#) = qualifier out of range (m) = manual integration
2698V.D 8260VOI.M Tue Nov 10 05:25:21 2009



59169b

Data File : C:\HPCHEM\DATA\V110709\2698V.D
Acq On : 7 Nov 2009 11:15
Sample : A864635 MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 11:32:02 2009

Vial: 6
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 41) | n-Butanol | 6.01 | 56 | 861699 | 506.09 UG/L | 98 |
| 42) | 1,2-DICHLOROPROPANE | 6.27 | 63 | 218494 | 9.45 UG/L | 100 |
| 43) | 1,4-Dioxane | 6.46 | 88 | 75219 | 86.33 UG/L | 100 |
| 44) | Methyl Methacrylate | 6.46 | 41 | 221980 | 6.98 UG/L # | 60 |
| 45) | Bromodichloromethane | 6.60 | 83 | 226473 | 8.48 UG/L | 96 |
| 46) | Dibromomethane | 6.40 | 93 | 132591 | 9.49 UG/L | 91 |
| 47) | 4-Methyl-2-Pentanone | 7.34 | 43 | 2134766 | 48.78 UG/L | 99 |
| 49) | cis-1,3-Dichloropropene | 7.13 | 75 | 226434 | 6.77 UG/L | 100 |
| 51) | TOLUENE | 7.53 | 91 | 866547 | 9.14 UG/L | 100 |
| 52) | trans-1,3-Dichloropropene | 7.81 | 75 | 187740 | 6.30 UG/L | 100 |
| 53) | 1,1,2-Trichloroethane | 8.03 | 97 | 184249 | 9.27 UG/L | 100 |
| 54) | 1,2-Dibromoethane | 8.64 | 107 | 196822 | 9.01 UG/L | 99 |
| 56) | 2-Hexanone | 8.38 | 43 | 1661561 | 49.24 UG/L | 99 |
| 57) | 1,3-Dichloropropane | 8.23 | 76 | 331738 | 9.42 UG/L | 100 |
| 58) | Ethyl Methacrylate | 7.97 | 69 | 208425 | 6.96 UG/L | 91 |
| 59) | Tetrachloroethene | 8.21 | 166 | 226163 | 8.68 UG/L | 99 |
| 60) | Dibromochloromethane | 8.51 | 129 | 146171 | 7.72 UG/L | 100 |
| 61) | Chlorobenzene | 9.29 | 112 | 578500 | 9.42 UG/L | 99 |
| 62) | 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 180509 | 8.84 UG/L | 100 |
| 63) | ETHYL BENZENE | 9.47 | 106 | 316792 | 9.15 UG/L | 73 |
| 64) | m,p-Xylene | 9.62 | 106 | 786069 | 18.19 UG/L # | 59 |
| 65) | o-Xylene | 10.10 | 106 | 382881 | 8.98 UG/L | 78 |
| 66) | Styrene | 10.12 | 104 | 396326 | 5.57 UG/L # | 74 |
| 67) | Bromoform | 10.30 | 173 | 91204 | 6.29 UG/L | 100 |
| 68) | 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 325744 | 9.93 UG/L | 98 |
| 70) | Isopropylbenzene | 10.54 | 105 | 958941 | 9.40 UG/L | 100 |
| 71) | trans-1,4-Dichloro-2-buten | 10.93 | 53 | 121380 | 7.41 UG/L # | 1 |
| 72) | Bromobenzene | 10.84 | 77 | 436459 | 9.56 UG/L | 100 |
| 73) | 1,2,3-Trichloropropane | 10.90 | 110 | 103067 | 9.57 UG/L | 100 |
| 74) | n-Propylbenzene | 11.00 | 92 | 141586 | 9.50 UG/L | 87 |
| 75) | 1,3,5-Trimethylbenzene | 11.19 | 105 | 878464 | 8.71 UG/L | 100 |
| 76) | 2-Chlorotoluene | 11.06 | 126 | 263638 | 9.42 UG/L | 100 |
| 77) | 4-Chlorotoluene | 11.17 | 126 | 264710 | 9.37 UG/L | 100 |
| 78) | t-Butylbenzene | 11.51 | 91 | 594350 | 9.78 UG/L # | 60 |
| 79) | 1,2,4-Trimethylbenzene | 11.56 | 105 | 902523 | 8.86 UG/L | 100 |
| 80) | sec-Butylbenzene | 11.73 | 105 | 1318608 | 10.03 UG/L | 100 |
| 81) | p-Isopropyltoluene | 11.87 | 119 | 1025223 | 9.55 UG/L | 100 |
| 82) | 1,3-Dichlorobenzene | 11.81 | 146 | 539829 | 9.74 UG/L | 100 |
| 83) | 1,4-Dichlorobenzene | 11.90 | 146 | 560530 | 9.88 UG/L | 100 |
| 84) | n-Butylbenzene | 12.26 | 92 | 573022 | 9.97 UG/L | 95 |
| 85) | 1,2-Dichlorobenzene | 12.24 | 146 | 520283 | 9.84 UG/L | 100 |
| 86) | 1,2-Dibromo-3-chloropropan | 12.94 | 157 | 63596 | 8.99 UG/L | 100 |
| 87) | 1,2,4-Trichlorobenzene | 13.66 | 180 | 372629 | 10.30 UG/L | 100 |
| 88) | Naphthalene | 13.86 | 128 | 1095342 | 11.34 UG/L | 100 |
| 89) | Hexachlorobutadiene | 13.82 | 225 | 213856 | 10.06 UG/L | 100 |
| 90) | 1,2,3-Trichlorobenzene | 14.06 | 180 | 362668 | 11.68 UG/L | 100 |

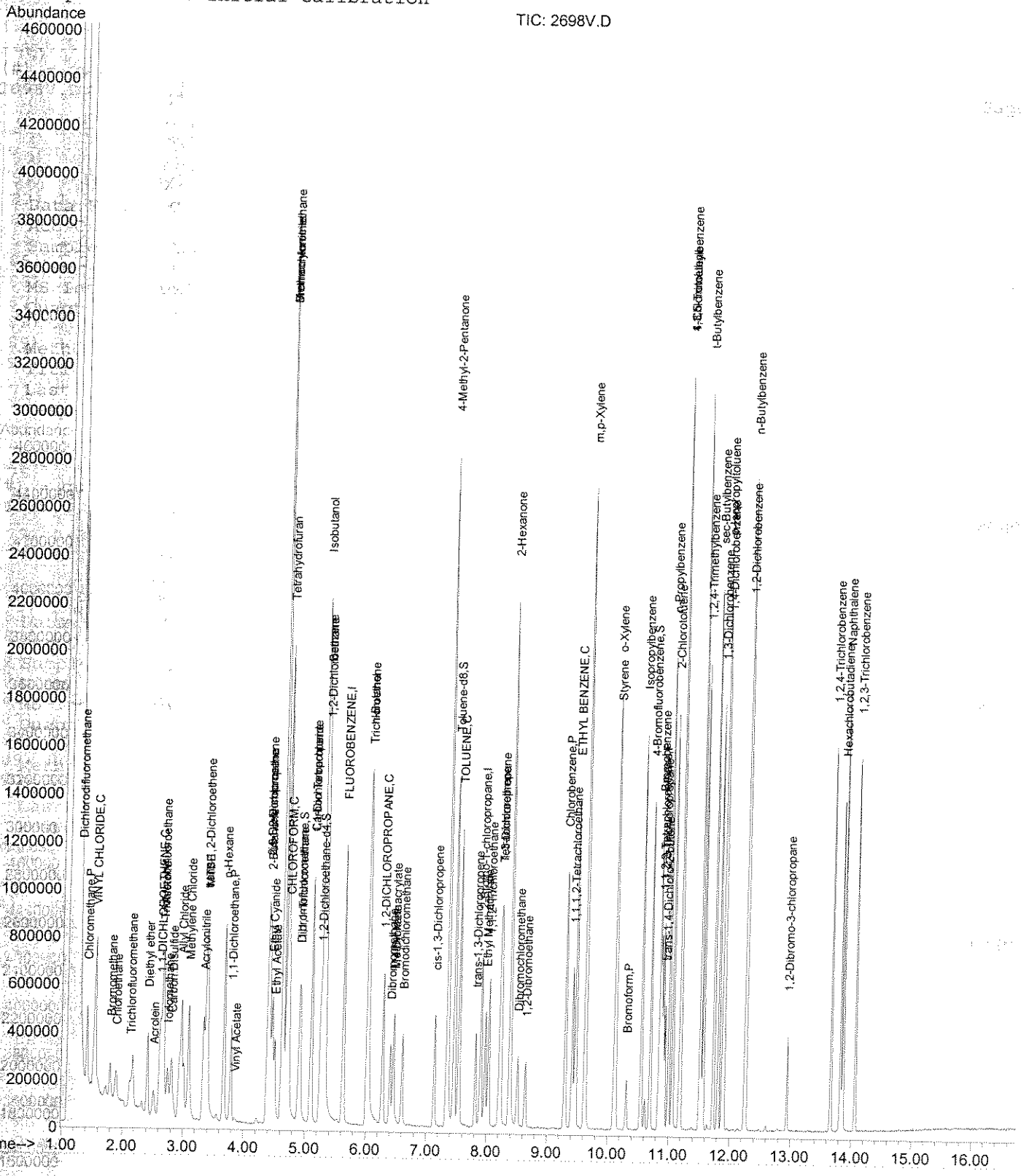
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\DATA\V110709\2698V.D
Acq On : 7 Nov 2009 11:15
Sample : A864635 MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 10 5:25 2009

Vial: 6
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

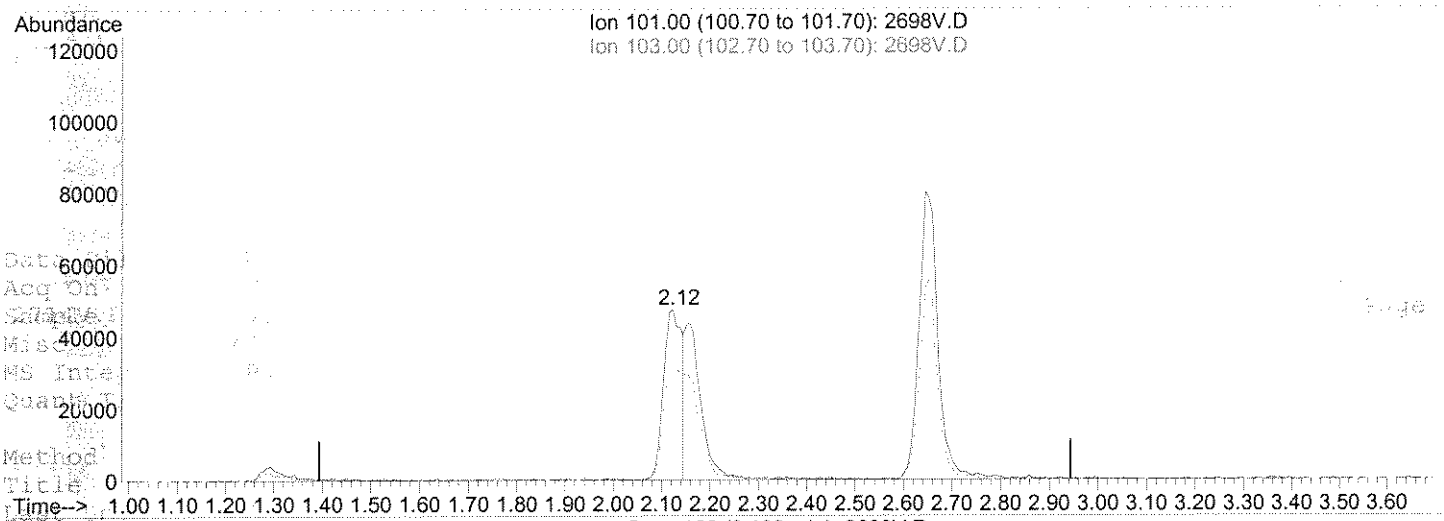
Quant Results File: 8260VOI.RES

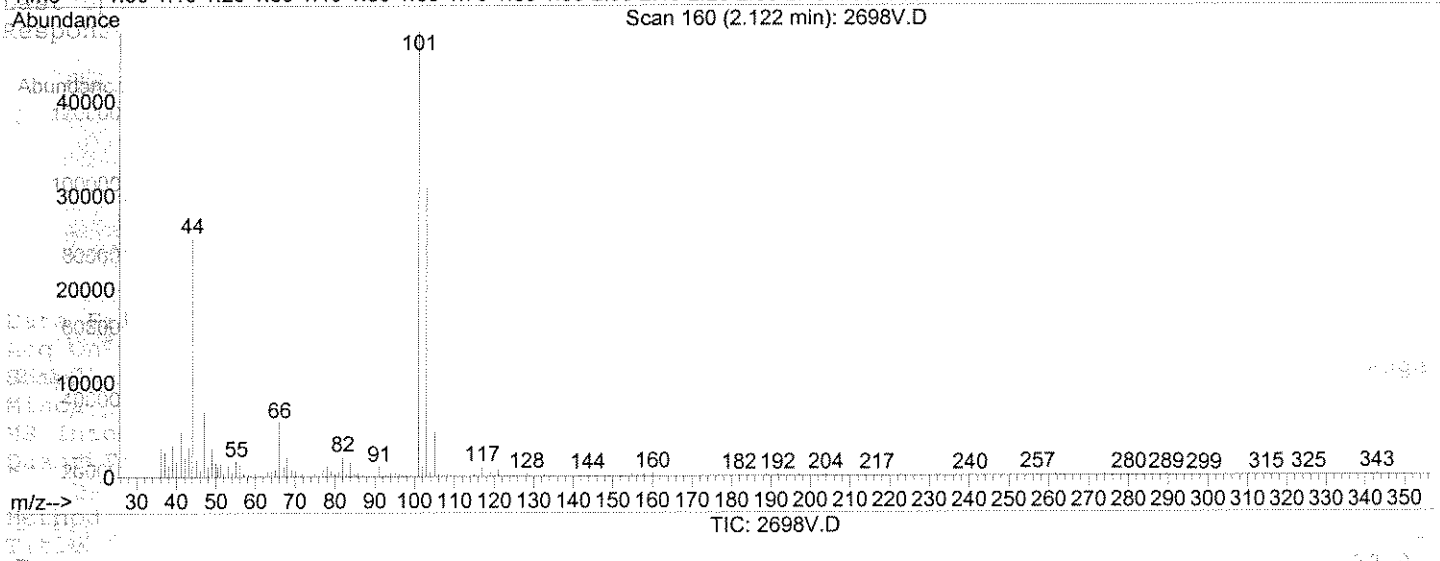
Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration



Data File : C:\HPCHEM\DATA\V110709\2698V.D  Vial: 6
Acq On : 7 Nov 2009 11:15  Operator: REGI
Sample : A864635 MS  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 11:32 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.12min 4.99UG/L

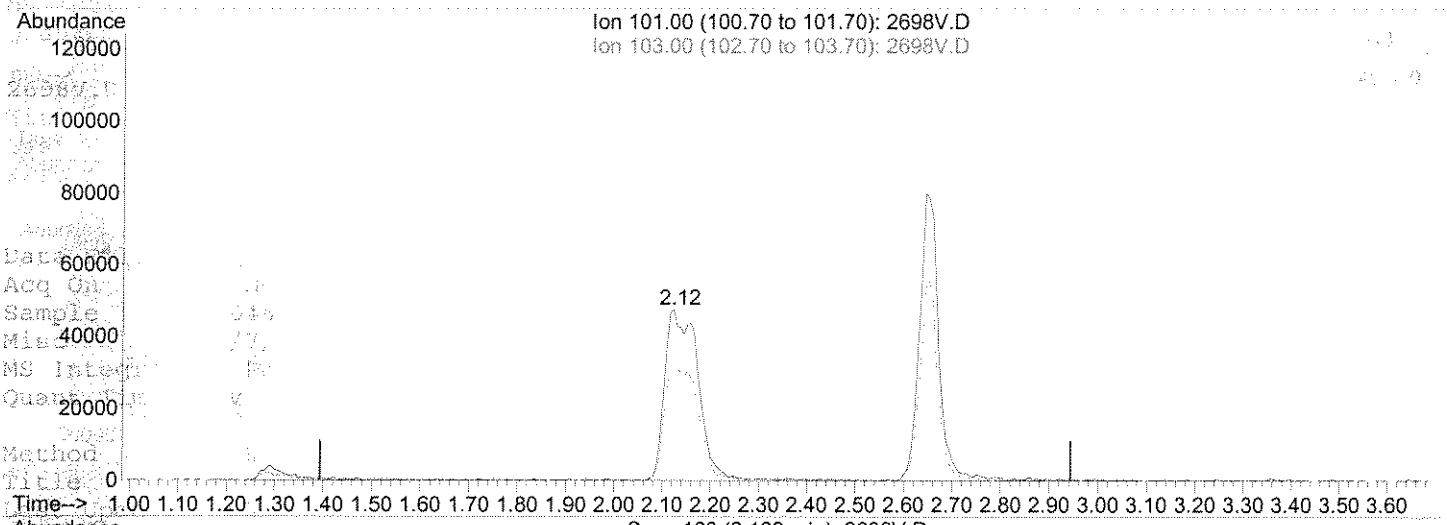
response 126252

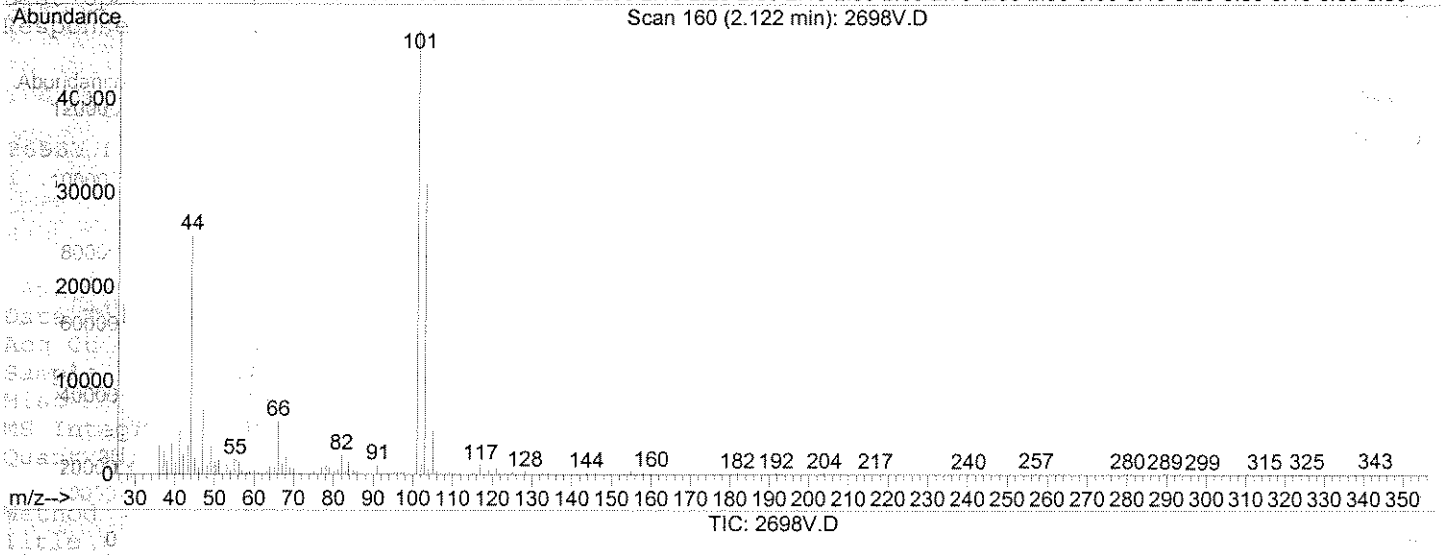
| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 120.56# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2698V.D 8260VOI.M Tue Nov 10 05:25:08 2009

Data File : C:\HPCHEM\DATA\V110709\2698V.D  Vial: 6
Acq On : 7 Nov 2009 11:15  Operator: REGI
Sample : A864635 MS  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 10 5:25 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.12min 8.89UG/L m

response 224925

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 67.67# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110709\2699V.D
Acq On : 7 Nov 2009 11:40
Sample : A864635 MSD
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 11:56:59 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 963061 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 355729 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 228182 | 10.08 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.80% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 367439 | 10.60 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 106.00% | |
| 50) Toluene-d8 | 7.46 | 98 | 954215 | 9.88 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.80% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 326372 | 9.57 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.70% | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 144814 | 8.39 UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 341035 | 9.62 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 291099 | 9.71 UG/L | 99 |
| 5) Bromomethane | 1.79 | 94 | 112145 | 9.71 UG/L | 99 |
| 6) Chloroethane | 1.89 | 64 | 149743 | 11.28 UG/L | 97 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 222956m | 8.89 UG/L | |
| 8) Acrolein | 2.51 | 56 | 105532 | 57.58 UG/L | 100 |
| 9) Acetone | 2.67 | 43 | 710944 | 54.10 UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 188607 | 9.68 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.65 | 101 | 229372 | 10.07 UG/L | 87 |
| 12) Acrylonitrile | 3.32 | 53 | 420825 | 75.77 UG/L | 100 |
| 13) Carbon Disulfide | 2.80 | 76 | 514497 | 8.85 UG/L | 100 |
| 14) Methylene Chloride | 3.08 | 84 | 224894 | 9.97 UG/L | 95 |
| 15) Allyl Chloride | 2.96 | 41 | 798915 | 8.58 UG/L | 100 |
| 16) Vinyl Acetate | 3.87 | 43 | 24024 | 10.40 UG/L # | 87 |
| 17) MTBE | 3.39 | 73 | 644142 | 9.47 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 204300 | 9.87 UG/L | 85 |
| 19) n-Hexane | 3.67 | 57 | 383043 | 9.86 UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.78 | 63 | 411738 | 10.11 UG/L | 100 |
| 21) 2-Butanone | 4.41 | 72 | 180676 | 47.59 UG/L | 94 |
| 22) Ethyl Acetate | 4.50 | 43 | 396901 | 9.53 UG/L # | 100 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 219930 | 10.21 UG/L | 89 |
| 24) Ethyl Cyanide | 4.45 | 54 | 578255 | 99.74 UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 361574 | 9.52 UG/L | 99 |
| 26) Methacrylonitrile | 4.62 | 41 | 1880043 | 85.88 UG/L # | 100 |
| 27) Tetrahydrofuran | 4.69 | 42 | 1371598 | 121.31 UG/L | 100 |
| 28) Bromochloromethane | 4.62 | 128 | 102006 | 9.92 UG/L # | 67 |
| 29) 2,2-Dichloropropane | 4.38 | 77 | 213155 | 9.89 UG/L # | 89 |
| 30) Diethyl ether | 2.41 | 59 | 216185 | 10.42 UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 305521 | 9.78 UG/L | 99 |
| 32) Iodomethane | 2.74 | 142 | 306698 | 9.65 UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 101744 | 9.79 UG/L | 100 |
| 36) Carbon Tetrachloride | 5.10 | 117 | 226425 | 8.16 UG/L | 96 |
| 37) 1,2-Dichloroethane | 5.33 | 62 | 369676 | 9.92 UG/L | 100 |
| 38) Isobutanol | 5.28 | 43 | 1667267 | 811.64 UG/L # | 97 |
| 39) Benzene | 5.31 | 78 | 836645 | 9.76 UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 221485 | 9.83 UG/L | 91 |

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

Data File : C:\HPCHEM\DATA\V110709\2699V.D
Acq On : 7 Nov 2009 11:40
Sample : A864635 MSD
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 11:56:59 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 41) | n-Butanol | 6.01 | 56 | 851788 | 504.53 UG/L | 97 |
| 42) | 1,2-DICHLOROPROPANE | 6.27 | 63 | 224959 | 9.82 UG/L | 100 |
| 43) | 1,4-Dioxane | 6.46 | 88 | 78206 | 90.52 UG/L | 100 |
| 44) | Methyl Methacrylate | 6.46 | 41 | 221973 | 7.04 UG/L # | 64 |
| 45) | Bromodichloromethane | 6.60 | 83 | 235538 | 8.89 UG/L | 98 |
| 46) | Dibromomethane | 6.40 | 93 | 135179 | 9.76 UG/L | 92 |
| 47) | 4-Methyl-2-Pentanone | 7.34 | 43 | 2166835 | 49.94 UG/L | 99 |
| 49) | cis-1,3-Dichloropropene | 7.13 | 75 | 242590 | 7.31 UG/L | 100 |
| 51) | TOLUENE | 7.53 | 91 | 878565 | 9.35 UG/L | 100 |
| 52) | trans-1,3-Dichloropropene | 7.81 | 75 | 198221 | 6.70 UG/L | 100 |
| 53) | 1,1,2-Trichloroethane | 8.03 | 97 | 189931 | 9.64 UG/L | 100 |
| 54) | 1,2-Dibromoethane | 8.64 | 107 | 199992 | 9.23 UG/L | 97 |
| 56) | 2-Hexanone | 8.38 | 43 | 1647623 | 47.28 UG/L | 99 |
| 57) | 1,3-Dichloropropane | 8.23 | 76 | 345039 | 9.48 UG/L | 100 |
| 58) | Ethyl Methacrylate | 7.97 | 69 | 217068 | 7.02 UG/L | 99 |
| 59) | Tetrachloroethene | 8.21 | 166 | 230562 | 8.57 UG/L | 99 |
| 60) | Dibromochloromethane | 8.51 | 129 | 150207 | 7.68 UG/L | 100 |
| 61) | Chlorobenzene | 9.29 | 112 | 594599 | 9.37 UG/L | 100 |
| 62) | 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 188121 | 8.92 UG/L | 100 |
| 63) | ETHYL BENZENE | 9.47 | 106 | 331916 | 9.28 UG/L | 79 |
| 64) | m,p-Xylene | 9.62 | 106 | 810748 | 18.17 UG/L # | 61 |
| 65) | o-Xylene | 10.10 | 106 | 396475 | 9.01 UG/L | 80 |
| 66) | Styrene | 10.12 | 104 | 391672 | 5.33 UG/L # | 70 |
| 67) | Bromoform | 10.31 | 173 | 91088 | 6.09 UG/L | 100 |
| 68) | 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 327924 | 9.68 UG/L | 100 |
| 70) | Isopropylbenzene | 10.55 | 105 | 971679 | 9.23 UG/L | 100 |
| 71) | trans-1,4-Dichloro-2-buten | 10.93 | 53 | 103213 | 6.10 UG/L # | 1 |
| 72) | Bromobenzene | 10.84 | 77 | 453340 | 9.61 UG/L | 100 |
| 73) | 1,2,3-Trichloropropane | 10.90 | 110 | 104063 | 9.35 UG/L | 100 |
| 74) | n-Propylbenzene | 10.99 | 92 | 144399 | 9.38 UG/L | 84 |
| 75) | 1,3,5-Trimethylbenzene | 11.19 | 105 | 881683 | 8.46 UG/L | 100 |
| 76) | 2-Chlorotoluene | 11.06 | 126 | 274476 | 9.49 UG/L | 100 |
| 77) | 4-Chlorotoluene | 11.17 | 126 | 271932 | 9.33 UG/L | 100 |
| 78) | t-Butylbenzene | 11.51 | 91 | 609908 | 9.72 UG/L # | 58 |
| 79) | 1,2,4-Trimethylbenzene | 11.56 | 105 | 912268 | 8.67 UG/L | 100 |
| 80) | sec-Butylbenzene | 11.73 | 105 | 1316505 | 9.70 UG/L | 100 |
| 81) | p-Isopropyltoluene | 11.88 | 119 | 1052930 | 9.50 UG/L | 100 |
| 82) | 1,3-Dichlorobenzene | 11.81 | 146 | 544554 | 9.52 UG/L | 100 |
| 83) | 1,4-Dichlorobenzene | 11.90 | 146 | 554359 | 9.46 UG/L | 100 |
| 84) | n-Butylbenzene | 12.26 | 92 | 578947 | 9.76 UG/L | 95 |
| 85) | 1,2-Dichlorobenzene | 12.25 | 146 | 529188 | 9.69 UG/L | 100 |
| 86) | 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 66471 | 9.10 UG/L | 100 |
| 87) | 1,2,4-Trichlorobenzene | 13.66 | 180 | 393948 | 10.55 UG/L | 100 |
| 88) | Naphthalene | 13.86 | 128 | 1127565 | 11.30 UG/L | 100 |
| 89) | Hexachlorobutadiene | 13.82 | 225 | 228143 | 10.48 UG/L | 100 |
| 90) | 1,2,3-Trichlorobenzene | 14.06 | 180 | 378679 | 11.86 UG/L | 100 |

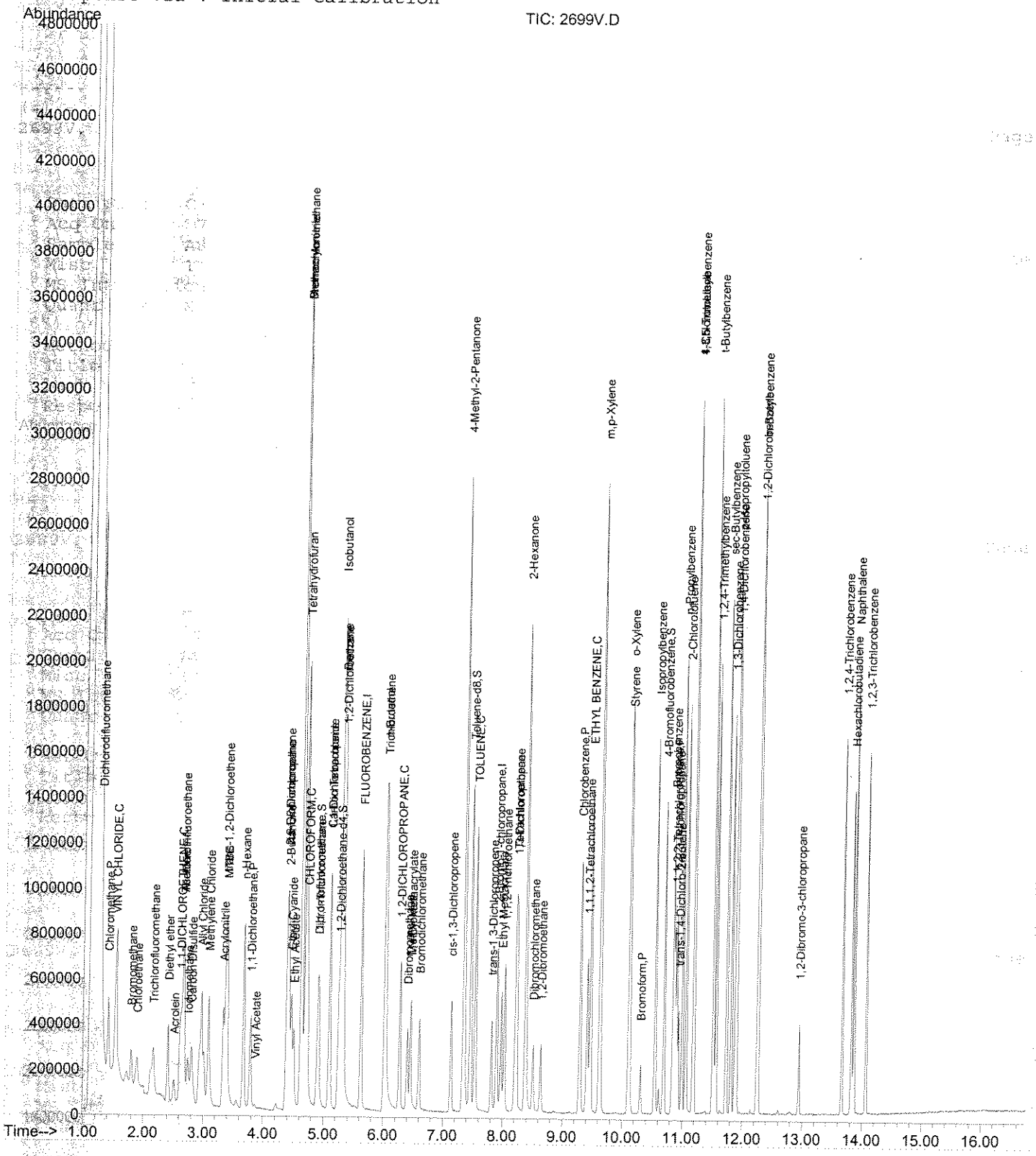
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\DATA\V110709\2699V.D
Acq On : 7 Nov 2009 11:40
Sample : A864635 MSD
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 10 5:25 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





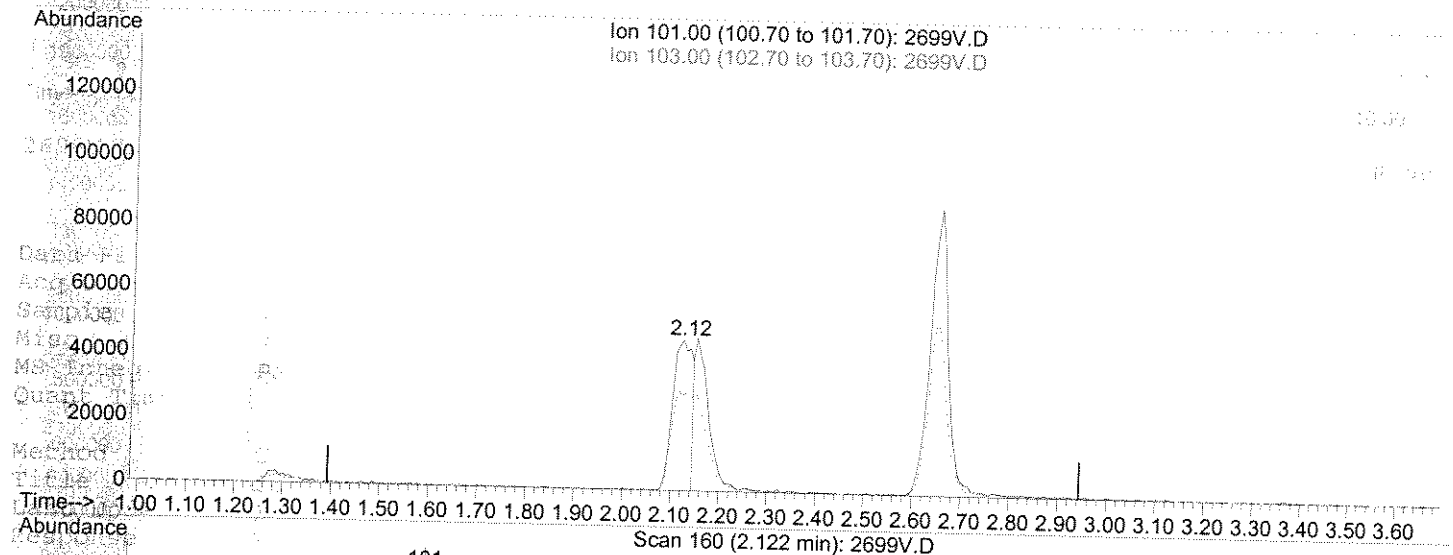

59169b

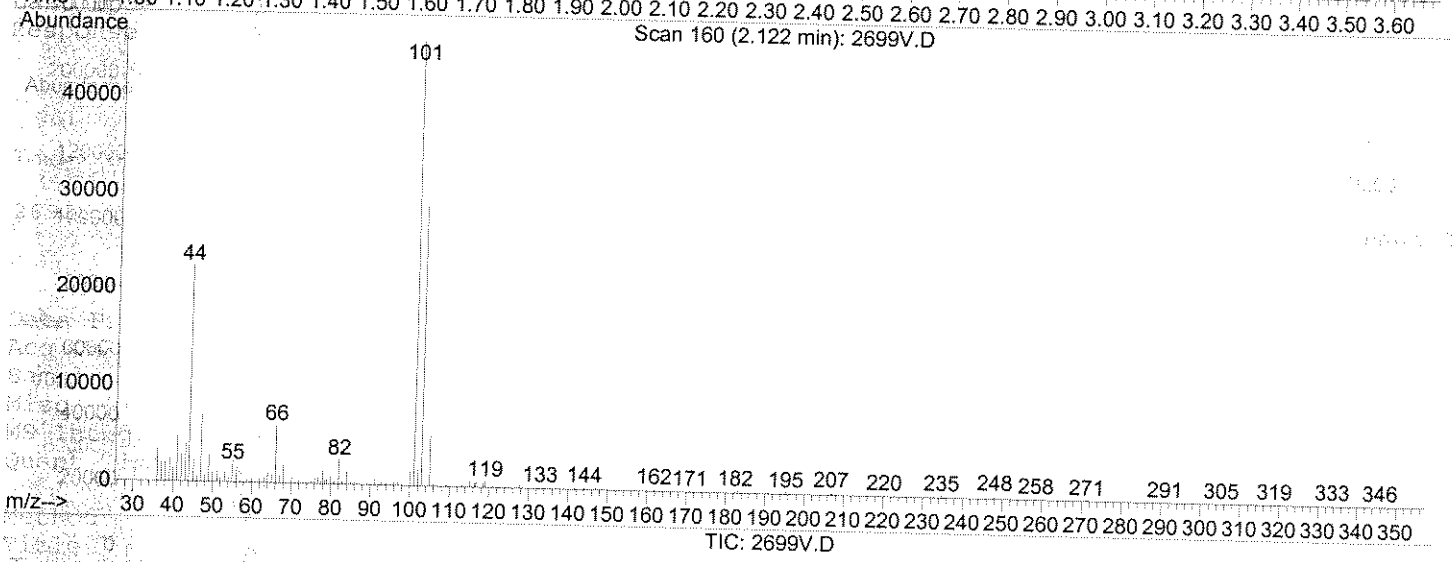
Data File : C:\HPCHEM\DATA\V110709\2699V.D
Acq On : 7 Nov 2009 11:40
Sample : A864635 MSD
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 11:57 2009

Vial: 7
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

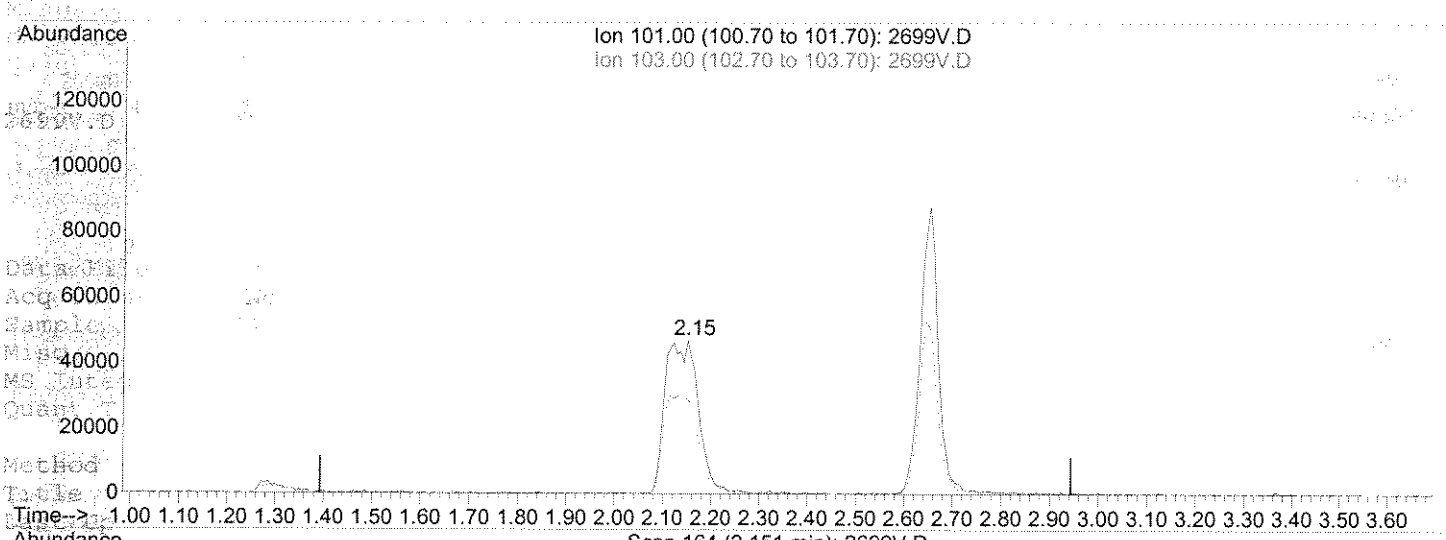
2.12min 5.20UG/L

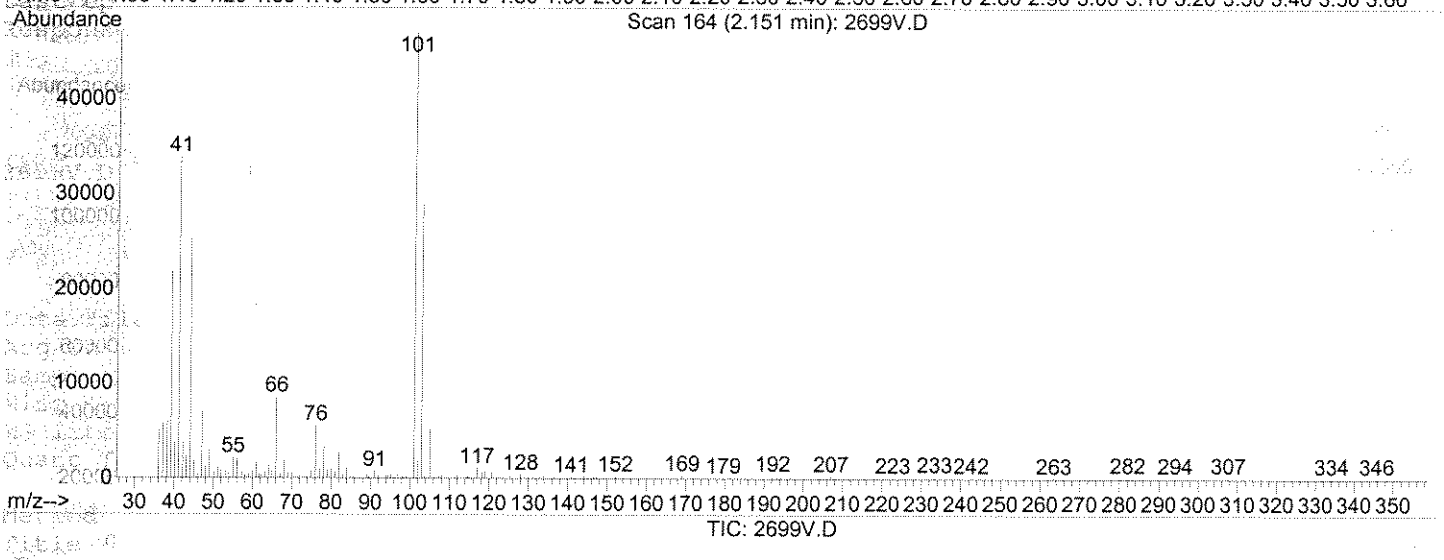
response 130377

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 111.11# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : C:\HPCHEM\DATA\V110709\2699V.D  Vial: 7
Acq On : 7 Nov 2009 11:40  Operator: REGI
Sample : A864635 MSD  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 10 5:25 2009  Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.15min 8.89UG/L m

response 222956

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 64.97# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2699V.D 8260VOI.M Tue Nov 10 05:25:39 2009

R560098

# Heritage Environmental Services, LLC

A864529

GC/MS VOA

Method SW846-8260B
Sample Description 153
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.1
Analyst 1062 R. SHAMP
File 2710V.D Date/Time 07Nov09 16:13:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 79-01-6 | 750 | TRICHLOROETHENE | 190 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 105 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 96 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 97 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11-11-09

Data File : C:\HPCHEM\DATA\V110709\2710V.D
Acq On : 7 Nov 2009 16:13
Sample : A864529 1:10 REP1
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 16:30:22 2009

Vial: 18
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 928342 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 318956 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 211396 | 9.69 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.90% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 350251 | 10.49 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 104.90% | |
| 50) Toluene-d8 | 7.46 | 98 | 893166 | 9.60 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.00% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 293626 | 9.60 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.00% | |
| Target Compounds | | | | | Qvalue |
| 9) ~~Acetone~~ | 2.67 | 43 | 30923 | 2.44 UG/L | 93 |
| 14) ~~Methylene Chloride~~ | 3.07 | 84 | 12829 | Below Cal | 98 |
| 23) ~~cis-1,2-Dichloroethene~~ | 4.38 | 96 | 46825 | 2.26 UG/L | 97 |
| 40) Trichloroethene 190 | 6.03 | 130 | 410353 | 18.89 UG/L | 94 |
| (47) 4-~~Methyl-2-Pentanone~~ | 7.45 | 43 | 7334 | 0.18 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.91 | 75 | 6117 | 0.21 UG/L | 100 |

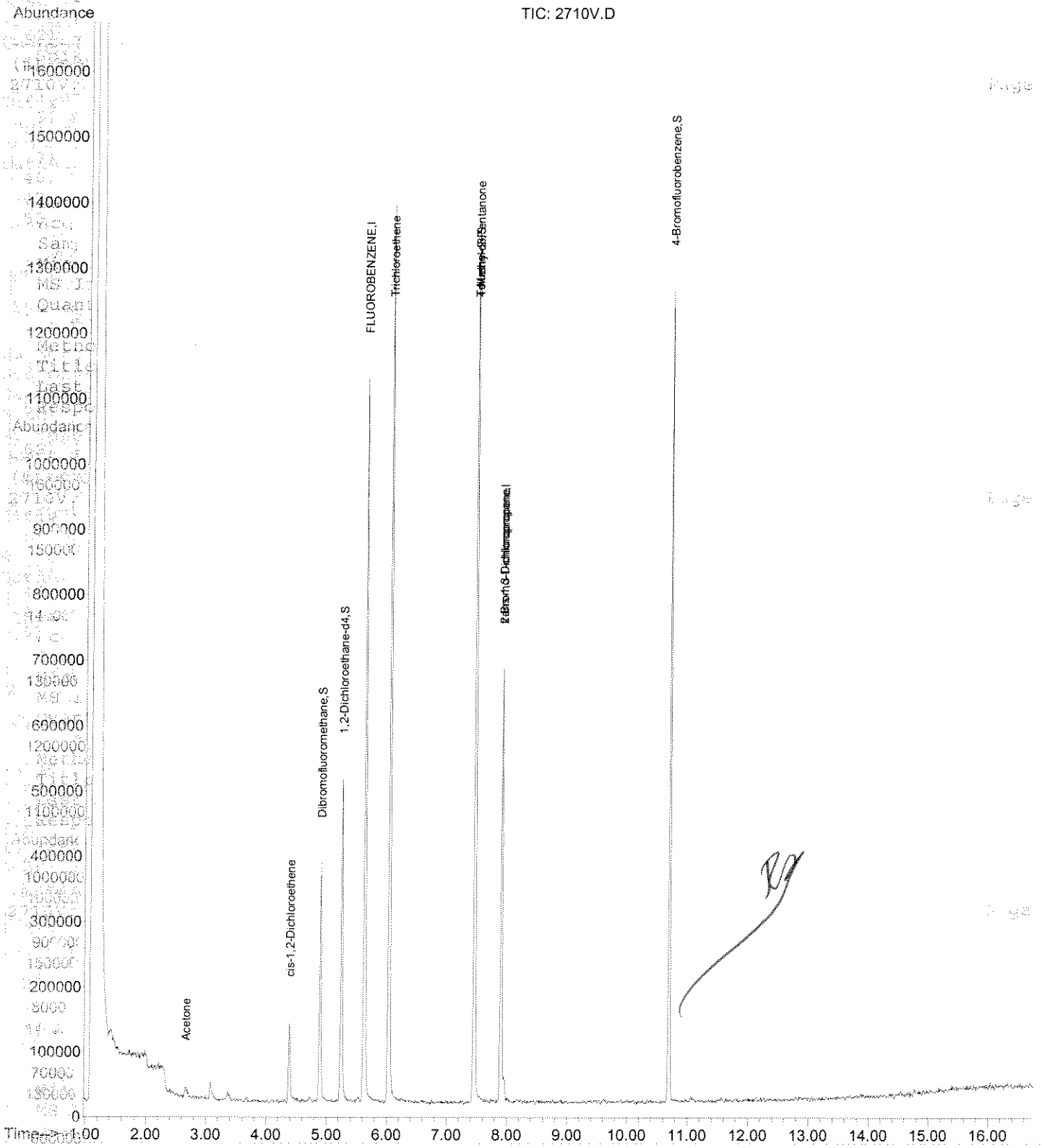
(#) = qualifier out of range (m) = manual integration
2710V.D 8260VOI.M Sat Nov 07 16:30:25 2009



59169b

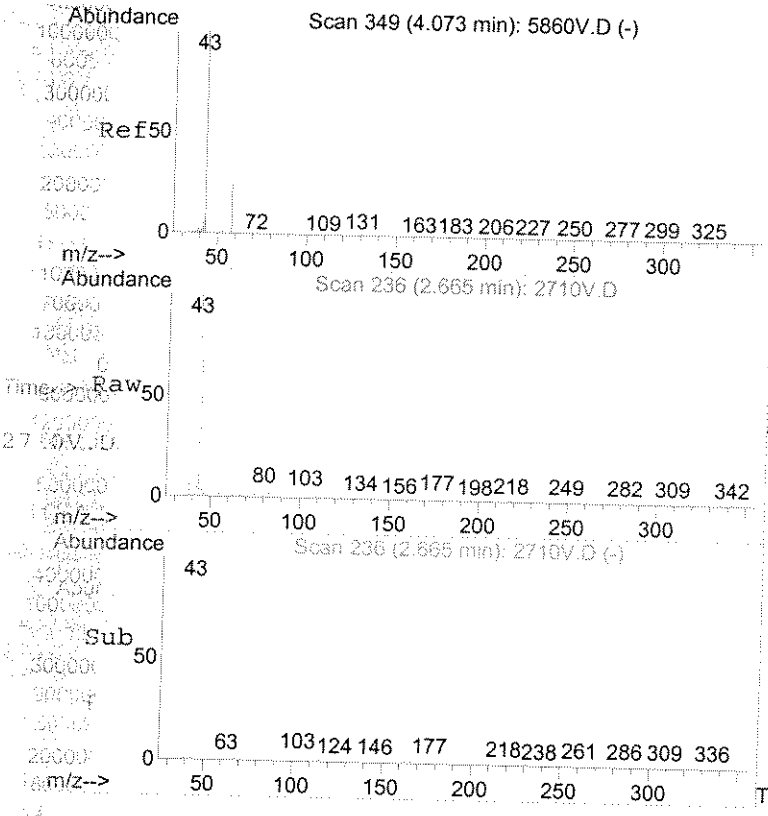
Data File : C:\HPCHEM\DATA\V110709\2710V.D  Vial: 18
Acq On : 7 Nov 2009 16:13  Operator: REGI
Sample : A864529 1:10 REP1  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 16:30 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





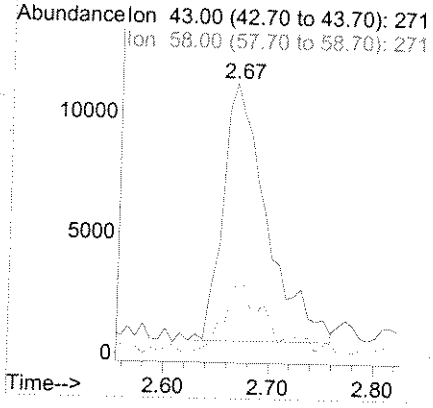

591696

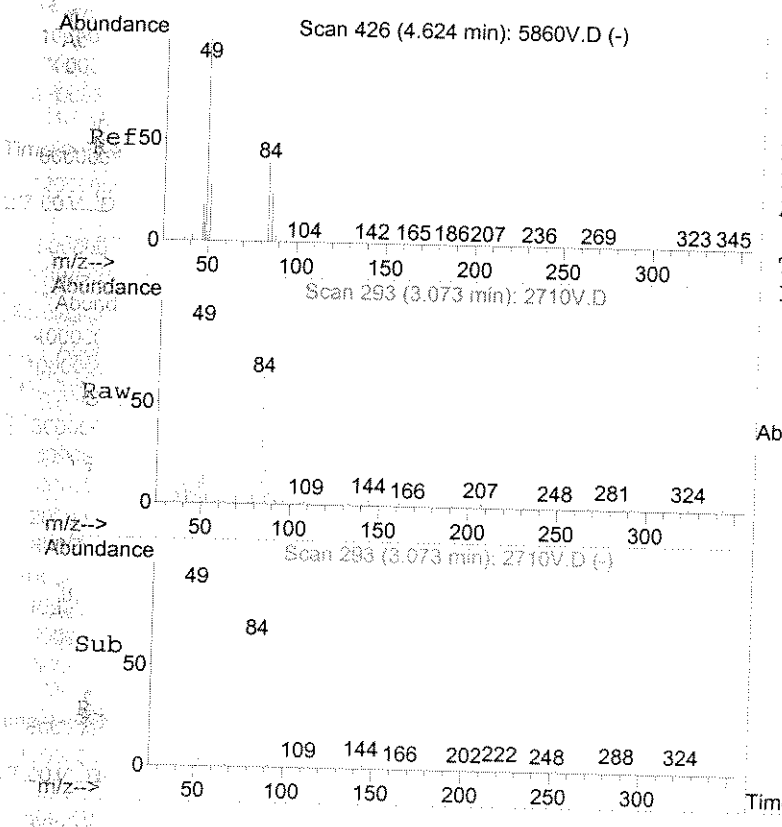



#9
Acetone
Concen: 2.44 UG/L
RT: 2.67 min Scan# 236
Delta R.T. -0.00 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion: 43 Resp: 30923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.1 | 23.1 | 34.7 |

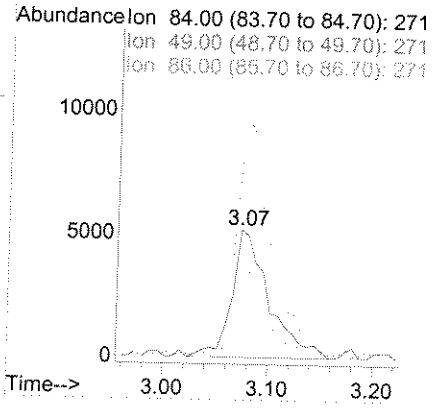


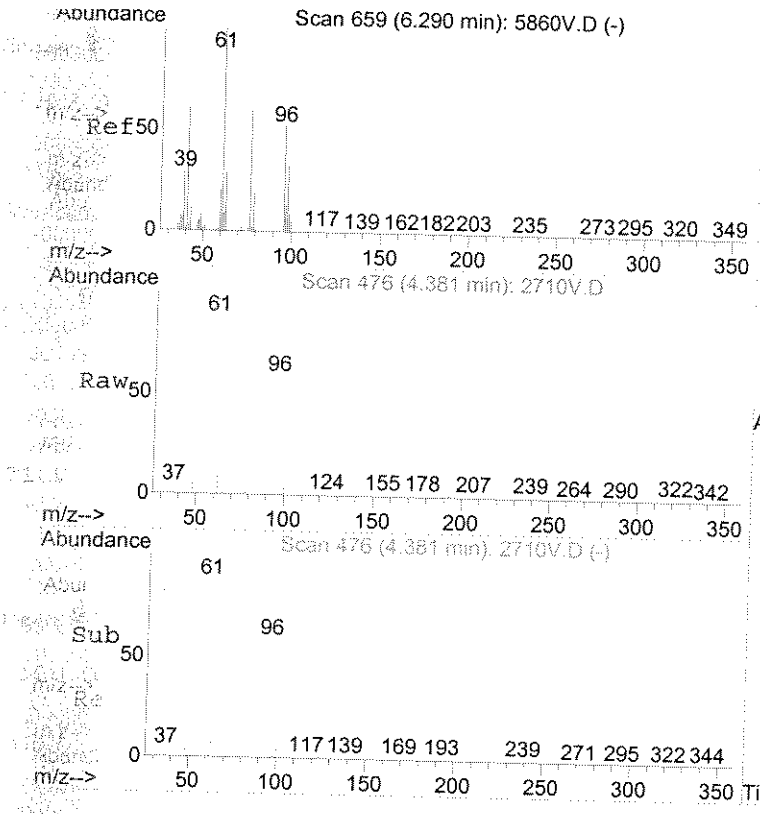




#14
Methylene Chloride
Concen: Below Cal
RT: 3.07 min Scan# 293
Delta R.T. -0.01 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion: 84 Resp: 12829

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 177.6 | 140.2 | 210.2 |
| 86 | 61.1 | 51.1 | 76.7 |

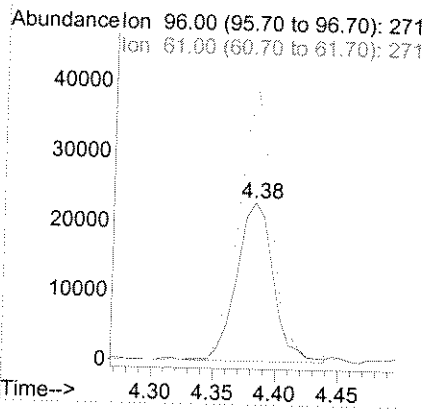


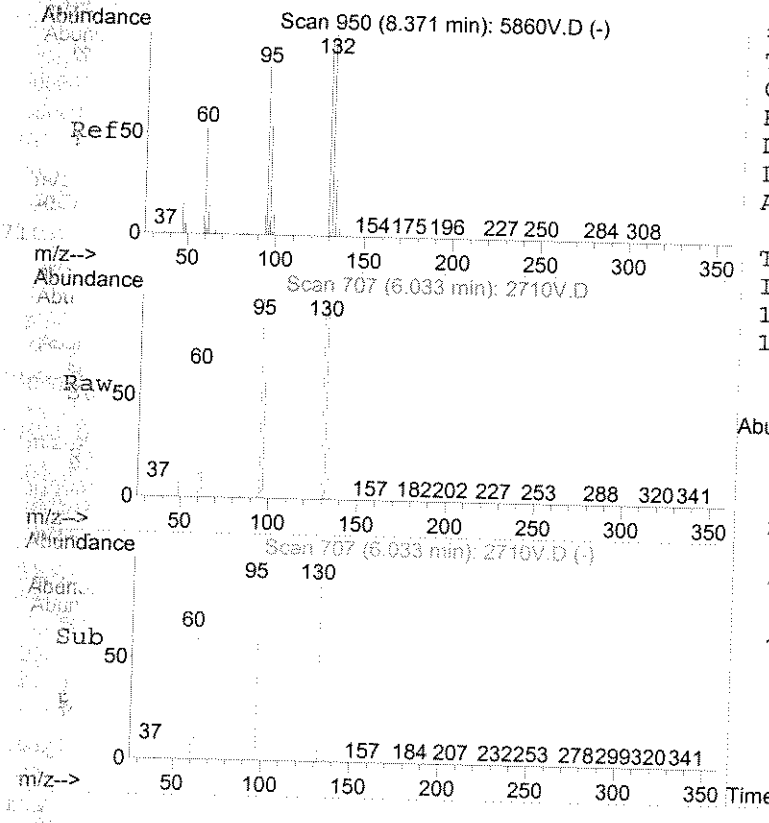



#23
cis-1,2-Dichloroethene
Concen: 2.26 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion: 96 Resp: 46825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 155.9 | 121.8 | 182.6 |

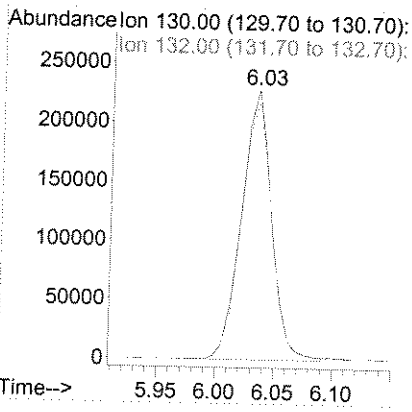


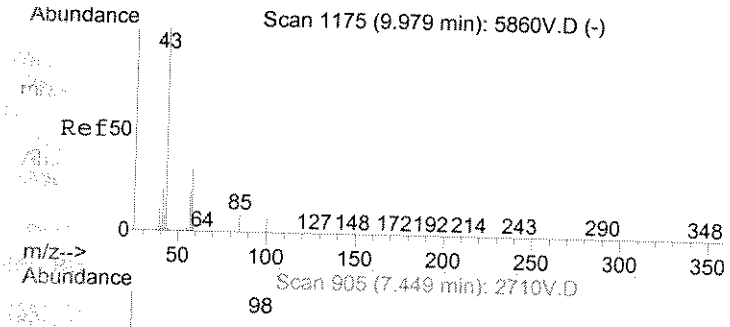




#40
Trichloroethene
Concen: 18.89 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion:130 Resp: 410353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 96.7 | 82.0 | 123.0 |

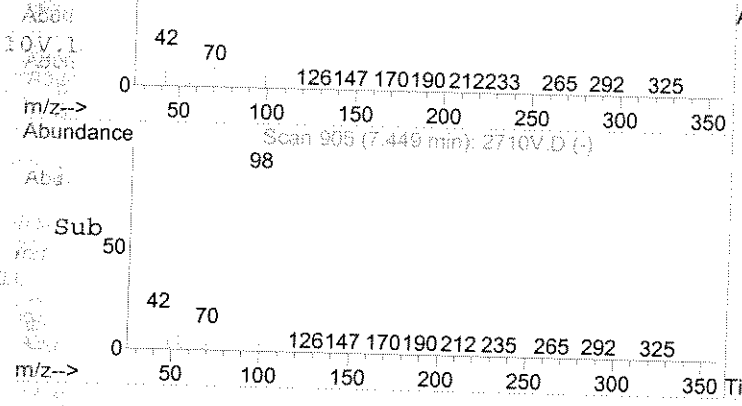


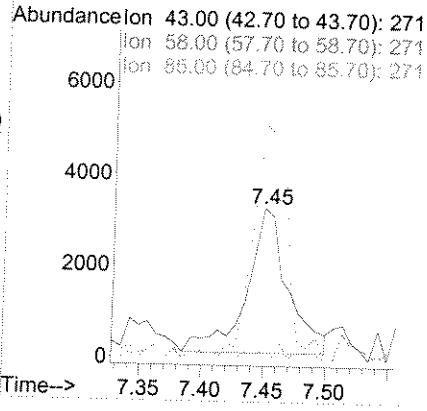


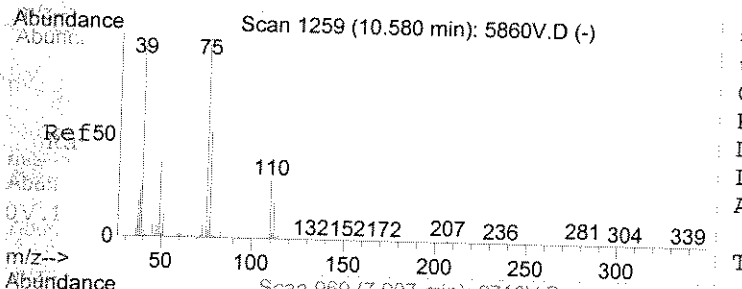

#47
4-Methyl-2-Pentanone
Concen: 0.18 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion: 43 Resp: 7334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 137.0 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

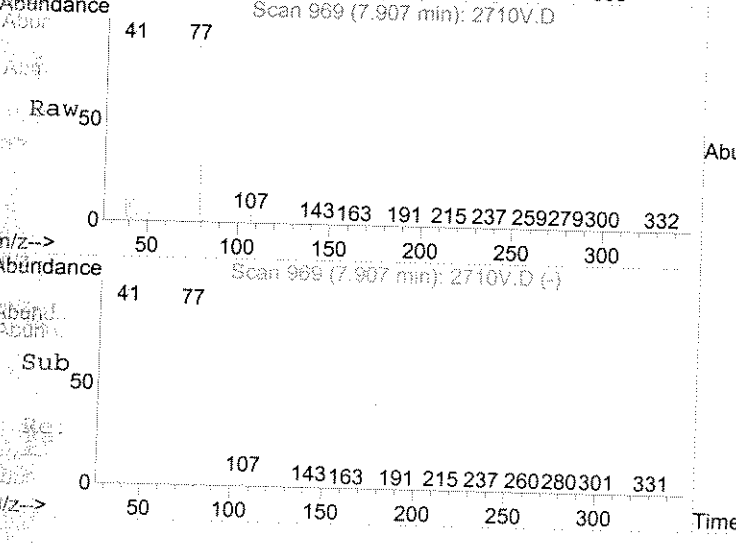


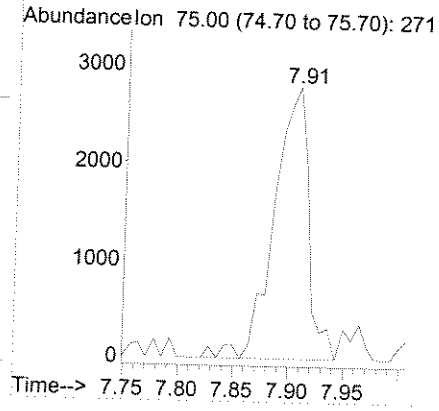




#52
trans-1,3-Dichloropropene
Concen: 0.21 UG/L
RT: 7.91 min Scan# 969
Delta R.T. 0.10 min
Lab File: 2710V.D
Acq: 7 Nov 2009 16:13

Tgt Ion: 75 Resp: 6117



R560098

# Heritage Environmental Services, LLC

GC/MS VOA

A864528

Method SW846-8260B
Sample Description 148
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.1
Analyst 1062 R. SHAMP
File 2711V.D Date/Time 07Nov09 16:38:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 480 | | 10 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 110 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 103 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 94 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 96 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 96 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

LKS
11/11/09

Data File : C:\HPCHEM\DATA\V110709\2711V.D
Acq On : 7 Nov 2009 16:38
Sample : A864528 1:10 REP1
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 16:55:16 2009

Vial: 19
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 943385 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 315555 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 212910 | 9.60 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 96.00% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 351015 | 10.34 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 103.40% | |
| 50) Toluene-d8 | 7.46 | 98 | 884384 | 9.35 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 93.50% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 291263 | 9.63 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 96.30% | |
| Target Compounds | | | | | Qvalue |
| 4) ~~VINYL CHLORIDE~~ | 1.51 | 62 | 122890 | 4.18 UG/L | 95 |
| 9) ~~Acetone~~ | 2.67 | 43 | 34688 | 2.69 UG/L | 99 |
| 14) Methylene Chloride | 3.08 | 84 | 15214 | Below Cal | 90 |
| 18) ~~trans-1,2-Dichloroethene~~ | 3.37 | 96 | 69966 | 3.45 UG/L # | 82 |
| 20) ~~1,1-Dichloroethane~~ | 3.79 | 63 | 20452 | 0.51 UG/L | 100 |
| 21) ~~2-Butanone~~ | 4.39 | 72 | 9405 | 2.53 UG/L # | 1 |
| 23) cis-1,2-Dichloroethene 480 | 4.38 | 96 | 1005796 | 47.68 UG/L | 96 |
| 42) Trichloroethene 110 | 6.03 | 130 | 232607 | 10.54 UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 7763 | 0.18 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.89 | 75 | 8124 | 0.28 UG/L | 100 |

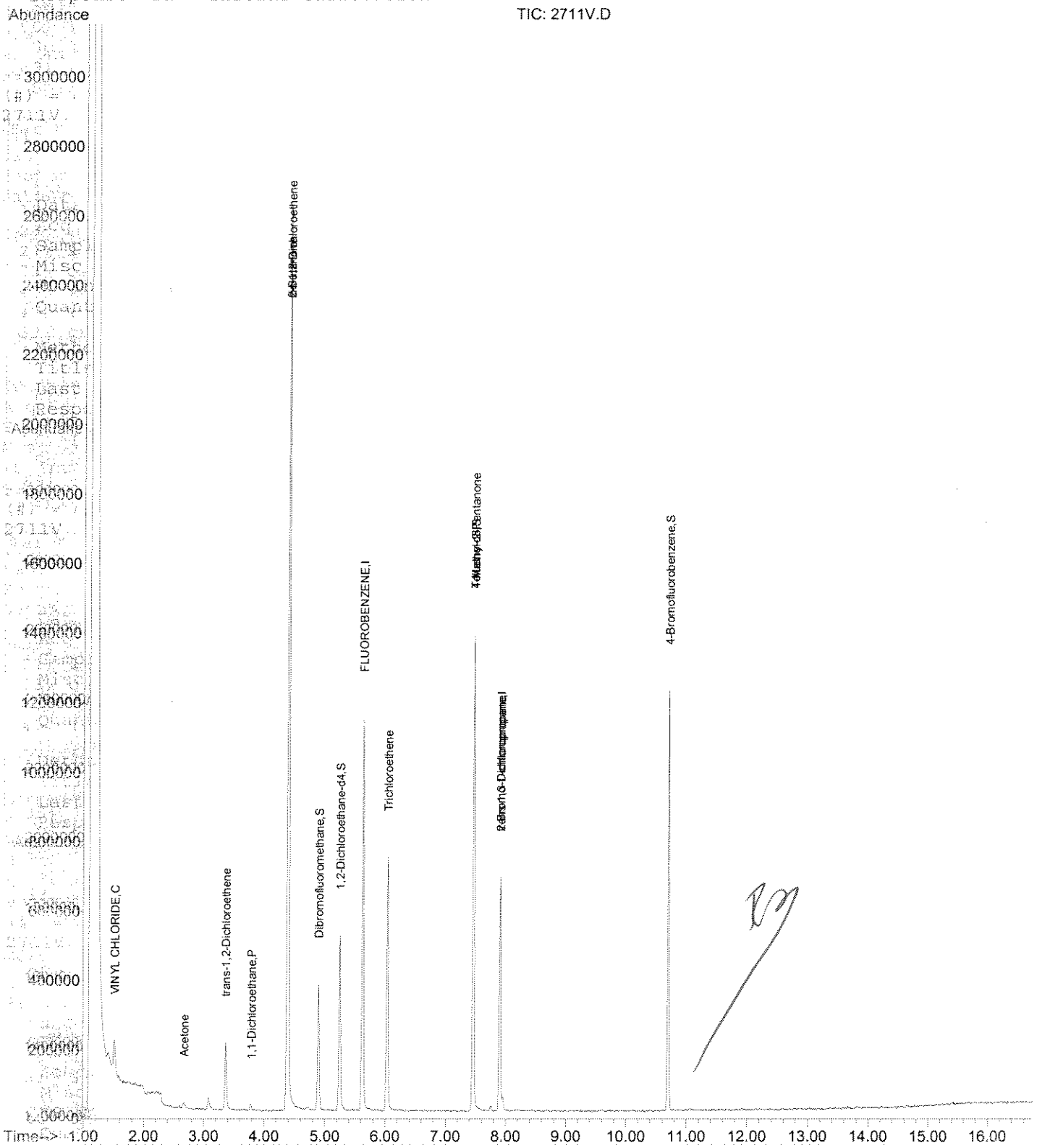
(#) = qualifier out of range (m) = manual integration
2711V.D 8260VOI.M Sat Nov 07 16:55:19 2009



59169b

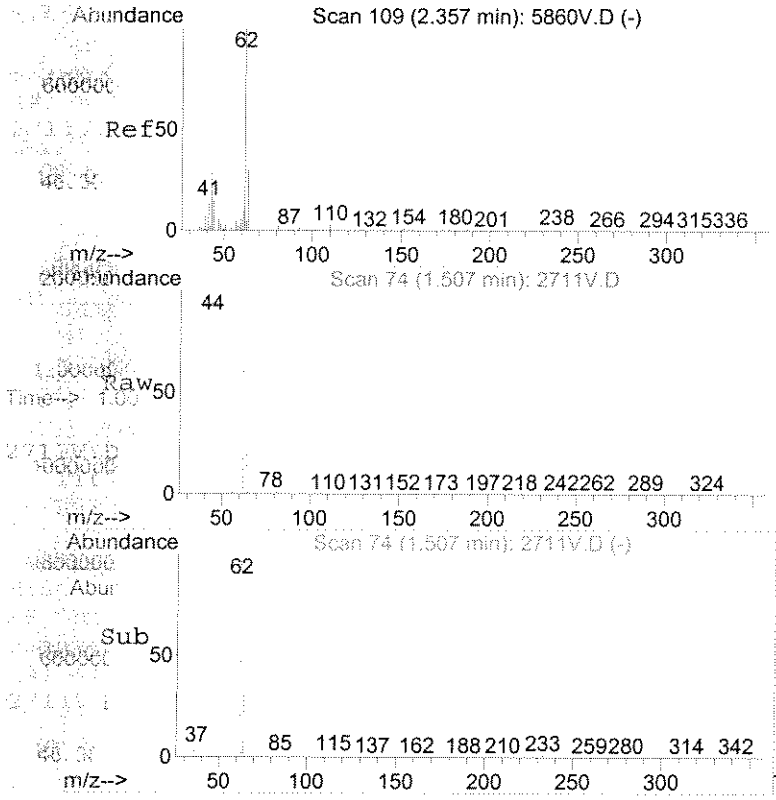
Data File : C:\HPCHEM\DATA\V110709\2711V.D  Vial: 19
Acq On : 7 Nov 2009 16:38  Operator: REGI
Sample : A864528 1:10 REP1  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 16:55 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





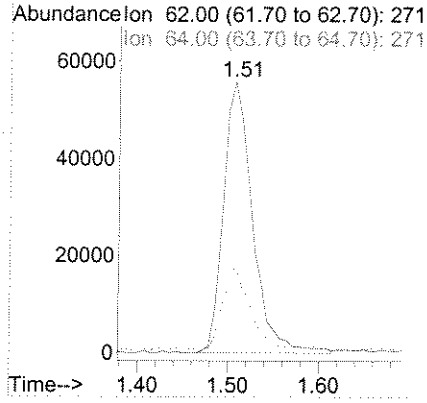

59169b

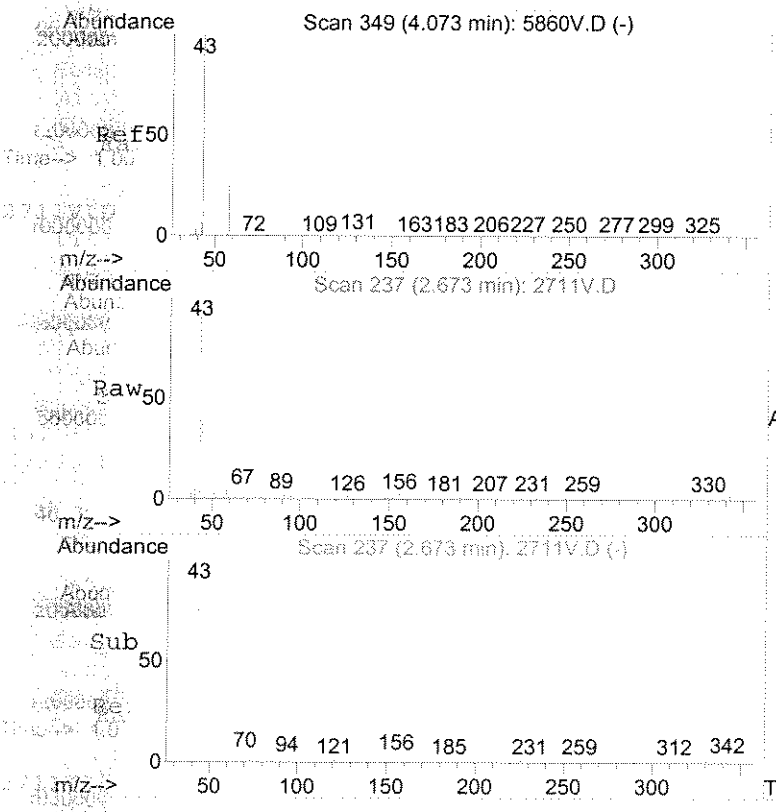



#4
VINYL CHLORIDE
Concen: 4.18 UG/L
RT: 1.51 min Scan# 74
Delta R.T. -0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 62 Resp: 122890

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 28.1 | 24.9 | 37.3 |

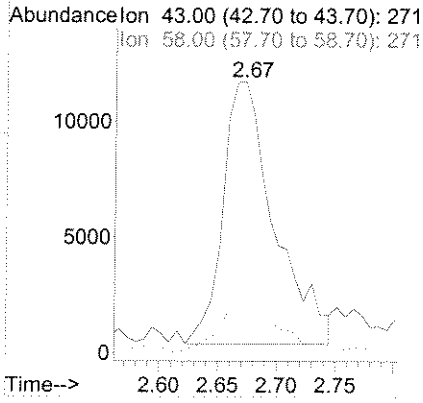


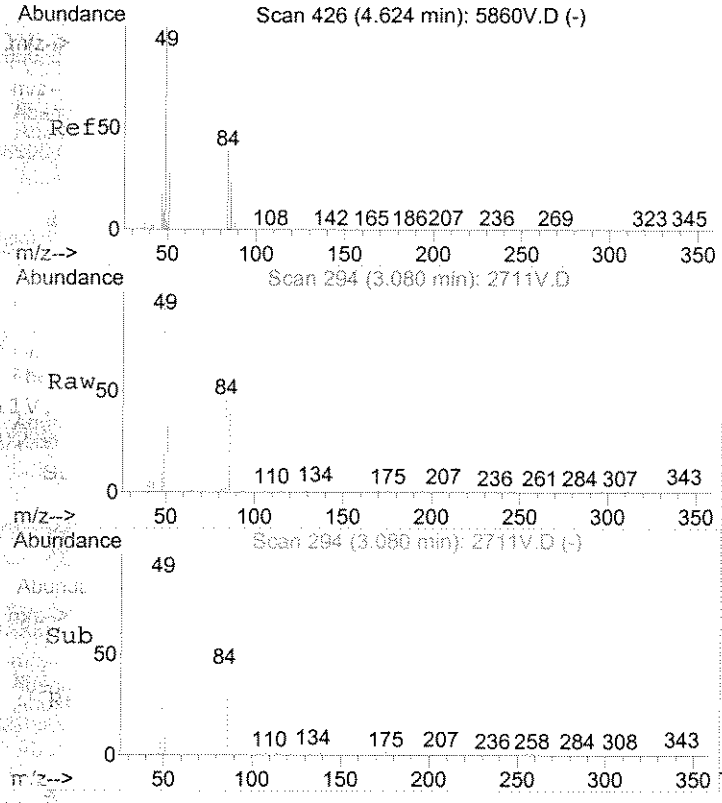




#9
Acetone
Concen: 2.69 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 43 Resp: 34688

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.5 | 23.1 | 34.7 |

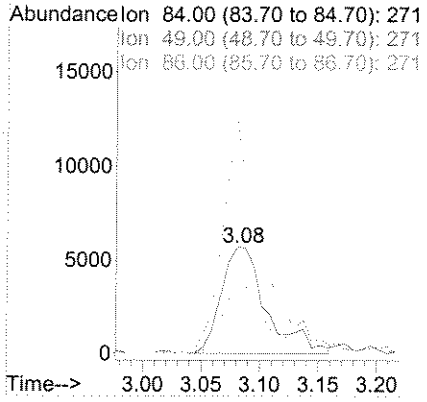


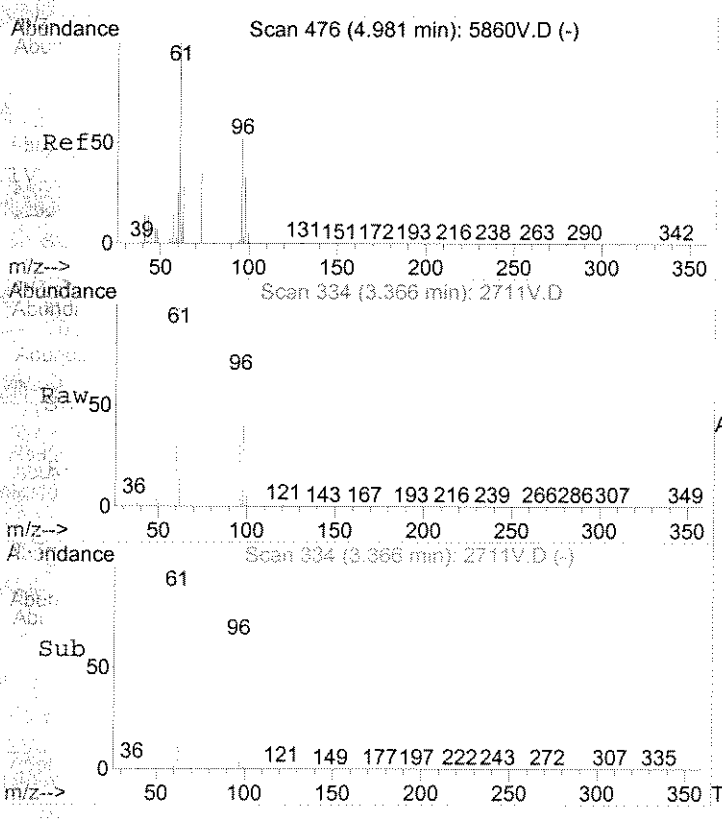



#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. 0.00 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 84 Resp: 15214

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 192.8 | 140.2 | 210.2 |
| 86 | 65.5 | 51.1 | 76.7 |

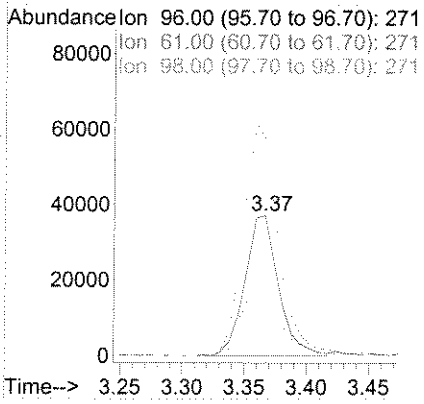


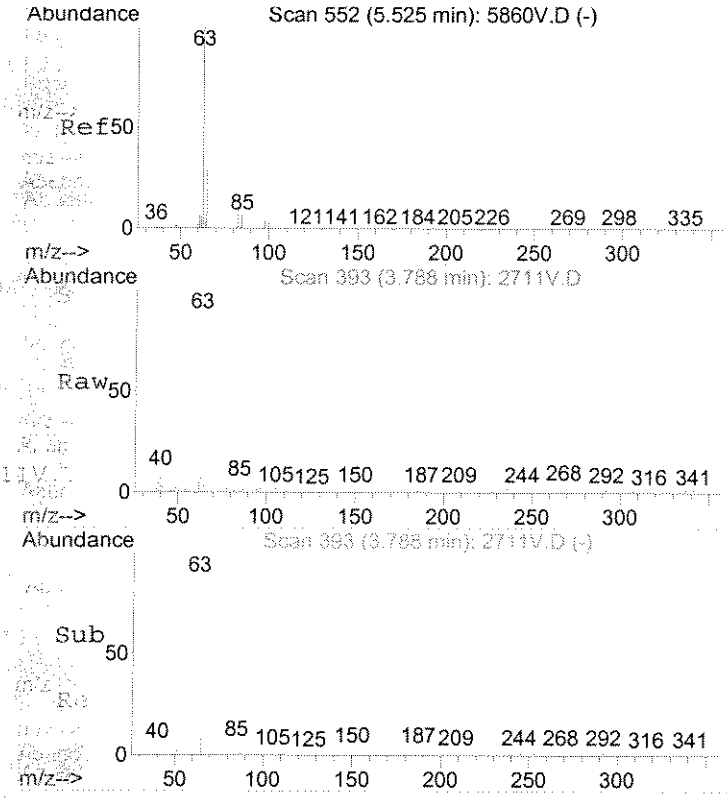




#18
trans-1,2-Dichloroethene
Concen: 3.45 UG/L
RT: 3.37 min Scan# 334
Delta R.T. 0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 96 Resp: 69966

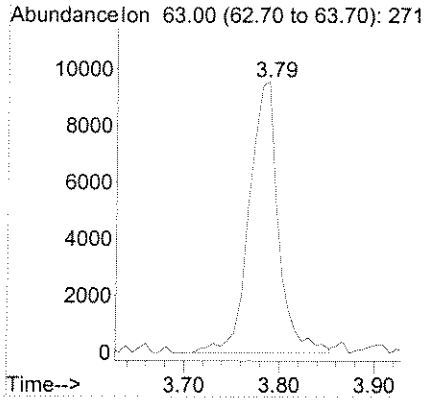
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 173.4 | 114.1 | 171.1# |
| 98 | 64.6 | 50.7 | 76.1 |

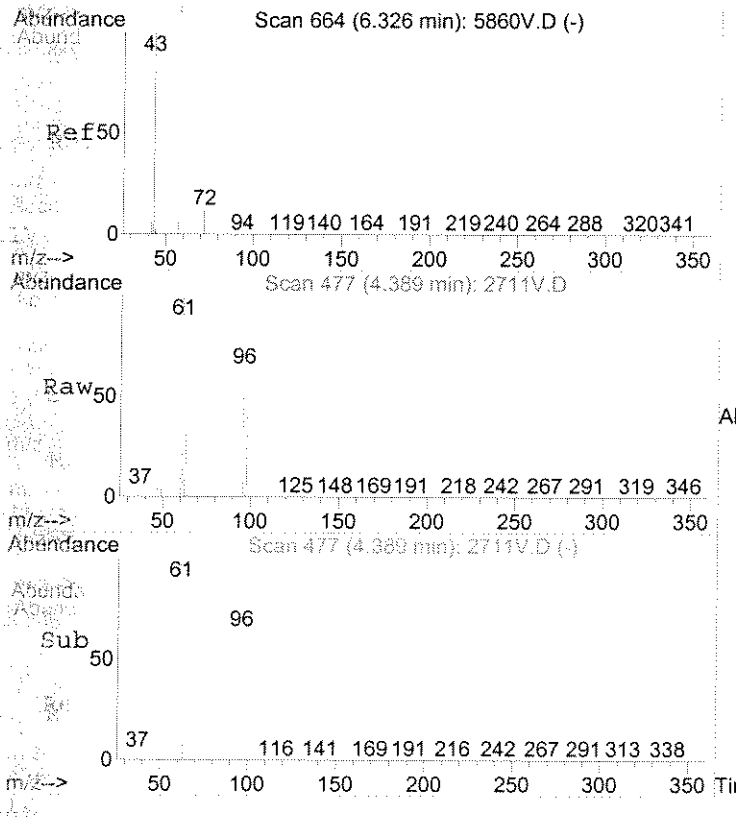





#20
1,1-Dichloroethane
Concen: 0.51 UG/L
RT: 3.79 min Scan# 393
Delta R.T. 0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 63 Resp: 20452

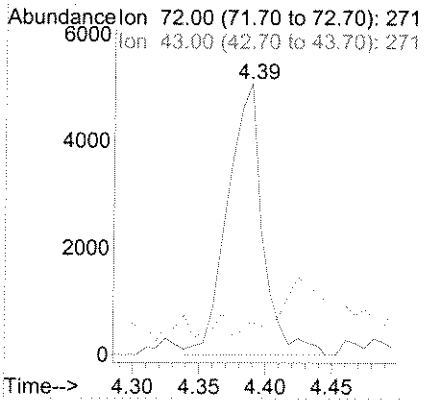


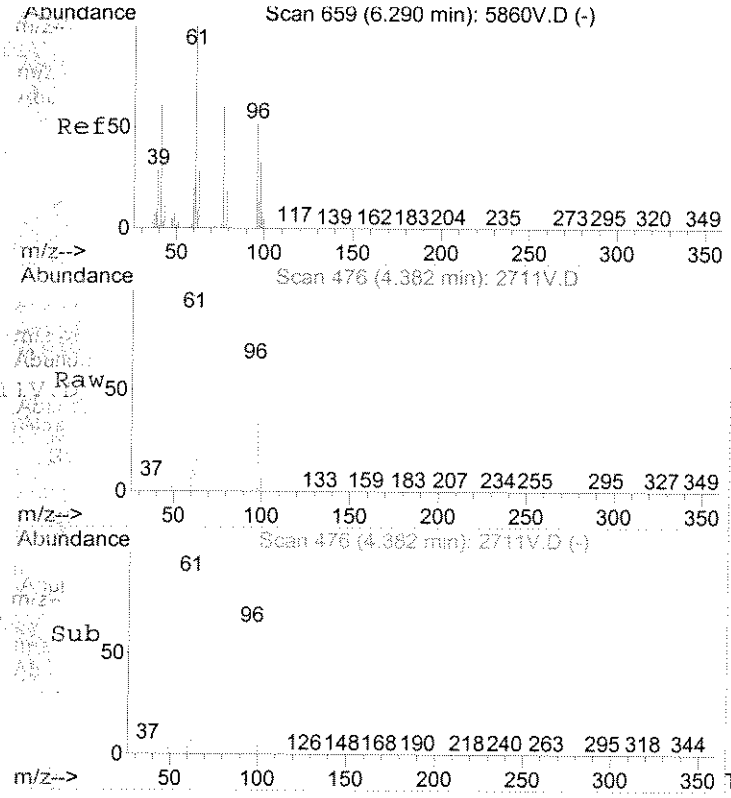




#21
2-Butanone
Concen: 2.53 UG/L
RT: 4.39 min Scan# 477
Delta R.T. -0.03 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 72 Resp: 9405

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |

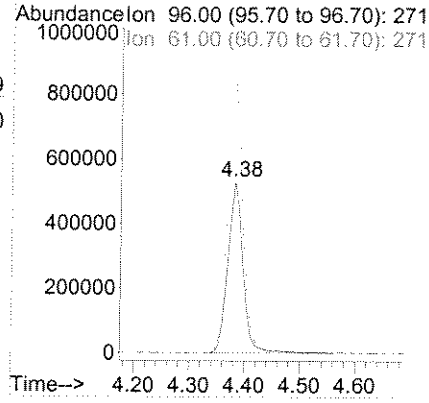


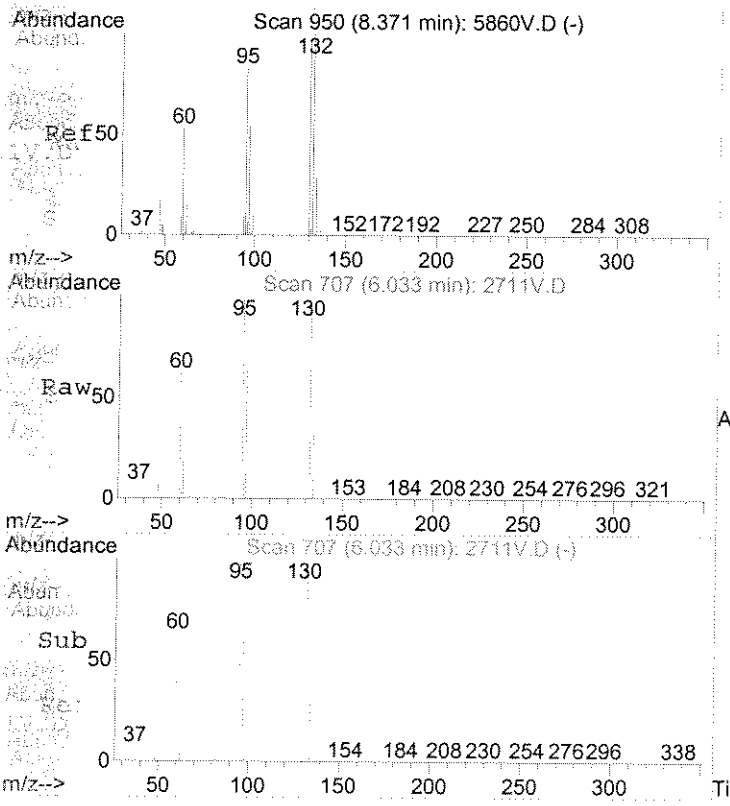



#23
cis-1,2-Dichloroethene
Concen: 47.68 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 96 Resp: 1005796

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 157.6 | 121.8 | 182.6 |

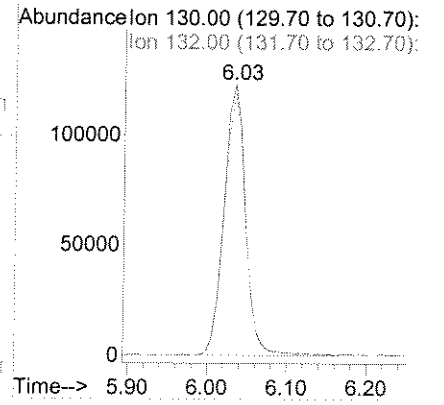


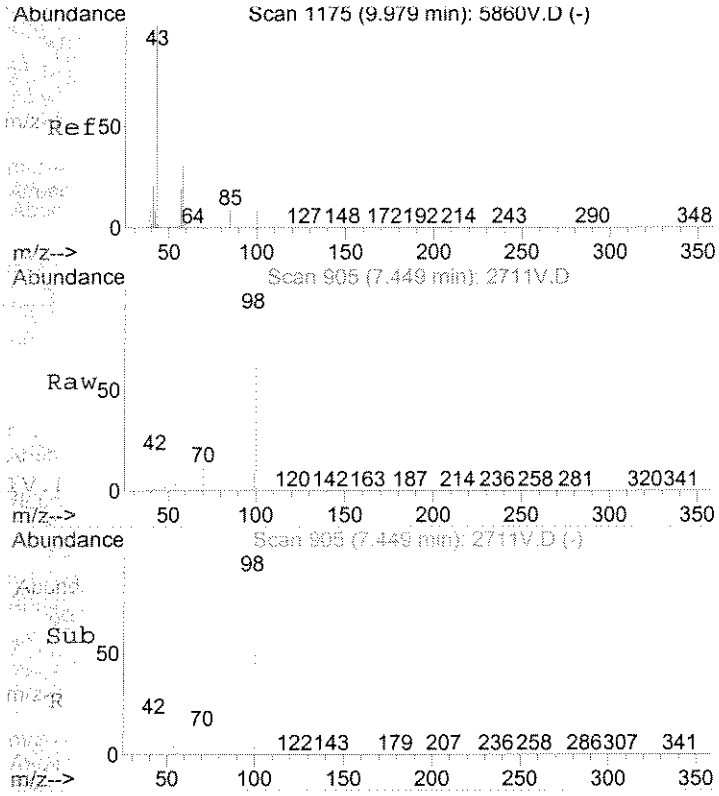




#40
Trichloroethene
Concen: 10.54 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion:130 Resp: 232607

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.3 | 82.0 | 123.0 |

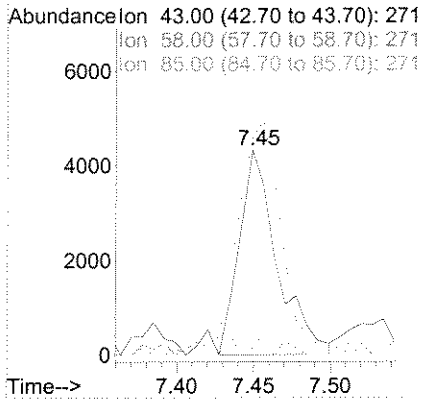


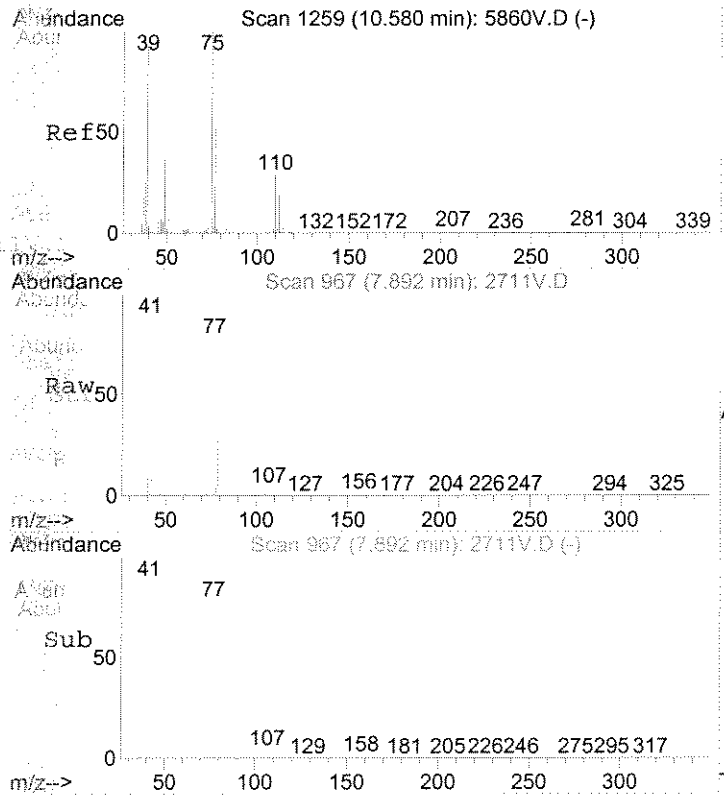



#47
4-Methyl-2-Pentanone
Concen: 0.18 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 43 Resp: 7763

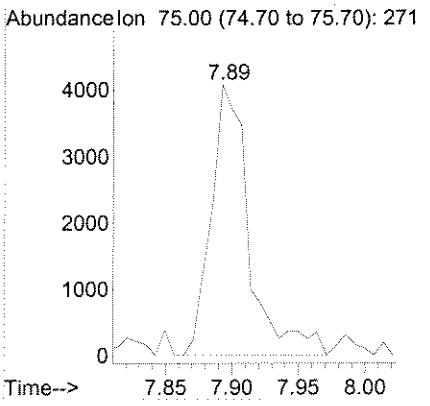
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 125.9 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |




#52
trans-1,3-Dichloropropene
Concen: 0.28 UG/L
RT: 7.89 min Scan# 967
Delta R.T. 0.09 min
Lab File: 2711V.D
Acq: 7 Nov 2009 16:38

Tgt Ion: 75 Resp: 8124



R560098

# Heritage Environmental Services, LLC

A864530

GC/MS VOA

Method SW846-8260B
Sample Description DUP-03
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.1
Analyst 1062 R. SHAMP
File 2712V.D Date/Time 07Nov09 17:03:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 79-01-6 | 750 | TRICHLOROETHENE | 180 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 103 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 94 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 96 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

JB 11/11/09

Data File : C:\HPCHEM\DATA\V110709\2712V.D  Vial: 20
Acq On : 7 Nov 2009 17:03  Operator: REGI
Sample : A864530 1:10 REP1  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 07 17:20:07 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 931102 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 323525 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 209538 | 9.57 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 95.70% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 344421 | 10.28 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.80% | |
| 50) Toluene-d8 | 7.46 | 98 | 898400 | 9.62 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.20% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 291848 | 9.41 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.10% | |
| Target Compounds | | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 33690 | 2.65 | UG/L | 93 |
| 14) Methylene Chloride | 3.08 | 84 | 17240 | Below Cal | | 100 |
| 23) cis-1,2-Dichloroethene | 4.38 | 96 | 46361 | 2.23 | UG/L | 95 |
| 40) Trichloroethene 180 | 6.03 | 130 | 401260 | 18.42 | UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.46 | 43 | 7981 | 0.19 | UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 6694 | 0.23 | UG/L | 100 |

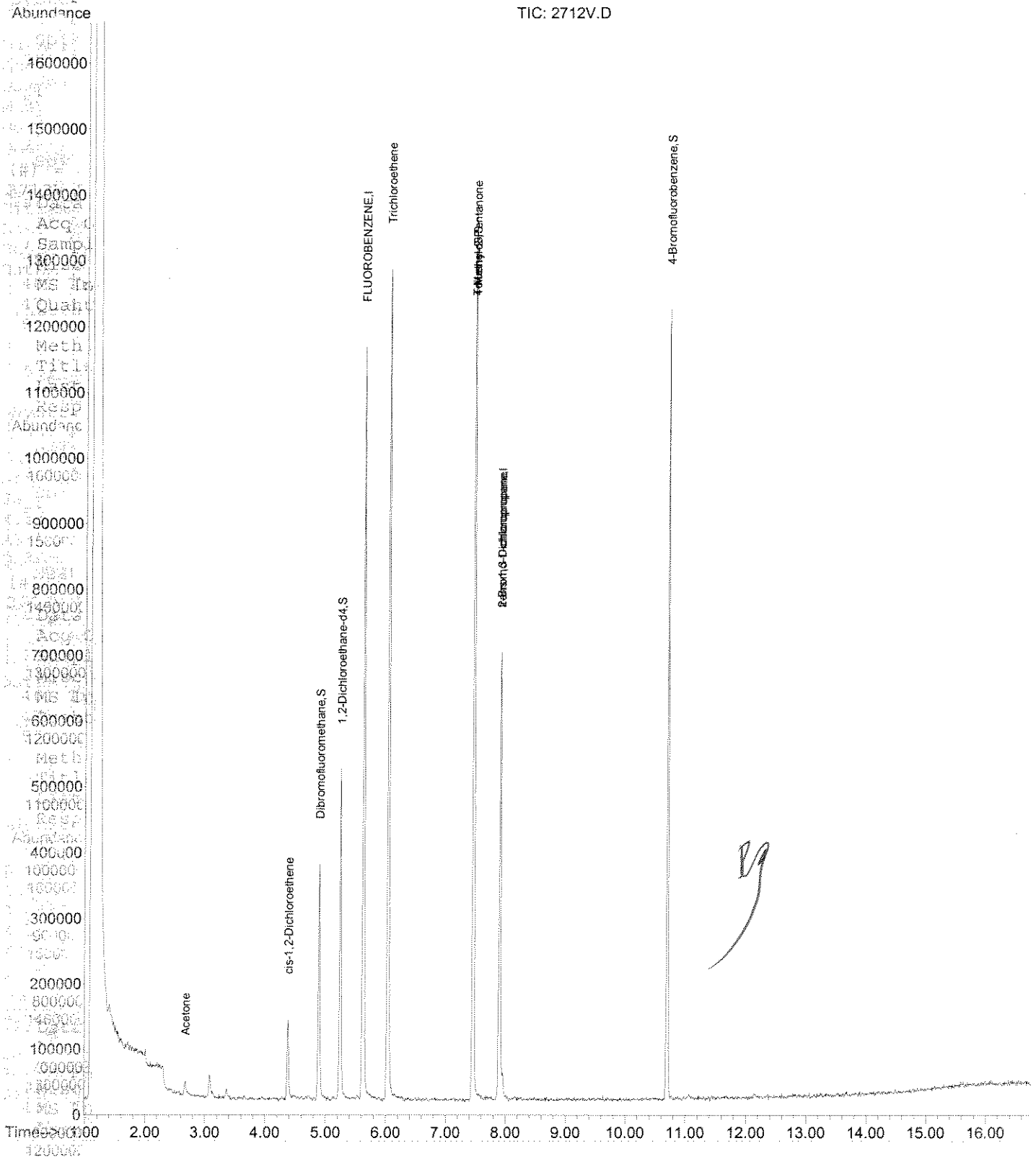
(#) = qualifier out of range (m) = manual integration



59169b

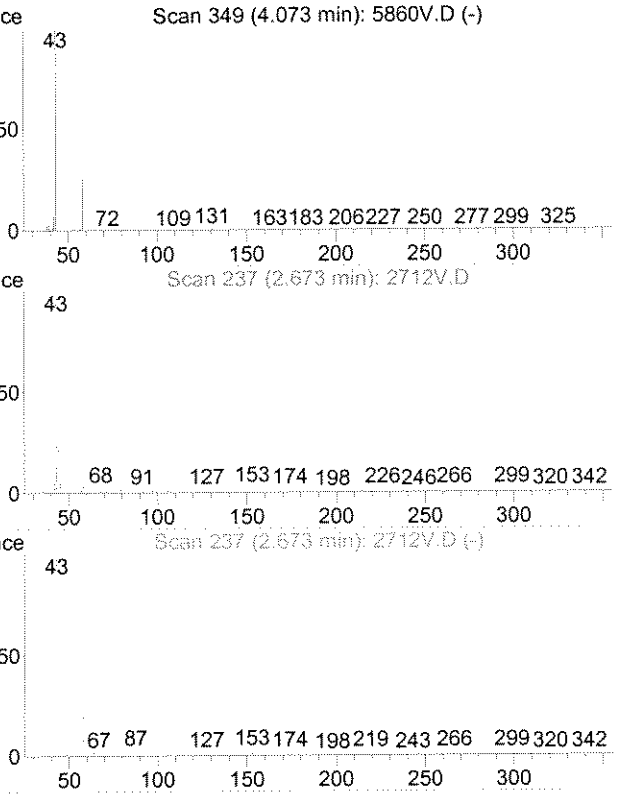
Data File : C:\HPCHEM\DATA\V110709\2712V.D Vial: 20
Acq On : 7 Nov 2009 17:03 Operator: REGI
Sample : A864530 1:10 REP1 Inst : Instrumen
Misc : 11/7/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 17:20 2009 Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





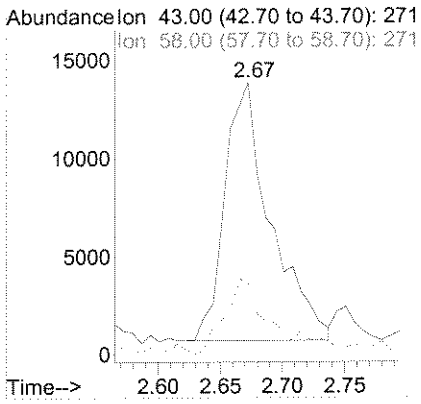

59169b

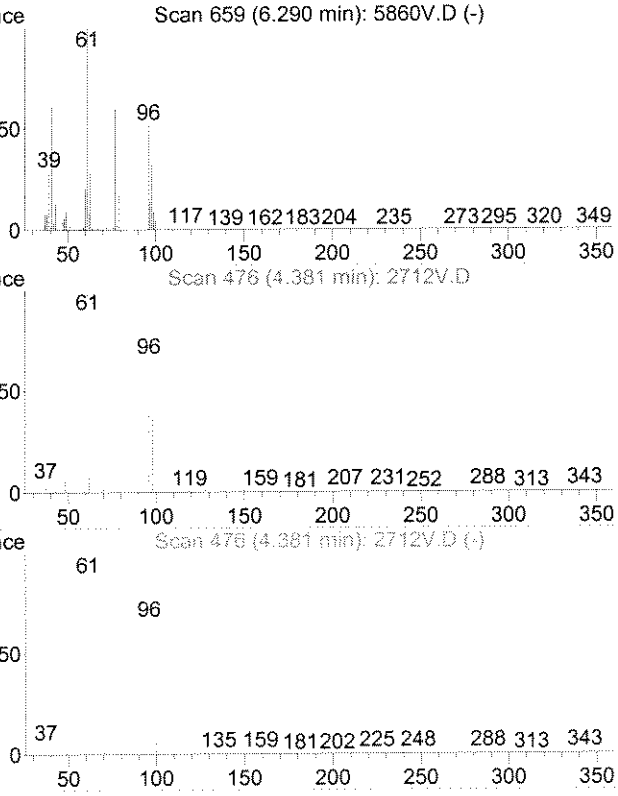



#9
Acetone
Concen: 2.65 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2712V.D
Acq: 7 Nov 2009 17:03

Tgt Ion: 43 Resp: 33690

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.4 | 23.1 | 34.7 |

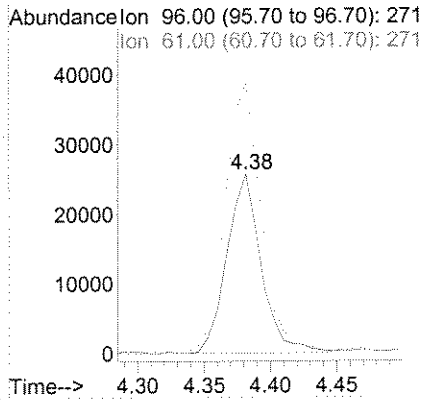



#23
cis-1,2-Dichloroethene
Concen: 2.23 UG/L
RT: 4.38 min Scan# 476
Delta R.T. 0.01 min
Lab File: 2712V.D
Acq: 7 Nov 2009 17:03

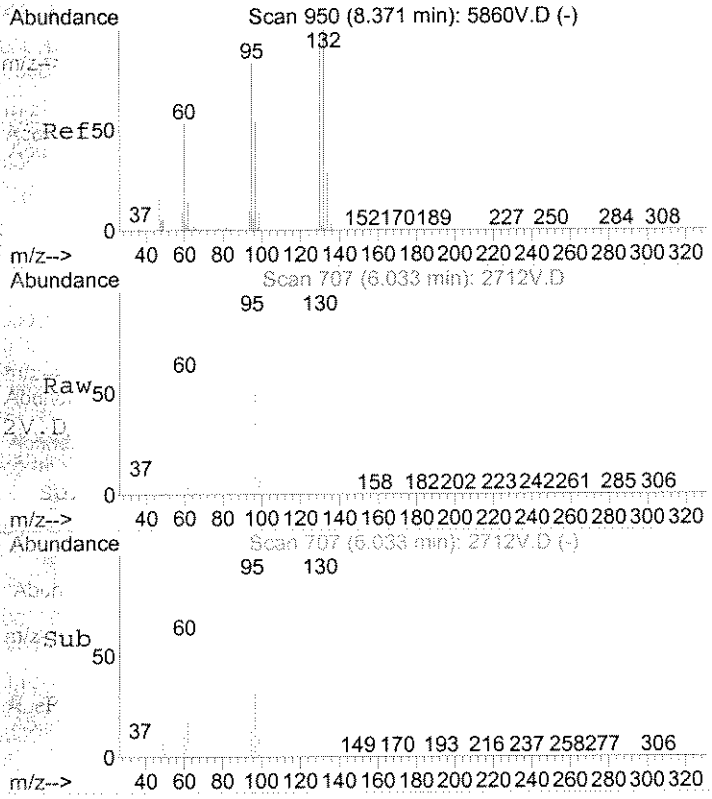
Tgt Ion: 96 Resp: 46361

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 159.0 | 121.8 | 182.6 |





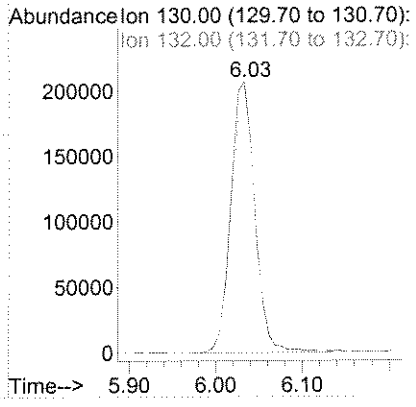

59169b

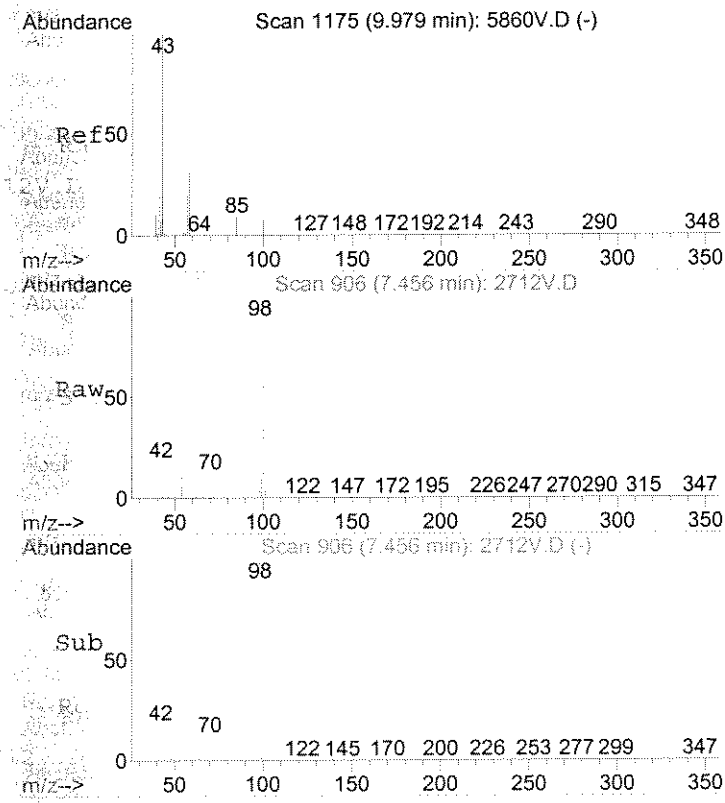



#40
Trichloroethene
Concen: 18.42 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2712V.D
Acq: 7 Nov 2009 17:03

Tgt Ion:130 Resp: 401260

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.8 | 82.0 | 123.0 |

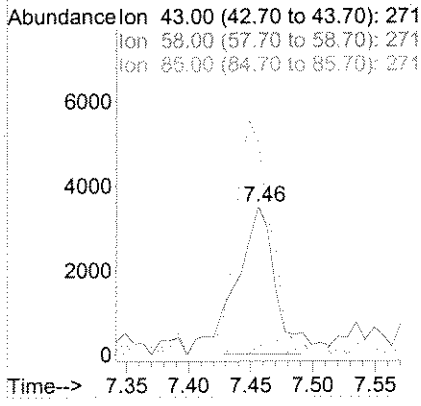



#47
4-Methyl-2-Pentanone
Concen: 0.19 UG/L
RT: 7.46 min Scan# 906
Delta R.T. 0.11 min
Lab File: 2712V.D
Acq: 7 Nov 2009 17:03

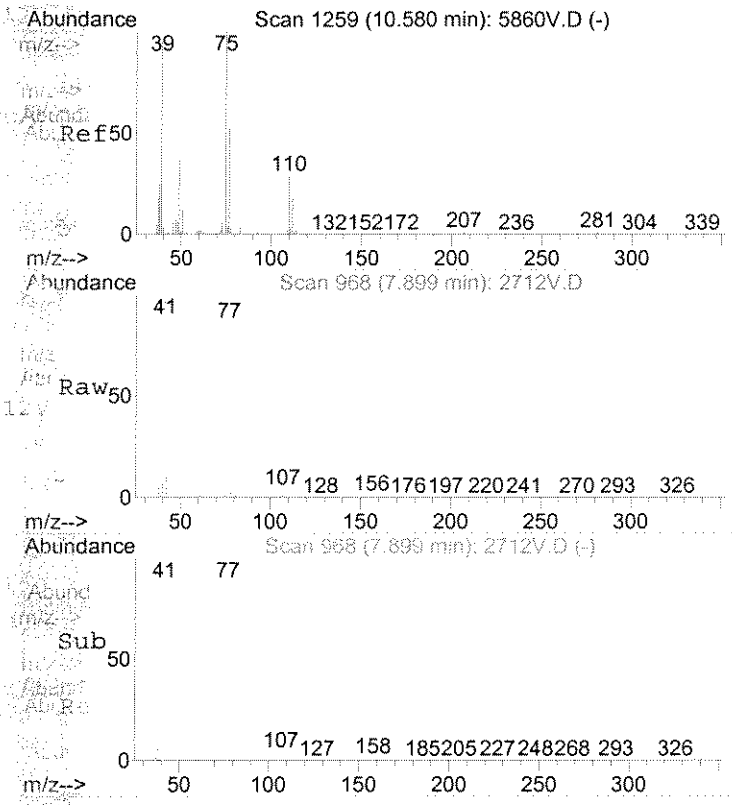
Tgt Ion: 43 Resp: 7981

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 134.3 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |



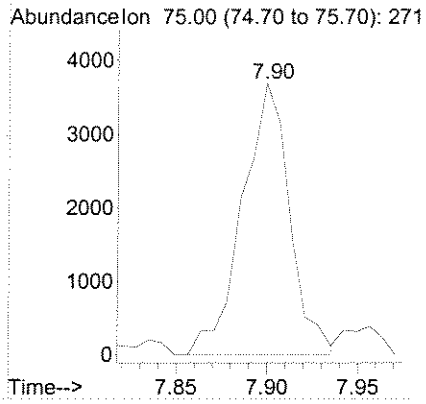



59169b




#52
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2712V.D
Acq: 7 Nov 2009 17:03

Tgt Ion: 75 Resp: 6694






59169b

R560098

# Heritage Environmental Services, LLC

A864534

GC/MS VOA

Method SW846-8260B
Sample Description 152
Submitter KERAMIDA ENVIRONMENTAL
Instrument 346 Channel 1

**Test Code** O510.5.1
Analyst 1062 R. SHAMP
File 2713V.D Date/Time 07Nov09 17:28:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 79-01-6 | 750 | TRICHLOROETHENE | 110 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 103 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 94 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 95 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/11/09

Data File : C:\HPCHEM\DATA\V110709\2713V.D Vial: 21
Acq On : 7 Nov 2009 17:28 Operator: REGI
Sample : A864534 1:10 REP1 Inst : Instrumen
Misc : 11/7/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 07 17:45:27 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 922528 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 309591 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 200353 | 9.24 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 92.40% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 340362 | 10.25 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.50% | |
| 50) Toluene-d8 | 7.46 | 98 | 870772 | 9.41 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.10% | |
| 69) 4-Bromofluorobenzene | 10.70 | 174 | 282860 | 9.53 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.30% | |
| Target Compounds | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 37567 | 2.98 UG/L # | 85 |
| 14) Methylene Chloride | 3.08 | 84 | 12859 | Below Cal | 97 |
| 40) Trichloroethene 110 | 6.03 | 130 | 237550 | 11.01 UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 5474 | 0.13 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 6794 | 0.24 UG/L | 100 |

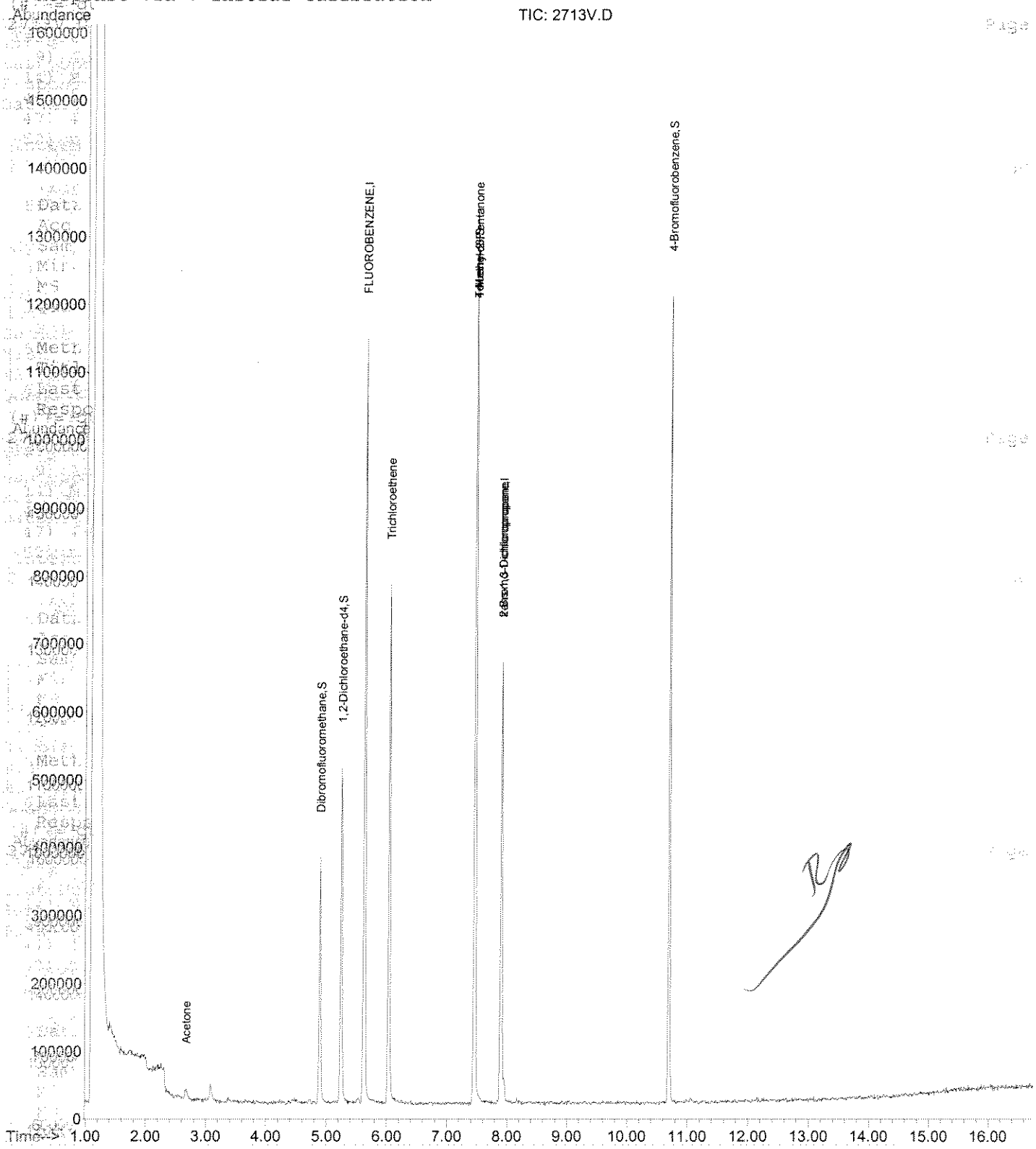
(#) = qualifier out of range (m) = manual integration



59169b

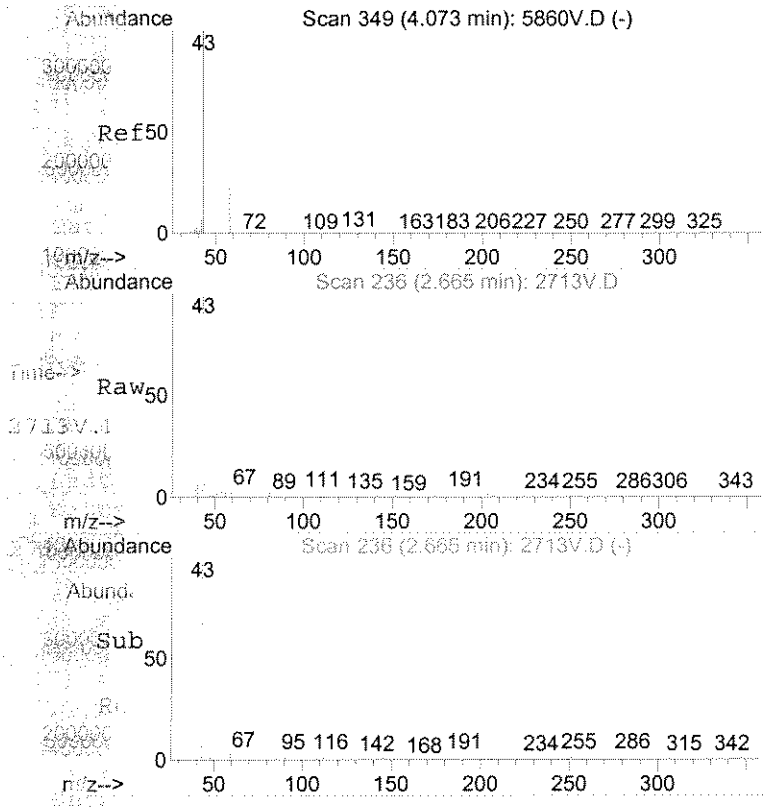
Data File : C:\HPCHEM\DATA\V110709\2713V.D  Vial: 21
Acq On : 7 Nov 2009 17:28  Operator: REGI
Sample : A864534 1:10 REP1  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 17:45 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





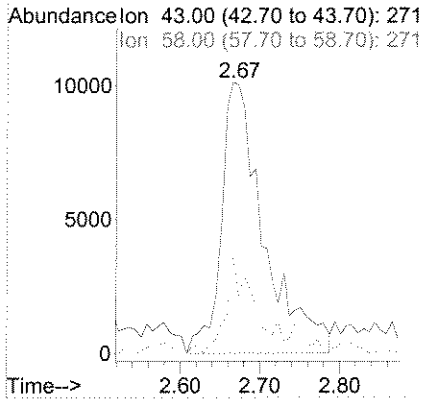

59169b

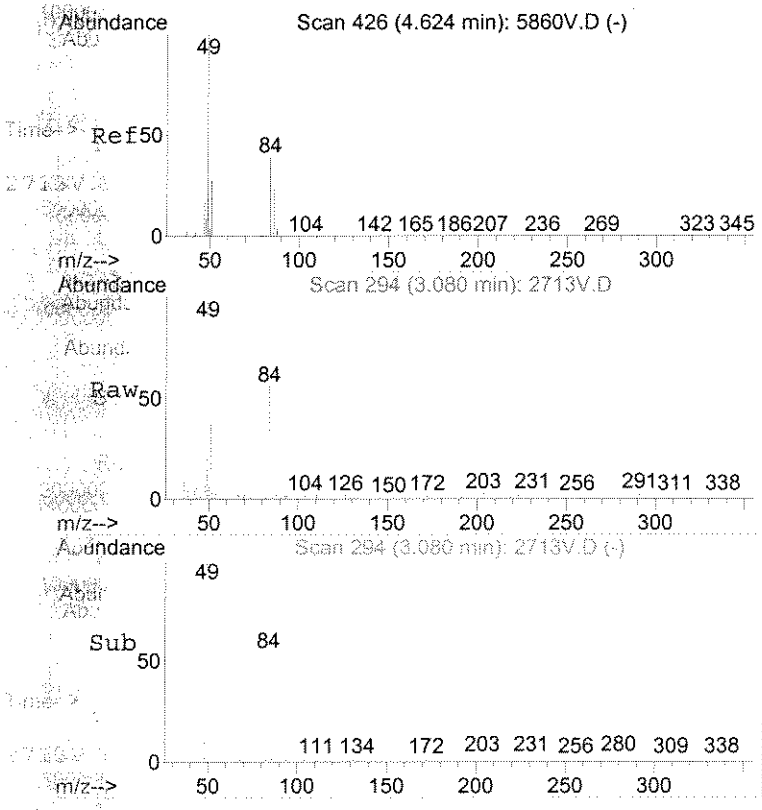



#9
Acetone
Concen: 2.98 UG/L
RT: 2.67 min Scan# 236
Delta R.T. -0.00 min
Lab File: 2713V.D
Acq: 7 Nov 2009 17:28

Tgt Ion: 43 Resp: 37567

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 21.1 | 23.1 | 34.7# |

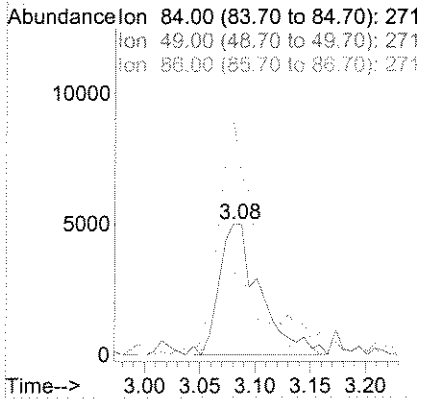


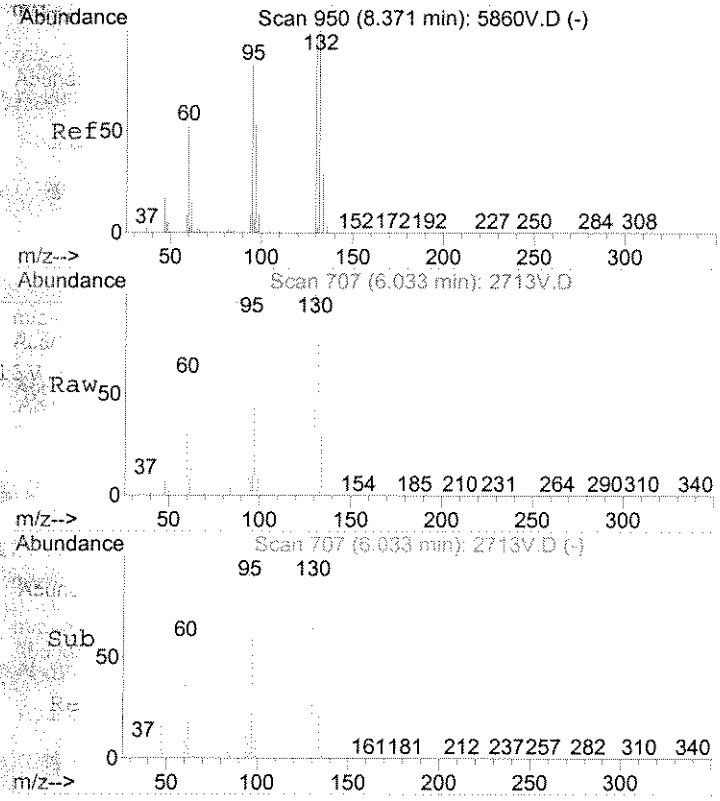




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. 0.00 min
Lab File: 2713V.D
Acq: 7 Nov 2009 17:28

Tgt Ion: 84 Resp: 12859

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 179.6 | 140.2 | 210.2 |
| 86 | 64.5 | 51.1 | 76.7 |

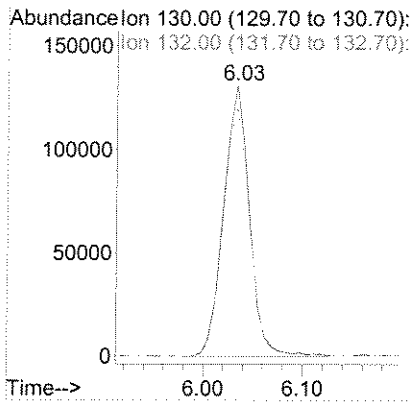


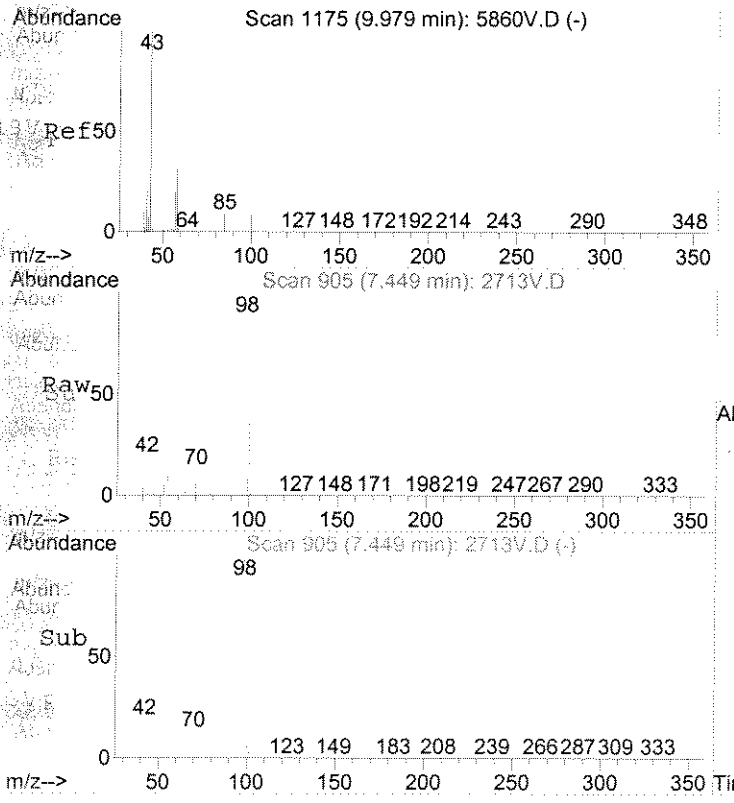



#40
Trichloroethene
Concen: 11.01 UG/L
RT: 6.03 min Scan# 707
Delta R.T. 0.01 min
Lab File: 2713V.D
Acq: 7 Nov 2009 17:28

Tgt Ion:130 Resp: 237550

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.4 | 82.0 | 123.0 |

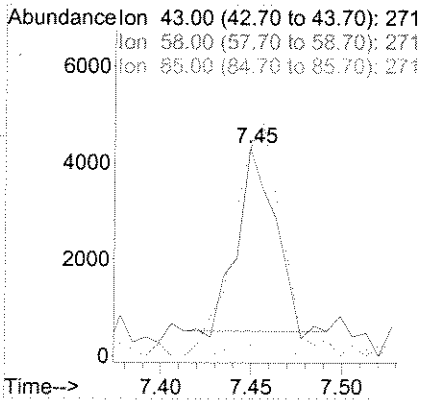


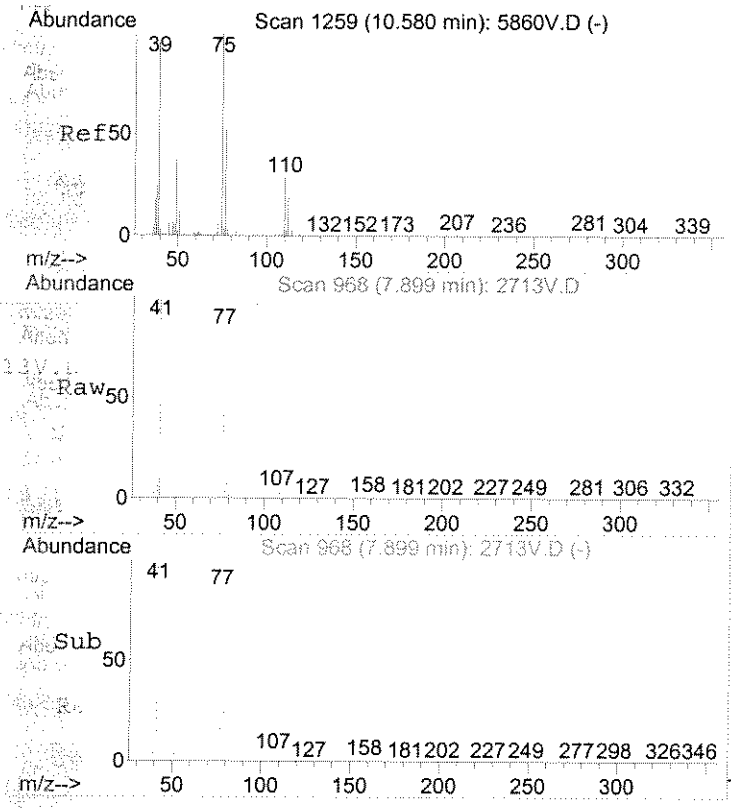




#47
4-Methyl-2-Pentanone
Concen: 0.13 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2713V.D
Acq: 7 Nov 2009 17:28

Tgt Ion: 43 Resp: 5474

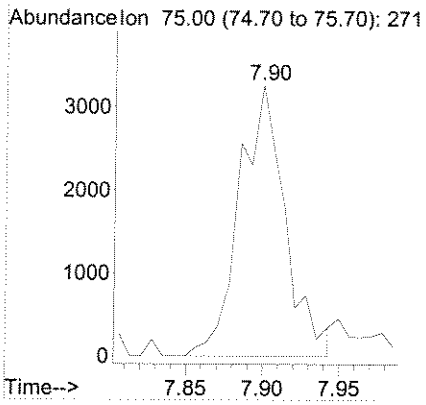
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 164.0 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |






#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2713V.D
Acq: 7 Nov 2009 17:28

Tgt Ion: 75 Resp: 6794






59169b

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Lab File ID: 2689V.D BFB Injection Date: 11/07/09
Instrument ID: GCMS#17 BFB Injection Time: 07:12
GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 33.0 |
| 75 | 30.0 - 60.0% of mass 95 | 54.5 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 8.1 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 65.7 |
| 175 | 5.0 - 9.0% of mass 174 | 4.9 ( 7.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 64.3 ( 98.0)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 7.3)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD010 | VSTD010 | 2690V.D | 11/07/09 | 07:40 |
| 02 | VBLK01 | VBLK | 2691V.D | 11/07/09 | 08:07 |
| 03 | DI MS | DI MS | 2692V.D | 11/07/09 | 08:37 |
| 04 | A864631 | A864631 | 2693V.D | 11/07/09 | 09:10 |
| 05 | A864632 | A864632 | 2694V.D | 11/07/09 | 09:35 |
| 06 | A864633 | A864633 | 2695V.D | 11/07/09 | 10:00 |
| 07 | A864634 | A864634 | 2696V.D | 11/07/09 | 10:25 |
| 08 | A864635 | A864635 | 2697V.D | 11/07/09 | 10:50 |
| 09 | A864635 MS | A864635 MS | 2698V.D | 11/07/09 | 11:15 |
| 10 | A864635 MSD | A864635 MSD | 2699V.D | 11/07/09 | 11:40 |
| 11 | A864636 | A864636 | 2700V.D | 11/07/09 | 12:04 |
| 12 | A864637 | A864637 | 2701V.D | 11/07/09 | 12:29 |
| 13 | A864638 | A864638 | 2702V.D | 11/07/09 | 12:54 |
| 14 | A864551 | A864551 | 2703V.D | 11/07/09 | 13:19 |
| 15 | A864561 | A864561 | 2704V.D | 11/07/09 | 13:44 |
| 16 | A864562 | A864562 | 2705V.D | 11/07/09 | 14:09 |
| 17 | A864570 | A864570 1:5 | 2706V.D | 11/07/09 | 14:34 |
| 18 | A864566 | A864566 1:10 REP1 | 2707V.D | 11/07/09 | 14:59 |
| 19 | A864567 | A864567 1:10 REP1 | 2708V.D | 11/07/09 | 15:23 |
| 20 | A864569 | A864569 1:100 REP | 2709V.D | 11/07/09 | 15:48 |
| 21 | A864529 | A864529 1:10 REP1 | 2710V.D | 11/07/09 | 16:13 |
| 22 | A864528 | A864528 1:10 REP1 | 2711V.D | 11/07/09 | 16:38 |

 FORM V VOA 11/11/09 3/90

59169b

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Lab File ID: 2689V.D BFB Injection Date: 11/07/09
Instrument ID: GCMS#17 BFB Injection Time: 07:12
GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 33.0 |
| 75 | 30.0 - 60.0% of mass 95 | 54.5 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 8.1 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 65.7 |
| 175 | 5.0 - 9.0% of mass 174 | 4.9 ( 7.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 64.3 ( 98.0)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 7.3)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 23 | A864530 | A864530 1:10 REP1 | 2712V.D | 11/07/09 | 17:03 |
| 24 | A864534 | A864534 1:10 REP1 | 2713V.D | 11/07/09 | 17:28 |
| 25 | A864538 | A864538 1:10 REP1 | 2714V.D | 11/07/09 | 17:53 |

UKS 11/11/09



59169b

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 2690V.D Date Analyzed: 11/07/09

Instrument ID: GCMS#17 Time Analyzed: 07:40

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1012730 | 5.62 | 383021 | 7.90 | | |
| | UPPER LIMIT | 2025460 | 6.12 | 766042 | 8.40 | | |
| | LOWER LIMIT | 506365 | 5.12 | 191511 | 7.40 | | |
| | EPA SAMPLE NO. | | | | | | |
| 01 | VBLK01 | 987790 | 5.62 | 341227 | 7.89 | | |
| 02 | DI MS | 998334 | 5.61 | 341228 | 7.89 | | |
| 03 | A864631 | 993873 | 5.62 | 328574 | 7.89 | | |
| 04 | A864632 | 1011680 | 5.62 | 346509 | 7.90 | | |
| 05 | A864633 | 962532 | 5.62 | 330527 | 7.90 | | |
| 06 | A864634 | 966258 | 5.62 | 333258 | 7.90 | | |
| 07 | A864635 | 957883 | 5.62 | 330937 | 7.90 | | |
| 08 | A864635 MS | 971258 | 5.62 | 344457 | 7.90 | | |
| 09 | A864635 MS | 963061 | 5.62 | 355729 | 7.90 | | |
| 10 | A864636 | 950758 | 5.62 | 322643 | 7.90 | | |
| 11 | A864637 | 946295 | 5.62 | 316511 | 7.90 | | |
| 12 | A864638 | 948550 | 5.62 | 333343 | 7.90 | | |
| 13 | A864551 | 920014 | 5.62 | 321911 | 7.90 | | |
| 14 | A864561 | 923900 | 5.62 | 307590 | 7.90 | | |
| 15 | A864562 | 924591 | 5.62 | 300245 | 7.90 | | |
| 16 | A864570 | 927200 | 5.62 | 304621 | 7.90 | | |
| 17 | A864566 | 976617 | 5.62 | 327055 | 7.90 | | |
| 18 | A864567 | 949535 | 5.62 | 326463 | 7.90 | | |
| 19 | A864569 | 966381 | 5.62 | 330976 | 7.90 | | |
| 20 | A864529 | 928342 | 5.62 | 318956 | 7.90 | | |
| 21 | A864528 | 943385 | 5.62 | 315555 | 7.90 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

11-11-09



59169b

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 2690V.D Date Analyzed: 11/07/09

Instrument ID: GCMS#17 Time Analyzed: 07:40

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1012730 | 5.62 | 383021 | 7.90 | | |
| | UPPER LIMIT | 2025460 | 6.12 | 766042 | 8.40 | | |
| | LOWER LIMIT | 506365 | 5.12 | 191511 | 7.40 | | |
| | EPA SAMPLE NO. | | | | | | |
| 22 | A864530 | 931102 921528 | 5.62 | 323525 309591 | 7.90 | | |
| 23 | A864534 | ~~931102~~ 954822 | 5.62 | ~~323525~~ 327813 | 7.90 | | |
| 24 | A864538 | ~~931102~~ | 5.62 | ~~323525~~ | 7.90 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

JK 11/1/09

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: HERITAGE Contract:

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

Date Injected: 07-Nov-09 Instrument: GCMS#17

| | EPA SAMPLE NO. | SMC1 # | SMC2 # | SMC3 # | SMC4 # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VBLK01 | 99 | 105 | 96 | 99 | 0 |
| 02 | DI MS | 98 | 102 | 99 | 101 | 0 |
| 03 | A864631 | 98 | 104 | 97 | 99 | 0 |
| 04 | A864632 | 95 | 102 | 95 | 95 | 0 |
| 05 | A864633 | 98 | 105 | 96 | 98 | 0 |
| 06 | A864634 | 97 | 103 | 95 | 95 | 0 |
| 07 | A864635 | 97 | 105 | 95 | 97 | 0 |
| 08 | A864635 MS | 102 | 104 | 97 | 100 | 0 |
| 09 | A864635 MS | 101 | 106 | 99 | 96 | 0 |
| 10 | A864636 | 98 | 103 | 96 | 102 | 0 |
| 11 | A864637 | 97 | 102 | 96 | 102 | 0 |
| 12 | A864638 | 96 | 103 | 95 | 96 | 0 |
| 13 | A864551 | 98 | 105 | 95 | 96 | 0 |
| 14 | A864561 | 96 | 105 | 97 | 101 | 0 |
| 15 | A864562 | 95 | 104 | 95 | 100 | 0 |
| 16 | A864570 | 97 | 102 | 96 | 103 | 0 |
| 17 | A864566 | 94 | 100 | 95 | 100 | 0 |
| 18 | A864567 | 96 | 104 | 96 | 98 | 0 |
| 19 | A864569 | 93 | 103 | 97 | 97 | 0 |
| 20 | A864529 | 97 | 105 | 96 | 96 | 0 |
| 21 | A864528 | 96 | 103 | 94 | 96 | 0 |
| 22 | A864530 | 96 | 103 | 96 | 94 | 0 |
| 23 | A864534 | 92 | 103 | 94 | 95 | 0 |
| 24 | A864538 | 96 | 105 | 99 | 91 | 0 |

QC LIMITS

| | | | |
|---|---|---|---|
| SMC1 | = | Dibromofluoromethane | (83-139) |
| SMC2 | = | 1,2-Dichloroethane-d4 | (79-137) |
| SMC3 | = | toluene-d8 | (85-123) |
| SMC4 | = | 4-bromofluorobenzene | (76-129) |

# Column to be used to flag recovery values
* Values outside of contract required QC limits
D System Monitoring Compound diluted out

11-11-09

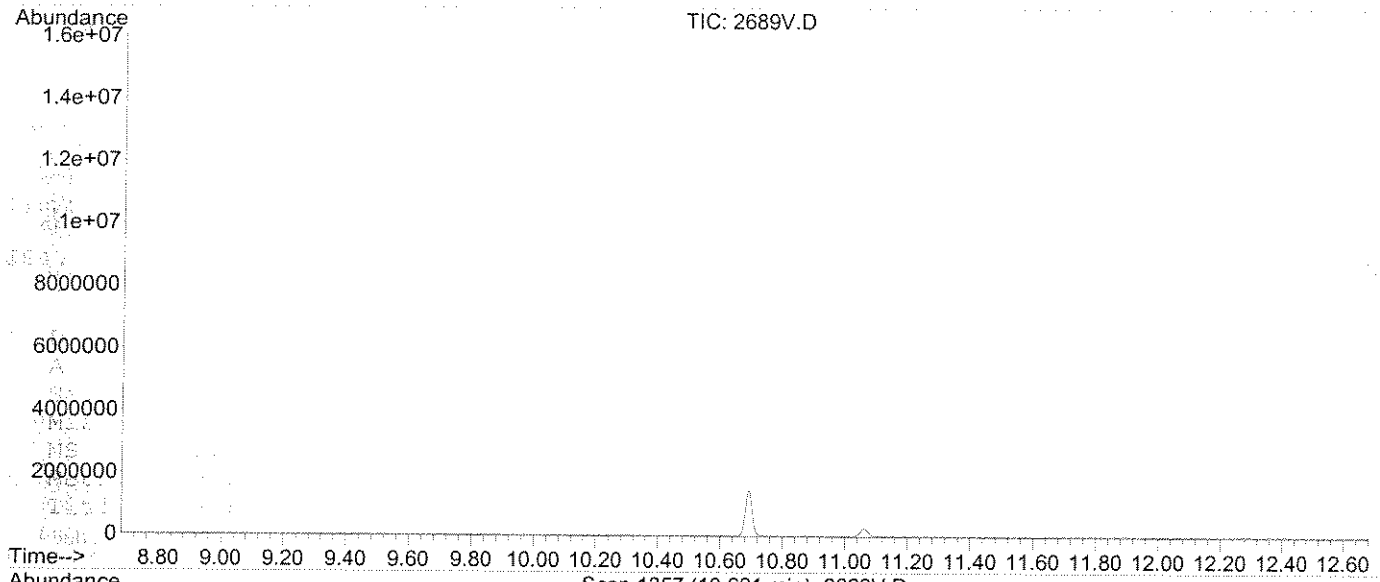


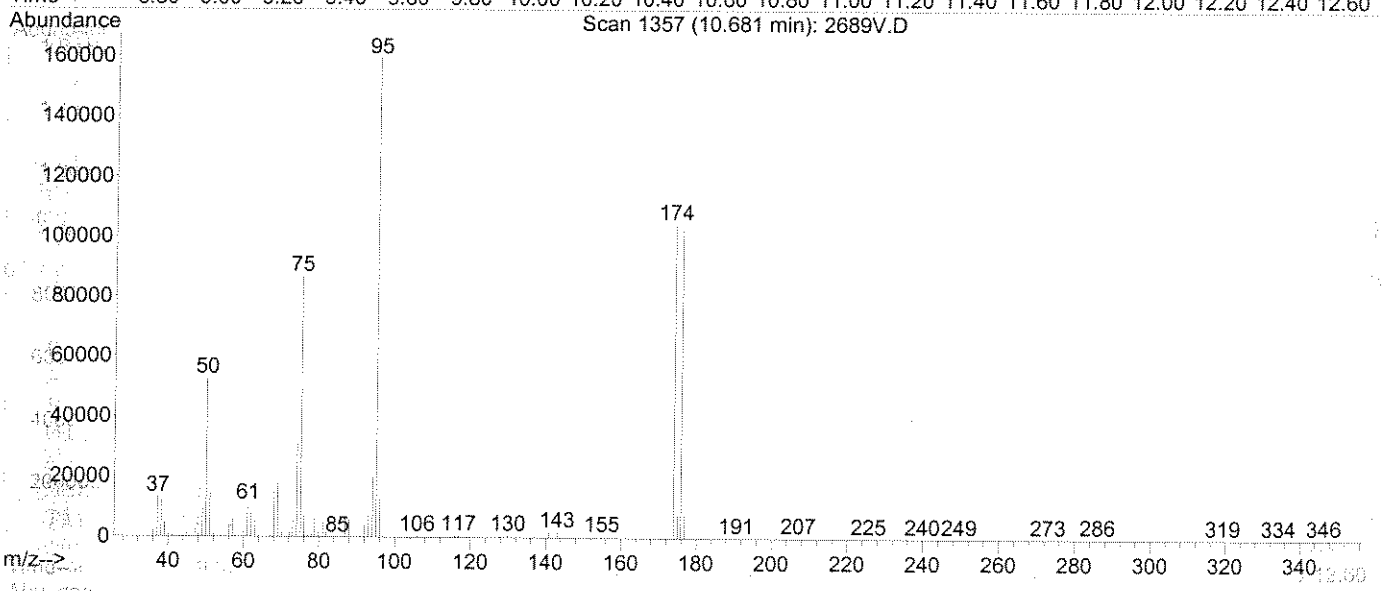
FORM II VOA-1

3/90

Data File : C:\HPCHEM\DATA\V110709\2689V.D
Acq On : 7 Nov 2009 7:12
Sample : BLANK
Misc : 11/7/09
MS Integration Params: rteint2.p
Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES

Vial: 22
Operator: REGINBA
Inst : Instrumen
Multiplr: 1.00




Spectrum Information: Scan 1357

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 33.0 | 52664 | PASS |
| 75 | 95 | 30 | 60 | 54.5 | 86848 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 159488 | PASS |
| 96 | 95 | 5 | 9 | 8.1 | 12896 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 65.7 | 104720 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 7857 | PASS |
| 176 | 174 | 95 | 101 | 98.0 | 102576 | PASS |
| 177 | 176 | 5 | 9 | 7.3 | 7499 | PASS |

KB 11/11/09

2689V.D 8260VOI.M Sat Nov 07 07:26:12 2009

BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.00 | 2824 | 47.10 | 3087 | 57.00 | 5819 | 67.10 | 653 |
| 37.10 | 13180 | 48.00 | 1572 | 57.70 | 302 | 68.00 | 16054 |
| 38.10 | 12623 | 49.00 | 11112 | 57.90 | 307 | 69.00 | 17944 |
| 39.00 | 5168 | 50.00 | 52664 | 58.90 | 288 | 70.10 | 1485 |
| 40.00 | 1238 | 51.00 | 14543 | 60.00 | 2100 | 71.20 | 237 |
| 41.10 | 835 | 52.10 | 1016 | 61.00 | 10853 | 72.10 | 1697 |
| 42.00 | 468 | 53.00 | 255 | 62.00 | 8405 | 73.00 | 7762 |
| 43.00 | 717 | 53.60 | 167 | 63.00 | 6474 | 74.00 | 31144 |
| 44.00 | 8417 | 54.00 | 369 | 63.90 | 862 | 75.00 | 86848 |
| 45.00 | 2045 | 55.00 | 720 | 65.10 | 275 | 76.00 | 6895 |
| 45.90 | 205 | 56.10 | 4486 | 66.20 | 141 | 76.90 | 834 |

Scan 1357 (10.681 min): 2689V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 77.40 | 482 | 85.90 | 135 | 98.20 | 106 | 110.90 | 257 |
| 78.00 | 900 | 86.90 | 6463 | 100.60 | 121 | 112.00 | 388 |
| 78.90 | 6065 | 87.90 | 5809 | 102.60 | 130 | 112.80 | 206 |
| 79.90 | 1535 | 91.10 | 897 | 103.10 | 336 | 114.80 | 513 |
| 80.90 | 5351 | 91.90 | 4325 | 103.90 | 521 | 115.80 | 727 |
| 81.90 | 1604 | 93.00 | 7253 | 105.00 | 531 | 116.90 | 822 |
| 83.00 | 412 | 94.10 | 20096 | 105.90 | 619 | 117.80 | 634 |
| 83.50 | 115 | 95.00 | 159488 | 106.90 | 225 | 119.00 | 699 |
| 83.70 | 119 | 96.00 | 12896 | 107.20 | 246 | 120.30 | 119 |
| 84.60 | 132 | 97.10 | 534 | 109.50 | 317 | 121.30 | 104 |
| 84.80 | 138 | 97.70 | 219 | 110.20 | 122 | 122.20 | 217 |

Scan 1357 (10.681 min): 2689V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 122.40 | 200 | 133.70 | 107 | 147.80 | 485 | 161.70 | 138 |
| 122.70 | 191 | 134.90 | 481 | 148.70 | 282 | 170.30 | 367 |
| 125.50 | 136 | 136.90 | 605 | 152.60 | 144 | 170.80 | 190 |
| 126.70 | 137 | 138.40 | 107 | 153.10 | 267 | 171.60 | 218 |
| 127.80 | 728 | 140.80 | 2077 | 153.60 | 121 | 172.10 | 339 |
| 128.70 | 230 | 141.70 | 118 | 154.90 | 643 | 173.90 | 104720 |
| 129.20 | 178 | 143.00 | 2129 | 155.50 | 144 | 175.00 | 7857 |
| 129.90 | 753 | 143.70 | 466 | 157.00 | 330 | 175.90 | 102576 |
| 131.00 | 272 | 144.30 | 166 | 157.80 | 112 | 176.90 | 7499 |
| 132.00 | 267 | 145.50 | 101 | 158.60 | 146 | 177.90 | 232 |
| 133.10 | 101 | 145.90 | 100 | 158.90 | 221 | 178.30 | 185 |

Scan 1357 (10.681 min): 2689V.D
BLANK

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 181.00 | 110 | 214.60 | 109 | 280.80 | 213 | 334.20 | 118 |
| 189.40 | 161 | 215.50 | 101 | 281.30 | 176 | 346.40 | 255 |
| 190.70 | 265 | 216.90 | 135 | 282.40 | 132 | | |
| 194.50 | 123 | 225.60 | 145 | 282.90 | 204 | | |
| 195.00 | 121 | 225.90 | 118 | 286.00 | 246 | | |
| 202.50 | 109 | 239.90 | 185 | 289.20 | 134 | | |
| 205.10 | 128 | 246.00 | 104 | 290.00 | 182 | | |
| 206.70 | 347 | 246.60 | 179 | 313.70 | 101 | | |
| 207.10 | 398 | 249.60 | 137 | 319.30 | 182 | | |
| 207.70 | 137 | 268.40 | 130 | 324.50 | 155 | | |
| 209.60 | 100 | 273.00 | 134 | 328.10 | 103 | | |

R560098 Heritage Environmental Services, LLC Q2256392

QC Report

QCType CCVD | Duplicate SampleID | DataFile 2690V.D
Date Entered 11Nov09 | Duplicate QCSampleID | Analyst 1062 R. SHAMP
Analysis Date/Time 07Nov0907:40:00 | Method | Matrix 1 | Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0.1791 | | 0.1433 | | | 20 |
| 236 | CHLOROMETHANE | 0.3681 | | 0.3375 | | | 8.3 |
| 768 | VINYL CHLORIDE | 0.3113 | | 0.2933 | | | 5.8 |
| 198 | BROMOMETHANE | 0.1126 | | 0.1165 | | | 3.5 |
| 234 | CHLOROETHANE | 0.1260 | | 0.1429 | | | 13.4 |
| 372 | TRICHLOROFLUOROMETHANE | 0.2605 | | 0.2587 | | | .7 |
| 105 | ACROLEIN | 0.0190 | | 0.0155 | | | 18.4 |
| 8 | 1,1-DICHLOROETHENE | 0.2024 | | 0.2025 | | | 0 |
| 99 | ACETONE (2-PROPANONE) | 0.1365 | | 0.1485 | | | 8.8 |
| 422 | IODOMETHANE | 0.3302 | | 0.3290 | | | .4 |
| 216 | CARBON DISULFIDE | 0.6034 | | 0.5590 | | | 7.4 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0.9666 | | 0.9700 | | | .4 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 10.18 | LIN | | 1.8 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0.2150 | | 0.2118 | | | 1.5 |
| 106 | ACRYLONITRILE | 0.0577 | | 0.0498 | | | 13.7 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0.7059 | | 0.7045 | | | .2 |
| 7 | 1,1-DICHLOROETHANE | 0.4227 | | 0.4200 | | | .6 |
| 767 | VINYL ACETATE | 10 | | 9.87 | LIN | | 1.3 |
| 33 | 2,2-DICHLOROPROPANE | 0.2237 | | 0.2317 | | | 3.6 |
| 246 | CIS-1,2-DICHLOROETHENE | 0.2236 | | 0.2275 | | | 1.7 |
| 52 | 2-BUTANONE | 0.0394 | | 0.0409 | | | 3.8 |
| 348 | ETHYL ACETATE | 0.4326 | | 0.4240 | | | 2 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0.0602 | | 0.0627 | | | 4.2 |
| 194 | BROMOCHLOROMETHANE | 0.1068 | | 0.1085 | | | 1.6 |
| 471 | METHACRYLONITRILE | 0.2273 | | 0.2385 | | | 4.9 |
| 3457 | 2-METHYL-2-PROPENENITRILE | 0.2273 | | 0.2385 | | | 4.9 |
| 709 | TETRAHYDROFURAN | 0.1174 | | 0.1198 | | | 2 |
| 235 | CHLOROFORM | 0.3943 | | 0.3817 | | | 3.2 |
| 2 | 1,1,1-TRICHLOROETHANE | 0.3242 | | 0.3145 | | | 3 |
| 217 | CARBON TETRACHLORIDE | 0.2882 | | 0.2797 | | | 2.9 |
| 10 | 1,1-DICHLOROPROPENE | 0.1079 | | 0.1066 | | | 1.2 |
| 151 | BENZENE | 0.8900 | | 0.8706 | | | 2.2 |
| 21 | 1,2-DICHLOROETHANE | 0.3868 | | 0.3896 | | | .7 |
| 1525 | 2-BUTANOL | 0.0213 | | 0.0214 | | | .5 |
| 750 | TRICHLOROETHENE | 0.2340 | | 0.2261 | | | 3.4 |
| 517 | N-BUTANOL | 0.0175 | | 0.0175 | | | 0 |
| 23 | 1,2-DICHLOROPROPANE | 0.2379 | | 0.2306 | | | 3.1 |
| 296 | DIBROMOMETHANE | 0.1439 | | 0.1400 | | | 2.7 |
| 30 | 1,4-DIOXANE | 0.0090 | | 0.0089 | | | 1.1 |
| 1147 | METHYL METHACRYLATE | 0.3274 | | 0.3132 | | | 4.3 |
| 195 | BROMODICHLOROMETHANE | 0.2750 | | 0.2594 | | | 5.7 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0.1852 | | 0.1763 | | | 4.8 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0.3445 | | 0.3259 | | | 5.4 |
| 91 | 4-METHYL-2-PENTANONE | 0.4505 | | 0.4654 | | | 3.3 |

DT 11/11/09

R560098 Heritage Environmental Services, LLC Q2256392

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | 0.9760 | | 0.9342 | | | 4.3 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0.3070 | | 0.2754 | | | 10.3 |
| 4 | 1,1,2-TRICHLOROETHANE | 0.2046 | | 0.2048 | | | .1 |
| 351 | ETHYL METHACRYLATE | 0.8695 | | 0.7801 | | | 10.3 |
| 703 | TETRACHLOROETHENE | 0.7565 | | 0.6861 | | | 9.3 |
| 27 | 1,3-DICHLOROPROPANE | 1.0228 | | 0.9526 | | | 6.9 |
| 60 | 2-HEXANONE | 0.9796 | | 0.9626 | | | 1.7 |
| 295 | DIBROMOCHLOROMETHANE | 0.5499 | | 0.4787 | | | 12.9 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0.2249 | | 0.2163 | | | 3.8 |
| 231 | CHLOROBENZENE | 1.7833 | | 1.6608 | | | 6.9 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0.5927 | | 0.5402 | | | 8.9 |
| 349 | ETHYL BENZENE | 1.0051 | | 0.9411 | | | 6.4 |
| 492 | M/P-XYLENE | 1.2547 | | 1.1549 | | | 8 |
| 549 | O-XYLENE | 1.2374 | | 1.1424 | | | 7.7 |
| 680 | STYRENE | 2.0649 | | 1.8291 | | | 11.4 |
| 197 | BROMOFORM | 0.4207 | | 0.3439 | | | 18.3 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 2.9603 | | 2.7134 | | | 8.3 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0.9521 | | 0.9077 | | | 4.7 |
| 193 | BROMOBENZENE | 1.3255 | | 1.2387 | | | 6.5 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0.3128 | | 0.3007 | | | 3.9 |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0.4756 | | 0.3970 | | | 16.5 |
| 532 | N-PROPYLBENZENE | 0.4327 | | 0.4067 | | | 6 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.8128 | | 0.7564 | | | 6.9 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 2.9291 | | 2.6971 | | | 7.9 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.8197 | | 0.7577 | | | 7.6 |
| 702 | TERT-BUTYLBENZENE | 1.7636 | | 1.6631 | | | 5.7 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 2.9564 | | 2.8094 | | | 5 |
| 644 | SEC-BUTYLBENZENE | 3.8168 | | 3.6297 | | | 4.9 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.6087 | | 1.4703 | | | 8.6 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.1172 | | 2.9738 | | | 4.6 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.6474 | | 1.5170 | | | 7.9 |
| 519 | N-BUTYLBENZENE | 1.6681 | | 1.6192 | | | 2.9 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.5350 | | 1.4502 | | | 5.5 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2054 | | 0.1924 | | | 6.3 |
| 16 | 1,2,4-TRICHLOROBENZENE | 1.0500 | | 1.1037 | | | 5.1 |
| 398 | HEXACHLOROBUTADIENE | 10 | | 10.49 | LIN | | 4.9 |
| 493 | NAPHTHALENE | 10 | | 11.16 | LIN | | 11.6 |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 11.41 | LIN | | 14.1 |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | 0.2364 | | 0.2295 | | | 2.9 |
| 305 | DIETHYL ETHER | 0.2155 | | 0.2146 | | | .4 |
| 866 | HEXANE | 0.4035 | | 0.3990 | | | 1.1 |
| 301 | DICHLOROETHANE-D4 | 0.3598 | | 0.3709 | | | 3.1 |
| 726 | TOLUENE-D8 | 1.0027 | | 1.0055 | | | .3 |
| 196 | 4-BROMOFLUOROBENZENE | 0.9585 | | 0.9232 | | | 3.7 |
| 3362 | DIBROMOFLUOROMETHANE | 0.2351 | | 0.2364 | | | .6 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration ( ).

**Qualifiers**

LIN Linear Regression Used

Continuing Calibration Report

Data File : E:\V110709\2690V.D
Acq On : 7 Nov 09 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

2256392

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff | |
|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 | |
| 2 | | Dichlorodifluoromethane | 0.17912 | 0.14327 | 20.0# | |
| 3 | P | Chloromethane | 0.36814 | 0.33746 | 8.3 | |
| 4 | C | VINYL CHLORIDE | 0.31131 | 0.29329 | 5.8 | |
| 5 | | Bromomethane | 0.11993 | 0.11649 | 2.9 | |
| 6 | | Chloroethane | 0.13785 | 0.14290 | 3.7 | |
| 7 | | Trichlorofluoromethane | 0.26049 | 0.25875 | 0.7 | |
| 8 | | Acrolein | 0.01903 | 0.01553 | 18.4 | |
| 9 | | Acetone | 0.13646 | 0.14848 | 8.8 | |
| 10 | C | 1,1-DICHLOROETHENE | 0.20240 | 0.20250 | 0.0 | |
| 11 | | Trichlorotrifluoroethane | 0.23642 | 0.22949 | 2.9 | |
| 12 | | Acrylonitrile | 0.05767 | 0.04984 | 13.6 | |
| 13 | | Carbon Disulfide | 0.60340 | 0.55904 | 7.4 | |
| 14 | | Methylene Chloride | 10.000 | 10.178 | | 1.8 |
| 15 | | Allyl Chloride | 0.96664 | 0.97001 | 0.3 | |
| 16 | | Vinyl Acetate | 10.000 | 9.873 | | 1.3 |
| 17 | | MTBE | 0.70592 | 0.70449 | 0.2 | |
| 18 | | trans-1,2-Dichloroethene | 0.21497 | 0.21179 | 1.5 | |
| 19 | | n-Hexane | 0.40352 | 0.39902 | 1.1 | |
| 20 | P | 1,1-Dichloroethane | 0.42276 | 0.41996 | 0.7 | |
| 21 | | 2-Butanone | 0.03942 | 0.04089 | 3.7 | |
| 22 | | Ethyl Acetate | 0.43256 | 0.42403 | 2.0 | |
| 23 | | cis-1,2-Dichloroethene | 0.22363 | 0.22753 | 1.7 | |
| 24 | | Ethyl Cyanide | 0.06020 | 0.06268 | 4.1 | |
| 25 | C | CHLOROFORM | 0.39429 | 0.38167 | 3.2 | |
| 26 | | Methacrylonitrile | 0.22731 | 0.23850 | 4.9 | |
| 27 | | Tetrahydrofuran | 0.11740 | 0.11976 | 2.0 | |
| 28 | | Bromochloromethane | 0.10679 | 0.10845 | 1.6 | |
| 29 | | 2,2-Dichloropropane | 0.22372 | 0.23171 | 3.6 | |
| 30 | | Diethyl ether | 0.21548 | 0.21458 | 0.4 | |
| 31 | | 1,1,1-Trichloroethane | 0.32421 | 0.31447 | 3.0 | |
| 32 | | Iodomethane | 0.33017 | 0.32902 | 0.3 | |
| 33 | S | Dibromofluoromethane | 0.23504 | 0.23644 | 0.6 | |
| 34 | | 1,1-Dichloropropene | 0.10795 | 0.10662 | 1.2 | |
| 35 | S | 1,2-Dichloroethane-d4 | 0.35981 | 0.37092 | 3.1 | |
| 36 | | Carbon Tetrachloride | 0.28819 | 0.27973 | 2.9 | |
| 37 | | 1,2-Dichloroethane | 0.38679 | 0.38963 | 0.7 | |
| 38 | | Isobutanol | 0.02133 | 0.02145 | 0.6 | |
| 39 | | Benzene | 0.88997 | 0.87056 | 2.2 | |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : E:\V110709\2690V.D
Acq On : 7 Nov 09 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 40 | Trichloroethene | 0.23396 | 0.22612 | 3.4 |
| 41 | n-Butanol | 0.01753 | 0.01751 | 0.1 |
| 42 C | 1,2-DICHLOROPROPANE | 0.23795 | 0.23062 | 3.1 |
| 43 | 1,4-Dioxane | 0.00897 | 0.00894 | 0.3 |
| 44 | Methyl Methacrylate | 0.32735 | 0.31323 | 4.3 |
| 45 | Bromodichloromethane | 0.27504 | 0.25942 | 5.7 |
| 46 | Dibromomethane | 0.14388 | 0.13999 | 2.7 |
| 47 | 4-Methyl-2-Pentanone | 0.45055 | 0.46541 | 3.3 |
| 48 | 2-Chloroethylvinylether | 0.18519 | 0.17633 | 4.8 |
| 49 | cis-1,3-Dichloropropene | 0.34453 | 0.32593 | 5.4 |
| 50 S | Toluene-d8 | 1.00266 | 1.00548 | 0.3 |
| 51 C | TOLUENE | 0.97594 | 0.93423 | 4.3 |
| 52 | trans-1,3-Dichloropropene | 0.30701 | 0.27537 | 10.3 |
| 53 | 1,1,2-Trichloroethane | 0.20465 | 0.20483 | 0.1 |
| 54 | 1,2-Dibromoethane | 0.22489 | 0.21628 | 3.8 |
| 55 I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | 2-Hexanone | 0.97955 | 0.96264 | 1.7 |
| 57 | 1,3-Dichloropropane | 1.02279 | 0.95258 | 6.9 |
| 58 | Ethyl Methacrylate | 0.86946 | 0.78005 | 10.3 |
| 59 | Tetrachloroethene | 0.75652 | 0.68613 | 9.3 |
| 60 | Dibromochloromethane | 0.54993 | 0.47870 | 13.0 |
| 61 P | Chlorobenzene | 1.78326 | 1.66081 | 6.9 |
| 62 | 1,1,1,2-Tetrachloroethane | 0.59269 | 0.54019 | 8.9 |
| 63 C | ETHYL BENZENE | 1.00515 | 0.94108 | 6.4 |
| 64 | m,p-Xylene | 1.25465 | 1.15488 | 8.0 |
| 65 | o-Xylene | 1.23741 | 1.14239 | 7.7 |
| 66 | Styrene | 2.06494 | 1.82909 | 11.4 |
| 67 P | Bromoform | 0.42063 | 0.34391 | 18.2 |
| 68 P | 1,1,2,2-Tetrachloroethane | 0.95211 | 0.90774 | 4.7 |
| 69 S | 4-Bromofluorobenzene | 0.95847 | 0.92317 | 3.7 |
| 70 | Isopropylbenzene | 2.96032 | 2.71337 | 8.3 |
| 71 | trans-1,4-Dichloro-2-butene | 0.47555 | 0.39697 | 16.5 |
| 72 | Bromobenzene | 1.32551 | 1.23872 | 6.5 |
| 73 | 1,2,3-Trichloropropane | 0.31278 | 0.30065 | 3.9 |
| 74 | n-Propylbenzene | 0.43265 | 0.40675 | 6.0 |
| 75 | 1,3,5-Trimethylbenzene | 2.92905 | 2.69708 | 7.9 |
| 76 | 2-Chlorotoluene | 0.81281 | 0.75642 | 6.9 |
| 77 | 4-Chlorotoluene | 0.81975 | 0.75766 | 7.6 |
| 78 | t-Butylbenzene | 1.76355 | 1.66306 | 5.7 |

(#) = Out of Range (Advisory for non CCC, SPCC)

Continuing Calibration Report



Data File : E:\V110709\2690V.D
Acq On : 7 Nov 09 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Method : L:\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.95633 | 2.80942 | 5.0 |
| 80 | sec-Butylbenzene | 3.81675 | 3.62967 | 4.9 |

| | | | | | |
|---|---|---|---|---|---|
| 81 | p-Isopropyltoluene | 3.11723 | 2.97378 | 4.6 | |
| 82 | 1,3-Dichlorobenzene | 1.60866 | 1.47030 | 8.6 | |
| 83 | 1,4-Dichlorobenzene | 1.64743 | 1.51704 | 7.9 | |
| 84 | n-Butylbenzene | 1.66813 | 1.61916 | 2.9 | |
| 85 | 1,2-Dichlorobenzene | 1.53494 | 1.45018 | 5.5 | |
| 86 | 1,2-Dibromo-3-chloropropane | 0.20542 | 0.19237 | 6.4 | |
| 87 | 1,2,4-Trichlorobenzene | 1.04996 | 1.10365 | 5.1 | |
| 88 | Naphthalene | 10.000 | 11.156 | | 11.6 |
| 89 | Hexachlorobutadiene | 10.000 | 10.485 | | 4.9 |
| 90 | 1,2,3-Trichlorobenzene | 10.000 | 11.413 | | 14.1 |

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

2646V.D 8260VOI.M Wed Nov 11 11:31:03 2009 RPT01
Average RPD= 5.24

Data File : C:\HPCHEM\DATA\V110709\2690V.D  Vial: 22
Acq On : 7 Nov 2009 7:40  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF | CCRF | %Dev |
|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 |
| 2 | | Dichlorodifluoromethane | 0.17912 | 0.14327 | 20.0# |
| 3 | P | Chloromethane | 0.36814 | 0.33746 | 8.3 |
| 4 | C | VINYL CHLORIDE | 0.31131 | 0.29329 | 5.8 |
| 5 | | Bromomethane | 0.11993 | 0.11649 | 2.9 |
| 6 | | Chloroethane | 0.13785 | 0.14290 | 3.7 |
| 7 | | Trichlorofluoromethane | 0.26049 | 0.25875 | 0.7 |
| 8 | | Acrolein | 0.01903 | 0.01553 | 18.4 |
| 9 | | Acetone | 0.13646 | 0.14848 | 8.8 |
| 10 | C | 1,1-DICHLOROETHENE | 0.20240 | 0.20250 | 0.0 |
| 11 | | Trichlorotrifluoroethane | 0.23642 | 0.22949 | 2.9 |
| 12 | | Acrylonitrile | 0.05767 | 0.04984 | 13.6 |
| 13 | | Carbon Disulfide | 0.60340 | 0.55904 | 7.4 |
| 14 | | Methylene Chloride | 0.25611 | 0.23794 | 7.1 |
| 15 | | Allyl Chloride | 0.96664 | 0.97001 | 0.3 |
| 16 | | Vinyl Acetate | 0.02721 | 0.02350 | 13.6 |
| 17 | | MTBE | 0.70592 | 0.70449 | 0.2 |
| 18 | | trans-1,2-Dichloroethene | 0.21497 | 0.21179 | 1.5 |
| 19 | | n-Hexane | 0.40352 | 0.39902 | 1.1 |
| 20 | P | 1,1-Dichloroethane | 0.42276 | 0.41996 | 0.7 |
| 21 | | 2-Butanone | 0.03942 | 0.04089 | 3.7 |
| 22 | | Ethyl Acetate | 0.43256 | 0.42403 | 2.0 |
| 23 | | cis-1,2-Dichloroethene | 0.22363 | 0.22753 | 1.7 |
| 24 | | Ethyl Cyanide | 0.06020 | 0.06268 | 4.1 |
| 25 | C | CHLOROFORM | 0.39429 | 0.38167 | 3.2 |
| 26 | | Methacrylonitrile | 0.22731 | 0.23850 | 4.9 |
| 27 | | Tetrahydrofuran | 0.11740 | 0.11976 | 2.0 |
| 28 | | Bromochloromethane | 0.10679 | 0.10845 | 1.6 |
| 29 | | 2,2-Dichloropropane | 0.22372 | 0.23171 | 3.6 |
| 30 | | Diethyl ether | 0.21548 | 0.21458 | 0.4 |
| 31 | | 1,1,1-Trichloroethane | 0.32421 | 0.31447 | 3.0 |
| 32 | | Iodomethane | 0.33017 | 0.32902 | 0.3 |
| 33 | S | Dibromofluoromethane | 0.23504 | 0.23644 | 0.6 |
| 34 | | 1,1-Dichloropropene | 0.10795 | 0.10662 | 1.2 |
| 35 | S | 1,2-Dichloroethane-d4 | 0.35981 | 0.37092 | 3.1 |
| 36 | | Carbon Tetrachloride | 0.28819 | 0.27973 | 2.9 |
| 37 | | 1,2-Dichloroethane | 0.38679 | 0.38963 | 0.7 |
| 38 | | Isobutanol | 0.02133 | 0.02145 | 0.6 |
| 39 | | Benzene | 0.88997 | 0.87056 | 2.2 |

(#) = Out of Range (Advisory for non CCC, SPCC)  Page 1 of 3

Continuing Calibration Report

Data File : C:\HPCHEM\DATA\V110709\2690V.D  Vial: 22
Acq On : 7 Nov 2009 7:40  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES

Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | Compound | AvgRF | CCRF | %Dev |
|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.23396 | 0.22612 | 3.4 |
| 41 | | n-Butanol | 0.01753 | 0.01751 | 0.1 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.23795 | 0.23062 | 3.1 |
| 43 | | 1,4-Dioxane | 0.00897 | 0.00894 | 0.3 |
| 44 | | Methyl Methacrylate | 0.32735 | 0.31323 | 4.3 |
| 45 | | Bromodichloromethane | 0.27504 | 0.25942 | 5.7 |
| 46 | | Dibromomethane | 0.14388 | 0.13999 | 2.7 |
| 47 | | 4-Methyl-2-Pentanone | 0.45055 | 0.46541 | 3.3 |
| 48 | | 2-Chloroethylvinylether | 0.18519 | 0.17633 | 4.8 |
| 49 | | cis-1,3-Dichloropropene | 0.34453 | 0.32593 | 5.4 |
| 50 | S | Toluene-d8 | 1.00266 | 1.00548 | 0.3 |
| 51 | C | TOLUENE | 0.97594 | 0.93423 | 4.3 |
| 52 | | trans-1,3-Dichloropropene | 0.30701 | 0.27537 | 10.3 |
| 53 | | 1,1,2-Trichloroethane | 0.20465 | 0.20483 | 0.1 |
| 54 | | 1,2-Dibromoethane | 0.22489 | 0.21628 | 3.8 |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | | 2-Hexanone | 0.97955 | 0.96264 | 1.7 |
| 57 | | 1,3-Dichloropropane | 1.02279 | 0.95258 | 6.9 |
| 58 | | Ethyl Methacrylate | 0.86946 | 0.78005 | 10.3 |
| 59 | | Tetrachloroethene | 0.75652 | 0.68613 | 9.3 |
| 60 | | Dibromochloromethane | 0.54993 | 0.47870 | 13.0 |
| 61 | P | Chlorobenzene | 1.78326 | 1.66081 | 6.9 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.59269 | 0.54019 | 8.9 |
| 63 | C | ETHYL BENZENE | 1.00515 | 0.94108 | 6.4 |
| 64 | | m,p-Xylene | 1.25465 | 1.15488 | 8.0 |
| 65 | | o-Xylene | 1.23741 | 1.14239 | 7.7 |
| 66 | | Styrene | 2.06494 | 1.82909 | 11.4 |
| 67 | P | Bromoform | 0.42063 | 0.34391 | 18.2 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.95211 | 0.90774 | 4.7 |
| 69 | S | 4-Bromofluorobenzene | 0.95847 | 0.92317 | 3.7 |
| 70 | | Isopropylbenzene | 2.96032 | 2.71337 | 8.3 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.47555 | 0.39697 | 16.5 |
| 72 | | Bromobenzene | 1.32551 | 1.23872 | 6.5 |
| 73 | | 1,2,3-Trichloropropane | 0.31278 | 0.30065 | 3.9 |
| 74 | | n-Propylbenzene | 0.43265 | 0.40675 | 6.0 |
| 75 | | 1,3,5-Trimethylbenzene | 2.92905 | 2.69708 | 7.9 |
| 76 | | 2-Chlorotoluene | 0.81281 | 0.75642 | 6.9 |
| 77 | | 4-Chlorotoluene | 0.81975 | 0.75766 | 7.6 |
| 78 | | t-Butylbenzene | 1.76355 | 1.66306 | 5.7 |

(#) = Out of Range (Advisory for non CCC, SPCC) Page 2 of 3

Continuing Calibration Report

Data File : C:\HPCHEM\DATA\V110709\2690V.D Vial: 22
Acq On : 7 Nov 2009 7:40 Operator: REGI
Sample : VSTD010 Inst : Instrumen
Misc : CALIBRATION CHECK 11/7/09 Multiplr: 1.00
MS Integration Params: rteint2.p

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.002 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 2642V.D cal 10 = 2646V.D cal 25 = 2647V.D
cal 50 = 2648V.D cal 5 = 2645V.D

| | | | | |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.95633 | 2.80942 | 5.0 |
| 80 | sec-Butylbenzene | 3.81675 | 3.62967 | 4.9 |
| 81 | p-Isopropyltoluene | 3.11723 | 2.97378 | 4.6 |
| 82 | 1,3-Dichlorobenzene | 1.60866 | 1.47030 | 8.6 |
| 83 | 1,4-Dichlorobenzene | 1.64743 | 1.51704 | 7.9 |
| 84 | n-Butylbenzene | 1.66813 | 1.61916 | 2.9 |
| 85 | 1,2-Dichlorobenzene | 1.53494 | 1.45018 | 5.5 |
| 86 | 1,2-Dibromo-3-chloropropane | 0.20542 | 0.19237 | 6.4 |
| 87 | 1,2,4-Trichlorobenzene | 1.04996 | 1.10365 | 5.1 |
| 88 | Naphthalene | 2.86891 | 3.13638 | 9.3 |
| 89 | Hexachlorobutadiene | 0.61187 | 0.64144 | 4.8 |
| 90 | 1,2,3-Trichlorobenzene | 0.93592 | 1.03496 | 10.6 |

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

2646V.D 8260VOI.M Sat Nov 07 07:55:41 2009
Average RPD= 5.37 Page 3 of 3

Data File : C:\HPCHEM\DATA\V110709\2690V.D  Vial: 22
Acq On : 7 Nov 2009 7:40  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 07 07:55:14 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 1012730 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.90 | 77 | 383021 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 239451 | 10.06 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.60% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 375641 | 10.31 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 103.10% | |
| 50) Toluene-d8 | 7.45 | 98 | 1018278 | 10.03 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.30% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 353593 | 9.63 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.30% | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.29 | 85 | 145092 | 8.00 | UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 341753 | 9.17 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 297023 | 9.42 | UG/L | 98 |
| 5) Bromomethane | 1.79 | 94 | 117970 | 9.71 | UG/L | 100 |
| 6) Chloroethane | 1.89 | 64 | 144723 | 10.37 | UG/L | 94 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 262039m | 9.93 | UG/L | |
| 8) Acrolein | 2.51 | 56 | 157258 | 81.60 | UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 751849 | 54.40 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 205076 | 10.00 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 232411 | 9.71 | UG/L | 87 |
| 12) Acrylonitrile | 3.32 | 53 | 504779 | 86.42 | UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 566157 | 9.26 | UG/L | 100 |
| 14) Methylene Chloride | 3.07 | 84 | 240974 | 10.18 | UG/L | 95 |
| 15) Allyl Chloride | 2.96 | 41 | 982361 | 10.03 | UG/L | 100 |
| 16) Vinyl Acetate | 3.86 | 43 | 23800 | 9.87 | UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 713457 | 9.98 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 214482 | 9.85 | UG/L # | 82 |
| 19) n-Hexane | 3.66 | 57 | 404099 | 9.89 | UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.77 | 63 | 425302 | 9.93 | UG/L | 100 |
| 21) 2-Butanone | 4.40 | 72 | 207035 | 51.86 | UG/L | 86 |
| 22) Ethyl Acetate | 4.50 | 43 | 429432 | 9.80 | UG/L # | 100 |
| 23) cis-1,2-Dichloroethene | 4.37 | 96 | 230431 | 10.17 | UG/L | 85 |
| 24) Ethyl Cyanide | 4.45 | 54 | 634809 | 104.13 | UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 386527 | 9.68 | UG/L | 98 |
| 26) Methacrylonitrile | 4.62 | 41 | 2415396 | 104.92 | UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 1516010 | 127.51 | UG/L | 100 |
| 28) Bromochloromethane | 4.62 | 128 | 109834 | 10.16 | UG/L # | 65 |
| 29) 2,2-Dichloropropane | 4.37 | 77 | 234663 | 10.36 | UG/L # | 87 |
| 30) Diethyl ether | 2.40 | 59 | 217314 | 9.96 | UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 318473 | 9.70 | UG/L | 96 |
| 32) Iodomethane | 2.74 | 142 | 333213 | 9.97 | UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 107980 | 9.88 | UG/L | 100 |
| 36) Carbon Tetrachloride | 5.09 | 117 | 283296 | 9.71 | UG/L | 92 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 394589 | 10.07 | UG/L | 99 |
| 38) Isobutanol | 5.28 | 43 | 1792087 | 829.62 | UG/L # | 97 |
| 39) Benzene | 5.30 | 78 | 881641 | 9.78 | UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 229002 | 9.67 | UG/L | 97 |

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



59169b

Data File : C:\HPCHEM\DATA\V110709\2690V.D
Acq On : 7 Nov 2009 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 07:55:14 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 41) n-Butanol | 6.00 | 56 | 917803 | 516.96 | UG/L | | 96 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 233551 | 9.69 | UG/L | | 100 |
| 43) 1,4-Dioxane | 6.45 | 88 | 181135 | 199.37 | UG/L | | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 317216 | 9.57 | UG/L | # | 63 |
| 45) Bromodichloromethane | 6.60 | 83 | 262722 | 9.43 | UG/L | | 99 |
| 46) Dibromomethane | 6.39 | 93 | 141777 | 9.73 | UG/L | | 92 |
| 47) 4-Methyl-2-Pentanone | 7.33 | 43 | 2356675 | 51.65 | UG/L | | 99 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 178573 | 9.52 | UG/L | | 100 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 330075 | 9.46 | UG/L | | 100 |
| 51) TOLUENE | 7.53 | 91 | 946126 | 9.57 | UG/L | | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 278880 | 8.97 | UG/L | | 100 |
| 53) 1,1,2-Trichloroethane | 8.02 | 97 | 207440 | 10.01 | UG/L | | 100 |
| 54) 1,2-Dibromoethane | 8.63 | 107 | 219034 | 9.62 | UG/L | | 98 |
| 56) 2-Hexanone | 8.37 | 43 | 1843552 | 49.14 | UG/L | | 100 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 364859 | 9.31 | UG/L | | 100 |
| 58) Ethyl Methacrylate | 7.97 | 69 | 298776 | 8.97 | UG/L | | 90 |
| 59) Tetrachloroethene | 8.21 | 166 | 262803 | 9.07 | UG/L | | 99 |
| 60) Dibromochloromethane | 8.51 | 129 | 183351 | 8.70 | UG/L | | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 636127 | 9.31 | UG/L | | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 206906 | 9.11 | UG/L | | 100 |
| 63) ETHYL BENZENE | 9.46 | 106 | 360455 | 9.36 | UG/L | | 78 |
| 64) m,p-Xylene | 9.62 | 106 | 884683 | 18.41 | UG/L | # | 57 |
| 65) o-Xylene | 10.10 | 106 | 437558 | 9.23 | UG/L | | 79 |
| 66) Styrene | 10.12 | 104 | 700578 | 8.86 | UG/L | # | 81 |
| 67) Bromoform | 10.30 | 173 | 131725 | 8.18 | UG/L | | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 347685 | 9.53 | UG/L | | 100 |
| 70) Isopropylbenzene | 10.54 | 105 | 1039278 | 9.17 | UG/L | | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 304093 | 16.69 | UG/L | # | 1 |
| 72) Bromobenzene | 10.84 | 77 | 474454 | 9.35 | UG/L | | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 115157 | 9.61 | UG/L | | 100 |
| 74) n-Propylbenzene | 10.99 | 92 | 155793 | 9.40 | UG/L | | 87 |
| 75) 1,3,5-Trimethylbenzene | 11.18 | 105 | 1033037 | 9.21 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 289723 | 9.31 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 11.17 | 126 | 290198 | 9.24 | UG/L | | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 636985 | 9.43 | UG/L | # | 60 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 1076066 | 9.50 | UG/L | | 100 |
| 80) sec-Butylbenzene | 11.73 | 105 | 1390239 | 9.51 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.87 | 119 | 1139021 | 9.54 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 563156 | 9.14 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 581058 | 9.21 | UG/L | | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 620173 | 9.71 | UG/L | | 97 |
| 85) 1,2-Dichlorobenzene | 12.24 | 146 | 555450 | 9.45 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.95 | 157 | 73681 | 9.36 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 422722 | 10.51 | UG/L | | 100 |
| 88) Naphthalene | 13.86 | 128 | 1201301 | 11.16 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 245685 | 10.49 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 396413 | 11.41 | UG/L | | 100 |

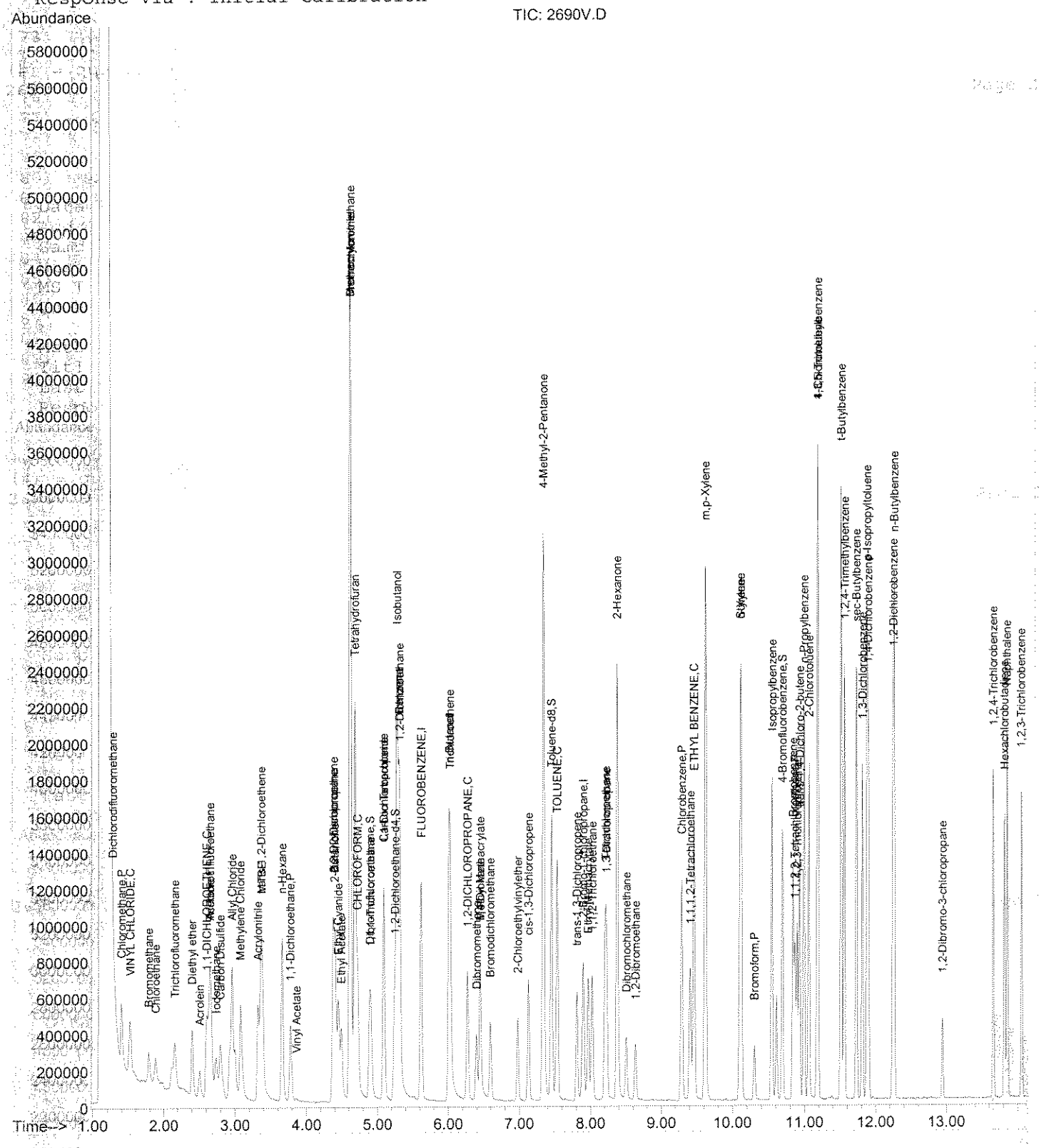
(#) = qualifier out of range (m) = manual integration



591696

Data File : C:\HPCHEM\DATA\V110709\2690V.D  Vial: 22
Acq On : 7 Nov 2009 7:40  Operator: REGI
Sample : VSTD010  Inst : Instrumen
Misc : CALIBRATION CHECK 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 7 7:55 2009  Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration





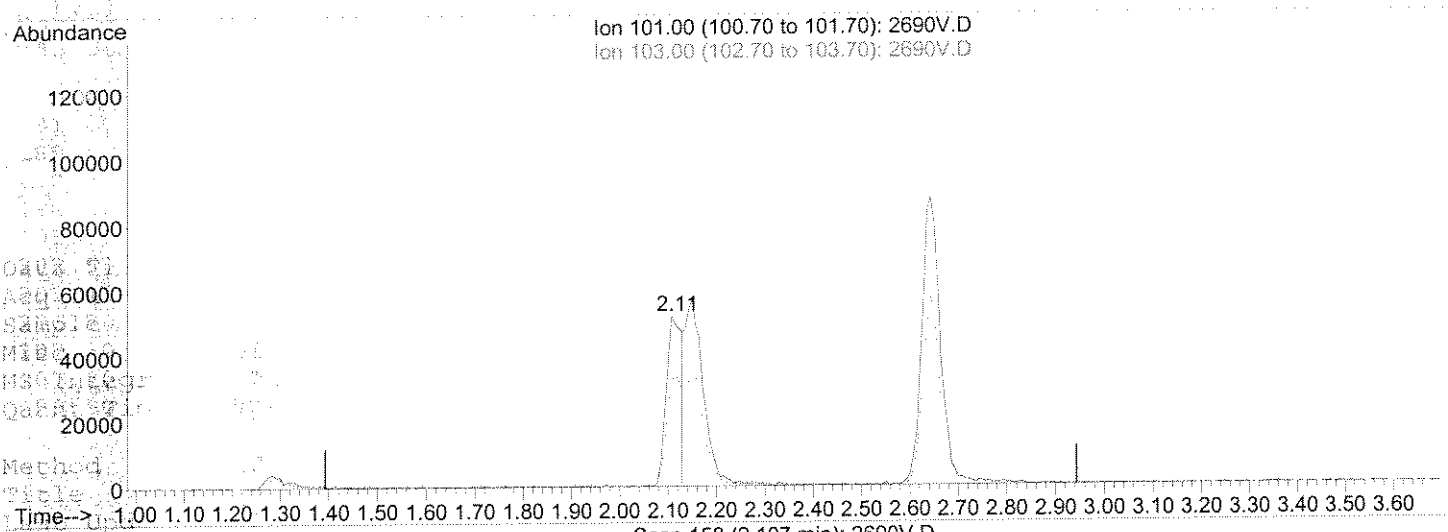

59169b

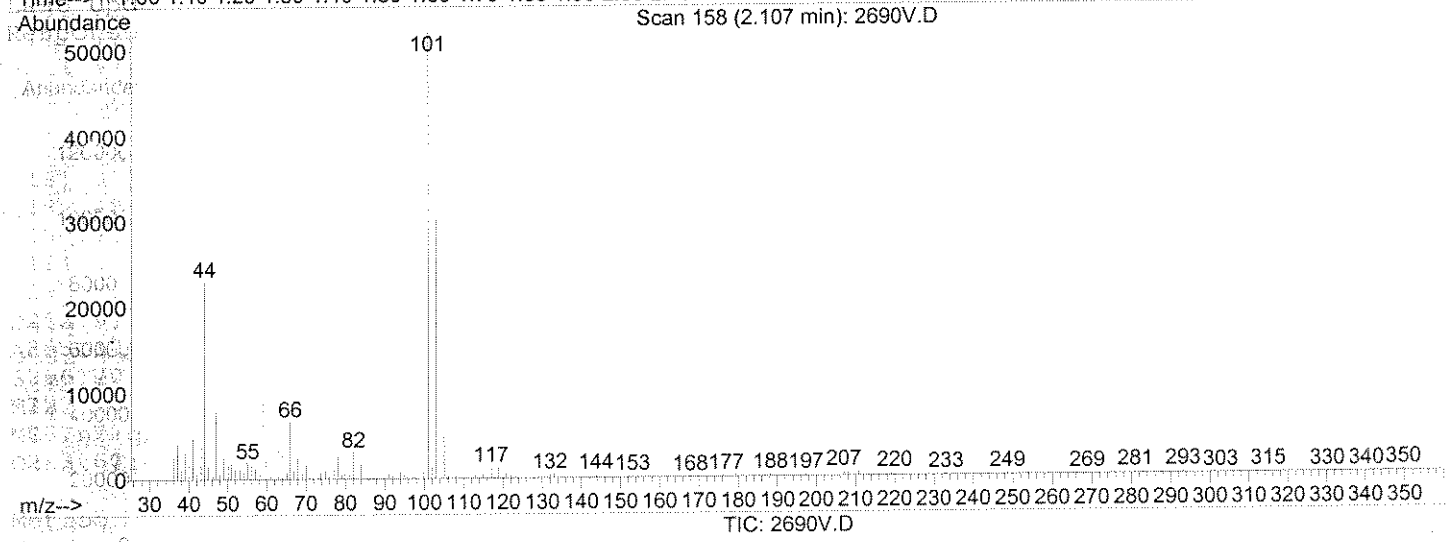
Data File : C:\HPCHEM\DATA\V110709\2690V.D
Acq On : 7 Nov 2009 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 7:55 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.11min 4.31UG/L

response 113602

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 63.59# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

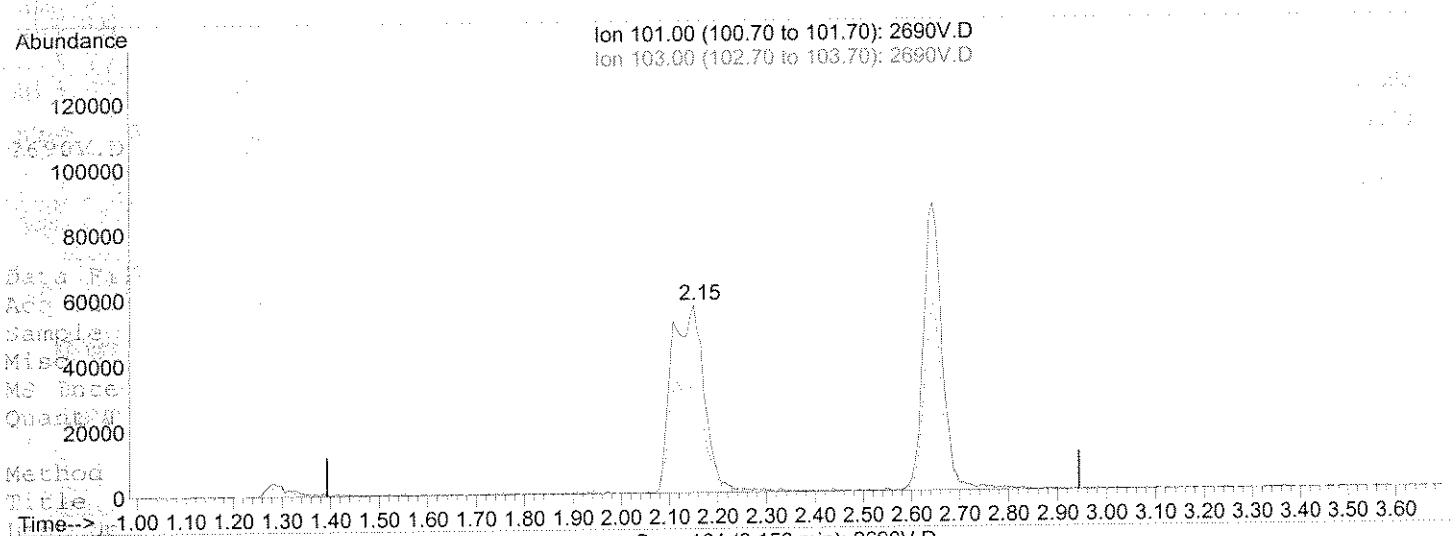
2690V.D 8260VOI.M Sat Nov 07 07:55:30 2009

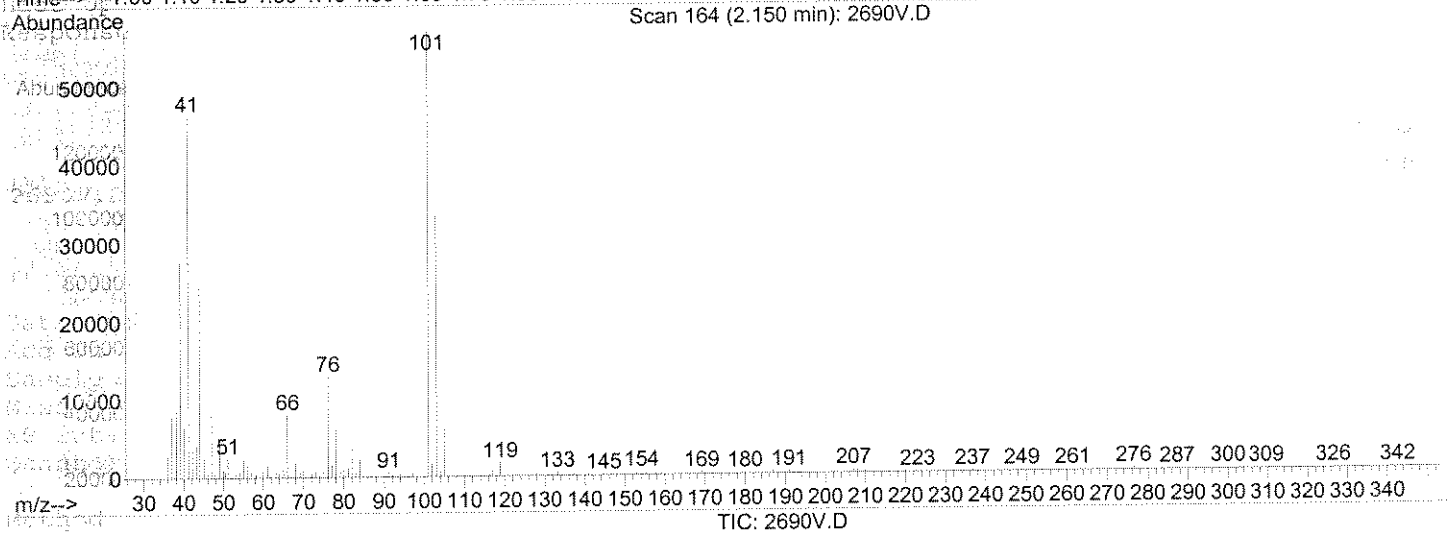
Data File : C:\HPCHEM\DATA\V110709\2690V.D
Acq On : 7 Nov 2009 7:40
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 7:55 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.15min 9.93UG/L m

response 262039

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 27.57# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

2690V.D 8260VOI.M Sat Nov 07 07:55:35 2009

59169b

R560098

# Heritage Environmental Services, LLC

Q2256393

QC Report

QCType BLA01
Date Entered 11Nov09
Analysis Date/Time 07Nov0908:07:00

Duplicate SampleID
Duplicate QCSampleID
Method 0 Matrix 1

DataFile 2691V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | | | 1.0 | BDL | | |
| 236 | CHLOROMETHANE | | | 1.0 | BDL | | |
| 768 | VINYL CHLORIDE | | | 1.0 | BDL | | |
| 198 | BROMOMETHANE | | | 1.0 | BDL | | |
| 234 | CHLOROETHANE | | | 1.0 | BDL | | |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | BDL | | |
| 105 | ACROLEIN | | | 25. | BDL | | |
| 8 | 1,1-DICHLOROETHENE | | | 1.0 | BDL | | |
| 99 | ACETONE (2-PROPANONE) | | | 10. | BDL | | |
| 422 | IODOMETHANE | | | 1.0 | BDL | | |
| 216 | CARBON DISULFIDE | | | 1.0 | BDL | | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | | | 1.0 | BDL | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | 1.0 | BDL | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 106 | ACRYLONITRILE | | | 5.0 | BDL | | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | BDL | | |
| 7 | 1,1-DICHLOROETHANE | | | 1.0 | BDL | | |
| 767 | VINYL ACETATE | | | 1.0 | BDL | | |
| 33 | 2,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 52 | 2-BUTANONE | | | 5.0 | BDL | | |
| 348 | ETHYL ACETATE | | | 1.0 | BDL | | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | | | 10. | BDL | | |
| 194 | BROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 471 | METHACRYLONITRILE | | | 10. | BDL | | |
| 3457 | 2-METHYL-2-PROPENENITRILE | | | 10. | BDL | | |
| 709 | TETRAHYDROFURAN | | | 20. | BDL | | |
| 235 | CHLOROFORM | | | 1.0 | BDL | | |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 217 | CARBON TETRACHLORIDE | | | 1.0 | BDL | | |
| 10 | 1,1-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 151 | BENZENE | | | 1.0 | BDL | | |
| 21 | 1,2-DICHLOROETHANE | | | 1.0 | BDL | | |
| 1525 | 2-BUTANOL | | | 100 | BDL | | |
| 750 | TRICHLOROETHENE | | | 1.0 | BDL | | |
| 517 | N-BUTANOL | | | 100 | BDL | | |
| 23 | 1,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 296 | DIBROMOMETHANE | | | 1.0 | BDL | | |
| 30 | 1,4-DIOXANE | | | 100 | BDL | | |
| 1147 | METHYL METHACRYLATE | | | 1.0 | BDL | | |
| 195 | BROMODICHLOROMETHANE | | | 1.0 | BDL | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | 1.0 | BDL | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 91 | 4-METHYL-2-PENTANONE | | | 5.0 | BDL | | |

RT 11/11/09

R560098 Heritage Environmental Services, LLC Q2256393

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | | | 1.0 | BDL | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 4 | 1,1,2-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 351 | ETHYL METHACRYLATE | | | 1.0 | BDL | | |
| 703 | TETRACHLOROETHENE | | | 1.0 | BDL | | |
| 27 | 1,3-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 60 | 2-HEXANONE | | | 5.0 | BDL | | |
| 295 | DIBROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | 1.0 | BDL | | |
| 231 | CHLOROBENZENE | | | 1.0 | BDL | | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 349 | ETHYL BENZENE | | | 1.0 | BDL | | |
| 492 | M/P-XYLENE | | | 2.0 | BDL | | |
| 803 | XYLENES (O/M/P-XYLENE) | | | 2.0 | BDL | | |
| 549 | O-XYLENE | | | 1.0 | BDL | | |
| 680 | STYRENE | | | 1.0 | BDL | | |
| 197 | BROMOFORM | | | 1.0 | BDL | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | 1.0 | BDL | | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 193 | BROMOBENZENE | | | 1.0 | BDL | | |
| 14 | 1,2,3-TRICHLOROPROPANE | | | 1.0 | BDL | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | 2.0 | BDL | | |
| 532 | N-PROPYLBENZENE | | | 1.0 | BDL | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 702 | TERT-BUTYLBENZENE | | | 1.0 | BDL | | |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 644 | SEC-BUTYLBENZENE | | | 1.0 | BDL | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | 1.0 | BDL | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 519 | N-BUTYLBENZENE | | | 1.0 | BDL | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | 1.0 | BDL | | |
| 16 | 1,2,4-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 398 | HEXACHLOROBUTADIENE | | | 1.0 | BDL | | |
| 493 | NAPHTHALENE | | | 1.0 | BDL | | |
| 13 | 1,2,3-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | | | 1.0 | BDL | | |
| 305 | DIETHYL ETHER | | | 1.0 | BDL | | |
| 866 | HEXANE | | | 1.0 | BDL | | |
| 301 | DICHLOROETHANE-D4 | | | | | 105 | |
| 726 | TOLUENE-D8 | | | | | 96 | |
| 196 | 4-BROMOFLUOROBENZENE | | | | | 99 | |
| 3362 | DIBROMOFLUOROMETHANE | | | | | 99 | |

**Qualifiers**

R560098

Heritage Environmental Services, LLC

QC Report

Q2256393

BDL Below Detection Limit

Data File : C:\HPCHEM\DATA\V110709\2691V.D
Acq On : 7 Nov 2009 8:07
Sample : VBLK
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 07 08:22:27 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

Q 2254393

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.62 | 96 | 987790 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 341227 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.89 | 113 | 229571 | 9.89 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.90% | |
| 35) 1,2-Dichloroethane-d4 | 5.24 | 65 | 372742 | 10.49 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 104.90% | |
| 50) Toluene-d8 | 7.45 | 98 | 954917 | 9.64 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.40% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 322445 | 9.86 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.60% | |
| Target Compounds | | | | | Qvalue |
| 9) Acetone | 2.67 | 43 | 8809 | 0.65 UG/L # | 46 |
| 14) Methylene Chloride | 3.08 | 84 | 12200 | Below Cal | 91 |
| 47) 4-Methyl-2-Pentanone | 7.45 | 43 | 7744 | 0.17 UG/L # | 1 |
| 52) trans-1,3-Dichloropropene | 7.90 | 75 | 8855 | 0.29 UG/L | 100 |
| 56) 2-Hexanone | 8.38 | 43 | 6310 | 0.19 UG/L # | 36 |
| 88) Naphthalene | 13.86 | 128 | 9919 | Below Cal | 100 |

(#) = qualifier out of range (m) = manual integration
2691V.D 8260VOI.M Sat Nov 07 08:22:30 2009



59169b

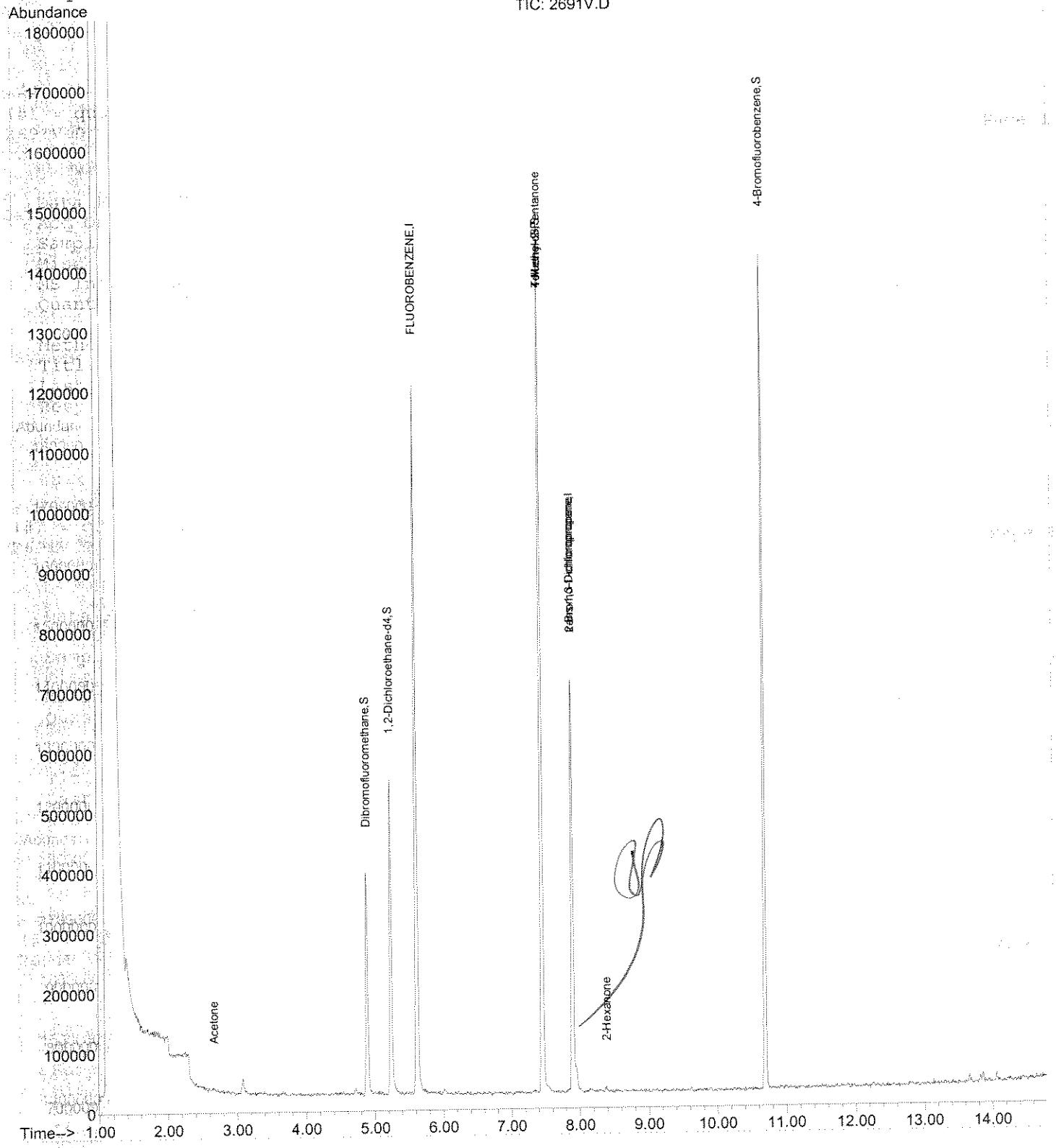
Data File : C:\HPCHEM\DATA\V110709\2691V.D
Acq On : 7 Nov 2009 8:07
Sample : VBLK
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 8:22 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

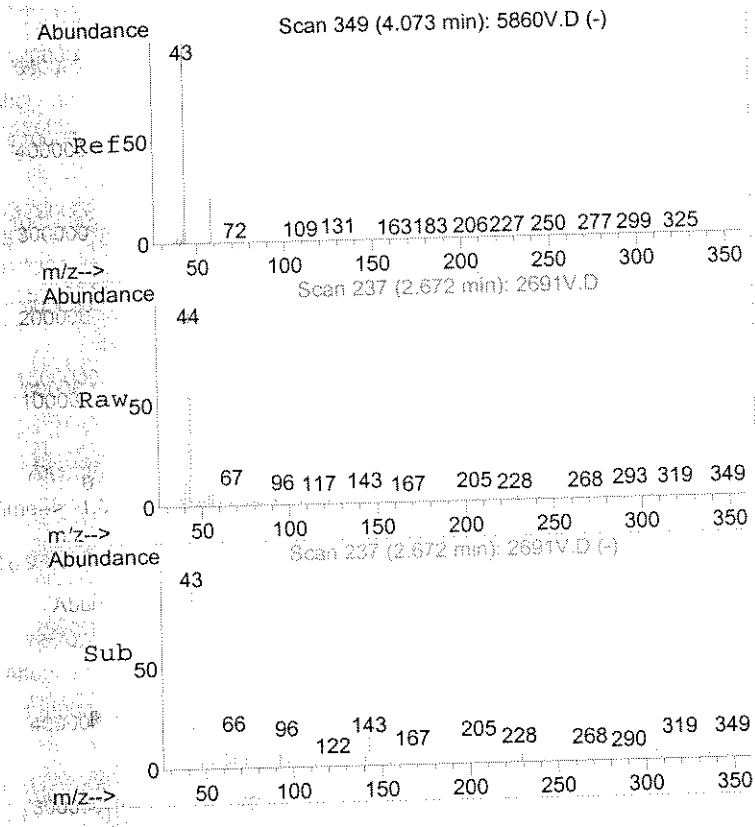
Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

TIC: 2691V.D





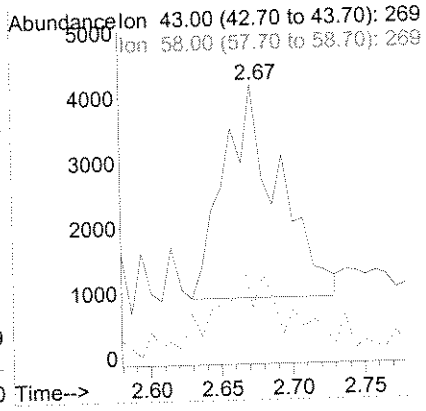

59169b

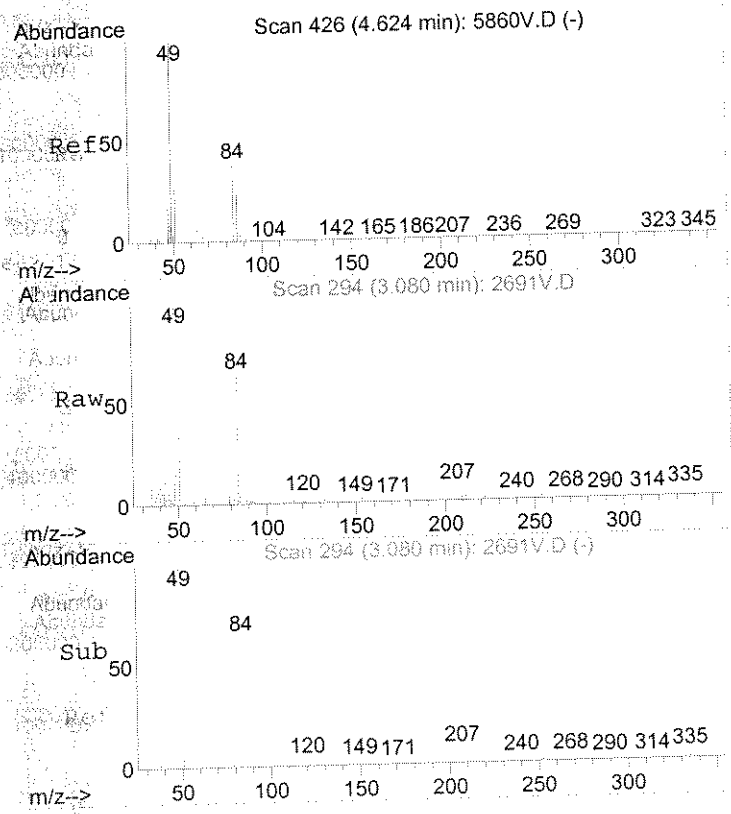



#9
Acetone
Concen: 0.65 UG/L
RT: 2.67 min Scan# 237
Delta R.T. 0.01 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion: 43 Resp: 8809

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 23.1 | 34.7# |

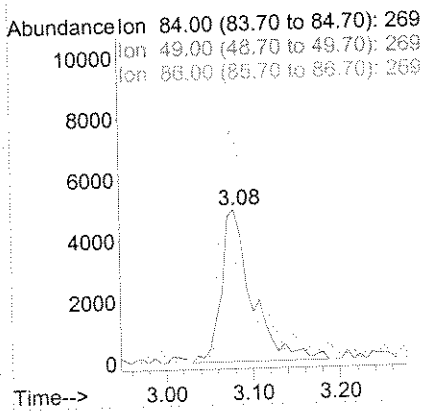


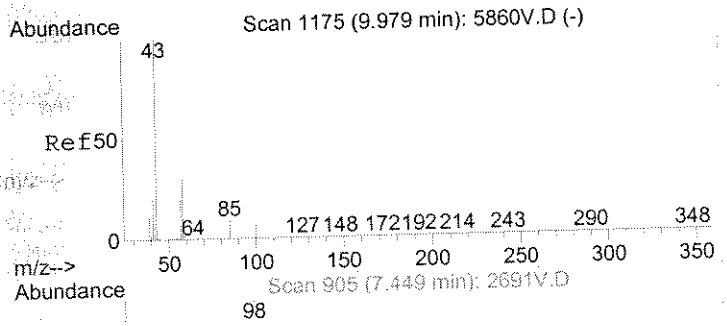




#14
Methylene Chloride
Concen: Below Cal
RT: 3.08 min Scan# 294
Delta R.T. -0.00 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion: 84 Resp: 12200

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 159.0 | 140.2 | 210.2 |
| 86 | 65.5 | 51.1 | 76.7 |

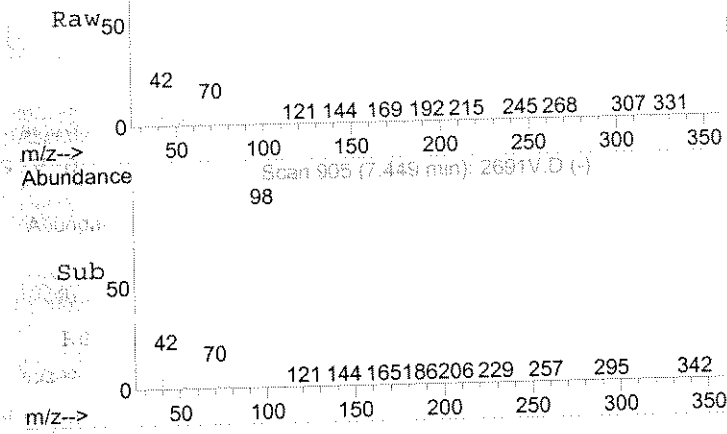


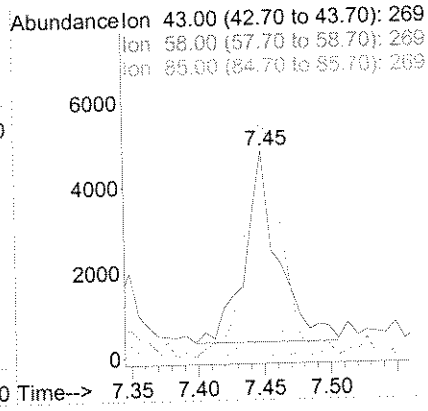


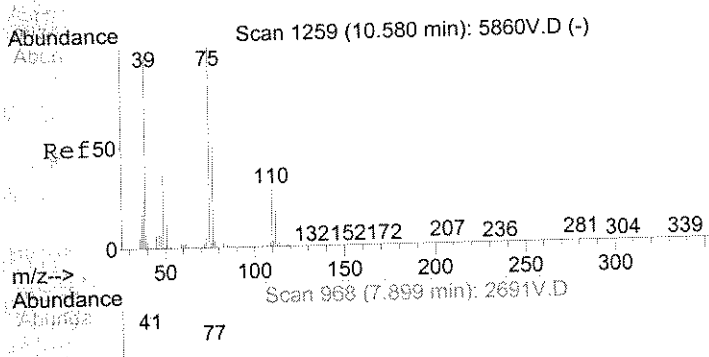

#47
4-Methyl-2-Pentanone
Concen: 0.17 UG/L
RT: 7.45 min Scan# 905
Delta R.T. 0.11 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion: 43 Resp: 7744

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 142.8 | 27.5 | 41.3# |
| 85 | 0.0 | 9.6 | 14.4# |

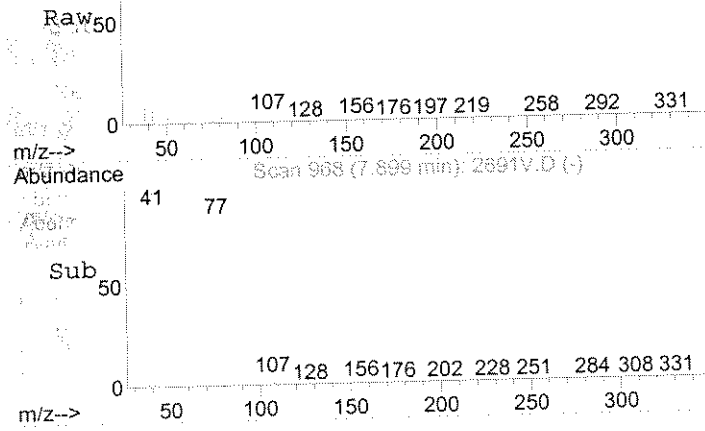


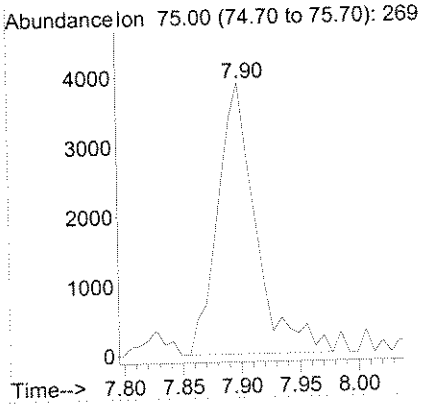




#52
trans-1,3-Dichloropropene
Concen: 0.29 UG/L
RT: 7.90 min Scan# 968
Delta R.T. 0.09 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion: 75 Resp: 8855



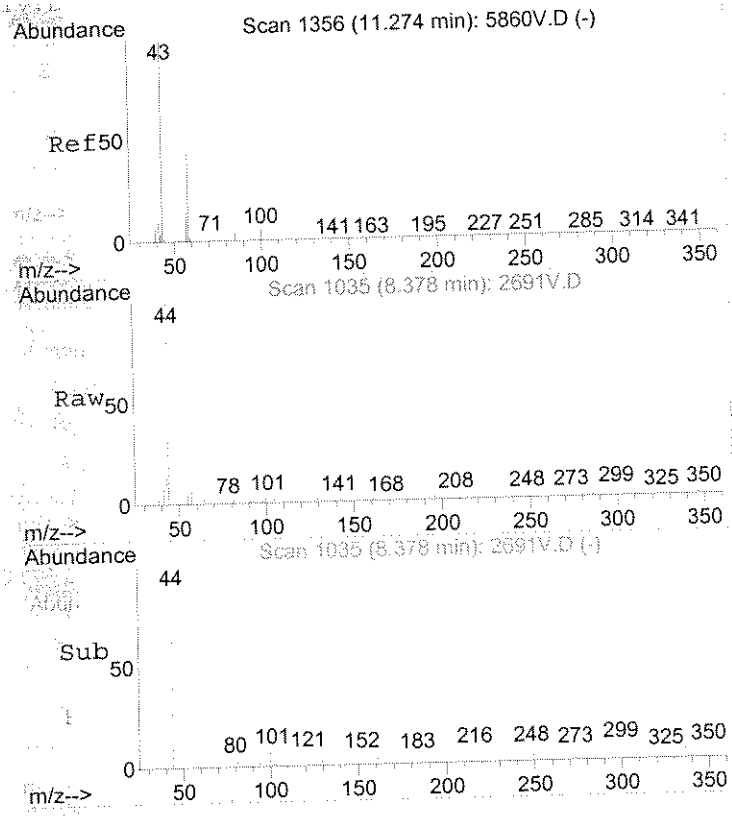



**REMEDIATION SYSTEM EVALUATION REPORT**
**OCTOBER THROUGH DECEMBER 2009**
**FORMER GENERAL MOTORS CORPORATION**
**ALLISON GAS TURBINE DIVISION, PLANT 10**
**700 NORTH OLIN AVENUE**
**INDIANAPOLIS, INDIANA**
**IDEM VRP #6991004**
**KERAMIDA PROJECT NO. 2829E**

# ATTACHMENT 6

## November 2009 - Groundwater Analytical Report

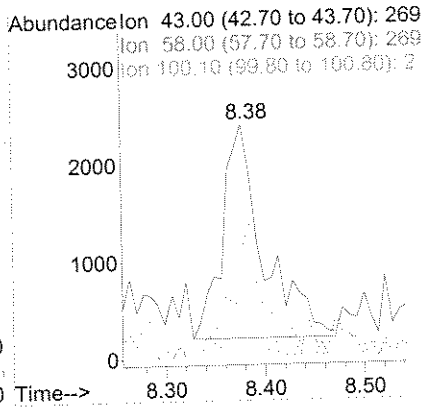
## Part 3 of 4

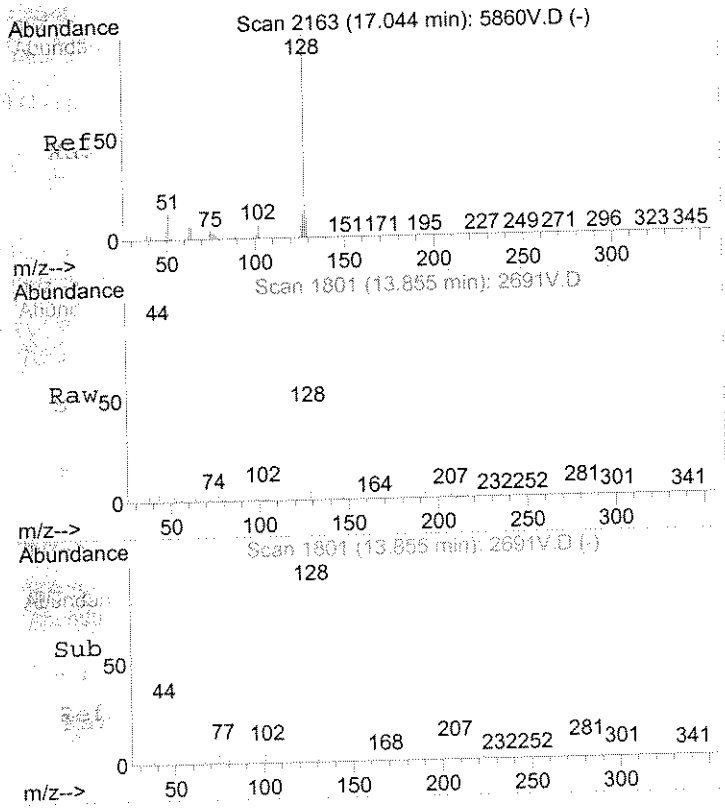



#56
2-Hexanone
Concen: 0.19 UG/L
RT: 8.38 min Scan# 1035
Delta R.T. -0.00 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion: 43 Resp: 6310

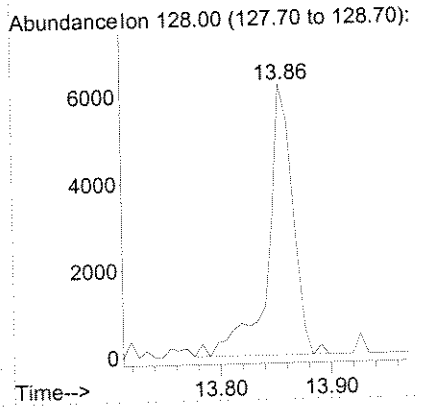
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 38.6 | 58.0# |
| 100 | 0.0 | 6.8 | 10.2# |




#88
Naphthalene
Concen: Below Cal
RT: 13.86 min Scan# 1801
Delta R.T. 0.00 min
Lab File: 2691V.D
Acq: 7 Nov 2009 8:07

Tgt Ion:128 Resp: 9919



QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 2692V.
LCS Date/Time : 7 Nov 2009 8:37
Spike Conc : 10 uG/L
Dilution Factor: 1

Q2256394

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| Benzene | 11 | 110.0 | 73 | 131.5 |
| Carbon Tetrachloride | 10.7 | 107.0 | 63 | 144.9 |
| 1,4-Dichlorobenzene | 11.6 | 116.0 | 74 | 136.7 |
| 1,2-Dichloroethane | 11.4 | 114.0 | 65 | 133.8 |
| 1,1-DICHLOROETHENE | 11.1 | 111.0 | 59 | 128.5 |
| 1,1,1-Trichloroethane | 10.8 | 108.0 | 65 | 135.2 |
| Trichloroethene | 11 | 110.0 | 67 | 120.9 |
| VINYL CHLORIDE | 9.78 | 97.8 | 43 | 144 |
| Bromobenzene | 11.5 | 115.0 | 56 | 159.4 |
| Bromodichloromethane | 10.3 | 103.0 | 70 | 129.4 |
| Bromoform | 10 | 100.0 | 59 | 163.5 |
| Bromomethane | 9.72 | 97.2 | 54 | 135.8 |
| Chlorobenzene | 11.7 | 117.0 | 76 | 132.6 |
| Dibromochloromethane | 10.8 | 108.0 | 67 | 145.6 |
| Chloroethane | 11.3 | 113.0 | 64 | 142.7 |
| CHLOROFORM | 10.9 | 109.0 | 73 | 136.2 |
| Chloromethane | 9.21 | 92.1 | 42 | 138.5 |
| 2-Chlorotoluene | 11.5 | 115.0 | 76 | 134.4 |
| 4-Chlorotoluene | 11.5 | 115.0 | 76 | 139.9 |
| Dibromomethane | 11.5 | 115.0 | 72 | 126 |
| 1,3-Dichlorobenzene | 11.6 | 116.0 | 74 | 140 |
| 1,2-Dichlorobenzene | 11.8 | 118.0 | 78 | 136.7 |
| trans-1,2-Dichloroethene | 11 | 110.0 | 57 | 116.1 |
| cis-1,2-Dichloroethene | 11.4 | 114.0 | 72 | 167.4 |
| Methylene Chloride | 11.1 | 111.0 | 71 | 133 |
| 1,1-Dichloroethane | 11.3 | 113.0 | 72 | 132.7 |
| 1,1-Dichloropropene | 10.6 | 106.0 | 68 | 124.6 |
| 1,2-DICHLOROPROPANE | 11.2 | 112.0 | 70 | 125.6 |
| 1,3-Dichloropropane | 11.8 | 118.0 | 74 | 127 |
| cis-1,3-Dichloropropene | 10.3 | 103.0 | 70 | 119.1 |
| trans-1,3-Dichloropropene | 11 | 110.0 | 72 | 131.8 |
| 2,2-Dichloropropane | 11.1 | 111.0 | 64 | 135 |
| ETHYL BENZENE | 11.6 | 116.0 | 47 | 155.6 |
| Styrene | 11.2 | 112.0 | 48 | 158.2 |
| 1,1,2-Trichloroethane | 11.4 | 114.0 | 73 | 121.4 |
| 1,1,1,2-Tetrachloroethane | 11.6 | 116.0 | 75 | 129.5 |
| 1,1,2,2-Tetrachloroethane | 12.4 | 124.0 | 76 | 126.3 |
| Tetrachloroethene | 11.3 | 113.0 | 69 | 135.2 |
| 1,2,3-Trichloropropane | 10.7 | 107.0 | 73 | 132.7 |

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 2692V.
LCS Date/Time : 7 Nov 2009 8:37
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| TOLUENE | 11 | 110.0 | 73 | 130 |
| m,p-Xylene | 22.8 | 114.0 | 73 | 137.2 |
| o-Xylene | 11.8 | 118.0 | 78 | 143.5 |
| Bromochloromethane | 11.2 | 112.0 | 65 | 141.4 |
| n-Butylbenzene | 12.1 | 121.0 | 77 | 137.1 |
| Dichlorodifluoromethane | 7.59 | 75.9 | 15 | 123.1 |
| Trichlorofluoromethane | 9.6 | 96.0 | 51 | 149.1 |
| Hexachlorobutadiene | 13.9 | 139.0 ! | 66 | 130.5 |
| Isopropylbenzene | 13.3 | 133.0 | 84 | 148.4 |
| p-Isopropyltoluene | 12.3 | 123.0 | 75 | 137.2 |
| Naphthalene | 14.7 | 147.0 ! | 75 | 133.3 |
| n-Propylbenzene | 12.1 | 121.0 | 74 | 140.8 |
| sec-Butylbenzene | 12 | 120.0 | 74 | 129.3 |
| t-Butylbenzene | 12.1 | 121.0 | 47 | 155.9 |
| 1,2,3-Trichlorobenzene | 15.2 | 152.0 ! | 69 | 143.8 |
| 1,2,4-Trichlorobenzene | 13.3 | 133.0 ! | 75 | 132.1 |
| 1,2,4-Trimethylbenzene | 12 | 120.0 | 77 | 136.1 |
| 1,3,5-Trimethylbenzene | 11.7 | 117.0 | 77 | 134.7 |
| Acrolein | 81.6 | 81.6 | D | 672 |
| Acetone | 56 | 112.0 | 62 | 135.2 |
| Acrylonitrile | 91.7 | 91.7 | D | 597.8 |
| Carbon Disulfide | 9.11 | 91.1 | 65 | 161.9 |
| Vinyl Acetate | 10.5 | 105.0 | 71 | 127.6 |
| 2-Butanone | 56.7 | 113.4 | 74 | 128.8 |
| 4-Methyl-2-Pentanone | 55.3 | 110.6 | 70 | 131.2 |
| 2-Hexanone | 57.9 | 115.8 | 76 | 131.7 |
| 2-Chloroethylvinylether | 9.92 | 99.2 | 49 | 136.5 |
| trans-1,4-Dichloro-2-butene | 20 | 100.0 | D | 114.1 |
| 1,2-Dibromoethane | 11 | 110.0 | 73 | 124 |
| 1,2-Dibromo-3-chloropropane | 11.9 | 119.0 | 67 | 127.4 |
| Iodomethane | 10.2 | 102.0 | 67 | 135.8 |

Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 100 uG/L

R560098

# Heritage Environmental Services, LLC

Q2256400

QC Report

QCType LCS01
Date Entered 11Nov09
Analysis Date/Time 07Nov0908:37:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 2692V.D
Analyst 1062 R. SHAMP
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 10 | | 11 | | 110 | |
| 217 | CARBON TETRACHLORIDE | 10 | | 10.7 | | 107 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | 11.6 | | 116 | |
| 21 | 1,2-DICHLOROETHANE | 10 | | 11.4 | | 114 | |
| 8 | 1,1-DICHLOROETHENE | 10 | | 11.1 | | 111 | |
| 2 | 1,1,1-TRICHLOROETHANE | 10 | | 10.8 | | 108 | |
| 750 | TRICHLOROETHENE | 10 | | 11 | | 110 | |
| 768 | VINYL CHLORIDE | 10 | | 9.78 | | 97.8 | |
| 193 | BROMOBENZENE | 10 | | 11.5 | | 115 | |
| 195 | BROMODICHLOROMETHANE | 10 | | 10.3 | | 103 | |
| 197 | BROMOFORM | 10 | | 10 | | 100 | |
| 198 | BROMOMETHANE | 10 | | 9.72 | | 97.2 | |
| 231 | CHLOROBENZENE | 10 | | 11.7 | | 117 | |
| 295 | DIBROMOCHLOROMETHANE | 10 | | 10.8 | | 108 | |
| 234 | CHLOROETHANE | 10 | | 11.3 | | 113 | |
| 235 | CHLOROFORM | 10 | | 10.9 | | 109 | |
| 236 | CHLOROMETHANE | 10 | | 9.21 | | 92.1 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | 11.5 | | 115 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | 11.5 | | 115 | |
| 296 | DIBROMOMETHANE | 10 | | 11.5 | | 115 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | 11.6 | | 116 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | 11.8 | | 118 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 10 | | 10.9 | | 109 | |
| 246 | CIS-1,2-DICHLOROETHENE | 10 | | 11.4 | | 114 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 11.1 | | 111 | |
| 7 | 1,1-DICHLOROETHANE | 10 | | 11.3 | | 113 | |
| 10 | 1,1-DICHLOROPROPENE | 10 | | 10.6 | | 106 | |
| 23 | 1,2-DICHLOROPROPANE | 10 | | 11.2 | | 112 | |
| 27 | 1,3-DICHLOROPROPANE | 10 | | 11.8 | | 118 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 10 | | 10.3 | | 103 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 10 | | 11 | | 110 | |
| 33 | 2,2-DICHLOROPROPANE | 10 | | 11.1 | | 111 | |
| 349 | ETHYL BENZENE | 10 | | 11.6 | | 116 | |
| 680 | STYRENE | 10 | | 11.2 | | 112 | |
| 4 | 1,1,2-TRICHLOROETHANE | 10 | | 11.4 | | 114 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 10 | | 11.6 | | 116 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 10 | | 12.4 | | 124 | |
| 703 | TETRACHLOROETHENE | 10 | | 11.3 | | 113 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 10 | | 10.7 | | 107 | |
| 724 | TOLUENE | 10 | | 11 | | 110 | |
| 492 | M/P-XYLENE | 20 | | 22.8 | | 114 | |
| 549 | O-XYLENE | 10 | | 11.8 | | 118 | |
| 194 | BROMOCHLOROMETHANE | 10 | | 11.2 | | 112 | |
| 519 | N-BUTYLBENZENE | 10 | | 12.1 | | 121 | |

KS 11/11/09

R560098 Heritage Environmental Services, LLC Q2256400

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 10 | | 7.59 | | 75.9 | |
| 372 | TRICHLOROFLUOROMETHANE | 10 | | 9.6 | | 96 | |
| 398 | HEXACHLOROBUTADIENE | 10 | | 13.9 | ! | 139 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 10 | | 13.3 | | 133 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | 12.3 | | 123 | |
| 493 | NAPHTHALENE | 10 | | 14.7 | ! | 147 | |
| 532 | N-PROPYLBENZENE | 10 | | 12.1 | | 121 | |
| 644 | SEC-BUTYLBENZENE | 10 | | 12 | | 120 | |
| 702 | TERT-BUTYLBENZENE | 10 | | 12.1 | | 121 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 15.2 | ! | 152 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 10 | | 13.3 | ! | 133 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 10 | | 12 | | 120 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 10 | | 11.7 | | 117 | |
| 105 | ACROLEIN | 100 | | 81.6 | | 81.6 | |
| 99 | ACETONE (2-PROPANONE) | 50 | | 56 | | 112 | |
| 106 | ACRYLONITRILE | 100 | | 91.7 | | 91.7 | |
| 216 | CARBON DISULFIDE | 10 | | 9.11 | | 91.1 | |
| 767 | VINYL ACETATE | 10 | | 10.5 | | 105 | |
| 52 | 2-BUTANONE | 50 | | 56.7 | | 113.4 | |
| 91 | 4-METHYL-2-PENTANONE | 50 | | 55.3 | | 110.6 | |
| 60 | 2-HEXANONE | 50 | | 57.9 | | 115.8 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 10 | | 9.92 | | 99.2 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | 20 | | 100 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 10 | | 11 | | 110 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | 11.9 | | 119 | |
| 422 | IODOMETHANE | 10 | | 10.2 | | 102 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | 10.3 | | 103 | |
| 30 | 1,4-DIOXANE | 200 | | 204 | | 102 | |
| 709 | TETRAHYDROFURAN | 125 | | 135 | | 108 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 10 | | 10.9 | | 109 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 100 | | 118 | | 118 | |
| 975 | METHYLACRYLONITRILE | 100 | | 118 | | 118 | |
| 1147 | METHYL METHACRYLATE | 10 | | 10.6 | | 106 | |
| 351 | ETHYL METHACRYLATE | 10 | | 11.1 | | 111 | |
| 803 | XYLENES (O/M/P-XYLENE) | 30 | | 34.6 | | 115.3 | |

**Qualifiers**

! Outside Lab Generated Control Limits

Data File : C:\HPCHEM\DATA\V110709\2692V.D  Vial: 22
Acq On : 7 Nov 2009 8:37  Operator: REGI
Sample : DI MS  Inst : Instrumen
Misc : 11/7/09  Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 07 08:52:18 2009  Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 5.61 | 96 | 998334 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.89 | 77 | 341228 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 33) Dibromofluoromethane | 4.88 | 113 | 228673 | 9.75 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.50% | |
| 35) 1,2-Dichloroethane-d4 | 5.23 | 65 | 366722 | 10.21 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.10% | |
| 50) Toluene-d8 | 7.45 | 98 | 995064 | 9.94 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.40% | |
| 69) 4-Bromofluorobenzene | 10.69 | 174 | 330384 | 10.10 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.00% | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.28 | 85 | 135637 | 7.59 UG/L | 100 |
| 3) Chloromethane | 1.40 | 50 | 338463 | 9.21 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.51 | 62 | 304018 | 9.78 UG/L | 94 |
| 5) Bromomethane | 1.79 | 94 | 116331 | 9.72 UG/L | 98 |
| 6) Chloroethane | 1.89 | 64 | 155410 | 11.29 UG/L | 94 |
| 7) Trichlorofluoromethane | 2.15 | 101 | 249695m | 9.60 UG/L | |
| 8) Acrolein | 2.50 | 56 | 154945 | 81.56 UG/L | 100 |
| 9) Acetone | 2.66 | 43 | 763217 | 56.02 UG/L | 96 |
| 10) 1,1-DICHLOROETHENE | 2.61 | 96 | 224032 | 11.09 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.64 | 101 | 251315 | 10.65 UG/L | 90 |
| 12) Acrylonitrile | 3.32 | 53 | 527710 | 91.65 UG/L | 100 |
| 13) Carbon Disulfide | 2.79 | 76 | 548532 | 9.11 UG/L | 99 |
| 14) Methylene Chloride | 3.07 | 84 | 257053 | 11.09 UG/L | 93 |
| 15) Allyl Chloride | 2.96 | 41 | 1046667 | 10.85 UG/L | 100 |
| 16) Vinyl Acetate | 3.85 | 43 | 25172 | 10.50 UG/L # | 87 |
| 17) MTBE | 3.38 | 73 | 724372 | 10.28 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 3.36 | 96 | 234931 | 10.95 UG/L | 84 |
| 19) n-Hexane | 3.66 | 57 | 468308 | 11.63 UG/L | 100 |
| 20) 1,1-Dichloroethane | 3.77 | 63 | 476554 | 11.29 UG/L | 100 |
| 21) 2-Butanone | 4.40 | 72 | 223163 | 56.70 UG/L | 82 |
| 22) Ethyl Acetate | 4.50 | 43 | 466931 | 10.81 UG/L # | 100 |
| 23) cis-1,2-Dichloroethene | 4.37 | 96 | 253709 | 11.36 UG/L | 86 |
| 24) Ethyl Cyanide | 4.45 | 54 | 707384 | 117.71 UG/L | 100 |
| 25) CHLOROFORM | 4.72 | 83 | 430249 | 10.93 UG/L | 98 |
| 26) Methacrylonitrile | 4.61 | 41 | 2674210 | 117.84 UG/L # | 100 |
| 27) Tetrahydrofuran | 4.68 | 42 | 1585077 | 135.24 UG/L | 99 |
| 28) Bromochloromethane | 4.62 | 128 | 119019 | 11.16 UG/L # | 63 |
| 29) 2,2-Dichloropropane | 4.37 | 77 | 248593 | 11.13 UG/L # | 88 |
| 30) Diethyl ether | 2.40 | 59 | 221949 | 10.32 UG/L | 100 |
| 31) 1,1,1-Trichloroethane | 4.91 | 97 | 349361 | 10.79 UG/L | 98 |
| 32) Iodomethane | 2.73 | 142 | 335493 | 10.18 UG/L | 100 |
| 34) 1,1-Dichloropropene | 5.09 | 110 | 114448 | 10.62 UG/L | 100 |
| 36) Carbon Tetrachloride | 5.09 | 117 | 308708 | 10.73 UG/L | 91 |
| 37) 1,2-Dichloroethane | 5.32 | 62 | 439857 | 11.39 UG/L | 97 |
| 38) Isobutanol | 5.28 | 43 | 530530 | 249.14 UG/L # | 94 |
| 39) Benzene | 5.30 | 78 | 973799 | 10.96 UG/L | 100 |
| 40) Trichloroethene | 6.03 | 130 | 257429 | 11.02 UG/L | 91 |

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



59169b

Data File : C:\HPCHEM\DATA\V110709\2692V.D Vial: 22
Acq On : 7 Nov 2009 8:37 Operator: REGI
Sample : DI MS Inst : Instrumen
Misc : 11/7/09 Multiplr: 1.00
MS Integration Params: rteint2.p
Quant Time: Nov 07 08:52:18 2009 Quant Results File: 8260VOI.RES

Quant Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration
DataAcq Meth : 8260VOI

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 41) n-Butanol | 6.03 | 56 | 7630 | 4.36 UG/L # | 80 |
| 42) 1,2-DICHLOROPROPANE | 6.27 | 63 | 265367 | 11.17 UG/L | 100 |
| 43) 1,4-Dioxane | 6.45 | 88 | 183098 | 204.44 UG/L | 100 |
| 44) Methyl Methacrylate | 6.45 | 41 | 347784 | 10.64 UG/L # | 61 |
| 45) Bromodichloromethane | 6.59 | 83 | 282270 | 10.28 UG/L | 96 |
| 46) Dibromomethane | 6.39 | 93 | 164633 | 11.46 UG/L | 87 |
| 47) 4-Methyl-2-Pentanone | 7.33 | 43 | 2486126 | 55.27 UG/L | 99 |
| 48) 2-Chloroethylvinylether | 6.98 | 63 | 183325 | 9.92 UG/L | 99 |
| 49) cis-1,3-Dichloropropene | 7.13 | 75 | 355706 | 10.34 UG/L | 100 |
| 51) TOLUENE | 7.53 | 91 | 1073589 | 11.02 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.81 | 75 | 335955 | 10.96 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 8.02 | 97 | 233206 | 11.41 UG/L | 100 |
| 54) 1,2-Dibromoethane | 8.63 | 107 | 247252 | 11.01 UG/L | 100 |
| 56) 2-Hexanone | 8.37 | 43 | 1934670 | 57.88 UG/L | 99 |
| 57) 1,3-Dichloropropane | 8.23 | 76 | 411670 | 11.80 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.96 | 69 | 329362 | 11.10 UG/L | 90 |
| 59) Tetrachloroethene | 8.21 | 166 | 292104 | 11.32 UG/L | 99 |
| 60) Dibromochloromethane | 8.51 | 129 | 202767 | 10.81 UG/L | 100 |
| 61) Chlorobenzene | 9.29 | 112 | 711896 | 11.70 UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 9.41 | 131 | 233859 | 11.56 UG/L | 100 |
| 63) ETHYL BENZENE | 9.46 | 106 | 399211 | 11.64 UG/L | 78 |
| 64) m,p-Xylene | 9.62 | 106 | 974955 | 22.77 UG/L # | 57 |
| 65) o-Xylene | 10.10 | 106 | 496222 | 11.75 UG/L | 83 |
| 66) Styrene | 10.12 | 104 | 786761 | 11.17 UG/L # | 81 |
| 67) Bromoform | 10.30 | 173 | 143489 | 10.00 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.87 | 83 | 401950 | 12.37 UG/L | 98 |
| 70) Isopropylbenzene | 10.54 | 105 | 1339560 | 13.26 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-buten | 10.93 | 53 | 324842 | 20.02 UG/L # | 5 |
| 72) Bromobenzene | 10.84 | 77 | 519951 | 11.50 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.90 | 110 | 114368 | 10.72 UG/L | 100 |
| 74) n-Propylbenzene | 10.99 | 92 | 178879 | 12.12 UG/L | 94 |
| 75) 1,3,5-Trimethylbenzene | 11.18 | 105 | 1171922 | 11.73 UG/L | 100 |
| 76) 2-Chlorotoluene | 11.06 | 126 | 318832 | 11.50 UG/L | 100 |
| 77) 4-Chlorotoluene | 11.17 | 126 | 322925 | 11.54 UG/L | 100 |
| 78) t-Butylbenzene | 11.51 | 91 | 727787 | 12.09 UG/L # | 59 |
| 79) 1,2,4-Trimethylbenzene | 11.56 | 105 | 1210877 | 12.00 UG/L | 100 |
| 80) sec-Butylbenzene | 11.72 | 105 | 1561936 | 11.99 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.87 | 119 | 1302826 | 12.25 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.81 | 146 | 638752 | 11.64 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.90 | 146 | 650789 | 11.58 UG/L | 100 |
| 84) n-Butylbenzene | 12.26 | 92 | 686030 | 12.05 UG/L | 95 |
| 85) 1,2-Dichlorobenzene | 12.24 | 146 | 619616 | 11.83 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropropan | 12.94 | 157 | 83131 | 11.86 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 13.66 | 180 | 476908 | 13.31 UG/L | 100 |
| 88) Naphthalene | 13.86 | 128 | 1355566 | 14.73 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.82 | 225 | 275279 | 13.91 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 14.06 | 180 | 438789 | 15.22 UG/L | 100 |

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



59169b

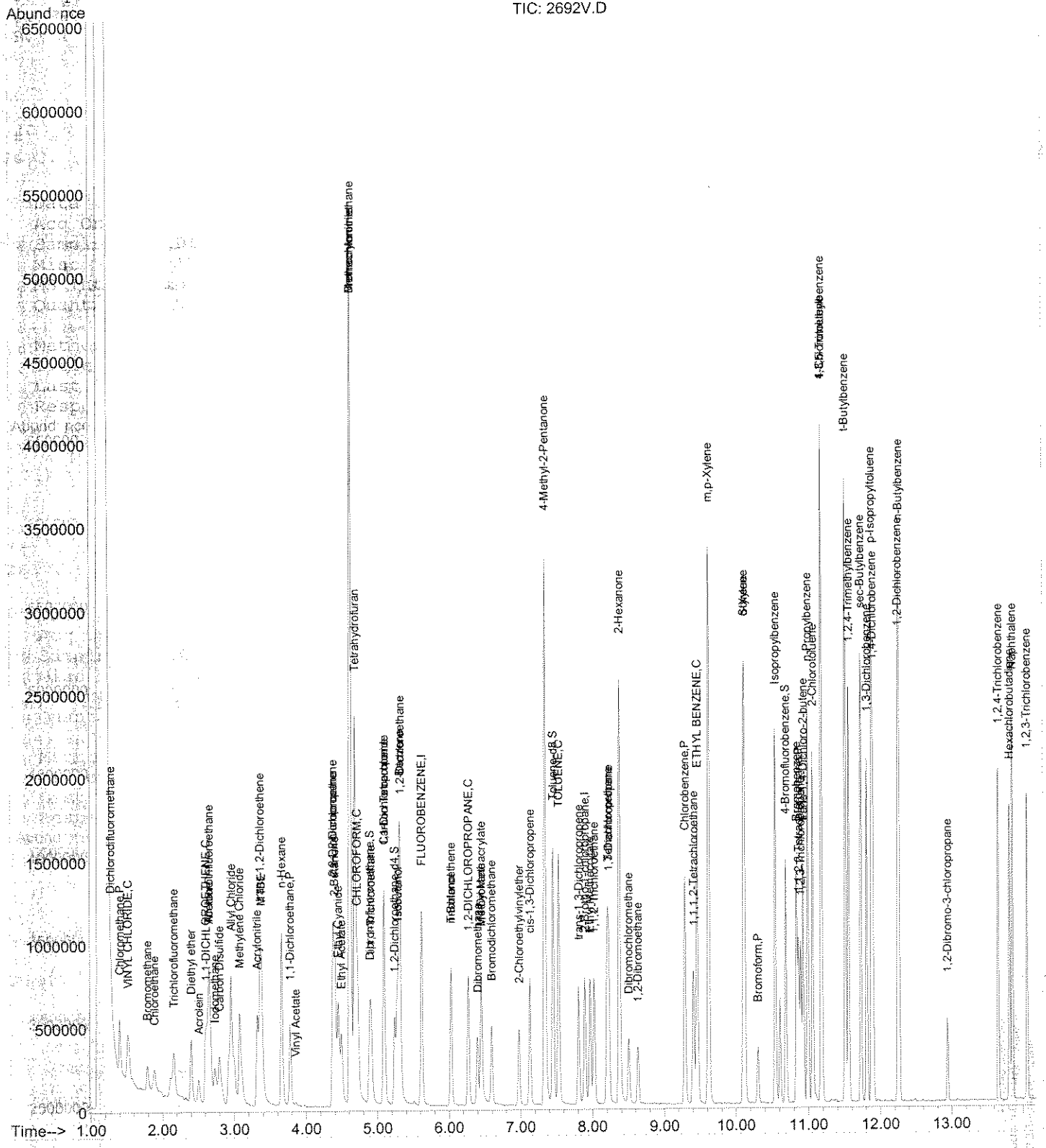
Data File : C:\HPCHEM\DATA\V110709\2692V.D
Acq On : 7 Nov 2009 8:37
Sample : DI MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 8:52 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: 8260VOI.RES

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Initial Calibration

TIC: 2692V.D



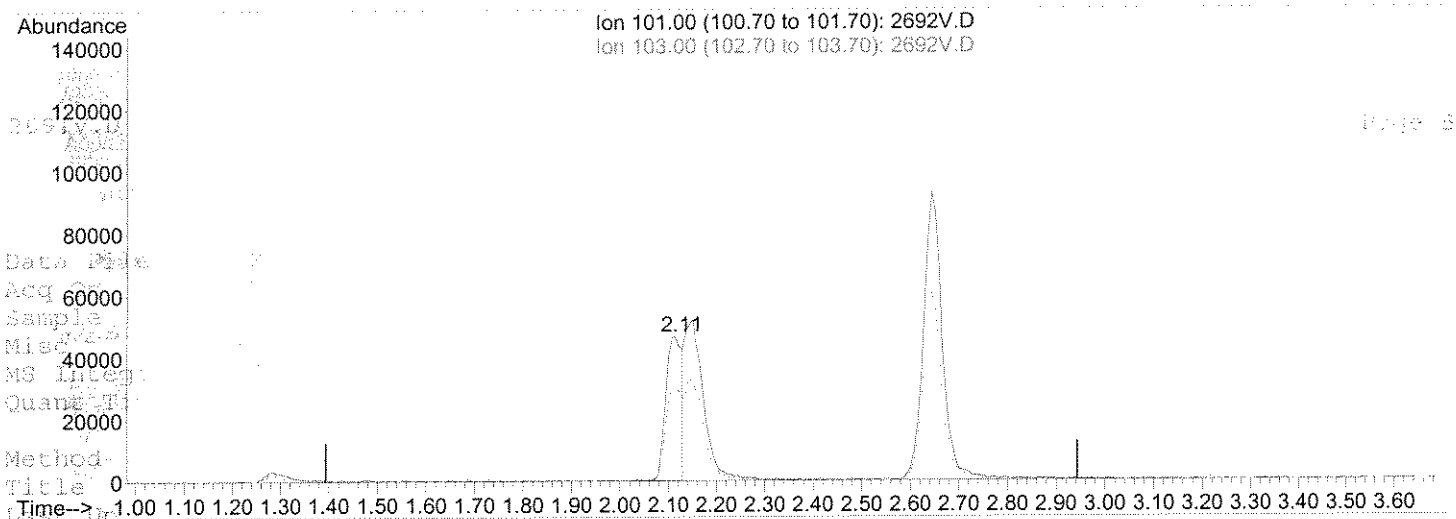


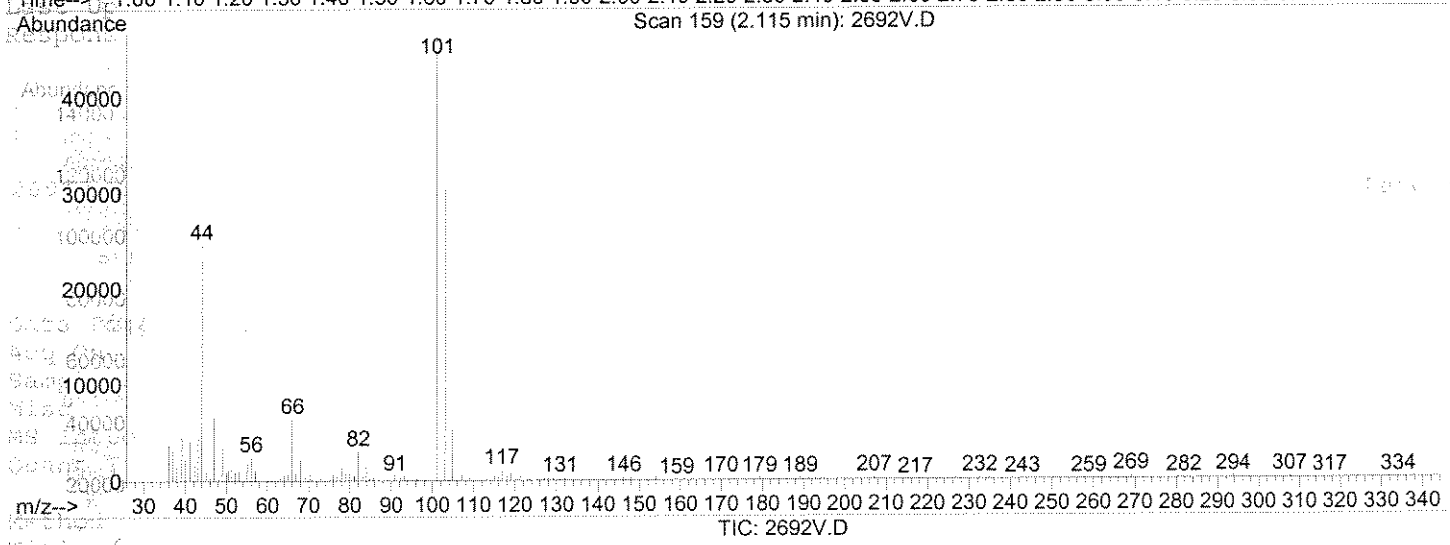

59169b

Data File : C:\HPCHEM\DATA\V110709\2692V.D
Acq On : 7 Nov 2009 8:37
Sample : DI MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 8:52 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.11min 4.21UG/L

response 109456

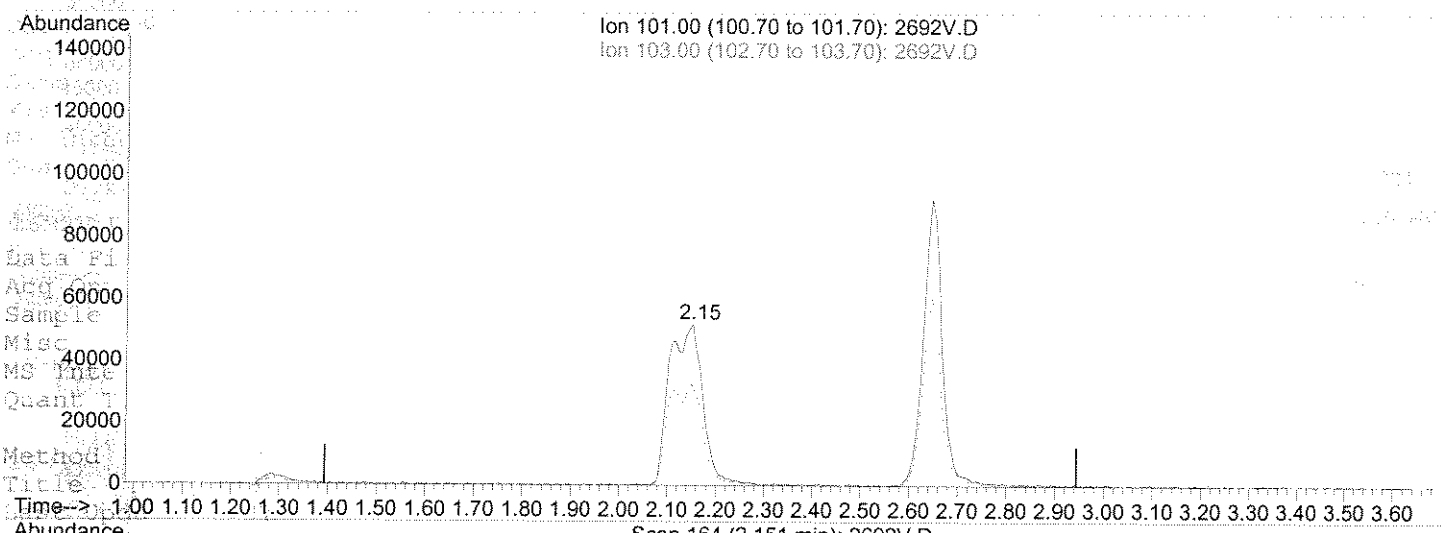
| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 64.79# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

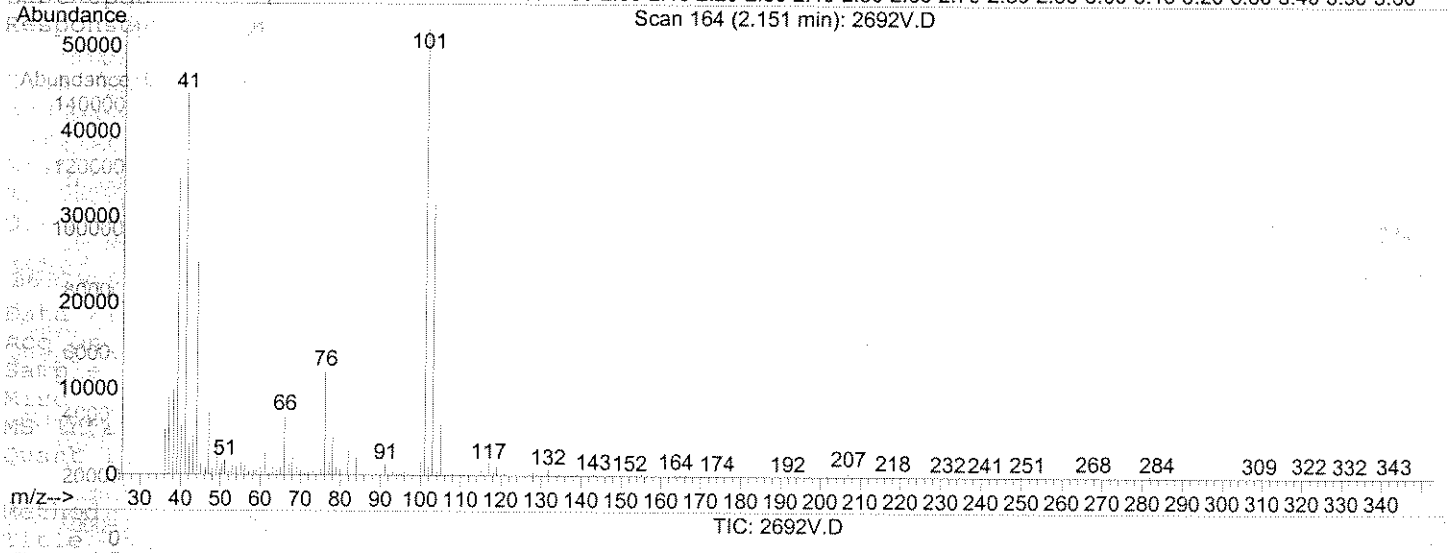
Data File : C:\HPCHEM\DATA\V110709\2692V.D
Acq On : 7 Nov 2009 8:37
Sample : DI MS
Misc : 11/7/09
MS Integration Params: rteint2.p
Quant Time: Nov 7 8:52 2009

Vial: 22
Operator: REGI
Inst : Instrumen
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\8260VOI.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Thu Nov 05 11:57:09 2009
Response via : Multiple Level Calibration




(7) Trichlorofluoromethane

2.15min 9.60UG/L m

response 249695

| Ion | Exp% | Act% |
|---|---|---|
| 101.00 | 100 | 100 |
| 103.00 | 49.20 | 28.40# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL Water

Laboratory Sample # : A864635 Q2256395 Q2256394
Data File :2697V. MS Data File : 2698V. MSD Data File : 2699V.
Date/Time : 7 Nov 2009 10:50 MS Date/Time : 7 Nov 2009 11:15 MSD Date/Time : 7 Nov 2009 11:40
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0 | 9.51 | 95.1 | 9.76 | 97.6 | 2.6 | 75 | 127.9 |
| Carbon Tetrachloride | 0 | 8.37 | 83.7 | 8.16 | 81.6 | 2.5 | 71 | 163.4 |
| 1,4-Dichlorobenzene | 0 | 9.88 | 98.8 | 9.46 | 94.6 | 4.3 | 80 | 121.8 |
| 1,2-Dichloroethane | 0 | 9.65 | 96.5 | 9.92 | 99.2 | 2.8 | 71 | 163.2 |
| 1,1-DICHLOROETHENE | 0 | 9.39 | 93.9 | 9.68 | 96.8 | 3.0 | 66 | 134.3 |
| 1,1,1-Trichloroethane | 0 | 9.26 | 92.6 | 9.78 | 97.8 | 5.5 | 79 | 156.2 |
| Trichloroethene | 0 | 9.28 | 92.8 | 9.83 | 98.3 | 5.8 | 67 | 149.3 |
| VINYL CHLORIDE | 0 | 9.2 | 92.0 | 9.71 | 97.1 | 5.4 | 46 | 154 |
| Bromobenzene | 0 | 9.56 | 95.6 | 9.61 | 96.1 | 0.5 | 78 | 126.6 |
| Bromodichloromethane | 0 | 8.48 | 84.8 | 8.89 | 88.9 | 4.7 | 68 | 157.1 |
| Bromoform | 0 | 6.29 | 62.9 | 6.09 | 60.9 | 3.2 | 52 | 171.7 |
| Bromomethane | 0 | 9.17 | 91.7 | 9.71 | 97.1 | 5.7 | 17 | 175.4 |
| Chlorobenzene | 0 | 9.42 | 94.2 | 9.37 | 93.7 | 0.5 | 81 | 123.4 |
| Dibromochloromethane | 0 | 7.72 | 77.2 | 7.68 | 76.8 | 0.5 | 64 | 152.5 |
| Chloroethane | 0 | 10.6 | 106.0 | 11.3 | 113.0 | 6.4 | 79 | 145.1 |
| CHLOROFORM | 0 | 9.39 | 93.9 | 9.52 | 95.2 | 1.4 | 79 | 146.2 |
| Chloromethane | 0 | 9.25 | 92.5 | 9.62 | 96.2 | 3.9 | 31 | 139.9 |
| 2-Chlorotoluene | 0 | 9.42 | 94.2 | 9.49 | 94.9 | 0.7 | 70 | 126.1 |
| 4-Chlorotoluene | 0 | 9.37 | 93.7 | 9.33 | 93.3 | 0.4 | 73 | 123.4 |
| Dibromomethane | 0 | 9.49 | 94.9 | 9.76 | 97.6 | 2.8 | 60 | 156.9 |
| 1,3-Dichlorobenzene | 0 | 9.74 | 97.4 | 9.52 | 95.2 | 2.3 | 80 | 127.4 |
| 1,2-Dichlorobenzene | 0 | 9.84 | 98.4 | 9.69 | 96.9 | 1.5 | 81 | 125.8 |
| trans-1,2-Dichloroethene | 0 | 9.39 | 93.9 | 9.87 | 98.7 | 5.0 | 76 | 136.3 |
| cis-1,2-Dichloroethene | 0 | 9.54 | 95.4 | 10.2 | 102.0 | 6.7 | 67 | 151.6 |
| Methylene Chloride | 0 | 9.48 | 94.8 | 9.97 | 99.7 | 5.0 | 65 | 145 |
| 1,1-Dichloroethane | 0 | 9.64 | 96.4 | 10.1 | 101.0 | 4.7 | 79 | 140.1 |
| 1,1-Dichloropropene | 0 | 9.6 | 96.0 | 9.79 | 97.9 | 2.0 | 76 | 133.2 |
| 1,2-DICHLOROPROPANE | 0 | 9.45 | 94.5 | 9.82 | 98.2 | 3.8 | 77 | 123.2 |
| 1,3-Dichloropropane | 0 | 9.42 | 94.2 | 9.48 | 94.8 | 0.6 | 81 | 121.5 |
| cis-1,3-Dichloropropene | 0 | 6.77 | 67.7 ! | 7.31 | 73.1 | 7.7 | 69 | 125.1 |
| trans-1,3-Dichloropropene | 0 | 6.3 | 63.0 ! | 6.7 | 67.0 ! | 6.2 | 68 | 129.6 |
| 2,2-Dichloropropane | 0 | 9.98 | 99.8 | 9.89 | 98.9 | 0.9 | 64 | 130.7 |
| ETHYL BENZENE | 0 | 9.15 | 91.5 | 9.28 | 92.8 | 1.4 | 37 | 176.4 |
| Styrene | 0 | 5.57 | 55.7 | 5.33 | 53.3 | 4.4 | 29 | 159.9 |
| 1,1,2-Trichloroethane | 0 | 9.27 | 92.7 | 9.64 | 96.4 | 3.9 | 70 | 140.6 |
| 1,1,1,2-Tetrachloroethane | 0 | 8.84 | 88.4 | 8.92 | 89.2 | 0.9 | 68 | 154.5 |
| 1,1,2,2-Tetrachloroethane | 0 | 9.93 | 99.3 | 9.68 | 96.8 | 2.5 | 73 | 122.6 |
| Tetrachloroethene | 0 | 8.68 | 86.8 | 8.57 | 85.7 | 1.3 | 82 | 141.4 |
| 1,2,3-Trichloropropane | 0 | 9.57 | 95.7 | 9.35 | 93.5 | 2.3 | 73 | 136.1 |

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 4989T.D BFB Injection Date: 10/31/09

Instrument ID: GCMS#394 BFB Injection Time: 07:48

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.0 |
| 75 | 30.0 - 60.0% of mass 95 | 46.3 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 73.0 |
| 175 | 5.0 - 9.0% of mass 174 | 5.5 ( 7.6)1 |
| 176 | 95.0 - 101.0% of mass 174 | 73.3 ( 100.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.8 ( 6.5)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD001 | VSTD001 | 4991T.D | 10/31/09 | 08:40 |
| 02 | VSTD005 | VSTD005 | 4993T.D | 10/31/09 | 09:31 |
| 03 | VSTD025 | VSTD025 | 4995T.D | 10/31/09 | 10:22 |
| 04 | VSTD050 | VSTD050 | 4996T.D | 10/31/09 | 10:48 |
| 05 | VSTD100 | VSTD100 | 4997T.D | 10/31/09 | 11:13 |
| 06 | VSTD010 | VSTD010 | 5003T.D | 10/31/09 | 13:47 |

11/4/09



FORM V VOA

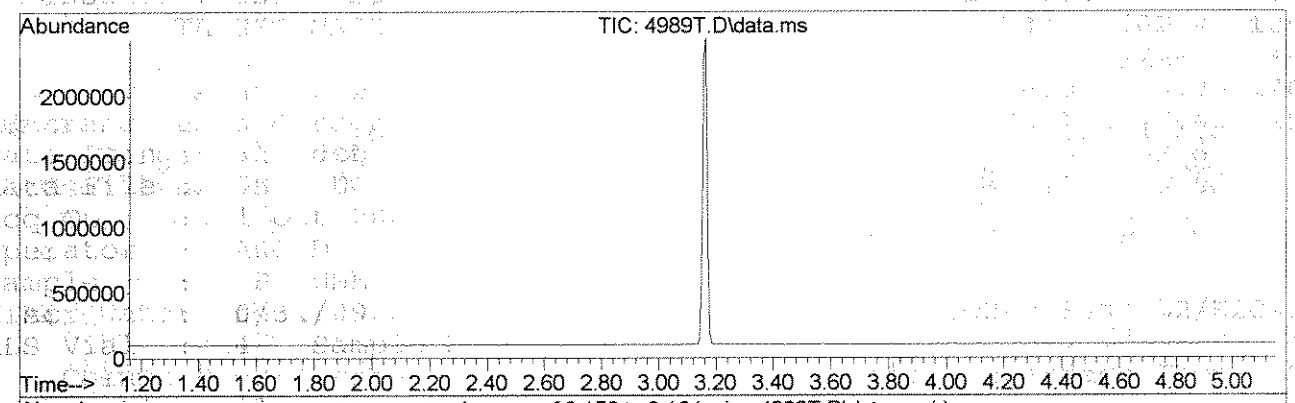
3/90

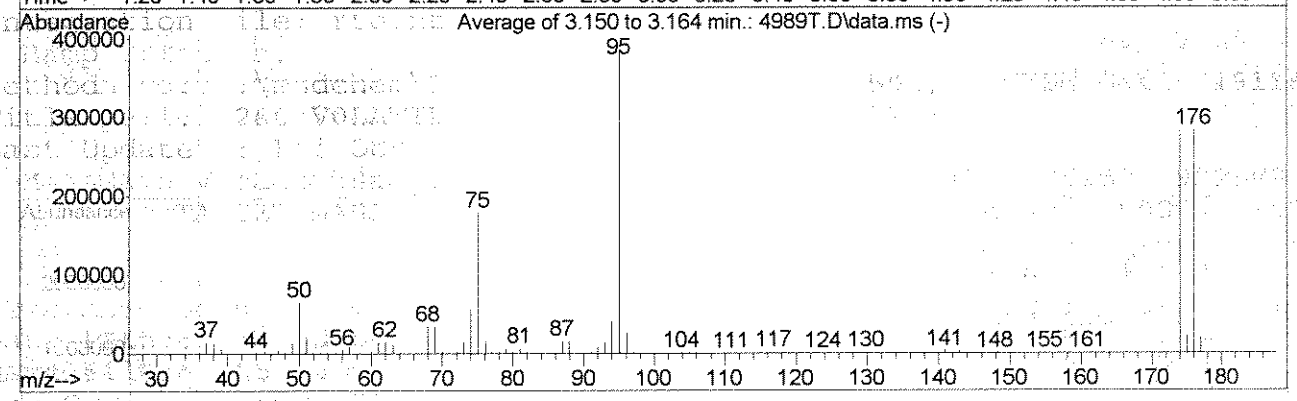
59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4989T.D
Acq On : 31 Oct 2009 7:48
Operator : HAROLD
Sample : BFB TUNE CHECK
Misc : 10/31/09
ALS Vial : 14 Sample Multiplier: 1

Integration File: rteint2.p

Method : C:\msdchem\1\METHODS\8260TNEW.M
Title : 8260 VOLATILES
Last Update : Fri Oct 30 13:34:43 2009




AutoFind: Scans 303, 304, 305; Background Corrected with Scan 298

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 17.0 | 65373 | PASS |
| 75 | 95 | 30 | 60 | 46.3 | 178426 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 385344 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 25518 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 73.0 | 281322 | PASS |
| 175 | 174 | 5 | 9 | 7.6 | 21302 | PASS |
| 176 | 174 | 95 | 101 | 100.3 | 282269 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 18372 | PASS |

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.00 | 1987 | 49.00 | 13677 | 61.00 | 14333 | 74.00 | 55930 |
| 37.05 | 14801 | 50.05 | 65373 | 62.00 | 14861 | 75.05 | 178426 |
| 38.10 | 13339 | 51.00 | 20428 | 63.10 | 11230 | 76.05 | 15163 |
| 39.10 | 5558 | 52.00 | 615 | 64.05 | 1013 | 76.95 | 2196 |
| 40.00 | 192 | 53.00 | 315 | 65.00 | 102 | 78.05 | 1615 |
| 41.05 | 120 | 55.05 | 639 | 67.10 | 999 | 78.95 | 6051 |
| 44.00 | 1006 | 56.05 | 4852 | 68.00 | 34095 | 80.00 | 2051 |
| 45.10 | 2960 | 57.00 | 8393 | 69.00 | 34094 | 80.95 | 6662 |
| 46.00 | 125 | 58.10 | 468 | 70.05 | 2629 | 81.95 | 1489 |
| 47.00 | 4657 | 59.05 | 35 | 72.00 | 1889 | 84.90 | 48 |
| 48.00 | 1720 | 60.00 | 3065 | 73.00 | 14242 | 86.00 | 657 |

Average of 3.150 to 3.164 min.: 4989T.D\data.ms

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 87.00 | 15446 | 104.90 | 532 | 127.90 | 1046 | 145.00 | 162 |
| 87.95 | 15140 | 105.95 | 1181 | 128.85 | 563 | 145.90 | 513 |
| 91.00 | 1010 | 106.85 | 241 | 129.95 | 1267 | 146.90 | 217 |
| 92.00 | 9350 | 110.95 | 221 | 130.95 | 389 | 147.95 | 55692 |
| 93.00 | 14407 | 111.80 | 102 | 134.90 | 456 | 148.80 | 178132 |
| 94.00 | 41322 | 114.95 | 283 | 136.90 | 459 | 149.95 | 325 |
| 95.00 | 385344 | 115.90 | 1108 | 139.90 | 218 | 151.95 | 255 |
| 96.10 | 25518 | 116.95 | 1892 | 140.90 | 3110 | 152.95 | 320 |
| 97.05 | 883 | 118.00 | 1010 | 141.95 | 337 | 153.90 | 179 |
| 102.80 | 97 | 118.95 | 1515 | 142.90 | 2912 | 154.95 | 2739 |
| 103.95 | 1285 | 123.90 | 96 | 143.90 | 225 | 156.95 | 487 |

Average of 3.150 to 3.164 min.: 4989T.D\data.ms

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 158.95 | 391 | | | | | | |
| 160.95 | 312 | | | | | | |
| 174.00 | 281322 | | | | | | |
| 175.00 | 21302 | | | | | | |
| 176.00 | 282269 | | | | | | |
| 177.00 | 18372 | | | | | | |
| 177.80 | 99 | | | | | | |
| 178.00 | 489 | | | | | | |

Method Path : C:\msdchem\1\METHODS\
Method File : 8260TNEW.M
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:22:28 2009
Response Via : Initial Calibration

Calibration Files
1 =4991T.D 10 =5003T.D 25 =4995T.D 50 =4996T.D 5 =4993T.D 100 =4997T.D

| | | Compound | 1 | 10 | 25 | 50 | 5 | 100 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | FLUOROBENZENE | ISTD | | | | | | | | |
| 2) | | Dichlorodifluo... | 0.156 | 0.141 | 0.141 | 0.135 | 0.148 | 0.133 | 0.142 | 5.93 | |
| 3) | P | Chloromethane | 0.282 | 0.202 | 0.198 | 0.194 | 0.211 | 0.192 | 0.213 | 16.21 | |
| 4) | C | VINYL CHLORIDE | 0.242 | 0.238 | 0.237 | 0.225 | 0.243 | 0.225 | 0.235 | 3.40# | |
| 5) | | Bromomethane | 0.110 | 0.113 | 0.088 | 0.100 | 0.106 | 0.090 | 0.101 | 10.25 | |
| 6) | | Chloroethane | 0.145 | 0.129 | 0.116 | 0.118 | 0.138 | 0.112 | 0.126 | 10.55 | |
| 7) | | Trichlorofluor... | 0.307 | 0.296 | 0.298 | 0.293 | 0.305 | 0.282 | 0.297 | 3.05 | |
| 8) | | Acrolein | 0.022 | 0.018 | 0.016 | 0.016 | 0.017 | 0.016 | 0.017 | 14.54 | |
| 9) | | Acetone | 0.114 | 0.095 | 0.104 | 0.097 | 0.110 | 0.093 | 0.102 | 8.38 | |
| 10) | C | 1,1-DICHLOROET... | 0.194 | 0.200 | 0.198 | 0.200 | 0.200 | 0.197 | 0.198 | 1.36# | |
| 11) | | Trichlorotrifl... | 0.218 | 0.223 | 0.235 | 0.223 | 0.236 | 0.221 | 0.226 | 3.34 | |
| 12) | | Acrylonitrile | 0.084 | 0.068 | 0.067 | 0.064 | 0.070 | 0.062 | 0.069 | 11.26 | |
| 13) | | Carbon Disulfide | 0.606 | 0.614 | 0.637 | 0.655 | 0.627 | 0.647 | 0.631 | 3.01 | |
| 14) | | Methylene Chlo... | 0.551 | 0.249 | 0.237 | 0.231 | 0.286 | 0.220 | 0.296 | 42.92 | — LIN 1.000 |
| 15) | | Allyl Chloride | 0.756 | 0.687 | 0.734 | 0.692 | 0.730 | 0.663 | 0.710 | 4.96 | |
| 16) | | Vinyl Acetate | 0.045 | 0.029 | 0.030 | 0.026 | 0.037 | 0.024 | 0.032 | 24.93 | — LIN 0.996 |
| 17) | | MTBE | 0.794 | 0.744 | 0.740 | 0.760 | 0.772 | 0.735 | 0.758 | 2.98 | |
| 18) | | trans-1,2-Dich... | 0.221 | 0.232 | 0.225 | 0.229 | 0.235 | 0.221 | 0.227 | 2.57 | |
| 19) | P | 1,1-Dichloroet... | 0.376 | 0.386 | 0.383 | 0.388 | 0.384 | 0.372 | 0.382 | 1.62 | |
| 20) | | 2-Butanone | 0.043 | 0.038 | 0.039 | 0.041 | 0.040 | 0.042 | 0.040 | 4.99 | |
| 21) | | Ethyl Acetate | 0.290 | 0.279 | 0.281 | 0.293 | 0.302 | 0.314 | 0.293 | 4.44 | |
| 22) | | cis-1,2-Dichlo... | 0.246 | 0.241 | 0.242 | 0.244 | 0.242 | 0.232 | 0.241 | 2.05 | |
| 23) | | Ethyl Cyanide | 0.048 | 0.043 | 0.047 | 0.045 | 0.048 | 0.045 | 0.046 | 4.17 | |
| 24) | C | CHLOROFORM | 0.403 | 0.367 | 0.361 | 0.367 | 0.376 | 0.344 | 0.369 | 5.24# | |
| 25) | | Methacrylonitrile | 0.168 | 0.168 | 0.167 | 0.174 | 0.171 | 0.171 | 0.170 | 1.48 | |
| 26) | | Tetrahydrofuran | 0.092 | 0.087 | 0.088 | 0.091 | 0.093 | 0.087 | 0.090 | 2.73 | |
| 27) | | Bromochloromet... | 0.105 | 0.111 | 0.109 | 0.109 | 0.111 | 0.102 | 0.108 | 3.19 | |
| 28) | | 2,2-Dichloropr... | 0.263 | 0.221 | 0.244 | 0.240 | 0.248 | 0.226 | 0.240 | 6.27 | |
| 29) | | Diethyl ether | 0.229 | 0.216 | 0.210 | 0.217 | 0.227 | 0.208 | 0.218 | 4.03 | |
| 30) | | 1,1,1-Trichlor... | 0.289 | 0.310 | 0.310 | 0.313 | 0.311 | 0.308 | 0.307 | 2.88 | |
| 31) | | Iodomethane | 0.321 | 0.333 | 0.324 | 0.324 | 0.327 | 0.315 | 0.324 | 1.82 | |
| 32) | S | Dibromofluorom... | 0.243 | 0.237 | 0.239 | 0.231 | 0.243 | 0.224 | 0.236 | 3.19 | |
| 33) | | 1,1-Dichloropr... | 0.104 | 0.105 | 0.104 | 0.111 | 0.106 | 0.107 | 0.106 | 2.51 | |
| 34) | S | 1,2-Dichloroet... | 0.287 | 0.286 | 0.282 | 0.278 | 0.286 | 0.271 | 0.282 | 2.29 | |
| 35) | | Carbon Tetrach... | 0.249 | 0.266 | 0.272 | 0.280 | 0.271 | 0.281 | 0.270 | 4.34 | |
| 36) | | 1,2-Dichloroet... | 0.271 | 0.283 | 0.273 | 0.288 | 0.281 | 0.271 | 0.278 | 2.50 | |
| 37) | | Isobutanol | 0.017 | 0.014 | 0.017 | 0.016 | 0.016 | 0.016 | 0.016 | 6.19 | |
| 38) | | Benzene | 0.839 | 0.882 | 0.858 | 0.904 | 0.872 | 0.866 | 0.870 | 2.51 | |
| 39) | | n-Hexane | 0.529 | 0.401 | 0.431 | 0.429 | 0.437 | 0.426 | 0.442 | 10.01 | |
| 40) | | Trichloroethene | 0.223 | 0.230 | 0.225 | 0.234 | 0.228 | 0.227 | 0.228 | 1.81 | |
| 41) | | n-Butanol | 0.015 | 0.013 | 0.015 | 0.014 | 0.014 | 0.014 | 0.014 | 5.62 | |
| 42) | C | 1,2-DICHLOROPR... | 0.196 | 0.199 | 0.196 | 0.210 | 0.191 | 0.212 | 0.201 | 4.15# | |
| 43) | | 1,4-Dioxane | 0.008 | 0.006 | 0.008 | 0.006 | 0.007 | 0.005 | 0.007 | 20.43 | — QDR 0.99 |
| 44) | | Methyl Methacr... | 0.198 | 0.187 | 0.193 | 0.206 | 0.192 | 0.240 | 0.203 | 9.49 | |
| 45) | | Bromodichlorom... | 0.237 | 0.235 | 0.239 | 0.258 | 0.233 | 0.259 | 0.243 | 4.82 | |
| 46) | | Dibromomethane | 0.124 | 0.121 | 0.121 | 0.127 | 0.121 | 0.124 | 0.123 | 1.95 | |
| 47) | | 4-Methyl-2-Pen... | 0.350 | 0.300 | 0.300 | 0.309 | 0.311 | 0.323 | 0.316 | 5.94 | |
| 48) | | 2-Chloroethylv... | 0.124 | 0.135 | 0.135 | 0.149 | 0.131 | 0.178 | 0.142 | 13.77 | |
| 49) | | cis-1,3-Dichlo... | 0.277 | 0.290 | 0.297 | 0.329 | 0.282 | 0.348 | 0.304 | 9.32 | |
| 50) | S | Toluene-d8 | 0.871 | 0.885 | 0.898 | 0.890 | 0.880 | 0.969 | 0.899 | 3.96 | |
| 51) | C | TOLUENE | 0.806 | 0.848 | 0.849 | 0.895 | 0.829 | 0.957 | 0.864 | 6.27# | |
| 52) | | trans-1,3-Dich... | 0.203 | 0.223 | 0.240 | 0.264 | 0.227 | 0.301 | 0.243 | 14.27 | |
| 53) | | 1,1,2-Trichlor... | 0.162 | 0.164 | 0.167 | 0.176 | 0.163 | 0.193 | 0.171 | 7.01 | |
| 54) | | Carbon Tetrach... | 0.34 | | | | | 0.381 | 0.370 | 4.34 | |
| 55) | | 1,2-Dich oroet... | 0.27 | | | | | 0.275 | 0.278 | 2.80 | |

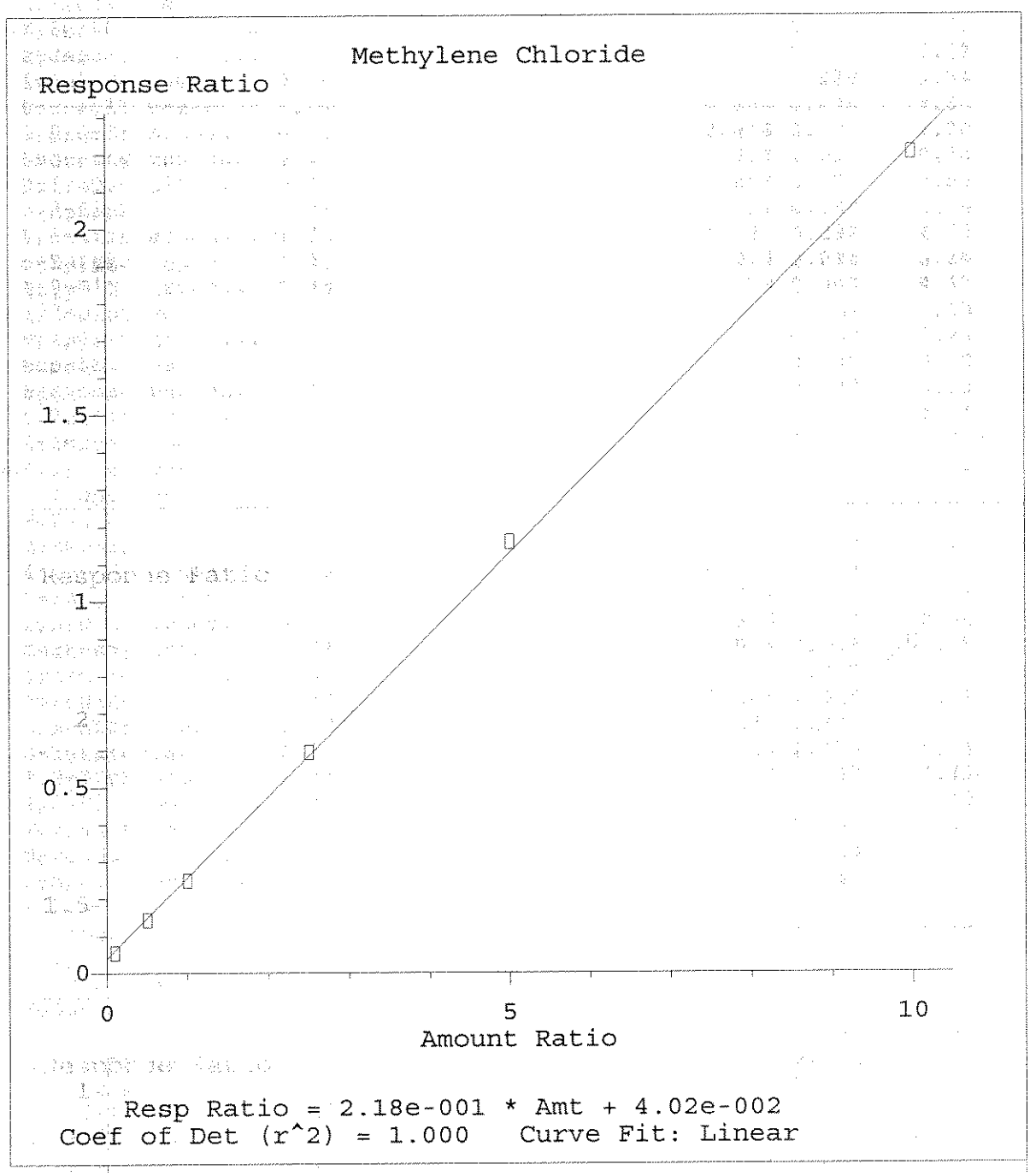
59169b

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 55) | I | 2-Bromo-1-chloropr... | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | |
| 56) | | 2-Hexanone | 0.701 | 0.612 | 0.609 | 0.627 | 0.642 | 0.716 | 0.651 | 7.11 |
| 57) | | 1,3-Dichloropr... | 0.832 | 0.936 | 0.932 | 1.012 | 0.916 | 1.087 | 0.953 | 9.17 |
| 58) | | Ethyl Methacry... | 0.880 | 0.843 | 0.856 | 0.916 | 0.837 | 1.045 | 0.896 | 8.74 |
| 59) | | Tetrachloroethene | 0.644 | 0.803 | 0.734 | 0.759 | 0.720 | 0.768 | 0.738 | 7.36 |
| 60) | | Dibromochlorom... | 0.457 | 0.487 | 0.519 | 0.576 | 0.478 | 0.616 | 0.522 | 11.86 |
| 61) | P | Chlorobenzene | 1.580 | 1.718 | 1.700 | 1.825 | 1.667 | 1.908 | 1.733 | 6.74 |
| 62) | | 1,1,1,2-Tetrac... | 0.568 | 0.615 | 0.616 | 0.675 | 0.590 | 0.662 | 0.621 | 6.60 |
| 63) | C | ETHYL BENZENE | 0.869 | 0.954 | 0.956 | 1.011 | 0.938 | 1.051 | 0.963 | 6.52# |
| 64) | | m,p-Xylene | 1.125 | 1.203 | 1.188 | 1.237 | 1.168 | 1.289 | 1.202 | 4.72 |
| 65) | | o-Xylene | 1.075 | 1.233 | 1.218 | 1.282 | 1.219 | 1.283 | 1.218 | 6.24 |
| 66) | | Styrene | 1.722 | 1.899 | 1.916 | 2.043 | 1.906 | 2.173 | 1.943 | 7.82 |
| 67) | P | Bromoform | 0.304 | 0.304 | 0.348 | 0.396 | 0.309 | 0.442 | 0.351 | 16.35 |
| 68) | P | 1,1,2,2-Tetrac... | 0.847 | 0.875 | 0.877 | 0.902 | 0.885 | 0.937 | 0.887 | 3.41 |
| 69) | S | 4-Bromofluorob... | 0.824 | 0.833 | 0.842 | 0.832 | 0.849 | 0.943 | 0.854 | 5.20 |
| 70) | | Isopropylbenzene | 2.640 | 2.881 | 2.873 | 3.043 | 2.799 | 3.074 | 2.885 | 5.55 |
| 71) | | trans-1,4-Dich... | 0.228 | 0.229 | 0.250 | 0.273 | 0.231 | 0.296 | 0.251 | 11.11 |
| 72) | | Bromobenzene | 1.125 | 1.146 | 1.142 | 1.215 | 1.180 | 1.279 | 1.181 | 4.88 |
| 73) | | 1,2,3-Trichlor... | 0.281 | 0.271 | 0.280 | 0.287 | 0.285 | 0.298 | 0.284 | 3.08 |
| 74) | | n-Propylbenzene | 0.388 | 0.400 | 0.407 | 0.419 | 0.399 | 0.433 | 0.408 | 3.95 |
| 75) | | 1,3,5-Trimethy... | 2.430 | 2.748 | 2.764 | 2.906 | 2.688 | 2.897 | 2.739 | 6.36 |
| 76) | | 2-Chlorotoluene | 0.744 | 0.751 | 0.742 | 0.784 | 0.775 | 0.793 | 0.765 | 2.87 |
| 77) | | 4-Chlorotoluene | 0.652 | 0.716 | 0.728 | 0.741 | 0.728 | 0.772 | 0.723 | 5.51 |
| 78) | | t-Butylbenzene | 1.282 | 1.522 | 1.526 | 1.669 | 1.426 | 1.655 | 1.513 | 9.61 |
| 79) | | 1,2,4-Trimethy... | 2.629 | 2.778 | 2.795 | 2.893 | 2.740 | 2.954 | 2.798 | 4.10 |
| 80) | | sec-Butylbenzene | 3.274 | 3.621 | 3.627 | 3.862 | 3.507 | 3.883 | 3.629 | 6.28 |
| 81) | | p-Isopropyltol... | 2.781 | 3.027 | 3.063 | 3.208 | 2.974 | 3.248 | 3.050 | 5.54 |
| 82) | | 1,3-Dichlorobe... | 1.475 | 1.465 | 1.466 | 1.490 | 1.515 | 1.531 | 1.490 | 1.84 |
| 83) | | 1,4-Dichlorobe... | 1.420 | 1.477 | 1.502 | 1.512 | 1.505 | 1.541 | 1.493 | 2.76 |
| 84) | | n-Butylbenzene | 1.508 | 1.567 | 1.626 | 1.642 | 1.585 | 1.630 | 1.593 | 3.18 |
| 85) | | 1,2-Dichlorobe... | 1.484 | 1.490 | 1.506 | 1.506 | 1.513 | 1.499 | 1.500 | 0.73 |
| 86) | | 1,2-Dibromo-3-... | 0.204 | 0.204 | 0.229 | 0.234 | 0.215 | 0.234 | 0.220 | 6.40 |
| 87) | | 1,2,4-Trichlor... | 1.187 | 1.193 | 1.235 | 1.183 | 1.230 | 1.092 | 1.187 | 4.35 |
| 88) | | Naphthalene | 3.493 | 3.493 | 3.644 | 3.546 | 3.674 | 3.300 | 3.525 | 3.79 |
| 89) | | Hexachlorobuta... | 0.521 | 0.527 | 0.545 | 0.536 | 0.554 | 0.544 | 0.538 | 2.30 |
| 90) | | 1,2,3-Trichlor... | 1.199 | 1.149 | 1.186 | 1.130 | 1.230 | 1.032 | 1.154 | 6.05 |

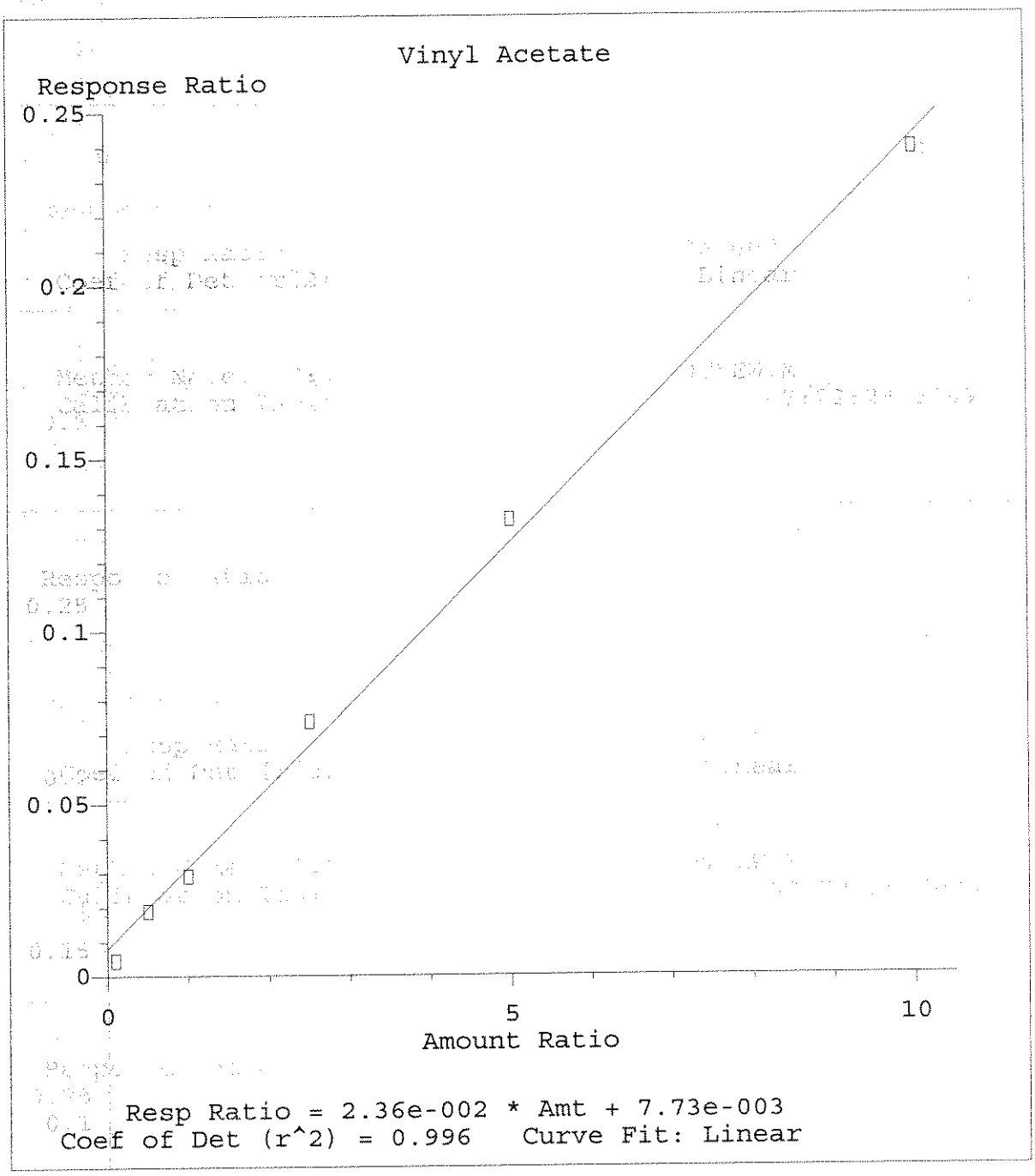
(#) = Out of Range

8260TNEW.M Sun Nov 01 07:22:31 2009

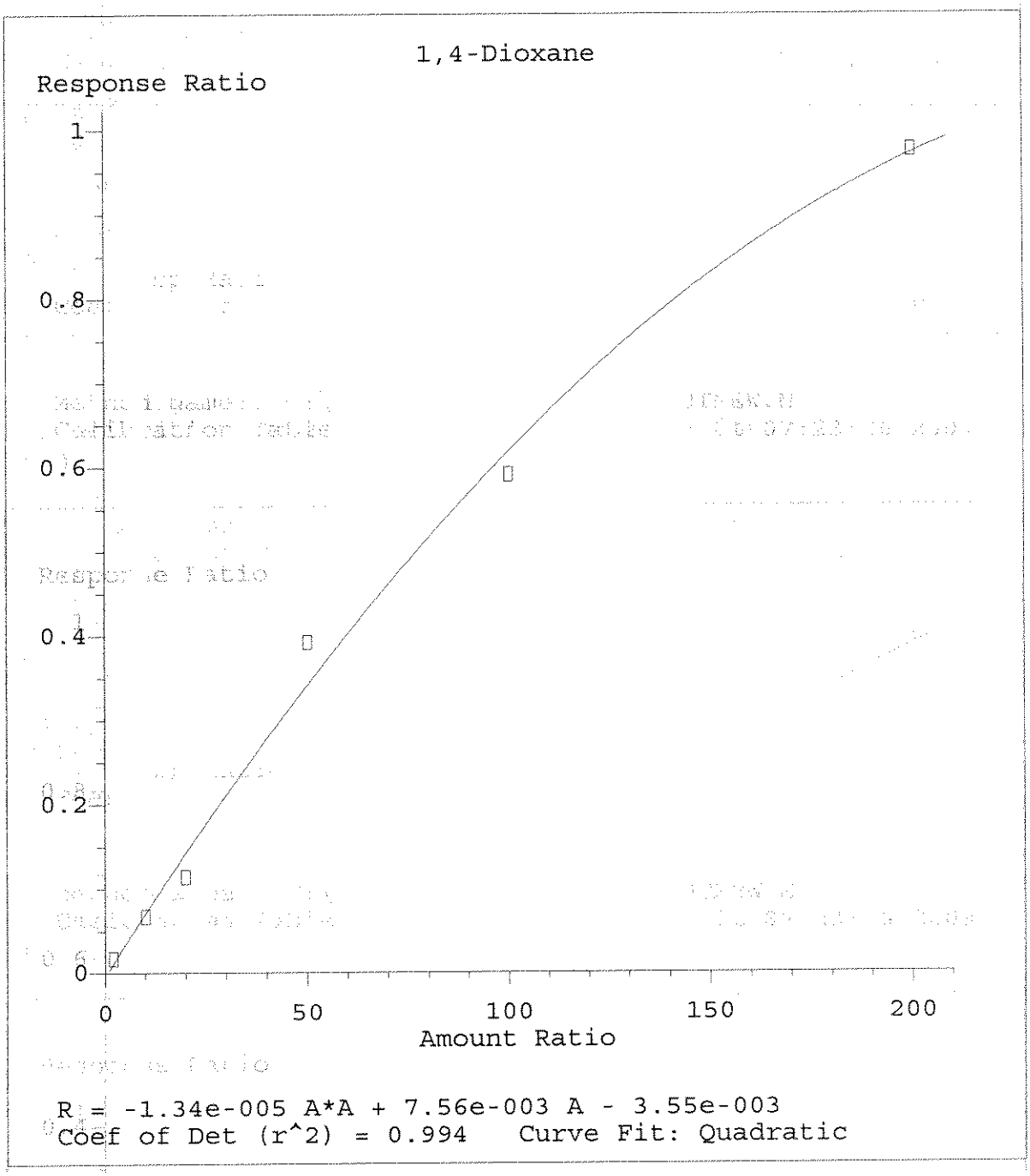
59169b




Method Name: C:\msdchem\1\METHODS\8260TNEW.M
Calibration Table Last Updated: Sun Nov 01 07:22:28 2009




Method Name: C:\msdchem\1\METHODS\8260TNEW.M
Calibration Table Last Updated: Sun Nov 01 07:23:26 2009




Method Name: C:\msdchem\1\METHODS\8260TNEW.M
Calibration Table Last Updated: Sun Nov 01 07:23:43 2009

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4991T.D
Acq On : 31 Oct 2009 8:40
Operator : HAROLD
Sample : VSTD001
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 01 07:21:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 678760 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 214311 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 164925 | 9.63 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.30% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 194472 | 9.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 591107 | 9.49 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 176645 | 9.92 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 99.20% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 10555 | 0.75 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 19157 | 0.85 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 16410 | 0.71 | UG/L | 96 |
| 5) Bromomethane | 1.481 | 94 | 7497 | 0.92 | UG/L # | 63 |
| 6) Chloroethane | 1.560 | 64 | 9852 | 0.88 | UG/L | 99 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 20815 | 0.87 | UG/L # | 77 |
| 8) Acrolein | 2.040 | 56 | 15214m | 75.25 | UG/L | |
| 9) Acetone | 2.161 | 43 | 38716m | Below Cal | | |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 13149 | 0.83 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.133 | 101 | 14814 | 0.76 | UG/L | 99 |
| 12) Acrylonitrile | 2.734 | 53 | 56975 | 8.17 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 41134 | 0.74 | UG/L | 98 |
| 14) Methylene Chloride | 2.512 | 84 | 37375 | Below Cal | # | 72 |
| 15) Allyl Chloride | 2.412 | 41 | 51318 | 0.68 | UG/L | 100 |
| 17) MTBE | 2.756 | 73 | 53890 | 0.85 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 14974 | 0.84 | UG/L # | 93 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 25505 | 0.75 | UG/L | 100 |
| 20) 2-Butanone | 3.701 | 72 | 14649 | 4.84 | UG/L # | 32 |
| 21) Ethyl Acetate | 3.766 | 43 | 19691 | 0.67 | UG/L # | 192 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 16730 | 0.91 | UG/L | 186 |
| 23) Ethyl Cyanide | 3.759 | 54 | 32588 | 7.07 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 27325 | 0.95 | UG/L # | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 113869 | 6.55 | UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 77678 | 8.80 | UG/L # | 80 |

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4991T.D
Acq On : 31 Oct 2009 8:40
Operator : HAROLD
Sample : VSTD001
Misc :
ALS Vial : 2 Sample Multiplier: 1
Quant Time: Nov 01 07:21:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 27) Bromochloromethane | 3.902 | 128 | 7160 | 0.82 | UG/L # | 65 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 17827 | 0.95 | UG/L | 92 |
| 29) Diethyl ether | 1.932 | 59 | 15554 | 0.75 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.160 | 97 | 19625 | 0.81 | UG/L | 97 |
| 31) Iodomethane | 2.233 | 142 | 21795 | 0.81 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 7083 | 0.89 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 16895 | 0.78 | UG/L | 100 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 18415 | 0.81 | UG/L | 93 |
| 37) Isobutanol | 4.504 | 43 | 96350 | 56.46 | UG/L # | 91 |
| 38) Benzene | 4.532 | 78 | 56962 | 0.94 | UG/L | 100 |
| 39) n-Hexane | 2.999 | 57 | 35911 | 0.92 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 15121 | 0.92 | UG/L | 95 |
| 41) n-Butanol | 5.213 | 56 | 52394 | 35.75 | UG/L # | 86 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 13298 | 0.84 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 11369 | 28.31 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 13473 | 0.70 | UG/L # | 89 |
| 45) Bromodichloromethane | 5.786 | 83 | 16083 | 0.94 | UG/L | 94 |
| 46) Dibromomethane | 5.593 | 93 | 8437 | 0.97 | UG/L | 88 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 118619 | 3.77 | UG/L # | 97 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 8420 | 0.71 | UG/L | 91 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 18777 | 1.92 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 54679 | 0.93 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 13780 | 1.91 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 10987 | 0.92 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.784 | 107 | 11253 | 0.89 | UG/L | 92 |
| 56) 2-Hexanone | 7.534 | 43 | 75164 | 3.72 | UG/L # | 90 |
| 57) 1,3-Dichloropropane | 7.390 | 76 | 17831 | 0.94 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 18851 | 1.07 | UG/L | 87 |
| 59) Tetrachloroethene | 7.340 | 166 | 13805 | 0.85 | UG/L | 99 |
| 60) Dibromochloromethane | 7.655 | 129 | 9800 | 1.84 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 33858 | 0.94 | UG/L # | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 12168 | 0.87 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 18624 | 0.91 | UG/L | 72 |
| 64) m,p-Xylene | 8.744 | 106 | 48225 | 1.90 | UG/L # | 65 |
| 65) o-Xylene | 9.253 | 106 | 23043 | 0.86 | UG/L # | 72 |
| 66) Styrene | 9.281 | 104 | 36907 | 0.88 | UG/L # | 87 |
| 67) Bromoform | 9.482 | 173 | 6519 | 2.42 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 18146 | 0.96 | UG/L | 96 |
| 70) Isopropylbenzene | 9.718 | 105 | 56587 | 0.88 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 9764 | 4.24 | UG/L # | 114 |
| 72) Bromobenzene | 10.026 | 77 | 24112 | 0.96 | UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 6030 | 0.91 | UG/L | 100 |

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4991T.D
Acq On : 31 Oct 2009 8:40
Operator : HAROLD
Sample : VSTD001
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 01 07:21:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 74) n-Propylbenzene | 10.184 | 92 | 8320 | 0.95 | UG/L | | 91 |
| 75) 1,3,5-Trimethylbenzene | 10.392 | 105 | 52069 | 0.84 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 15937 | 0.92 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 13967 | 0.84 | UG/L | | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 27466 | 0.82 | UG/L | # | 66 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 56341 | 0.89 | UG/L | | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 70155 | 0.86 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 59606 | 0.86 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 31611 | 0.94 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 30436 | 0.89 | UG/L | | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 32324 | 0.90 | UG/L | | 94 |
| 85) 1,2-Dichlorobenzene | 11.473 | 146 | 31806 | 0.93 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.197 | 157 | 4380 | 0.82 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 25443 | 0.95 | UG/L | | 100 |
| 88) Naphthalene | 13.099 | 128 | 74862 | 0.90 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 11161 | 0.92 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 25693 | 1.01 | UG/L | | 100 |

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



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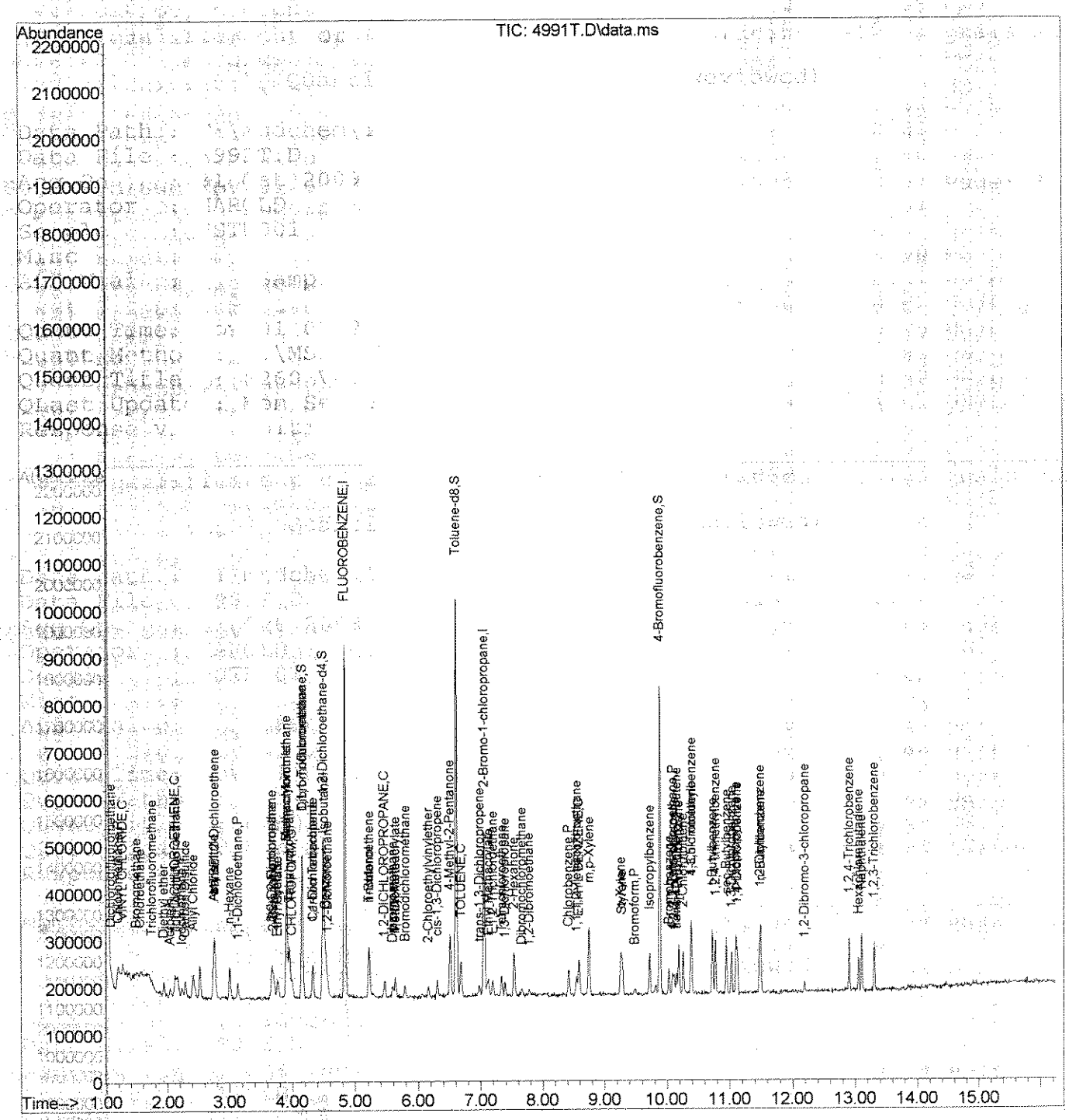
Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4991T.D
Acq On : 31 Oct 2009 8:40
Operator : HAROLD
Sample : VSTD001
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 01 07:21:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration






59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4993T.D
Acq On : 31 Oct 2009 9:31
Operator : HAROLD
Sample : VSTD005
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 31 08:47:59 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 666404 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 211974 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 161662 | 9.62 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.20% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 190891 | 9.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 586531 | 9.60 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.00% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 179920 | 10.21 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = | 102.10% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 49188 | 3.54 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 70194 | 3.17 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 80872 | 3.54 | UG/L | 96 |
| 5) Bromomethane | 1.488 | 94 | 35180 | 4.41 | UG/L | 98 |
| 6) Chloroethane | 1.560 | 64 | 45824 | 4.17 | UG/L | 93 |
| 7) Trichlorofluoromethane | 1.739 | 101 | 101650 | 4.33 | UG/L # | 77 |
| 8) Acrolein | 2.040 | 56 | 55316 | 327.41 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 182844 | 11.99 | UG/L | 97 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 66647 | 4.31 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 78753 | 4.14 | UG/L | 96 |
| 12) Acrylonitrile | 2.735 | 53 | 233742 | 34.14 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 208762 | 3.84 | UG/L | 99 |
| 14) Methylene Chloride | 2.520 | 84 | 95159 | 3.36 | UG/L # | 74 |
| 15) Allyl Chloride | 2.412 | 41 | 243358 | 3.31 | UG/L | 100 |
| 16) Vinyl Acetate | 3.200 | 43 | 12491 | 0.23 | UG/L # | 1 |
| 17) MTBE | 2.756 | 73 | 257369 | 4.16 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 78311 | 4.49 | UG/L | 96 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 127874 | 3.82 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 65927 | 22.19 | UG/L # | 38 |
| 21) Ethyl Acetate | 3.766 | 43 | 100726 | 3.49 | UG/L # | 91 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 80788 | 4.47 | UG/L | 94 |
| 23) Ethyl Cyanide | 3.759 | 54 | 159180 | 35.15 | UG/L | 100 |
| 24) CHLOROFORM | 3.995 | 83 | 125219 | 4.44 | UG/L | 97 |
| 25) Methacrylonitrile | 3.902 | 41 | 569192 | 33.36 | UG/L # | 100 |



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Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4993T.D
Acq On : 31 Oct 2009 9:31
Operator : HAROLD
Sample : VSTD005
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 31 08:47:59 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 387252 | 44.69 | UG/L # | 81 |
| 27) Bromochloromethane | 3.902 | 128 | 36839 | 4.29 | UG/L | 92 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 82515 | 4.50 | UG/L | 89 |
| 29) Diethyl ether | 1.932 | 59 | 75755 | 3.70 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 103574 | 4.36 | UG/L | 99 |
| 31) Iodomethane | 2.233 | 142 | 108993 | 4.13 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 35287 | 4.53 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 90269 | 4.24 | UG/L | 93 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 93573 | 4.20 | UG/L | 97 |
| 37) Isobutanol | 4.504 | 43 | 441972 | 263.81 | UG/L # | 95 |
| 38) Benzene | 4.533 | 78 | 290649 | 4.87 | UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 145482 | 3.81 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 75992 | 4.70 | UG/L | 93 |
| 41) n-Butanol | 5.213 | 56 | 236898 | 164.65 | UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 63765 | 4.09 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 44436 | 112.69 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 63893 | 3.40 | UG/L # | 92 |
| 45) Bromodichloromethane | 5.786 | 83 | 77578 | 4.60 | UG/L | 100 |
| 46) Dibromomethane | 5.593 | 93 | 40326 | 4.70 | UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 517872 | 16.76 | UG/L # | 88 |
| 48) 2-Chloroethylvinylether | 6.159 | 63 | 43712 | 3.74 | UG/L | 91 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 94096 | 5.25 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 276390 | 4.80 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 75503 | 5.22 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 54442 | 4.65 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 55445 | 4.46 | UG/L | 100 |
| 56) 2-Hexanone | 7.534 | 43 | 340188 | 17.04 | UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.391 | 76 | 97061 | 5.15 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 88749 | 5.10 | UG/L # | 65 |
| 59) Tetrachloroethene | 7.333 | 166 | 76324 | 4.74 | UG/L | 96 |
| 60) Dibromochloromethane | 7.656 | 129 | 50694 | 5.11 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 176632 | 4.98 | UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 62532 | 4.53 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 99390 | 4.89 | UG/L | 74 |
| 64) m,p-Xylene | 8.744 | 106 | 247487 | 9.86 | UG/L # | 60 |
| 65) o-Xylene | 9.253 | 106 | 129171 | 4.89 | UG/L | 84 |
| 66) Styrene | 9.274 | 104 | 202006 | 4.88 | UG/L | 88 |
| 67) Bromoform | 9.482 | 173 | 32795 | 5.35 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 93792 | 5.00 | UG/L | 99 |
| 70) Isopropylbenzene | 9.719 | 105 | 296616 | 4.69 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 49043 | 9.14 | UG/L # | 20 |
| 72) Bromobenzene | 10.027 | 77 | 125044 | 5.04 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4993T.D
Acq On : 31 Oct 2009 9:31
Operator : HAROLD
Sample : VSTD005
Misc :
ALS Vial : 4 Sample Multiplier: 1
Quant Time: Oct 31 08:47:59 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.113 | 110 | 30172 | 4.59 | UG/L | | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 42317 | 4.88 | UG/L | | 84 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 284916 | 4.64 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 82089 | 4.80 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 77173 | 4.72 | UG/L | | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 151176 | 4.55 | UG/L | # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 290418 | 4.64 | UG/L | | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 371744 | 4.63 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 315215 | 4.61 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 160594 | 4.84 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 159561 | 4.71 | UG/L | | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 168017 | 4.72 | UG/L | | 197 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 160394 | 4.73 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 22773 | 4.32 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 130408 | 4.94 | UG/L | | 100 |
| 88) Naphthalene | 13.100 | 128 | 389350 | 4.75 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 58739 | 4.91 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 130351 | 5.20 | UG/L | | 100 |

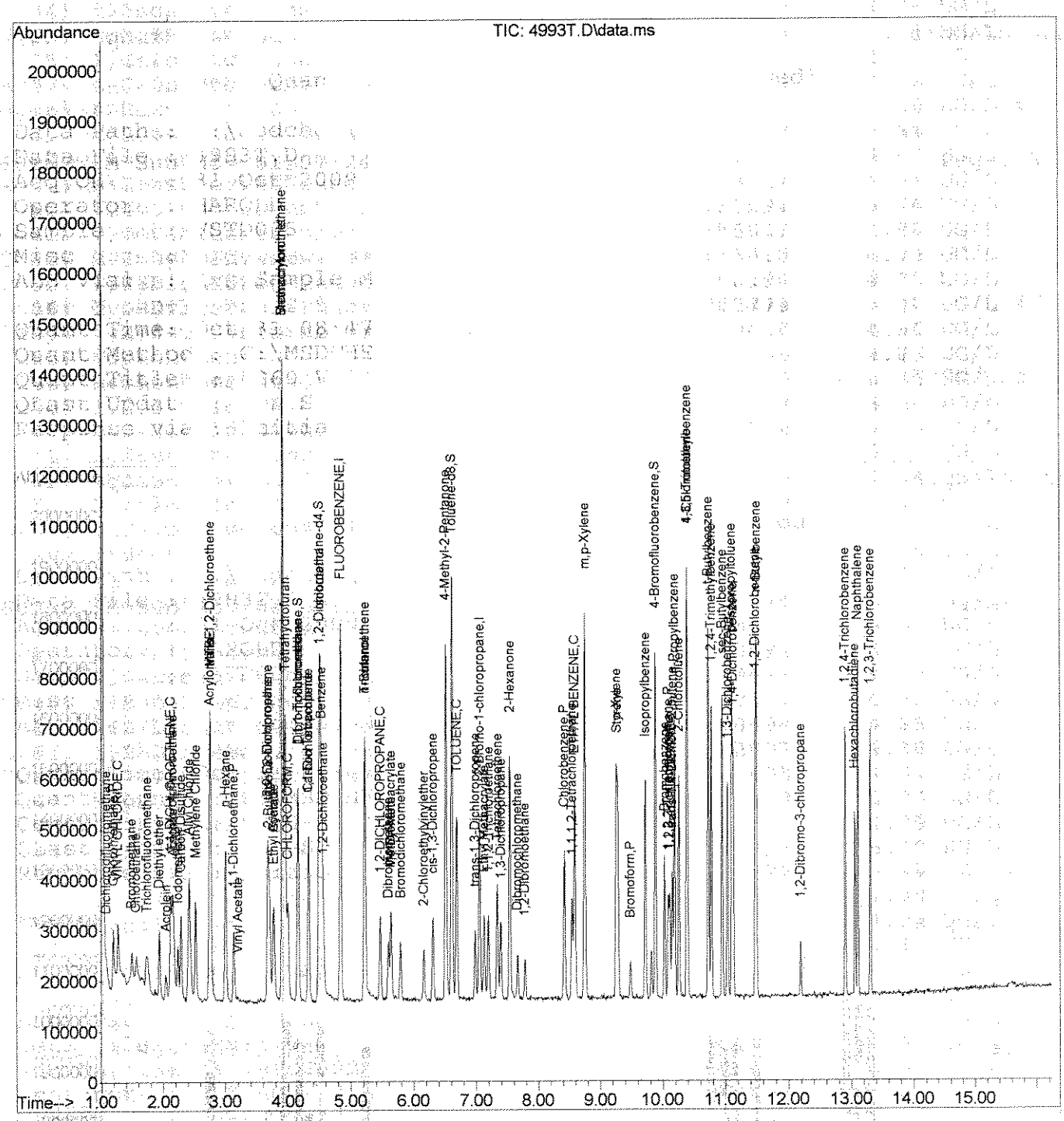
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4993T.D
Acq On : 31 Oct 2009 9:31
Operator : HAROLD
Sample : VSTD005
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 31 08:47:59 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\T103109\
Data File : 5003T.D
Acq On : 31 Oct 2009 13:47
Operator : HAROLD
Sample : VSTD010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 31 13:03:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 682833 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 212348 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 162053 | 9.41 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 195561 | 9.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 604496 | 9.65 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.50% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 176858 | 10.02 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.20% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 96338 | 6.76 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 138115 | 6.09 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 162808 | 6.96 | UG/L | 99 |
| 5) Bromomethane | 1.488 | 94 | 76965 | 9.41 | UG/L | 97 |
| 6) Chloroethane | 1.560 | 64 | 88175 | 7.84 | UG/L | 91 |
| 7) Trichlorofluoromethane | 1.739 | 101 | 202023 | 8.40 | UG/L # | 78 |
| 8) Acrolein | 2.040 | 56 | 122282 | 613.78 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 323497 | 24.39 | UG/L | 94 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 136896 | 8.63 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 152586 | 7.83 | UG/L | 97 |
| 12) Acrylonitrile | 2.734 | 53 | 463184 | 66.03 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 419467 | 7.52 | UG/L | 99 |
| 14) Methylene Chloride | 2.520 | 84 | 169900 | 7.70 | UG/L # | 73 |
| 15) Allyl Chloride | 2.412 | 41 | 469326 | 16.22 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 19707 | 0.36 | UG/L # | 70 |
| 17) MTBE | 2.756 | 73 | 508219 | 8.01 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 158222 | 8.85 | UG/L | 98 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 263804 | 7.70 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 129026 | 42.38 | UG/L # | 100 |
| 21) Ethyl Acetate | 3.766 | 43 | 190685 | 6.46 | UG/L # | 100 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 164377 | 8.87 | UG/L | 99 |
| 23) Ethyl Cyanide | 3.759 | 54 | 296527 | 63.91 | UG/L | 100 |
| 24) CHLOROFORM | 3.995 | 83 | 250924 | 8.68 | UG/L | 98 |
| 25) Methacrylonitrile | 3.902 | 41 | 1148104 | 65.67 | UG/L # | 100 |
| 8) Acrole | | | | 613.78 | UG/L | 100 |
| 10) 1,1-DI | | | | 8.63 | UG/L | 100 |
| 11) Trichlo | | | 152586 | 7.83 | UG/L | 97 |
| 12) Acrylon | | | 463184 | 66.03 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : M5003T.D
Acq On : 31 Oct 2009 13:47
Operator : HAROLD
Sample : VSTD010
Misc :
ALS Vial : 14 Sample Multiplier: 1
Quant Time: Oct 31 13:03:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 741576 | 83.51 | UG/L # | 78 |
| 27) Bromochloromethane | 3.902 | 128 | 75561 | 8.59 | UG/L | 79 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 151013 | 8.03 | UG/L # | 89 |
| 29) Diethyl ether | 1.932 | 59 | 147454 | 7.03 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 211884 | 8.70 | UG/L | 99 |
| 31) Iodomethane | 2.233 | 142 | 227069 | 8.40 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 71856 | 8.99 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 181782 | 8.33 | UG/L | 94 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 193159 | 8.46 | UG/L | 97 |
| 37) Isobutanol | 4.504 | 43 | 807629 | 470.47 | UG/L # | 97 |
| 38) Benzene | 4.532 | 78 | 602037 | 9.84 | UG/L | 100 |
| 39) n-Hexane | 2.999 | 57 | 273941 | 7.01 | UG/L # | 100 |
| 40) Trichloroethene | 5.220 | 130 | 156906 | 9.46 | UG/L | 96 |
| 41) n-Butanol | 5.206 | 56 | 453133 | 307.37 | UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 135798 | 8.51 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 77565 | 191.98 | UG/L # | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 127657 | 6.63 | UG/L # | 93 |
| 45) Bromodichloromethane | 5.786 | 83 | 160617 | 9.29 | UG/L | 100 |
| 46) Dibromomethane | 5.593 | 93 | 82754 | 9.42 | UG/L | 93 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1025275 | 32.39 | UG/L # | 88 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 92009 | 7.68 | UG/L | 93 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 198358 | 9.63 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 578931 | 9.81 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 152532 | 9.13 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 111693 | 9.31 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 113287 | 8.89 | UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 650122 | 32.50 | UG/L # | 86 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 198809 | 10.52 | UG/L # | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 178935 | 10.27 | UG/L # | 162 |
| 59) Tetrachloroethene | 7.333 | 166 | 170610 | 10.58 | UG/L | 198 |
| 60) Dibromochloromethane | 7.655 | 129 | 103314 | 9.30 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 364831 | 10.28 | UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 130579 | 9.45 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 202527 | 9.94 | UG/L | 177 |
| 64) m&p-Xylene | 8.744 | 106 | 511028 | 20.32 | UG/L # | 66 |
| 65) o-Xylene | 9.253 | 106 | 261727 | 9.89 | UG/L | 182 |
| 66) Styrene | 9.281 | 104 | 403323 | 9.73 | UG/L | 89 |
| 67) Bromoform | 9.482 | 173 | 64495 | 8.86 | UG/L # | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 185798 | 9.88 | UG/L | 99 |
| 70) Isopropylbenzene | 9.718 | 105 | 611737 | 9.65 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 97122 | 15.11 | UG/L # | 116 |
| 72) Bromobenzene | 10.026 | 77 | 243355 | 9.78 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 5003T.D
Acq On : 31 Oct 2009 13:47
Operator : HAROLD
Sample : VSTD010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 31 13:03:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 57642 | 8.75 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 85018 | 9.80 | UG/L | 83 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 583436 | 9.48 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 159525 | 9.31 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 151945 | 9.27 | UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 323260 | 9.70 | UG/L # | 68 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 589893 | 9.41 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 768880 | 9.56 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 642740 | 9.38 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 311038 | 9.36 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 313695 | 9.25 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 332765 | 9.32 | UG/L | 99 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 316343 | 9.31 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 43418 | 8.23 | UG/L # | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 253247 | 9.57 | UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 741652 | 9.03 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 111908 | 9.33 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 243935 | 9.72 | UG/L | 100 |

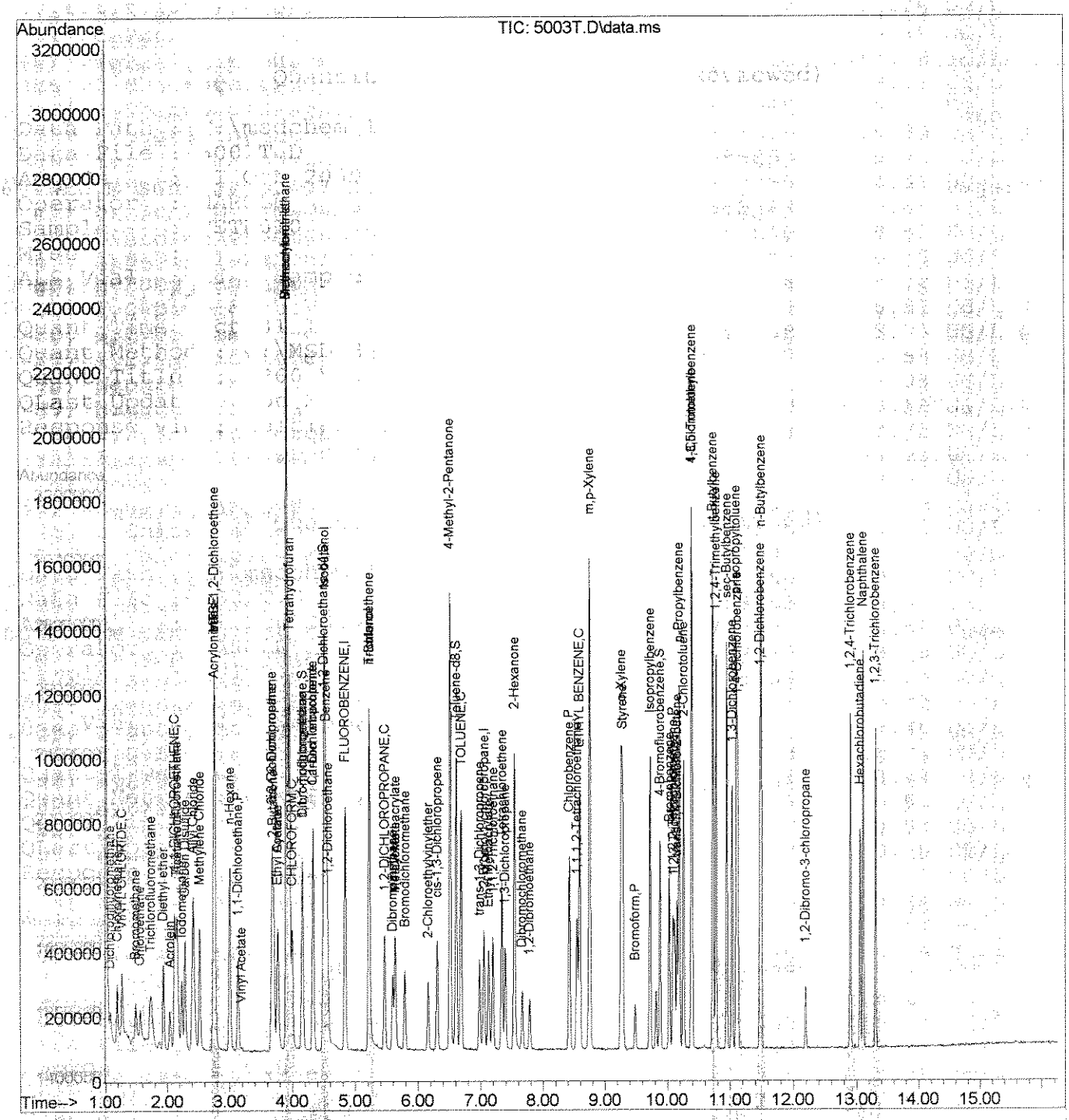
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 5003T.D
Acq On : 31 Oct 2009 13:47
Operator : HAROLD
Sample : VSTD010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 31 13:03:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration






59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 07:19:37 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 670844 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 212663 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 160653 | 9.49 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 189080 | 8.97 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 89.70% | |
| 50) Toluene-d8 | 6.603 | 98 | 602130 | 9.79 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.90% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 179028 | 10.13 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = | 101.30% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.073 | 85 | 235668 | 16.84 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 331554 | 14.89 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 397468 | 17.30 | UG/L | 99 |
| 5) Bromomethane | 1.488 | 94 | 147588 | 18.37 | UG/L | 97 |
| 6) Chloroethane | 1.560 | 64 | 193777 | 17.54 | UG/L | 92 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 499932 | 21.16 | UG/L # | 78 |
| 8) Acrolein | 2.033 | 56 | 261952m | 1067.17 | UG/L | |
| 9) Acetone | 2.154 | 43 | 874773 | 75.99 | UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 331773 | 21.29 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 393533 | 20.56 | UG/L | 97 |
| 12) Acrylonitrile | 2.734 | 53 | 1129239 | 163.86 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 1069023 | 19.51 | UG/L | 99 |
| 14) Methylene Chloride | 2.512 | 84 | 398200 | 21.81 | UG/L # | 71 |
| 15) Allyl Chloride | 2.405 | 41 | 1231161 | 16.61 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 49488 | 0.92 | UG/L # | 70 |
| 17) MTBE | 2.756 | 73 | 1240720 | 19.91 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 378105 | 21.54 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 642658 | 19.09 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 327481 | 109.49 | UG/L # | 133 |
| 21) Ethyl Acetate | 3.766 | 43 | 471880 | 16.26 | UG/L # | 195 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 406146 | 22.30 | UG/L | 91 |
| 23) Ethyl Cyanide | 3.759 | 54 | 795600 | 174.54 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 604763 | 21.30 | UG/L | 100 |
| 25) Methacrylonitrile | 3.902 | 41 | 2799779 | 163.01 | UG/L # | 100 |

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 07:19:37 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 1854849 | 212.62 | UG/L | # | 79 |
| 27) Bromochloromethane | 3.902 | 128 | 183240 | 21.20 | UG/L | | 80 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 409653 | 22.17 | UG/L | | 90 |
| 29) Diethyl ether | 1.932 | 59 | 352319 | 17.10 | UG/L | | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 519143 | 21.70 | UG/L | | 99 |
| 31) Iodomethane | 2.226 | 142 | 544125 | 20.49 | UG/L | | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 174519 | 22.23 | UG/L | | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 456582 | 21.29 | UG/L | | 92 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 458352 | 20.43 | UG/L | | 97 |
| 37) Isobutanol | 4.504 | 43 | 2319648 | 1375.40 | UG/L | # | 96 |
| 38) Benzene | 4.532 | 78 | 1438146 | 23.93 | UG/L | | 100 |
| 39) n-Hexane | 2.992 | 57 | 723505 | 18.84 | UG/L | | 100 |
| 40) Trichloroethene | 5.220 | 130 | 376642 | 23.13 | UG/L | | 95 |
| 41) n-Butanol | 5.206 | 56 | 1286058 | 887.94 | UG/L | | 100 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 328938 | 20.98 | UG/L | | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 262842 | 662.18 | UG/L | | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 323375 | 17.09 | UG/L | # | 91 |
| 45) Bromodichloromethane | 5.779 | 83 | 400556 | 23.57 | UG/L | | 99 |
| 46) Dibromomethane | 5.585 | 93 | 202496 | 23.46 | UG/L | | 91 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 2513725 | 80.82 | UG/L | # | 86 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 225775 | 19.18 | UG/L | | 90 |
| 49) Cis-1,3-Dichloropropene | 6.302 | 75 | 498686 | 22.91 | UG/L | | 100 |
| 51) TOLUENE | 6.681 | 91 | 1423446 | 24.54 | UG/L | | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 402282 | 22.50 | UG/L | | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 280163 | 23.78 | UG/L | | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 284365 | 22.71 | UG/L | | 100 |
| 56) 2-Hexanone | 7.534 | 43 | 1618964 | 80.81 | UG/L | # | 86 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 495728 | 26.20 | UG/L | | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 454996 | 26.07 | UG/L | # | 60 |
| 59) Tetrachloroethene | 7.333 | 166 | 390088 | 24.15 | UG/L | | 99 |
| 60) Dibromochloromethane | 7.663 | 129 | 275982 | 23.02 | UG/L | | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 903732 | 25.42 | UG/L | | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 327756 | 23.67 | UG/L | | 100 |
| 63) ETHYLBENZENE | 8.587 | 106 | 508420 | 24.91 | UG/L | | 97 |
| 64) m,p-Xylene | 8.744 | 106 | 1263138 | 50.14 | UG/L | # | 63 |
| 65) o-Xylene | 9.253 | 106 | 647544 | 24.44 | UG/L | | 81 |
| 66) Styrene | 9.274 | 104 | 1018762 | 24.53 | UG/L | | 89 |
| 67) Bromoform | 9.482 | 173 | 184973 | 22.19 | UG/L | | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 466368 | 24.77 | UG/L | | 99 |
| 70) Isopropylbenzene | 9.718 | 105 | 1527325 | 24.06 | UG/L | | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 266078 | 36.06 | UG/L | # | 129 |
| 72) Bromobenzene | 10.026 | 77 | 606927 | 24.36 | UG/L | | 100 |



59169b

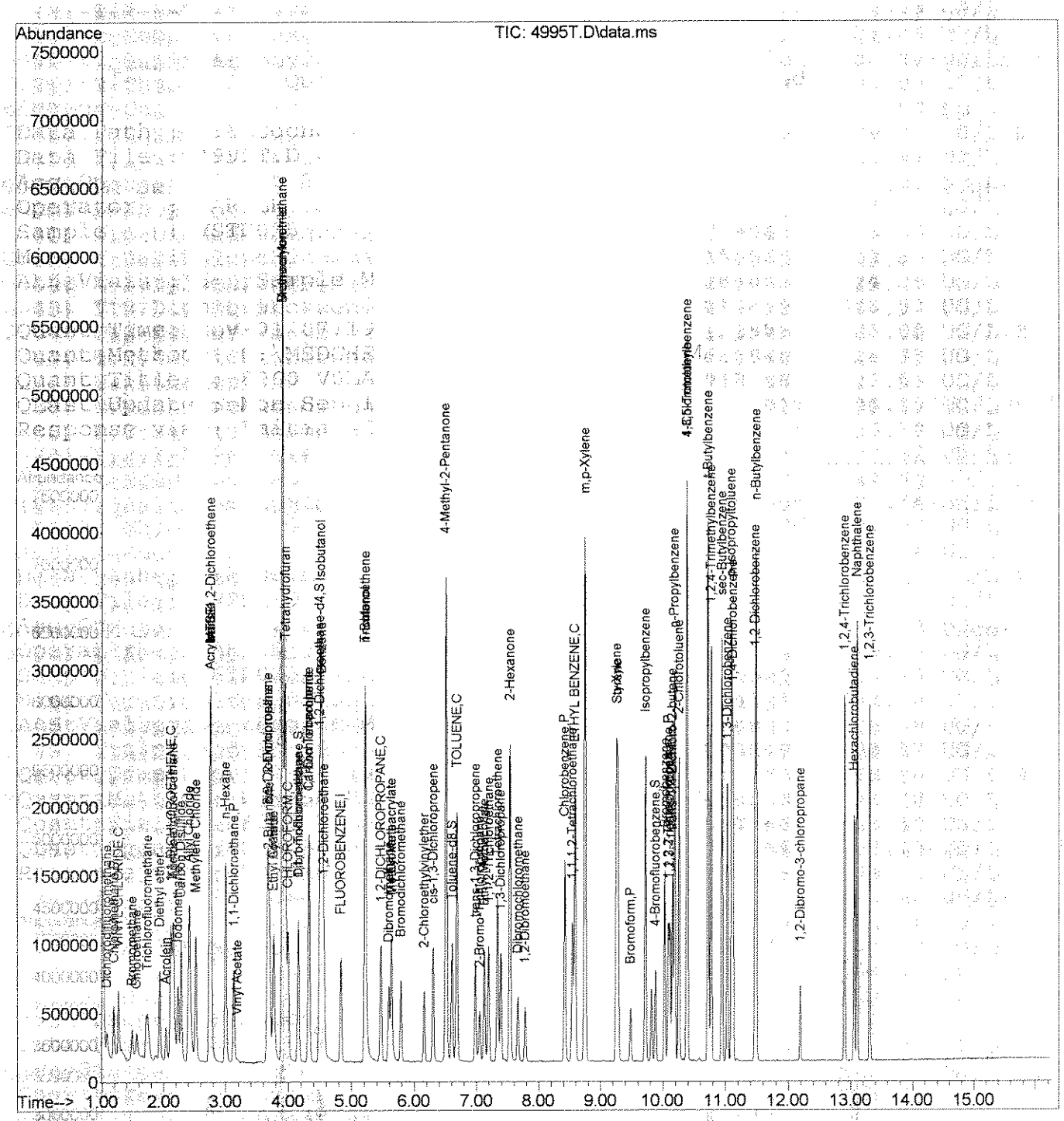
Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1
Quant Time: Nov 01 07:19:37 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 148691 | 22.53 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 216263 | 24.88 | UG/L | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 1469632 | 23.84 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 394459 | 23.00 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 386981 | 23.58 | UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 811570 | 24.32 | UG/L # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 1485761 | 23.67 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 1928193 | 23.94 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 1628687 | 23.74 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 779541 | 23.43 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 798621 | 23.50 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 864645 | 24.19 | UG/L | 99 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 800479 | 23.53 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 121579 | 23.00 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 656849 | 24.78 | UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 1937366 | 23.55 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 289761 | 24.13 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 630735 | 25.10 | UG/L | 100 |

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

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 07:19:37 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

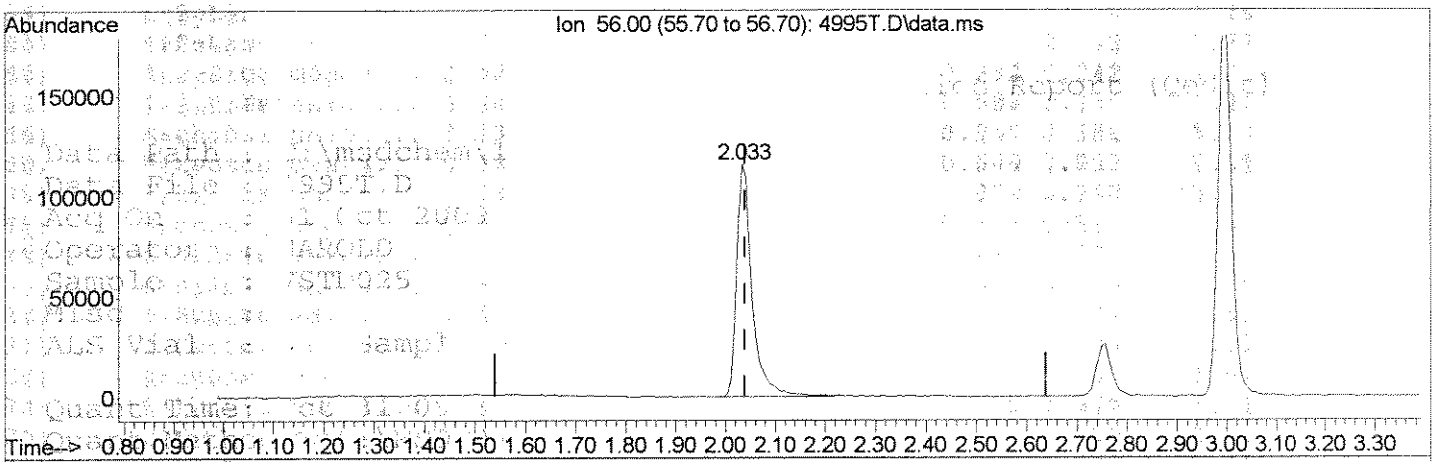


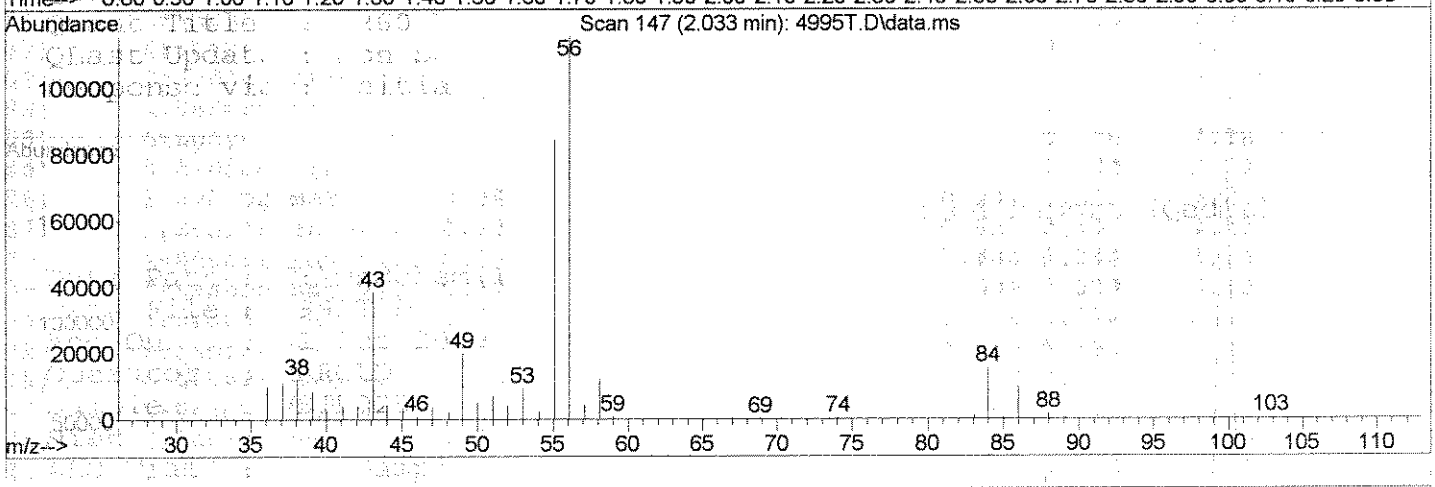



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 31 09:39:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration




TIC: 4995T.D\data.ms

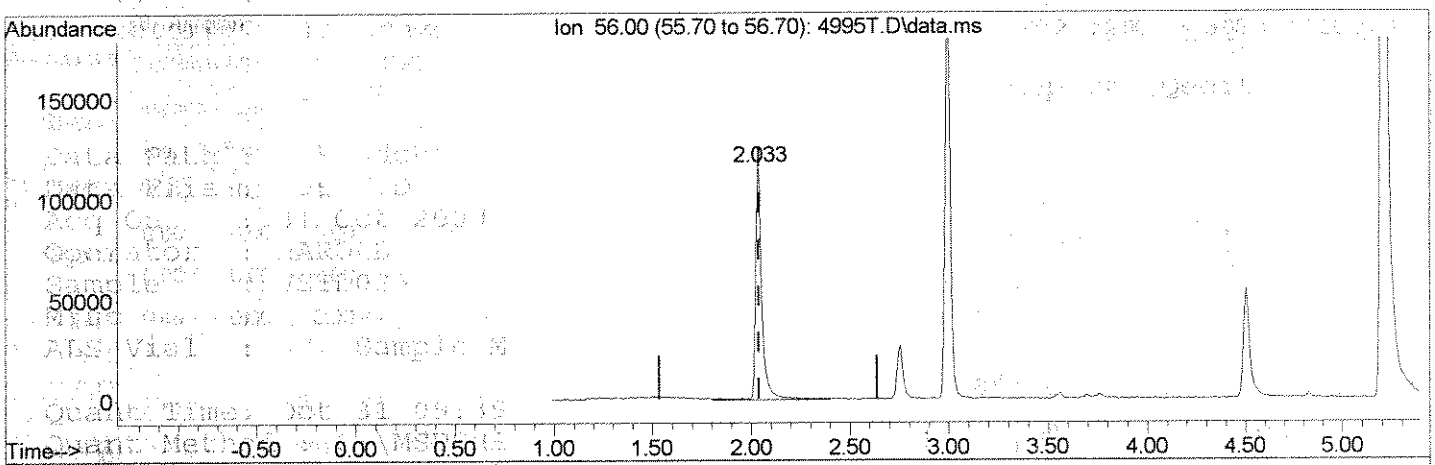
(8) Acrolein
2.033min (-0.006) 1033.71UG/L
response 249817

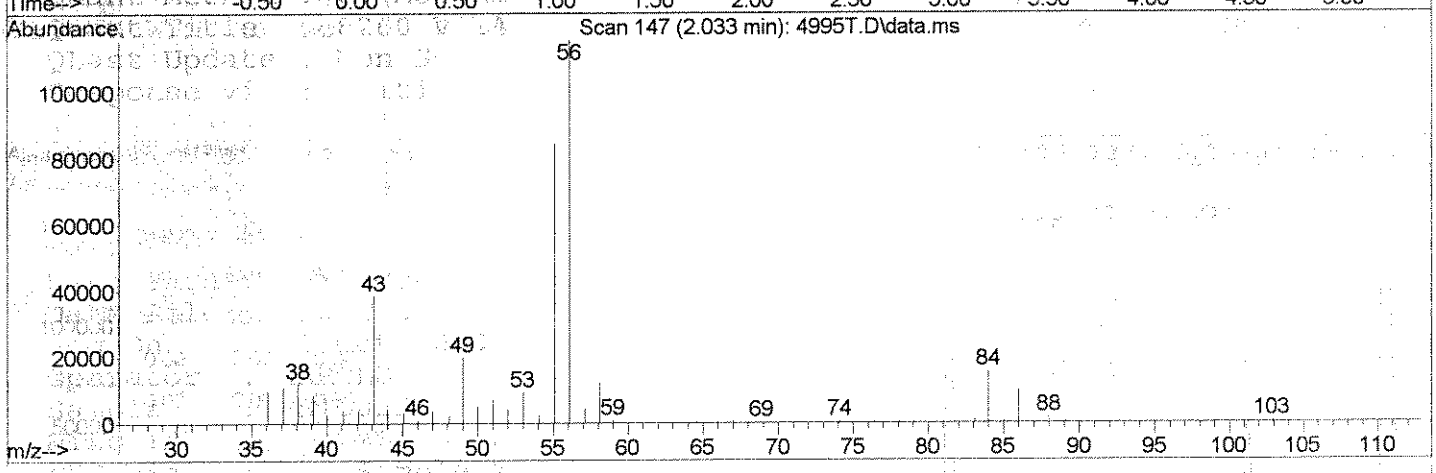
| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

8260TNEW.M Sun Nov 01 07:19:33 2009

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4995T.D
Acq On : 31 Oct 2009 10:22
Operator : HAROLD
Sample : VSTD025
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 31 09:39:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration




TIC: 4995T.D\data.ms

(8) Acrolein
2.033min (-0.006) 1067.17UG/L m
response 261952

| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

8260TNEW.M Sun Nov 01 07:19:40 2009

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4996T.D
Acq On : 31 Oct 2009 10:48
Operator : HAROLD
Sample : VSTD050
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 31 10:04:39 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 736580 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 228852 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 170382 | 9.17 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.70% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 204509 | 8.84 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 88.40% | |
| 50) Toluene-d8 | 6.602 | 98 | 655705 | 9.71 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.10% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 190499 | 10.01 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.10% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.073 | 85 | 497164 | 32.36 | UG/L | 100 |
| 3) Chloromethane | 1.180 | 50 | 713206 | 29.16 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 828923 | 32.86 | UG/L | 100 |
| 5) Bromomethane | 1.481 | 94 | 369194 | 41.85 | UG/L | 99 |
| 6) Chloroethane | 1.560 | 64 | 435650 | 35.91 | UG/L | 92 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 1079081 | 41.60 | UG/L # | 78 |
| 8) Acrolein | 2.032 | 56 | 597774 | 1705.84 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 1777845 | 144.95 | UG/L | 91 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 738332 | 43.15 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 820175 | 39.02 | UG/L | 97 |
| 12) Acrylonitrile | 2.734 | 53 | 2353139 | 310.98 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 2413197 | 40.11 | UG/L | 99 |
| 14) Methylene Chloride | 2.512 | 84 | 852223 | 44.87 | UG/L # | 73 |
| 15) Allyl Chloride | 2.405 | 41 | 2548803 | 31.32 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 97200 | 1.64 | UG/L # | 82 |
| 17) MTBE | 2.756 | 73 | 2799887 | 40.92 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 844534 | 43.82 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 1428362 | 38.64 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 758888 | 231.09 | UG/L # | 136 |
| 21) Ethyl Acetate | 3.766 | 43 | 1077734 | 33.83 | UG/L # | 94 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 899872 | 45.00 | UG/L | 191 |
| 23) Ethyl Cyanide | 3.759 | 54 | 1661284 | 331.93 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 1349939 | 43.30 | UG/L | 99 |
| 25) Methacrylonitrile | 3.909 | 41 | 6389972 | 338.84 | UG/L # | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4996T.D
Acq On : 31 Oct 2009 10:48
Operator : HAROLD
Sample : VSTD050
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 31 10:04:39 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 4181269 | 436.52 | UG/L | # | 78 |
| 27) Bromochloromethane | 3.902 | 128 | 403140 | 42.47 | UG/L | | 79 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 883288 | 43.55 | UG/L | | 91 |
| 29) Diethyl ether | 1.932 | 59 | 797931 | 35.28 | UG/L | | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 1153473 | 43.91 | UG/L | | 100 |
| 31) Iodomethane | 2.226 | 142 | 1192397 | 40.89 | UG/L | | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 409934 | 47.56 | UG/L | | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 1031168 | 43.78 | UG/L | | 93 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 1059937 | 43.03 | UG/L | | 97 |
| 37) Isobutanol | 4.504 | 43 | 4976476 | 2687.40 | UG/L | # | 94 |
| 38) Benzene | 4.532 | 78 | 3328121 | 50.45 | UG/L | | 100 |
| 39) n-Hexane | 2.992 | 57 | 1579665 | 37.46 | UG/L | | 100 |
| 40) Trichloroethene | 5.220 | 130 | 863270 | 48.27 | UG/L | | 96 |
| 41) n-Butanol | 5.213 | 56 | 2680939 | 1685.83 | UG/L | | 100 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 772988 | 44.89 | UG/L | | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 435291 | 998.76 | UG/L | | 100 |
| 44) Methyl Methacrylate | 5.635 | 41 | 758592 | 36.52 | UG/L | # | 93 |
| 45) Bromodichloromethane | 5.786 | 83 | 949463 | 50.89 | UG/L | | 100 |
| 46) Dibromomethane | 5.592 | 93 | 466657 | 49.25 | UG/L | | 92 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 5695697 | 166.79 | UG/L | # | 87 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 549199 | 42.50 | UG/L | | 91 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 1209877 | 49.27 | UG/L | | 100 |
| 51) TOLUENE | 6.681 | 91 | 3296362 | 51.76 | UG/L | | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 971622 | 48.06 | UG/L | | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 649290 | 50.19 | UG/L | | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 666937 | 48.51 | UG/L | | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 3587109 | 166.38 | UG/L | # | 86 |
| 57) 1,3-Dichloropropane | 7.390 | 76 | 1158069 | 56.88 | UG/L | | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 1047837 | 55.79 | UG/L | # | 59 |
| 59) Tetrachloroethene | 7.333 | 166 | 868671 | 49.98 | UG/L | | 100 |
| 60) Dibromochloromethane | 7.663 | 129 | 659264 | 49.80 | UG/L | | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 2088344 | 54.58 | UG/L | | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 771884 | 51.81 | UG/L | | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 1157330 | 52.69 | UG/L | | 78 |
| 64) m,p-Xylene | 8.744 | 106 | 2831471 | 104.45 | UG/L | # | 61 |
| 65) o-Xylene | 9.253 | 106 | 1466680 | 51.45 | UG/L | | 82 |
| 66) Styrene | 9.274 | 104 | 2337518 | 52.30 | UG/L | | 89 |
| 67) Bromoform | 9.482 | 173 | 453207 | 48.34 | UG/L | | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 1032662 | 50.98 | UG/L | | 100 |
| 70) Isopropylbenzene | 9.718 | 105 | 3481667 | 50.97 | UG/L | | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 623883 | 75.00 | UG/L | # | 27 |
| 72) Bromobenzene | 10.026 | 77 | 1389962 | 51.85 | UG/L | | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4996T.D
Acq On : 31 Oct 2009 10:48
Operator : HAROLD
Sample : VSTD050
Misc :
ALS Vial : 7 Sample Multiplier: 1
Quant Time: Oct 31 10:04:39 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 328200 | 46.21 | UG/L | | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 479576 | 51.27 | UG/L | | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.392 | 105 | 3324884 | 50.11 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 896677 | 48.58 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 847659 | 47.99 | UG/L | | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 1909570 | 53.19 | UG/L | # | 71 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 3310480 | 49.00 | UG/L | | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 4419327 | 50.98 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 3670291 | 49.71 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 1704712 | 47.62 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 1730332 | 47.32 | UG/L | | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 1879062 | 48.86 | UG/L | | 99 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 1723025 | 47.07 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 268203 | 47.15 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 1353586 | 47.45 | UG/L | | 100 |
| 88) Naphthalene | 13.099 | 128 | 4058068 | 45.84 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 613289 | 47.45 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 1293020 | 47.82 | UG/L | | 100 |

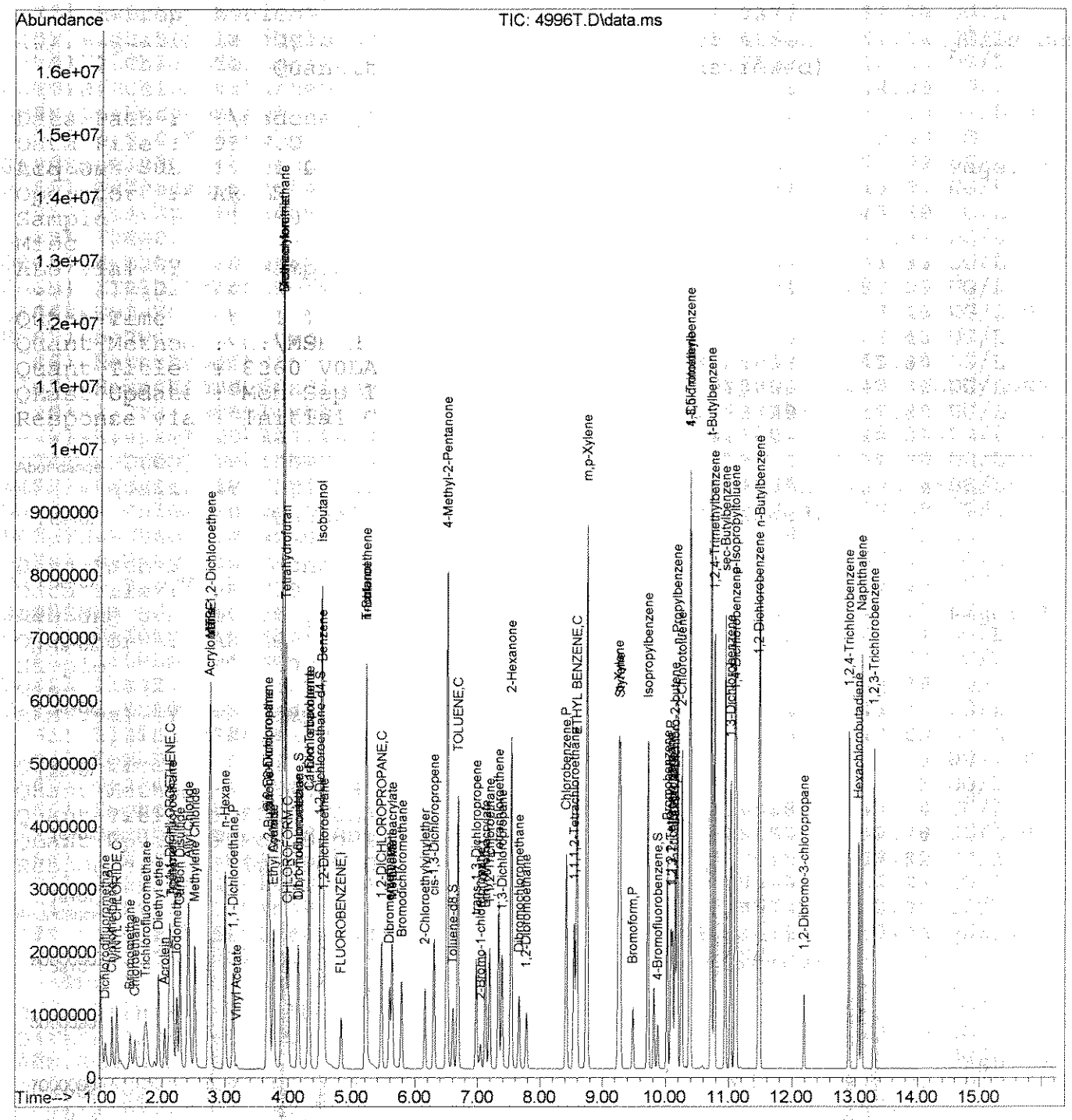
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4996T.D
Acq On : 31 Oct 2009 10:48
Operator : HAROLD
Sample : VSTD050
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 31 10:04:39 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration






59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 07:22:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 746771 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 241782 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 166917 | 8.86 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 88.60% | | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 202046 | 8.61 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 86.10% | | | |
| 50) Toluene-d8 | 6.603 | 98 | 723808 | 10.57 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 105.70% | | | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 227969 | 11.34 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 113.40% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 990294 | 63.58 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 1433970 | 57.84 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 1680414 | 65.71 | UG/L | 100 |
| 5) Bromomethane | 1.474 | 94 | 672093 | 75.15 | UG/L | 98 |
| 6) Chloroethane | 1.553 | 64 | 833271 | 67.74 | UG/L | 91 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 2104080 | 80.02 | UG/L # | 78 |
| 8) Acrolein | 2.040 | 56 | 1201183 | 2567.80 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 3490251 | 285.42 | UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 1468001 | 84.63 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.133 | 101 | 1649680 | 77.42 | UG/L | 98 |
| 12) Acrylonitrile | 2.735 | 53 | 4630480 | 603.60 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 4830768 | 79.20 | UG/L | 99 |
| 14) Methylene Chloride | 2.513 | 84 | 1644777 | 87.65 | UG/L # | 74 |
| 15) Allyl Chloride | 2.412 | 41 | 4947902 | 59.98 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 178456 | 2.97 | UG/L # | 76 |
| 17) MTBE | 2.756 | 73 | 5488757 | 79.12 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 1650415 | 84.46 | UG/L | 98 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 2779606 | 74.16 | UG/L | 100 |
| 20) 2-Butanone | 3.702 | 72 | 1571401 | 471.97 | UG/L # | 34 |
| 21) Ethyl Acetate | 3.766 | 43 | 2342751 | 72.53 | UG/L # | 95 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 1733749 | 85.51 | UG/L | 90 |
| 23) Ethyl Cyanide | 3.766 | 54 | 3334801 | 657.22 | UG/L | 100 |
| 24) CHLOROFORM | 3.995 | 83 | 2568805 | 81.27 | UG/L | 100 |
| 25) Methacrylonitrile | 3.909 | 41 | 12775201m | 668.18 | UG/L | |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 07:22:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 8162456 | 840.52 | UG/L # | 77 |
| 27) Bromochloromethane | 3.902 | 128 | 761827 | 79.17 | UG/L | 77 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 1689343 | 82.15 | UG/L | 91 |
| 29) Diethyl ether | 1.932 | 59 | 1551495 | 67.66 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 2302577 | 86.46 | UG/L | 100 |
| 31) Iodomethane | 2.226 | 142 | 2351631 | 79.54 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 797800 | 91.30 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 2098793 | 87.90 | UG/L | 92 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 2024984 | 81.09 | UG/L | 98 |
| 37) Isobutanol | 4.518 | 43 | 9718819 | 5176.74 | UG/L # | 94 |
| 38) Benzene | 4.532 | 78 | 6468498 | 96.71 | UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 3183874 | 74.48 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 1692257 | 93.34 | UG/L | 96 |
| 41) n-Butanol | 5.220 | 56 | 5257883 | 3261.14 | UG/L | 100 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 1583145 | 90.69 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 728028m | 1647.64 | UG/L | |
| 44) Methyl Methacrylate | 5.636 | 41 | 1788530 | 84.93 | UG/L # | 93 |
| 45) Bromodichloromethane | 5.786 | 83 | 1932949 | 102.19 | UG/L | 100 |
| 46) Dibromomethane | 5.593 | 93 | 925621 | 96.35 | UG/L | 91 |
| 47) 4-Methyl-2-Pentanone | 6.509 | 43 | 12076495 | 348.82 | UG/L # | 86 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 1331289 | 101.61 | UG/L | 91 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 2601651 | 103.25 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 7144298 | 110.64 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 2244418 | 107.99 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 1440128 | 109.81 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.785 | 107 | 1514476 | 108.65 | UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 8658961 | 380.15 | UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.391 | 76 | 2628295 | 122.20 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 2525695 | 127.28 | UG/L # | 158 |
| 59) Tetrachloroethene | 7.333 | 166 | 1855684 | 101.06 | UG/L | 99 |
| 60) Dibromochloromethane | 7.663 | 129 | 1490146 | 105.32 | UG/L | 100 |
| 61) Chlorobenzene | 8.422 | 112 | 4612305 | 114.10 | UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 1600783 | 101.70 | UG/L | 100 |
| 63) ETHYLBENZENE | 8.587 | 106 | 2541678 | 109.52 | UG/L | 76 |
| 64) m,p-Xylene | 8.744 | 106 | 6232501 | 217.62 | UG/L # | 61 |
| 65) o-Xylene | 9.253 | 106 | 3101249 | 102.97 | UG/L | 80 |
| 66) Styrene | 9.282 | 104 | 5253559 | 111.27 | UG/L | 90 |
| 67) Bromoform | 9.482 | 173 | 1068026 | 105.74 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 2264454 | 105.81 | UG/L | 100 |
| 70) Isopropylbenzene | 9.719 | 105 | 7432068 | 102.97 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 1429990 | 159.15 | UG/L # | 131 |
| 72) Bromobenzene | 10.027 | 77 | 3091916 | 109.17 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1
Quant Time: Nov 01 07:22:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 720136 | 95.98 | UG/L | | 100 |
| 74) n-Propylbenzene | 10.191 | 92 | 1047848 | 106.04 | UG/L | | 81 |
| 75) 1,3,5-Trimethylbenzene | 10.392 | 105 | 7005571 | 99.95 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 1918024 | 98.36 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 1867158 | 100.05 | UG/L | | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 4001548 | 105.49 | UG/L | # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 7141845 | 100.06 | UG/L | | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 9388351 | 102.51 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.101 | 119 | 7852382 | 100.66 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 3702324 | 97.89 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.122 | 146 | 3726295 | 96.45 | UG/L | | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 3941933 | 97.01 | UG/L | | 98 |
| 85) 1,2-Dichlorobenzene | 11.473 | 146 | 3624814 | 93.73 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 565894 | 94.16 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 2639688 | 87.59 | UG/L | | 100 |
| 88) Naphthalene | 13.099 | 128 | 7979295 | 85.32 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 1314249 | 96.25 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 2494420 | 87.31 | UG/L | | 100 |

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



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
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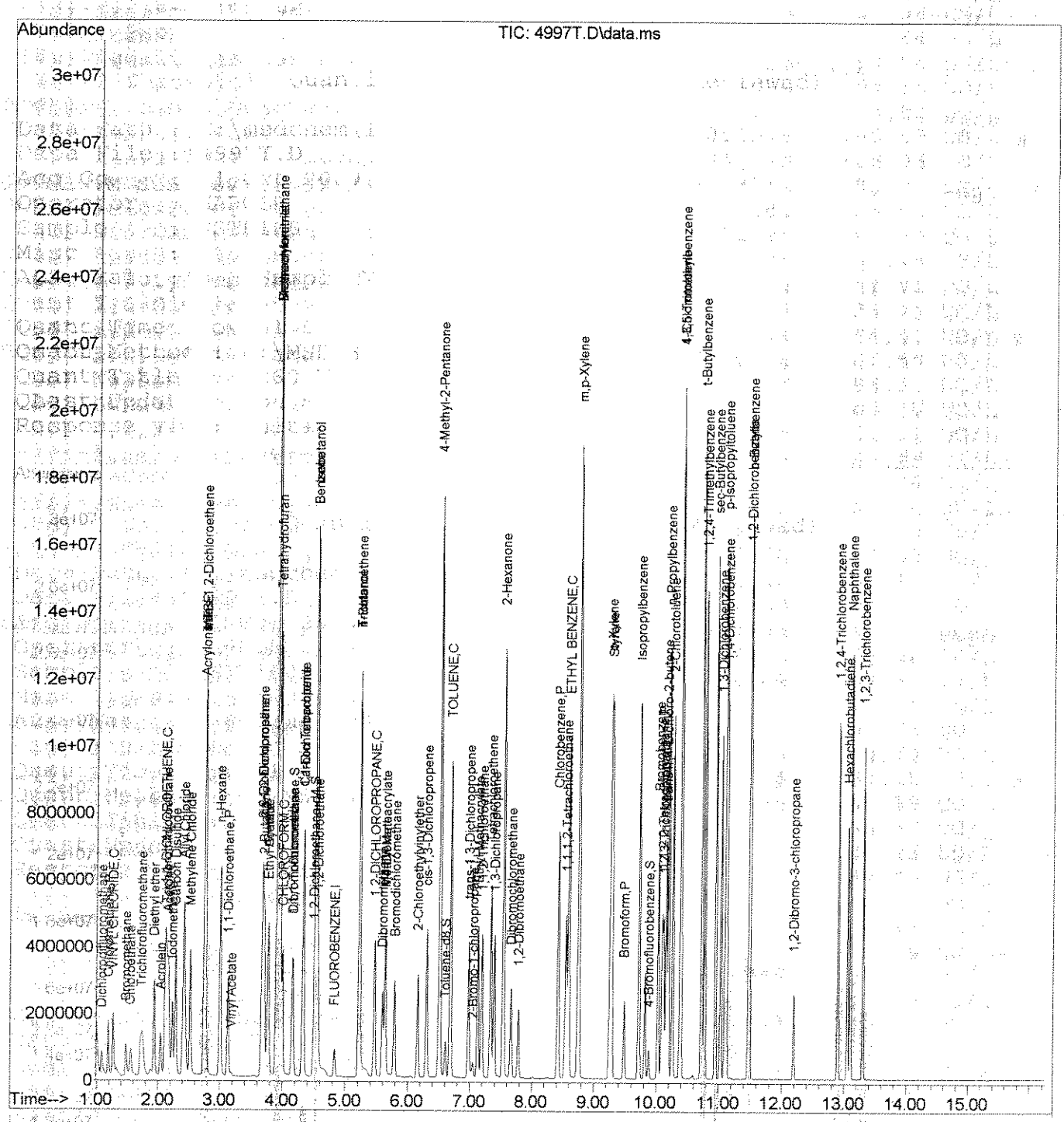
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 07:22:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration

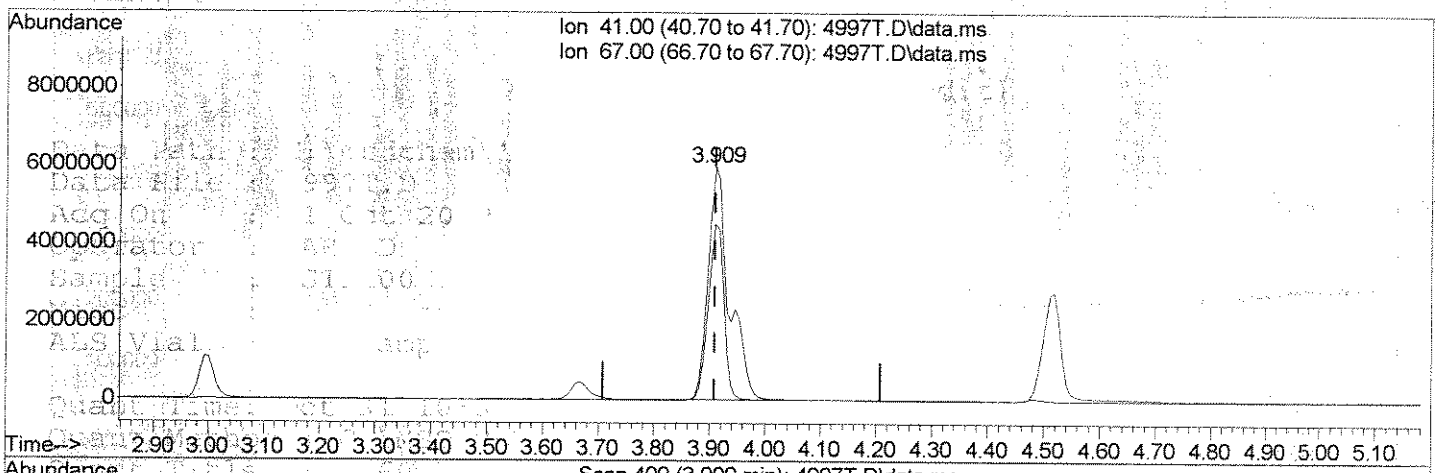


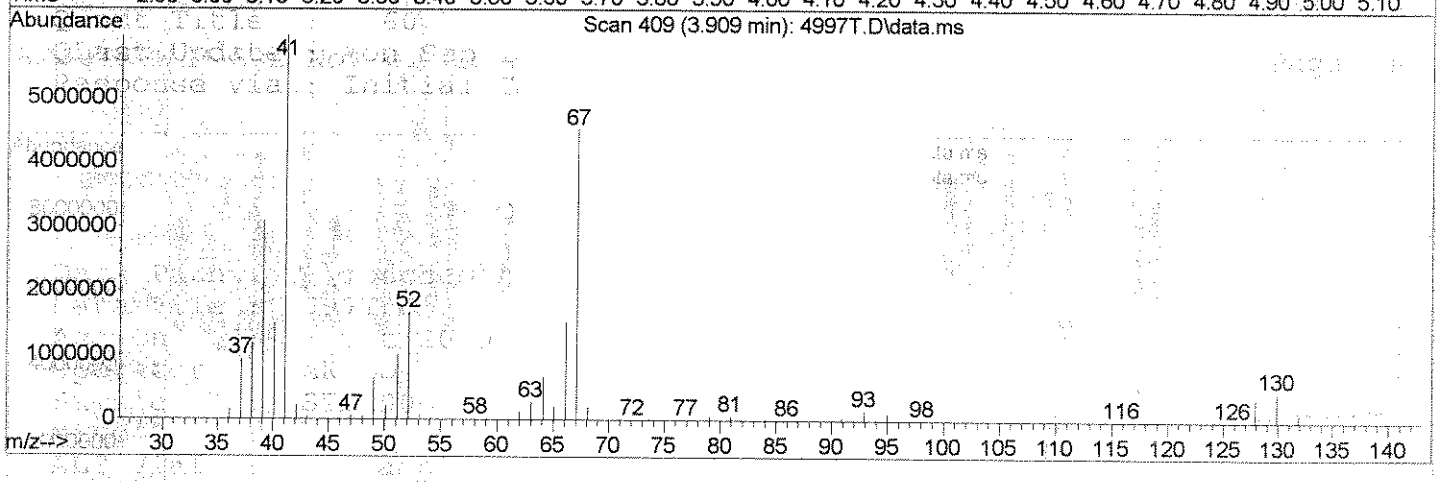



59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 31 10:30:03 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration




TIC: 4997T.D\data.ms

(25) Methacrylonitrile
3.909min (+0.000) 839.71UG/L
response 16054648

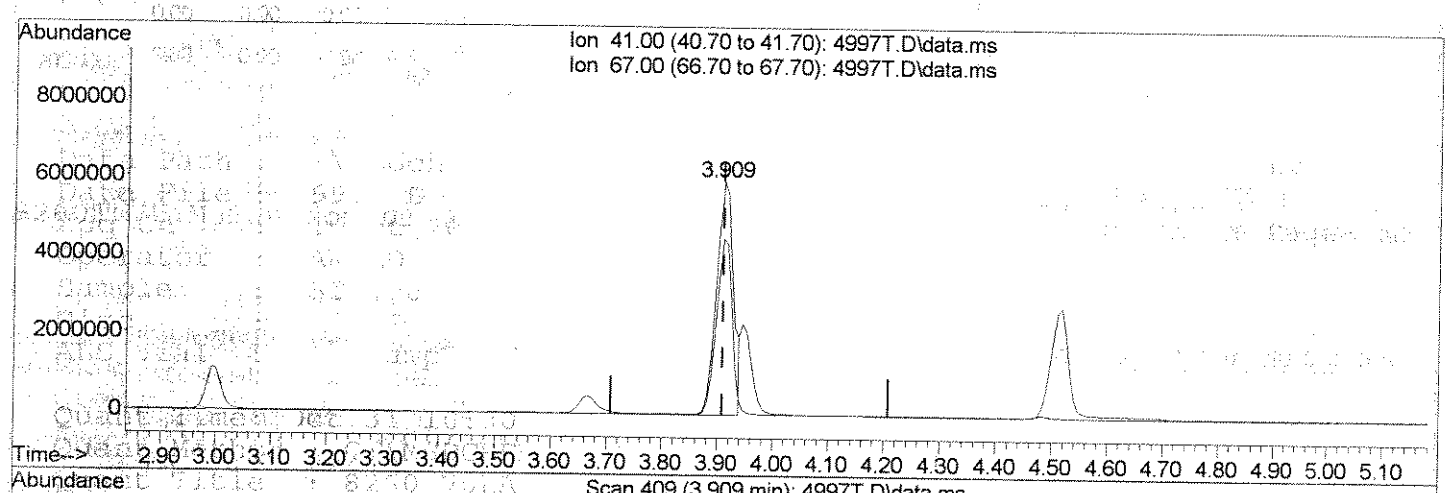
| Ion | Exp% | Act% |
|---|---|---|
| 41.00 | 100 | 100 |
| 67.00 | 0.00 | 55.91# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

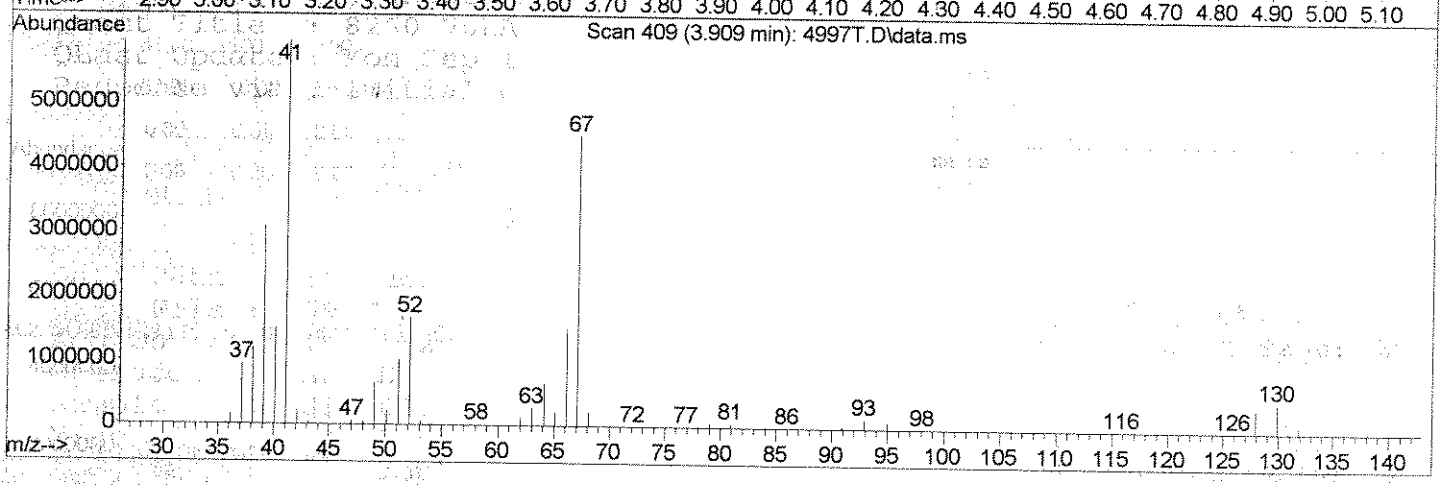


59169b

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 31 10:30:03 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration



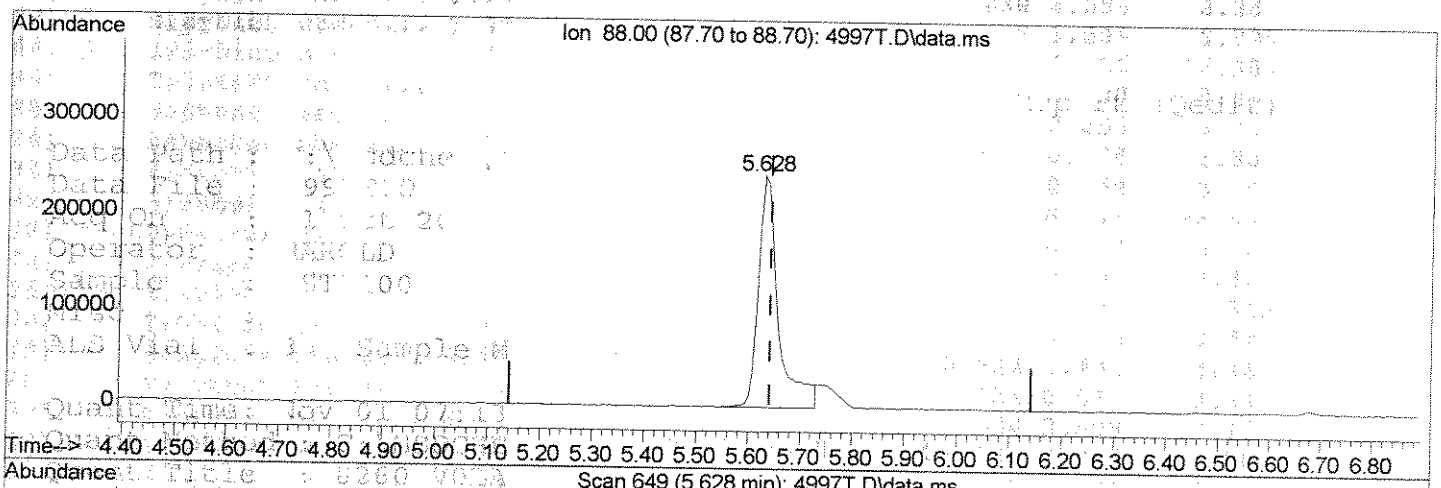

TIC: 4997T.D\data.ms

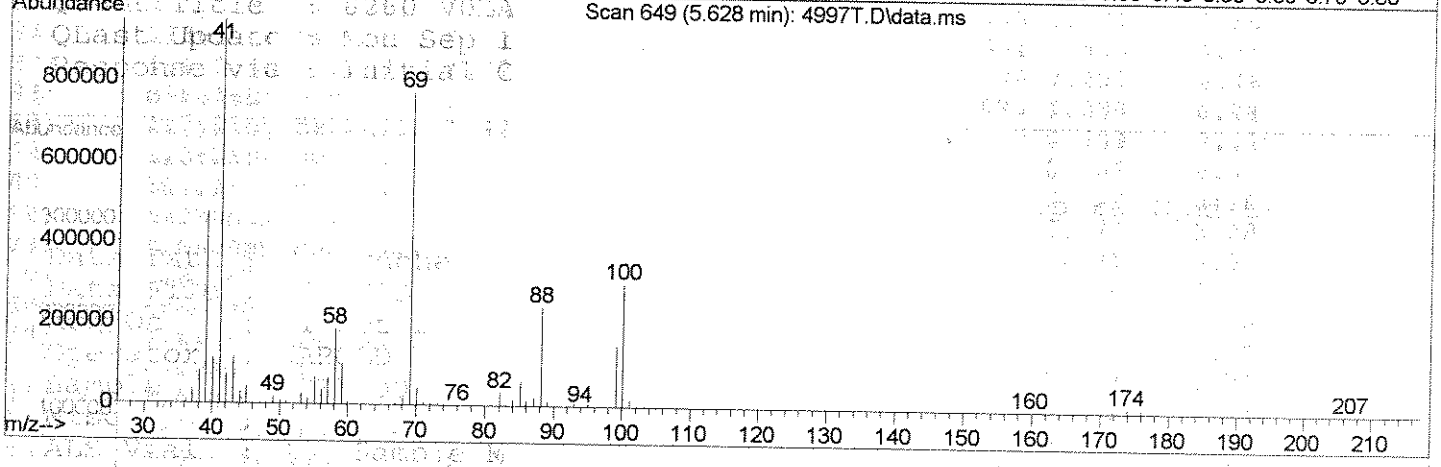
(25) Methacrylonitrile
3.909min (+0.000) 668.18UG/L m
response 12775201

| Ion | Exp% | Act% |
|---|---|---|
| 41.00 | 100 | 100 |
| 67.00 | 0.00 | 70.26# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 07:13:06 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration



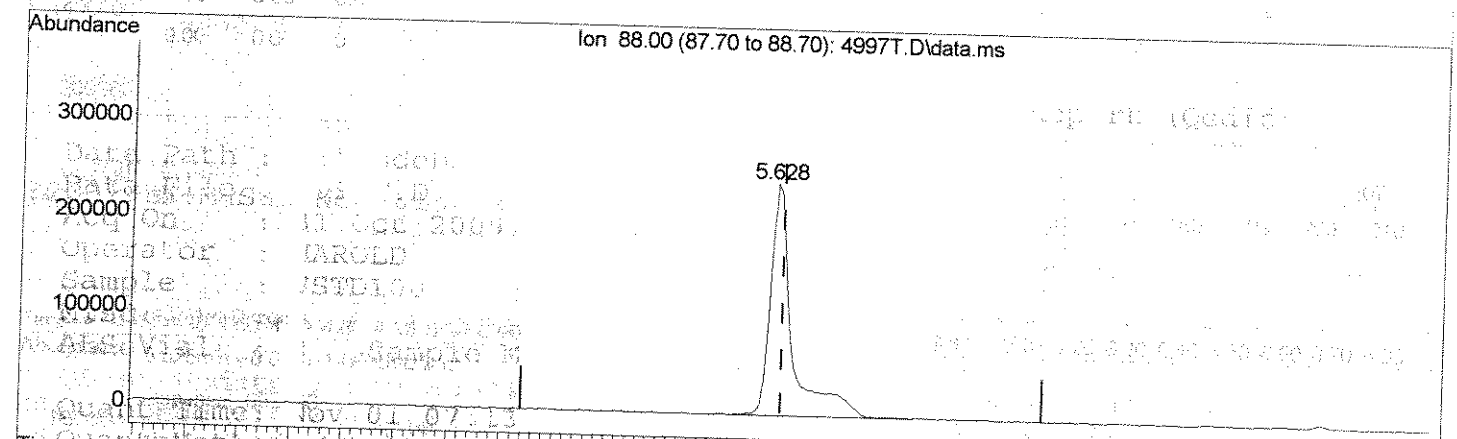

TIC: 4997T.D\data.ms

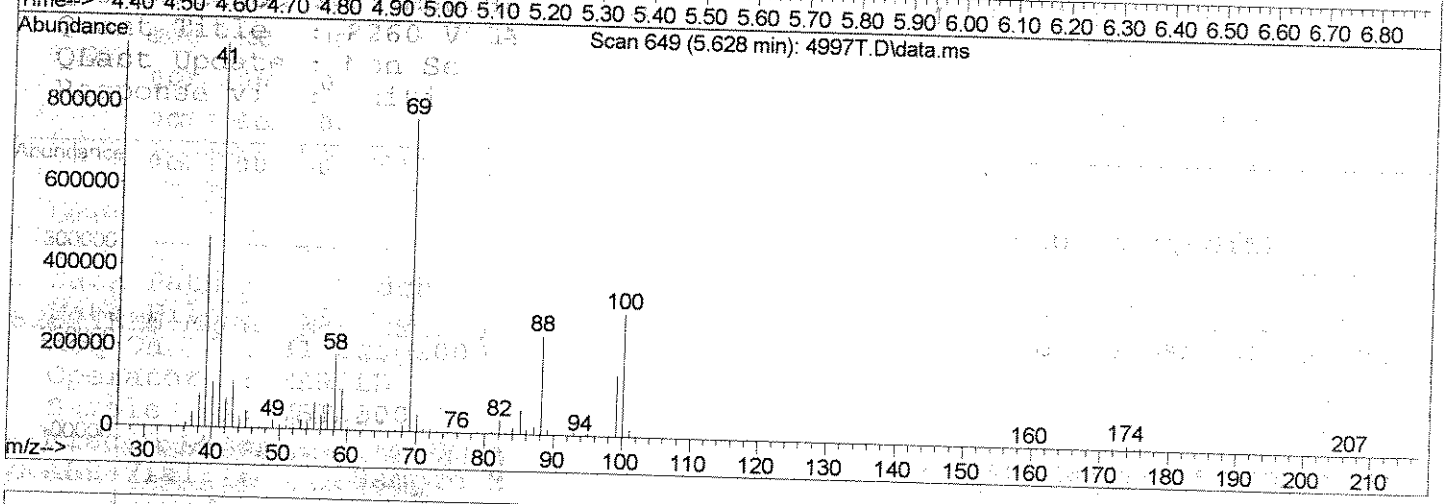
(43) 1,4-Dioxane
5.628min (-0.014) 1477.59UG/L
response 652890

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data Path : C:\msdchem\1\DATA\T103109\
Data File : 4997T.D
Acq On : 31 Oct 2009 11:13
Operator : HAROLD
Sample : VSTD100
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 07:13:06 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Mon Sep 14 06:25:56 2009
Response via : Initial Calibration




TIC: 4997T.D\data.ms

(43) 1,4-Dioxane
5.628min (-0.014) 1647.64UG/L m
response 728028

| Ion | Exp% | Act% |
|---|---|---|
| 88.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864558

Method SW846-8260B
Sample Description 157
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5200T.D Date/Time 06Nov09 12:28:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

11-10-09

59169b

R559983

# Heritage Environmental Services, LLC

A864558

## GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | EX | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 88 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864558

ORIGINAL

Method SW846-8260B
Sample Description 157
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5200T Date/Time 11/6/09 12:
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 7 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 8 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 10 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

TC7189

59169b

# Heritage Environmental Services, LLC

A864558

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | EX | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 97 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 88 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 93 | | | % Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5200T.D
Acq On : 6 Nov 2009 12:28
Operator : HAROLD
Sample : A864558
Misc :
ALS Vial : 18 Sample Multiplier: 1

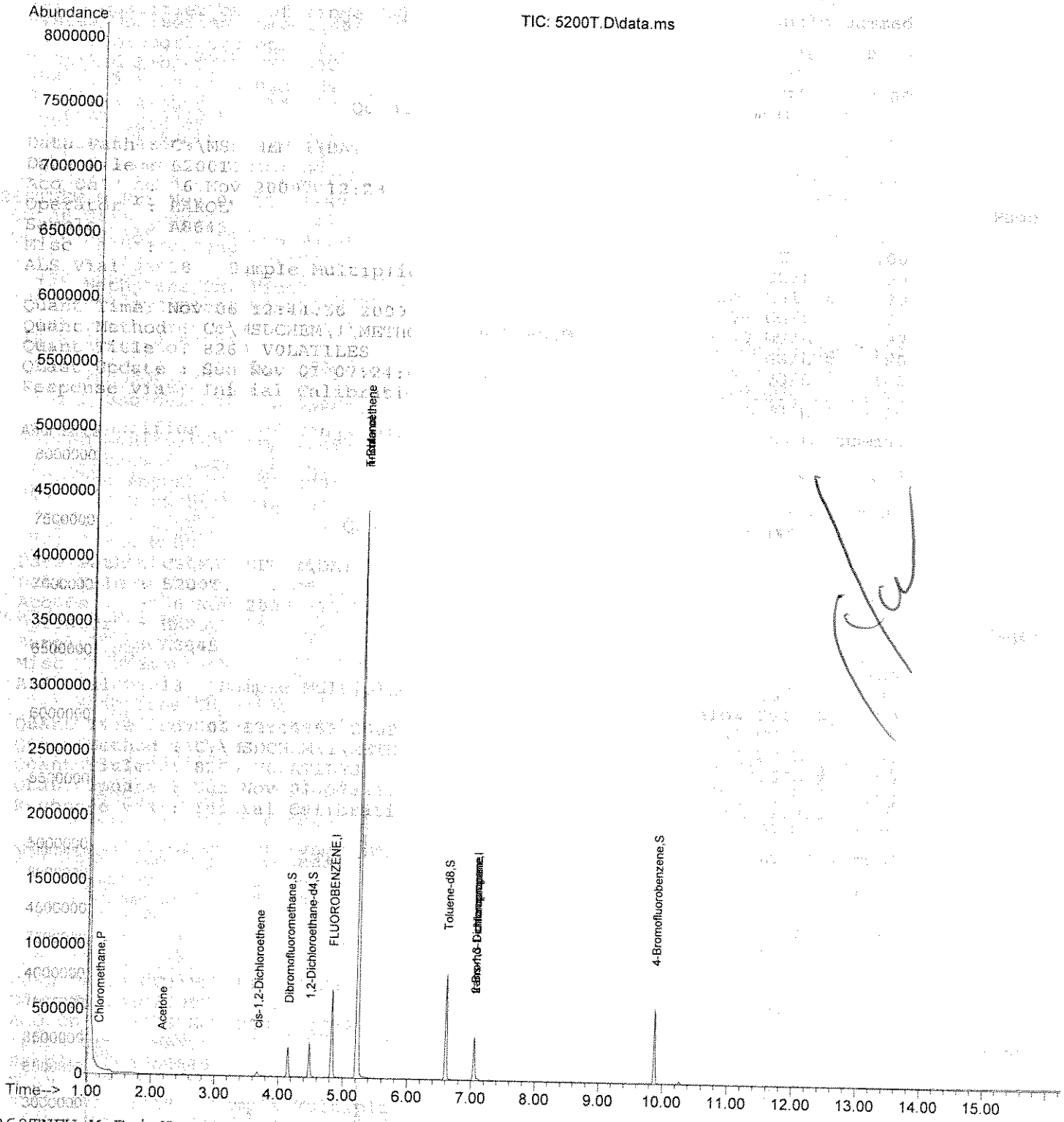
Quant Time: Nov 06 12:44:56 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 617557 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 200999 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 134023 | 9.19 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 169324 | 9.74 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.40% | |
| 50) Toluene-d8 | 6.602 | 98 | 567174 | 10.22 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.20% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 151082 | 8.80 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 88.00% | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Chloromethane | 1.187 | 50 | 4139 | 0.31 | UG/L | 100 |
| 9) Acetone | 2.169 | 43 | 9003 | 1.43 | UG/L | 99 |
| 14) Methylene Chloride | 2.520 | 84 | 3613 | Below Cal | # | 79 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 8342 | 0.56 | UG/L | 83 |
| 40) Trichloroethene | 5.220 | 130 | 1480708 | 105.30 | UG/L | 97 |
| 41) n-Butanol | 5.220 | 56 | 1253 | 1.45 | UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.039 | 75 | 3484 | 0.23 | UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5200T.D
Acq On : 6 Nov 2009 12:28
Operator : HAROLD
Sample : A864558
Misc :
ALS Vial : 18 Sample Multiplier: 1

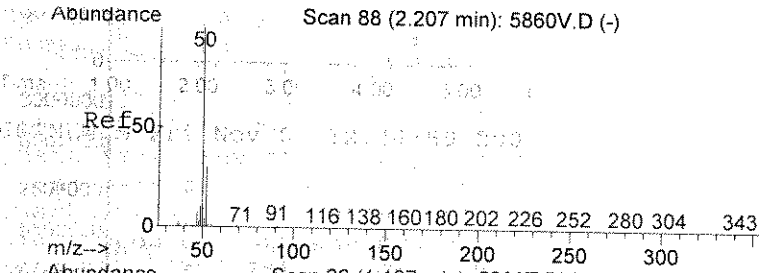
Quant Time: Nov 06 12:44:56 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 12:44:59 2009

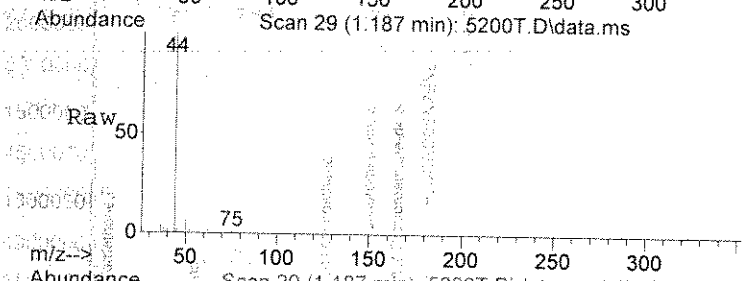


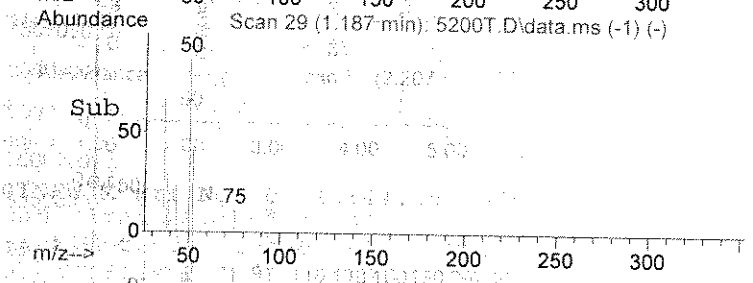
59169b

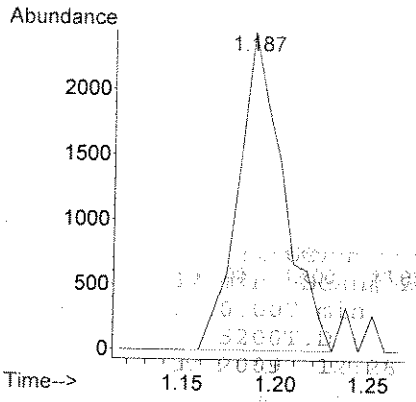


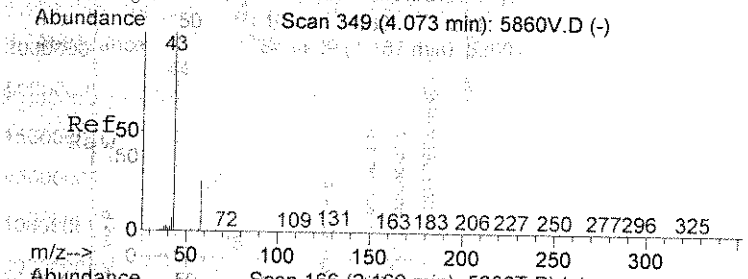

#3
Chloromethane
Concen: 0.31 UG/L
RT: 1.187 min Scan# 29
Delta R.T. 0.007 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

Tgt Ion: 50 Resp: 4139



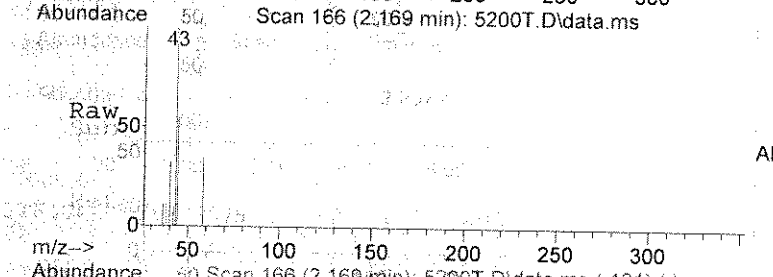



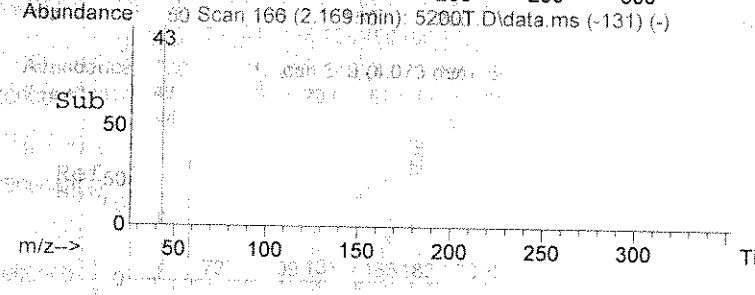



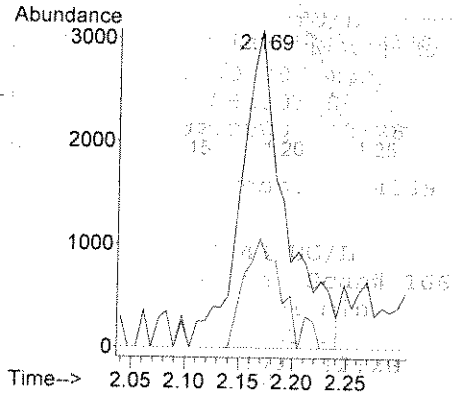

#9
Acetone
Concen: 1.43 UG/L
RT: 2.169 min Scan# 166
Delta R.T. 0.001 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

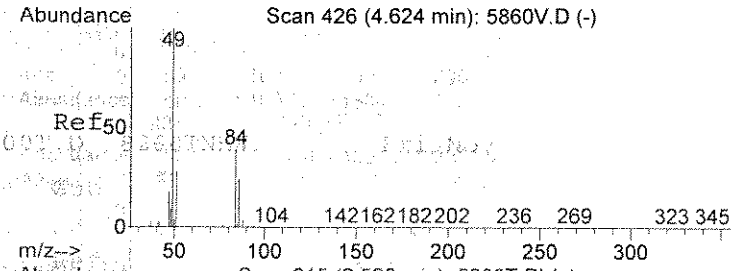
Tgt Ion: 43 Resp: 9003

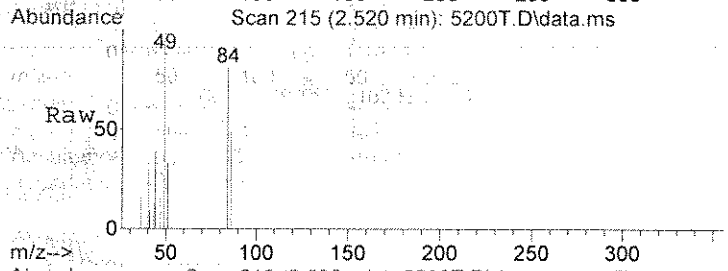
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.7 | 23.1 | 34.7 |

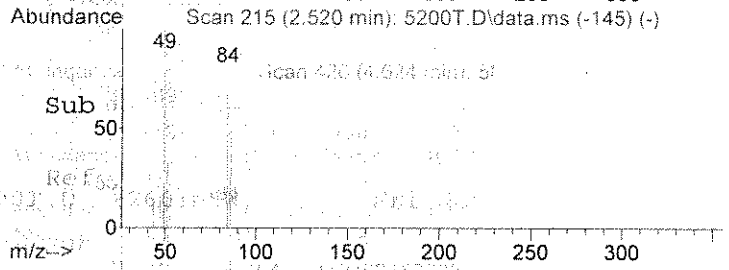




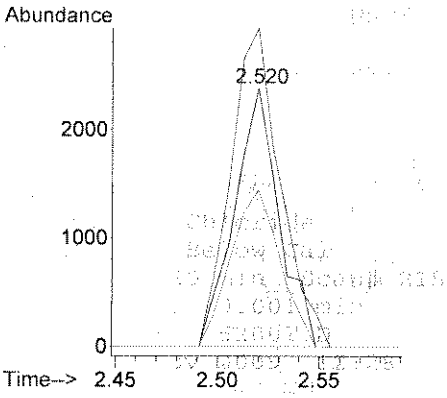



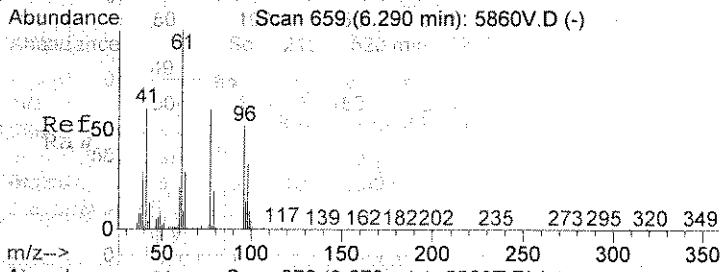



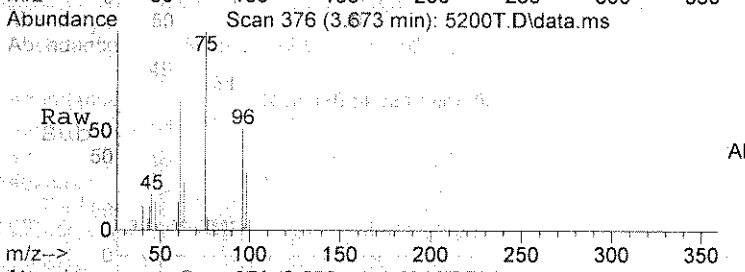

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

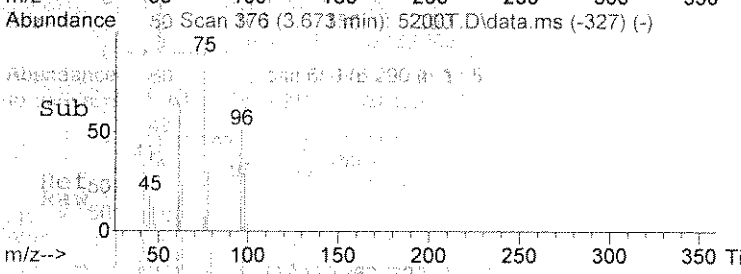
Tgt Ion: 84 Resp: 3613

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 138.2 | 140.2 | 210.2# |
| 86 | 67.1 | 51.1 | 76.7 |



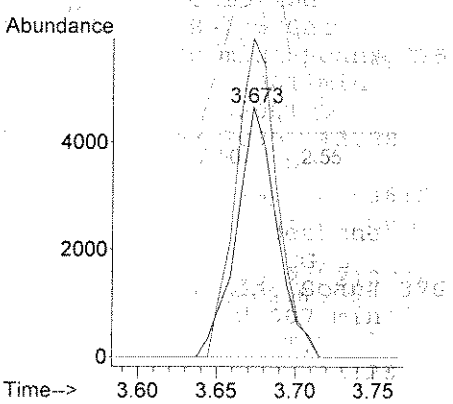



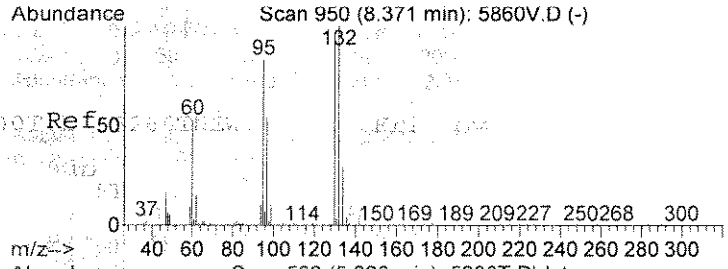



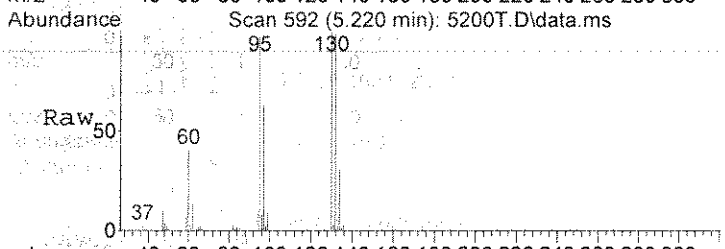

#22
cis-1,2-Dichloroethene
Concen: 0.56 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

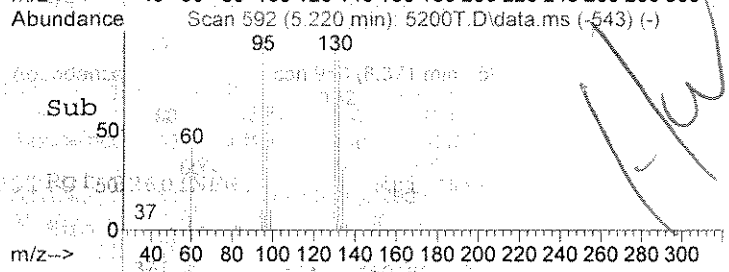
Tgt Ion: 96 Resp: 8342

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 130.2 | 121.8 | 182.6 |





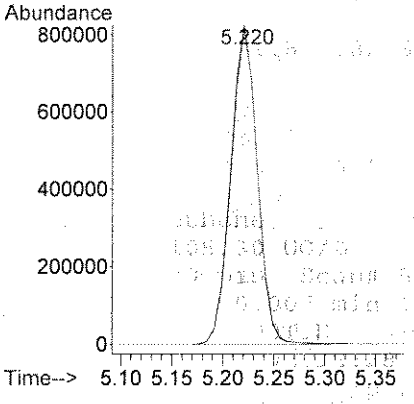



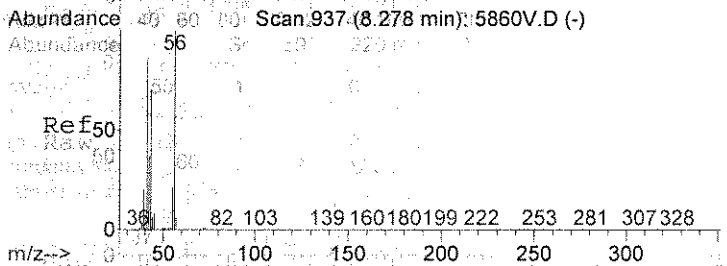



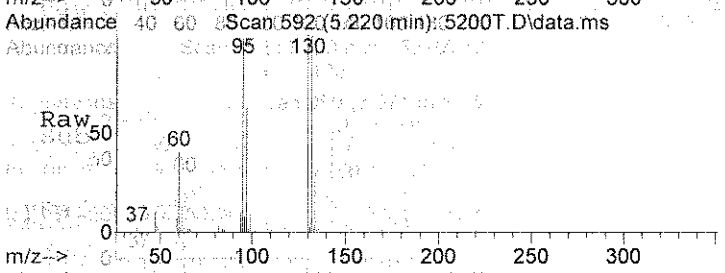

#40
Trichloroethene
Concen: 105.30 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

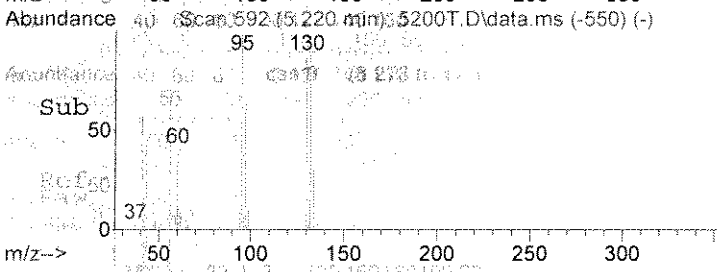
Tgt Ion:130 Resp: 1480708

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 99.0 | 82.0 | 123.0 |



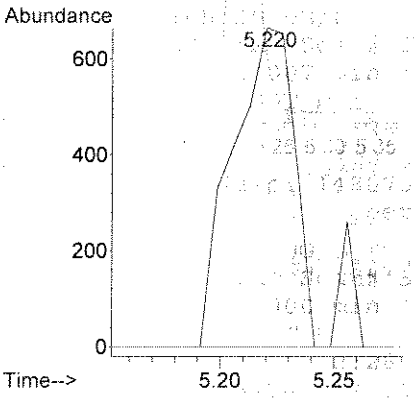




#41
n-Butanol
Concen: 1.45 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.000 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

Tgt Ion: 56 Resp: 1253

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |



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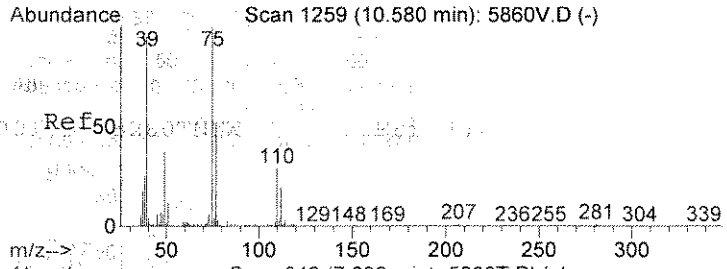
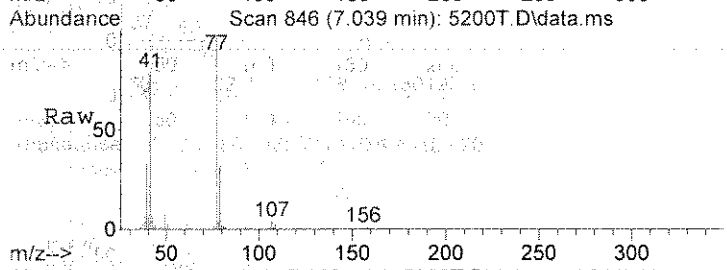
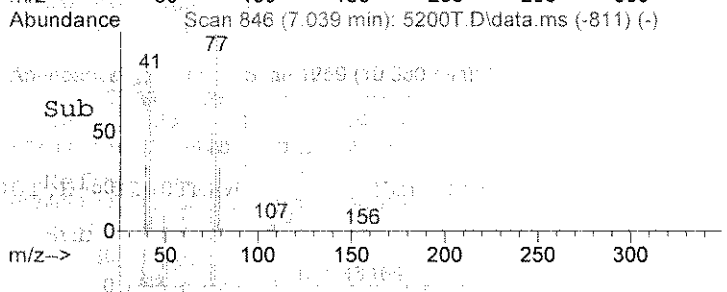
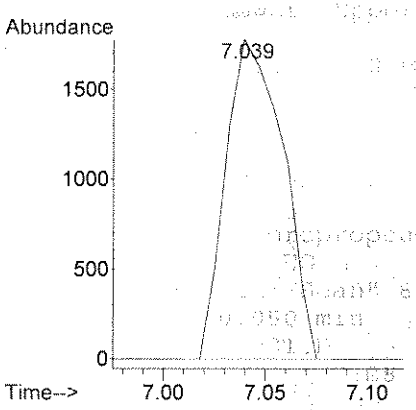



#52
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.039 min Scan# 846
Delta R.T. 0.050 min
Lab File: 5200T.D
Acq: 6 Nov 2009 12:28

Tgt Ion: 75 Resp: 3484






59169b

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

Method SW846-8260B
Sample Description 161
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5201T.D Date/Time 06Nov09 12:54:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 1.9 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

11/10/09

59169b

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | EX | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 5.2 | | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 102 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 97 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 88 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 100 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

Method SW846-8260B
Sample Description 161
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 52017 Date/Time 11/6/09 12:
Dilution Factor _____

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 267 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 718 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 811 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | EX | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 1.9 | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 270 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 307 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 106 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 697 | [illegible] | | | | | g/L | | |
| 346 | [illegible] | | | | | g/L | | |
| 746 | [illegible] | | | | | g/L | | |
| 239 | [illegible] | | | | | g/L | | |

TC#89

59169b

A864559

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1152 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3[illegible] | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | EX | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 5.2 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | [illegible] | | | | | ug/L |
| 970 | SURROGATE RECOVERY | | | | | |
| 972 | [illegible] | | | | | |
| 301 | DICHLOROETHANE-D4 | | 102 | | | %Rec |
| 726 | TOLUENE-D8 | | 97 | | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 88 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 100 | | | %Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5201T.D
Acq On : 6 Nov 2009 12:54
Operator : HAROLD
Sample : A864559
Misc :
ALS Vial : 19 Sample Multiplier: 1

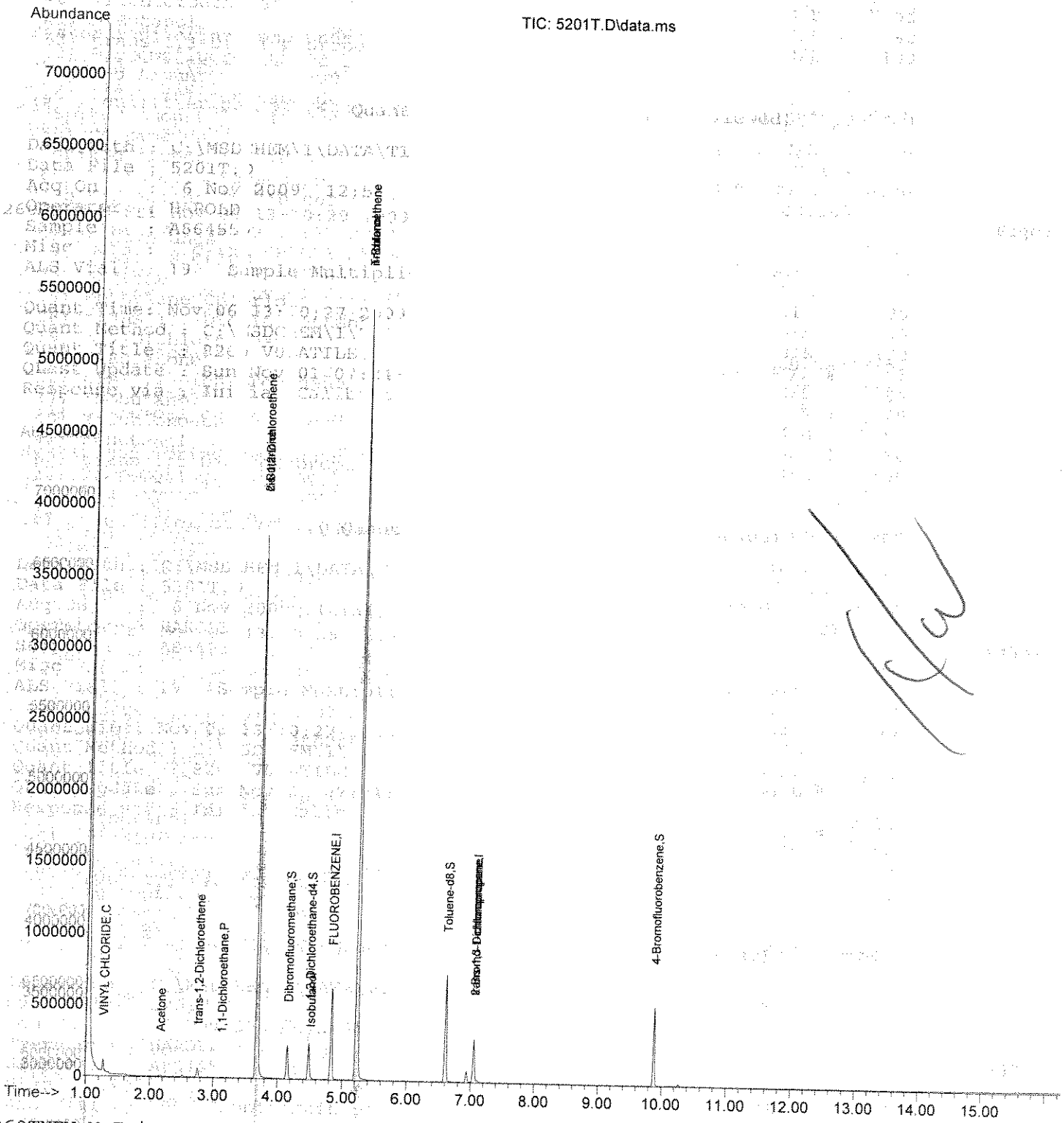
Quant Time: Nov 06 13:10:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 582503 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 191766 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 137947 | 10.03 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.30% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 167674 | 10.22 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 508364 | 9.71 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.10% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 144574 | 8.83 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 88.30% | |
| **Target Compounds** | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 71340 | 5.21 UG/L | 99 |
| 9) Acetone | 2.169 | 43 | 13395 | 2.25 UG/L | 92 |
| 14) Methylene Chloride | 2.520 | 84 | 4569 | Below Cal | 79 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 24508 | 1.85 UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 5782 | 0.26 UG/L | 100 |
| 20) 2-Butanone | 3.673 | 72 | 10913 | 4.63 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 1610798 | 114.56 UG/L | 84 |
| 37) Isobutanol | 4.511 | 43 | 910 | 0.97 UG/L # | 25 |
| 40) Trichloroethene | 5.220 | 130 | 1807512 | 136.27 UG/L | 96 |
| 41) n-Butanol | 5.220 | 56 | 1073 | 1.32 UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3350 | 0.24 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5201T.D
Acq On : 6 Nov 2009 12:54
Operator : HAROLD
Sample : A864559
Misc :
ALS Vial : 19 Sample Multiplier: 1

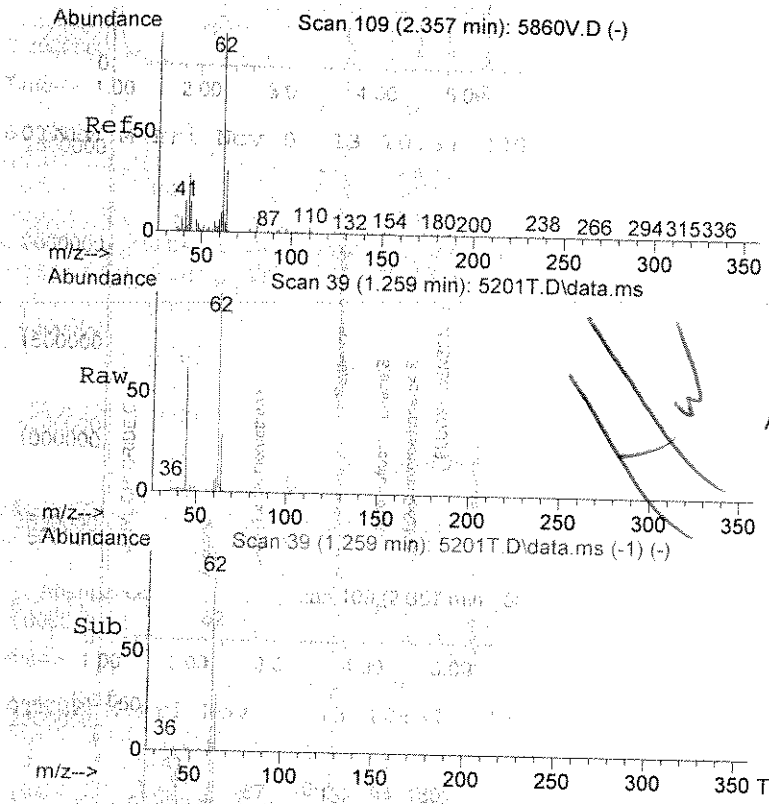
Quant Time: Nov 06 13:10:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 13:10:31 2009



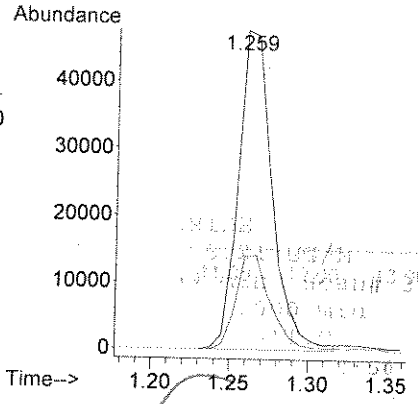
59169b

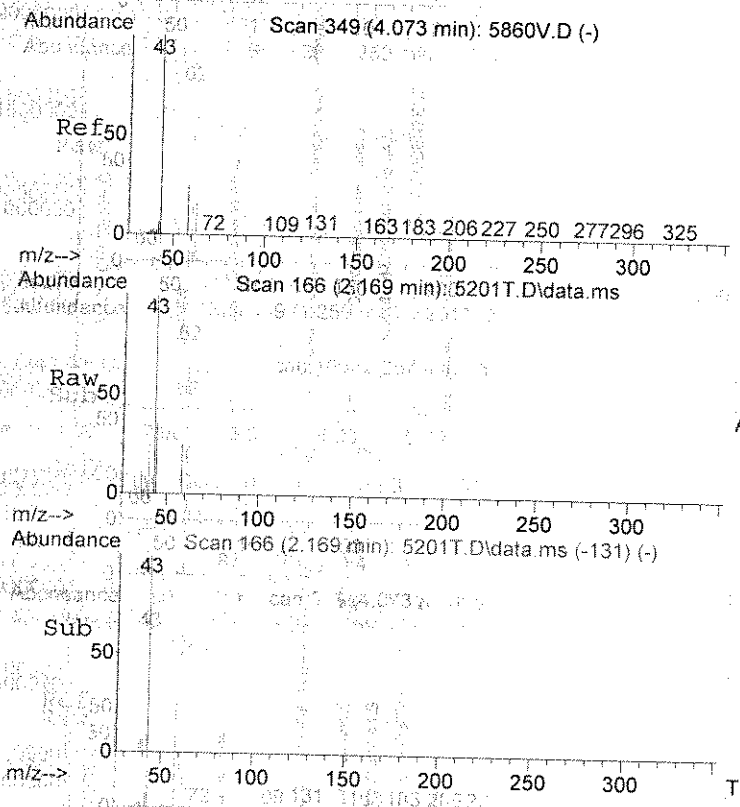



#4
VINYL CHLORIDE
Concen: 5.21 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 62 Resp: 71340

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.7 | 24.9 | 37.3 |

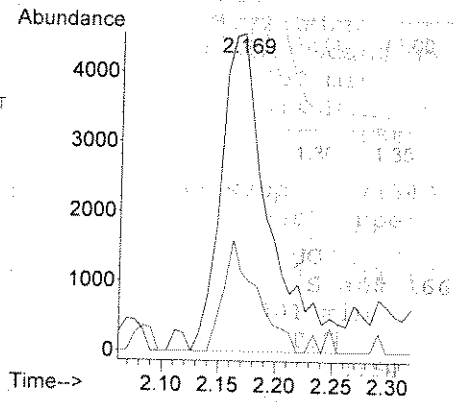


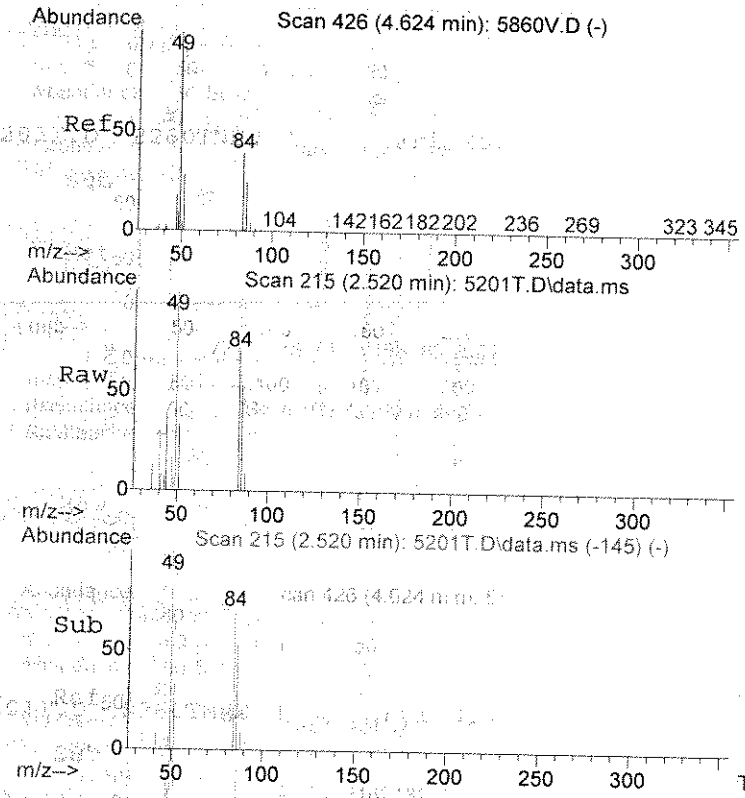




#9
Acetone
Concen: 2.25 UG/L
RT: 2.169 min Scan# 166
Delta R.T. 0.001 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 43 Resp: 13395

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 24.5 | 23.1 | 34.7 |

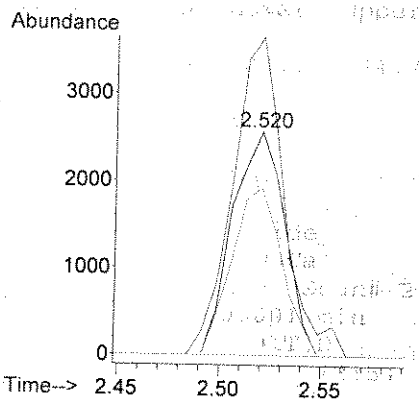


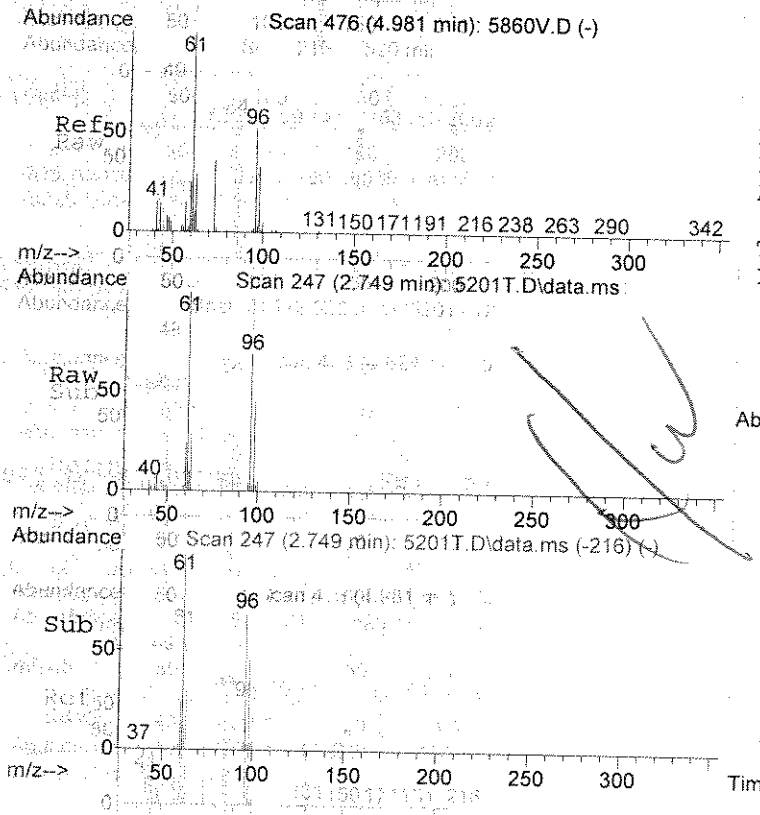



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 84 Resp: 4569

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 140.5 | 140.2 | 210.2 |
| 86 | 73.0 | 51.1 | 76.7 |

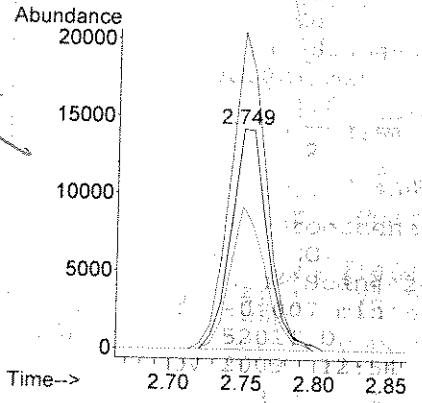


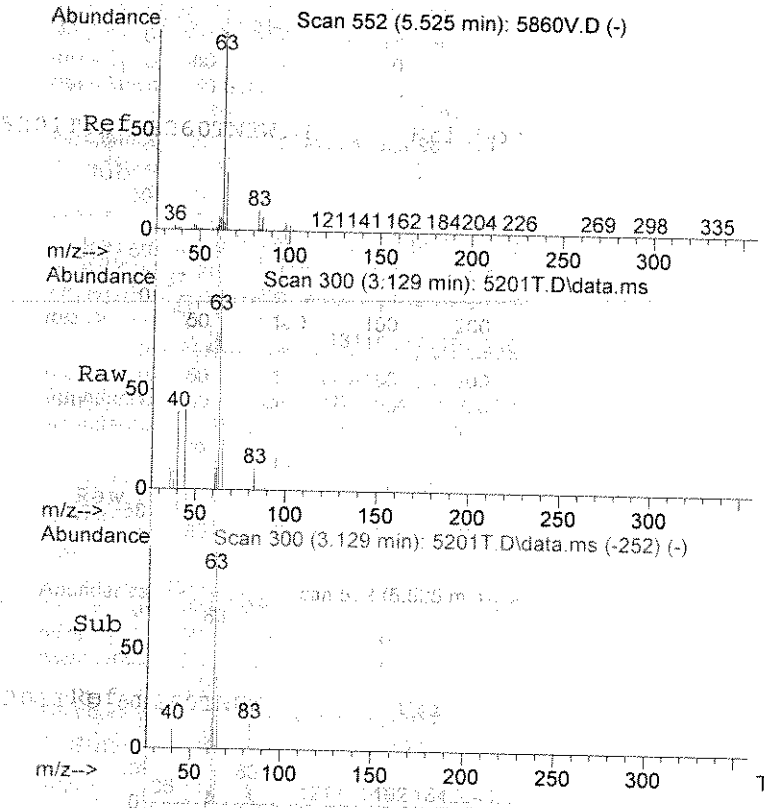




#18
trans-1,2-Dichloroethene
Concen: 1.85 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 96 Resp: 24508

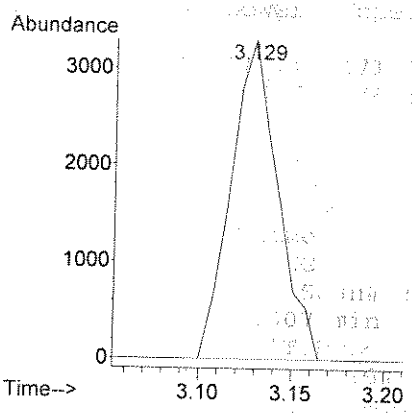
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 141.4 | 114.1 | 171.1 |
| 98 | 62.9 | 50.7 | 76.1 |

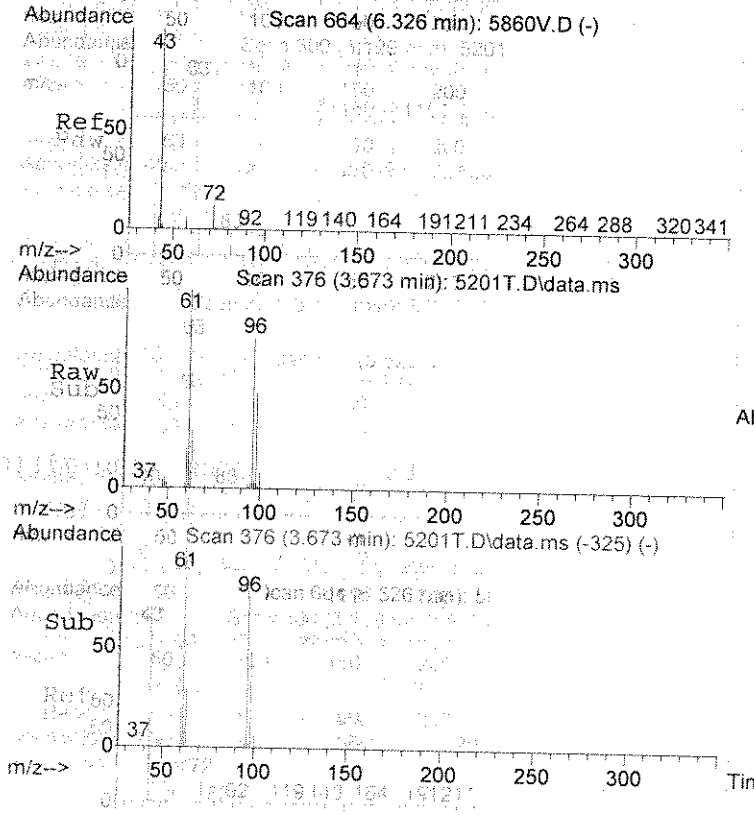





#19
1,1-Dichloroethane
Concen: 0.26 UG/L
RT: 3.129 min Scan# 300
Delta R.T. -0.007 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 63 Resp: 5782

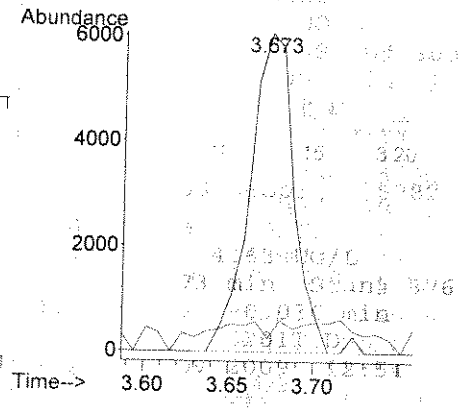


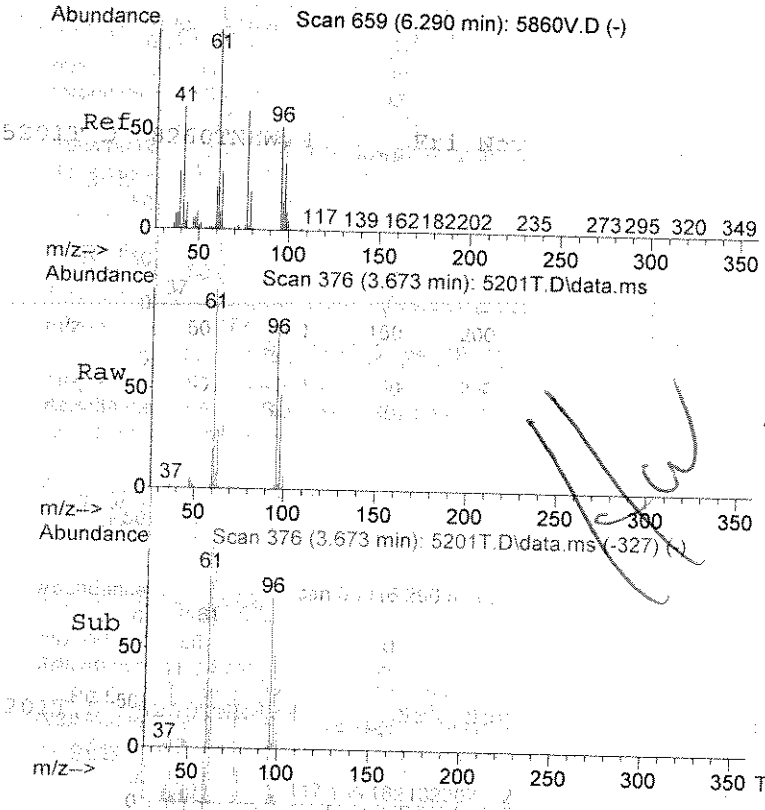




#20
2-Butanone
Concen: 4.63 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 72 Resp: 10913

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 12.9 | 449.0 | 673.4# |

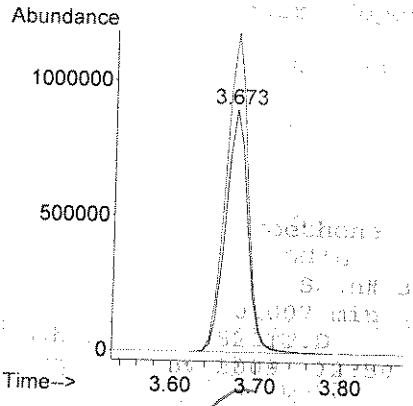


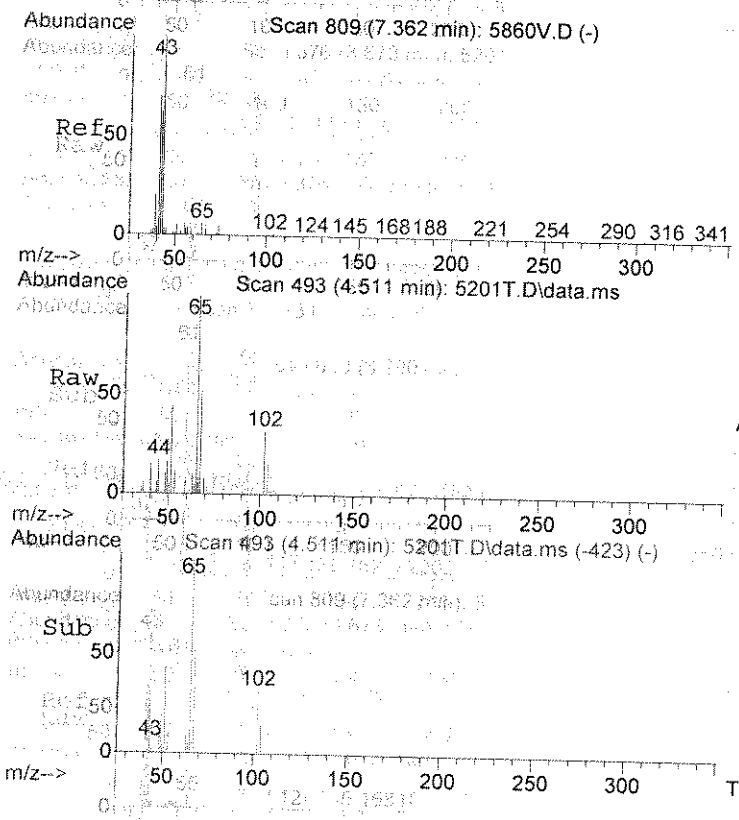



#22
cis-1,2-Dichloroethene
Concen: 114.56 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 96 Resp: 1610798

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 132.0 | 121.8 | 182.6 |

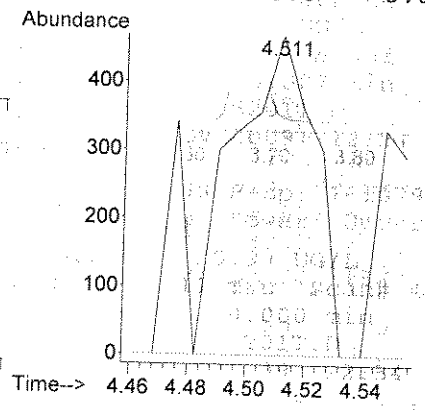


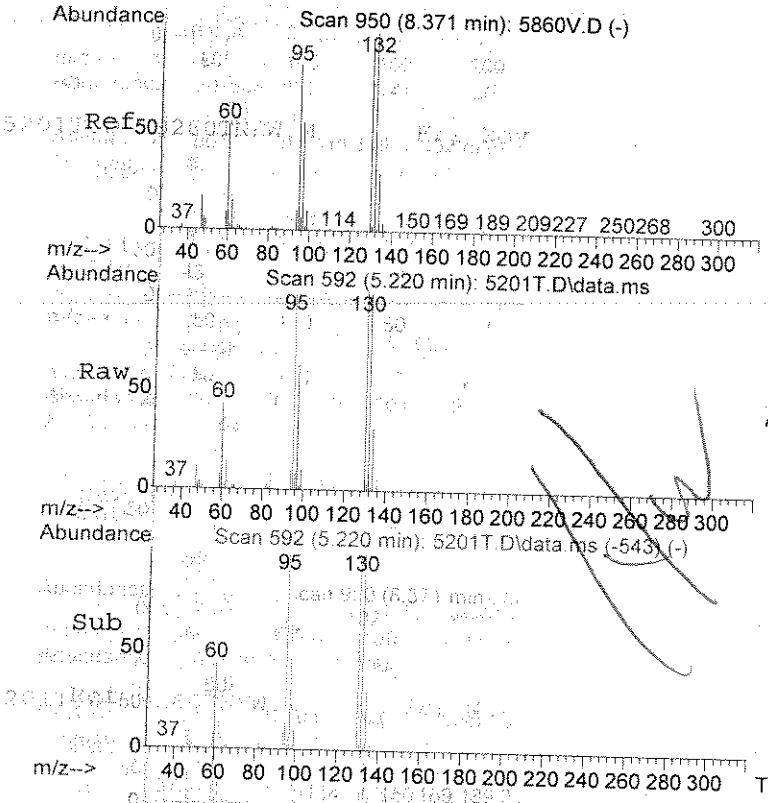




#37
Isobutanol
Concen: 0.97 UG/L
RT: 4.511 min Scan# 493
Delta R.T. 0.000 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 43 Resp: 910

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |

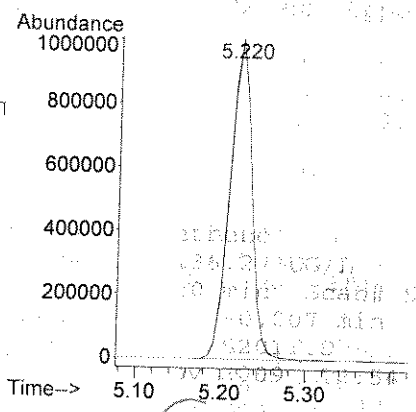


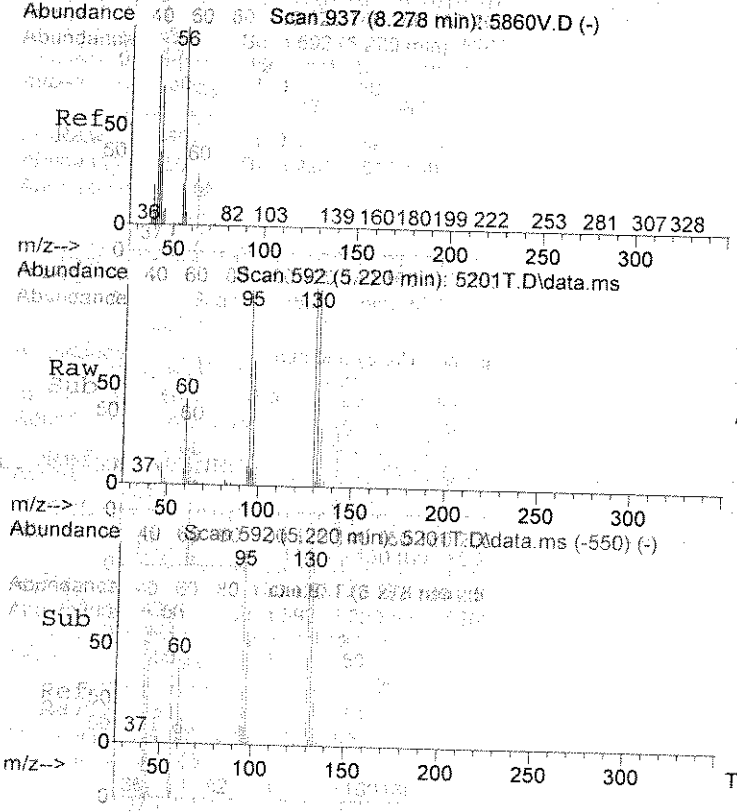



#40
Trichloroethene
Concen: 136.27 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion:130 Resp: 1807512

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 98.4 | 82.0 | 123.0 |

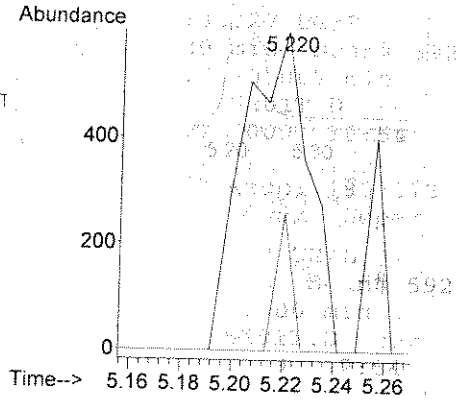


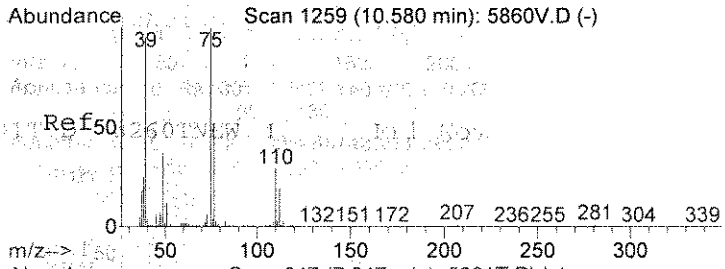




#41
n-Butanol
Concen: 1.32 UG/L
RT: 5.220 min Scan# 592
Delta R.T. 0.000 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 56 Resp: 1073

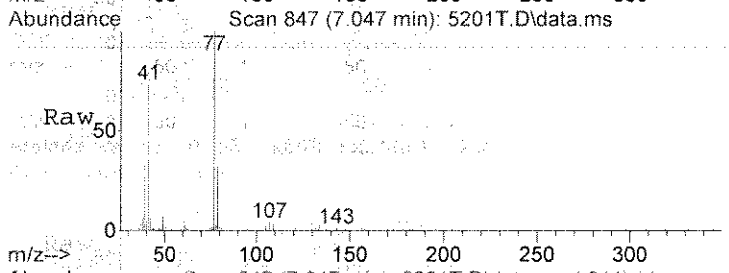
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |

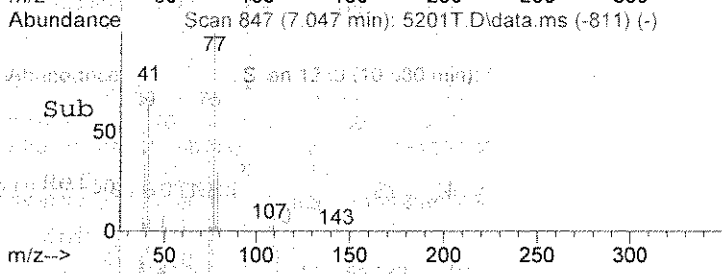


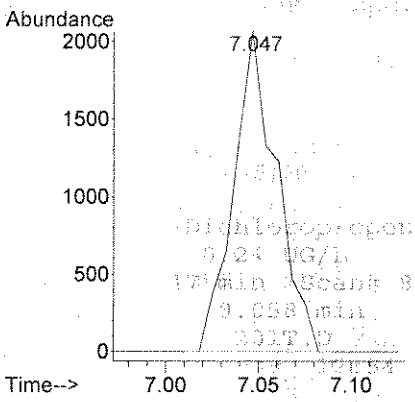



#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5201T.D
Acq: 6 Nov 2009 12:54

Tgt Ion: 75 Resp: 3350






59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864552
Data File :5192T. MS Data File : 5193T. MSD Data File : 5194T.
Date/Time : 6 Nov 2009 9:03 MS Date/Time : 6 Nov 2009 9:29 MSD Date/Time : 6 Nov 2009 9:54
Spike Conc : 10 uG/L
Dilution Factor: 1

Q2255854 Q2255855

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0 | 12.8 | 128.0 ! | 11.9 | 119.0 | 7.3 | 75 | 127.9 |
| Carbon Tetrachloride | 0 | 11 | 110.0 | 10.2 | 102.0 | 7.5 | 71 | 163.4 |
| 1,4-Dichlorobenzene | 0 | 11.7 | 117.0 | 11.1 | 111.0 | 5.3 | 80 | 121.8 |
| 1,2-Dichloroethane | 0 | 12.4 | 124.0 | 11.3 | 113.0 | 9.3 | 71 | 163.2 |
| 1,1-DICHLOROETHENE | 0 | 12 | 120.0 | 11.5 | 115.0 | 4.3 | 66 | 134.3 |
| 1,1,1-Trichloroethane | 0 | 11.9 | 119.0 | 11.1 | 111.0 | 7.0 | 79 | 156.2 |
| Trichloroethene | 0 | 13.2 | 132.0 | 12.5 | 125.0 | 5.4 | 67 | 149.3 |
| VINYL CHLORIDE | 4.9 | 18.1 | 132.0 | 17.1 | 122.0 | 7.9 | 46 | 154 |
| Bromobenzene | 0 | 12.1 | 121.0 | 11.3 | 113.0 | 6.8 | 78 | 126.6 |
| Bromodichloromethane | 0 | 11.3 | 113.0 | 10.6 | 106.0 | 6.4 | 68 | 157.1 |
| Bromoform | 0 | 8.94 | 89.4 | 8.52 | 85.2 | 4.8 | 52 | 171.7 |
| Bromomethane | 0 | 12.9 | 129.0 | 11.6 | 116.0 | 10.6 | 17 | 175.4 |
| Chlorobenzene | 0 | 12.5 | 125.0 ! | 11.8 | 118.0 | 5.8 | 81 | 123.4 |
| Dibromochloromethane | 0 | 10.3 | 103.0 | 9.83 | 98.3 | 4.7 | 64 | 152.5 |
| Chloroethane | 0 | 13.7 | 137.0 | 12.6 | 126.0 | 8.4 | 79 | 145.1 |
| CHLOROFORM | 0 | 11.8 | 118.0 | 10.9 | 109.0 | 7.9 | 79 | 146.2 |
| Chloromethane | 0 | 11.2 | 112.0 | 10.3 | 103.0 | 8.4 | 31 | 139.9 |
| 2-Chlorotoluene | 0 | 11.8 | 118.0 | 11.4 | 114.0 | 3.4 | 70 | 126.1 |
| 4-Chlorotoluene | 0 | 11.9 | 119.0 | 11.2 | 112.0 | 6.1 | 73 | 123.4 |
| Dibromomethane | 0 | 12.5 | 125.0 | 11.6 | 116.0 | 7.5 | 60 | 156.9 |
| 1,3-Dichlorobenzene | 0 | 11.6 | 116.0 | 11.1 | 111.0 | 4.4 | 80 | 127.4 |
| 1,2-Dichlorobenzene | 0 | 11.6 | 116.0 | 11 | 110.0 | 5.3 | 81 | 125.8 |
| trans-1,2-Dichloroethene | 0 | 12.9 | 129.0 | 12.3 | 123.0 | 4.8 | 76 | 136.3 |
| cis-1,2-Dichloroethene | 0 | 12.5 | 125.0 | 11.7 | 117.0 | 6.6 | 67 | 151.6 |
| Methylene Chloride | 0 | 11.4 | 114.0 | 10.6 | 106.0 | 7.3 | 65 | 145 |
| 1,1-Dichloroethane | 0 | 12.5 | 125.0 | 11.5 | 115.0 | 8.3 | 79 | 140.1 |
| 1,1-Dichloropropene | 0 | 11.6 | 116.0 | 10.7 | 107.0 | 8.1 | 76 | 133.2 |
| 1,2-DICHLOROPROPANE | 0 | 13.1 | 131.0 ! | 12.2 | 122.0 | 7.1 | 77 | 123.2 |
| 1,3-Dichloropropane | 0 | 13.6 | 136.0 ! | 12.5 | 125.0 ! | 8.4 | 81 | 121.5 |
| cis-1,3-Dichloropropene | 0 | 10.8 | 108.0 | 9.75 | 97.5 | 10.2 | 69 | 125.1 |
| trans-1,3-Dichloropropene | 0 | 10.4 | 104.0 | 9.21 | 92.1 | 12.1 | 68 | 129.6 |
| 2,2-Dichloropropane | 0 | 10.6 | 106.0 | 9.85 | 98.5 | 7.3 | 64 | 130.7 |
| ETHYL BENZENE | 0 | 11.8 | 118.0 | 11.5 | 115.0 | 2.6 | 37 | 176.4 |
| Styrene | 0 | 6.41 | 64.1 | 6.77 | 67.7 | 5.5 | 29 | 159.9 |
| 1,1,2-Trichloroethane | 0 | 13.8 | 138.0 | 12.8 | 128.0 | 7.5 | 70 | 140.6 |
| 1,1,1,2-Tetrachloroethane | 0 | 11.1 | 111.0 | 10.2 | 102.0 | 8.5 | 68 | 154.5 |
| 1,1,2,2-Tetrachloroethane | 0 | 12.7 | 127.0 ! | 11.5 | 115.0 | 9.9 | 73 | 122.6 |
| Tetrachloroethene | 0 | 11.5 | 115.0 | 11 | 110.0 | 4.4 | 82 | 141.4 |
| 1,2,3-Trichloropropane | 0 | 12.4 | 124.0 | 11.4 | 114.0 | 8.4 | 73 | 136.1 |

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864552
Data File :5192T. MS Data File : 5193T. MSD Data File : 5194T.
Date/Time : 6 Nov 2009 9:03 MS Date/Time : 6 Nov 2009 9:29 MSD Date/Time : 6 Nov 2009 9:54
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery * | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| TOLUENE | 0 | 13 | 130.0 ! | 12.2 | 122.0 | 6.3 | 77 | 126.5 |
| m,p-Xylene | 0 | 21.9 | 109.5 | 21.1 | 105.5 | 3.7 | 80 | 127 |
| o-Xylene | 0 | 10.7 | 107.0 | 10.2 | 102.0 | 4.8 | 78 | 130.1 |
| Bromochloromethane | 0 | 12.4 | 124.0 | 11.5 | 115.0 | 7.5 | 70 | 155.2 |
| n-Butylbenzene | 0 | 11.1 | 111.0 | 11 | 110.0 | 0.9 | 71 | 121.5 |
| Dichlorodifluoromethane | 0 | 12 | 120.0 | 12.2 | 122.0 | 1.7 | 4 | 176.7 |
| Trichlorofluoromethane | 0 | 11.7 | 117.0 | 11.1 | 111.0 | 5.3 | 77 | 170.6 |
| Hexachlorobutadiene | 0 | 10.7 | 107.0 | 10.8 | 108.0 | 0.9 | 62 | 157.6 |
| Isopropylbenzene | 0 | 11.8 | 118.0 | 11.2 | 112.0 | 5.2 | 68 | 128.4 |
| p-Isopropyltoluene | 0 | 11 | 110.0 | 10.8 | 108.0 | 1.8 | 72 | 127.2 |
| Naphthalene | 0 | 10.4 | 104.0 | 10.4 | 104.0 | 0.0 | 46 | 113.1 |
| n-Propylbenzene | 0 | 11.6 | 116.0 | 10.9 | 109.0 | 6.2 | 64 | 127.4 |
| sec-Butylbenzene | 0 | 11.8 | 118.0 | 11.4 | 114.0 | 3.4 | 71 | 126.1 |
| t-Butylbenzene | 0 | 12.2 | 122.0 | 11.8 | 118.0 | 3.3 | 72 | 131.7 |
| 1,2,3-Trichlorobenzene | 0 | 10.3 | 103.0 | 10.5 | 105.0 | 1.9 | 43 | 149 |
| 1,2,4-Trichlorobenzene | 0 | 10.4 | 104.0 | 10.6 | 106.0 | 1.9 | 54 | 137.9 |
| 1,2,4-Trimethylbenzene | 0 | 9.3 | 93.0 | 9.25 | 92.5 | 0.5 | 74 | 126.7 |
| 1,3,5-Trimethylbenzene | 0 | 8.78 | 87.8 | 8.92 | 89.2 | 1.6 | 74 | 125.9 |
| Acrolein | 0 | 92.7 | 92.7 | 75.7 | 75.7 | 20.2 | D | 400.3 |
| Acetone | 0 | 60.7 | 121.4 | 56.3 | 112.6 | 7.5 | 52 | 162.9 |
| Acrylonitrile | 0 | 195 | 195.0 | 151 | 151.0 | 25.4 | D | 472.1 |
| Carbon Disulfide | 0 | 9.99 | 99.9 | 9.41 | 94.1 | 6.0 | 65 | 135.1 |
| Vinyl Acetate | 0 | 8.89 | 88.9 | 5.88 | 58.8 | 40.8 | 58 | 113.1 |
| 2-Butanone | 0 | 64.8 | 129.6 | 57.7 | 115.4 | 11.6 | 38 | 143.2 |
| 4-Methyl-2-Pentanone | 0 | 68.1 | 136.2 ! | 61.8 | 123.6 | 9.7 | 68 | 130.7 |
| 2-Hexanone | 0 | 67.3 | 134.6 ! | 61.5 | 123.0 ! | 9.0 | 69 | 118.4 |
| 2-Chloroethylvinylether | 0 | 0 | 0.0 ! | 0 | 0.0 ! | | D | 39.3 |
| trans-1,4-Dichloro-2-butene | 0 | 12.2 | 61.0 | 10.2 | 51.0 | 17.9 | 24 | 138 |
| 1,2-Dibromoethane | 0 | 13.3 | 133.0 ! | 12.2 | 122.0 ! | 8.6 | 75 | 121.6 |
| 1,2-Dibromo-3-chloropropar | 0 | 10.1 | 101.0 | 9.25 | 92.5 | 8.8 | 59 | 129.5 |
| Iodomethane | 0 | 12 | 120.0 | 11 | 110.0 | 8.7 | 18 | 155.7 |
| Allyl Chloride | 0 | 10.7 | 107.0 | 9.6 | 96.0 | 10.8 | 25 | 154.8 |
| Ethyl Cyanide | 0 | 139 | 139.0 | 125 | 125.0 | 10.6 | 27 | 160.5 |
| Methacrylonitrile | 0 | 122 | 122.0 | 111 | 111.0 | 9.4 | 24 | 136.7 |
| Methyl Methacrylate | 0 | 12.2 | 122.0 | 11.6 | 116.0 | 5.0 | 41 | 149.1 |
| Ethyl Methacrylate | 0 | 10.8 | 108.0 | 10 | 100.0 | 7.7 | 38 | 137.8 |

Recovery limit



59169b

R559983

# Heritage Environmental Services, LLC

Q2255854

QC Report

QCType SPI01
Date Entered 10Nov09
Analysis Date/Time 06Nov0909:29:00

Duplicate SampleID A864552
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5193T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 12.8 | ! | 128 | |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 11 | | 110 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 11.7 | | 117 | |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 12.4 | | 124 | |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 12 | | 120 | |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 11.9 | | 119 | |
| 750 | TRICHLOROETHENE | 0 | 10 | 13.2 | | 132 | |
| 768 | VINYL CHLORIDE | 4.9 | 10 | 18.1 | | 132 | |
| 193 | BROMOBENZENE | 0 | 10 | 12.1 | | 121 | |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 11.3 | | 113 | |
| 197 | BROMOFORM | 0 | 10 | 8.94 | | 89.4 | |
| 198 | BROMOMETHANE | 0 | 10 | 12.9 | | 129 | |
| 231 | CHLOROBENZENE | 0 | 10 | 12.5 | ! | 125 | |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 10.3 | | 103 | |
| 234 | CHLOROETHANE | 0 | 10 | 13.7 | | 137 | |
| 235 | CHLOROFORM | 0 | 10 | 11.8 | | 118 | |
| 236 | CHLOROMETHANE | 0 | 10 | 11.2 | | 112 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 11.8 | | 118 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 11.9 | | 119 | |
| 296 | DIBROMOMETHANE | 0 | 10 | 12.5 | | 125 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 11.6 | | 116 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 11.6 | | 116 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 12.9 | | 129 | |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 12.5 | | 125 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 11.4 | | 114 | |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 12.5 | | 125 | |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 11.6 | | 116 | |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 13.1 | ! | 131 | |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 13.6 | ! | 136 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 10.8 | | 108 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 10.4 | | 104 | |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 10.6 | | 106 | |
| 349 | ETHYL BENZENE | 0 | 10 | 11.8 | | 118 | |
| 680 | STYRENE | 0 | 10 | 6.41 | | 64.1 | |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 13.8 | | 138 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 11.1 | | 111 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 12.7 | ! | 127 | |
| 703 | TETRACHLOROETHENE | 0 | 10 | 11.5 | | 115 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 12.4 | | 124 | |
| 724 | TOLUENE | 0 | 10 | 13 | ! | 130 | |
| 492 | M/P-XYLENE | 0 | 20 | 21.9 | | 109.5 | |
| 549 | O-XYLENE | 0 | 10 | 10.7 | | 107 | |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 12.4 | | 124 | |
| 519 | N-BUTYLBENZENE | 0 | 10 | 11.1 | | 111 | |

11-10-09

591696

R559983

# Heritage Environmental Services, LLC

Q2255854

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 12 | | 120 | |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 11.7 | | 117 | |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.7 | | 107 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 11.8 | | 118 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 11 | | 110 | |
| 493 | NAPHTHALENE | 0 | 10 | 10.4 | | 104 | |
| 532 | N-PROPYLBENZENE | 0 | 10 | 11.6 | | 116 | |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 11.8 | | 118 | |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 12.2 | | 122 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 10.3 | | 103 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 10.4 | | 104 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 9.3 | | 93 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 8.78 | | 87.8 | |
| 105 | ACROLEIN | 0 | 100 | 92.7 | | 92.7 | |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 60.7 | | 121.4 | |
| 106 | ACRYLONITRILE | 0 | 100 | 195 | | 195 | |
| 216 | CARBON DISULFIDE | 0 | 10 | 9.99 | | 99.9 | |
| 767 | VINYL ACETATE | 0 | 10 | 8.89 | | 88.9 | |
| 52 | 2-BUTANONE | 0 | 50 | 64.8 | | 129.6 | |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 68.1 | ! | 136.2 | |
| 60 | 2-HEXANONE | 0 | 50 | 67.3 | ! | 134.6 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 12.2 | | 61 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 13.3 | ! | 133 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 10.1 | | 101 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 11.4 | | 114 | |
| 422 | IODOMETHANE | 0 | 10 | 12 | | 120 | |
| 709 | TETRAHYDROFURAN | 0 | 125 | 169 | | 135.2 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 10.7 | | 107 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 139 | | 139 | |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 122 | | 122 | |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 12.2 | | 122 | |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 10.8 | | 108 | |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 32.6 | | 108.7 | |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

R559983

# Heritage Environmental Services, LLC

Q2255855

QC Report

QCType DPS01
Date Entered 10Nov09
Analysis Date/Time 06Nov0909:54:00

Duplicate SampleID A864552
Duplicate QCSampleID Q2255854
Method 309 Matrix 1

DataFile 5194T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 11.9 | | 118.5 | 7.3 |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 10.2 | | 101.6 | 7.8 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 11.1 | | 110.8 | 5.3 |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 11.3 | | 112.7 | 9.5 |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 11.5 | | 114.7 | 4.1 |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 11.1 | | 111.4 | 6.4 |
| 750 | TRICHLOROETHENE | 0 | 10 | 12.5 | | 124.7 | 5.6 |
| 768 | VINYL CHLORIDE | 4.9 | 10 | 17.1 | | 122 | 7.9 |
| 193 | BROMOBENZENE | 0 | 10 | 11.3 | | 112.7 | 7.2 |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 10.6 | | 106.4 | 5.8 |
| 197 | BROMOFORM | 0 | 10 | 8.52 | | 85.2 | 4.8 |
| 198 | BROMOMETHANE | 0 | 10 | 11.6 | | 115.6 | 10.6 |
| 231 | CHLOROBENZENE | 0 | 10 | 11.8 | | 117.7 | 5.9 |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 9.83 | | 98.3 | 5.1 |
| 234 | CHLOROETHANE | 0 | 10 | 12.6 | | 126.3 | 8.3 |
| 235 | CHLOROFORM | 0 | 10 | 10.9 | | 108.7 | 7.8 |
| 236 | CHLOROMETHANE | 0 | 10 | 10.3 | | 102.9 | 8.4 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 11.4 | | 113.6 | 4.1 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 11.2 | | 111.6 | 6.3 |
| 296 | DIBROMOMETHANE | 0 | 10 | 11.6 | | 115.6 | 7.9 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 11.1 | | 110.8 | 4.6 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 11 | | 109.9 | 5.5 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 12.3 | | 122.5 | 5.2 |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 11.7 | | 116.9 | 6.3 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 10.6 | | 106 | 7.3 |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 11.5 | | 114.8 | 8.7 |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 10.7 | | 107 | 8.1 |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 12.2 | | 121.9 | 7 |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 12.5 | | 125.4 | 7.8 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 9.75 | | 97.5 | 10 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 9.21 | | 92.1 | 12.3 |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.85 | | 98.5 | 7.1 |
| 349 | ETHYL BENZENE | 0 | 10 | 11.5 | | 115.1 | 2.1 |
| 680 | STYRENE | 0 | 10 | 6.77 | | 67.7 | 5.5 |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 12.8 | | 128.3 | 7.4 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 10.2 | | 101.6 | 8.8 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 11.5 | | 115.1 | 9.4 |
| 703 | TETRACHLOROETHENE | 0 | 10 | 11 | | 109.8 | 4.4 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 11.4 | | 113.8 | 8.4 |
| 724 | TOLUENE | 0 | 10 | 12.2 | | 121.9 | 6.1 |
| 492 | M/P-XYLENE | 0 | 20 | 21.1 | | 105.4 | 8.4 |
| 549 | O-XYLENE | 0 | 10 | 10.2 | | 102.4 | 4.5 |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 11.5 | | 114.9 | 7.4 |
| 519 | N-BUTYLBENZENE | 0 | 10 | 11 | | 109.8 | 7.9 |
| 247 | CIS-1,3-DIC[illegible] | | | | | | |
| [illegible] | TRANS-1,3-[illegible] | | | | | | 10 |
| [illegible] | 2,2-DICHL[illegible] | | | | | | 12.[illegible] |

KS 11/10/09

591695

R559983

# Heritage Environmental Services, LLC

Q2255855

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 12.2 | | 121.8 | 1.7 |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 11.1 | | 110.9 | 5.3 |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.8 | | 108.4 | 1.5 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 11.2 | | 111.7 | 5.2 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 10.8 | | 108.4 | 1.6 |
| 493 | NAPHTHALENE | 0 | 10 | 10.4 | | 103.9 | 7.1 |
| 532 | N-PROPYLBENZENE | 0 | 10 | 10.9 | | 109.3 | 5.5 |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 11.4 | | 114.1 | 3.4 |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 11.8 | | 117.8 | 3.7 |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 10.5 | | 104.7 | 2.1 |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 10.6 | | 106 | 1.8 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 9.25 | | 92.5 | 5.5 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 8.92 | | 89.2 | 1.6 |
| 105 | ACROLEIN | 0 | 100 | 75.7 | | 75.7 | 20.2 |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 56.3 | | 112.6 | 7.5 |
| 106 | ACRYLONITRILE | 0 | 100 | 151 | | 151.1 | 25.2 |
| 216 | CARBON DISULFIDE | 0 | 10 | 9.41 | | 94.1 | 6 |
| 767 | VINYL ACETATE | 0 | 10 | 5.88 | | 58.8 | 40.8 |
| 152 | 2-BUTANONE | 0 | 50 | 57.7 | | 115.4 | 11.6 |
| 591 | 4-METHYL-2-PENTANONE | 0 | 50 | 61.8 | | 123.6 | 9.6 |
| 160 | 2-HEXANONE | 0 | 50 | 61.5 | ! | 123 | 9 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 10.2 | | 50.8 | 18.1 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 12.2 | ! | 122.3 | 8.4 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 9.25 | | 92.5 | 8.6 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 10.5 | | 105.4 | 7.9 |
| 422 | IODOMETHANE | 0 | 10 | 11 | | 110.4 | 8.2 |
| 709 | TETRAHYDROFURAN | 0 | 125 | 153 | | 122.5 | 9.6 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 9.6 | | 96 | 10.5 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 125 | | 124.8 | 10.8 |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 111 | | 110.5 | 9.6 |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 11.6 | | 115.6 | 5.1 |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 10 | | 100.2 | 4.7 |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 31.3 | | 104.3 | 4.1 |

**Comment:** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5193T.D
Acq On : 6 Nov 2009 9:29
Operator : HAROLD
Sample : A864552 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 06 09:45:22 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 635192 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 211211 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 143390 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.60% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 173817 | 9.72 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 598311 | 10.48 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 104.80% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 172637 | 9.57 UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = 95.70% | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 107979 | 11.97 UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 151431 | 11.19 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 270293 | 18.11 UG/L | 99 |
| 5) Bromomethane | 1.488 | 94 | 82602 | 12.85 UG/L | 97 |
| 6) Chloroethane | 1.567 | 64 | 109981 | 13.72 UG/L # | 89 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 220322 | 11.69 UG/L # | 75 |
| 8) Acrolein | 2.033 | 56 | 102900 | 92.69 UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 393922 | 60.71 UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 150479 | 11.95 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 168285 | 11.72 UG/L | 95 |
| 12) Acrylonitrile | 2.734 | 53 | 855748 | 194.71 UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 400573 | 9.99 UG/L | 99 |
| 14) Methylene Chloride | 2.520 | 84 | 183239 | 11.40 UG/L # | 79 |
| 15) Allyl Chloride | 2.412 | 41 | 481220 | 10.66 UG/L | 100 |
| 16) Vinyl Acetate | 3.193 | 43 | 18228 | 8.89 UG/L # | 96 |
| 17) MTBE | 2.756 | 73 | 549148 | 11.41 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 186237 | 12.91 UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 303394 | 12.52 UG/L | 100 |
| 20) 2-Butanone | 3.701 | 72 | 166673 | 64.82 UG/L # | 31 |
| 21) Ethyl Acetate | 3.766 | 43 | 266698 | 14.32 UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 190841 | 12.45 UG/L | 94 |
| 23) Ethyl Cyanide | 3.759 | 54 | 406837 | 139.03 UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 276127 | 11.77 UG/L | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 1312257 | 121.73 UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 960502 | 168.59 UG/L # | 81 |
| 27) Bromochloromethane | 3.902 | 128 | 84796 | 12.37 UG/L | 83 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 161526 | 10.58 UG/L | 91 |
| 29) Diethyl ether | 1.932 | 59 | 167690 | 12.12 UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 231527 | 11.88 UG/L | 100 |
| 31) Iodomethane | 2.233 | 142 | 246588 | 11.98 UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 78341 | 11.60 UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 188334 | 10.99 UG/L | 92 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 218736 | 12.39 UG/L | 98 |
| 37) Isobutanol | 4.504 | 43 | 1099287 | 1075.60 UG/L # | 94 |
| 38) Benzene | 4.532 | 78 | 704841 | 12.75 UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 309865 | 11.03 UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 190808 | 13.19 UG/L | 97 |
| 41) n-Butanol | 5.213 | 56 | 567813 | 638.89 UG/L | 99 |

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5193T.D
Acq On : 6 Nov 2009 9:29
Operator : HAROLD
Sample : A864552 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

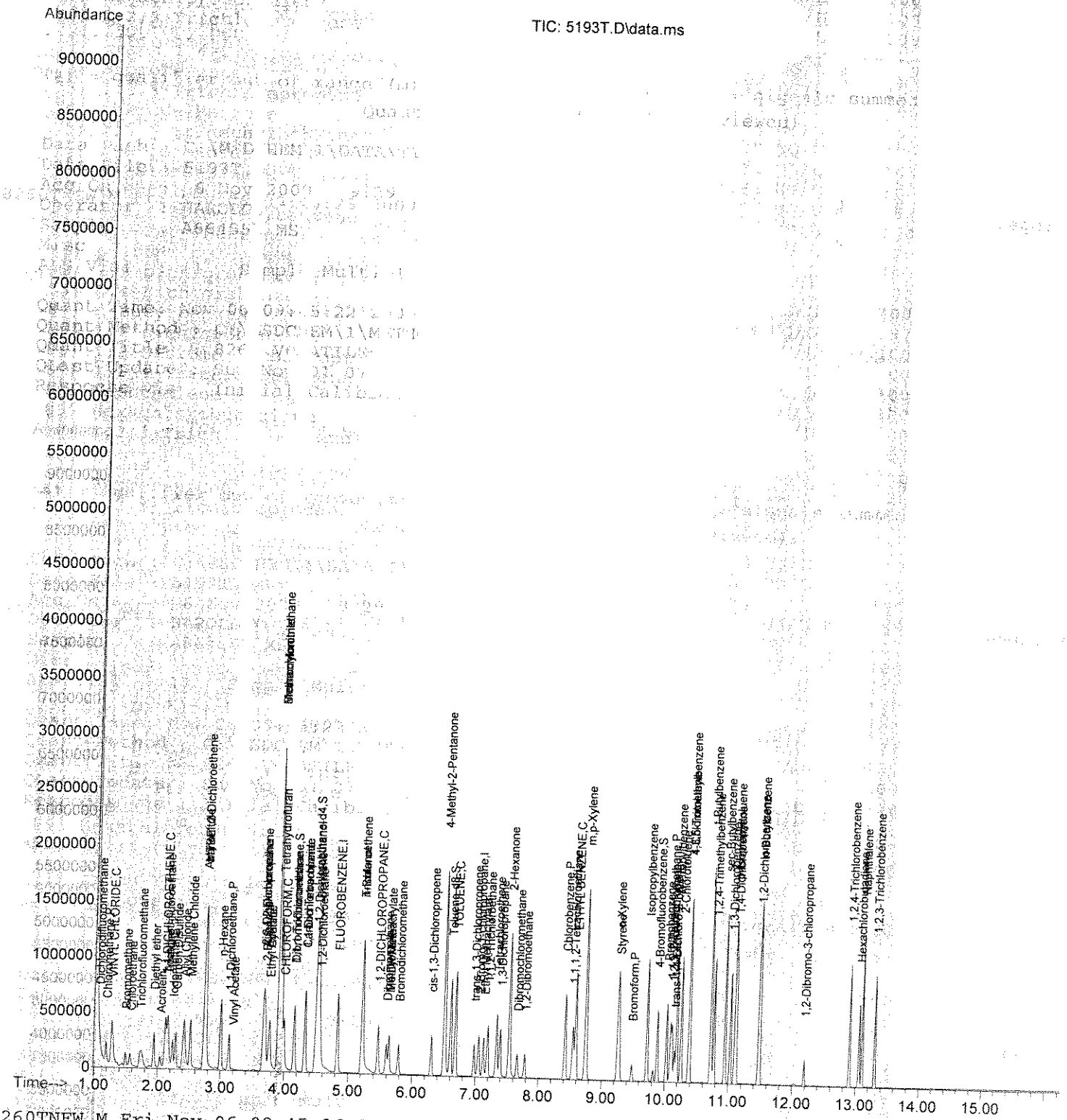
Quant Time: Nov 06 09:45:22 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 166762 | 13.08 UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 38623 | 86.43 UG/L | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 156431 | 12.16 UG/L # | 91 |
| 45) Bromodichloromethane | 5.786 | 83 | 174434 | 11.28 UG/L | 99 |
| 46) Dibromomethane | 5.593 | 93 | 97725 | 12.51 UG/L | 90 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1364231 | 68.07 UG/L # | 88 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 208094 | 10.78 UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 711327 | 12.96 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 160747 | 10.42 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 150014 | 13.82 UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 148023 | 13.30 UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 925652 | 67.29 UG/L # | 87 |
| 57) 1,3-Dichloropropane | 7.390 | 76 | 272842 | 13.56 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 203482 | 10.75 UG/L # | 61 |
| 59) Tetrachloroethene | 7.333 | 166 | 178743 | 11.47 UG/L | 100 |
| 60) Dibromochloromethane | 7.663 | 129 | 114085 | 10.34 UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 456770 | 12.48 UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 145541 | 11.10 UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 239011 | 11.75 UG/L | 73 |
| 64) m,p-Xylene | 8.744 | 106 | 556888 | 21.94 UG/L # | 62 |
| 65) o-Xylene | 9.253 | 106 | 275616 | 10.71 UG/L | 81 |
| 66) Styrene | 9.274 | 104 | 262996 | 6.41 UG/L # | 80 |
| 67) Bromoform | 9.482 | 173 | 66197 | 8.94 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 236980 | 12.65 UG/L | 98 |
| 70) Isopropylbenzene | 9.718 | 105 | 717349 | 11.77 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 64597 | 12.18 UG/L # | 9 |
| 72) Bromobenzene | 10.026 | 77 | 302039 | 12.11 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 74167 | 12.38 UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 99502 | 11.55 UG/L | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 507834 | 8.78 UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 191295 | 11.84 UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 181314 | 11.88 UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 390706 | 12.22 UG/L # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 549713 | 9.30 UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 905446 | 11.81 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 709922 | 11.02 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 365063 | 11.60 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 368267 | 11.68 UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 372999 | 11.08 UG/L | 97 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 367796 | 11.61 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 46870 | 10.08 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 261037 | 10.41 UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 773005 | 10.38 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 121270 | 10.68 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 249933 | 10.25 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5193T.D
Acq On : 6 Nov 2009 9:29
Operator : HAROLD
Sample : A864552 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 06 09:45:22 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 09:45:26 2009



59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5194T.D
Acq On : 6 Nov 2009 9:54
Operator : HAROLD
Sample : A864552 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 06 10:10:51 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 617620 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 205636 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 137937 | 9.46 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 94.60% | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 166599 | 9.58 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.80% | | |
| 50) Toluene-d8 | 6.603 | 98 | 583569 | 10.51 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 105.10% | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 169030 | 9.63 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = | 96.30% | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 106869 | 12.18 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 135404 | 10.29 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 247608 | 17.06 | UG/L | 98 |
| 5) Bromomethane | 1.488 | 94 | 72214 | 11.56 | UG/L | 100 |
| 6) Chloroethane | 1.567 | 64 | 98440 | 12.63 | UG/L | 91 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 203304 | 11.09 | UG/L # | 78 |
| 8) Acrolein | 2.040 | 56 | 81742 | 75.73 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 355294 | 56.31 | UG/L | 98 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 140386 | 11.47 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.147 | 101 | 159671 | 11.44 | UG/L | 95 |
| 12) Acrylonitrile | 2.735 | 53 | 645770 | 151.11 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 366731 | 9.41 | UG/L | 99 |
| 14) Methylene Chloride | 2.513 | 84 | 167414 | 10.60 | UG/L # | 76 |
| 15) Allyl Chloride | 2.412 | 41 | 421284 | 9.60 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 13342 | 5.88 | UG/L # | 88 |
| 17) MTBE | 2.756 | 73 | 493129 | 10.54 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 171842 | 12.25 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 270455 | 11.48 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 144222 | 57.69 | UG/L # | 30 |
| 21) Ethyl Acetate | 3.766 | 43 | 231292 | 12.77 | UG/L # | 98 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 174249 | 11.69 | UG/L | 93 |
| 23) Ethyl Cyanide | 3.759 | 54 | 354990 | 124.76 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 248061 | 10.87 | UG/L | 100 |
| 25) Methacrylonitrile | 3.902 | 41 | 1158243 | 110.50 | UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 848256 | 153.13 | UG/L # | 82 |
| 27) Bromochloromethane | 3.902 | 128 | 76546 | 11.49 | UG/L | 85 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 146169 | 9.85 | UG/L | 91 |
| 29) Diethyl ether | 1.932 | 59 | 154895 | 11.51 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 211129 | 11.14 | UG/L | 99 |
| 31) Iodomethane | 2.233 | 142 | 220897 | 11.04 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 70266 | 10.70 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 169337 | 10.16 | UG/L | 92 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 193420 | 11.27 | UG/L | 97 |
| 37) Isobutanol | 4.504 | 43 | 954787 | 960.80 | UG/L # | 93 |
| 38) Benzene | 4.533 | 78 | 636971 | 11.85 | UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 287040 | 10.51 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 175372 | 12.47 | UG/L | 95 |
| 41) n-Butanol | 5.213 | 56 | 494956 | 572.76 | UG/L | 99 |

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5194T.D
Acq On : 6 Nov 2009 9:54
Operator : HAROLD
Sample : A864552 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

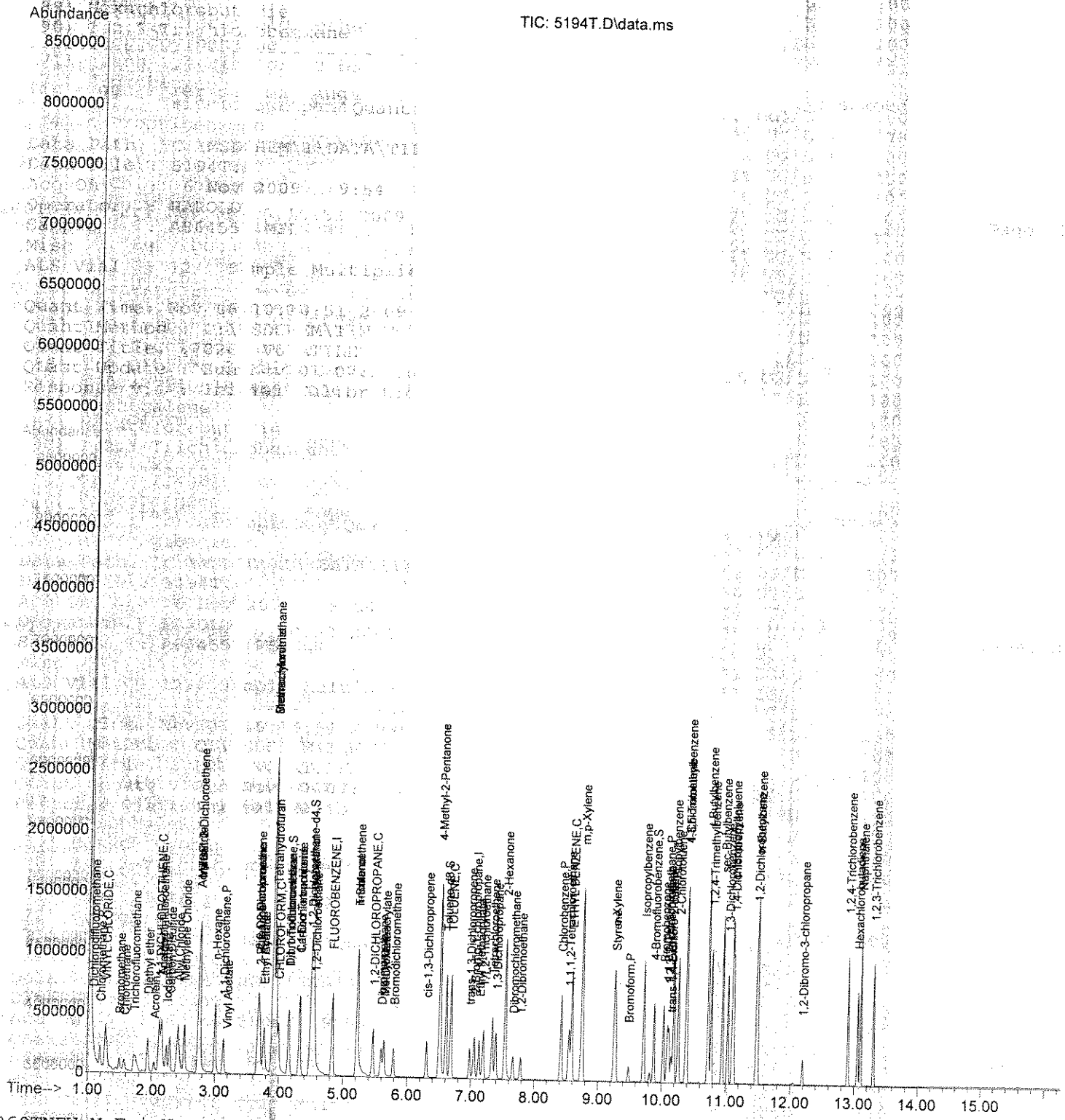
Quant Time: Nov 06 10:10:51 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 151088 | 12.19 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.636 | 88 | 34219 | 79.07 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 144576 | 11.56 | UG/L # | 89 |
| 45) Bromodichloromethane | 5.786 | 83 | 159964 | 10.64 | UG/L | 99 |
| 46) Dibromomethane | 5.593 | 93 | 87818 | 11.56 | UG/L | 91 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1204206 | 61.79 | UG/L # | 88 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 183108 | 9.75 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 650512 | 12.19 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 138151 | 9.21 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 135413 | 12.83 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 132434 | 12.23 | UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 823820 | 61.51 | UG/L # | 87 |
| 57) 1,3-Dichloropropane | 7.391 | 76 | 245694 | 12.54 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.126 | 69 | 184593 | 10.02 | UG/L # | 62 |
| 59) Tetrachloroethene | 7.333 | 166 | 166687 | 10.98 | UG/L | 98 |
| 60) Dibromochloromethane | 7.656 | 129 | 105588 | 9.83 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 419239 | 11.77 | UG/L | 98 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 129742 | 10.16 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 227931 | 11.51 | UG/L | 79 |
| 64) m,p-Xylene | 8.744 | 106 | 520737 | 21.07 | UG/L # | 61 |
| 65) o-Xylene | 9.253 | 106 | 256517 | 10.24 | UG/L | 79 |
| 66) Styrene | 9.274 | 104 | 270426 | 6.77 | UG/L # | 82 |
| 67) Bromoform | 9.482 | 173 | 61399 | 8.52 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 209920 | 11.51 | UG/L | 99 |
| 70) Isopropylbenzene | 9.719 | 105 | 662484 | 11.17 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 52417 | 10.15 | UG/L # | 7 |
| 72) Bromobenzene | 10.027 | 77 | 273729 | 11.27 | UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.113 | 110 | 66386 | 11.38 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 91685 | 10.93 | UG/L | 78 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 502402 | 8.92 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 178624 | 11.36 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 165861 | 11.16 | UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 366499 | 11.78 | UG/L # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 532336 | 9.25 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 851713 | 11.41 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 679845 | 10.84 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 339566 | 11.08 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 340249 | 11.08 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 359867 | 10.98 | UG/L | 100 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 339054 | 10.99 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 41877 | 9.25 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 258735 | 10.60 | UG/L | 100 |
| 88) Naphthalene | 13.100 | 128 | 753188 | 10.39 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 119885 | 10.84 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 248506 | 10.47 | UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5194T.D
Acq On : 6 Nov 2009 9:54
Operator : HAROLD
Sample : A864552 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 06 10:10:51 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 10:10:55 2009



59169b

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864555

Method SW846-8260B
Sample Description 156
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5197T.D Date/Time 06Nov09 11:11:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | 2.4 | | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 38 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 3.8 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

JM 11-10-09

591696

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864555

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | BDL | 1.0 | | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | BDL | 1.0 | | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | BDL | 1.0 | | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | BDL | 1.0 | | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | BDL | 10 | | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | BDL | 1.0 | | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | BDL | 10 | | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | BDL | 1.0 | | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | BDL | 1.0 | | UG/L | |
| 100-42-5 | 680 | STYRENE | BDL | 1.0 | | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | BDL | 1.0 | | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | BDL | 1.0 | | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | BDL | 1.0 | | UG/L | |
| 108-88-3 | 724 | TOLUENE | BDL | 1.0 | | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | BDL | 1.0 | | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | BDL | 1.0 | | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | BDL | 1.0 | | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | BDL | 1.0 | | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | EX | 1.0 | | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | BDL | 1.0 | | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | BDL | 1.0 | | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | BDL | 1.0 | | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | BDL | 1.0 | | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | BDL | 1.0 | | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | BDL | 1.0 | | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | BDL | 2.0 | | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 96 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 86 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864555

ORIGINAL

Method SW846-8260B
Sample Description 156
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5197T Date/Time 11/6/09 11:
Dilution Factor

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | 2.4 | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 210 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 83 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 240 | CIS-1,2-DICHLOROETHENE | | 38 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 3.8 | | 1.0 | ug/L | | |
| 235 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 273 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 364 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 828 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| 251 | [illegible] | | | | 1.0 | ug/L | | |
| 295 | [illegible] | | | | 1.0 | ug/L | | |
| 744 | [illegible] | | | | 1.0 | ug/L | | |
| 29[illegible] | [illegible] | | | | 1.0 | ug/L | | |

TC#89

59169b

# Heritage Environmental Services, LLC

## GC/MS VOA

A864555

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1602 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3325 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | EX | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 974 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 96 | | | %Rec |
| 726 | TOLUENE-D8 | | 102 | | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 86 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 98 | | | %Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5197T.D
Acq On : 6 Nov 2009 11:11
Operator : HAROLD
Sample : A864555
Misc :
ALS Vial : 15 Sample Multiplier: 1

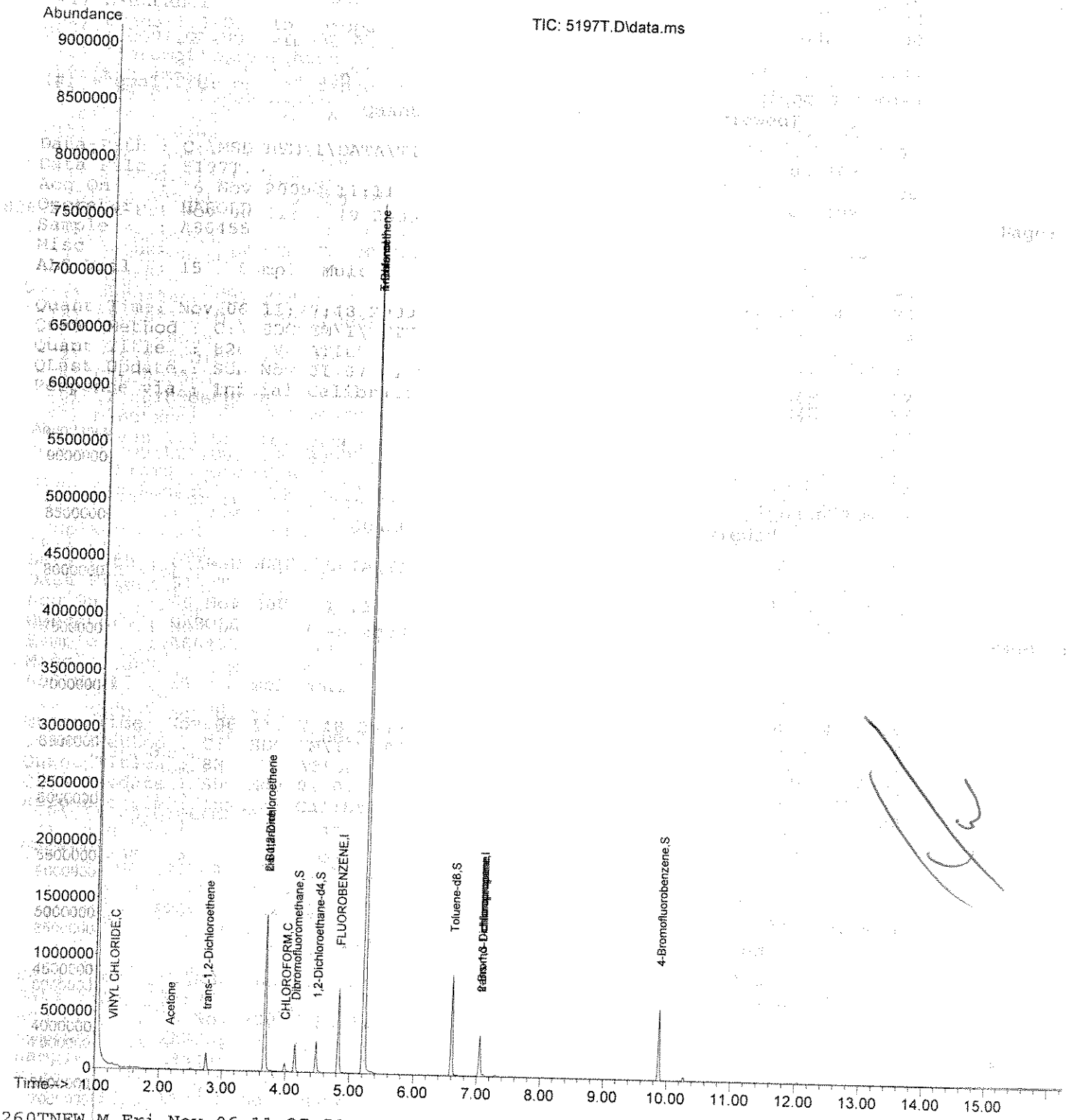
Quant Time: Nov 06 11:27:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 658506 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 223366 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 143018 | 9.19 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 178407 | 9.62 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 605256 | 10.23 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.30% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 164781 | 8.64 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 86.40% | |
| **Target Compounds** | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 13634 | 0.88 UG/L | 96 |
| 9) Acetone | 2.161 | 43 | 9894 | 1.47 UG/L | 94 |
| 14) Methylene Chloride | 2.512 | 84 | 4283 | Below Cal # | 76 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 56356 | 3.77 UG/L | 98 |
| 20) 2-Butanone | 3.673 | 72 | 4181 | 1.57 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 598990 | 37.68 UG/L | 84 |
| 24) CHLOROFORM | 3.988 | 83 | 57862 | 2.38 UG/L | 99 |
| 40) Trichloroethene | 5.220 | 130 | 2657221 | 177.21 UG/L | 96 |
| 41) n-Butanol | 5.213 | 56 | 2002 | 2.17 UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3954 | 0.25 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5197T.D
Acq On : 6 Nov 2009 11:11
Operator : HAROLD
Sample : A864555
Misc :
ALS Vial : 15 Sample Multiplier: 1

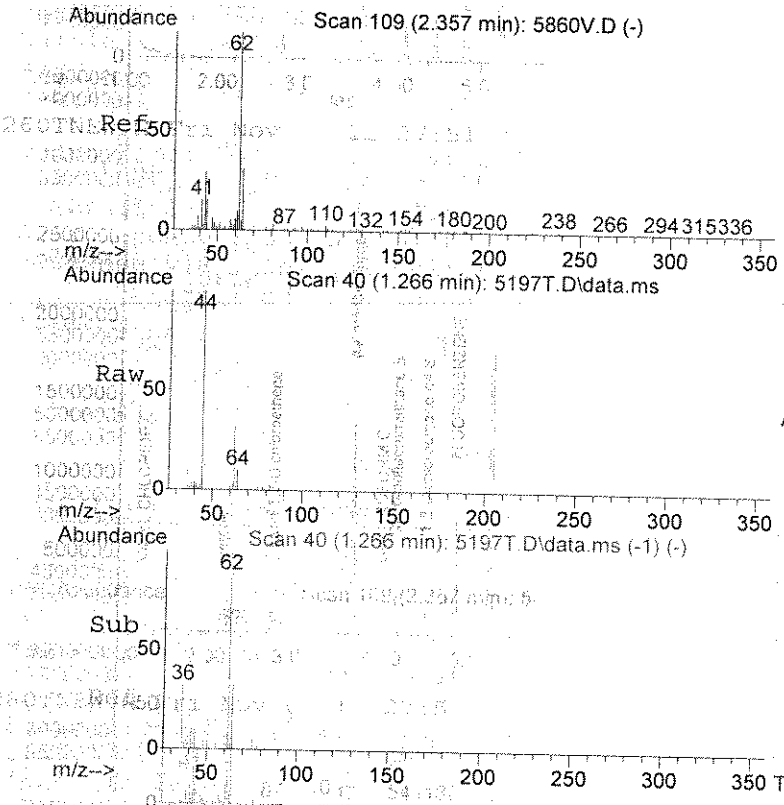
Quant Time: Nov 06 11:27:48 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 11:27:51 2009



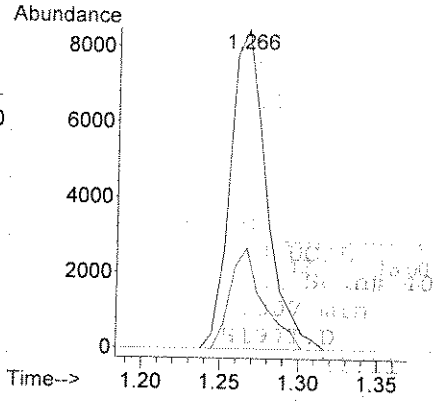
59169b

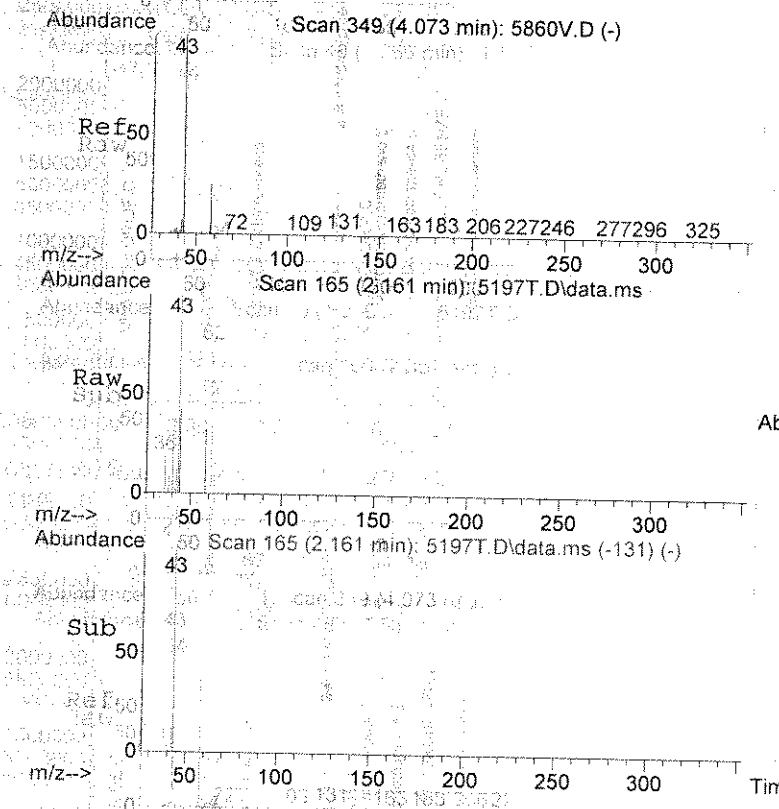



#4
VINYL CHLORIDE
Concen: 0.88 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 62 Resp: 13634

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 28.9 | 24.9 | 37.3 |

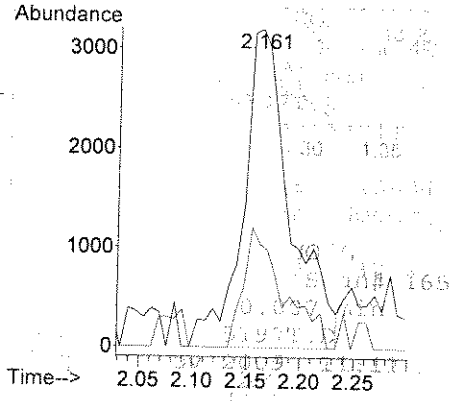


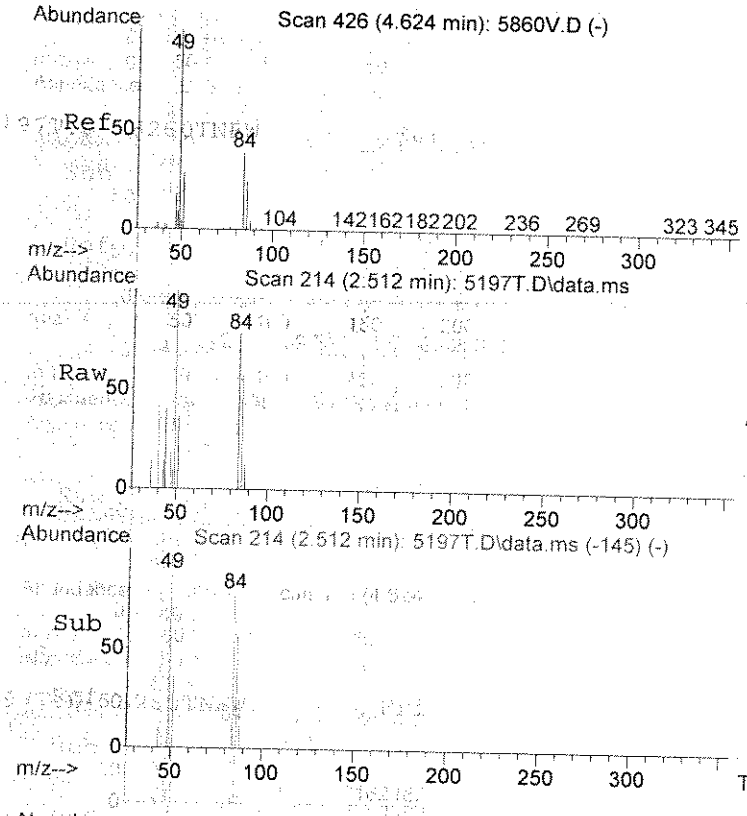




#9
Acetone
Concen: 1.47 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 43 Resp: 9894

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.9 | 23.1 | 34.7 |

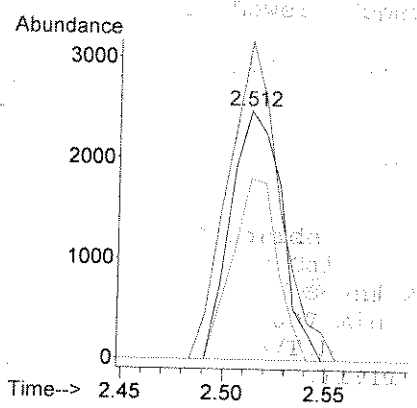


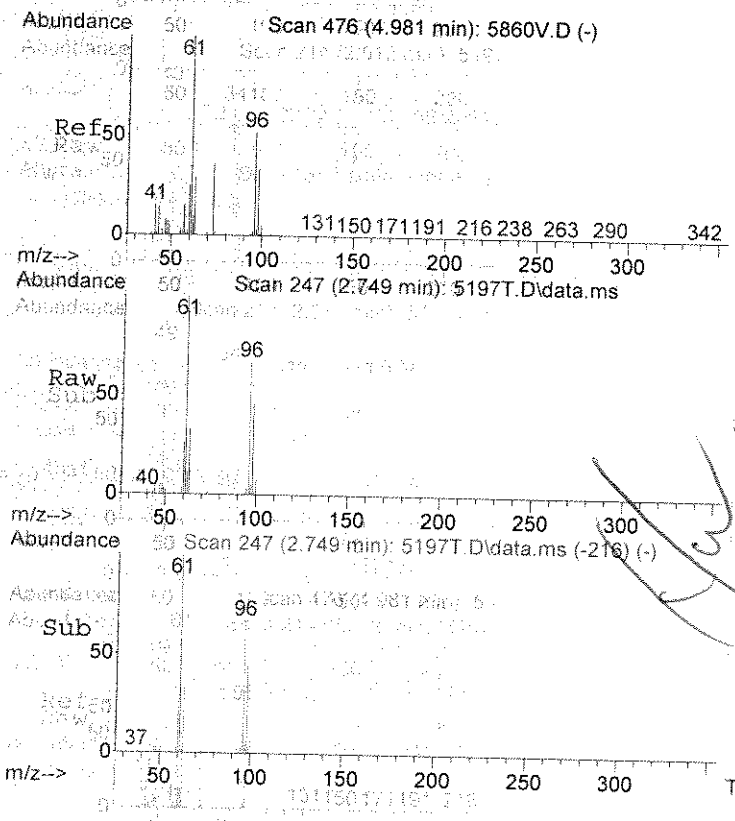



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 84 Resp: 4283

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 130.3 | 140.2 | 210.2# |
| 86 | 64.6 | 51.1 | 76.7 |

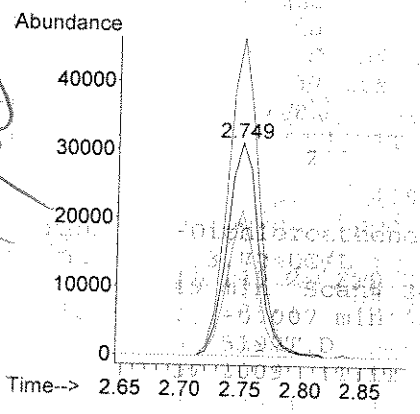


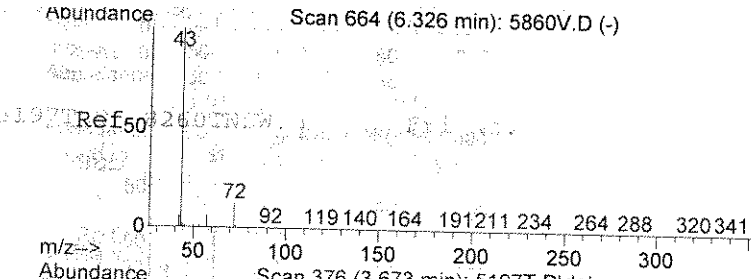




#18
trans-1,2-Dichloroethene
Concen: 3.77 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 96 Resp: 56356

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 145.0 | 114.1 | 171.1 |
| 98 | 64.1 | 50.7 | 76.1 |

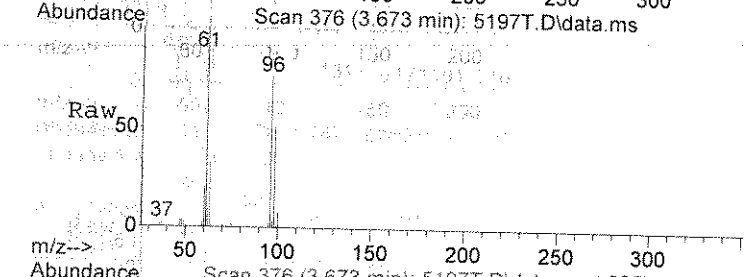


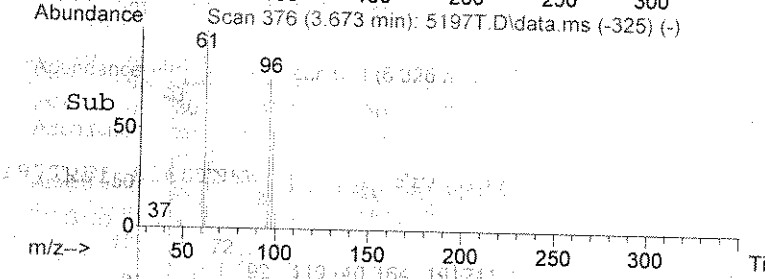


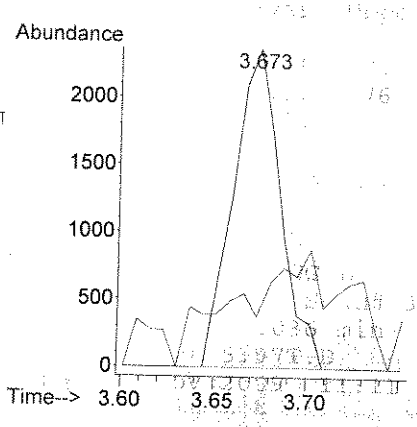

#20
2-Butanone
Concen: 1.57 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

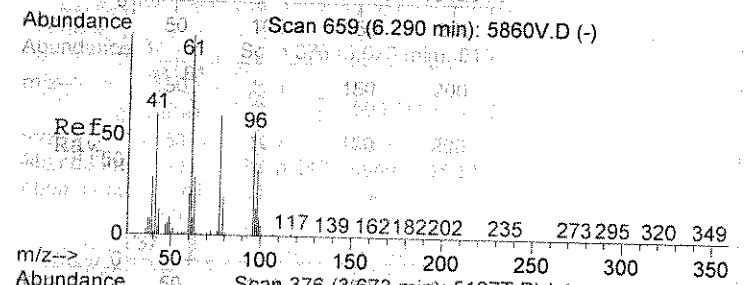
Tgt Ion: 72 Resp: 4181

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 67.3 | 449.0 | 673.4# |



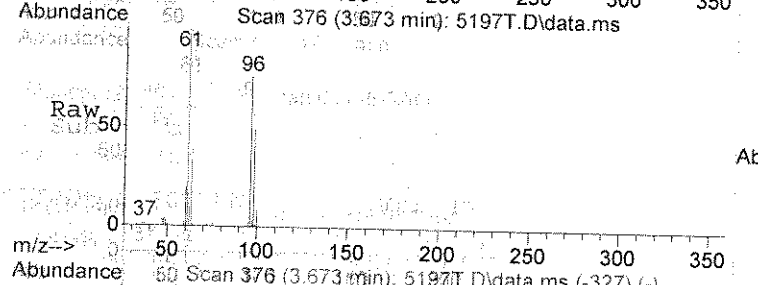



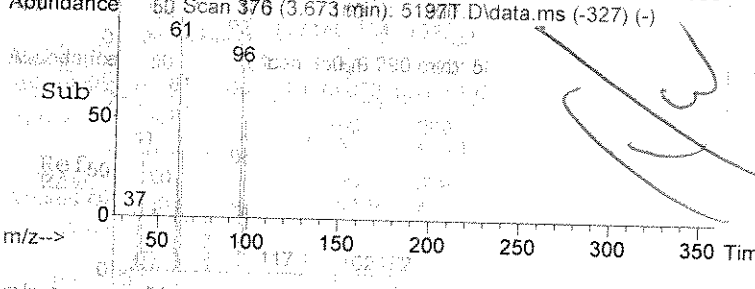



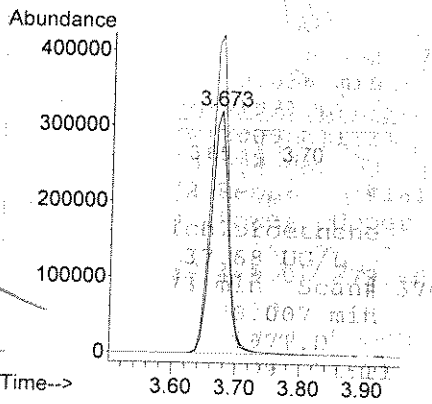

#22
cis-1,2-Dichloroethene
Concen: 37.68 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

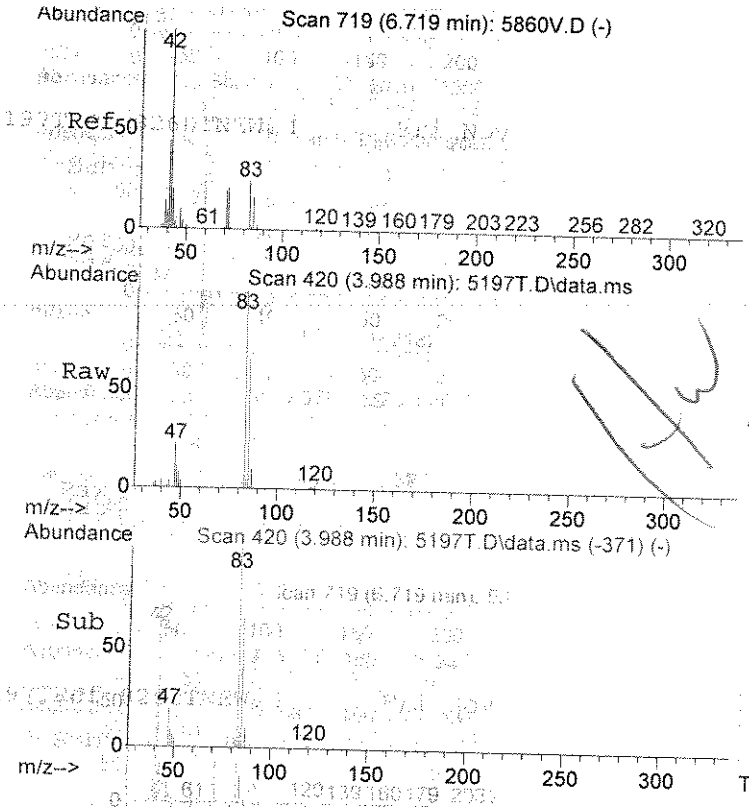
Tgt Ion: 96 Resp: 598990

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 132.0 | 121.8 | 182.6 |



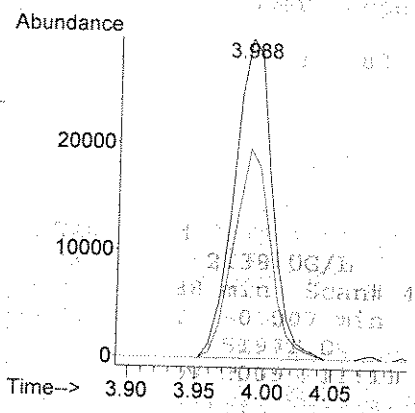



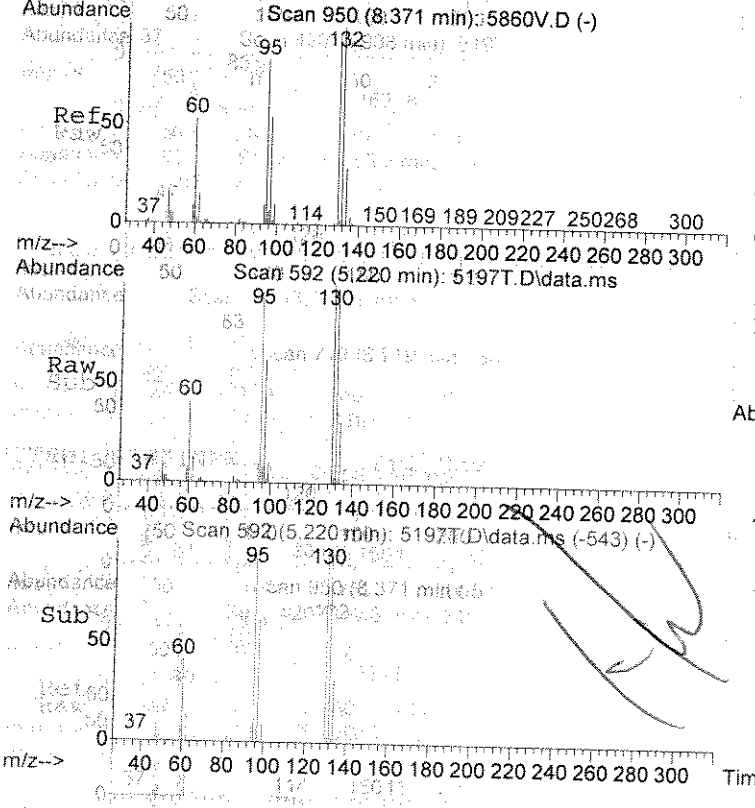



#24
CHLOROFORM
Concen: 2.38 UG/L
RT: 3.988 min Scan# 420
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 83 Resp: 57862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.4 | 51.3 | 76.9 |

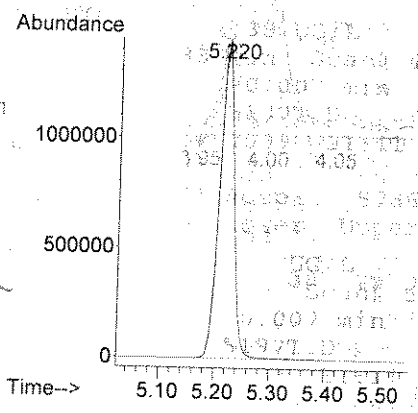


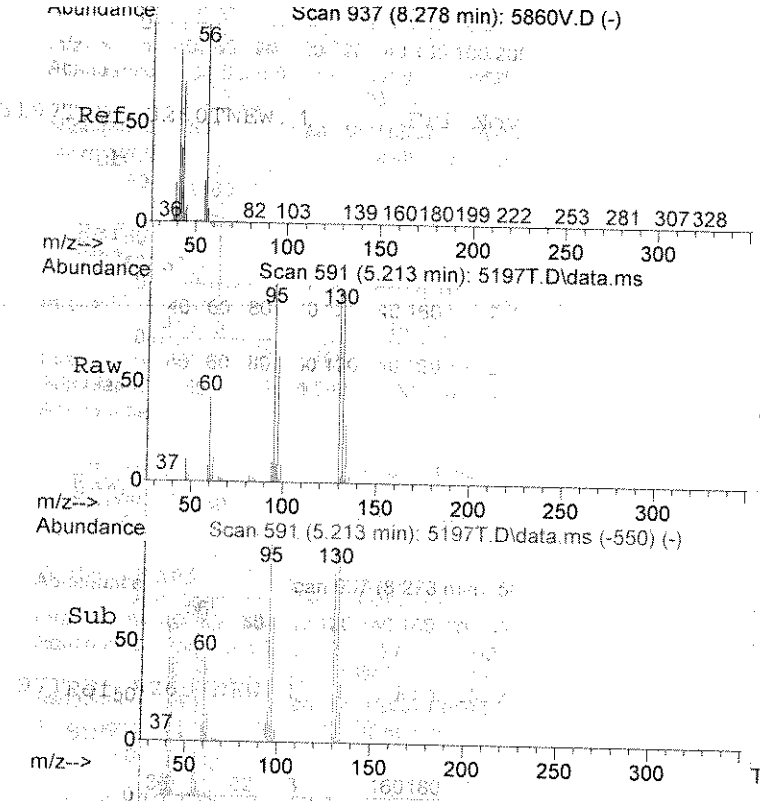




#40
Trichloroethene
Concen: 177.21 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion:130 Resp: 2657221

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 98.1 | 82.0 | 123.0 |

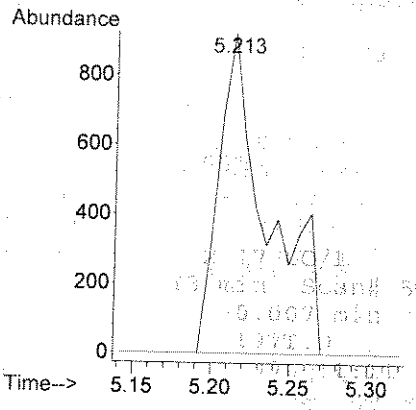


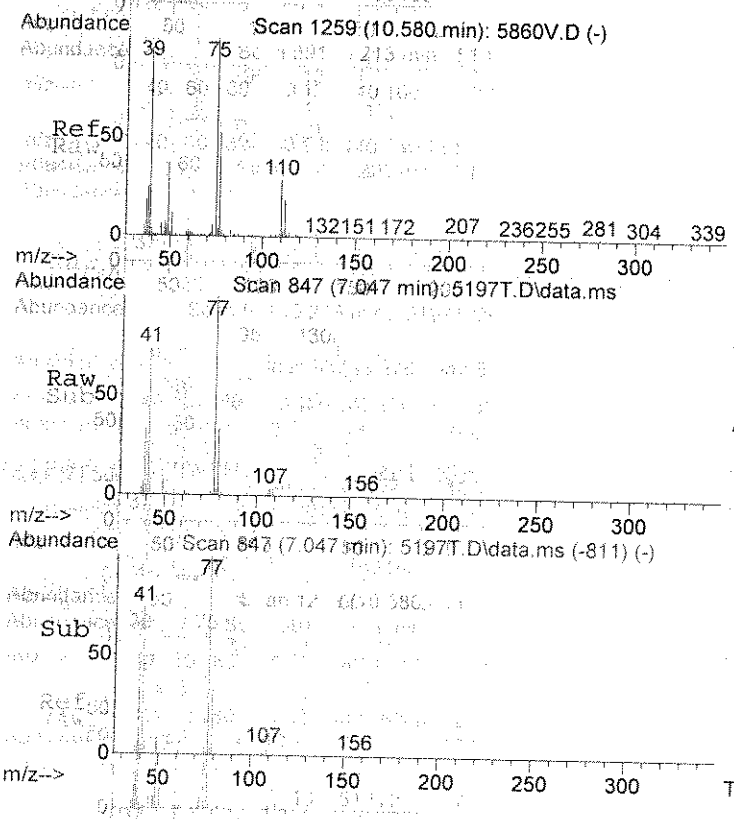



#41
n-Butanol
Concen: 2.17 UG/L
RT: 5.213 min Scan# 591
Delta R.T. -0.007 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 56 Resp: 2002

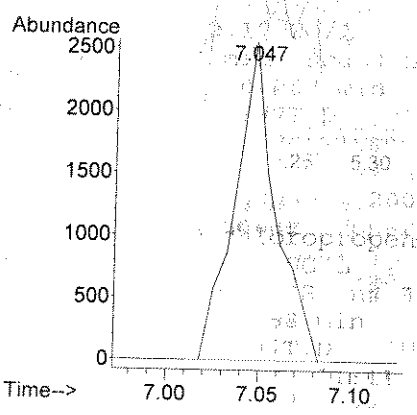
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |




#52
trans-1,3-Dichloropropene
Concen: 0.25 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5197T.D
Acq: 6 Nov 2009 11:11

Tgt Ion: 75 Resp: 3954



R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864556

Method SW846-8260B
Sample Description 151
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5198T.D Date/Time 06Nov09 11:36:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 1.6 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 1.7 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

JKT 11/10/09

59169b

R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864556

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | 7.0 | | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1804 | | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | | | |
| 127-18-4 | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 95 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 92 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864556

Method SW846-8260B
Sample Description 151
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5198T Date/Time 11/6/09 11:
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 291 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 715 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 811 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 1.6 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 1.7 | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 275 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 356 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 80 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| | | | | | 10 | ug/L | | |
| | | | | | | g/L | | |
| | | | | | | g/L | | |
| | | | | | | g/L | | |

59169b

# Heritage Environmental Services, LLC

A864556

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | 70 | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 95 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 92 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | % Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5198T.D
Acq On : 6 Nov 2009 11:36
Operator : HAROLD
Sample : A864556
Misc :
ALS Vial : 16 Sample Multiplier: 1

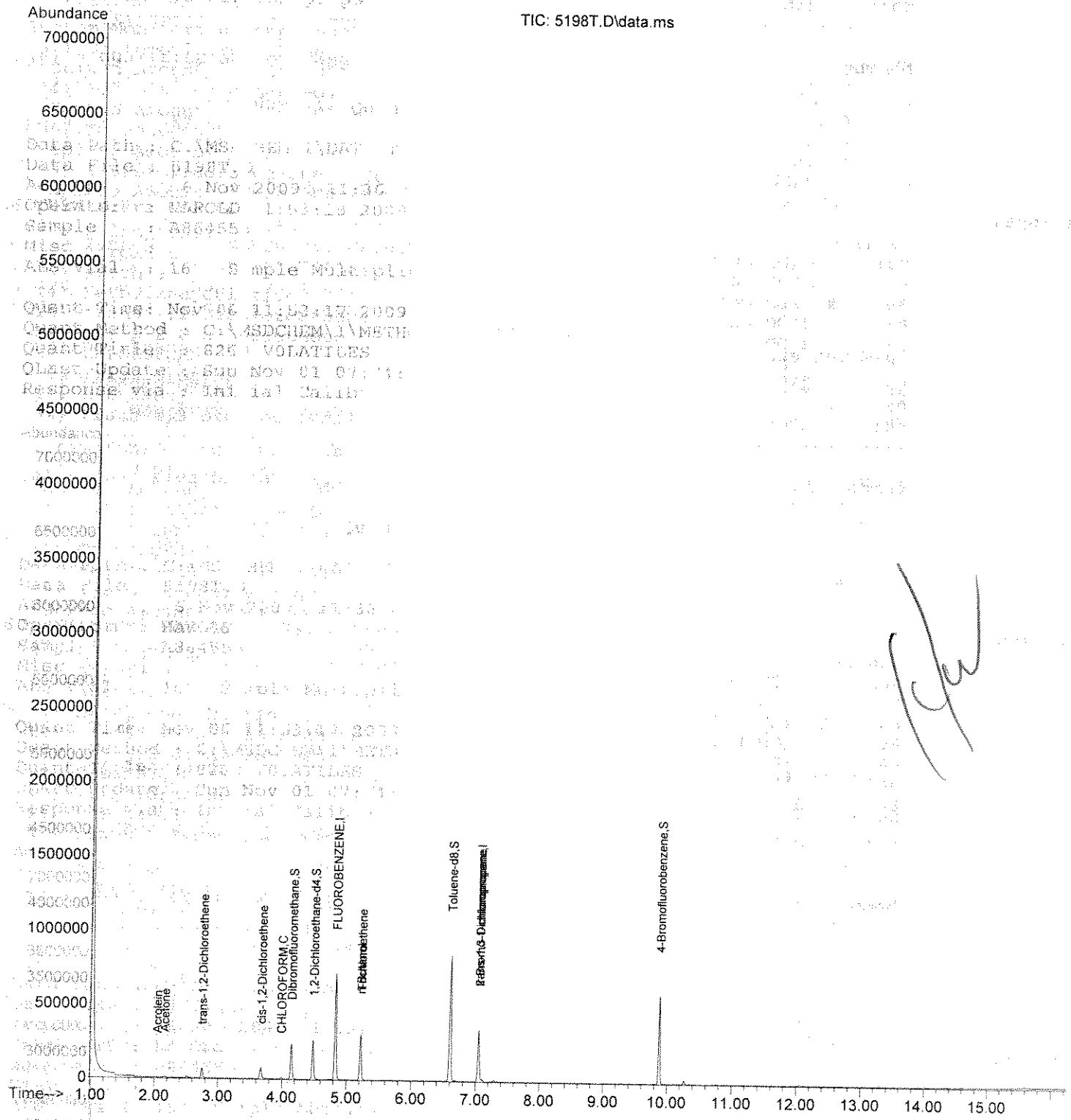
Quant Time: Nov 06 11:53:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 645447 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 205796 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 140684 | 9.23 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 92.30% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 172977 | 9.52 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 594392 | 10.24 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.40% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 161069 | 9.17 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.70% | |
| **Target Compounds** | | | | | Qvalue |
| 8) Acrolein | 2.047 | 56 | 1071 | 0.95 UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 13273 | 2.01 UG/L | 98 |
| 14) Methylene Chloride | 2.520 | 84 | 5200 | Below Cal # | 66 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 24626 | 1.68 UG/L | 98 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 24974 | 1.60 UG/L | 85 |
| 24) CHLOROFORM | 3.988 | 83 | 8851 | 0.37 UG/L | 96 |
| 40) Trichloroethene | 5.220 | 130 | 103142 | 7.02 UG/L | 98 |
| 41) n-Butanol | 5.206 | 56 | 1331 | 1.47 UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.040 | 75 | 3811 | 0.24 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5198T.D
Acq On : 6 Nov 2009 11:36
Operator : HAROLD
Sample : A864556
Misc :
ALS Vial : 16 Sample Multiplier: 1

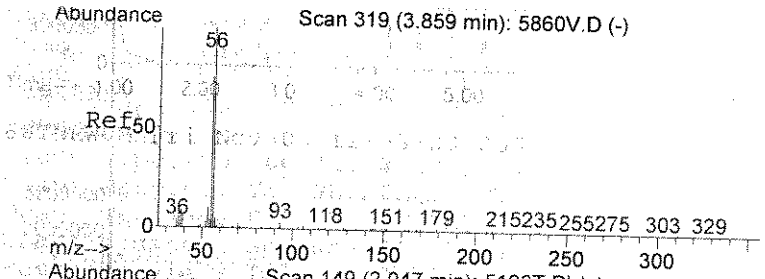
Quant Time: Nov 06 11:53:17 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 11:53:20 2009

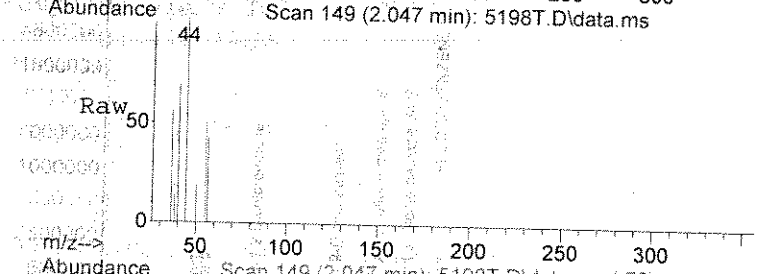


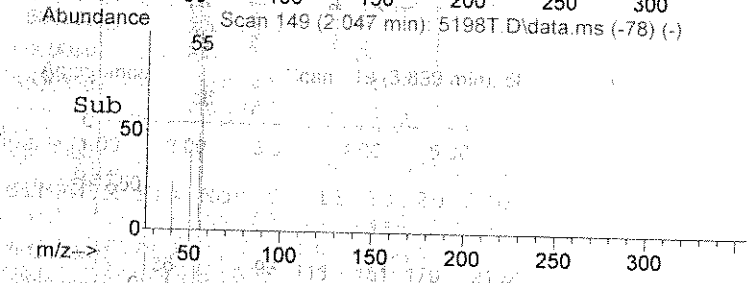
59169b

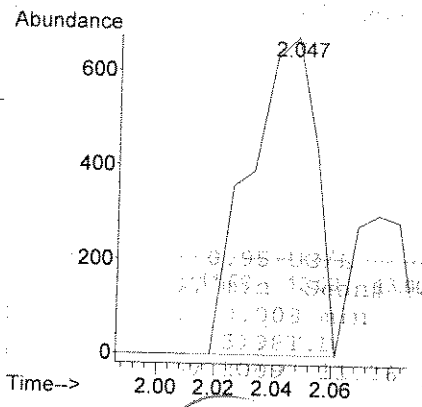


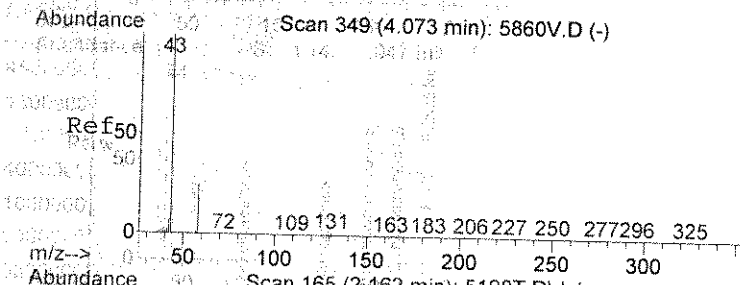

#8
Acrolein
Concen: 0.95 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 56 Resp: 1071



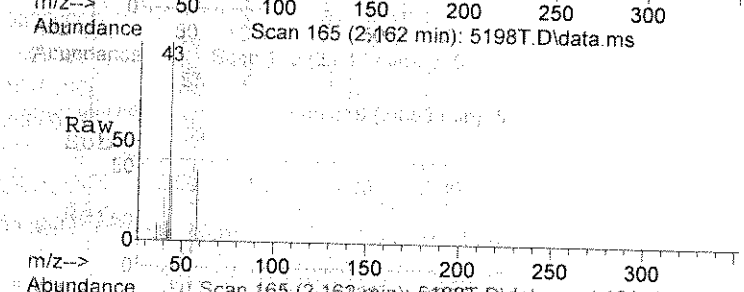



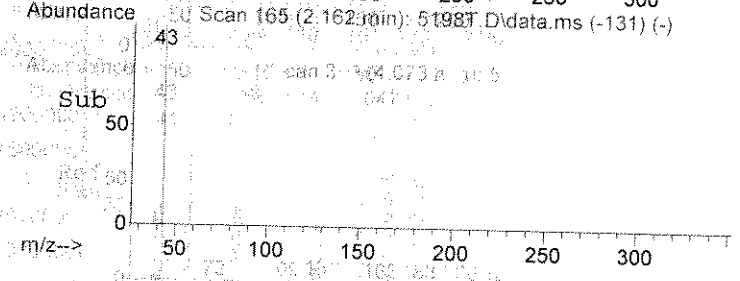



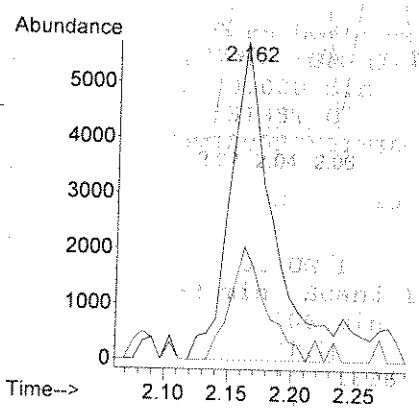

#9
Acetone
Concen: 2.01 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

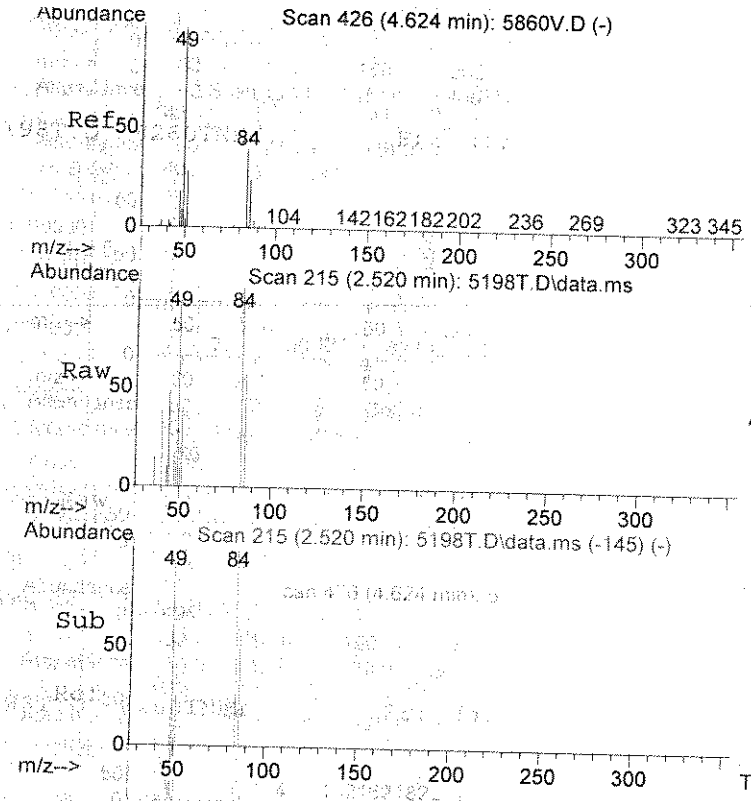
Tgt Ion: 43 Resp: 13273

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.1 | 23.1 | 34.7 |



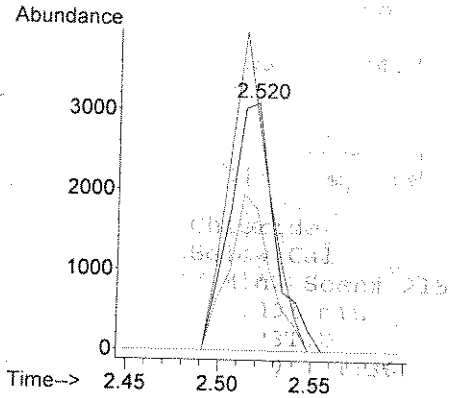



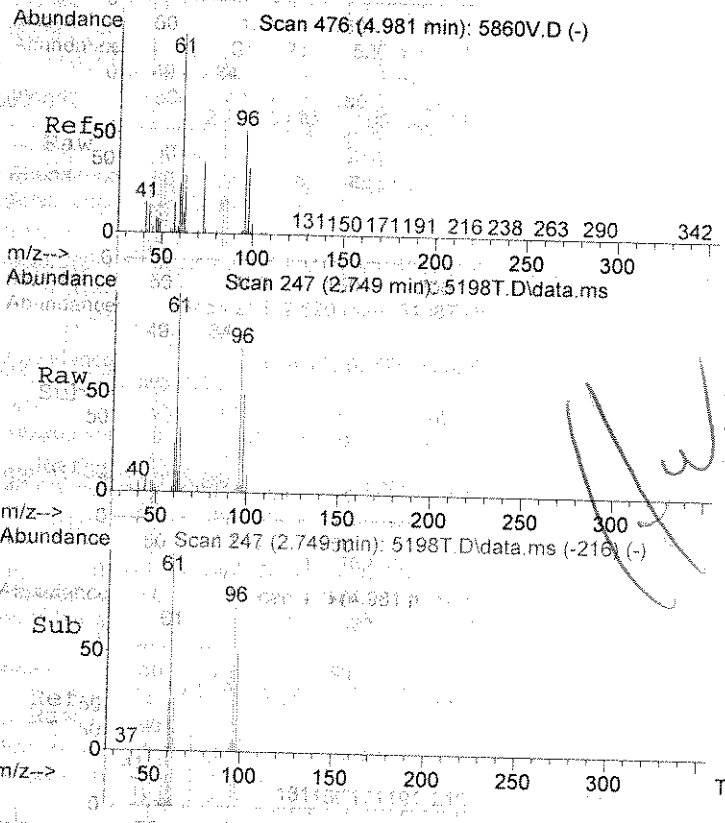



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 84 Resp: 5200

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 113.3 | 140.2 | 210.2# |
| 86 | 58.8 | 51.1 | 76.7 |

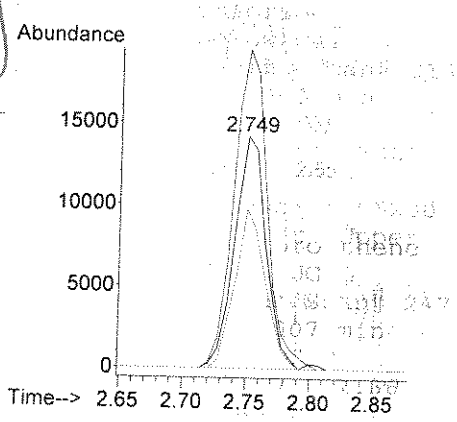


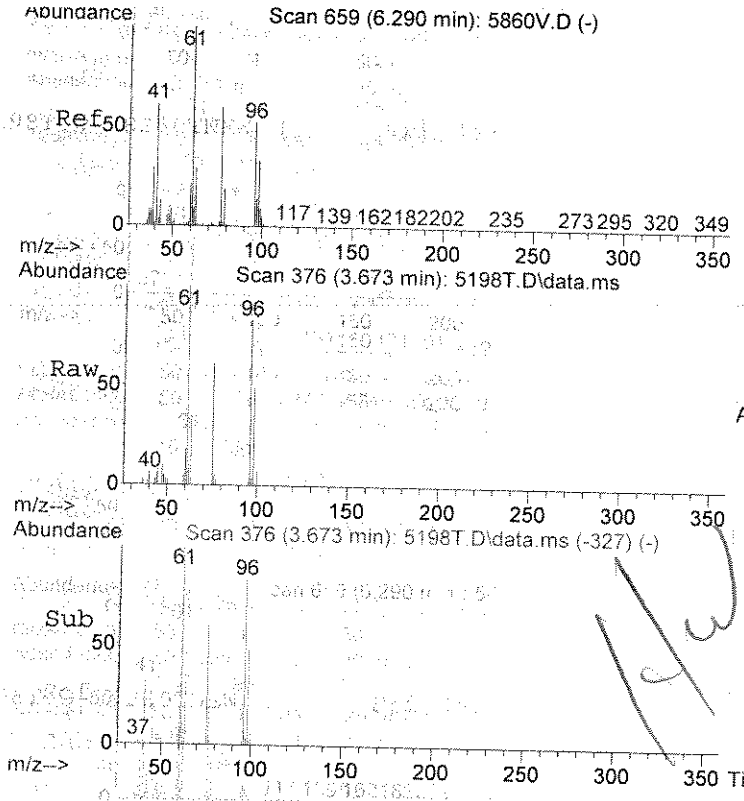




#18
trans-1,2-Dichloroethene
Concen: 1.68 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 96 Resp: 24626

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 144.0 | 114.1 | 171.1 |
| 98 | 66.6 | 50.7 | 76.1 |

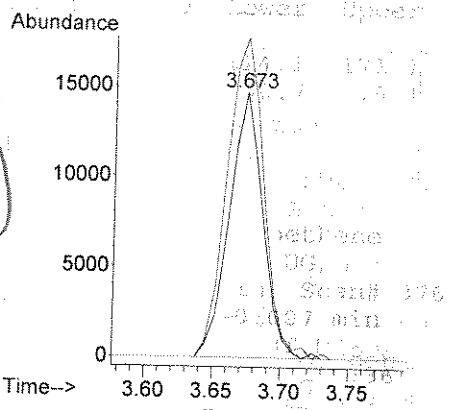


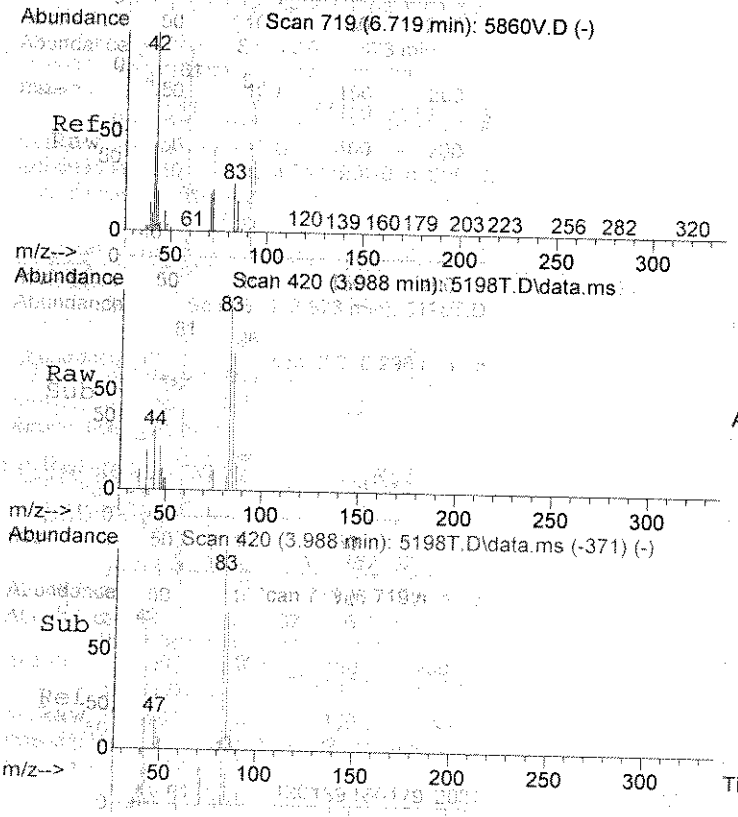



#22
cis-1,2-Dichloroethene
Concen: 1.60 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 96 Resp: 24974

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 132.9 | 121.8 | 182.6 |

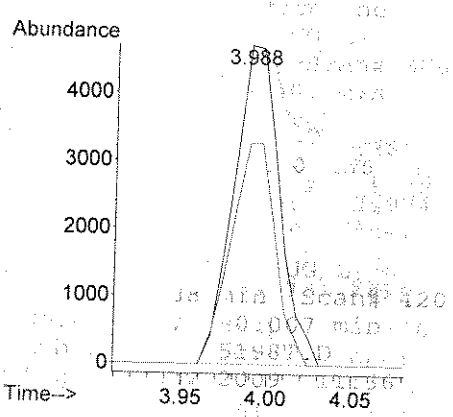


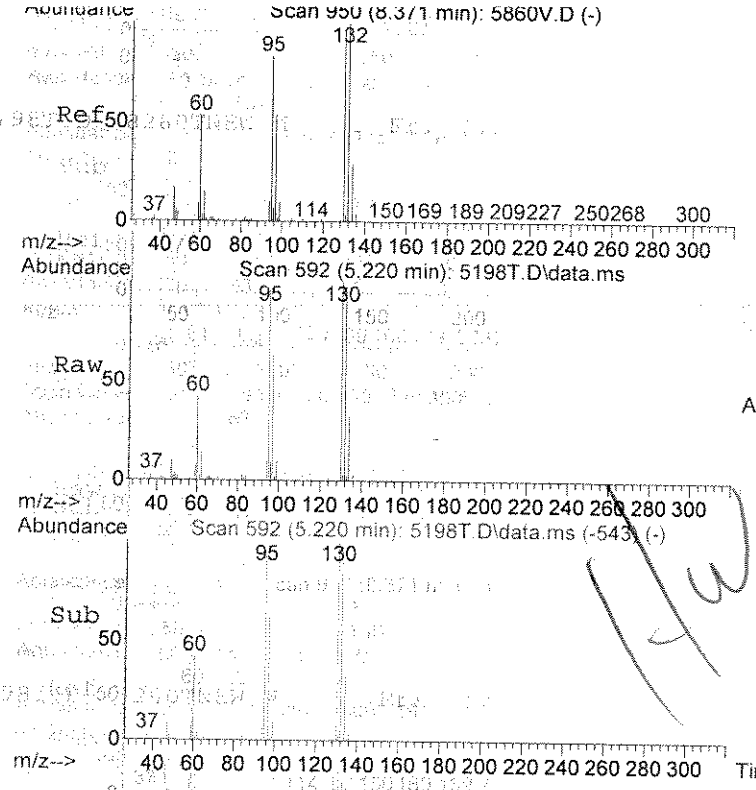




#24
CHLOROFORM
Concen: 0.37 UG/L
RT: 3.988 min Scan# 420
Delta R.T. -0.007 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 83 Resp: 8851

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 67.2 | 51.3 | 76.9 |

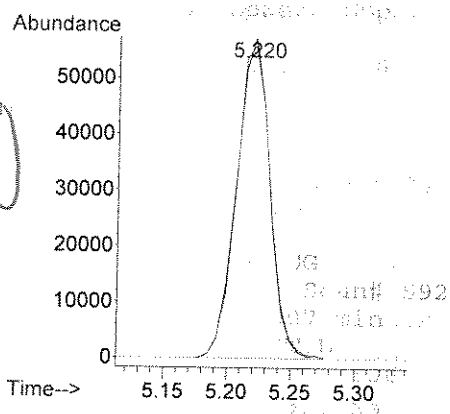


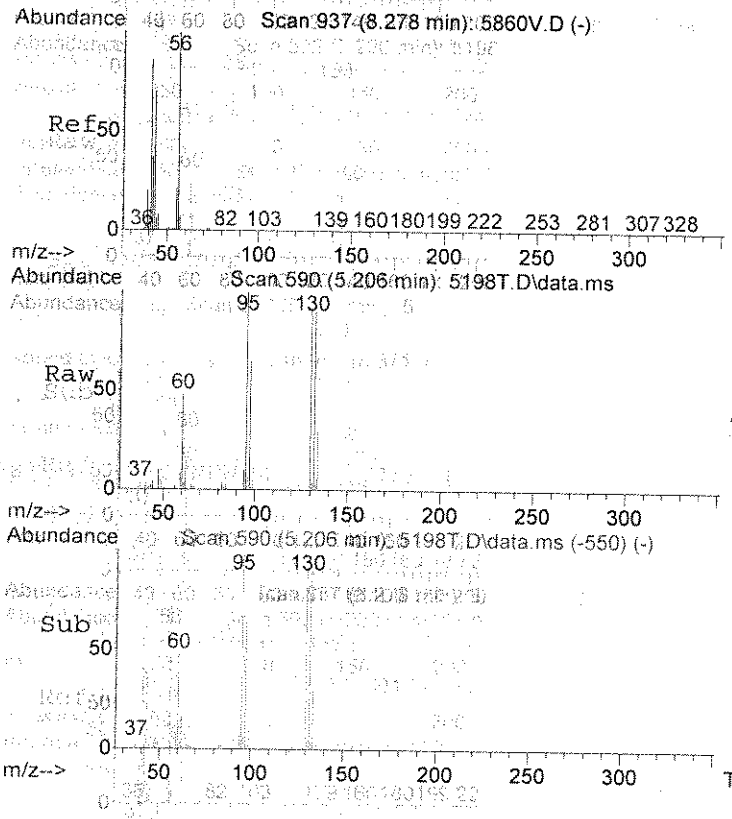



#40
Trichloroethene
Concen: 7.02 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion:130 Resp: 103142

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 100.2 | 82.0 | 123.0 |

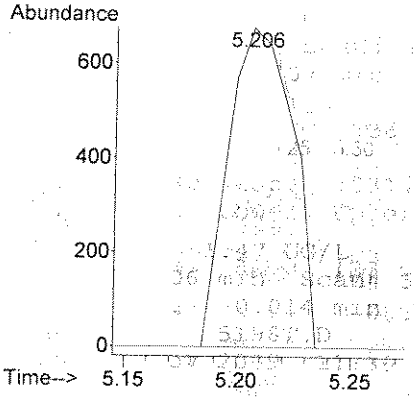


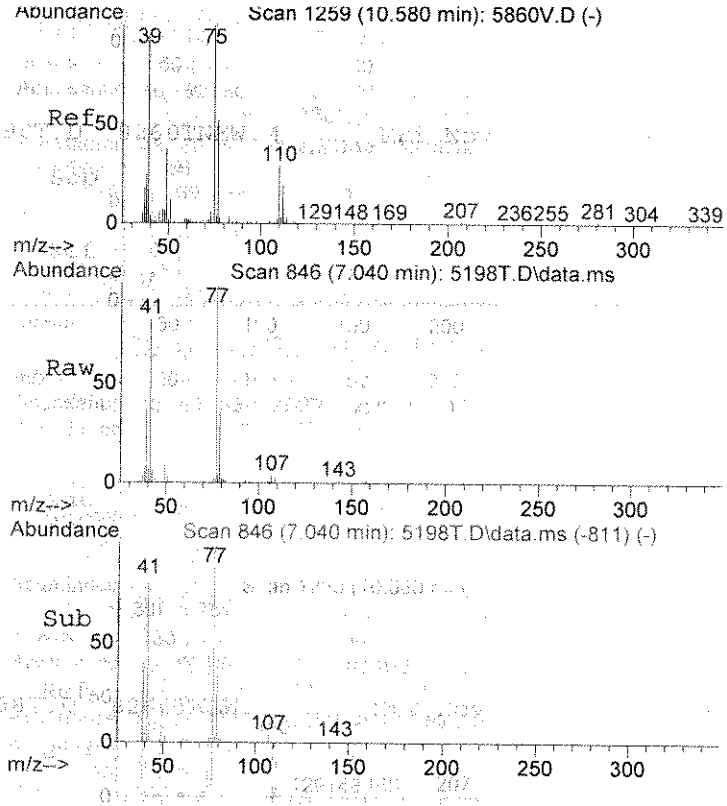




#41
n-Butanol
Concen: 1.47 UG/L
RT: 5.206 min Scan# 590
Delta R.T. -0.014 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 56 Resp: 1331

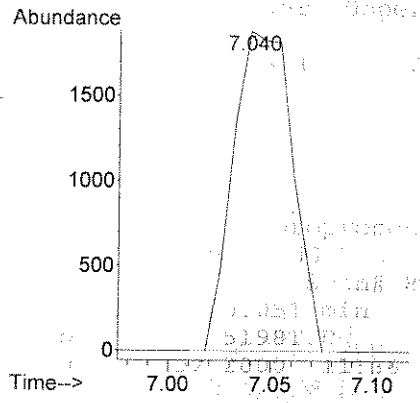
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |






#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.040 min Scan# 846
Delta R.T. 0.051 min
Lab File: 5198T.D
Acq: 6 Nov 2009 11:36

Tgt Ion: 75 Resp: 3811



R559983

# Heritage Environmental Services, LLC

GC/MS VOA

A864557

Method SW846-8260B
Sample Description 164
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5199T.D Date/Time 06Nov09 12:02:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 991 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

JK 11/10/09

R559983

# Heritage Environmental Services, LLC

A864557

## GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 21 | | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | 1.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | 1.0 | UG/L | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 101 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 94 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 99 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864557

Method SW846-8260B
Sample Description 164
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 51991 Date/Time 11/6/09 12:
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 73 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 83 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864557

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1[illegible] | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3[illegible] | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16[illegible] | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2[illegible] | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4[illegible] | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | 21 | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14[illegible] | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17[illegible] | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | [illegible] | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 101 | | | %Rec |
| 726 | TOLUENE-D8 | | 96 | | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 94 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 99 | | | %Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5199T.D
Acq On : 6 Nov 2009 12:02
Operator : HAROLD
Sample : A864557
Misc :
ALS Vial : 17 Sample Multiplier: 1

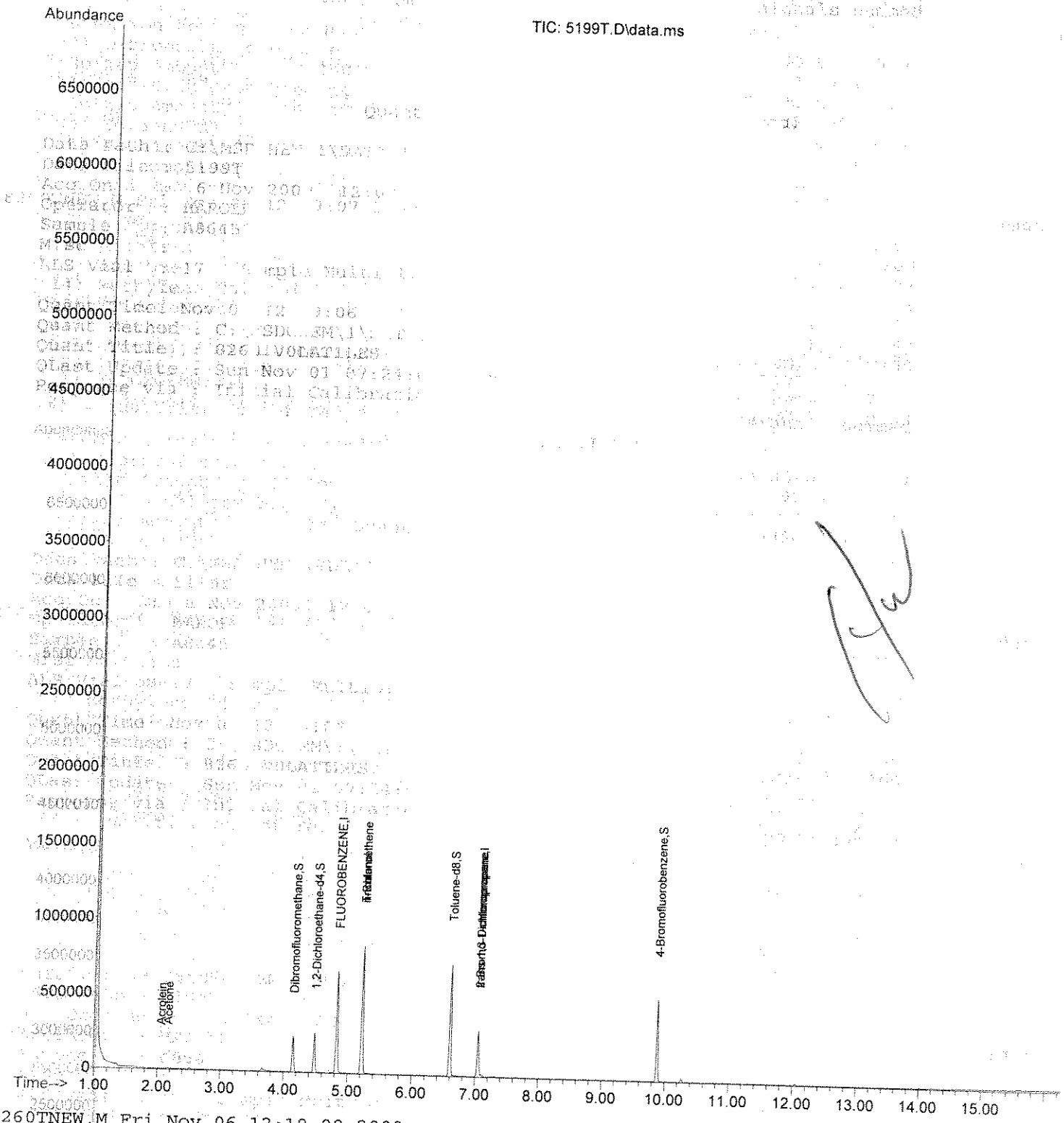
Quant Time: Nov 06 12:19:06 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 593550 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 181558 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 138643 | 9.89 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 168668 | 10.09 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.90% | |
| 50) Toluene-d8 | 6.603 | 98 | 510204 | 9.56 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 95.60% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 145677 | 9.40 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.00% | |
| **Target Compounds** | | | | | | Qvalue |
| 8) Acrolein | 2.040 | 56 | 883 | 0.85 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 10174 | 1.68 | UG/L # | 88 |
| 14) Methylene Chloride | 2.512 | 84 | 3684 | Below | Cal # | 75 |
| 40) Trichloroethene | 5.220 | 130 | 289134 | 21.39 | UG/L | 97 |
| 41) n-Butanol | 5.213 | 56 | 1582 | 1.90 | UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3245 | 0.23 | UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110609\
Data File : 5199T.D
Acq On : 6 Nov 2009 12:02
Operator : HAROLD
Sample : A864557
Misc :
ALS Vial : 17 Sample Multiplier: 1

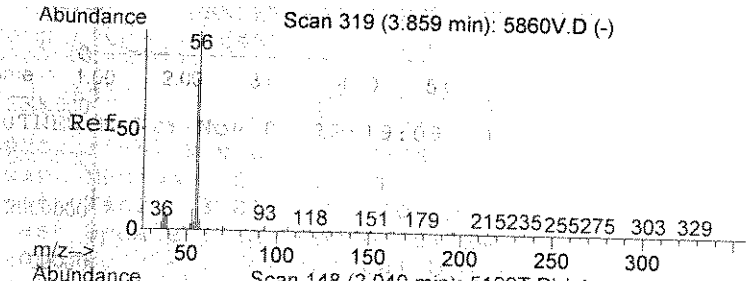
Quant Time: Nov 06 12:19:06 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 12:19:09 2009

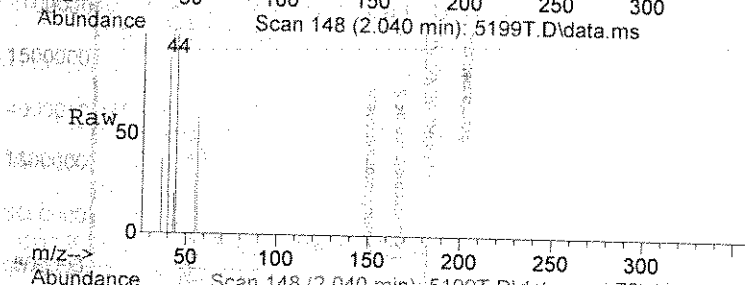


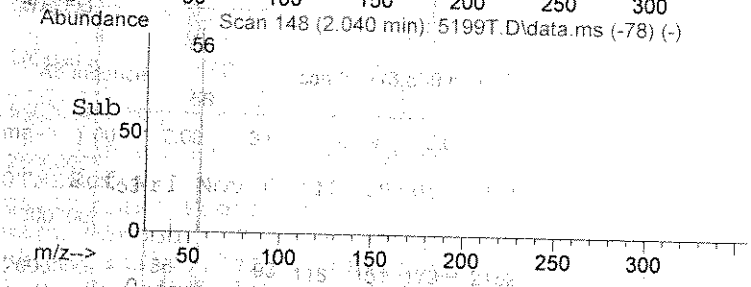
59169b

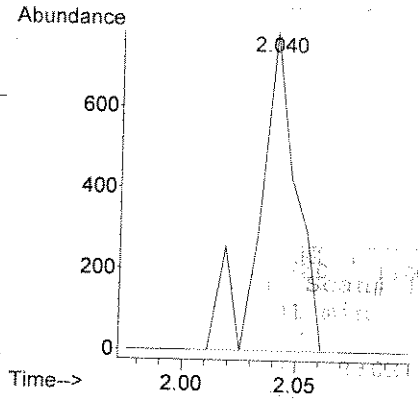


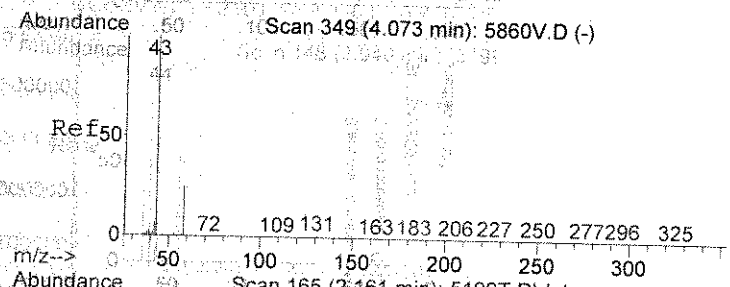

#8
Acrolein
Concen: 0.85 UG/L
RT: 2.040 min Scan# 148
Delta R.T. 0.001 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

Tgt Ion: 56 Resp: 883



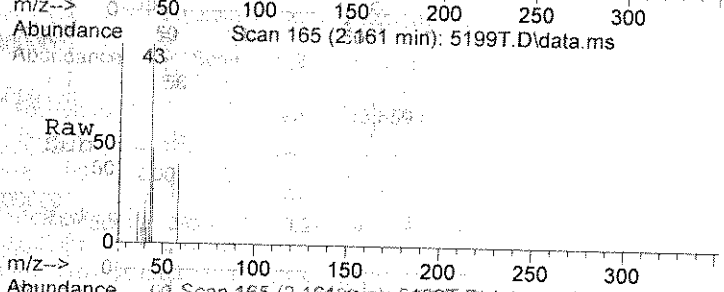



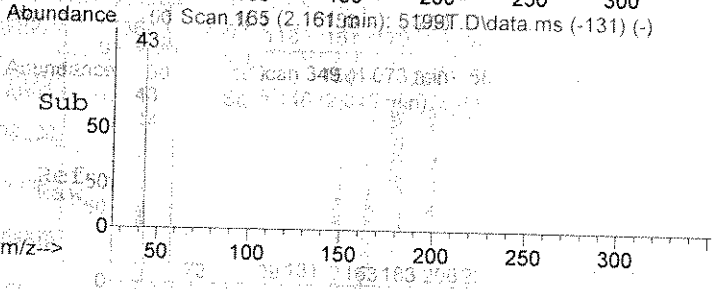



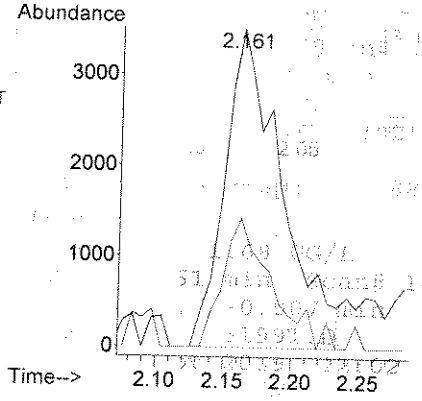

#9
Acetone
Concen: 1.68 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

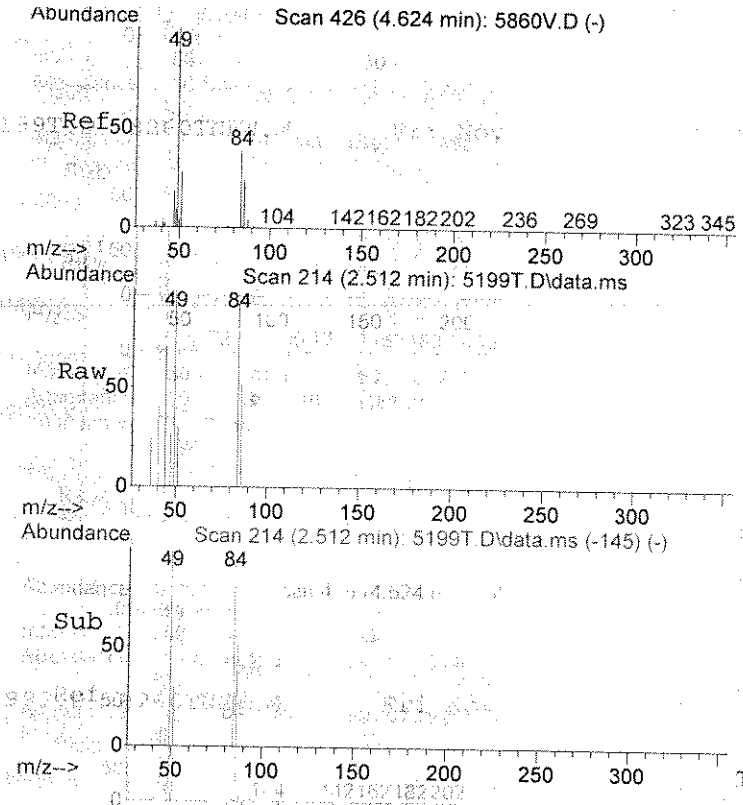
Tgt Ion: 43 Resp: 10174

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 35.2 | 23.1 | 34.7# |



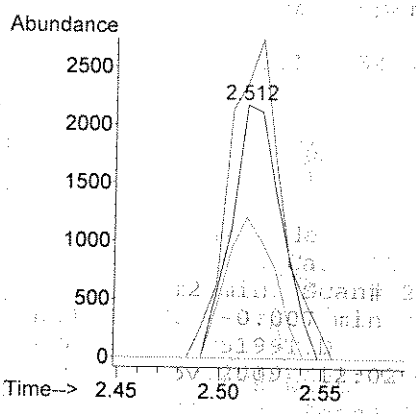



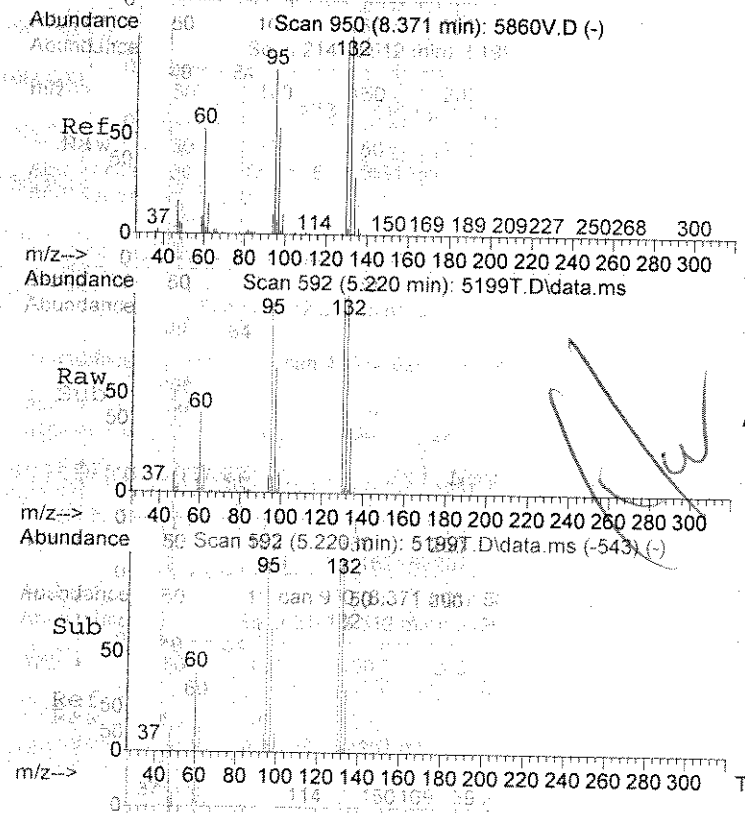



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

Tgt Ion: 84 Resp: 3684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 133.4 | 140.2 | 210.2# |
| 86 | 54.2 | 51.1 | 76.7 |

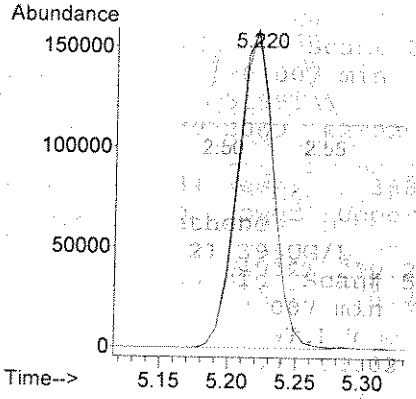


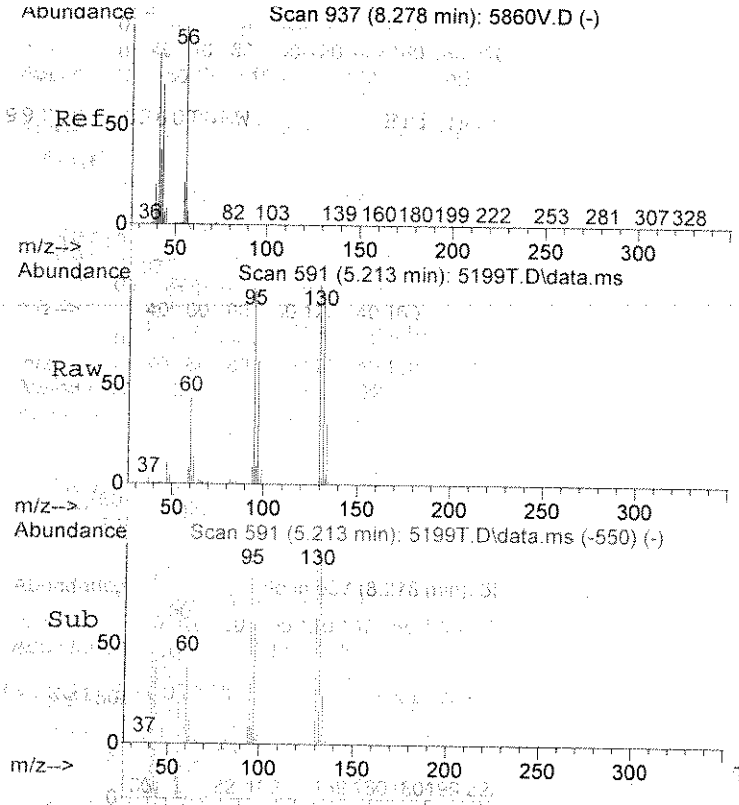




#40
Trichloroethene
Concen: 21.39 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

Tgt Ion:130 Resp: 289134

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 99.0 | 82.0 | 123.0 |

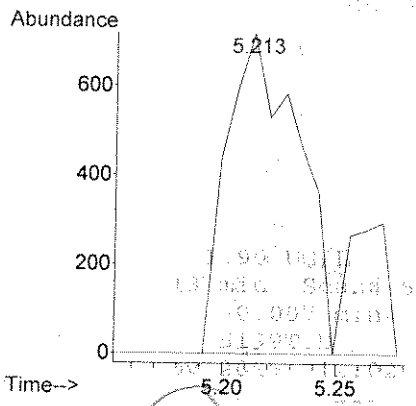


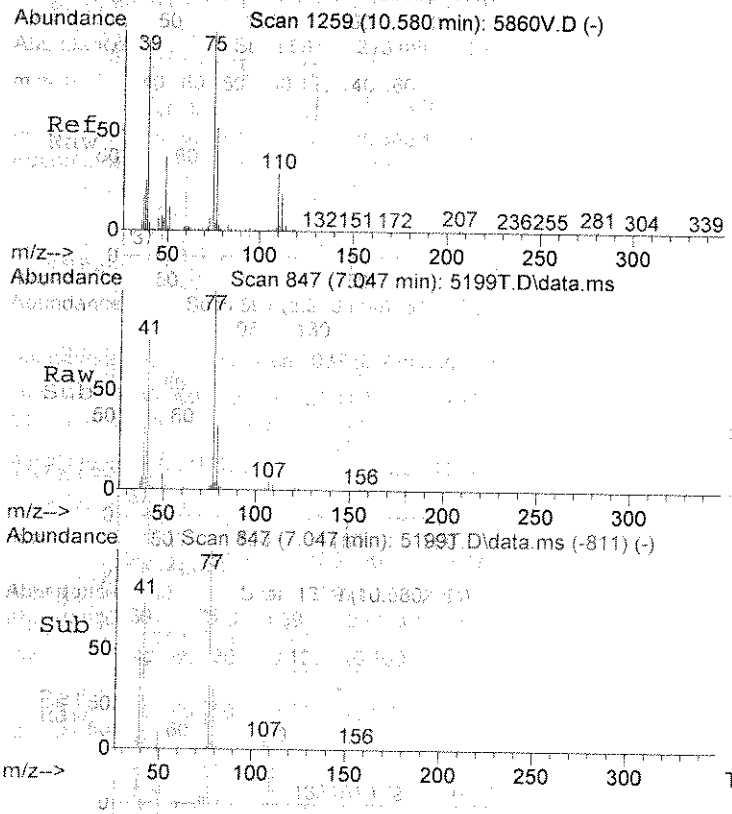



#41
n-Butanol
Concen: 1.90 UG/L
RT: 5.213 min Scan# 591
Delta R.T. -0.007 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

Tgt Ion: 56 Resp: 1582

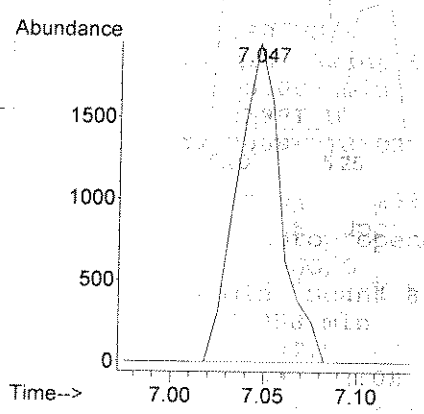
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |




#52
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5199T.D
Acq: 6 Nov 2009 12:02

Tgt Ion: 75 Resp: 3245



5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 5179T.D BFB Injection Date: 11/06/09

Instrument ID: GCMS#394 BFB Injection Time: 03:17

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.1 |
| 75 | 30.0 - 60.0% of mass 95 | 47.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 77.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.1 ( 99.1)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 6.6)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD010 | VSTD010 | 5180T.D | 11/06/09 | 03:35 |
| 02 | VBLK | VBLK | 5181T.D | 11/06/09 | 04:09 |
| 03 | DI MS | DI MS | 5182T.D | 11/06/09 | 04:43 |
| 04 | APP. IX STD | APP. IX STD | 5183T.D | 11/06/09 | 05:13 |
| 05 | A864518 | A864518 | 5184T.D | 11/06/09 | 05:38 |
| 06 | A864800 | A864800 | 5185T.D | 11/06/09 | 06:03 |
| 07 | A864801 | A864801 | 5186T.D | 11/06/09 | 06:29 |
| 08 | A864802 | A864802 | 5187T.D | 11/06/09 | 06:55 |
| 09 | A864803 | A864803 | 5188T.D | 11/06/09 | 07:21 |
| 10 | A864804 | A864804 | 5189T.D | 11/06/09 | 07:46 |
| 11 | A864805 | A864805 | 5190T.D | 11/06/09 | 08:12 |
| 12 | A864518 1:10 | A864518 1:10 | 5191T.D | 11/06/09 | 08:37 |
| 13 | A864552 | A864552 | 5192T.D | 11/06/09 | 09:03 |
| 14 | A864552 MS | A864552 MS | 5193T.D | 11/06/09 | 09:29 |
| 15 | A864552 MSD | A864552 MSD | 5194T.D | 11/06/09 | 09:54 |
| 16 | A864553 | A864553 | 5195T.D | 11/06/09 | 10:20 |
| 17 | A864554 | A864554 | 5196T.D | 11/06/09 | 10:45 |
| 18 | A864555 | A864555 | 5197T.D | 11/06/09 | 11:11 |
| 19 | A864556 | A864556 | 5198T.D | 11/06/09 | 11:36 |
| 20 | A864557 | A864557 | 5199T.D | 11/06/09 | 12:02 |
| 21 | A864558 | A864558 | 5200T.D | 11/06/09 | 12:28 |
| 22 | A864559 | A864559 | 5201T.D | 11/06/09 | 12:54 |

11/10/09



59169b

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 5179T.D BFB Injection Date: 11/06/09

Instrument ID: GCMS#394 BFB Injection Time: 03:17

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.1 |
| 75 | 30.0 - 60.0% of mass 95 | 47.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | >50.0% of mass 95 | 77.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.5 )1 |
| 176 | 95.0 - 101.0% of mass 174 | 77.1 ( 99.1 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 6.6 )2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 23 | A864560 | A864560 | 5202T.D | 11/06/09 | 13:19 |
| 24 | A864564 | A864564 | 5203T.D | 11/06/09 | 13:44 |
| 25 | A864565 | A864565 | 5204T.D | 11/06/09 | 14:10 |



59169b

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5180T.D Date Analyzed: 11/06/09

Instrument ID: GCMS#394 Time Analyzed: 03:35

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 653312 | 4.83 | 218717 | 7.05 | | |
| UPPER LIMIT | 1306624 | 5.33 | 437434 | 7.55 | | |
| LOWER LIMIT | 326656 | 4.33 | 109359 | 6.55 | | |
| EPA SAMPLE NO. | | | | | | |
| 01 VBLK | 611861 | 4.83 | 188680 | 7.05 | | |
| 02 DI MS | 642698 | 4.83 | 224705 | 7.05 | | |
| 03 APP. IX STD | 608583 | 4.83 | 200684 | 7.05 | | |
| 04 A864518 | 653849 | 4.83 | 210121 | 7.05 | | |
| 05 A864800 | 650257 | 4.83 | 222670 | 7.05 | | |
| 06 A864801 | 647928 | 4.83 | 214614 | 7.05 | | |
| 07 A864802 | 631575 | 4.83 | 218035 | 7.05 | | |
| 08 A864803 | 640616 | 4.83 | 215826 | 7.05 | | |
| 09 A864804 | 630180 | 4.83 | 202835 | 7.05 | | |
| 10 A864805 | 631627 | 4.83 | 205099 | 7.05 | | |
| 11 A864518 1:10 | 641588 | 4.83 | 208575 | 7.05 | | |
| 12 A864552 | 628249 | 4.83 | 201353 | 7.05 | | |
| 13 A864552 MS | 635192 | 4.83 | 211211 | 7.05 | | |
| 14 A864552 MSD | 617620 | 4.83 | 205636 | 7.05 | | |
| 15 A864553 | 640510 | 4.83 | 219187 | 7.05 | | |
| 16 A864554 | 658181 | 4.83 | 224305 | 7.05 | | |
| 17 A864555 | 658506 | 4.83 | 223366 | 7.05 | | |
| 18 A864556 | 645447 | 4.83 | 205796 | 7.05 | | |
| 19 A864557 | 593550 | 4.83 | 181558 | 7.05 | | |
| 20 A864558 | 617557 | 4.83 | 200999 | 7.05 | | |
| 21 A864559 | 582503 | 4.83 | 191766 | 7.05 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

JT 11-10-09



FORM VIII VOA

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5180T.D Date Analyzed: 11/06/09

Instrument ID.: GCMS#394 Time Analyzed: 03:35

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 653312 | 4.83 | 218717 | 7.05 | | |
| | UPPER LIMIT | 1306624 | 5.33 | 437434 | 7.55 | | |
| | LOWER LIMIT | 326656 | 4.33 | 109359 | 6.55 | | |
| | EPA SAMPLE NO. | | | | | | |
| 22 | A864560 | 624452 | 4.83 | 202941 | 7.05 | | |
| 23 | A864564 | 611299 ~~624452~~ | 4.83 | 199265 ~~202941~~ | 7.05 | | |
| 24 | A864565 | ~~624452~~ 195526 | 4.83 | ~~202941~~ 195526 | 7.05 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

11/10/09



59169b

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: HERITAGE Contract:

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

Date Injected: 06-Nov-09 Instrument: GCMS#394

| | EPA SAMPLE NO. | SMC1 # | SMC2 # | SMC3 # | SMC4 # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VBLK | 98 | 100 | 97 | 95 | 0 |
| 02 | DI MS | 98 | 99 | 99 | 86 | 0 |
| 03 | APP. IX STD | 99 | 101 | 98 | 91 | 0 |
| 04 | A864518 | 92 | 96 | 103 | 90 | 0 |
| 05 | A864800 | 91 | 96 | 102 | 86 | 0 |
| 06 | A864801 | 93 | 98 | 105 | 89 | 0 |
| 07 | A864802 | 93 | 96 | 104 | 84 | 0 |
| 08 | A864803 | 91 | 96 | 102 | 87 | 0 |
| 09 | A864804 | 92 | 97 | 101 | 91 | 0 |
| 10 | A864805 | 91 | 96 | 102 | 91 | 0 |
| 11 | A864518 1:10 | 91 | 96 | 103 | 89 | 0 |
| 12 | A864552 | 93 | 97 | 102 | 91 | 0 |
| 13 | A864552 MS | 96 | 97 | 105 | 96 | 0 |
| 14 | A864552 MSD | 95 | 96 | 105 | 96 | 0 |
| 15 | A864553 | 94 | 96 | 104 | 86 | 0 |
| 16 | A864554 | 92 | 97 | 103 | 84 | 0 |
| 17 | A864555 | 92 | 96 | 102 | 86 | 0 |
| 18 | A864556 | 92 | 95 | 102 | 92 | 0 |
| 19 | A864557 | 99 | 101 | 96 | 94 | 0 |
| 20 | A864558 | 92 | 97 | 102 | 88 | 0 |
| 21 | A864559 | 100 | 102 | 97 | 88 | 0 |
| 22 | A864560 | 93 | 99 | 103 | 90 | 0 |
| 23 | A864564 | 94 | 100 | 108 | 95 | 0 |
| 24 | A864565 | 89 | 98 | 101 | 93 | 0 |

QC LIMITS

| | | | |
|---|---|---|---|
| SMC1 | = | Dibromofluoromethane | (83-139) |
| SMC2 | = | 1,2-Dichloroethane-d4 | (79-137) |
| SMC3 | = | toluene-d8 | (85-123) |
| SMC4 | = | 4-bromofluorobenzene | (76-129) |

# Column to be used to flag recovery values
* Values outside of contract required QC limits
D System Monitoring Compound diluted out

11-10-09



FORM II VOA-1

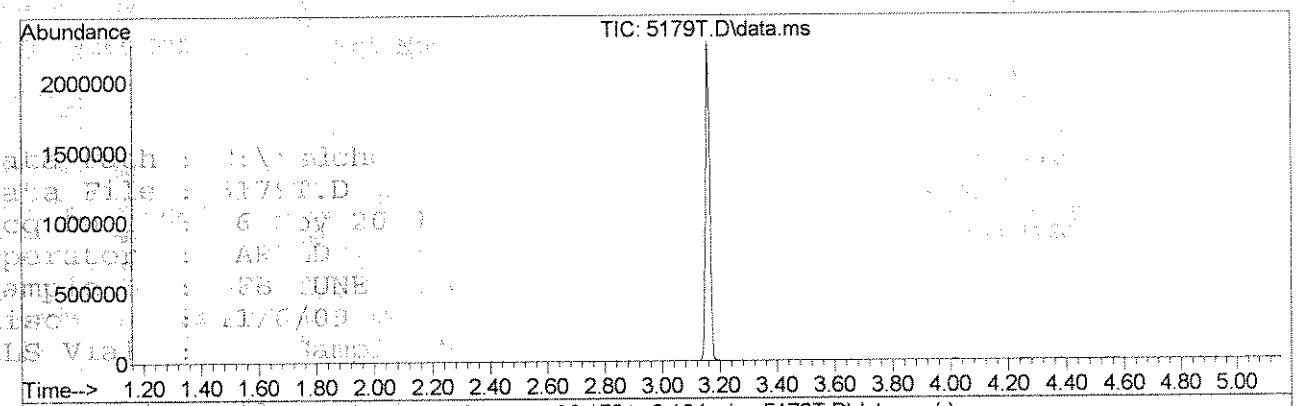
3/90

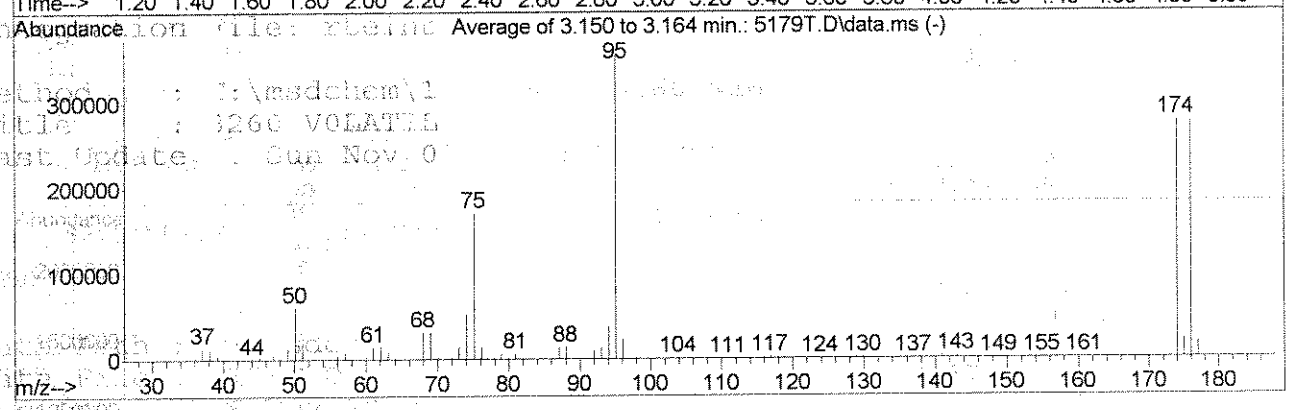
59169b

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5179T.D
Acq On : 6 Nov 2009 3:17
Operator : HAROLD
Sample : BFB TUNE CHECK
Misc : 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint2.p

Method : C:\msdchem\1\METHODS\8260TNEW.M
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009




AutoFind: Scans 303, 304, 305; Background Corrected with Scan 298

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 17.1 | 61229 | PASS |
| 75 | 95 | 30 | 60 | 47.9 | 171093 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 357056 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 23462 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 77.8 | 277704 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 20807 | PASS |
| 176 | 174 | 95 | 101 | 99.1 | 275296 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 18217 | PASS |

/ KS 11/10 09



59169b

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 2822 | 50.10 | 61229 | 64.10 | 847 | 77.00 | 2125 |
| 37.10 | 13707 | 51.10 | 18574 | 66.80 | 144 | 77.95 | 1478 |
| 38.10 | 11875 | 52.05 | 884 | 67.00 | 774 | 78.95 | 5954 |
| 39.10 | 4968 | 55.05 | 678 | 68.00 | 31893 | 79.95 | 1685 |
| 40.00 | 70 | 56.05 | 4342 | 69.00 | 31738 | 80.95 | 6304 |
| 43.05 | 338 | 57.05 | 8165 | 70.00 | 2562 | 81.95 | 1209 |
| 44.05 | 1361 | 58.05 | 261 | 72.00 | 1588 | 82.90 | 115 |
| 45.10 | 2298 | 60.00 | 2825 | 73.00 | 13809 | 87.00 | 13750 |
| 47.05 | 4626 | 61.00 | 14288 | 74.05 | 52722 | 88.00 | 14031 |
| 48.05 | 1789 | 62.05 | 14061 | 75.10 | 171093 | 90.90 | 938 |
| 49.05 | 12465 | 63.05 | 10146 | 76.10 | 14297 | 92.00 | 8850 |

Average of 3.150 to 3.164 min.: 5179T.D\data.ms
BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.00 | 13287 | 114.90 | 222 | 136.95 | 407 | 152.95 | 187 |
| 94.05 | 38709 | 115.95 | 1071 | 139.90 | 118 | 153.90 | 114 |
| 95.10 | 357056 | 116.90 | 1711 | 140.90 | 2950 | 154.90 | 702 |
| 96.10 | 23462 | 117.90 | 1036 | 141.95 | 369 | 156.95 | 496 |
| 97.05 | 595 | 118.90 | 1482 | 142.95 | 2957 | 158.95 | 288 |
| 103.95 | 1157 | 123.90 | 92 | 143.90 | 89 | 160.85 | 346 |
| 105.00 | 356 | 127.90 | 1177 | 144.95 | 31204 | 174.00 | 277704 |
| 105.95 | 1106 | 128.90 | 508 | 145.95 | 31528 | 175.00 | 20807 |
| 106.90 | 227 | 129.90 | 1188 | 147.90 | 2748 | 176.00 | 275296 |
| 110.95 | 182 | 130.95 | 334 | 148.85 | 1191 | 177.00 | 18217 |
| 113.00 | 298 | 134.90 | 512 | 149.90 | 13160 | 178.00 | 13516 |



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R559983 Heritage Environmental Services, LLC Q2255851

QC Report

QCType CCVD | Duplicate SampleID | DataFile 5180T.D
Date Entered 10Nov09 | Duplicate QCSampleID | Analyst 1365 H. WILLIAMS
Analysis Date/Time 06Nov0903:35:00 | Method | Matrix | Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0.1421 | | 0.1342 | | | 5.6 |
| 236 | CHLOROMETHANE | 0.2131 | | 0.1836 | | | 13.8 |
| 768 | VINYL CHLORIDE | 0.2350 | | 0.2317 | | | 1.4 |
| 198 | BROMOMETHANE | 0.1012 | | 0.1021 | | | .9 |
| 234 | CHLOROETHANE | 0.1262 | | 0.1280 | | | 1.4 |
| 372 | TRICHLOROFLUOROMETHANE | 0.2968 | | 0.2738 | | | 7.7 |
| 105 | ACROLEIN | 0.0175 | | 0.0079 | | | 54.9 |
| 8 | 1,1-DICHLOROETHENE | 0.1982 | | 0.1881 | | | 5.1 |
| 99 | ACETONE (2-PROPANONE) | 0.1022 | | 0.0864 | | | 15.5 |
| 422 | IODOMETHANE | 0.3240 | | 0.2975 | | | 8.2 |
| 216 | CARBON DISULFIDE | 0.6311 | | 0.5486 | | | 13.1 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0.7104 | | 0.5220 | | | 26.5 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | 8.57 | LIN | | 14.3 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0.2272 | | 0.2163 | | | 4.8 |
| 106 | ACRYLONITRILE | 0.0692 | | 0.0843 | | | 21.8 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | 0.6769 | | | 10.7 |
| 7 | 1,1-DICHLOROETHANE | 0.3815 | | 0.3615 | | | 5.2 |
| 767 | VINYL ACETATE | 10.0 | | 43.0 | LIN | | 330 |
| 246 | CIS-1,2-DICHLOROETHENE | 0.2414 | | 0.2250 | | | 6.8 |
| 52 | 2-BUTANONE | 0.0405 | | 0.0363 | | | 10.4 |
| 348 | ETHYL ACETATE | 0.2932 | | 0.3322 | | | 13.3 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0.0461 | | 0.0396 | | | 14.1 |
| 194 | BROMOCHLOROMETHANE | 0.1079 | | 0.1002 | | | 7.1 |
| 3457 | 2-METHYL-2-PROPENENITRILE | 0.1697 | | 0.1610 | | | 5.1 |
| 471 | METHACRYLONITRILE | 0.1697 | | 0.1610 | | | 5.1 |
| 709 | TETRAHYDROFURAN | 0.0897 | | 0.0852 | | | 5 |
| 235 | CHLOROFORM | 0.3695 | | 0.3374 | | | 8.7 |
| 2 | 1,1,1-TRICHLOROETHANE | 0.3069 | | 0.2843 | | | 7.4 |
| 217 | CARBON TETRACHLORIDE | 0.2699 | | 0.2375 | | | 12 |
| 10 | 1,1-DICHLOROPROPENE | 0.1063 | | 0.1008 | | | 5.2 |
| 151 | BENZENE | 0.8701 | | 0.8698 | | | 0 |
| 21 | 1,2-DICHLOROETHANE | 0.2779 | | 0.2705 | | | 2.7 |
| 1525 | 2-BUTANOL | 0.0161 | | 0.0130 | LIN | | 19.3 |
| 750 | TRICHLOROETHENE | 0.2277 | | 0.2225 | | | 2.3 |
| 517 | N-BUTANOL | 0.0140 | | 0.0094 | | | 32.9 |
| 23 | 1,2-DICHLOROPROPANE | 0.2007 | | 0.2143 | | | 6.8 |
| 296 | DIBROMOMETHANE | 0.1230 | | 0.1179 | | | 4.1 |
| 30 | 1,4-DIOXANE | 200.0 | | 98.6 | LIN | | 50.7 |
| 1147 | METHYL METHACRYLATE | 0.2026 | | 0.2064 | | | 1.9 |
| 195 | BROMODICHLOROMETHANE | 0.2434 | | 0.2242 | | | 7.9 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0.1420 | | 0.1656 | | | 16.6 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0.3040 | | 0.2976 | | | 2.1 |
| 91 | 4-METHYL-2-PENTANONE | 0.3155 | | 0.3076 | | | 2.5 |
| 724 | TOLUENE | 0.8639 | | 0.9345 | | | 8.2 |

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R559983 Heritage Environmental Services, LLC Q2255851

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 747 | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | 0.2335 | | | 3.9 |
| 4 | 1,1,2-TRICHLOROETHANE | 0.1709 | | 0.1845 | | | 8 |
| 351 | ETHYL METHACRYLATE | 0.8960 | | 0.7932 | | | 11.5 |
| 703 | TETRACHLOROETHENE | 0.7380 | | 0.7265 | | | 1.6 |
| 27 | 1,3-DICHLOROPROPANE | 0.9526 | | 1.0143 | | | 6.5 |
| 60 | 2-HEXANONE | 0.6513 | | 0.6297 | | | 3.3 |
| 295 | DIBROMOCHLOROMETHANE | 0.5223 | | 0.4523 | | | 13.4 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | 0.1818 | | | 3.7 |
| 231 | CHLOROBENZENE | 1.7328 | | 1.7193 | | | .8 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | 0.5362 | | | 13.7 |
| 349 | ETHYL BENZENE | 0.9633 | | 0.9504 | | | 1.3 |
| 492 | M/P-XYLENE | 1.2016 | | 1.1725 | | | 2.4 |
| 549 | O-XYLENE | 1.2181 | | 1.1535 | | | 5.3 |
| 680 | STYRENE | 1.9432 | | 1.8202 | | | 6.3 |
| 197 | BROMOFORM | 0.3505 | | 0.2777 | | | 20.8 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | 2.7788 | | | 3.7 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | 0.8565 | | | 3.5 |
| 193 | BROMOBENZENE | 1.1810 | | 1.1198 | | | 5.2 |
| 714 | 1,2,3-TRICHLOROPROPANE | 0.2837 | | 0.2674 | | | 5.7 |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | 0.1876 | | | 25.3 |
| 532 | N-PROPYLBENZENE | 0.4079 | | 0.3862 | | | 5.3 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | 0.7147 | | | 6.5 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | 2.5703 | | | 6.2 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | 0.6942 | | | 3.9 |
| 702 | TERT-BUTYLBENZENE | 1.5134 | | 1.4790 | | | 2.3 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | 2.5856 | | | 7.6 |
| 644 | SEC-BUTYLBENZENE | 3.6289 | | 3.4071 | | | 6.1 |
| 526 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | 1.3797 | | | 7.4 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | 2.8301 | | | 7.2 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | 1.3958 | | | 6.5 |
| 519 | N-BUTYLBENZENE | 1.5933 | | 1.4562 | | | 8.6 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | 1.3586 | | | 9.4 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | 0.1649 | | | 25.1 |
| 16 | 1,2,4-TRICHLOROBENZENE | 1.1867 | | 1.0449 | | | 11.9 |
| 398 | HEXACHLOROBUTADIENE | 0.5378 | | 0.4656 | | | 13.4 |
| 493 | NAPHTHALENE | 3.5250 | | 2.9887 | | | 15.2 |
| 13 | 1,2,3-TRICHLOROBENZENE | 1.1543 | | 0.9468 | | | 18 |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | 0.2261 | | 0.2189 | | | 3.2 |
| 305 | DIETHYL ETHER | 0.2179 | | 0.1942 | | | 10.9 |
| 866 | HEXANE | 0.4423 | | 0.5982 | | | 35.2 |
| 301 | DICHLOROETHANE-D4 | 0.2816 | | 0.2659 | | | 5.6 |
| 726 | TOLUENE-D8 | 0.8989 | | 0.9382 | | | 4.4 |
| 196 | 4-BROMOFLUOROBENZENE | 0.8538 | | 0.7967 | | | 6.7 |
| 3362 | DIBROMOFLUOROMETHANE | 0.2362 | | 0.2145 | | | 9.2 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration ( ).

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R559983 Heritage Environmental Services, LLC Q2255851

QC Report

**Qualifiers**

LIN Linear Regression Used

Data File : F:\1\DATA\T110609\5180T.D
Acq On : 6 Nov 2009 3:35
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 2
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

Q225851

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff | |
|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 | |
| 2 | | Dichlorodifluoromethane | 0.14206 | 0.13421 | 5.5 | |
| 3 | P | Chloromethane | 0.21309 | 0.18362 | 13.8 | |
| 4 | C | VINYL CHLORIDE | 0.23500 | 0.23170 | 1.4 | |
| 5 | | Bromomethane | 0.10117 | 0.10212 | 0.9 | |
| 6 | | Chloroethane | 0.12620 | 0.12801 | 1.4 | |
| 7 | | Trichlorofluoromethane | 0.29674 | 0.27381 | 7.7 | |
| 8 | | Acrolein | 0.01748 | 0.00794 | 54.6# | |
| 9 | | Acetone | 0.10215 | 0.08643 | 15.4 | |
| 10 | C | 1,1-DICHLOROETHENE | 0.19818 | 0.18813 | 5.1 | |
| 11 | | Trichlorotrifluoroethane | 0.22605 | 0.21891 | 3.2 | |
| 12 | | Acrylonitrile | 0.06919 | 0.08431 | 21.9# | |
| 13 | | Carbon Disulfide | 0.63107 | 0.54859 | 13.1 | |
| 14 | | Methylene Chloride | 10.000 | 8.569 | | 14.3 |
| 15 | | Allyl Chloride | 0.71041 | 0.52198 | 26.5# | |
| 16 | | Vinyl Acetate | 10.000 | 42.989 | | 329.9# |
| 17 | | MTBE | 0.75761 | 0.67695 | 10.6 | |
| 18 | | trans-1,2-Dichloroethene | 0.22719 | 0.21627 | 4.8 | |
| 19 | P | 1,1-Dichloroethane | 0.38152 | 0.36146 | 5.3 | |
| 20 | | 2-Butanone | 0.04048 | 0.03635 | 10.2 | |
| 21 | | Ethyl Acetate | 0.29323 | 0.33222 | 13.3 | |
| 22 | | cis-1,2-Dichloroethene | 0.24139 | 0.22498 | 6.8 | |
| 23 | | Ethyl Cyanide | 0.04607 | 0.03961 | 14.0 | |
| 24 | C | CHLOROFORM | 0.36950 | 0.33744 | 8.7 | |
| 25 | | Methacrylonitrile | 0.16971 | 0.16102 | 5.1 | |
| 26 | | Tetrahydrofuran | 0.08969 | 0.08520 | 5.0 | |
| 27 | | Bromochloromethane | 0.10791 | 0.10024 | 7.1 | |
| 28 | | 2,2-Dichloropropane | 0.24029 | 0.20937 | 12.9 | |
| 29 | | Diethyl ether | 0.21782 | 0.19418 | 10.9 | |
| 30 | | 1,1,1-Trichloroethane | 0.30689 | 0.28429 | 7.4 | |
| 31 | | Iodomethane | 0.32398 | 0.29747 | 8.2 | |
| 32 | S | Dibromofluoromethane | 0.23620 | 0.21453 | 9.2 | |
| 33 | | 1,1-Dichloropropene | 0.10628 | 0.10082 | 5.1 | |
| 34 | S | 1,2-Dichloroethane-d4 | 0.28157 | 0.26591 | 5.6 | |
| 35 | | Carbon Tetrachloride | 0.26989 | 0.23749 | 12.0 | |
| 36 | | 1,2-Dichloroethane | 0.27788 | 0.27053 | 2.6 | |
| 37 | | Isobutanol | 0.01609 | 0.01298 | 19.3 | |
| 38 | | Benzene | 0.87009 | 0.86976 | 0.0 | |
| 39 | | n-Hexane | 0.44226 | 0.59818 | 35.3# | |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : F:\1\DATA\T110609\5180T.D
Acq On : 6 Nov 2009 3:35
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 2
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.22770 | 0.22246 | 2.3 |
| 41 | | n-Butanol | 0.01399 | 0.00941 | 32.7# |
| 42 | C | 1,2-DICHLOROPROPANE | 0.20070 | 0.21430 | 6.8 |
| 43 | | 1,4-Dioxane | 200.000 | 98.625 | 50.7# |
| 44 | | Methyl Methacrylate | 0.20258 | 0.20640 | 1.9 |
| 45 | | Bromodichloromethane | 0.24341 | 0.22418 | 7.9 |
| 46 | | Dibromomethane | 0.12299 | 0.11788 | 4.2 |
| 47 | | 4-Methyl-2-Pentanone | 0.31553 | 0.30759 | 2.5 |
| 48 | | 2-Chloroethylvinylether | 0.14200 | 0.16557 | 16.6 |
| 49 | | cis-1,3-Dichloropropene | 0.30396 | 0.29759 | 2.1 |
| 50 | S | Toluene-d8 | 0.89888 | 0.93817 | 4.4 |
| 51 | C | TOLUENE | 0.86390 | 0.93446 | 8.2 |
| 52 | | trans-1,3-Dichloropropene | 0.24287 | 0.23347 | 3.9 |
| 53 | | 1,1,2-Trichloroethane | 0.17084 | 0.18448 | 8.0 |
| 54 | | 1,2-Dibromoethane | 0.17526 | 0.18183 | 3.7 |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | | 2-Hexanone | 0.65133 | 0.62974 | 3.3 |
| 57 | | 1,3-Dichloropropane | 0.95260 | 1.01432 | 6.5 |
| 58 | | Ethyl Methacrylate | 0.89596 | 0.79323 | 11.5 |
| 59 | | Tetrachloroethene | 0.73802 | 0.72651 | 1.6 |
| 60 | | Dibromochloromethane | 0.52228 | 0.45232 | 13.4 |
| 61 | P | Chlorobenzene | 1.73283 | 1.71930 | 0.8 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.62097 | 0.53624 | 13.6 |
| 63 | C | ETHYL BENZENE | 0.96324 | 0.95037 | 1.3 |
| 64 | | m,p-Xylene | 1.20166 | 1.17249 | 2.4 |
| 65 | | o-Xylene | 1.21815 | 1.15354 | 5.3 |
| 66 | | Styrene | 1.94322 | 1.82019 | 6.3 |
| 67 | P | Bromoform | 0.35051 | 0.27775 | 20.8# |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.88714 | 0.85645 | 3.5 |
| 69 | S | 4-Bromofluorobenzene | 0.85384 | 0.79671 | 6.7 |
| 70 | | Isopropylbenzene | 2.88487 | 2.77879 | 3.7 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.25107 | 0.18758 | 25.3# |
| 72 | | Bromobenzene | 1.18100 | 1.11983 | 5.2 |
| 73 | | 1,2,3-Trichloropropane | 0.28364 | 0.26739 | 5.7 |
| 74 | | n-Propylbenzene | 0.40785 | 0.38624 | 5.3 |
| 75 | | 1,3,5-Trimethylbenzene | 2.73880 | 2.57034 | 6.2 |
| 76 | | 2-Chlorotoluene | 0.76471 | 0.71473 | 6.5 |
| 77 | | 4-Chlorotoluene | 0.72272 | 0.69418 | 3.9 |
| 78 | | t-Butylbenzene | 1.51344 | 1.47903 | 2.3 |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : F:\1\DATA\T110609\5180T.D
Acq On : 6 Nov 2009 3:35
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
MS Integration Params: rteint2.p

Vial: 2
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.79809 | 2.58560 | 7.6 |
| 80 | sec-Butylbenzene | 3.62895 | 3.40706 | 6.1 |

| | | | | |
|---|---|---|---|---|
| | [illegible] | 3.05015 | 2.83009 | 7.2 |
| 82 | 1,3-Dichlorobenzene | 1.49038 | 1.37972 | 7.4 |
| 83 | 1,4-Dichlorobenzene | 1.49307 | 1.39579 | 6.5 |
| 84 | n-Butylbenzene | 1.59324 | 1.45620 | 8.6 |
| 85 | 1,2-Dichlorobenzene | 1.49964 | 1.35860 | 9.4 |
| 86 | 1,2-Dibromo-3-chloropropane | 0.22014 | 0.16492 | 25.1# |
| 87 | 1,2,4-Trichlorobenzene | 1.18673 | 1.04494 | 11.9 |
| 88 | Naphthalene | 3.52500 | 2.98874 | 15.2 |
| 89 | Hexachlorobutadiene | 0.53776 | 0.46557 | 13.4 |
| 90 | 1,2,3-Trichlorobenzene | 1.15426 | 0.94680 | 18.0 |

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

5003T.D 8260TNEW.M Tue Nov 10 07:07:01 2009
Average RPD= 13.49

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5180T.D
Acq On : 6 Nov 2009 3:35
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 03:54:49 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 2 | | Dichlorodifluoromethane | 0.142 | 0.134 | 5.6 | 91 | 0.00 |
| 3 | P | Chloromethane | 0.213 | 0.184 | 13.6 | 87 | 0.00 |
| 4 | C | VINYL CHLORIDE | 0.235 | 0.232 | 1.3 | 93 | 0.00 |
| 5 | | Bromomethane | 0.101 | 0.102 | -1.0 | 87 | 0.02 |
| 6 | | Chloroethane | 0.126 | 0.128 | -1.6 | 95 | 0.01 |
| 7 | | Trichlorofluoromethane | 0.297 | 0.274 | 7.7 | 89 | 0.00 |
| 8 | | Acrolein | 0.017 | 0.008 | 52.9# | 42# | 0.00 |
| 9 | | Acetone | 0.102 | 0.086 | 15.7 | 87 | 0.00 |
| 10 | C | 1,1-DICHLOROETHENE | 0.198 | 0.188 | 5.1 | 90 | 0.00 |
| 11 | | Trichlorotrifluoroethane | 0.226 | 0.219 | 3.1 | 94 | 0.00 |
| 12 | | Acrylonitrile | 0.069 | 0.084 | -21.7# | 119 | 0.00 |
| 13 | | Carbon Disulfide | 0.631 | 0.549 | 13.0 | 85 | 0.00 |
| 14 | | Methylene Chloride | 0.296 | 0.227 | 23.3# | 87 | 0.00 |
| 15 | | Allyl Chloride | 0.710 | 0.522 | 26.5# | 73 | 0.00 |
| 16 | | Vinyl Acetate | 0.032 | 0.109 | -240.6# | 362# | 0.00 |
| 17 | | MTBE | 0.758 | 0.677 | 10.7 | 87 | 0.00 |
| 18 | | trans-1,2-Dichloroethene | 0.227 | 0.216 | 4.8 | 89 | 0.00 |
| 19 | P | 1,1-Dichloroethane | 0.382 | 0.361 | 5.5 | 90 | 0.00 |
| 20 | | 2-Butanone | 0.040 | 0.036 | 10.0 | 92 | -0.01 |
| 21 | | Ethyl Acetate | 0.293 | 0.332 | -13.3 | 114 | 0.00 |
| 22 | | cis-1,2-Dichloroethene | 0.241 | 0.225 | 6.6 | 89 | 0.00 |
| 23 | | Ethyl Cyanide | 0.046 | 0.040 | 13.0 | 87 | 0.00 |
| 24 | C | CHLOROFORM | 0.369 | 0.337 | 8.7 | 88 | 0.00 |
| 25 | | Methacrylonitrile | 0.170 | 0.161 | 5.3 | 92 | 0.00 |
| 26 | | Tetrahydrofuran | 0.090 | 0.085 | 5.6 | 94 | 0.00 |
| 27 | | Bromochloromethane | 0.108 | 0.100 | 7.4 | 87 | 0.00 |
| 28 | | 2,2-Dichloropropane | 0.240 | 0.209 | 12.9 | 91 | 0.00 |
| 29 | | Diethyl ether | 0.218 | 0.194 | 11.0 | 86 | 0.00 |
| 30 | | 1,1,1-Trichloroethane | 0.307 | 0.284 | 7.5 | 88 | 0.00 |
| 31 | | Iodomethane | 0.324 | 0.297 | 8.3 | 86 | 0.00 |
| 32 | S | Dibromofluoromethane | 0.236 | 0.215 | 8.9 | 86 | 0.00 |
| 33 | | 1,1-Dichloropropene | 0.106 | 0.101 | 4.7 | 92 | 0.00 |
| 34 | S | 1,2-Dichloroethane-d4 | 0.282 | 0.266 | 5.7 | 89 | 0.00 |
| 35 | | Carbon Tetrachloride | 0.270 | 0.237 | 12.2# | 85# | 0.00 |
| 36 | | 1,2-Dichloroethane | 0.278 | 0.271 | 2.5 | 91 | 0.00 |
| 37 | | Isobutanol | 0.016 | 0.013 | 18.8 | 87 | 0.00 |
| 38 | | Benzene | 0.870 | 0.870 | 0.0 | 94 | 0.00 |
| 39 | | n-Hexane | 0.442 | 0.598 | -35.3# | 143 | 0.00 |
| 40 | | Trichloroethene | 0.228 | 0.222 | 2.6 | 93 | 0.00 |
| 41 | | n-Butanol | 0.014 | 0.009 | 35.7# | 70 | 0.00 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.201 | 0.214 | -6.5 | 103 | 0.00 |
| 43 | | 1,4-Dioxane | 0.007 | 0.003 | 57.1# | 59 | -0.01 |
| 44 | | Methyl Methacrylate | 0.203 | 0.206 | -1.5 | 106 | 0.00 |
| 45 | | Bromodichloromethane | 0.243 | 0.224 | 7.8 | 91 | -0.01 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 47 | | 4-Methyl-2-Pentanone | 0.316 | 0.308 | 2.5 | 98 | -0.01 |
| 48 | | 2-Chloroethylvinylether | 0.142 | 0.166 | -16.9 | 118 | 0.00 |
| 49 | | cis-1,3-Dichloropropene | 0.304 | 0.298 | 2.0 | 98 | 0.00 |
| 50 | S | Toluene-d8 | 0.899 | 0.938 | -4.3 | 101 | 0.00 |
| 51 | C | TOLUENE | 0.864 | 0.934 | -8.1 | 105 | 0.00 |
| 52 | | trans-1,3-Dichloropropene | 0.243 | 0.233 | 4.1 | 100 | -0.01 |
| 53 | | 1,1,2-Trichloroethane | 0.171 | 0.184 | -7.6 | 108 | 0.00 |
| 54 | | 1,2-Dibromoethane | 0.175 | 0.182 | -4.0 | 105 | -0.01 |
| 55 | I | 2-Bromo-1-chloropropane | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 56 | | 2-Hexanone | 0.651 | 0.630 | 3.2 | 106 | 0.00 |
| 57 | | 1,3-Dichloropropane | 0.953 | 1.014 | -6.4 | 112 | -0.01 |
| 58 | | Ethyl Methacrylate | 0.896 | 0.793 | 11.5 | 97 | 0.00 |
| 59 | | Tetrachloroethene | 0.738 | 0.727 | 1.5 | 93 | 0.00 |
| 60 | | Dibromochloromethane | 0.522 | 0.452 | 13.4 | 96 | -0.01 |
| 61 | P | Chlorobenzene | 1.733 | 1.719 | 0.8 | 103 | -0.01 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.621 | 0.536 | 13.7 | 90 | -0.01 |
| 63 | C | ETHYL BENZENE | 0.963 | 0.950 | 1.3 | 103 | -0.01 |
| 64 | | m,p-Xylene | 1.202 | 1.172 | 2.5 | 100 | 0.00 |
| 65 | | o-Xylene | 1.218 | 1.154 | 5.3 | 96 | -0.01 |
| 66 | | Styrene | 1.943 | 1.820 | 6.3 | 99 | -0.01 |
| 67 | P | Bromoform | 0.351 | 0.278 | 20.8# | 94 | 0.00 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.887 | 0.856 | 3.5 | 101 | 0.00 |
| 69 | S | 4-Bromofluorobenzene | 0.854 | 0.797 | 6.7 | 99 | -0.01 |
| 70 | | Isopropylbenzene | 2.885 | 2.779 | 3.7 | 99 | 0.00 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.251 | 0.188 | 25.1# | 84 | 0.00 |
| 72 | | Bromobenzene | 1.181 | 1.120 | 5.2 | 101 | 0.00 |
| 73 | | 1,2,3-Trichloropropane | 0.284 | 0.267 | 6.0 | 101 | 0.00 |
| 74 | | n-Propylbenzene | 0.408 | 0.386 | 5.4 | 99 | 0.00 |
| 75 | | 1,3,5-Trimethylbenzene | 2.739 | 2.570 | 6.2 | 96 | -0.01 |
| 76 | | 2-Chlorotoluene | 0.765 | 0.715 | 6.5 | 98 | 0.00 |
| 77 | | 4-Chlorotoluene | 0.723 | 0.694 | 4.0 | 100 | 0.00 |
| 78 | | t-Butylbenzene | 1.513 | 1.479 | 2.2 | 100 | -0.01 |
| 79 | | 1,2,4-Trimethylbenzene | 2.798 | 2.586 | 7.6 | 96 | 0.00 |
| 80 | | sec-Butylbenzene | 3.629 | 3.407 | 6.1 | 97 | 0.00 |
| 81 | | p-Isopropyltoluene | 3.050 | 2.830 | 7.2 | 96 | -0.01 |
| 82 | | 1,3-Dichlorobenzene | 1.490 | 1.380 | 7.4 | 97 | 0.00 |
| 83 | | 1,4-Dichlorobenzene | 1.493 | 1.396 | 6.5 | 97 | -0.01 |
| 84 | | n-Butylbenzene | 1.593 | 1.456 | 8.6 | 96 | 0.00 |
| 85 | | 1,2-Dichlorobenzene | 1.500 | 1.359 | 9.4 | 94 | -0.01 |
| 86 | P | 1,2-Dibromo-3-chloropropane | 0.220 | 0.165 | 25.0# | 83 | 0.00 |
| 87 | | 1,2,4-Trichlorobenzene | 1.187 | 1.045 | 12.0 | 90 | -0.01 |
| 88 | | Naphthalene | 3.525 | 2.989 | 15.2 | 88 | -0.01 |
| 89 | | Hexachlorobutadiene | 0.538 | 0.466 | 13.4 | 91 | 0.00 |
| 90 | | 1,2,3-Trichlorobenzene | 1.154 | 0.947 | 17.9 | 85 | -0.01 |

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

8260TNEW.M Fri Nov 06 03:55:10 2009

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5180T.D
Acq On : 6 Nov 2009 3:35
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 03:54:49 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 653312 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 218717 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 140156 | 9.08 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 90.80% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 173722 | 9.44 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.40% | |
| 50) Toluene-d8 | 6.602 | 98 | 612919 | 10.44 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 104.40% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 174254 | 9.33 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = | 93.30% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 87683 | 9.45 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 119961 | 8.62 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 151372 | 9.86 | UG/L | 97 |
| 5) Bromomethane | 1.495 | 94 | 66719 | 10.09 | UG/L | 99 |
| 6) Chloroethane | 1.567 | 64 | 83630 | 10.14 | UG/L # | 89 |
| 7) Trichlorofluoromethane | 1.739 | 101 | 178886 | 9.23 | UG/L # | 79 |
| 8) Acrolein | 2.040 | 56 | 51886 | 45.44 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 282339 | 42.31 | UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 122910 | 9.49 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.147 | 101 | 143017 | 9.68 | UG/L | 94 |
| 12) Acrylonitrile | 2.734 | 53 | 550803 | 121.85 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 358400 | 8.69 | UG/L | 99 |
| 14) Methylene Chloride | 2.512 | 84 | 148124 | 8.57 | UG/L # | 78 |
| 15) Allyl Chloride | 2.412 | 41 | 341015 | 7.35 | UG/L | 100 |
| 16) Vinyl Acetate | 3.193 | 43 | 71284 | 42.99 | UG/L # | 92 |
| 17) MTBE | 2.756 | 73 | 442257 | 8.94 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 141291 | 9.52 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 236143 | 9.47 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 118727 | 44.89 | UG/L # | 140 |
| 21) Ethyl Acetate | 3.766 | 43 | 217041 | 11.33 | UG/L # | 195 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 146981 | 9.32 | UG/L | 94 |
| 23) Ethyl Cyanide | 3.759 | 54 | 258790 | 85.98 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 220453 | 9.13 | UG/L | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 1051943 | 94.88 | UG/L # | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5180T.D
Acq On : 6 Nov 2009 3:35
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 03:54:49 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 695801 | 118.74 | UG/L # | 82 |
| 27) Bromochloromethane | 3.902 | 128 | 65489 | 9.29 | UG/L | 87 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 136784 | 8.71 | UG/L # | 89 |
| 29) Diethyl ether | 1.932 | 59 | 126863 | 8.91 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 185727 | 9.26 | UG/L | 100 |
| 31) Iodomethane | 2.233 | 142 | 194338 | 9.18 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 65869 | 9.49 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 155158 | 8.80 | UG/L | 92 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 176738 | 9.74 | UG/L | 98 |
| 37) Isobutanol | 4.504 | 43 | 699632 | 665.57 | UG/L # | 94 |
| 38) Benzene | 4.532 | 78 | 568226 | 10.00 | UG/L | 100 |
| 39) n-Hexane | 2.999 | 57 | 390801 | 13.53 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 145339 | 9.77 | UG/L | 95 |
| 41) n-Butanol | 5.213 | 56 | 318101 | 347.99 | UG/L | 97 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 140008 | 10.68 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 45553 | 98.62 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.635 | 41 | 134844 | 10.19 | UG/L # | 89 |
| 45) Bromodichloromethane | 5.779 | 83 | 146459 | 9.21 | UG/L | 100 |
| 46) Dibromomethane | 5.592 | 93 | 77011 | 19.58 | UG/L # | 91 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1004762 | 48.74 | UG/L # | 88 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 108167 | 11.66 | UG/L # | 92 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 194416 | 9.79 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 610494 | 10.82 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 152532 | 9.61 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 120525 | 10.80 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 118789 | 10.37 | UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 688669 | 48.34 | UG/L # | 86 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 221850 | 10.65 | UG/L # | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 173493 | 18.85 | UG/L # | 163 |
| 59) Tetrachloroethene | 7.333 | 166 | 158899 | 9.84 | UG/L | 198 |
| 60) Dibromochloromethane | 7.655 | 129 | 198929 | 8.66 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 376041 | 349.92 | UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.536 | 131 | 117285 | 18.64 | UG/L | 100 |
| 63) ETHYLBENZENE | 8.579 | 106 | 207863 | 9.87 | UG/L | 177 |
| 64) m,p-Xylene | 8.744 | 106 | 512887 | 19.51 | UG/L # | 62 |
| 65) o-Xylene | 9.253 | 106 | 252298 | 9.47 | UG/L | 183 |
| 66) Styrene | 9.274 | 104 | 398107 | 9.37 | UG/L | 89 |
| 67) Bromoform | 9.482 | 173 | 60748 | 17.92 | UG/L # | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 187321 | 19.65 | UG/L | 98 |
| 70) Isopropylbenzene | 9.718 | 105 | 607769 | 9.63 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 82054 | 14.94 | UG/L # | 111 |
| 72) Bromobenzene | 10.026 | 77 | 244925 | 9.48 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5180T.D
Acq On : 6 Nov 2009 3:35
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 03:54:49 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 58483 | 9.43 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 84478 | 9.47 | UG/L | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 562178 | 9.38 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 156323 | 9.35 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 151828 | 9.61 | UG/L | 100 |
| 78) t-Butylbenzene | 10.714 | 91 | 323489 | 9.77 | UG/L # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 565514 | 9.24 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 745183 | 9.39 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 618988 | 9.28 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 301768 | 9.26 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 305283 | 9.35 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 318495 | 9.14 | UG/L | 97 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 297150 | 9.06 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 36071 | 7.49 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 228547 | 8.81 | UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 653689 | 8.48 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 101829 | 8.66 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 207082 | 8.20 | UG/L | 100 |

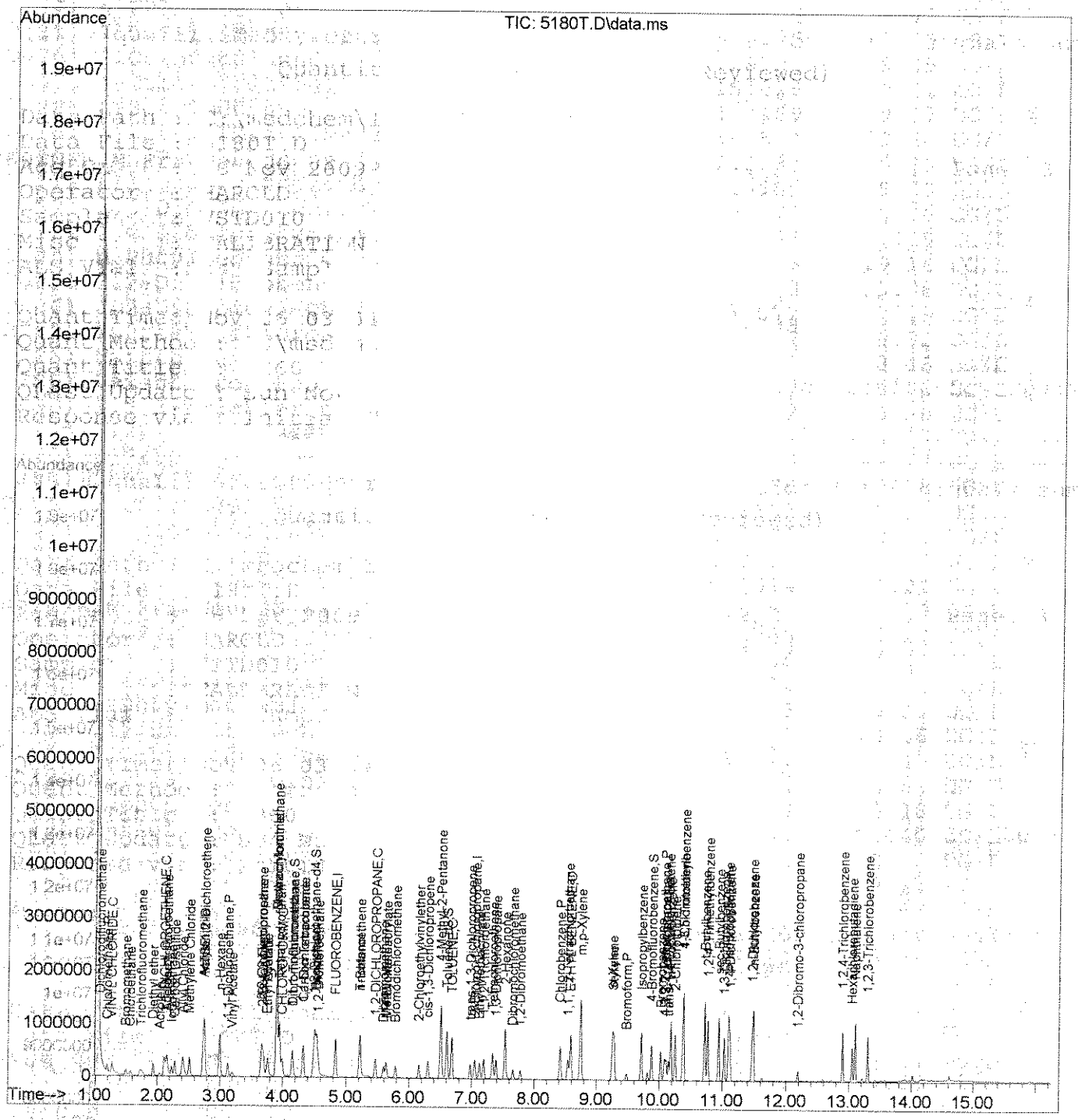
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5180T.D
Acq On : 6 Nov 2009 3:35
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 03:54:49 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration






59169b

R559983

# Heritage Environmental Services, LLC

Q2255852

QC Report

QCType BLA01
Date Entered 10Nov09
Analysis Date/Time 06Nov0904:09:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5181T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | | | 1.0 | BDL | | |
| 236 | CHLOROMETHANE | | | 1.0 | BDL | | |
| 768 | VINYL CHLORIDE | | | 1.0 | BDL | | |
| 198 | BROMOMETHANE | | | 1.0 | BDL | | |
| 234 | CHLOROETHANE | | | 1.0 | BDL | | |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | BDL | | |
| 105 | ACROLEIN | | | 25. | BDL | | |
| 8 | 1,1-DICHLOROETHENE | | | 1.0 | BDL | | |
| 99 | ACETONE (2-PROPANONE) | | | 10. | BDL | | |
| 422 | IODOMETHANE | | | 1.0 | BDL | | |
| 216 | CARBON DISULFIDE | | | 1.0 | BDL | | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | | | 1.0 | BDL | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | 1.0 | BDL | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 106 | ACRYLONITRILE | | | 5.0 | BDL | | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | BDL | | |
| 7 | 1,1-DICHLOROETHANE | | | 1.0 | BDL | | |
| 767 | VINYL ACETATE | | | 1.0 | BDL | | |
| 133 | 2,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 52 | 2-BUTANONE | | | 5.0 | BDL | | |
| 348 | ETHYL ACETATE | | | 1.0 | BDL | | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | | | 20. | BDL | | |
| 194 | BROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 471 | METHACRYLONITRILE | | | 1.0 | BDL | | |
| 3457 | 2-METHYL-2-PROPENENITRILE | | | 1.0 | BDL | | |
| 709 | TETRAHYDROFURAN | | | 20. | BDL | | |
| 235 | CHLOROFORM | | | 1.0 | BDL | | |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 217 | CARBON TETRACHLORIDE | | | 1.0 | BDL | | |
| 10 | 1,1-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 151 | BENZENE | | | 1.0 | BDL | | |
| 21 | 1,2-DICHLOROETHANE | | | 1.0 | BDL | | |
| 1525 | 2-BUTANOL | | | 100 | BDL | | |
| 750 | TRICHLOROETHENE | | | 1.0 | BDL | | |
| 517 | N-BUTANOL | | | 100 | BDL | | |
| 23 | 1,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 296 | DIBROMOMETHANE | | | 1.0 | BDL | | |
| 30 | 1,4-DIOXANE | | | 100 | BDL | | |
| 1147 | METHYL METHACRYLATE | | | 1.0 | BDL | | |
| 195 | BROMODICHLOROMETHANE | | | 1.0 | BDL | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | 1.0 | BDL | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 91 | 4-METHYL-2-PENTANONE | | | 5.0 | BDL | | |

JN 11-10-09

591695

R559983 Heritage Environmental Services, LLC Q2255852

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | | | 1.0 | BDL | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 4 | 1,1,2-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 351 | ETHYL METHACRYLATE | | | 1.0 | BDL | | |
| 703 | TETRACHLOROETHENE | | | 1.0 | BDL | | |
| 27 | 1,3-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 60 | 2-HEXANONE | | | 5.0 | BDL | | |
| 295 | DIBROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | 1.0 | BDL | | |
| 231 | CHLOROBENZENE | | | 1.0 | BDL | | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 349 | ETHYL BENZENE | | | 1.0 | BDL | | |
| 492 | M/P-XYLENE | | | 2.0 | BDL | | |
| 803 | XYLENES (O/M/P-XYLENE) | | | 2.0 | BDL | | |
| 549 | O-XYLENE | | | 1.0 | BDL | | |
| 680 | STYRENE | | | 1.0 | BDL | | |
| 197 | BROMOFORM | | | 1.0 | BDL | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | 1.0 | BDL | | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 193 | BROMOBENZENE | | | 1.0 | BDL | | |
| 14 | 1,2,3-TRICHLOROPROPANE | | | 1.0 | BDL | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | 2.0 | BDL | | |
| 532 | N-PROPYLBENZENE | | | 1.0 | BDL | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 702 | TERT-BUTYLBENZENE | | | 1.0 | BDL | | |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 644 | SEC-BUTYLBENZENE | | | 1.0 | BDL | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | 1.0 | BDL | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 519 | N-BUTYLBENZENE | | | 1.0 | BDL | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | 1.0 | BDL | | |
| 16 | 1,2,4-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 398 | HEXACHLOROBUTADIENE | | | 1.0 | BDL | | |
| 493 | NAPHTHALENE | | | 1.0 | BDL | | |
| 13 | 1,2,3-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | | | 1.0 | BDL | | |
| 305 | DIETHYL ETHER | | | 1.0 | BDL | | |
| 866 | HEXANE | | | 1.0 | BDL | | |
| 301 | DICHLOROETHANE-D4 | | | | | 100 | |
| 726 | TOLUENE-D8 | | | | | 97 | |
| 196 | 4-BROMOFLUOROBENZENE | | | | | 95 | |
| 3362 | DIBROMOFLUOROMETHANE | | | | | 98 | |

**Qualifiers**

59169b

R559983

# Heritage Environmental Services, LLC

QC Report

Q2255852

BDL Below Detection Limit

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5181T.D
Acq On : 6 Nov 2009 4:09
Operator : HAROLD
Sample : VBLK
Misc : 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 04:29:42 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Q 2255852

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 611861 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 188680 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 142267 | 9.84 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.40% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 172918 | 10.04 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.40% | |
| 50) Toluene-d8 | 6.603 | 98 | 531334 | 9.66 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.60% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 153411 | 9.52 UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = 95.20% | |
| Target Compounds | | | | | Qvalue |
| 8) Acrolein | 2.040 | 56 | 3122 | 2.92 UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 3858 | 0.62 UG/L # | 46 |
| 14) Methylene Chloride | 2.513 | 84 | 7344 | Below Cal # | 68 |
| 28) 2,2-Dichloropropane | 3.659 | 77 | 3313 | 0.23 UG/L # | 46 |
| 37) Isobutanol | 4.497 | 43 | 2257 | 2.29 UG/L # | 25 |
| 41) n-Butanol | 5.206 | 56 | 7960 | 9.30 UG/L # | 80 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3556 | 0.24 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 2890 | 0.28 UG/L | 100 |

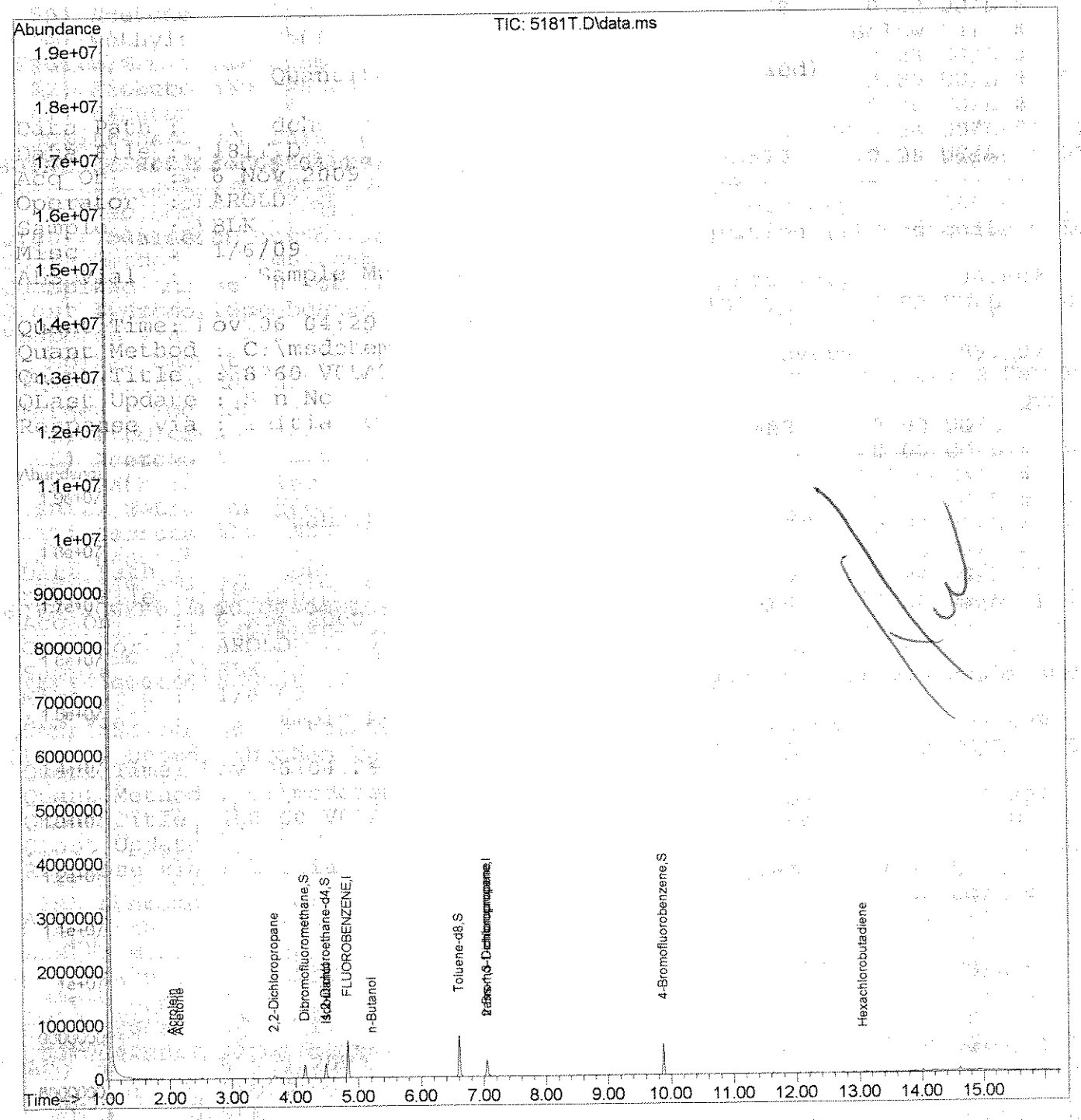
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

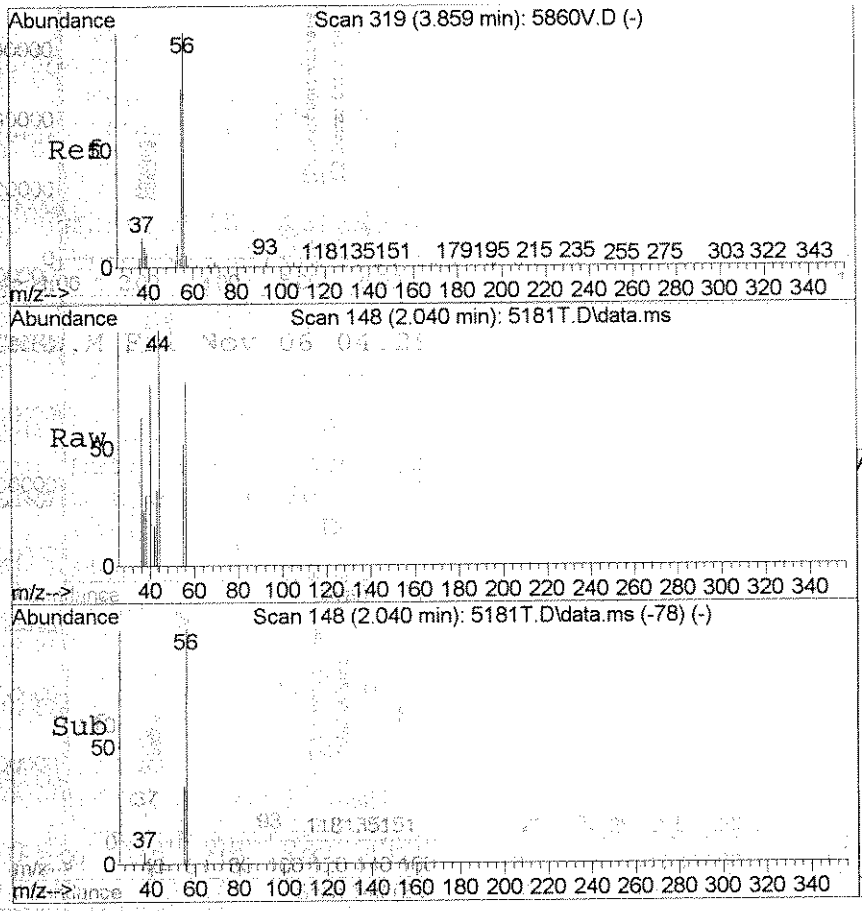
Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5181T.D
Acq On : 6 Nov 2009 4:09
Operator : HAROLD
Sample : VBLK
Misc : 11/6/09
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 06 04:29:42 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration



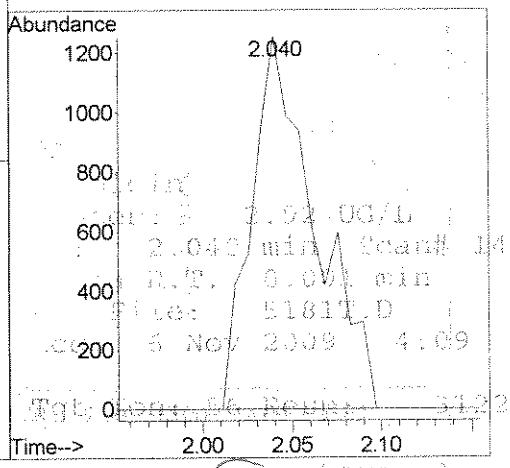


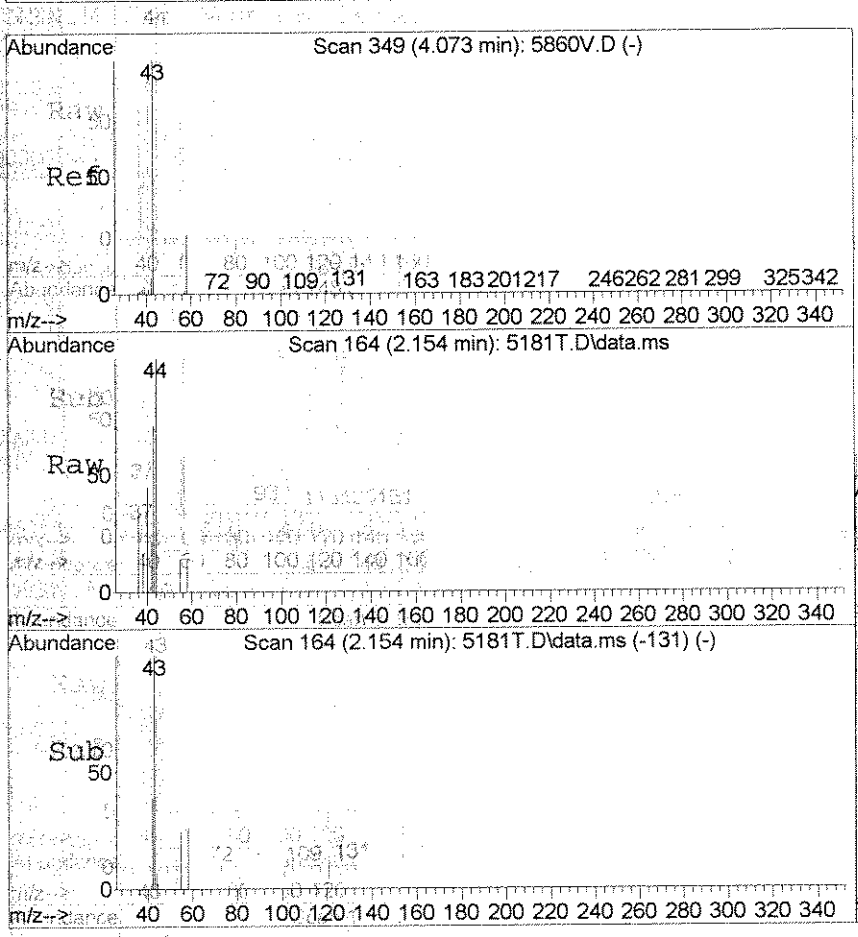

59169b




#8
Acrolein
Concen: 2.92 UG/L
RT: 2.040 min Scan# 148
Delta R.T. 0.001 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

Tgt Ion: 56 Resp: 3122

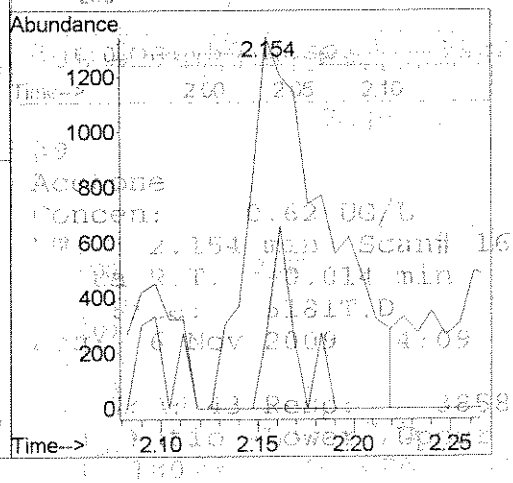



#9
Acetone
Concen: 0.62 UG/L
RT: 2.154 min Scan# 164
Delta R.T. -0.014 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

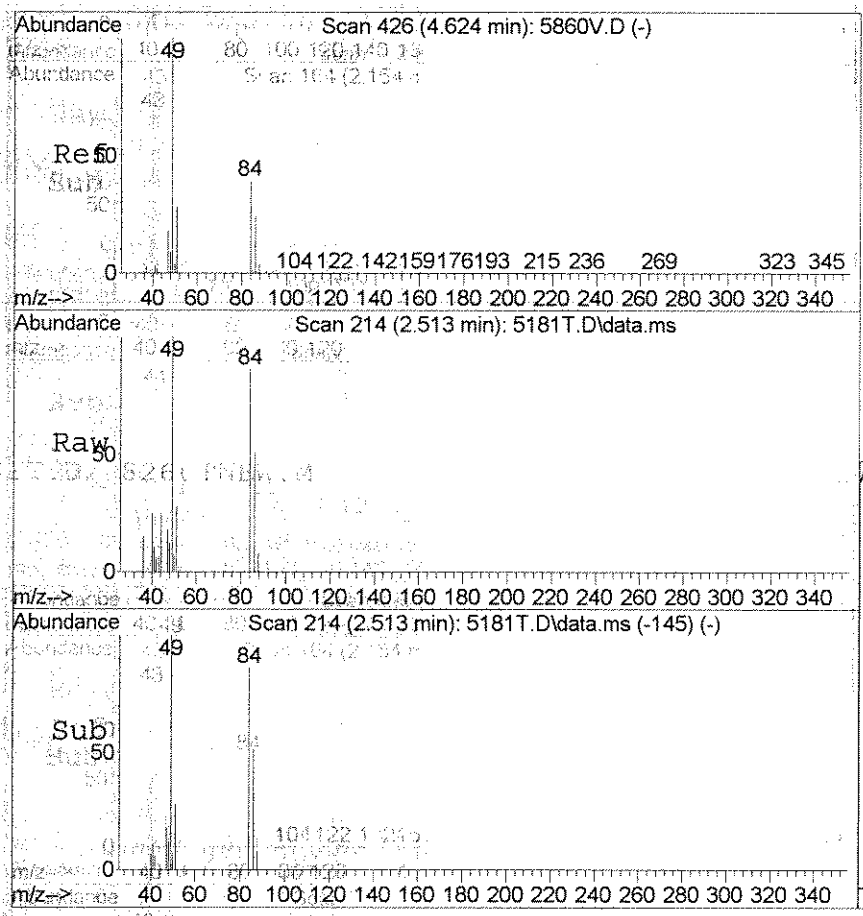
Tgt Ion: 43 Resp: 3858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 23.1 | 34.7# |





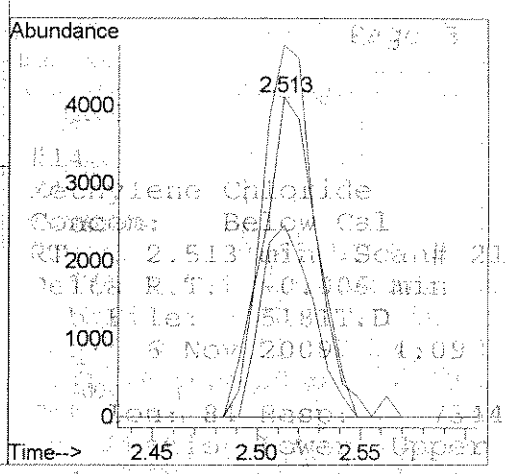

59169b

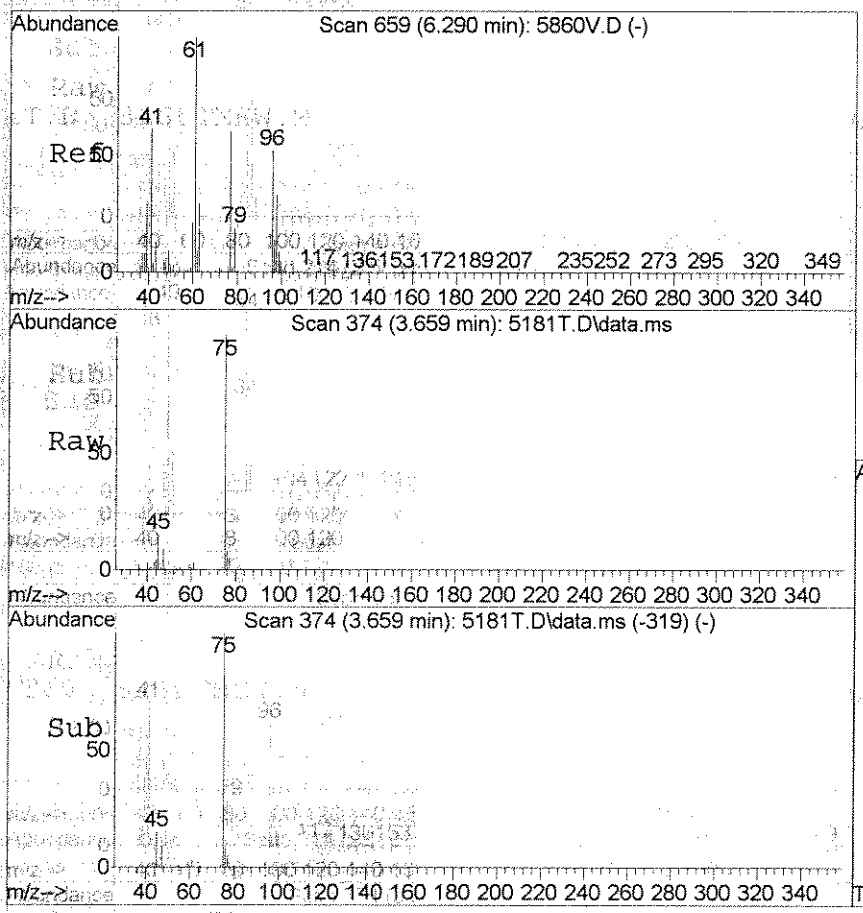



#14
Methylene Chloride
Concen: Below Cal
RT: 2.513 min Scan# 214
Delta R.T. -0.006 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

Tgt Ion: 84 Resp: 7344

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 118.3 | 140.2 | 210.2# |
| 86 | 58.6 | 51.1 | 76.7 |

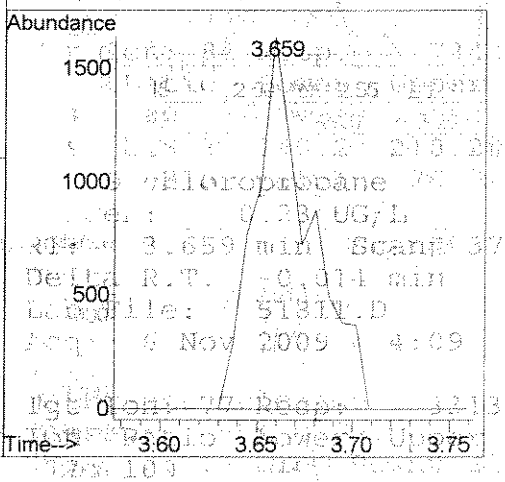



#28
2,2-Dichloropropane
Concen: 0.23 UG/L
RT: 3.659 min Scan# 374
Delta R.T. -0.014 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

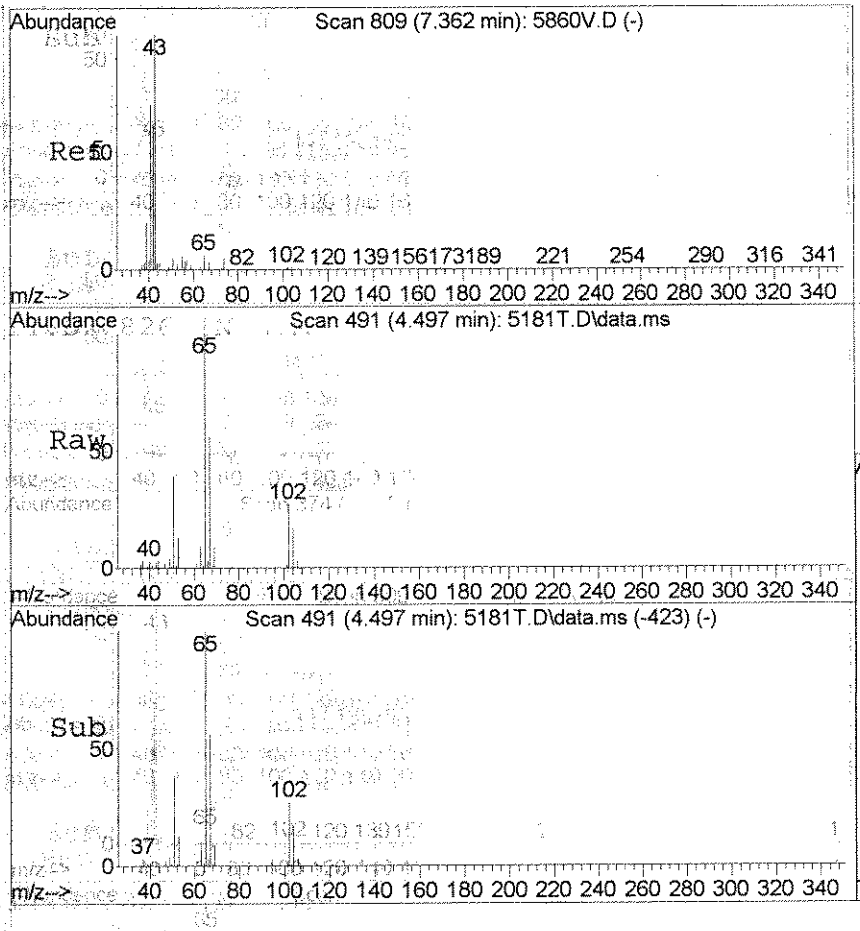
Tgt Ion: 77 Resp: 3313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 77 | 100 | | |
| 97 | 0.0 | 23.3 | 34.9# |





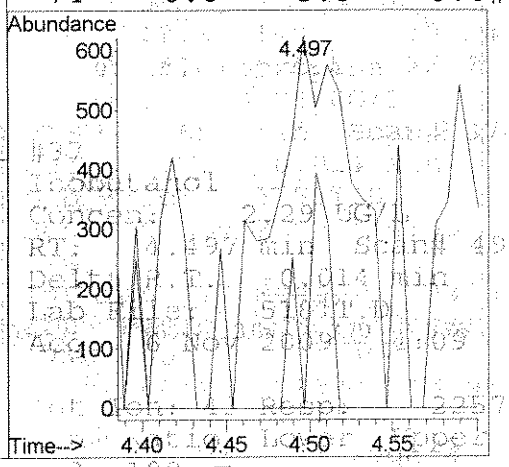

59169b

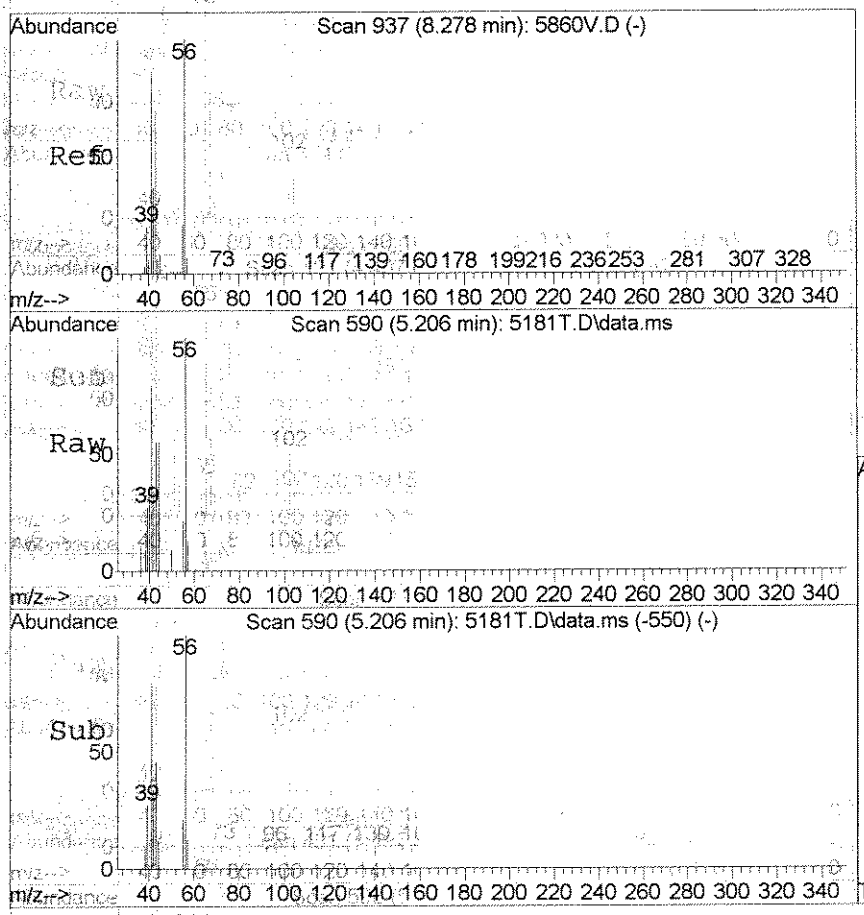



#37
Isobutanol
Concen: 2.29 UG/L
RT: 4.497 min Scan# 491
Delta R.T. -0.014 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

Tgt Ion: 43 Resp: 2257

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |

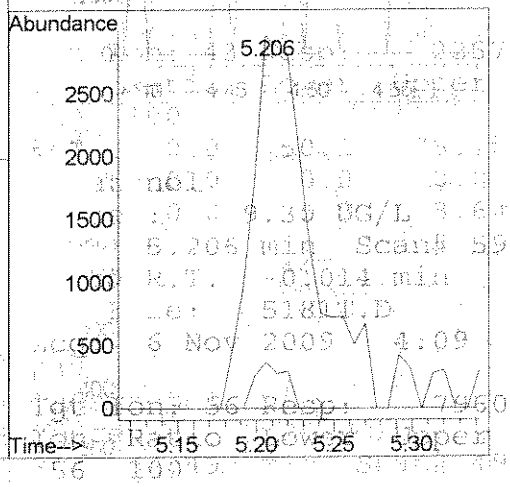



#41
n-Butanol
Concen: 9.30 UG/L
RT: 5.206 min Scan# 590
Delta R.T. -0.014 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

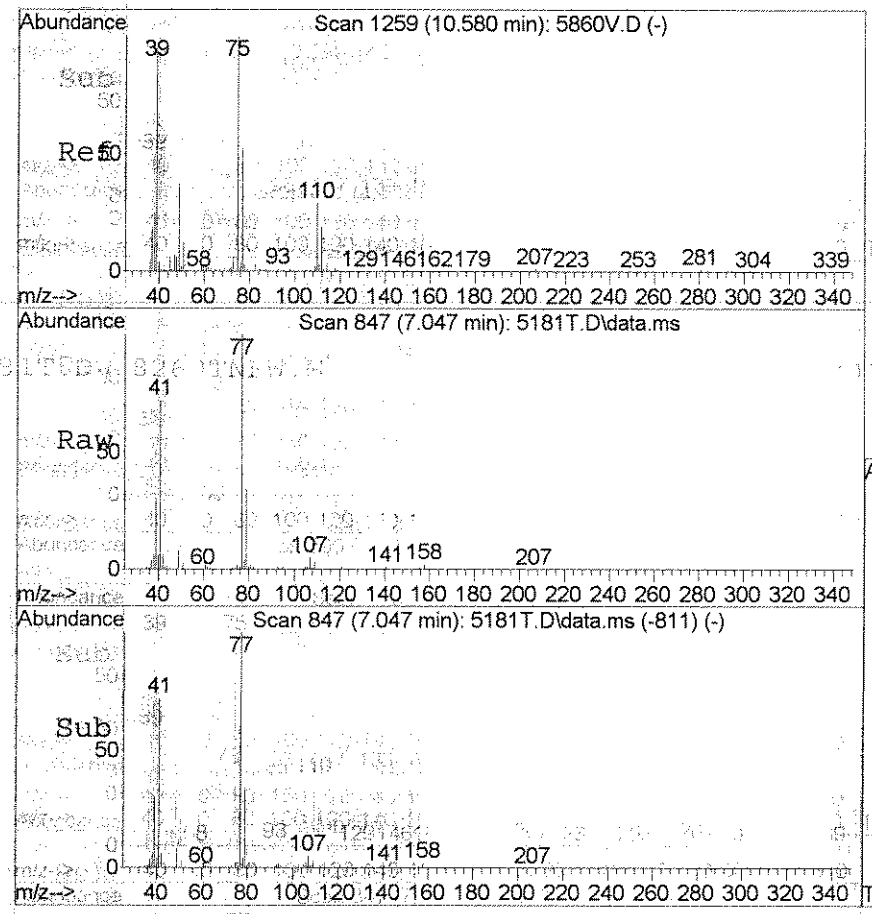
Tgt Ion: 56 Resp: 7960

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 57 | 0.0 | 5.4 | 8.0# |



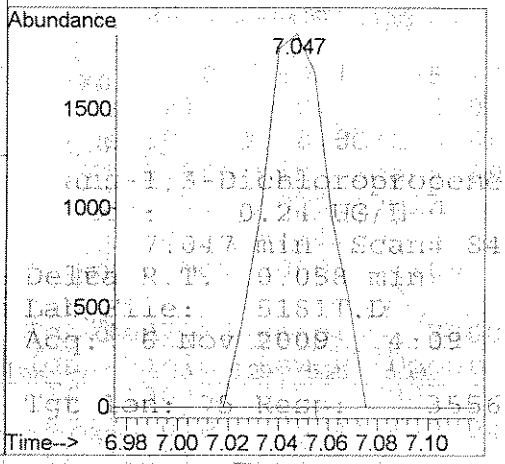


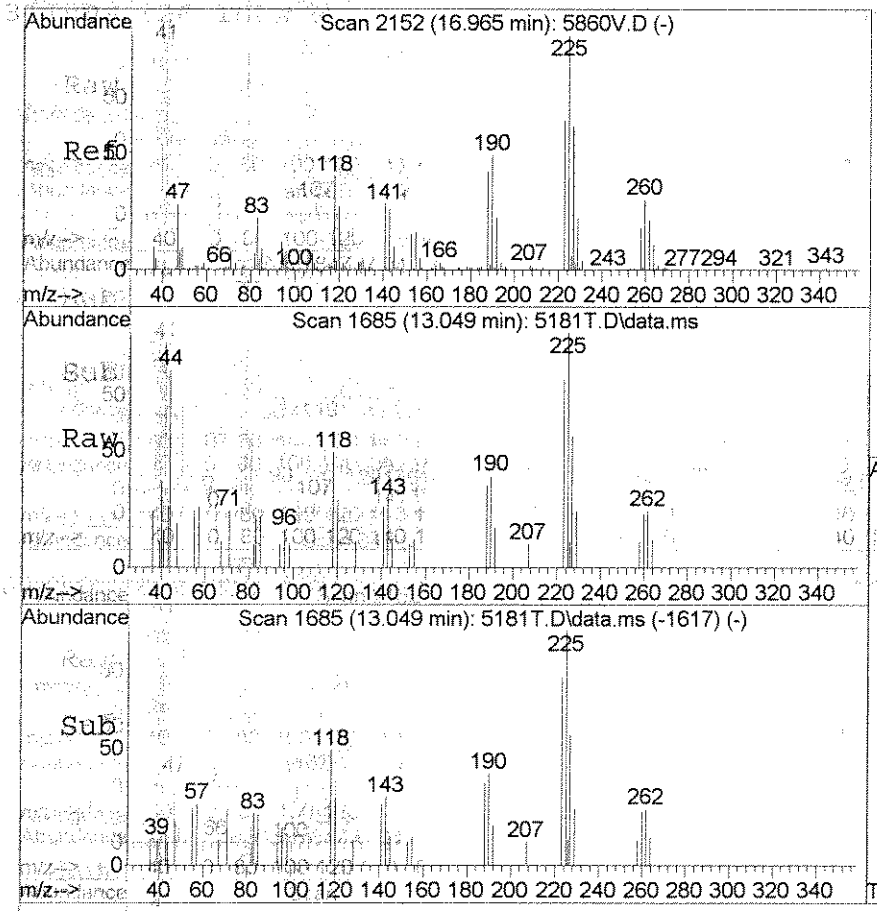

59169b




#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

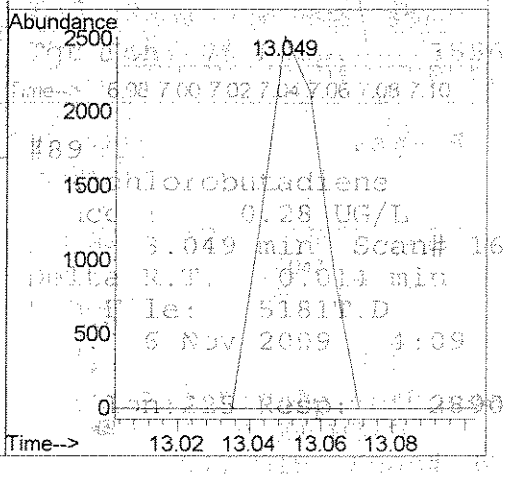
Tgt Ion: 75 Resp: 3556




#89
Hexachlorobutadiene
Concen: 0.28 UG/L
RT: 13.049 min Scan# 1685
Delta R.T. -0.014 min
Lab File: 5181T.D
Acq: 6 Nov 2009 4:09

Tgt Ion:225 Resp: 2890






59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5182T.
LCS Date/Time : 6 Nov 2009 4:43
Spike Conc : 10 uG/L
Dilution Factor: 1

Q2-2558.53

| Compound | Spike Conc | Spike % Rec | Min. Recovery | Max Recovery |
|---|---|---|---|---|
| Benzene | 10.7 | 107.0 | 73 | 131.5 |
| Carbon Tetrachloride | 9.85 | 98.5 | 63 | 144.9 |
| 1,4-Dichlorobenzene | 9.64 | 96.4 | 74 | 136.7 |
| 1,2-Dichloroethane | 10.7 | 107.0 | 65 | 133.8 |
| 1,1-DICHLOROETHENE | 10.4 | 104.0 | 59 | 128.5 |
| 1,1,1-Trichloroethane | 9.91 | 99.1 | 65 | 135.2 |
| Trichloroethene | 10.5 | 105.0 | 67 | 120.9 |
| VINYL CHLORIDE | 9.64 | 96.4 | 43 | 144 |
| Bromobenzene | 9.5 | 95.0 | 56 | 159.4 |
| Bromodichloromethane | 9.53 | 95.3 | 70 | 129.4 |
| Bromoform | 7.69 | 76.9 | 59 | 163.5 |
| Bromomethane | 9.84 | 98.4 | 54 | 135.8 |
| Chlorobenzene | 9.39 | 93.9 | 76 | 132.6 |
| Dibromochloromethane | 8.53 | 85.3 | 67 | 145.6 |
| Chloroethane | 10.1 | 101.0 | 64 | 142.7 |
| CHLOROFORM | 10.4 | 104.0 | 73 | 136.2 |
| Chloromethane | 8.73 | 87.3 | 42 | 138.5 |
| 2-Chlorotoluene | 9.49 | 94.9 | 76 | 134.4 |
| 4-Chlorotoluene | 9.63 | 96.3 | 76 | 139.9 |
| Dibromomethane | 10.7 | 107.0 | 72 | 126 |
| 1,3-Dichlorobenzene | 9.51 | 95.1 | 74 | 140 |
| 1,2-Dichlorobenzene | 9.46 | 94.6 | 78 | 136.7 |
| trans-1,2-Dichloroethene | 10.6 | 106.0 | 57 | 116.1 |
| cis-1,2-Dichloroethene | 10.6 | 106.0 | 72 | 167.4 |
| Methylene Chloride | 9.78 | 97.8 | 71 | 133 |
| 1,1-Dichloroethane | 10.8 | 108.0 | 72 | 132.7 |
| 1,1-Dichloropropene | 10.2 | 102.0 | 68 | 124.6 |
| 1,2-DICHLOROPROPANE | 10.9 | 109.0 | 70 | 125.6 |
| 1,3-Dichloropropane | 9.72 | 97.2 | 74 | 127 |
| cis-1,3-Dichloropropene | 9.59 | 95.9 | 70 | 119.1 |
| trans-1,3-Dichloropropene | 9.93 | 99.3 | 72 | 131.8 |
| 2,2-Dichloropropane | 9.11 | 91.1 | 64 | 135 |
| ETHYL BENZENE | 9.44 | 94.4 | 47 | 155.6 |
| Styrene | 9.22 | 92.2 | 48 | 158.2 |
| 1,1,2-Trichloroethane | 10.8 | 108.0 | 73 | 121.4 |
| 1,1,1,2-Tetrachloroethane | 8.98 | 89.8 | 75 | 129.5 |
| 1,1,2,2-Tetrachloroethane | 9.93 | 99.3 | 76 | 126.3 |
| Tetrachloroethene | 9.32 | 93.2 | 69 | 135.2 |
| 1,2,3-Trichloropropane | 8.89 | 88.9 | 73 | 132.7 |



59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5182T.
LCS Date/Time : 6 Nov 2009 4:43
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery % | Max Recovery % |
|---|---|---|---|---|
| TOLUENE | 10.8 | 108.0 | 73 | 130 |
| m,p-Xylene | 18.9 | 94.5 | 73 | 137.2 |
| o-Xylene | 9.47 | 94.7 | 78 | 143.5 |
| Bromochloromethane | 10.7 | 107.0 | 65 | 141.4 |
| n-Butylbenzene | 9.38 | 93.8 | 77 | 137.1 |
| Dichlorodifluoromethane | 8.66 | 86.6 | 15 | 123.1 |
| Trichlorofluoromethane | 9.28 | 92.8 | 51 | 149.1 |
| Hexachlorobutadiene | 8.69 | 86.9 | 66 | 130.5 |
| Isopropylbenzene | 10.7 | 107.0 | 84 | 148.4 |
| p-Isopropyltoluene | 9.37 | 93.7 | 75 | 137.2 |
| Naphthalene | 9.1 | 91.0 | 75 | 133.3 |
| n-Propylbenzene | 9.56 | 95.6 | 74 | 140.8 |
| sec-Butylbenzene | 9.39 | 93.9 | 74 | 129.3 |
| t-Butylbenzene | 9.38 | 93.8 | 47 | 155.9 |
| 1,2,3-Trichlorobenzene | 8.78 | 87.8 | 69 | 143.8 |
| 1,2,4-Trichlorobenzene | 9.33 | 93.3 | 75 | 132.1 |
| 1,2,4-Trimethylbenzene | 9.45 | 94.5 | 77 | 136.1 |
| 1,3,5-Trimethylbenzene | 9.45 | 94.5 | 77 | 134.7 |
| Acrolein | 86.8 | 86.8 | D | 672 |
| Acetone | 47.7 | 95.4 | 62 | 135.2 |
| Acrylonitrile | 189 | 189.0 | D | 597.8 |
| Carbon Disulfide | 8.6 | 86.0 | 65 | 161.9 |
| Vinyl Acetate | 11.1 | 111.0 | 71 | 127.6 |
| 2-Butanone | 49.3 | 98.6 | 74 | 128.8 |
| 4-Methyl-2-Pentanone | 49.2 | 98.4 | 70 | 131.2 |
| 2-Hexanone | 44.8 | 89.6 | 76 | 131.7 |
| 2-Chloroethylvinylether | 9.87 | 98.7 | 49 | 136.5 |
| trans-1,4-Dichloro-2-butene | 14.7 | 73.5 | D | 114.1 |
| 1,2-Dibromoethane | 10.5 | 105.0 | 73 | 124 |
| 1,2-Dibromo-3-chloropropane | 8.35 | 83.5 | 67 | 127.4 |
| Iodomethane | 9.47 | 94.7 | 67 | 135.8 |

Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 50 uG/L



59169b

R559983

# Heritage Environmental Services, LLC

Q2255853

QC Report

QCType LCS01
Date Entered 10Nov09
Analysis Date/Time 06Nov0904:43:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5182T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 10 | | 10.7 | | 107 | |
| 217 | CARBON TETRACHLORIDE | 10 | | 9.85 | | 98.5 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | 9.64 | | 96.4 | |
| 21 | 1,2-DICHLOROETHANE | 10 | | 10.7 | | 107 | |
| 8 | 1,1-DICHLOROETHENE | 10 | | 10.4 | | 104 | |
| 2 | 1,1,1-TRICHLOROETHANE | 10 | | 9.91 | | 99.1 | |
| 750 | TRICHLOROETHENE | 10 | | 10.5 | | 105 | |
| 768 | VINYL CHLORIDE | 10 | | 9.64 | | 96.4 | |
| 193 | BROMOBENZENE | 10 | | 9.5 | | 95 | |
| 195 | BROMODICHLOROMETHANE | 10 | | 9.53 | | 95.3 | |
| 197 | BROMOFORM | 10 | | 7.69 | | 76.9 | |
| 198 | BROMOMETHANE | 10 | | 9.84 | | 98.4 | |
| 231 | CHLOROBENZENE | 10 | | 9.39 | | 93.9 | |
| 295 | DIBROMOCHLOROMETHANE | 10 | | 8.53 | | 85.3 | |
| 234 | CHLOROETHANE | 10 | | 10.1 | | 101 | |
| 235 | CHLOROFORM | 10 | | 10.4 | | 104 | |
| 236 | CHLOROMETHANE | 10 | | 8.73 | | 87.3 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | 9.49 | | 94.9 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | 9.63 | | 96.3 | |
| 296 | DIBROMOMETHANE | 10 | | 10.7 | | 107 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | 9.51 | | 95.1 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | 9.46 | | 94.6 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 10 | | 10.6 | | 106 | |
| 246 | CIS-1,2-DICHLOROETHENE | 10 | | 10.6 | | 106 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 9.78 | | 97.8 | |
| 7 | 1,1-DICHLOROETHANE | 10 | | 10.8 | | 108 | |
| 10 | 1,1-DICHLOROPROPENE | 10 | | 10.2 | | 102 | |
| 23 | 1,2-DICHLOROPROPANE | 10 | | 10.9 | | 109 | |
| 27 | 1,3-DICHLOROPROPANE | 10 | | 9.72 | | 97.2 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 10 | | 9.59 | | 95.9 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 10 | | 9.93 | | 99.3 | |
| 33 | 2,2-DICHLOROPROPANE | 10 | | 9.11 | | 91.1 | |
| 349 | ETHYL BENZENE | 10 | | 9.44 | | 94.4 | |
| 680 | STYRENE | 10 | | 9.22 | | 92.2 | |
| 4 | 1,1,2-TRICHLOROETHANE | 10 | | 10.8 | | 108 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 10 | | 8.98 | | 89.8 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 10 | | 9.93 | | 99.3 | |
| 703 | TETRACHLOROETHENE | 10 | | 9.32 | | 93.2 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 10 | | 8.89 | | 88.9 | |
| 724 | TOLUENE | 10 | | 10.8 | | 108 | |
| 492 | M/P-XYLENE | 20 | | 18.9 | | 94.5 | |
| 549 | O-XYLENE | 10 | | 9.47 | | 94.7 | |
| 194 | BROMOCHLOROMETHANE | 10 | | 10.7 | | 107 | |
| 519 | N-BUTYLBENZENE | 10 | | 9.38 | | 93.8 | |

11/10/09

59169b

R559983

# Heritage Environmental Services, LLC

Q2255853

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 10 | | 8.66 | | 86.6 | |
| 372 | TRICHLOROFLUOROMETHANE | 10 | | 9.28 | | 92.8 | |
| 398 | HEXACHLOROBUTADIENE | 10 | | 8.69 | | 86.9 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 10 | | 10.7 | | 107 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | 9.37 | | 93.7 | |
| 493 | NAPHTHALENE | 10 | | 9.1 | | 91 | |
| 532 | N-PROPYLBENZENE | 10 | | 9.56 | | 95.6 | |
| 644 | SEC-BUTYLBENZENE | 10 | | 9.39 | | 93.9 | |
| 702 | TERT-BUTYLBENZENE | 10 | | 9.38 | | 93.8 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 8.78 | | 87.8 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 10 | | 9.33 | | 93.3 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 10 | | 9.45 | | 94.5 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 10 | | 9.45 | | 94.5 | |
| 105 | ACROLEIN | 100 | | 86.8 | | 86.8 | |
| 99 | ACETONE (2-PROPANONE) | 50 | | 47.7 | | 95.4 | |
| 106 | ACRYLONITRILE | 100 | | 189 | | 189 | |
| 216 | CARBON DISULFIDE | 10 | | 8.6 | | 86 | |
| 767 | VINYL ACETATE | 10 | | 11.1 | | 111 | |
| 52 | 2-BUTANONE | 50 | | 49.3 | | 98.6 | |
| 91 | 4-METHYL-2-PENTANONE | 50 | | 49.2 | | 98.4 | |
| 60 | 2-HEXANONE | 50 | | 44.8 | | 89.6 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 10 | | 9.87 | | 98.7 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | 14.7 | | 73.5 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 10 | | 10.4 | | 104 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | 8.35 | | 83.5 | |
| 422 | IODOMETHANE | 10 | | 9.47 | | 94.7 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | 9.25 | | 92.5 | |
| 30 | 1,4-DIOXANE | 200 | | 150 | | 75 | |
| 709 | TETRAHYDROFURAN | 125 | | 132 | | 105.6 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 10 | | 10.1 | | 101 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 100 | | 109 | | 109 | |
| 975 | METHYLACRYLONITRILE | 100 | | 109 | | 109 | |
| 1147 | METHYL METHACRYLATE | 10 | | 9.9 | | 99 | |
| 351 | ETHYL METHACRYLATE | 10 | | 8.74 | | 87.4 | |
| 803 | XYLENES (O/M/P-XYLENE) | 30 | | 28.4 | | 94.7 | |

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5182T.D
Acq On : 6 Nov 2009 4:43
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 06 04:58:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 642698 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 224705 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 148674 | 9.79 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 97.90% | | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 178714 | 9.88 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 98.80% | | | |
| 50) Toluene-d8 | 6.603 | 98 | 569484 | 9.86 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 98.60% | | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 165345 | 8.62 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 86.20% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 79058 | 18.66 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 119600 | 18.73 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 145658 | 9.64 | UG/L | 99 |
| 5) Bromomethane | 1.488 | 94 | 63996 | 9.84 | UG/L | 98 |
| 6) Chloroethane | 1.567 | 64 | 181757 | 10.08 | UG/L # | 87 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 176941 | 9.28 | UG/L # | 78 |
| 8) Acrolein | 2.033 | 56 | 97445 | 86.76 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 313330 | 47.72 | UG/L | 90 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 132152 | 10.38 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.147 | 101 | 147892 | 10.18 | UG/L | 92 |
| 12) Acrylonitrile | 2.735 | 53 | 840636 | 189.03 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 348741 | 8.60 | UG/L | 99 |
| 14) Methylene Chloride | 2.513 | 84 | 162633 | 9.78 | UG/L # | 75 |
| 15) Allyl Chloride | 2.412 | 41 | 459308 | 10.06 | UG/L | 100 |
| 16) Vinyl Acetate | 3.193 | 43 | 21812 | 11.11 | UG/L # | 88 |
| 17) MTBE | 2.756 | 73 | 450279 | 9.25 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 154047 | 10.55 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 264179 | 10.77 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 128176 | 49.27 | UG/L # | 83 |
| 21) Ethyl Acetate | 3.766 | 43 | 202878 | 10.77 | UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 164786 | 10.62 | UG/L | 92 |
| 23) Ethyl Cyanide | 3.759 | 54 | 323123 | 109.13 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 246090 | 10.36 | UG/L # | 98 |
| 25) Methacrylonitrile | 3.902 | 41 | 1187588 | 108.88 | UG/L # | 100 |

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5182T.D
Acq On : 6 Nov 2009 4:43
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 06 04:58:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 759068 | 131.68 | UG/L | # | 82 |
| 27) Bromochloromethane | 3.902 | 128 | 74332 | 10.72 | UG/L | | 85 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 140735 | 9.11 | UG/L | | 92 |
| 29) Diethyl ether | 1.932 | 59 | 137622 | 9.83 | UG/L | | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 195405 | 9.91 | UG/L | | 97 |
| 31) Iodomethane | 2.226 | 142 | 197097 | 9.47 | UG/L | | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 69838 | 10.22 | UG/L | | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 170784 | 9.85 | UG/L | | 91 |
| 36) 1,2-Dichloroethane | 4.554 | 62 | 191802 | 10.74 | UG/L | | 98 |
| 37) Isobutanol | 4.504 | 43 | 283423 | 274.08 | UG/L | # | 90 |
| 38) Benzene | 4.533 | 78 | 596770 | 10.67 | UG/L | | 100 |
| 39) n-Hexane | 2.993 | 57 | 381634 | 13.43 | UG/L | | 100 |
| 40) Trichloroethene | 5.220 | 130 | 153255 | 10.47 | UG/L | | 95 |
| 41) n-Butanol | 5.213 | 56 | 54832 | 60.98 | UG/L | | 99 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 139969 | 10.85 | UG/L | | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 68898 | 150.48 | UG/L | | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 128952 | 9.90 | UG/L | # | 94 |
| 45) Bromodichloromethane | 5.779 | 83 | 149012 | 9.53 | UG/L | | 98 |
| 46) Dibromomethane | 5.586 | 93 | 84729 | 10.72 | UG/L | | 92 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 998544 | 49.24 | UG/L | # | 89 |
| 48) 2-Chloroethylvinylether | 6.159 | 63 | 190088 | 9.87 | UG/L | | 95 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 187407 | 9.59 | UG/L | | 100 |
| 51) TOLUENE | 6.674 | 91 | 597229 | 10.76 | UG/L | | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 154929 | 9.93 | UG/L | | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 119007 | 10.84 | UG/L | | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 117689 | 10.45 | UG/L | | 100 |
| 56) 2-Hexanone | 7.534 | 43 | 654916 | 44.75 | UG/L | # | 86 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 207988 | 9.72 | UG/L | | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 175919 | 18.74 | UG/L | # | 62 |
| 59) Tetrachloroethene | 7.333 | 166 | 154547 | 9.32 | UG/L | | 99 |
| 60) Dibromochloromethane | 7.656 | 129 | 100109 | 18.53 | UG/L | | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 365761 | 9.39 | UG/L | | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 125275 | 18.98 | UG/L | | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 204220 | 9.44 | UG/L | | 76 |
| 64) m,p-Xylene | 8.744 | 106 | 510122 | 18.89 | UG/L | # | 61 |
| 65) o-Xylene | 9.253 | 106 | 259124 | 9.47 | UG/L | | 81 |
| 66) Styrene | 9.274 | 104 | 402653 | 19.22 | UG/L | | 89 |
| 67) Bromoform | 9.482 | 173 | 60554 | 7.69 | UG/L | | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 197962 | 9.93 | UG/L | | 99 |
| 70) Isopropylbenzene | 9.719 | 105 | 695432 | 10.73 | UG/L | | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 83184 | 14.74 | UG/L | # | 110 |
| 72) Bromobenzene | 10.027 | 77 | 252115 | 9.50 | UG/L | | 100 |



59169b

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Quant Time: Nov 06 04:58:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

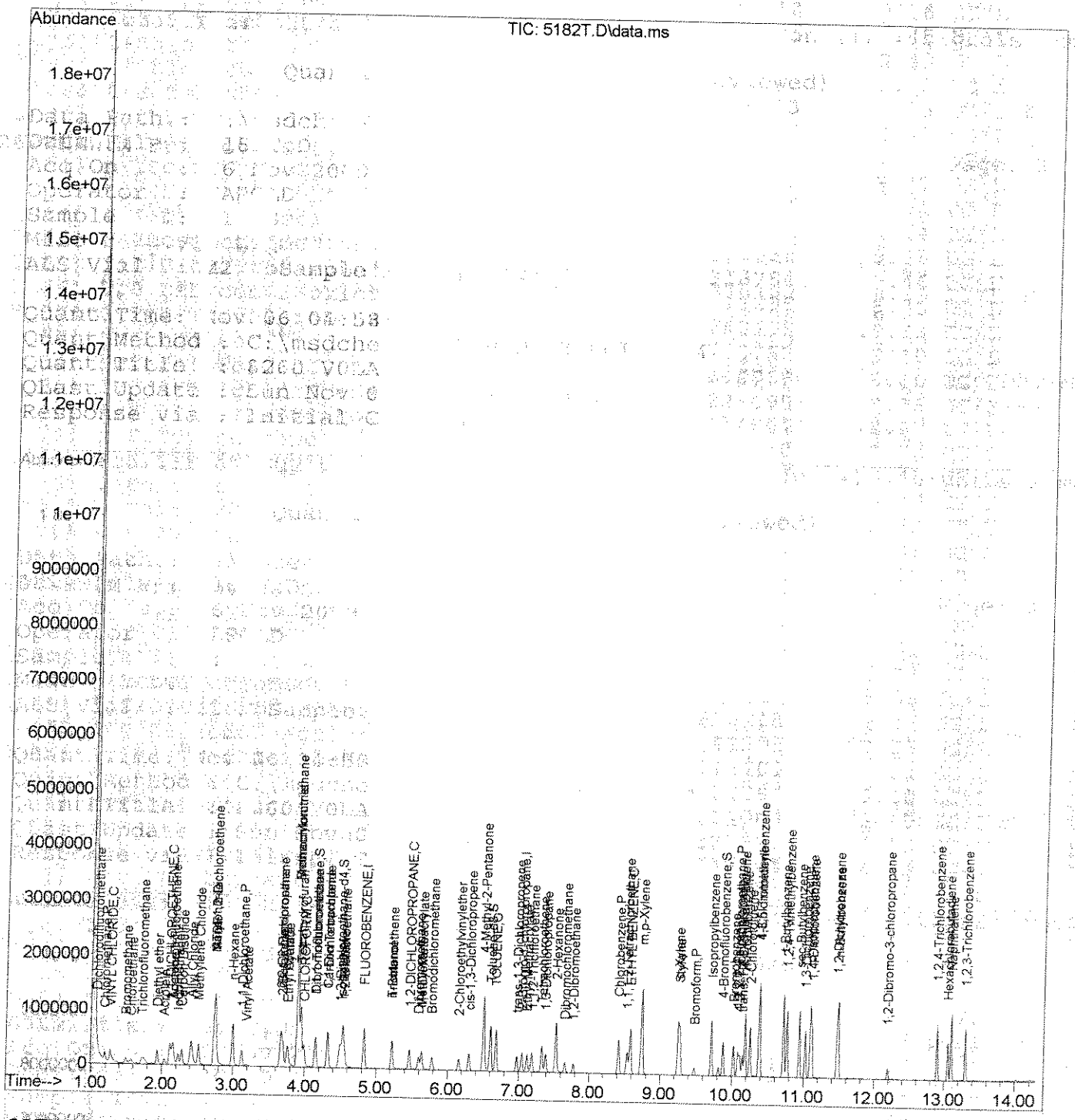
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.113 | 110 | 56661 | 8.89 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 87640 | 9.56 | UG/L | 85 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 581603 | 9.45 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 163027 | 9.49 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 156412 | 9.63 | UG/L | 100 |
| 78) t-Butylbenzene | 10.714 | 91 | 318963 | 9.38 | UG/L # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 594095 | 9.45 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 765674 | 9.39 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 642334 | 9.37 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 318346 | 9.51 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 323334 | 9.64 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 335833 | 9.38 | UG/L | 99 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 318784 | 9.46 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 41295 | 8.35 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 248709 | 9.33 | UG/L | 100 |
| 88) Naphthalene | 13.100 | 128 | 720787 | 9.10 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 104968 | 8.69 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 227695 | 8.78 | UG/L | 100 |

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\T110609\
Data File : 5182T.D
Acq On : 6 Nov 2009 4:43
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 06 04:58:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Fri Nov 06 04:58:34 2009



59169b

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864548

Method SW846-8260B
Sample Description 165D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5231T.D Date/Time 07Nov09 14:56:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 1.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 2.0 | UG/L | |
| 107-06-2 | 219 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | 2.4 | | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| 110-57-6 | 748 | | | BDL | 1.0 | UG/L | |
| 75-34-3 | 7 | | | | | | |
| 591696-08-2 | 219 | | | | | | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864548

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 1.0 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 10 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 1.0 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 10 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | EX | 1.0 | UG/L | |
| 630-20-6 | 1804 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | 1.0 | UG/L | |
| 127-18-4 | 972 | TETRACHLOROETHENE | | | 1.0 | UG/L | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 90 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

EX Exceeds calibration range. See Replicate

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864548

ORIGINAL

Method SW846-8260B
Sample Description 165D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5231T Date/Time 11/7/09 14:
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 716 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 811 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 245 | CIS-1,2-DICHLOROETHENE | | EX | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 5.4 | | 1.0 | ug/L | | |
| 232 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 803 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 101 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 353 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 375 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| [illegible] | [illegible] | | | | 10 | ug/L | | |
| 245 | [illegible] | | | | | ug/L | | |
| 746 | [illegible] | | | | | ug/L | | |
| 235 | [illegible] | | | | | ug/L | | |

TC#89

59169b

A864548

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1[illegible] | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3[illegible] | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2[illegible] | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4[illegible] | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | EX | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | [illegible] | | | | [illegible] | ug/L |
| 971 | SURROGATE RECOVERY | | | | [illegible] | % |
| 972 | [illegible] | | | | | % |
| 301 | DICHLOROETHANE-D4 | | 98 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 90 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 94 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5231T.D
Acq On : 7 Nov 2009 14:56
Operator : HAROLD
Sample : A864548
Misc :
ALS Vial : 19 Sample Multiplier: 1

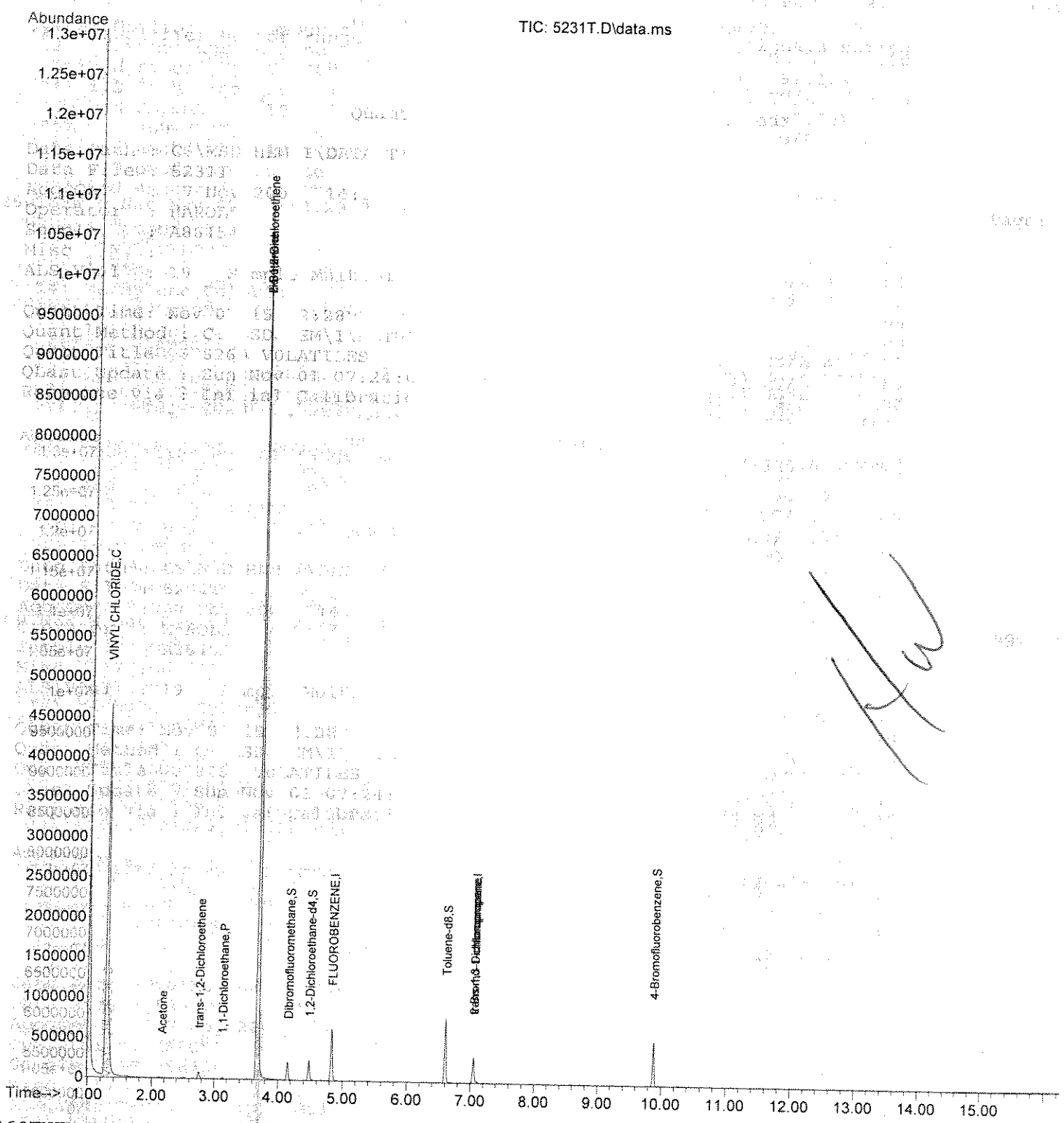
Quant Time: Nov 07 15:12:28 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 591409 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 190881 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 131388 | 9.41 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 162382 | 9.75 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.50% | |
| 50) Toluene-d8 | 6.603 | 98 | 540129 | 10.16 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.60% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 146430 | 8.98 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 89.80% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.273 | 62 | 6597018 | 474.67 UG/L | 100 |
| 9) ~~Acetone~~ | 2.162 | 43 | 7417 | 1.23 UG/L # | 84 |
| 14) ~~Methylene Chloride~~ | 2.513 | 84 | 4012 | ~~Below~~ Cal # | 80 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 31586 | 2.35 UG/L | 95 |
| 19) ~~1,1-Dichloroethane~~ | 3.129 | 63 | 19077 | 0.85 UG/L | 100 |
| 20) ~~2-Butanone~~ Bad Hit | 3.673 | 72 | 32765 | ~~13.69~~ UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 4726368 | 331.07 UG/L | 83 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3686 | 0.26 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5231T.D
Acq On : 7 Nov 2009 14:56
Operator : HAROLD
Sample : A864548
Misc :
ALS Vial : 19 Sample Multiplier: 1

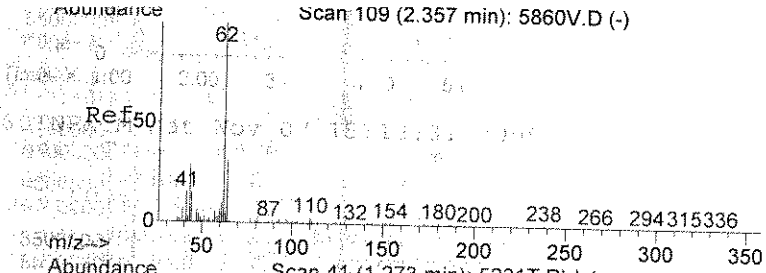
Quant Time: Nov 07 15:12:28 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 15:12:31 2009



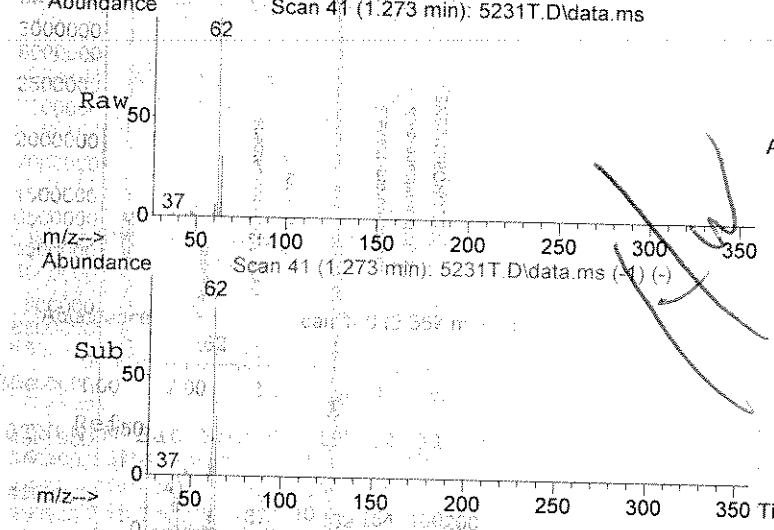
591695

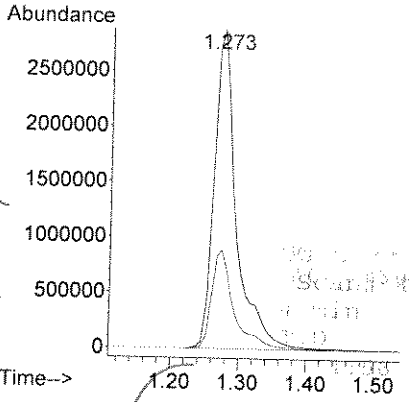


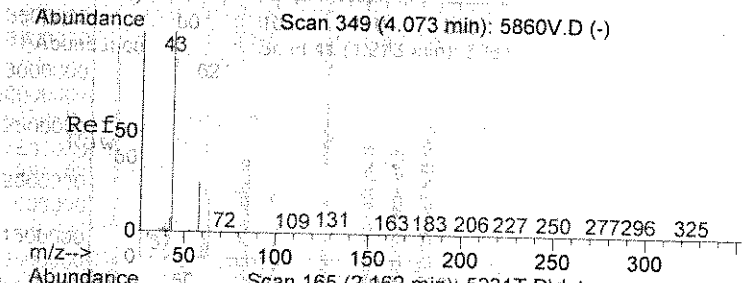

#4
VINYL CHLORIDE
Concen: 474.67 UG/L
RT: 1.273 min Scan# 41
Delta R.T. 0.014 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

Tgt Ion: 62 Resp: 6597018

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.9 | 24.9 | 37.3 |



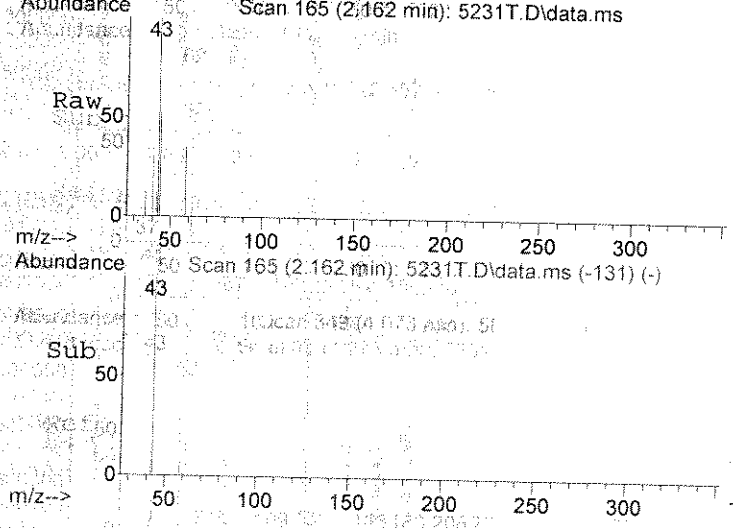



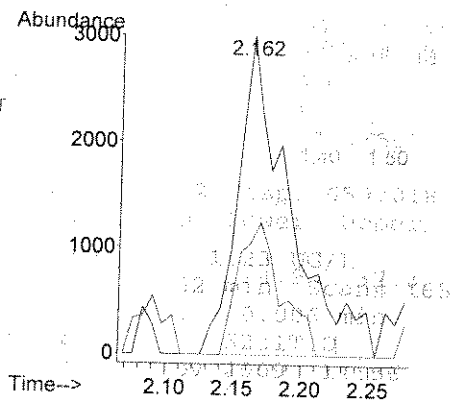



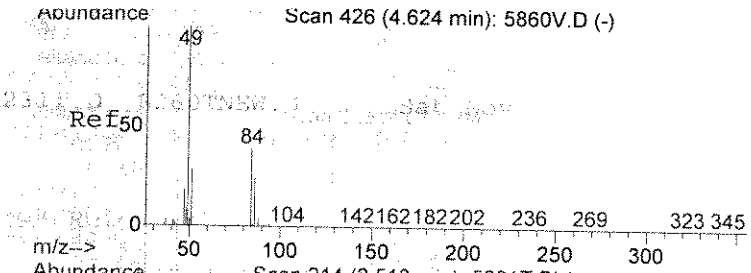

#9
Acetone
Concen: 1.23 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

Tgt Ion: 43 Resp: 7417

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 37.2 | 23.1 | 34.7# |



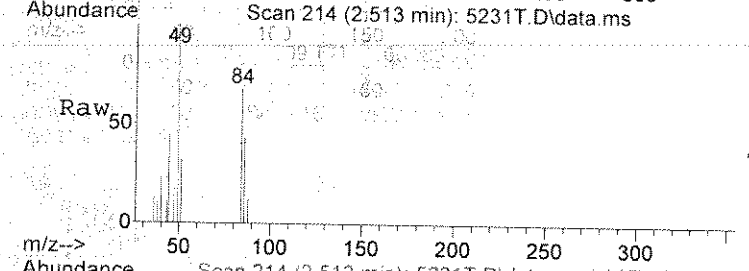



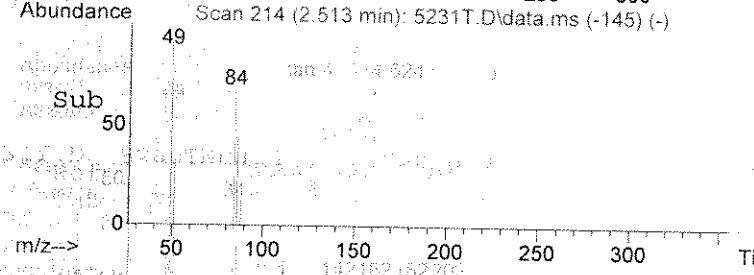


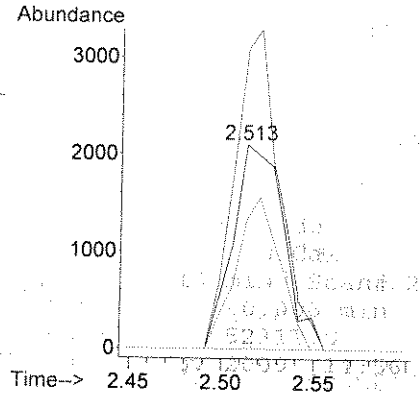

#14
Methylene Chloride
Concen: Below Cal
RT: 2.513 min Scan# 214
Delta R.T. -0.006 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

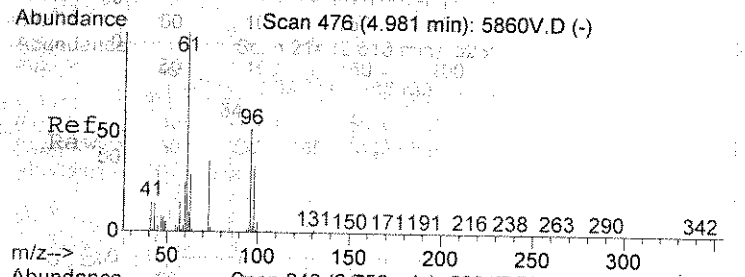
Tgt Ion: 84 Resp: 4012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 138.2 | 140.2 | 210.2# |
| 86 | 64.3 | 51.1 | 76.7 |



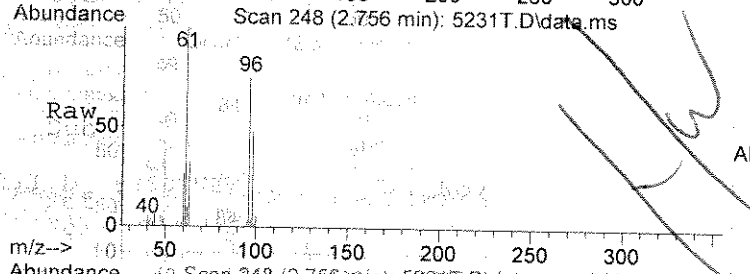



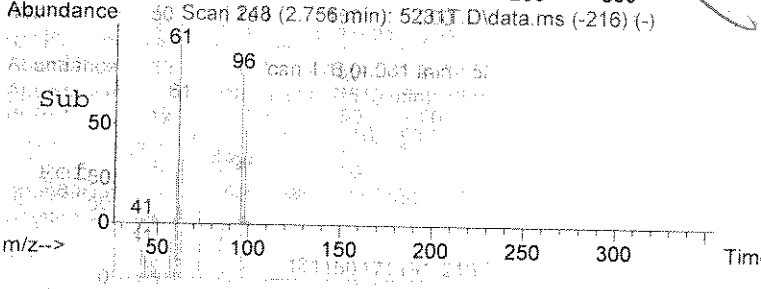



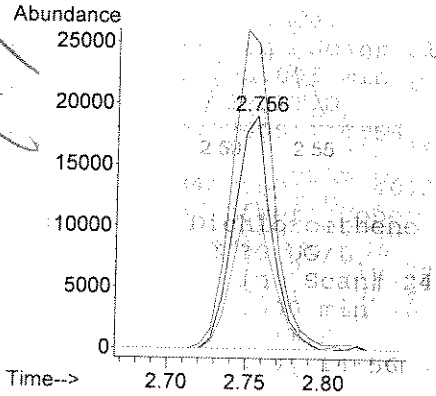

#18
trans-1,2-Dichloroethene
Concen: 2.35 UG/L
RT: 2.756 min Scan# 248
Delta R.T. 0.000 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

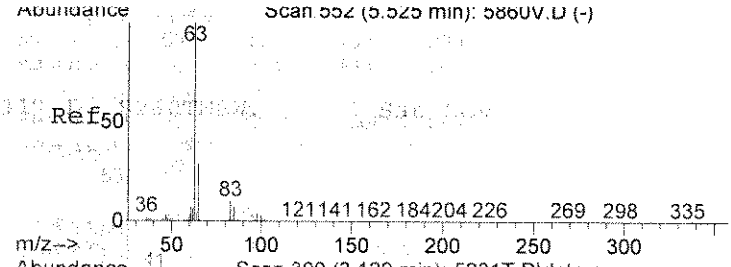
Tgt Ion: 96 Resp: 31586

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 149.3 | 114.1 | 171.1 |
| 98 | 67.8 | 50.7 | 76.1 |



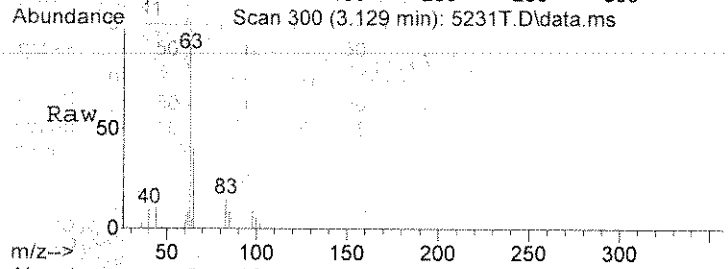



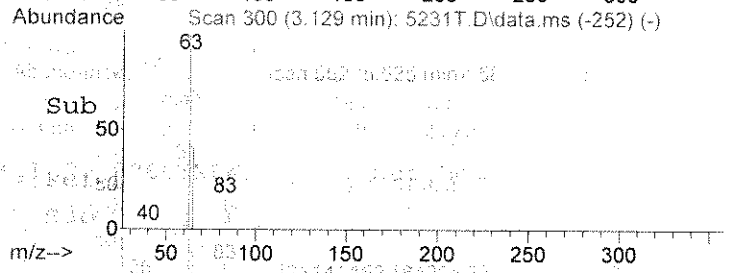



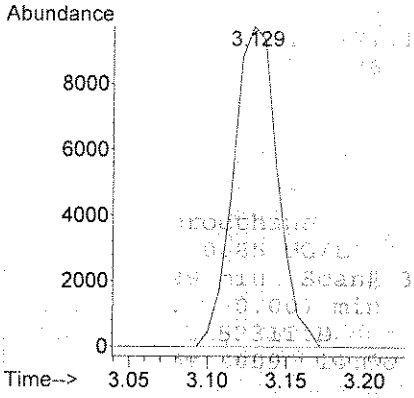


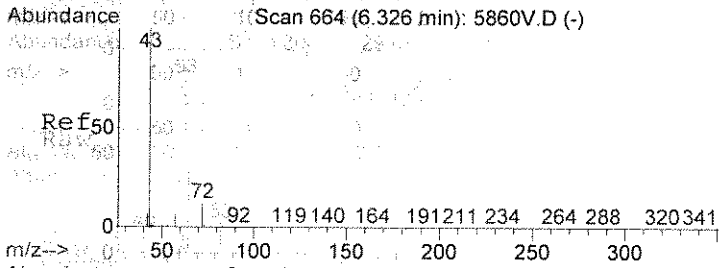

#19
1,1-Dichloroethane
Concen: 0.85 UG/L
RT: 3.129 min Scan# 300
Delta R.T. -0.007 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

Tgt Ion: 63 Resp: 19077



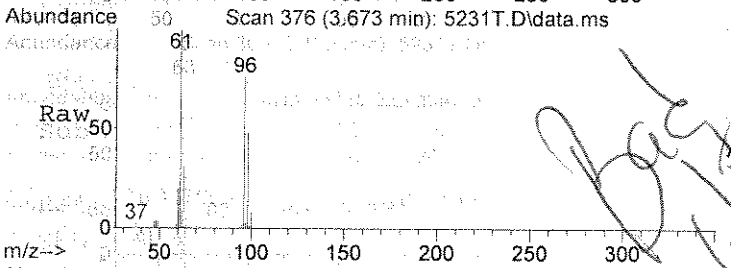



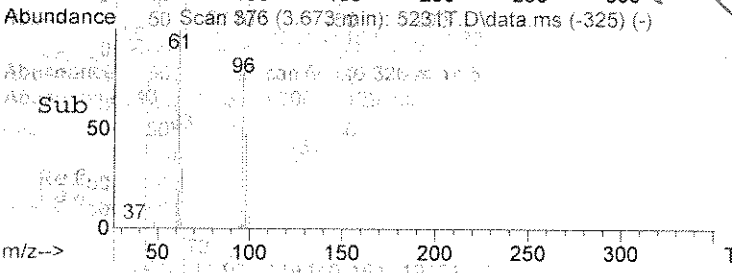



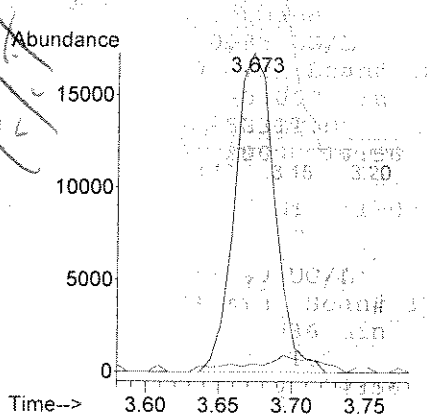

#20
2-Butanone
Concen: 13.69 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

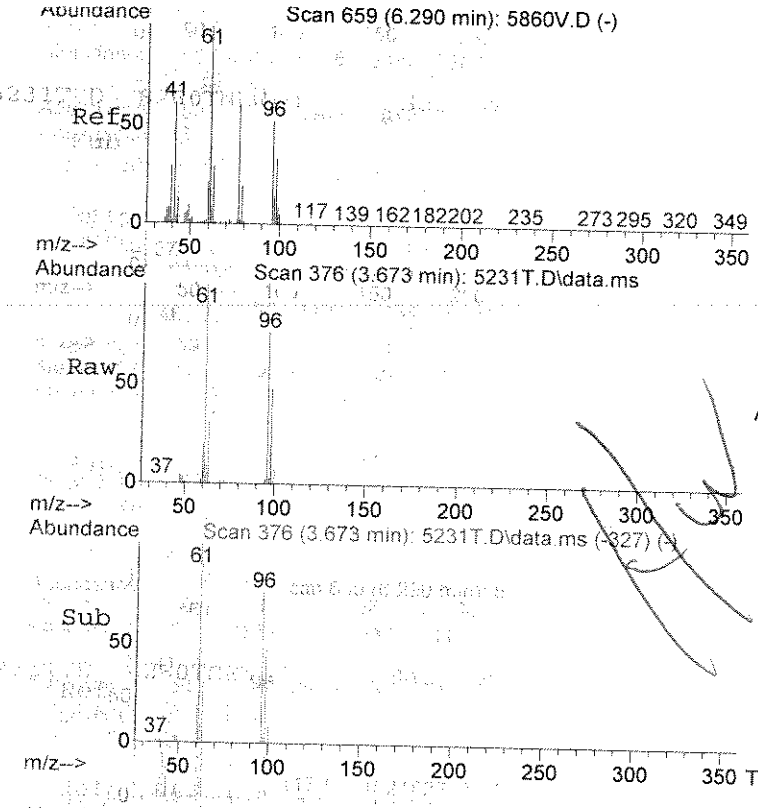
Tgt Ion: 72 Resp: 32765

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 6.6 | 449.0 | 673.4# |



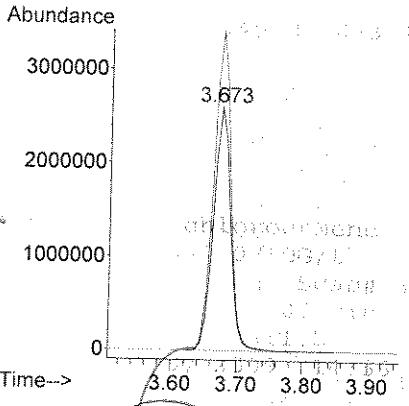



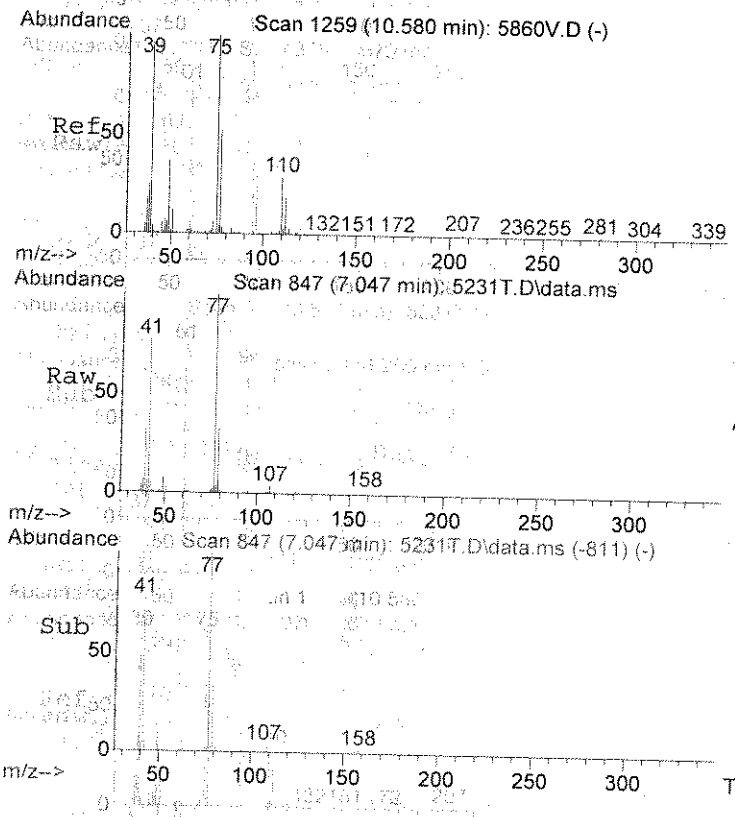



#22
cis-1,2-Dichloroethene
Concen: 331.07 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

Tgt Ion: 96 Resp: 4726368

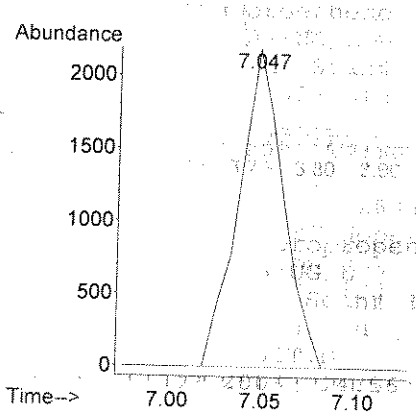
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 131.0 | 121.8 | 182.6 |




#52
trans-1,3-Dichloropropene
Concen: 0.26 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5231T.D
Acq: 7 Nov 2009 14:56

Tgt Ion: 75 Resp: 3686



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864549

Method SW846-8260B
Sample Description 166D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5232T.D Date/Time 07Nov09 15:22:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | 3.9 | | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 8.2 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | [illegible] | | | 2.0 | UG/L | |
| 75-34-3 | 7 | [illegible] | | | 1.0 | UG/L | |
| 107-06-2 | 21 | [illegible] | | | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864549

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | EX | 1.0 | UG/L | |
| 630-20-6 | 1804 | | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | | | |
| 127-18-4 | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 101 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 89 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864549 ORIGINAL

Method SW846-8260B
Sample Description 166D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code Q510.5.0
Analyst HHW
File 5232T Date/Time 11/7/09 15:2
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 183 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 268 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 215 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 81 | 1,1-DICHLOROETHENE | | 3.9 | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | EX | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 8.2 | | 1.0 | ug/L | | |
| 239 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 270 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 849 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 353 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 375 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 81 | 1,1-DICHLOROETHENE | | | | | ug/L | | |
| 245 | CIS-1,2-DICHLOROETHENE | | | | | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | | ug/L | | |
| 239 | 1,2-DICHLOROPROPANE | | | | | ug/L | | |

TC#89

59169b

A864549

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | EX | | 1.0 | ug/L |
| 503 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 98 | | | % Rec |
| 726 | TOLUENE-D8 | | 101 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 87 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 94 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5232T.D
Acq On : 7 Nov 2009 15:22
Operator : HAROLD
Sample : A864549
Misc :
ALS Vial : 20 Sample Multiplier: 1

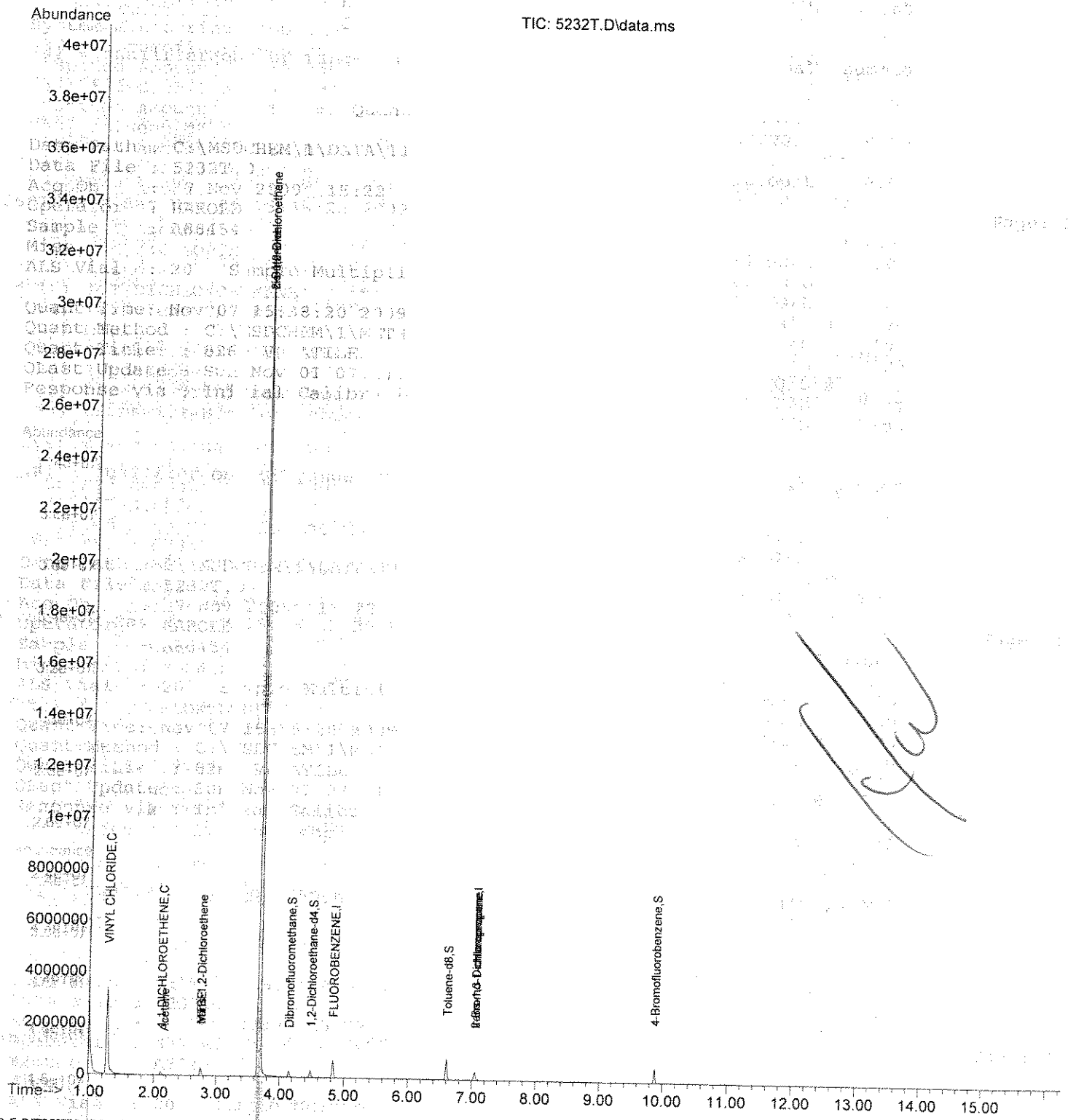
Quant Time: Nov 07 15:38:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 597578 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 192730 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 132216 | 9.37 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 93.70% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 164332 | 9.77 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.70% | |
| 50) Toluene-d8 | 6.603 | 98 | 541722 | 10.09 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 146536 | 8.90 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 89.00% | |
| Target Compounds | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 4122456 | 293.56 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 7019 | 1.15 | UG/L | 99 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 45954 | 3.88 | UG/L | 100 |
| 14) Methylene Chloride | 2.520 | 84 | 4288 | Below | Cal # | 70 |
| 17) MTBE | 2.756 | 73 | 10182 | 0.22 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 110967 | 8.17 | UG/L | 99 |
| 20) 2-Butanone Bad Hit | 3.673 | 72 | 112910 | 46.68 | UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 15901902 | 1102.39 | UG/L # | 74 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3184 | 0.22 | UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5232T.D
Acq On : 7 Nov 2009 15:22
Operator : HAROLD
Sample : A864549
Misc :
ALS Vial : 20 Sample Multiplier: 1

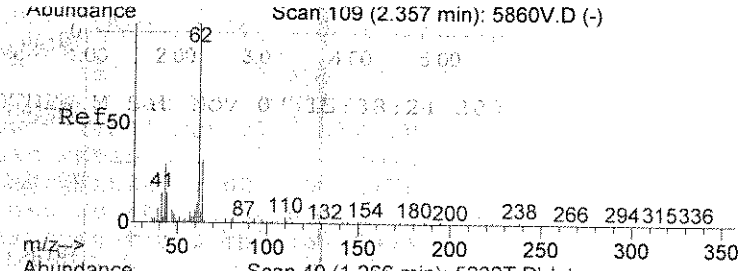
Quant Time: Nov 07 15:38:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 15:38:24 2009



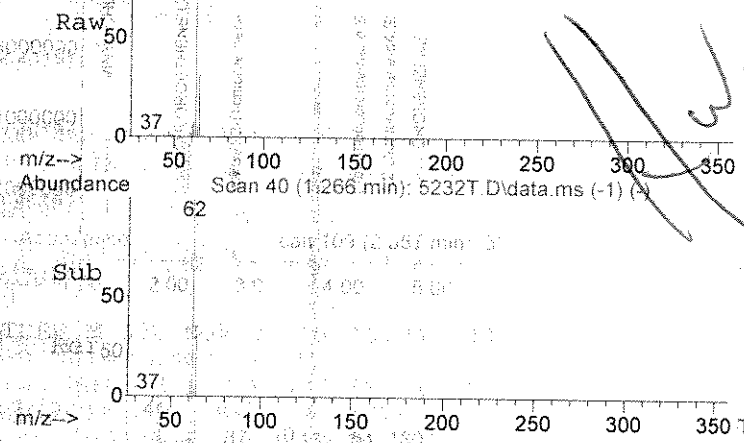
59169b

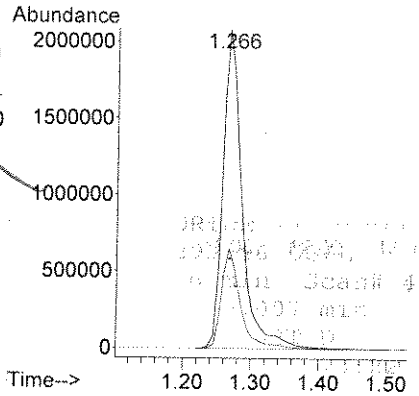


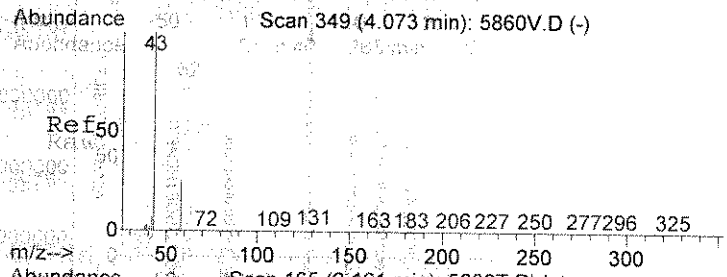

#4
VINYL CHLORIDE
Concen: 293.56 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 62 Resp: 4122456

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.8 | 24.9 | 37.3 |



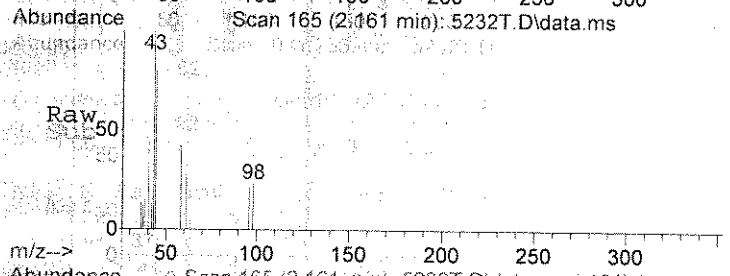



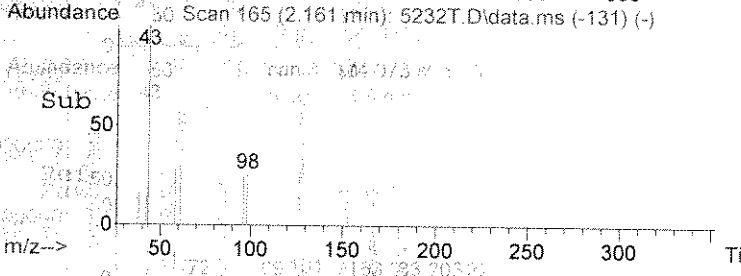



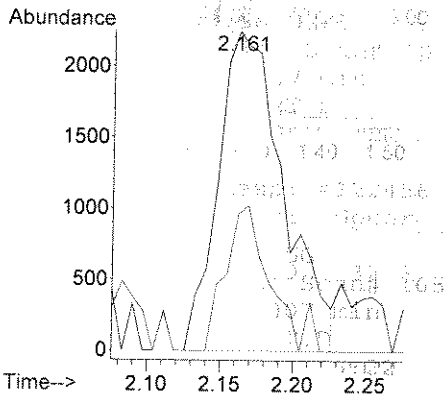

#9
Acetone
Concen: 1.15 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

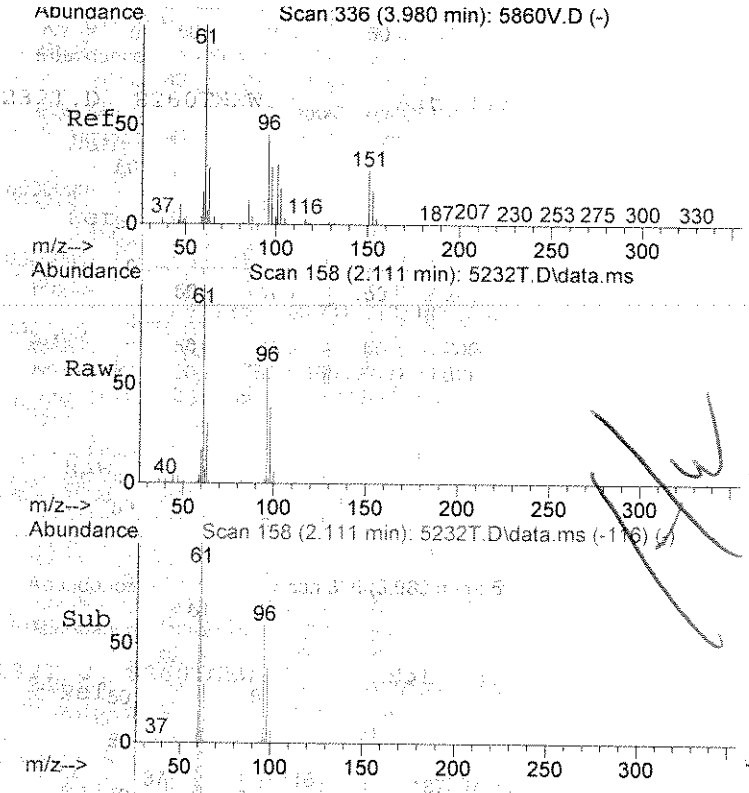
Tgt Ion: 43 Resp: 7019

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.5 | 23.1 | 34.7 |



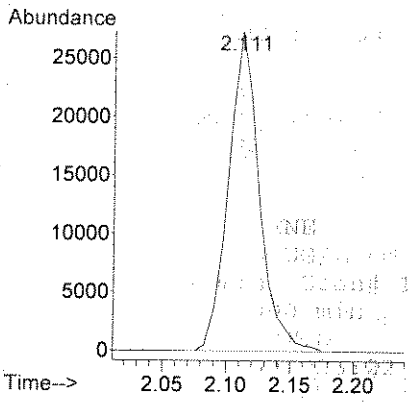



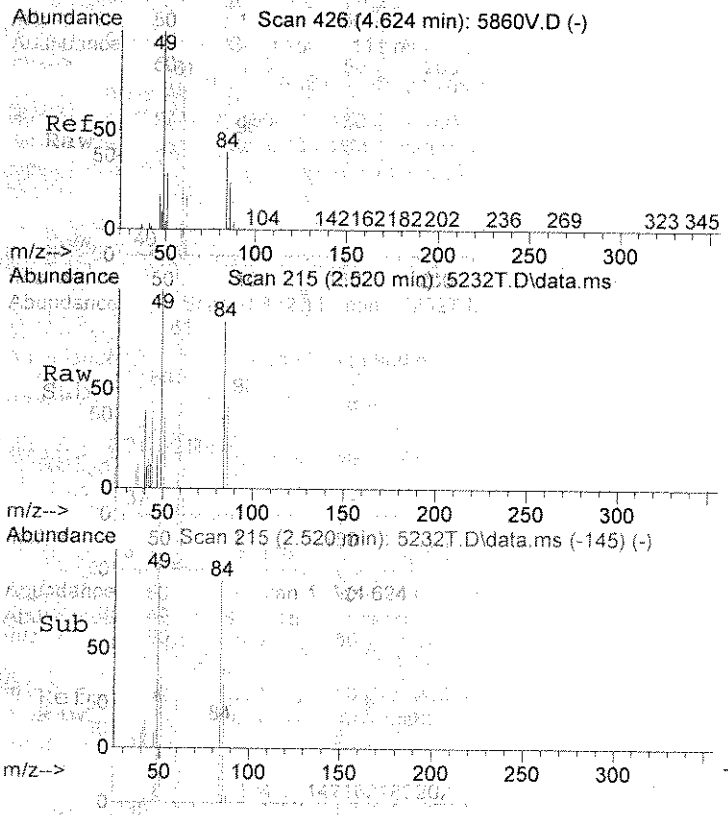






#10
1,1-DICHLOROETHENE
Concen: 3.88 UG/L
RT: 2.111 min Scan# 158
Delta R.T. 0.000 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 96 Resp: 45954

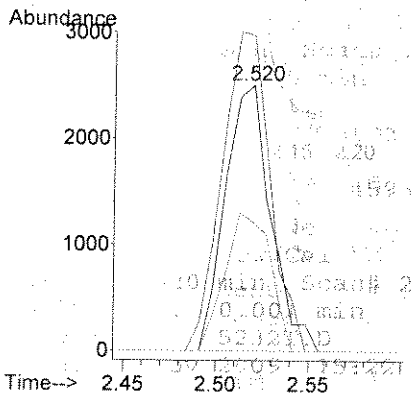


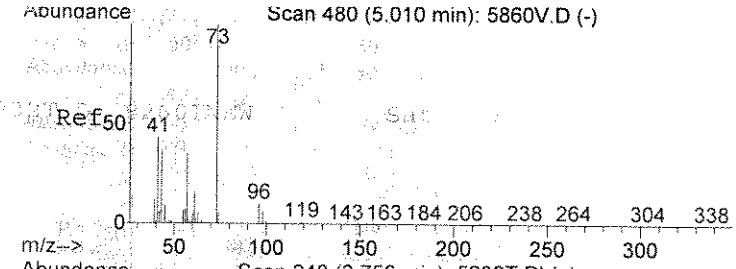




#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 84 Resp: 4288

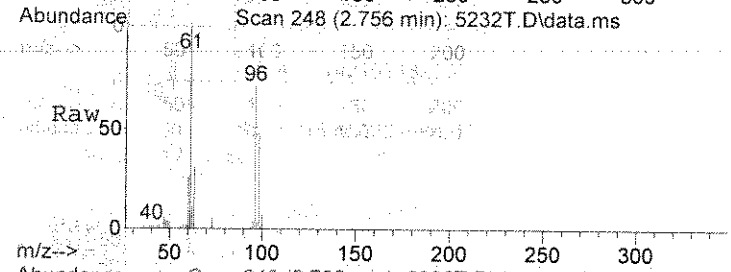
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 126.4 | 140.2 | 210.2# |
| 86 | 51.9 | 51.1 | 76.7 |

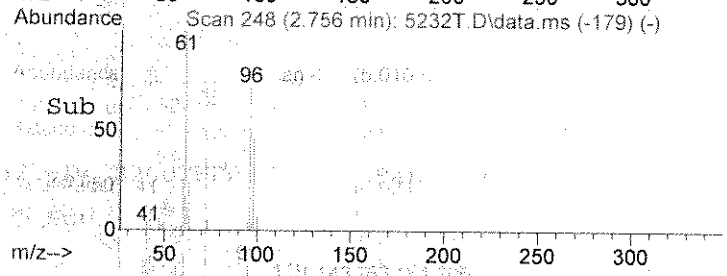


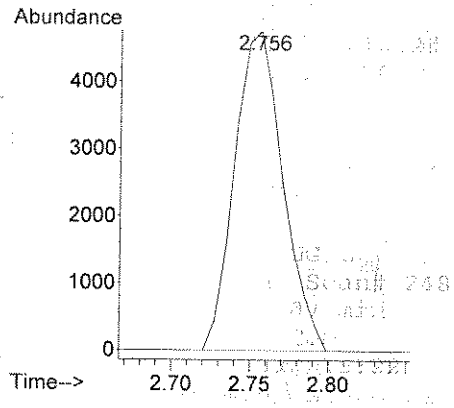


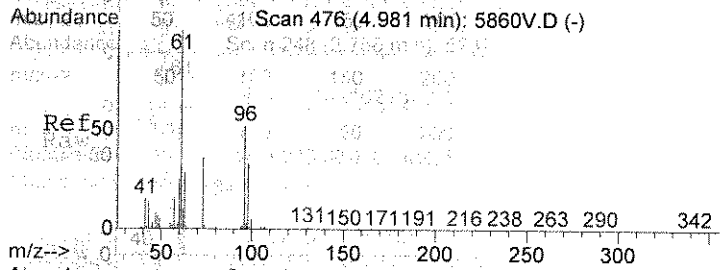

#17
MTBE
Concen: 0.22 UG/L
RT: 2.756 min Scan# 248
Delta R.T. -0.007 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 73 Resp: 10182



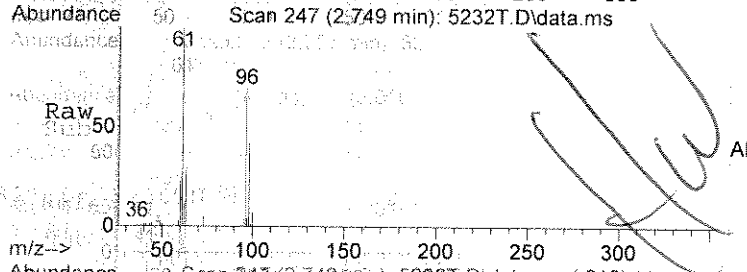



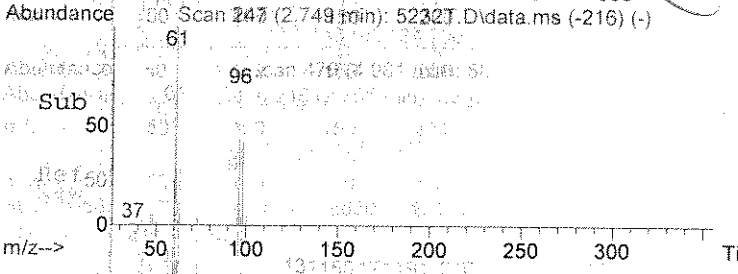



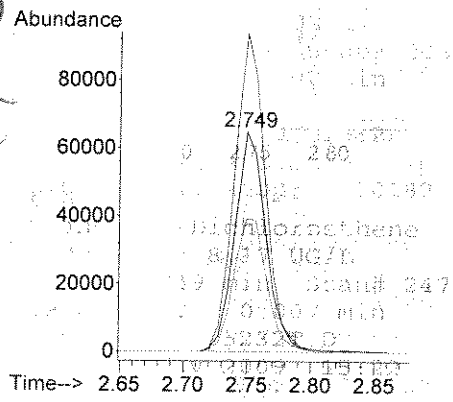

#18
trans-1,2-Dichloroethene
Concen: 8.17 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

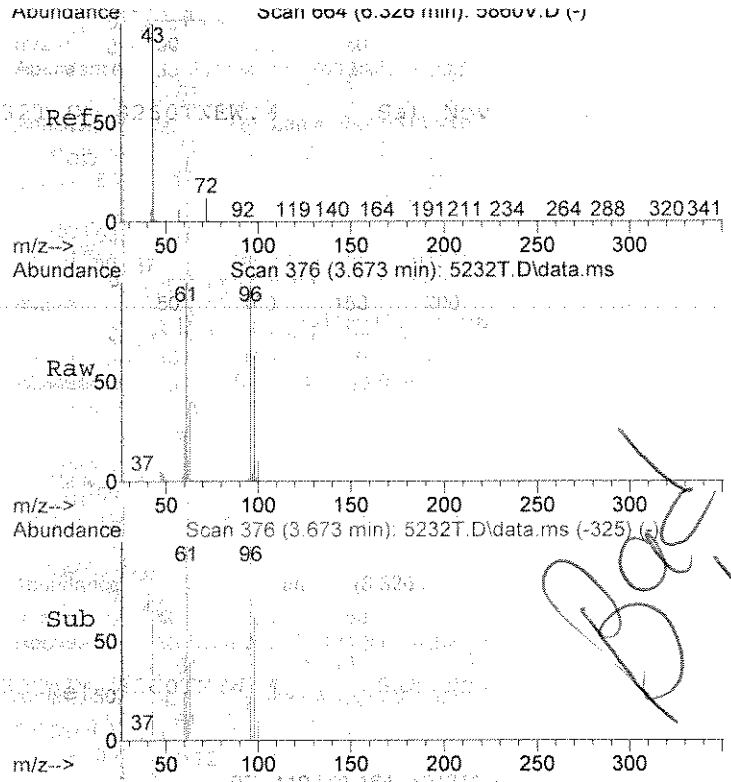
Tgt Ion: 96 Resp: 110967

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 143.6 | 114.1 | 171.1 |
| 98 | 64.0 | 50.7 | 76.1 |



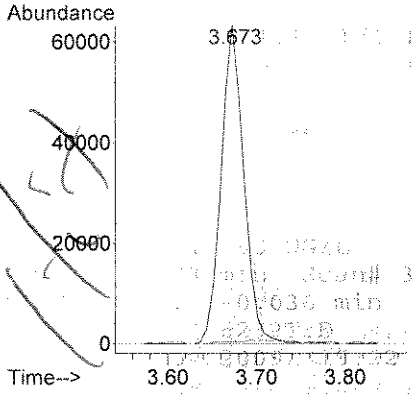





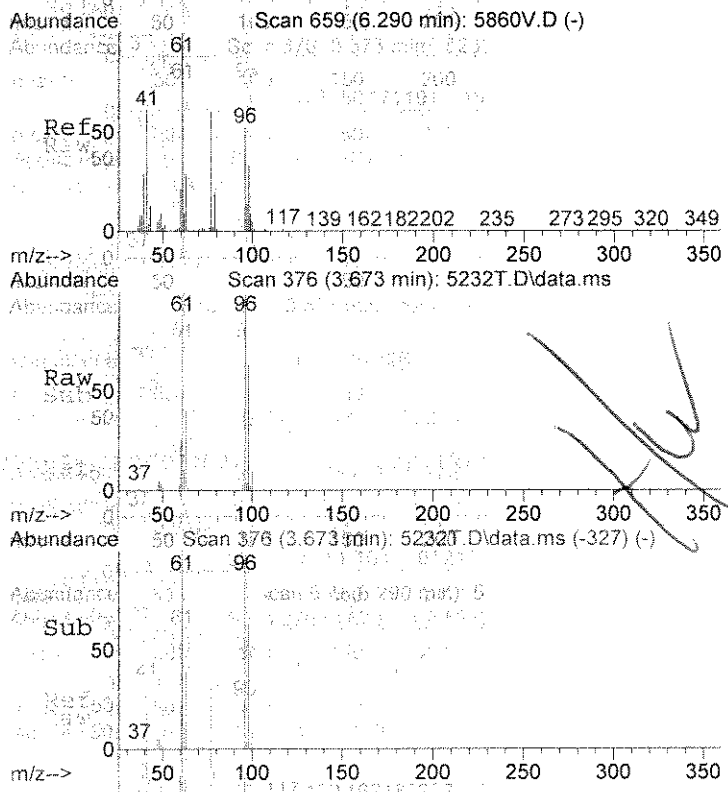

#20
2-Butanone
Concen: 46.68 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 72 Resp: 112910

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |



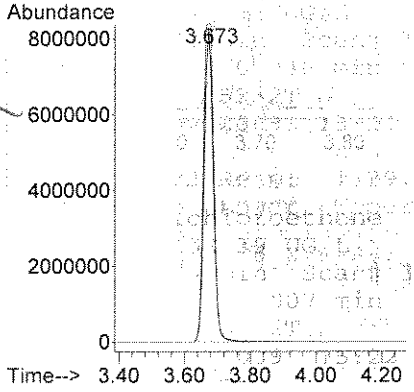

Bad Fit




#22
cis-1,2-Dichloroethene
Concen: 1102.39 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 96 Resp:15901902

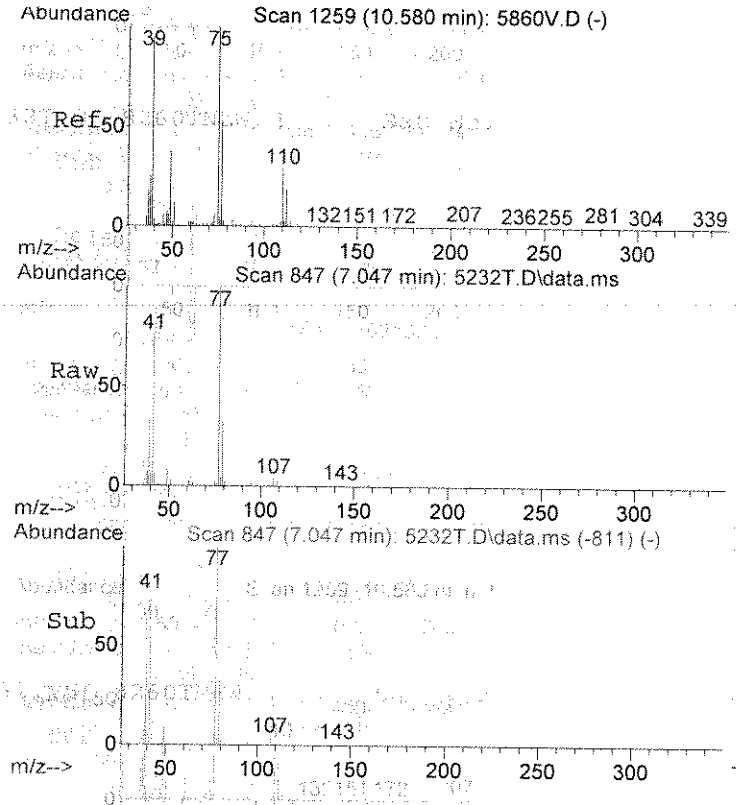
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 119.2 | 121.8 | 182.6# |




Fit

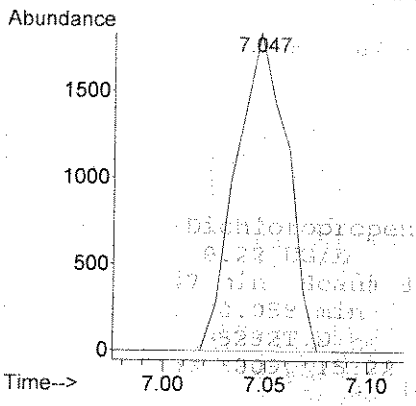


59169b




#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5232T.D
Acq: 7 Nov 2009 15:22

Tgt Ion: 75 Resp: 3184



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864550

Method SW846-8260B
Sample Description 166S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5233T.D Date/Time 07Nov09 15:47:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 9.7 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864550

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 171 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 6.5 | | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 99 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 101 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 90 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

EX Exceeds calibration range. See Replicate

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864550

ORIGINAL

Method SW846-8260B
Sample Description 166S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 52335 Date/Time 11/7/09 15:4
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 181 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 268 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 216 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 811 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | EX 67 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 235 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 273 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 807 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 108 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 3[illegible] | [illegible] | | | | | ug/L | | |
| 246 | [illegible] | | | | [illegible] | ug/L | | |
| 746 | [illegible] | | | | [illegible] | ug/L | | |
| 23[illegible] | [illegible] | | | | [illegible] | ug/L | | |

TC#89

59169b

A864550

# Heritage Environmental Services, LLC

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| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 6.5 | | 1.0 | ug/L |
| 603 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | 99 | | | |
| 301 | DICHLOROETHANE-D4 | | | | | % Rec |
| 726 | TOLUENE-D8 | | 101 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 90 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 94 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5233T.D
Acq On : 7 Nov 2009 15:47
Operator : HAROLD
Sample : A864550
Misc :
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 07 16:04:16 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 584784 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 190771 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 129636 | 9.39 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 93.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 162193 | 9.85 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.50% | |
| 50) Toluene-d8 | 6.603 | 98 | 530573 | 10.09 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 100.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 145833 | 8.95 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 89.50% | |
| Target Compounds | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 88968 | 6.47 | UG/L | 99 |
| 9) Acetone | 2.162 | 43 | 8006 | 1.34 | UG/L # | 84 |
| 10) 1,1-DICHLOROETHENE | 2.119 | 96 | 4551 | 0.39 | UG/L | 100 |
| 14) Methylene Chloride | 2.520 | 84 | 3675 | Below Cal | # | 72 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 129075 | 9.72 | UG/L | 98 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 4575 | 0.21 | UG/L | 100 |
| 20) 2-Butanone | 3.673 | 72 | 21264 | 8.98 | UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 3038652 | 215.26 | UG/L | 84 |
| 52) trans-1,3-Dichloropropene | 7.040 | 75 | 3126 | 0.22 | UG/L | 100 |

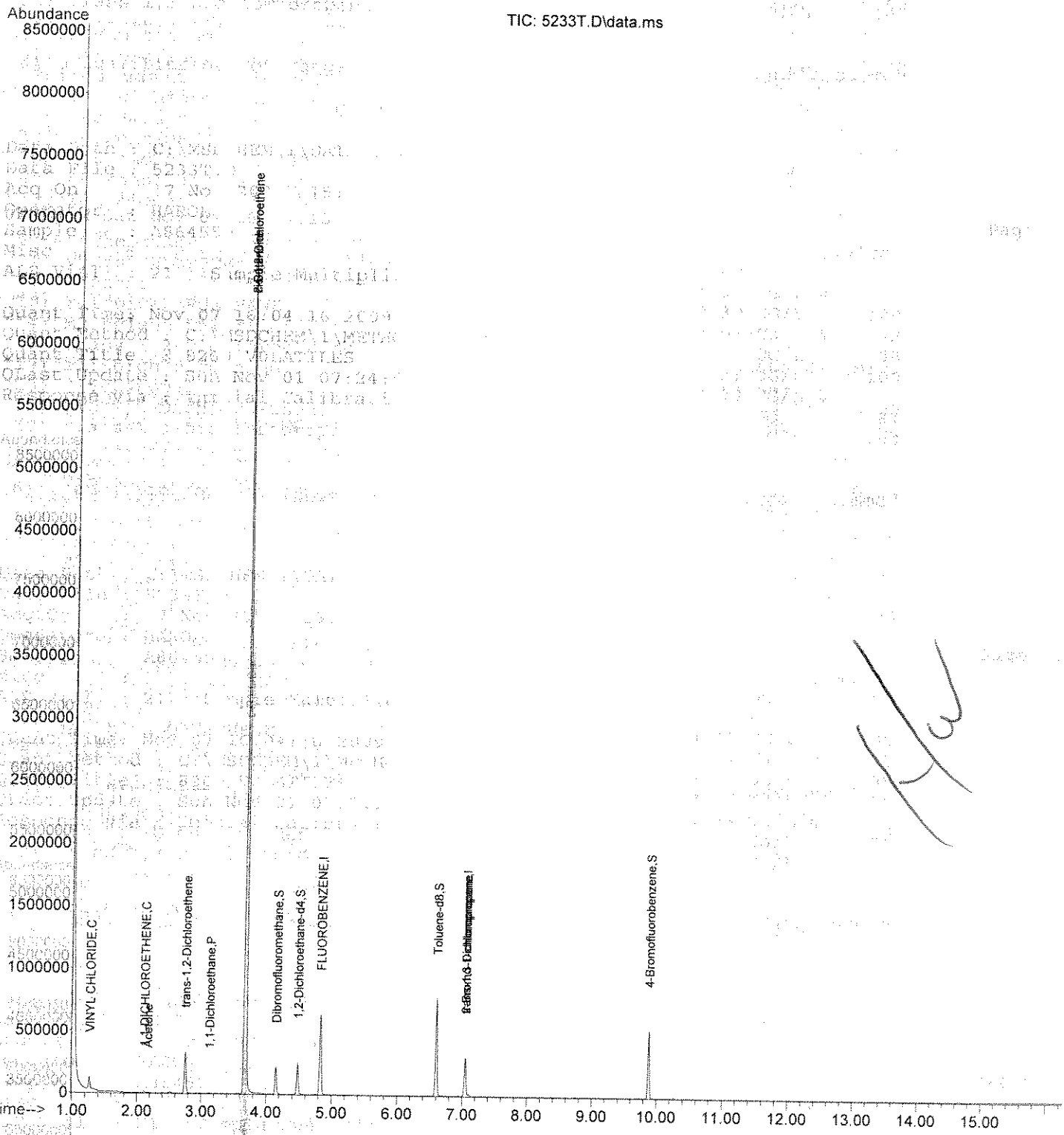
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5233T.D
Acq On : 7 Nov 2009 15:47
Operator : HAROLD
Sample : A864550
Misc :
ALS Vial : 21 Sample Multiplier: 1

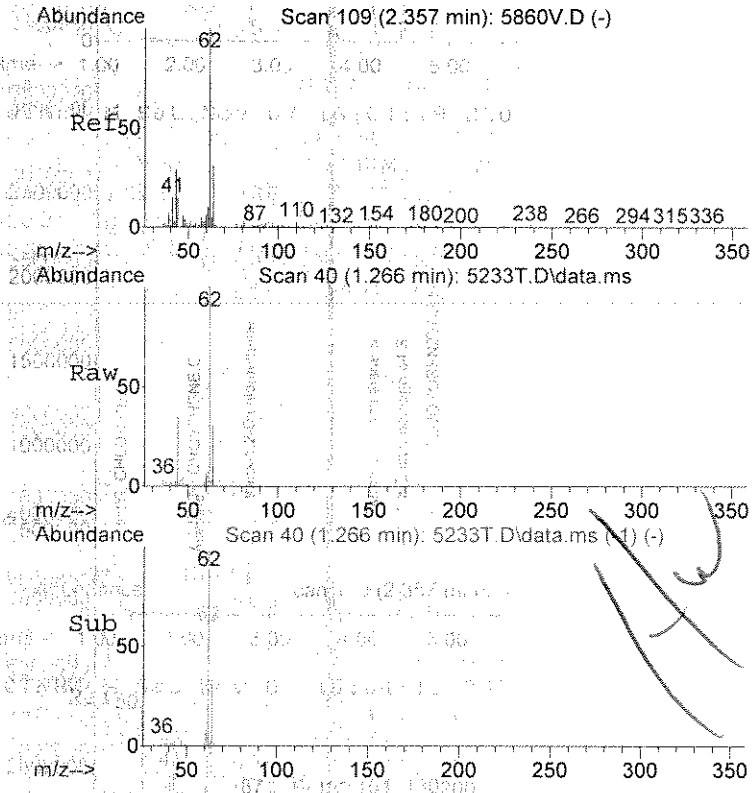
Quant Time: Nov 07 16:04:16 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 16:04:19 2009



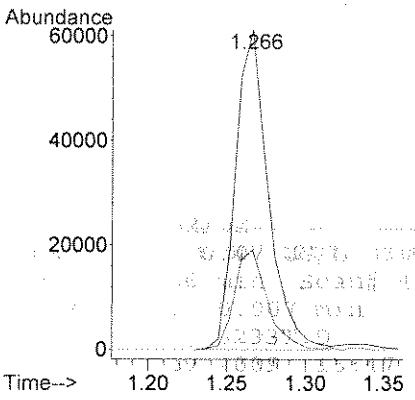
59169b

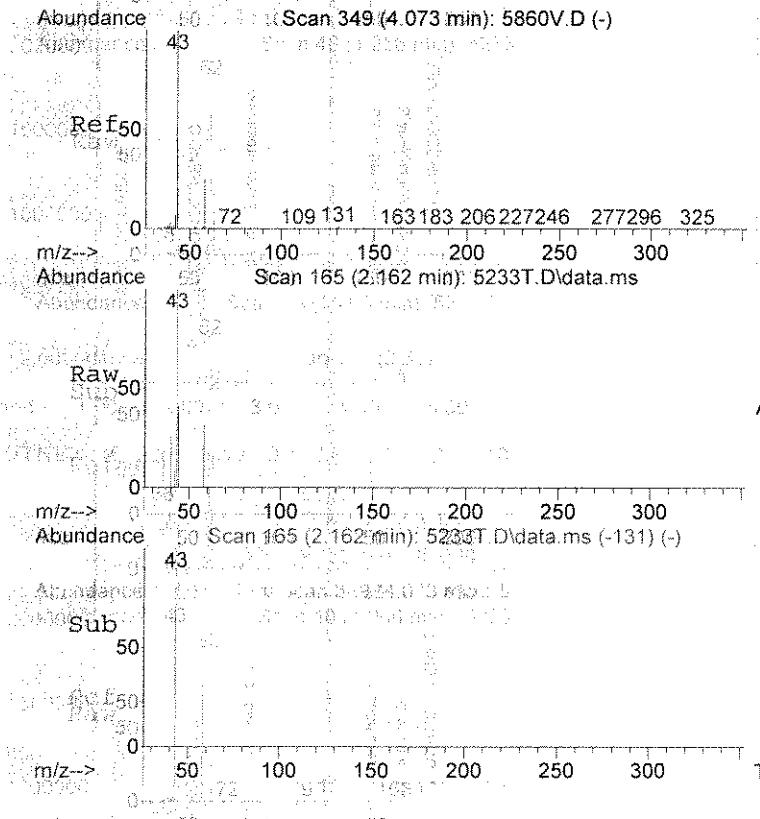



#4
VINYL CHLORIDE
Concen: 6.47 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

Tgt Ion: 62 Resp: 88968

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.6 | 24.9 | 37.3 |

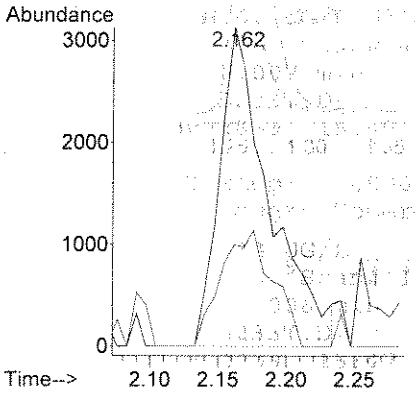



#9
Acetone
Concen: 1.34 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

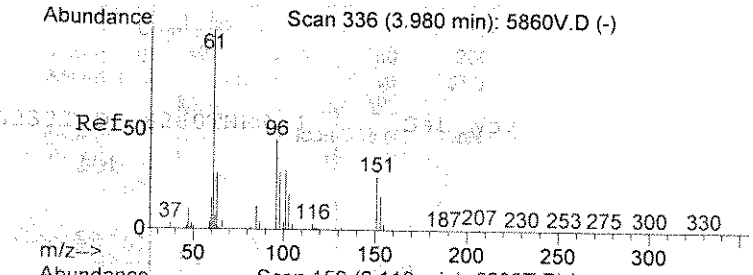
Tgt Ion: 43 Resp: 8006

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 37.6 | 23.1 | 34.7# |



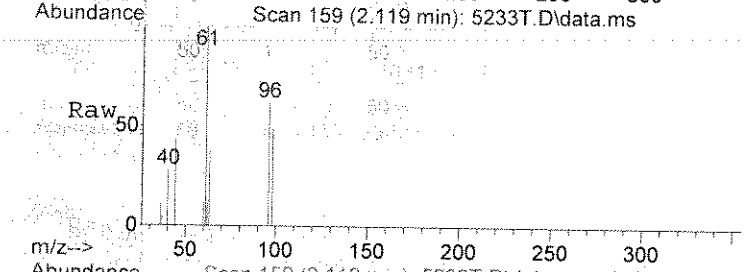


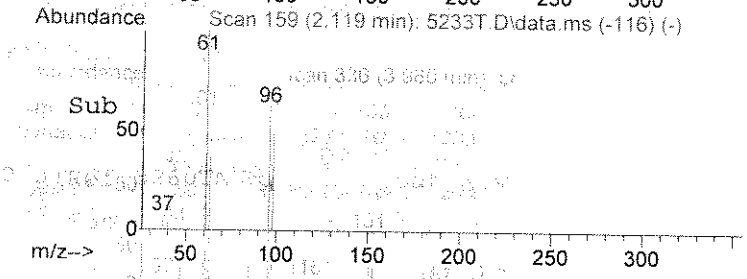

59169b

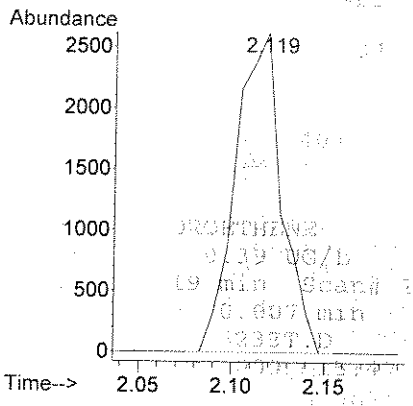


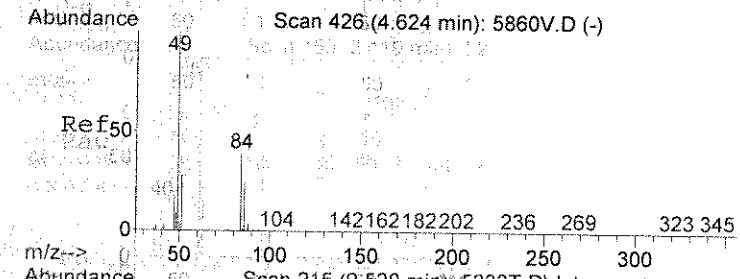

#10
1,1-DICHLOROETHENE
Concen: 0.39 UG/L
RT: 2.119 min Scan# 159
Delta R.T. 0.007 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

Tgt Ion: 96 Resp: 4551



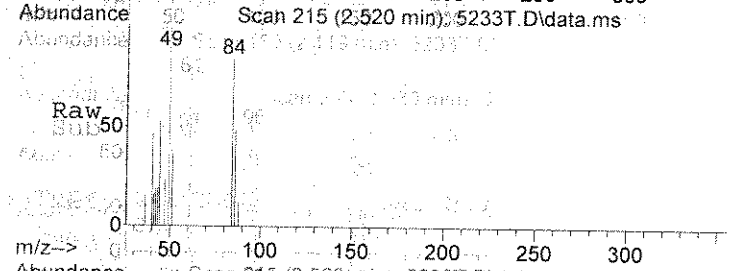



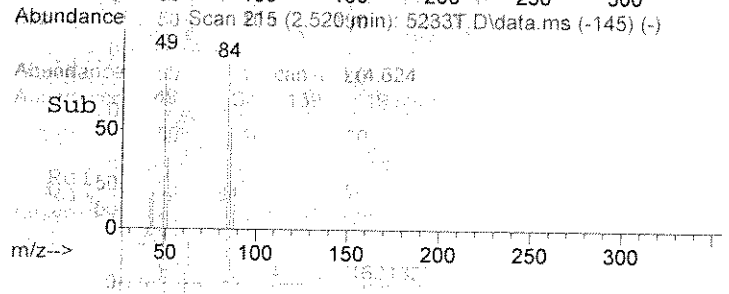



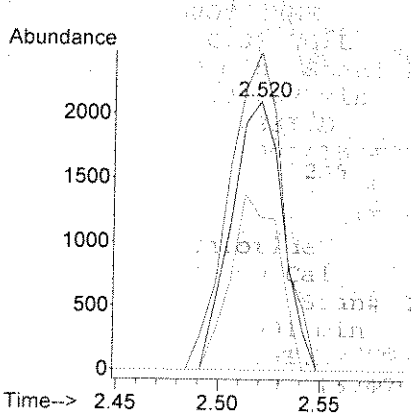

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

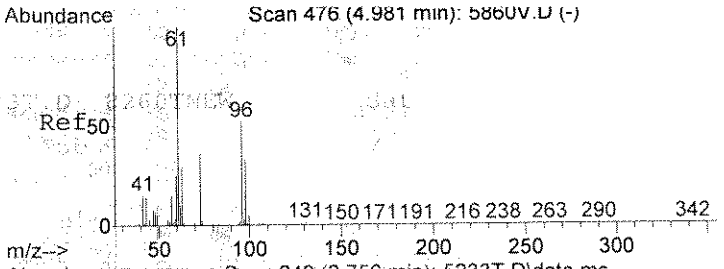
Tgt Ion: 84 Resp: 3675

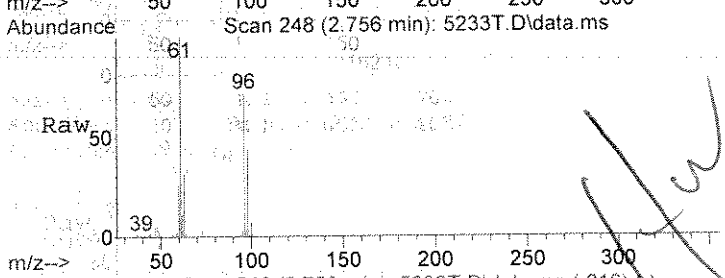
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 123.1 | 140.2 | 210.2# |
| 86 | 61.7 | 51.1 | 76.7 |

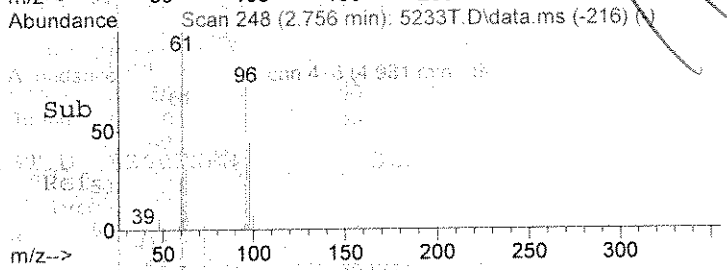




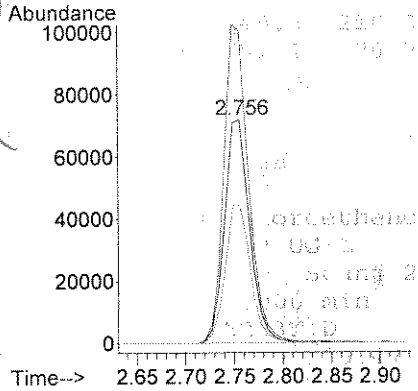



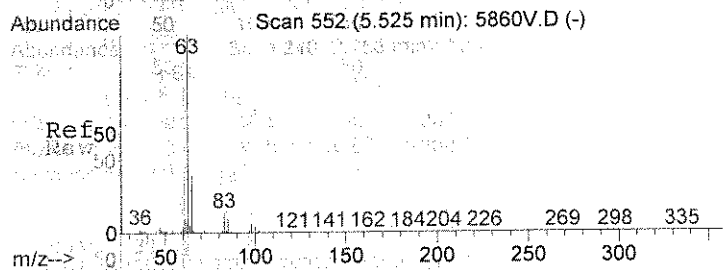



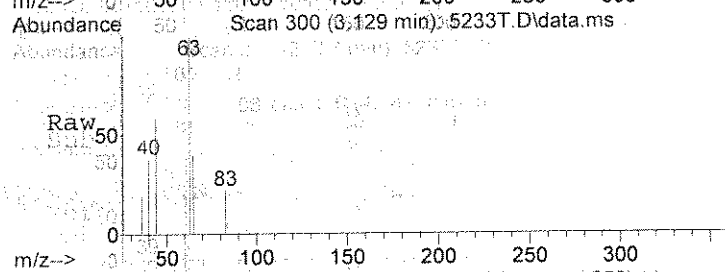

#18
trans-1,2-Dichloroethene
Concen: 9.72 UG/L
RT: 2.756 min Scan# 248
Delta R.T. 0.000 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

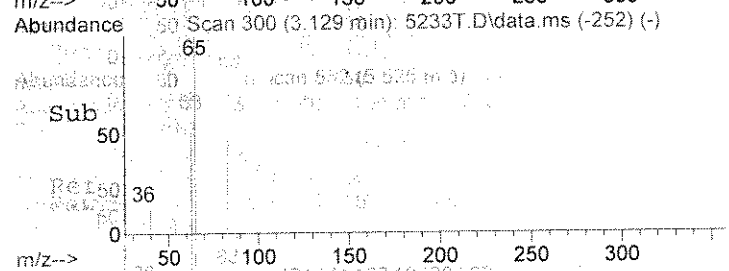
Tgt Ion: 96 Resp: 129075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 140.4 | 114.1 | 171.1 |
| 98 | 62.5 | 50.7 | 76.1 |



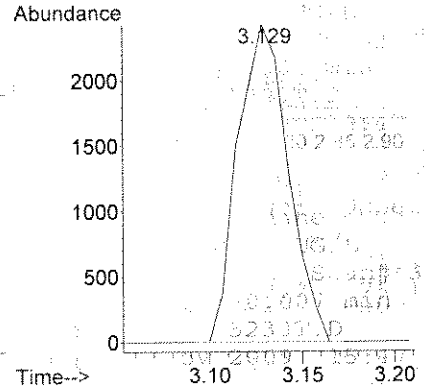



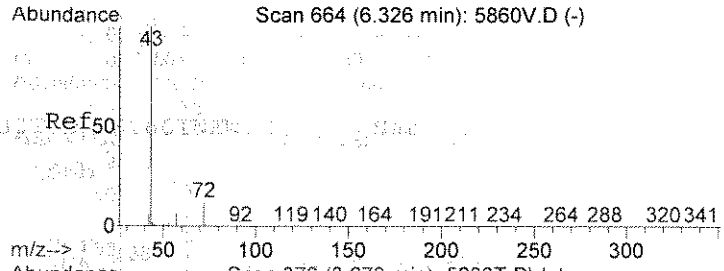




#19
1,1-Dichloroethane
Concen: 0.21 UG/L
RT: 3.129 min Scan# 300
Delta R.T. -0.007 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

Tgt Ion: 63 Resp: 4575

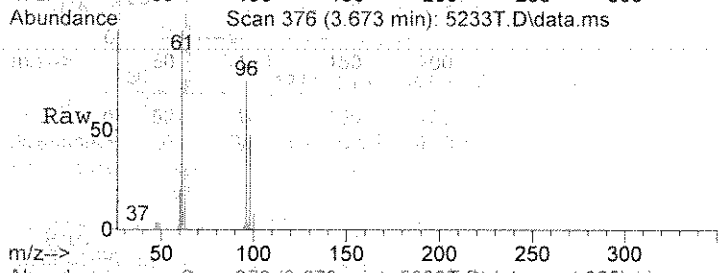


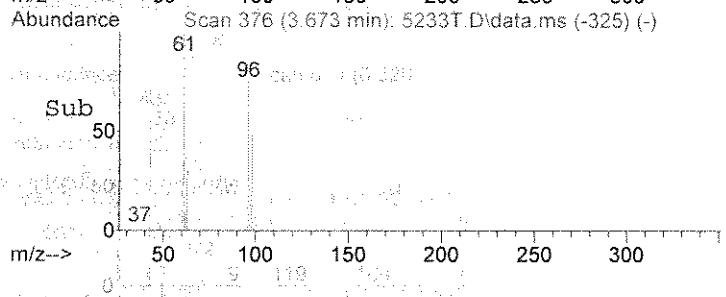


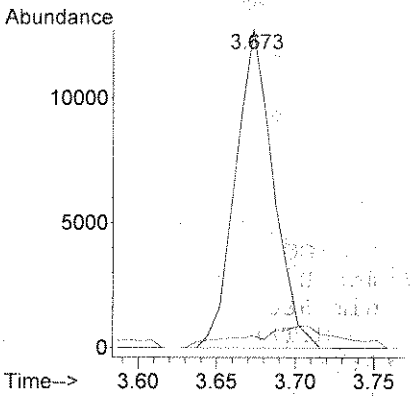

#20
2-Butanone
Concen: 8.98 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

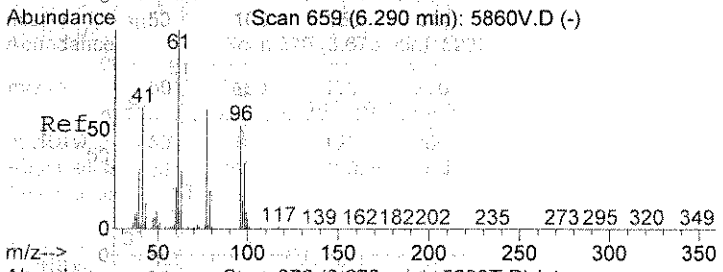
Tgt Ion: 72 Resp: 21264

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 16.2 | 449.0 | 673.4# |



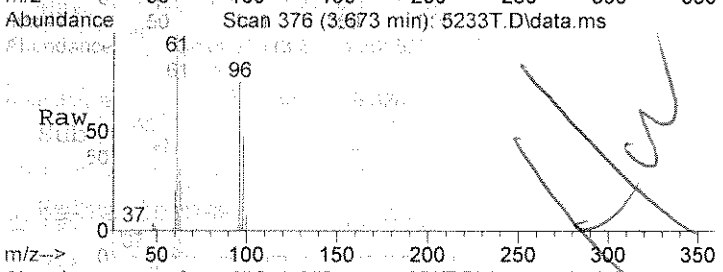



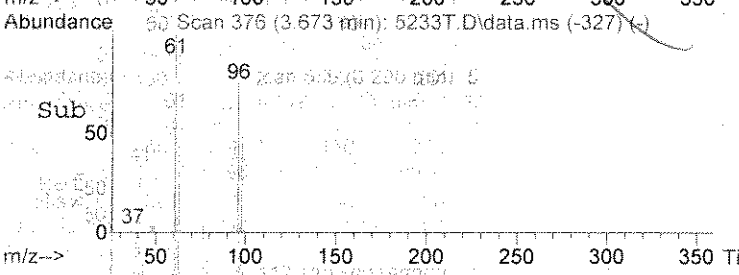



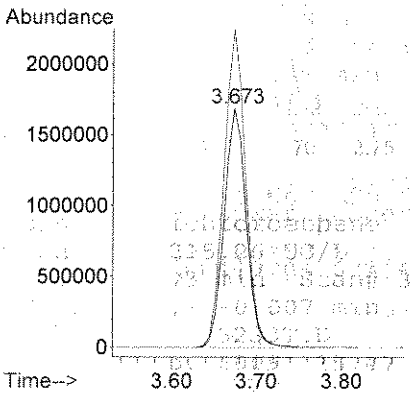

#22
cis-1,2-Dichloroethene
Concen: 215.26 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

Tgt Ion: 96 Resp: 3038652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 131.2 | 121.8 | 182.6 |

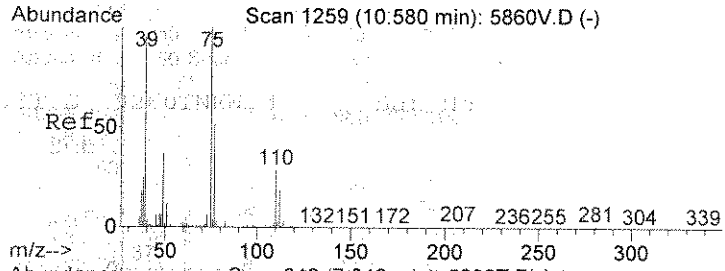


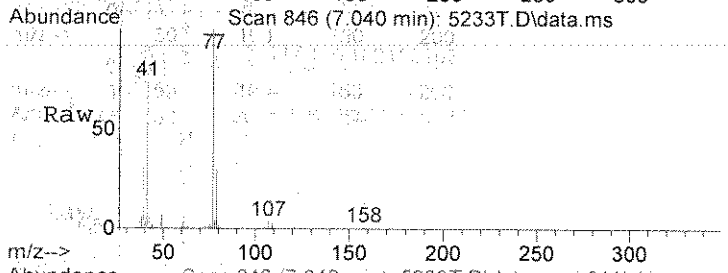


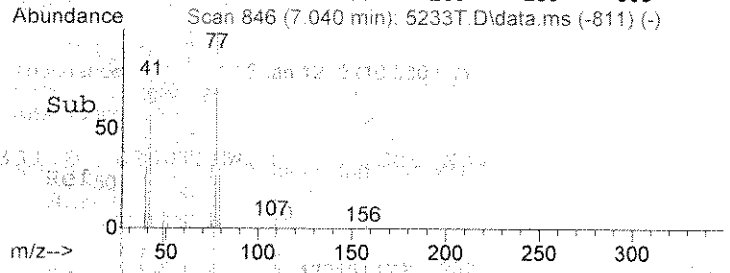

59169b

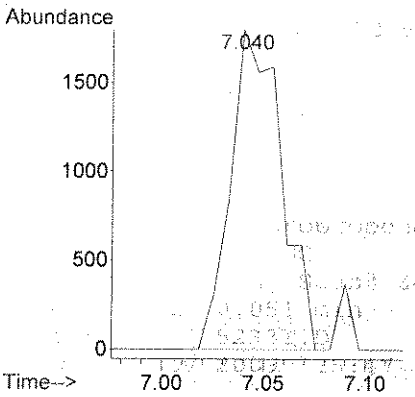



#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.040 min Scan# 846
Delta R.T. 0.051 min
Lab File: 5233T.D
Acq: 7 Nov 2009 15:47

Tgt Ion: 75 Resp: 3126



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864546

Method SW846-8260B
Sample Description DUP-02
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5229T.D Date/Time 07Nov09 14:04:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 25 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864546

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | 33 | | 1.0 | UG/L | |
| | 1804 | | | BDL | 2.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 101 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 92 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864546

ORIGINAL

Method SW846-8260B
Sample Description DUP-02
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5229T Date/Time 11/7/09 14
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 256 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 216 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 28 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 25 | | 1.0 | ug/L | | |
| 230 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 275 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 307 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| 801 | [illegible] | | | | 10 | ug/L | | |
| 246 | C [illegible] | | | | 1.0 | ug/L | | |
| 746 | T [illegible] | | | | | ug/L | | |
| 733 | [illegible] | | | | | ug/L | | |

TC#89

59169b

# Heritage Environmental Services, LLC

A864546

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 33 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 98 | | | % Rec |
| 725 | TOLUENE-D8 | | 101 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 92 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 94 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5229T.D
Acq On : 7 Nov 2009 14:04
Operator : HAROLD
Sample : A864546
Misc :
ALS Vial : 17 Sample Multiplier: 1

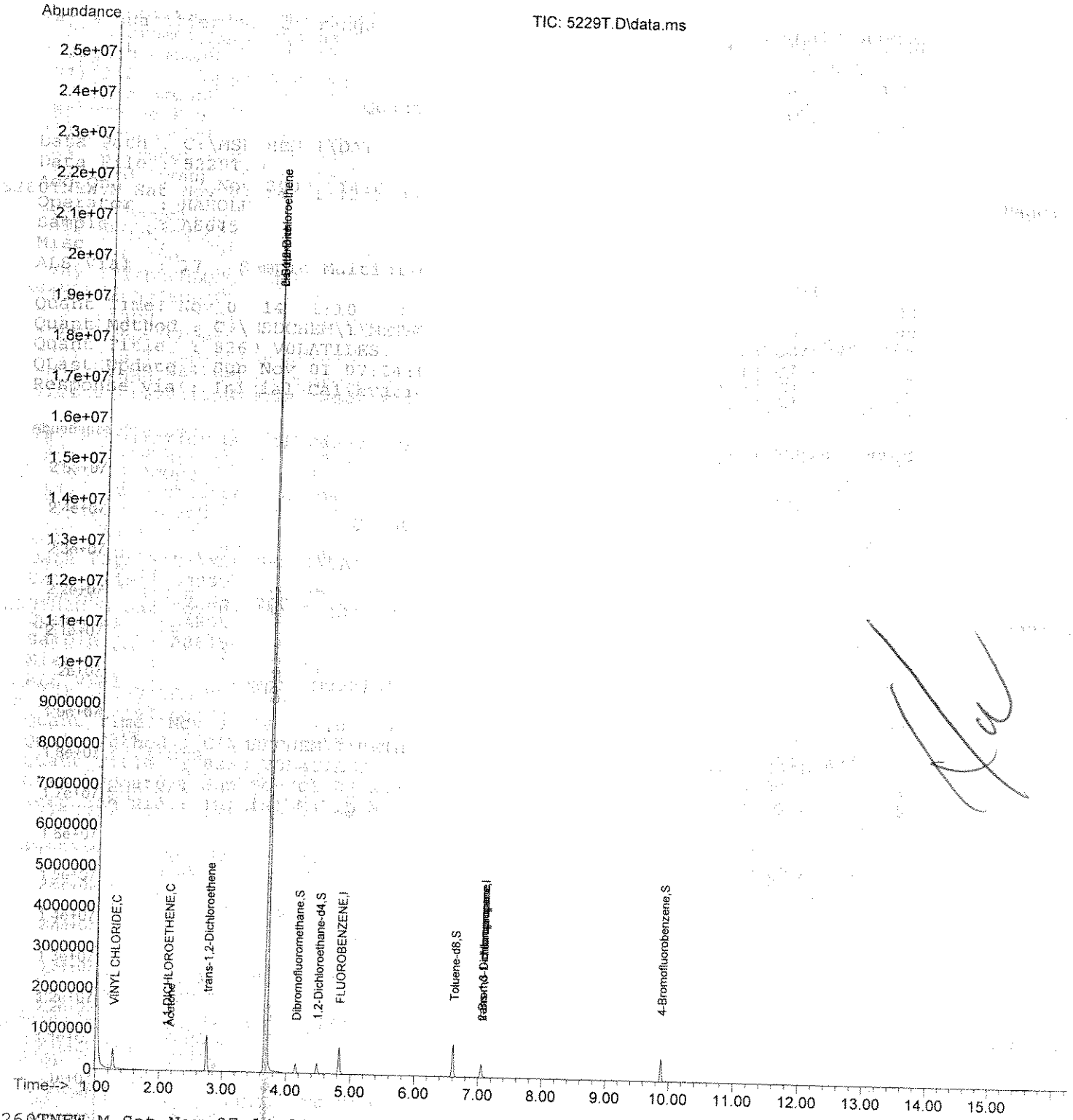
Quant Time: Nov 07 14:21:10 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 599561 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 191710 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 132425 | 9.35 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 93.50% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 165329 | 9.79 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.90% | |
| 50) Toluene-d8 | 6.603 | 98 | 546229 | 10.14 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.40% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 149699 | 9.15 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.50% | |
| **Target Compounds** | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 462933 | 32.86 UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 10537 | 1.72 UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 3974 | 0.33 UG/L | 100 |
| 14) Methylene Chloride | 2.513 | 84 | 4439 | Below Cal | 83 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 336056 | 24.67 UG/L | 99 |
| 20) 2-Butanone Bad ILS | 3.673 | 72 | 65401 | 26.95 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 9617034 | 664.49 UG/L | 82 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3383 | 0.23 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5229T.D
Acq On : 7 Nov 2009 14:04
Operator : HAROLD
Sample : A864546
Misc :
ALS Vial : 17 Sample Multiplier: 1

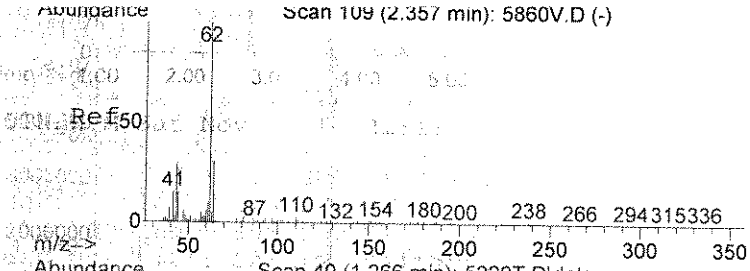
Quant Time: Nov 07 14:21:10 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 14:21:13 2009



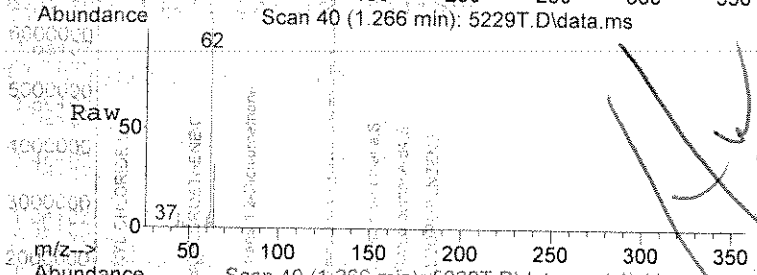
59169b

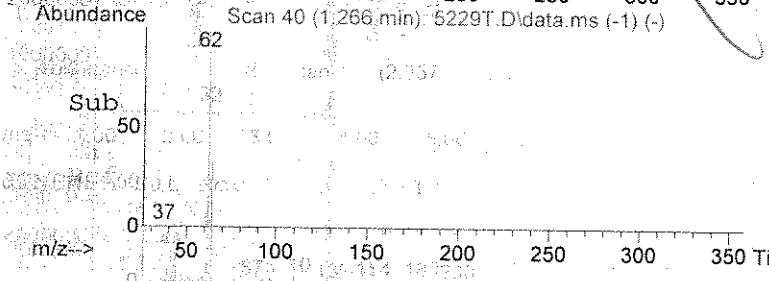


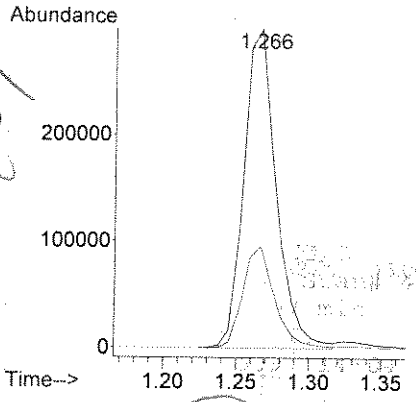

#4
VINYL CHLORIDE
Concen: 32.86 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

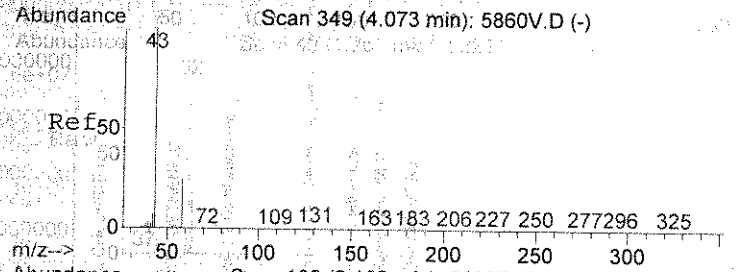
Tgt Ion: 62 Resp: 462933

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.2 | 24.9 | 37.3 |



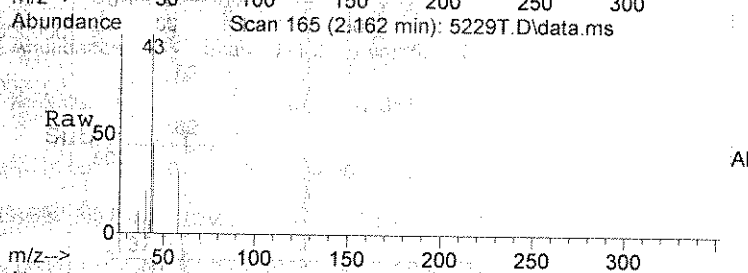



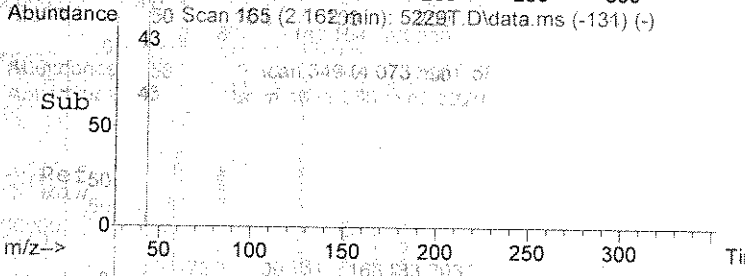



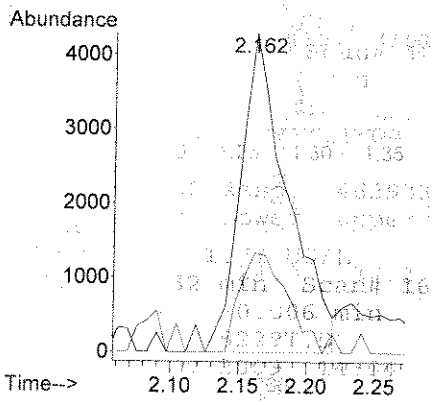

#9
Acetone
Concen: 1.72 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

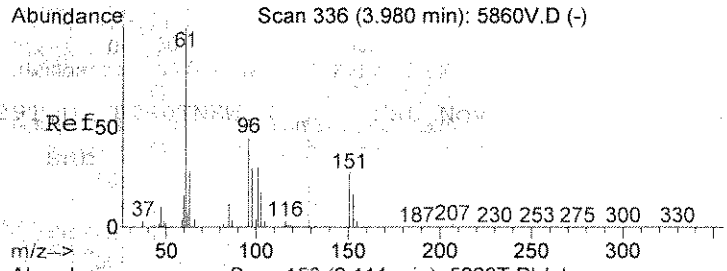
Tgt Ion: 43 Resp: 10537

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.5 | 23.1 | 34.7 |



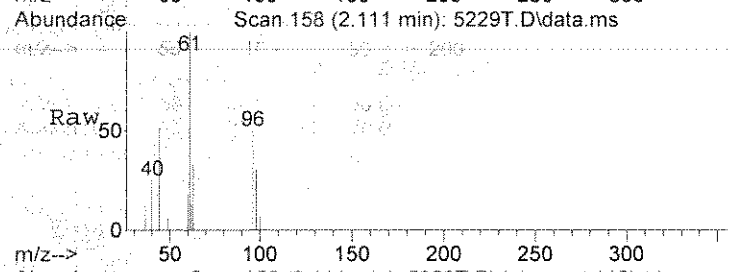



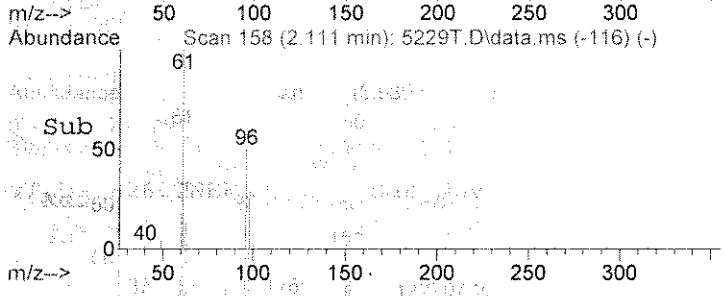



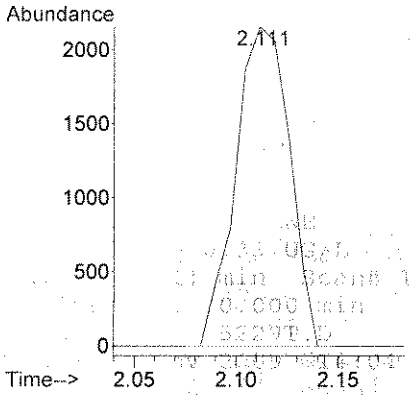


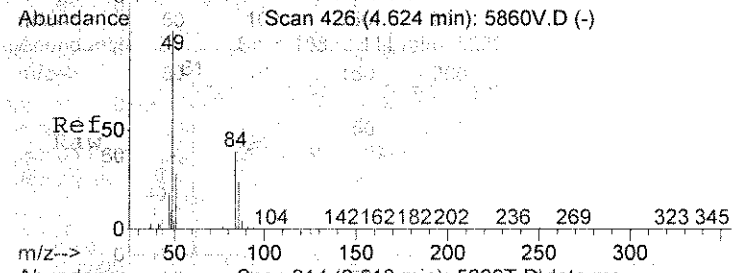

#10
1,1-DICHLOROETHENE
Concen: 0.33 UG/L
RT: 2.111 min Scan# 158
Delta R.T. 0.000 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

Tgt Ion: 96 Resp: 3974



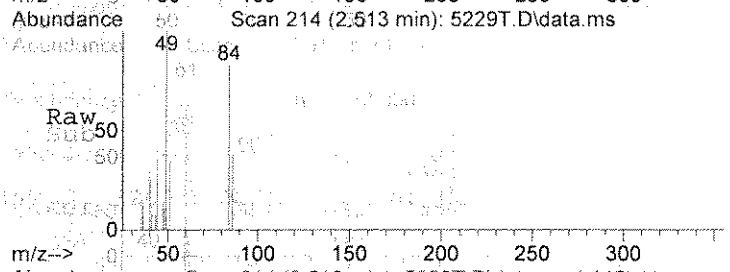



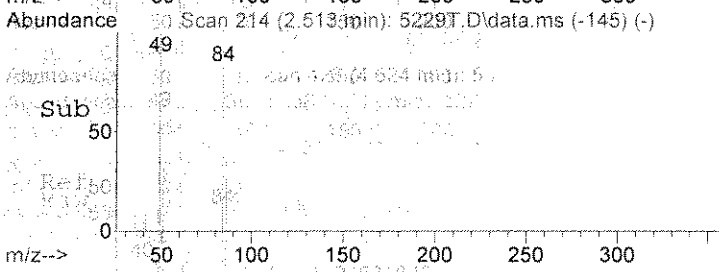



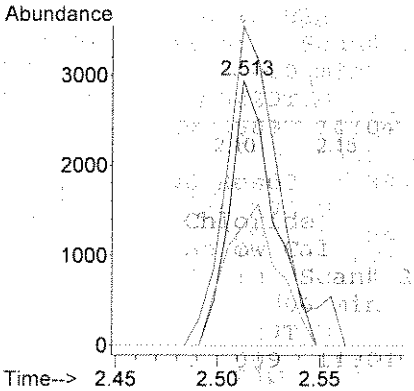

#14
Methylene Chloride
Concen: Below Cal
RT: 2.513 min Scan# 214
Delta R.T. -0.006 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

Tgt Ion: 84 Resp: 4429

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 144.4 | 140.2 | 210.2 |
| 86 | 62.9 | 51.1 | 76.7 |

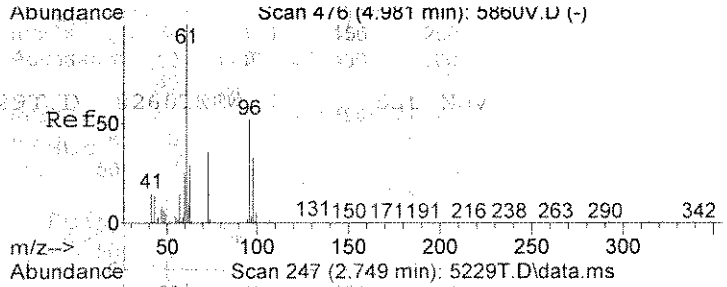




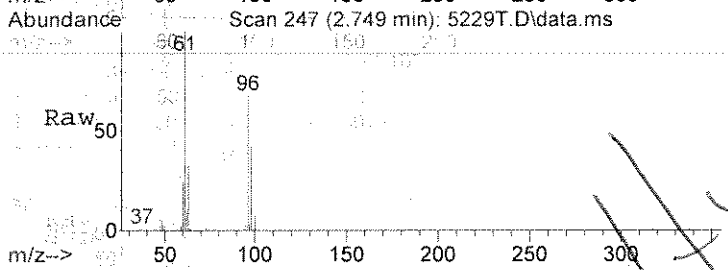

59169b

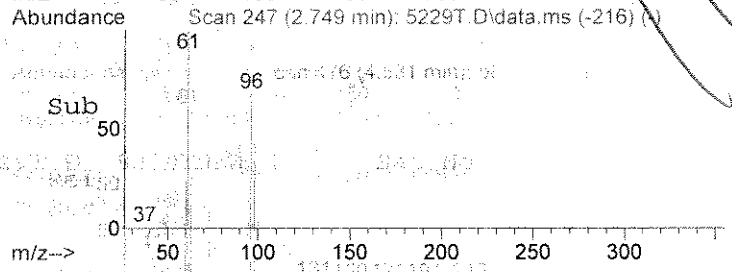


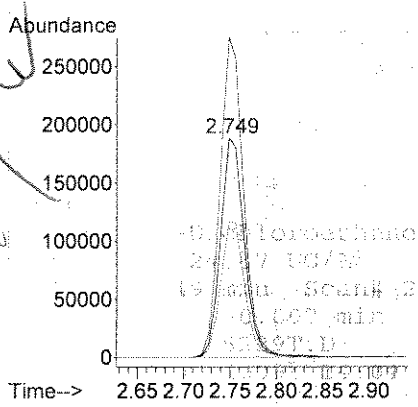

#18
trans-1,2-Dichloroethene
Concen: 24.67 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

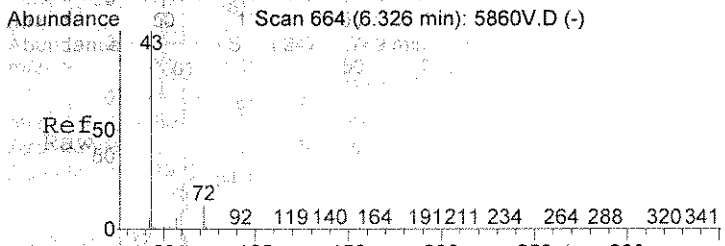
Tgt Ion: 96 Resp: 336056

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 143.9 | 114.1 | 171.1 |
| 98 | 62.8 | 50.7 | 76.1 |



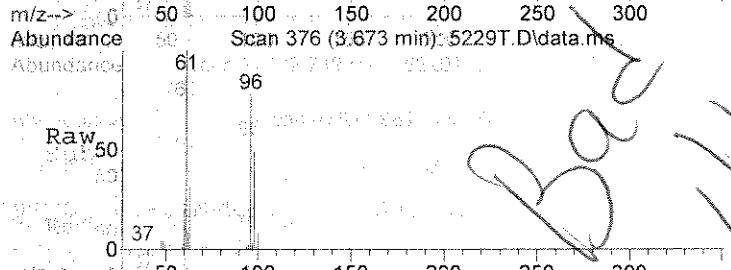



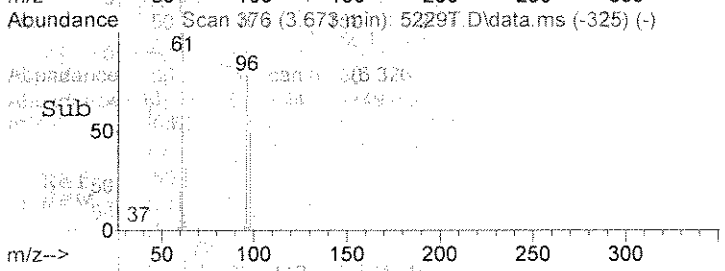



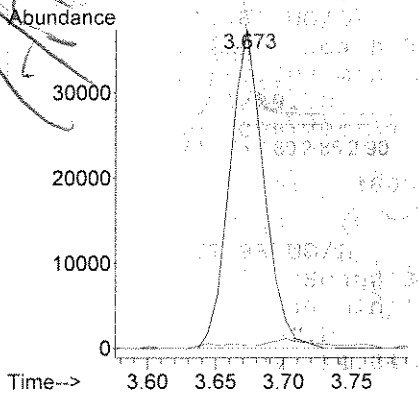

#20
2-Butanone
Concen: 26.95 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

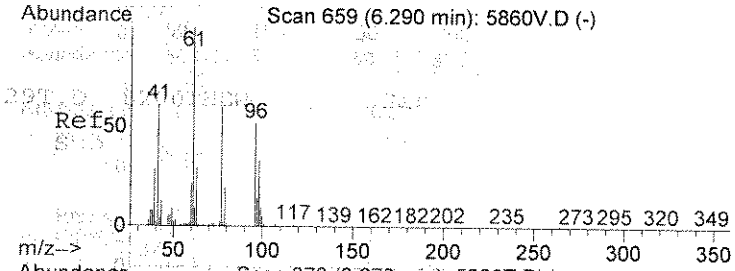
Tgt Ion: 72 Resp: 65401

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 2.7 | 449.0 | 673.4# |



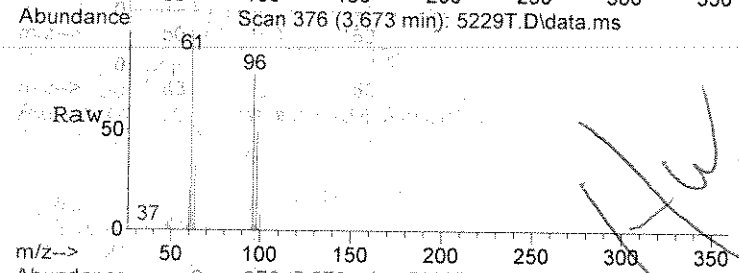



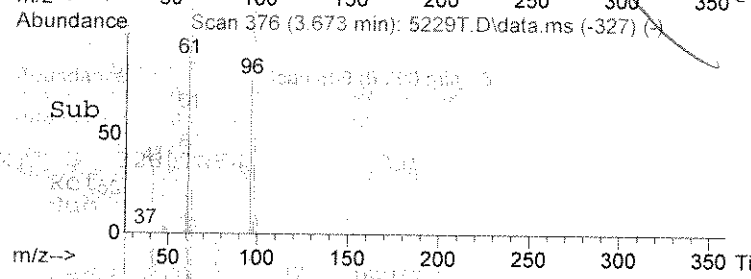


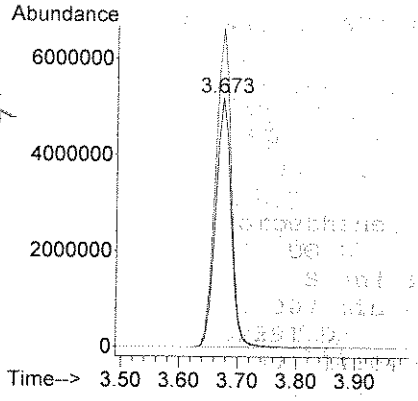

#22
cis-1,2-Dichloroethene
Concen: 664.49 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

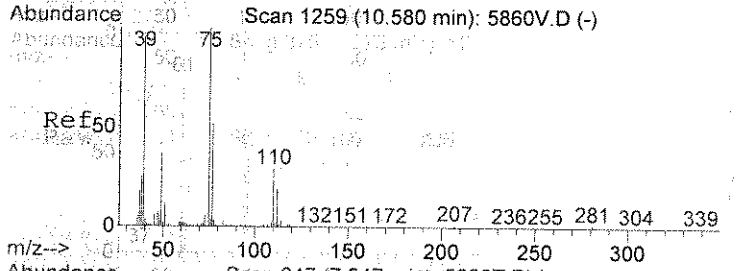
Tgt Ion: 96 Resp: 9617034

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.6 | 121.8 | 182.6 |



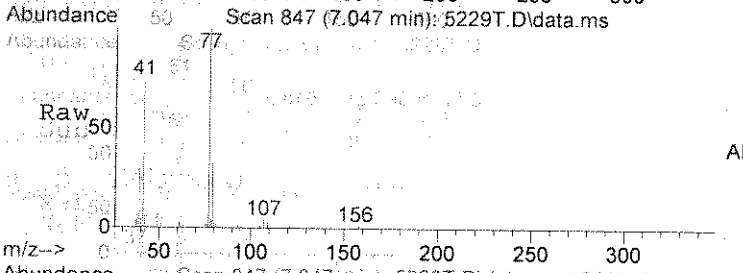



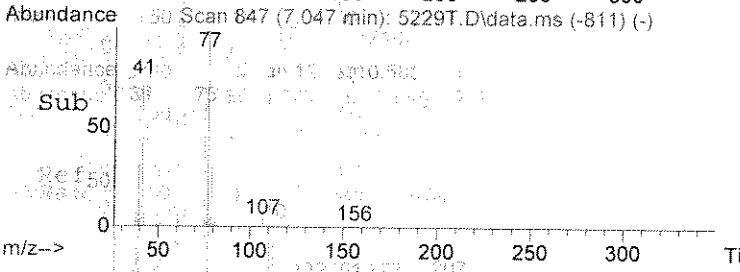



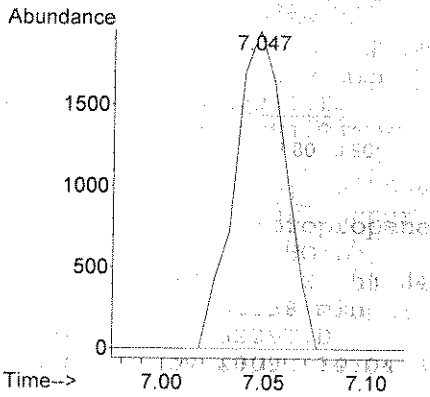




#52
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5229T.D
Acq: 7 Nov 2009 14:04

Tgt Ion: 75 Resp: 3383



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864547

Method SW846-8260B
Sample Description 165S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5230T.D Date/Time 07Nov09 14:30:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 1.0 | UG/L | |
| 75-34-3 | 71 | 1,1-DICHLOROETHANE | | BDL | 2.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 81 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 2.9 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864547

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | 2.4 | | 1.0 | UG/L | |
| 630-20-6 | 1804 | | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | | | |
| 127-18-4 | 972 | | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 99 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 88 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864547

Method SW846-8260B
Sample Description 165S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 52307 Date/Time 11/7/09 14:3
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 715 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 2.9 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 236 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 273 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 831 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 849 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 361 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 931 | [illegible] | | | | 1.0 | ug/L | | |
| 235 | [illegible] | | | | 1 | ug/L | | |
| 764 | [illegible] | | | | 1 | ug/L | | |
| 23 | [illegible] | | | | [illegible] | ug/L | | |

# Heritage Environmental Services, LLC

A864547

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 2.4 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | 99 | | | |
| 301 | DICHLOROETHANE-D4 | | | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 88 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 88 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by Date :

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5230T.D
Acq On : 7 Nov 2009 14:30
Operator : HAROLD
Sample : A864547
Misc :
ALS Vial : 18 Sample Multiplier: 1

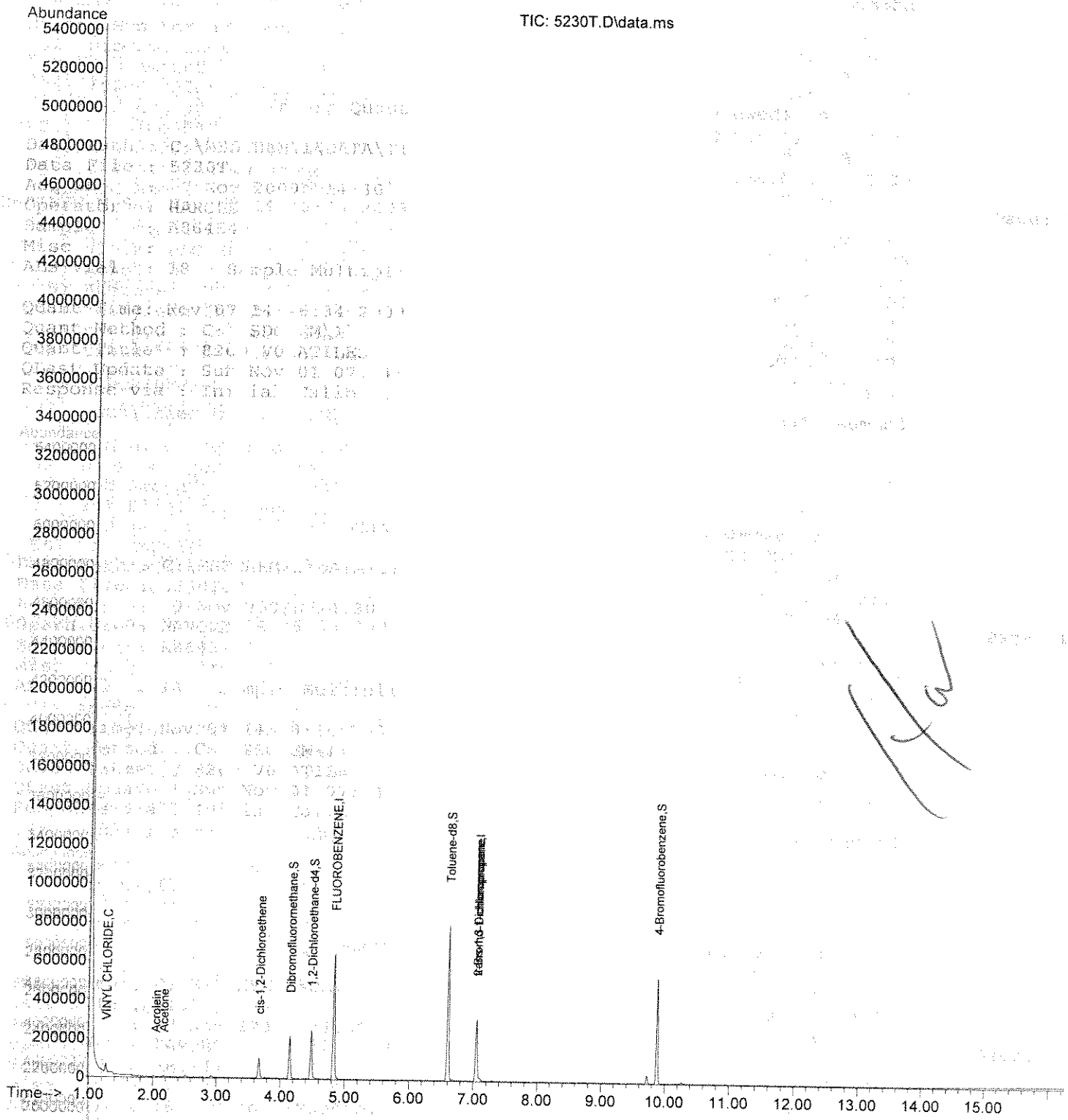
Quant Time: Nov 07 14:46:34 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 589670 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 200942 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 128235 | 9.21 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 92.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 164237 | 9.89 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.90% | |
| 50) Toluene-d8 | 6.602 | 98 | 542352 | 10.23 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.30% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 151545 | 8.83 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 88.30% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 33608 | 2.43 UG/L | 98 |
| 8) Acrolein | 2.047 | 56 | 1207 | 1.17 UG/L | 100 |
| 9) Acetone | 2.169 | 43 | 6745 | 1.12 UG/L | 95 |
| 14) Methylene Chloride | 2.520 | 84 | 3548 | Below Cal # | 73 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 40645 | 2.86 UG/L | 87 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3516 | 0.25 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5230T.D
Acq On : 7 Nov 2009 14:30
Operator : HAROLD
Sample : A864547
Misc :
ALS Vial : 18 Sample Multiplier: 1

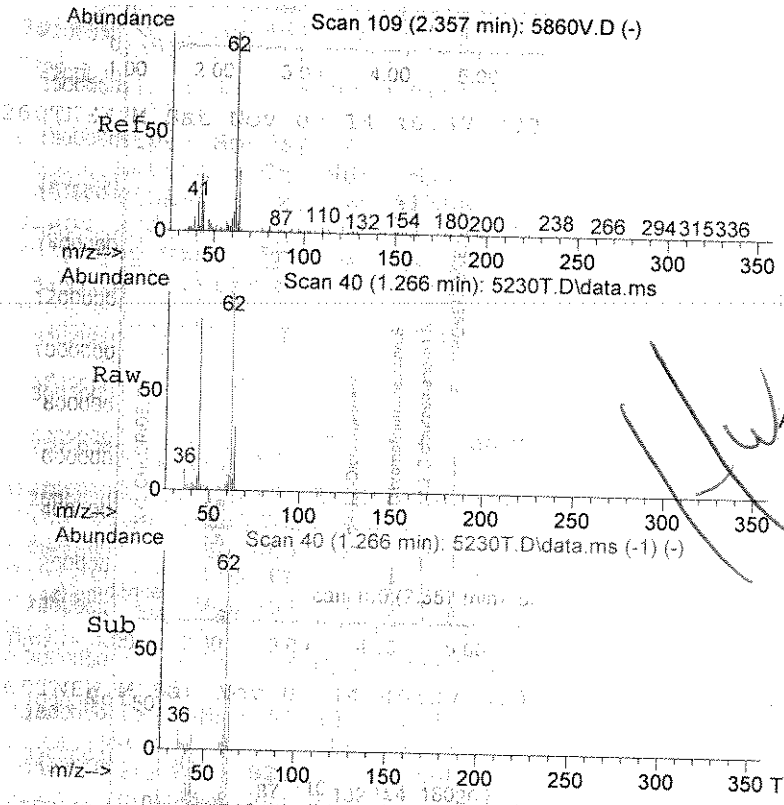
Quant Time: Nov 07 14:46:34 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 14:46:37 2009



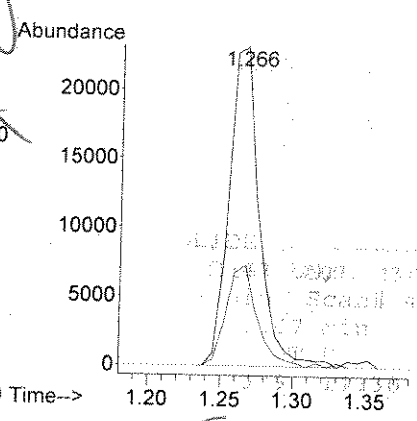
59169b

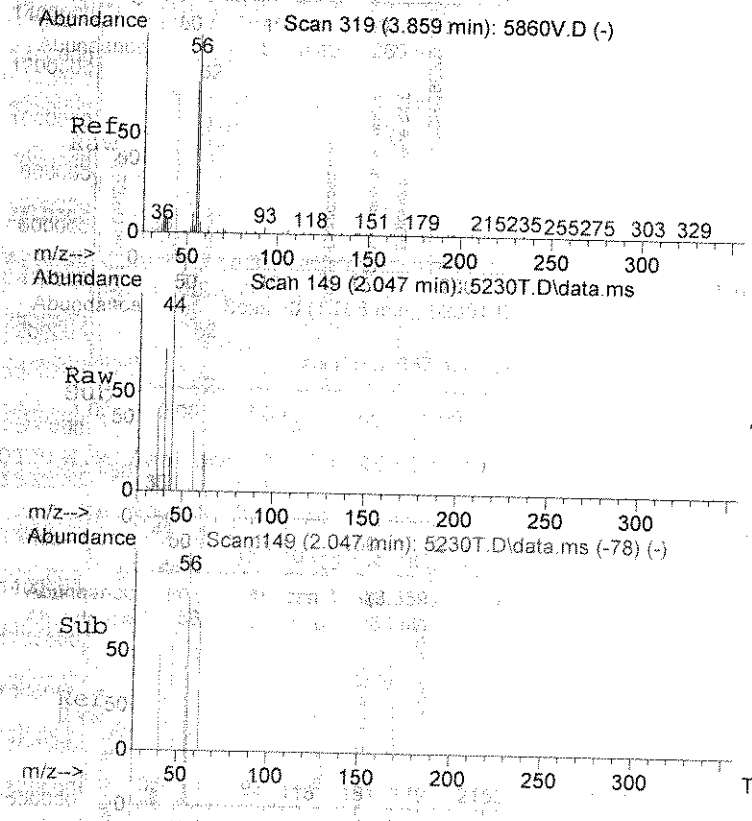



#4
VINYL CHLORIDE
Concen: 2.43 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

Tgt Ion: 62 Resp: 33608

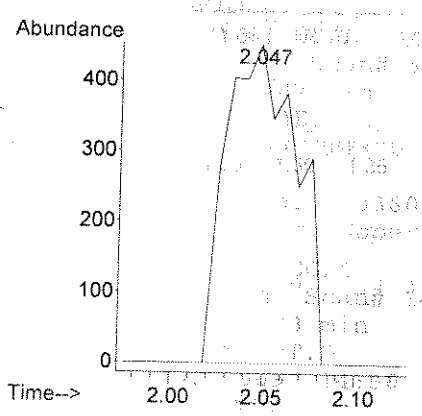
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.9 | 24.9 | 37.3 |

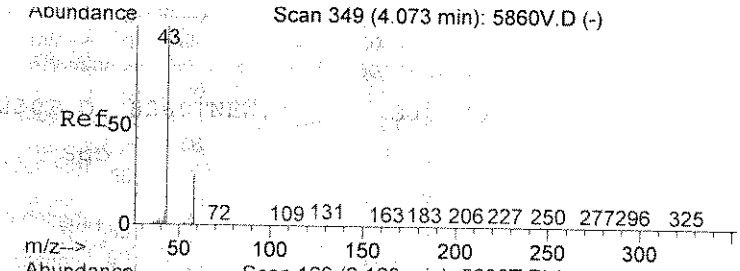



#8
Acrolein
Concen: 1.17 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

Tgt Ion: 56 Resp: 1207

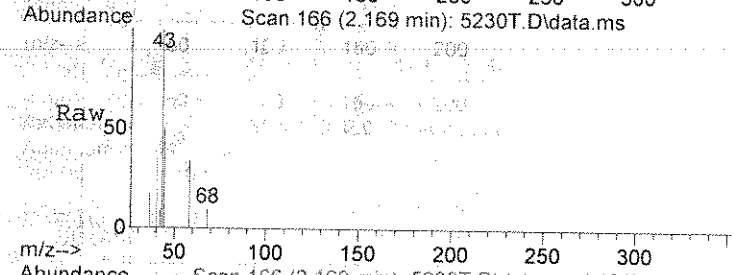


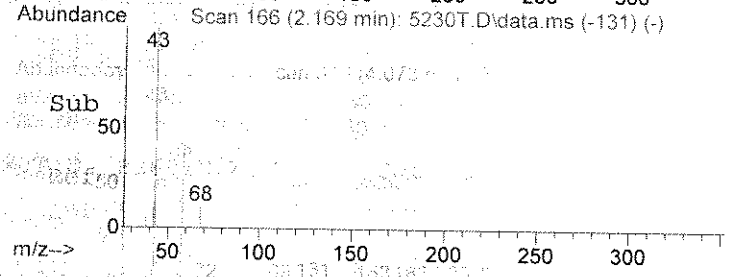


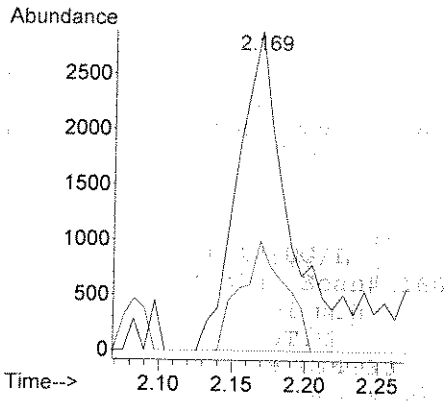

#9
Acetone
Concen: 1.12 UG/L
RT: 2.169 min Scan# 166
Delta R.T. 0.001 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

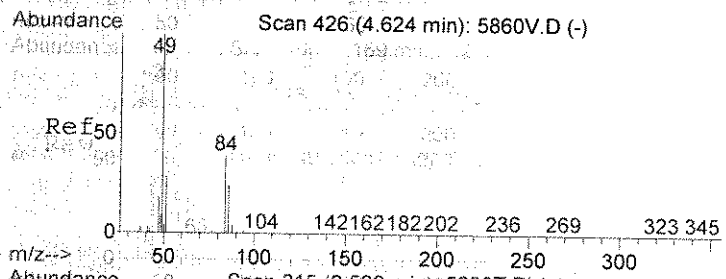
Tgt Ion: 43 Resp: 6745

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.5 | 23.1 | 34.7 |



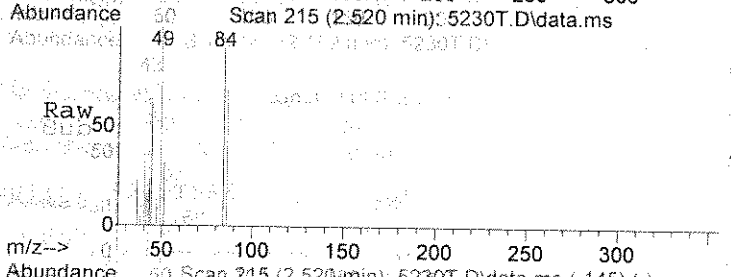



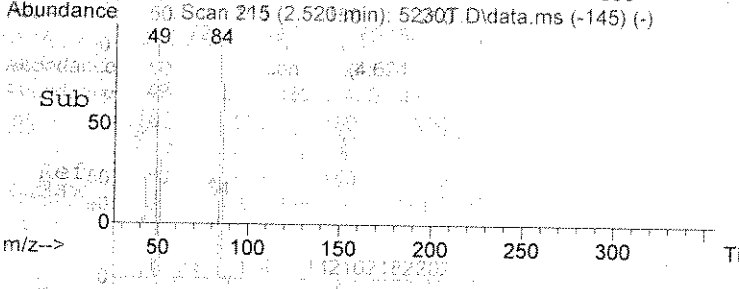



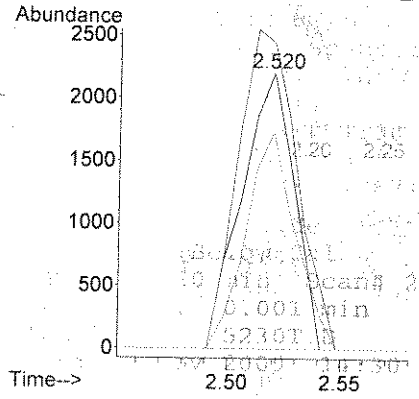

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

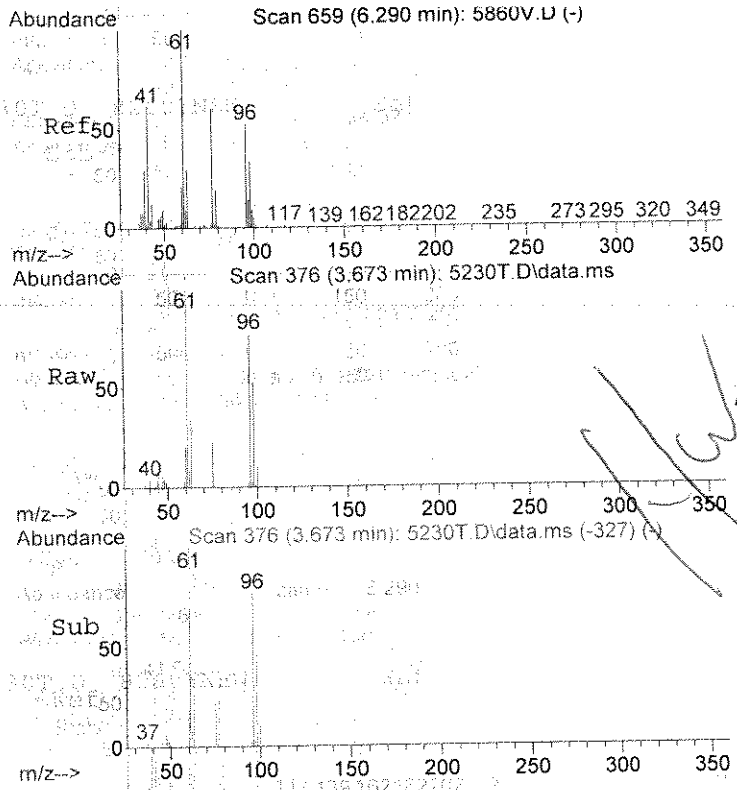
Tgt Ion: 84 Resp: 3548

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 130.3 | 140.2 | 210.2# |
| 86 | 74.2 | 51.1 | 76.7 |



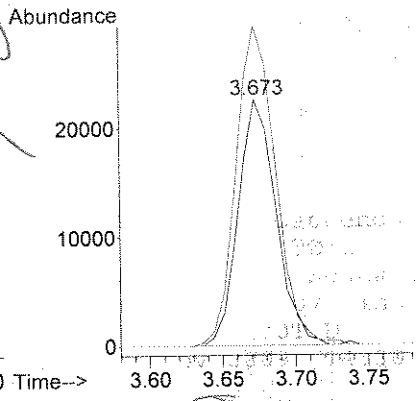



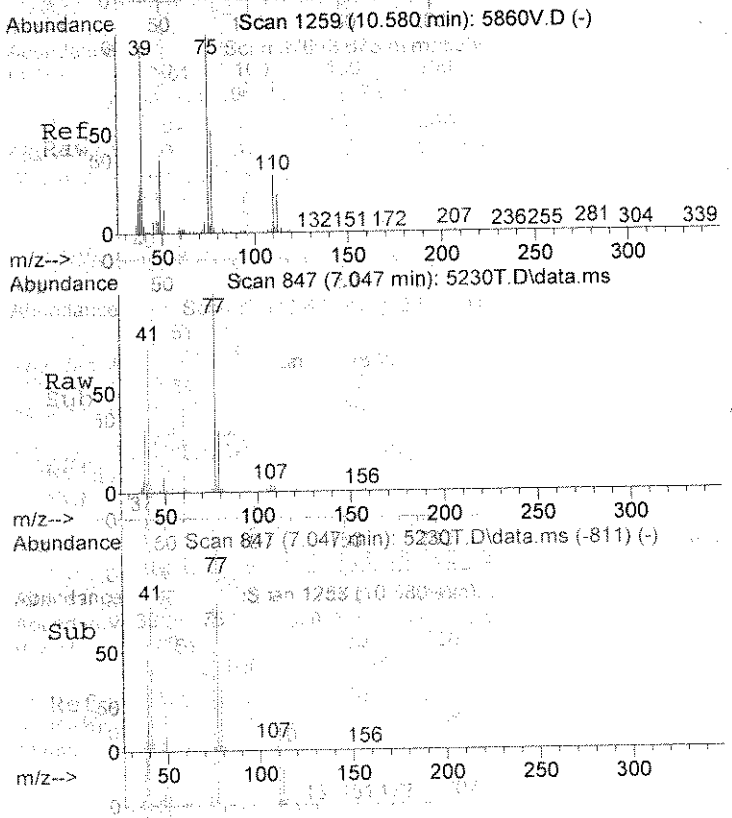



#22
cis-1,2-Dichloroethene
Concen: 2.86 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

Tgt Ion: 96 Resp: 40645

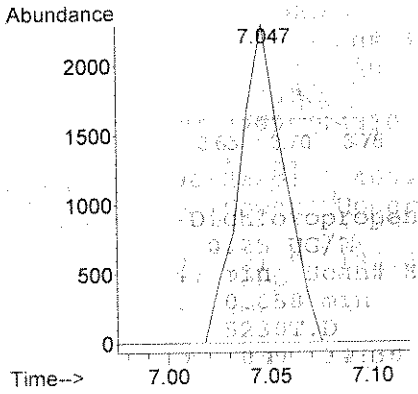
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 135.9 | 121.8 | 182.6 |




#52
trans-1,3-Dichloropropene
Concen: 0.25 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5230T.D
Acq: 7 Nov 2009 14:30

Tgt Ion: 75 Resp: 3516



QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864541
Data File : 5222T. MS Data File : 5223T. MSD Data File : 5224T.
Date/Time : 7 Nov 2009 11:05 MS Date/Time : 7 Nov 2009 11:31 MSD Date/Time : 7 Nov 2009 11:56
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery * | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0 | 11.9 | 119.0 | 10.3 | 103.0 | 14.4 | 75 | 127.9 |
| Carbon Tetrachloride | 0 | 10 | 100.0 | 9.1 | 91.0 | 9.4 | 71 | 163.4 |
| 1,4-Dichlorobenzene | 0 | 11.2 | 112.0 | 9.79 | 97.9 | 13.4 | 80 | 121.8 |
| 1,2-Dichloroethane | 0 | 11.9 | 119.0 | 10.2 | 102.0 | 15.4 | 71 | 163.2 |
| 1,1-DICHLOROETHENE | 0 | 11.2 | 112.0 | 9.83 | 98.3 | 13.0 | 66 | 134.3 |
| 1,1,1-Trichloroethane | 0 | 11 | 110.0 | 9.61 | 96.1 | 13.5 | 79 | 156.2 |
| Trichloroethene | 0 | 11.6 | 116.0 | 10.1 | 101.0 | 13.8 | 67 | 149.3 |
| VINYL CHLORIDE | 5.2 | 16.4 | 112.0 | 15 | 98.0 | 13.3 | 46 | 154 |
| Bromobenzene | 0 | 11.7 | 117.0 | 10.3 | 103.0 | 12.7 | 78 | 126.6 |
| Bromodichloromethane | 0 | 10.8 | 108.0 | 9.48 | 94.8 | 13.0 | 68 | 157.1 |
| Bromoform | 0 | 8.8 | 88.0 | 7.53 | 75.3 | 15.6 | 52 | 171.7 |
| Bromomethane | 0 | 12.2 | 122.0 | 10.8 | 108.0 | 12.2 | 17 | 175.4 |
| Chlorobenzene | 0 | 12.1 | 121.0 | 10.5 | 105.0 | 14.2 | 81 | 123.4 |
| Dibromochloromethane | 0 | 10.4 | 104.0 | 9.02 | 90.2 | 14.2 | 64 | 152.5 |
| Chloroethane | 0 | 11.5 | 115.0 | 10.2 | 102.0 | 12.0 | 79 | 145.1 |
| CHLOROFORM | 0 | 11.1 | 111.0 | 9.65 | 96.5 | 14.0 | 79 | 146.2 |
| Chloromethane | 0 | 10.4 | 104.0 | 9.26 | 92.6 | 11.6 | 31 | 139.9 |
| 2-Chlorotoluene | 0 | 11.7 | 117.0 | 9.94 | 99.4 | 16.3 | 70 | 126.1 |
| 4-Chlorotoluene | 0 | 11.4 | 114.0 | 9.85 | 98.5 | 14.6 | 73 | 123.4 |
| Dibromomethane | 0 | 11.8 | 118.0 | 10.2 | 102.0 | 14.5 | 60 | 156.9 |
| 1,3-Dichlorobenzene | 0 | 11.1 | 111.0 | 9.59 | 95.9 | 14.6 | 80 | 127.4 |
| 1,2-Dichlorobenzene | 0 | 10.9 | 109.0 | 9.5 | 95.0 | 13.7 | 81 | 125.8 |
| trans-1,2-Dichloroethene | 0 | 11.8 | 118.0 | 10.2 | 102.0 | 14.5 | 76 | 136.3 |
| cis-1,2-Dichloroethene | 2 | 13.2 | 112.0 | 11.7 | 97.0 | 14.4 | 67 | 151.6 |
| Methylene Chloride | 0 | 10.7 | 107.0 | 9.18 | 91.8 | 15.3 | 65 | 145 |
| 1,1-Dichloroethane | 0 | 11.5 | 115.0 | 10.1 | 101.0 | 13.0 | 79 | 140.1 |
| 1,1-Dichloropropene | 0 | 11.1 | 111.0 | 9.91 | 99.1 | 11.3 | 76 | 133.2 |
| 1,2-DICHLOROPROPANE | 0 | 12.5 | 125.0 ! | 10.9 | 109.0 | 13.7 | 77 | 123.2 |
| 1,3-Dichloropropane | 0 | 13.2 | 132.0 ! | 11.3 | 113.0 | 15.5 | 81 | 121.5 |
| cis-1,3-Dichloropropene | 0 | 10.5 | 105.0 | 9.08 | 90.8 | 14.5 | 69 | 125.1 |
| trans-1,3-Dichloropropene | 0 | 10.1 | 101.0 | 8.88 | 88.8 | 12.9 | 68 | 129.6 |
| 2,2-Dichloropropane | 0 | 9.57 | 95.7 | 8.49 | 84.9 | 12.0 | 64 | 130.7 |
| ETHYL BENZENE | 0 | 11.8 | 118.0 | 10.3 | 103.0 | 13.6 | 37 | 176.4 |
| Styrene | 0 | 9.82 | 98.2 | 8.45 | 84.5 | 15.0 | 29 | 159.9 |
| 1,1,2-Trichloroethane | 0 | 13 | 130.0 | 11.1 | 111.0 | 15.8 | 70 | 140.6 |
| 1,1,1,2-Tetrachloroethane | 0 | 10.9 | 109.0 | 9.51 | 95.1 | 13.6 | 68 | 154.5 |
| 1,1,2,2-Tetrachloroethane | 0 | 12.3 | 123.0 ! | 10.5 | 105.0 | 15.8 | 73 | 122.6 |
| Tetrachloroethene | 0 | 11.1 | 111.0 | 9.59 | 95.9 | 14.6 | 82 | 141.4 |
| 1,2,3-Trichloropropane | 0 | 12.1 | 121.0 | 10.2 | 102.0 | 17.0 | 73 | 136.1 |



59169b

QC Std#605
Method# 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 Appendix IX mL
Water

Laboratory Sample # : A864541
Data File : 5222T. MS Data File : 5223T. MSD Data File : 5224T.
Date/Time : 7 Nov 2009 11:05 MS Date/Time : 7 Nov 2009 11:31 MSD Date/Time : 7 Nov 2009 11:56
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery | Max Recovery |
|---|---|---|---|---|---|---|---|---|
| TOLUENE | 0 | 12.6 | 126.0 | 10.9 | 109.0 | 14.5 | 77 | 126.5 |
| m,p-Xylene | 0 | 23.7 | 118.5 | 20.6 | 103.0 | 14.0 | 80 | 127 |
| o-Xylene | 0 | 11.4 | 114.0 | 10.1 | 101.0 | 12.1 | 78 | 130.1 |
| Bromochloromethane | 0 | 11.5 | 115.0 | 9.98 | 99.8 | 14.2 | 70 | 155.2 |
| n-Butylbenzene | 0 | 10.6 | 106.0 | 9.29 | 92.9 | 13.2 | 71 | 121.5 |
| Dichlorodifluoromethane | 0 | 11.1 | 111.0 | 9.5 | 95.0 | 15.5 | 4 | 176.7 |
| Trichlorofluoromethane | 0 | 11.3 | 113.0 | 9.75 | 97.5 | 14.7 | 77 | 170.6 |
| Hexachlorobutadiene | 0 | 9.73 | 97.3 | 8.87 | 88.7 | 9.2 | 62 | 157.6 |
| Isopropylbenzene | 0 | 11.7 | 117.0 | 9.99 | 99.9 | 15.8 | 68 | 128.4 |
| p-Isopropyltoluene | 0 | 11.2 | 112.0 | 9.64 | 96.4 | 15.0 | 72 | 127.2 |
| Naphthalene | 0 | 9.49 | 94.9 | 8.64 | 86.4 | 9.4 | 46 | 113.1 |
| n-Propylbenzene | 0 | 11.4 | 114.0 | 9.95 | 99.5 | 13.6 | 64 | 127.4 |
| sec-Butylbenzene | 0 | 11.4 | 114.0 | 10 | 100.0 | 13.1 | 71 | 126.1 |
| t-Butylbenzene | 0 | 11.7 | 117.0 | 10.4 | 104.0 | 11.8 | 72 | 131.7 |
| 1,2,3-Trichlorobenzene | 0 | 9.37 | 93.7 | 8.61 | 86.1 | 8.5 | 43 | 149 |
| 1,2,4-Trichlorobenzene | 0 | 9.65 | 96.5 | 8.51 | 85.1 | 12.6 | 54 | 137.9 |
| 1,2,4-Trimethylbenzene | 0 | 10.6 | 106.0 | 9.17 | 91.7 | 14.5 | 74 | 126.7 |
| 1,3,5-Trimethylbenzene | 0 | 11.3 | 113.0 | 9.8 | 98.0 | 14.2 | 74 | 125.9 |
| Acrolein | 0 | 83.1 | 83.1 | 56.2 | 56.2 | 38.6 | D | 400.3 |
| Acetone | 0 | 54.1 | 108.2 | 44.3 | 88.6 | 19.9 | 52 | 162.9 |
| Acrylonitrile | 0 | 140 | 140.0 | 94.1 | 94.1 | 39.2 | D | 472.1 |
| Carbon Disulfide | 0 | 8.16 | 81.6 | 7.11 | 71.1 | 13.8 | 65 | 135.1 |
| Vinyl Acetate | 0 | 7.18 | 71.8 | 3.48 | 34.8 ! | 69.4 | 58 | 113.1 |
| 2-Butanone | 0 | 60.2 | 120.4 | 51.3 | 102.6 | 16.0 | 38 | 143.2 |
| 4-Methyl-2-Pentanone | 0 | 62.6 | 125.2 | 54.8 | 109.6 | 13.3 | 68 | 130.7 |
| 2-Hexanone | 0 | 63.7 | 127.4 ! | 55 | 110.0 | 14.7 | 69 | 118.4 |
| 2-Chloroethylvinylether | 0 | 0 | 0.0 ! | 0 | 0.0 ! | | D | 39.3 |
| trans-1,4-Dichloro-2-butene | 0 | 12.3 | 61.5 | 10.5 | 52.5 | 15.8 | 24 | 138 |
| 1,2-Dibromoethane | 0 | 12.7 | 127.0 ! | 10.8 | 108.0 | 16.2 | 75 | 121.6 |
| 1,2-Dibromo-3-chloropropar | 0 | 9.4 | 94.0 | 8.23 | 82.3 | 13.3 | 59 | 129.5 |
| Iodomethane | 0 | 11.2 | 112.0 | 9.75 | 97.5 | 13.8 | 18 | 155.7 |
| Allyl Chloride | 0 | 10.2 | 102.0 | 8.51 | 85.1 | 18.1 | 25 | 154.8 |
| Ethyl Cyanide | 0 | 121 | 121.0 | 104 | 104.0 | 15.1 | 27 | 160.5 |
| Methacrylonitrile | 0 | 123 | 123.0 | 140 | 140.0 ! | 12.9 | 24 | 136.7 |
| Methyl Methacrylate | 0 | 12.5 | 125.0 | 10.8 | 108.0 | 14.6 | 41 | 129.1 |
| Ethyl Methacrylate | 0 | 11.7 | 117.0 | 9.99 | 99.9 | 15.8 | 38 | 137.8 |

Recovery limit



59169b

R560082

# Heritage Environmental Services, LLC

Q2256328

QC Report

QCType SPI01
Date Entered 11Nov09
Analysis Date/Time 07Nov0911:31:00

Duplicate SampleID A864541
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5223T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 11.9 | | 119 | |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 10 | | 100 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 11.2 | | 112 | |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 11.9 | | 119 | |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 11.2 | | 112 | |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 11 | | 110 | |
| 750 | TRICHLOROETHENE | 0 | 10 | 11.6 | | 116 | |
| 768 | VINYL CHLORIDE | 5.2 | 10 | 16.4 | | 112 | |
| 193 | BROMOBENZENE | 0 | 10 | 11.7 | | 117 | |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 10.8 | | 108 | |
| 197 | BROMOFORM | 0 | 10 | 8.8 | | 88 | |
| 198 | BROMOMETHANE | 0 | 10 | 12.2 | | 122 | |
| 231 | CHLOROBENZENE | 0 | 10 | 12.1 | | 121 | |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 10.4 | | 104 | |
| 234 | CHLOROETHANE | 0 | 10 | 11.5 | | 115 | |
| 235 | CHLOROFORM | 0 | 10 | 11.1 | | 111 | |
| 236 | CHLOROMETHANE | 0 | 10 | 10.4 | | 104 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 11.7 | | 117 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 11.4 | | 114 | |
| 296 | DIBROMOMETHANE | 0 | 10 | 11.8 | | 118 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 11.1 | | 111 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 10.9 | | 109 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 11.8 | | 118 | |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 13.2 | | 132 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 10.7 | | 107 | |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 11.5 | | 115 | |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 11.1 | | 111 | |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 12.5 | ! | 125 | |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 13.2 | ! | 132 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 10.5 | | 105 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 10.1 | | 101 | |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 9.57 | | 95.7 | |
| 349 | ETHYL BENZENE | 0 | 10 | 11.8 | | 118 | |
| 680 | STYRENE | 0 | 10 | 9.82 | | 98.2 | |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 13 | | 130 | |
| 24 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 10.9 | | 109 | |
| 23 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 12.3 | ! | 123 | |
| 703 | TETRACHLOROETHENE | 0 | 10 | 11.1 | | 111 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 12.1 | | 121 | |
| 724 | TOLUENE | 0 | 10 | 12.6 | | 126 | |
| 492 | M/P-XYLENE | 0 | 20 | 23.7 | | 118.5 | |
| 549 | O-XYLENE | 0 | 10 | 11.4 | | 114 | |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 11.5 | | 115 | |
| 519 | N-BUTYLBENZENE | 0 | 10 | 10.6 | | 106 | |

11/11/09

R560082 Heritage Environmental Services, LLC Q2256328

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 11.1 | | 111 | |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 11.3 | | 113 | |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 9.73 | | 97.3 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 11.7 | | 117 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 11.2 | | 112 | |
| 493 | NAPHTHALENE | 0 | 10 | 9.49 | | 94.9 | |
| 532 | N-PROPYLBENZENE | 0 | 10 | 11.4 | | 114 | |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 11.4 | | 114 | |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 11.7 | | 117 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 9.37 | | 93.7 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 9.65 | | 96.5 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 10.6 | | 106 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 11.3 | | 113 | |
| 105 | ACROLEIN | 0 | 100 | 83.1 | | 83.1 | |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 54.1 | | 108.2 | |
| 106 | ACRYLONITRILE | 0 | 100 | 140 | | 140 | |
| 216 | CARBON DISULFIDE | 0 | 10 | 8.16 | | 81.6 | |
| 767 | VINYL ACETATE | 0 | 10 | 7.18 | | 71.8 | |
| 52 | 2-BUTANONE | 0 | 50 | 60.2 | | 120.4 | |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 62.6 | | 125.2 | |
| 60 | 2-HEXANONE | 0 | 50 | 63.7 | ! | 127.4 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 12.3 | | 61.5 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 12.7 | ! | 127 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 9.4 | | 94 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 10.9 | | 109 | |
| 422 | IODOMETHANE | 0 | 10 | 11.2 | | 112 | |
| 709 | TETRAHYDROFURAN | 0 | 125 | 156 | | 124.8 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 10.2 | | 102 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 121 | | 121 | |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 123 | | 123 | |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 12.5 | | 125 | |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 11.7 | | 117 | |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 35.1 | | 117.0 | |

**Comment** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers**

! Outside Lab Generated Control Limits

R560082

# Heritage Environmental Services, LLC

Q2256329

QC Report

QCType DPS01
Date Entered 11Nov09
Analysis Date/Time 07Nov0911:56:00

Duplicate SampleID A864541
Duplicate QCSampleID Q2256328
Method 309 Matrix 1

DataFile 5224T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 10.3 | | 103.3 | 14.1 |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 9.1 | | 91 | 9.8 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 9.79 | | 97.9 | 13.3 |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 10.2 | | 102.1 | 14.9 |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 9.83 | | 98.3 | 13.2 |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 9.61 | | 96.1 | 13.8 |
| 750 | TRICHLOROETHENE | 0 | 10 | 10.1 | | 100.6 | 14.6 |
| 768 | VINYL CHLORIDE | 5.2 | 10 | 15 | | 98 | 13.3 |
| 193 | BROMOBENZENE | 0 | 10 | 10.3 | | 102.8 | 13 |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 9.48 | | 94.8 | 12.7 |
| 197 | BROMOFORM | 0 | 10 | 7.53 | | 75.3 | 15.6 |
| 198 | BROMOMETHANE | 0 | 10 | 10.8 | | 107.5 | 12.8 |
| 231 | CHLOROBENZENE | 0 | 10 | 10.5 | | 104.8 | 14.6 |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 9.02 | | 90.2 | 13.7 |
| 234 | CHLOROETHANE | 0 | 10 | 10.2 | | 101.9 | 12.3 |
| 235 | CHLOROFORM | 0 | 10 | 9.65 | | 96.5 | 13.6 |
| 236 | CHLOROMETHANE | 0 | 10 | 9.26 | | 92.6 | 11.2 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 9.94 | | 99.4 | 16.1 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 9.85 | | 98.5 | 14.8 |
| 296 | DIBROMOMETHANE | 0 | 10 | 10.2 | | 101.6 | 14.9 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 9.59 | | 95.9 | 14.2 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 9.5 | | 95 | 13.6 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 10.2 | | 101.5 | 14.9 |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 11.7 | | 117 | 12 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.18 | | 91.8 | 15.4 |
| 107 | 1,1-DICHLOROETHANE | 0 | 10 | 10.1 | | 100.6 | 13.3 |
| 110 | 1,1-DICHLOROPROPENE | 0 | 10 | 9.91 | | 99.1 | 10.9 |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 10.9 | | 109.4 | 13.2 |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 11.3 | | 113.4 | 15.3 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 9.08 | | 90.8 | 14.7 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 8.88 | | 88.8 | 13.2 |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 8.49 | | 84.9 | 12 |
| 349 | ETHYL BENZENE | 0 | 10 | 10.3 | | 103.2 | 13.7 |
| 680 | STYRENE | 0 | 10 | 8.45 | | 84.5 | 15 |
| 204 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 11.1 | | 110.7 | 16 |
| 21 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 9.51 | | 95.1 | 13.4 |
| 23 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 10.5 | | 104.9 | 15.5 |
| 703 | TETRACHLOROETHENE | 0 | 10 | 9.59 | | 95.9 | 14.8 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 10.2 | | 101.9 | 17.2 |
| 724 | TOLUENE | 0 | 10 | 10.9 | | 109 | 14.1 |
| 492 | M/P-XYLENE | 0 | 20 | 20.6 | | 103.1 | 13.7 |
| 549 | O-XYLENE | 0 | 10 | 10.1 | | 101 | 12.4 |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 9.98 | | 99.8 | 14.2 |
| 519 | N-BUTYLBENZENE | 0 | 10 | 9.29 | | 92.9 | 13.3 |

R560082 Heritage Environmental Services, LLC Q2256329

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 9.5 | | 95 | 15.6 |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 9.75 | | 97.5 | 14.7 |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 8.87 | | 88.7 | 9.2 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 9.99 | | 99.9 | 15.3 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 9.64 | | 96.4 | 15.1 |
| 493 | NAPHTHALENE | 0 | 10 | 8.64 | | 86.4 | 9.4 |
| 532 | N-PROPYLBENZENE | 0 | 10 | 9.95 | | 99.5 | 13.8 |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 10 | | 100.4 | 12.6 |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 10.4 | | 103.9 | 12.1 |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 8.61 | | 86.1 | 8.5 |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 8.51 | | 85.1 | 12.6 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 9.17 | | 91.7 | 14.7 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 9.8 | | 98 | 14.5 |
| 105 | ACROLEIN | 0 | 100 | 56.2 | | 56.2 | 38.6 |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 44.3 | | 88.6 | 19.8 |
| 106 | ACRYLONITRILE | 0 | 100 | 94.1 | | 94.1 | 38.9 |
| 216 | CARBON DISULFIDE | 0 | 10 | 7.11 | | 71.1 | 13.8 |
| 767 | VINYL ACETATE | 0 | 10 | 3.48 | ! | 34.8 | 69.4 |
| 52 | 2-BUTANONE | 0 | 50 | 51.3 | | 102.7 | 15.8 |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 54.8 | | 109.6 | 13.3 |
| 69 | 2-HEXANONE | 0 | 50 | 55 | | 110 | 14.6 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 10.5 | | 52.4 | 16.1 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 10.8 | | 108.4 | 15.6 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 8.23 | | 82.3 | 13.3 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 9.45 | | 94.5 | 14.6 |
| 422 | IODOMETHANE | 0 | 10 | 9.75 | | 97.5 | 13.7 |
| 709 | TETRAHYDROFURAN | 0 | 125 | 134 | | 107.1 | 15.4 |
| 78 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 8.51 | | 85.1 | 18.1 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 104 | | 104.3 | 14.6 |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 140 | ! | 139.6 | 12.9 |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 10.8 | | 108.3 | 14.3 |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 9.99 | | 99.9 | 15.6 |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 30.7 | | 102.3 | 13.4 |

**Comment:** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers:**

! Outside Lab Generated Control Limits

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5223T.D
Acq On : 7 Nov 2009 11:31
Operator : HAROLD
Sample : A864541 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 07 11:47:19 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 612758 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 197257 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 174305 | 12.04 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 120.40% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 209717 | 12.16 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 121.60% | |
| 50) Toluene-d8 | 6.603 | 98 | 733231 | 13.31 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 133.10% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 207321 | 12.31 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = | 123.10% | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 96707 | 11.11 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 135280 | 10.36 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 235469 | 16.35 | UG/L | 100 |
| 5) Bromomethane | 1.488 | 94 | 75769 | 12.22 | UG/L | 99 |
| 6) Chloroethane | 1.560 | 64 | 89101 | 11.52 | UG/L # | 87 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 205396 | 11.30 | UG/L # | 80 |
| 8) Acrolein | 2.040 | 56 | 89007 | 83.12 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 338430 | 54.07 | UG/L | 94 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 136222 | 11.22 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 152733 | 11.03 | UG/L | 92 |
| 12) Acrylonitrile | 2.735 | 53 | 591959 | 139.62 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 315456 | 8.16 | UG/L | 100 |
| 14) Methylene Chloride | 2.513 | 84 | 167434 | 10.71 | UG/L # | 76 |
| 15) Allyl Chloride | 2.405 | 41 | 444133 | 10.20 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 15113 | 7.18 | UG/L # | 95 |
| 17) MTBE | 2.756 | 73 | 508049 | 10.94 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 164112 | 11.79 | UG/L | 100 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 268543 | 11.49 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 149190 | 60.15 | UG/L # | 33 |
| 21) Ethyl Acetate | 3.766 | 43 | 220515 | 12.27 | UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 194456 | 13.15 | UG/L | 93 |
| 23) Ethyl Cyanide | 3.759 | 54 | 340641 | 120.67 | UG/L | 100 |
| 24) CHLOROFORM | 3.995 | 83 | 250404 | 11.06 | UG/L | 100 |
| 25) Methacrylonitrile | 3.902 | 41 | 1275819 | 122.69 | UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 858958 | 156.29 | UG/L # | 83 |
| 27) Bromochloromethane | 3.902 | 128 | 76095 | 11.51 | UG/L | 86 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 140943 | 9.57 | UG/L | 92 |
| 29) Diethyl ether | 1.932 | 59 | 146912 | 11.01 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 207435 | 11.03 | UG/L | 99 |
| 31) Iodomethane | 2.233 | 142 | 222018 | 11.18 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 71936 | 11.05 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 166072 | 10.04 | UG/L | 94 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 201799 | 11.85 | UG/L | 97 |
| 37) Isobutanol | 4.504 | 43 | 908832 | 921.81 | UG/L # | 89 |
| 38) Benzene | 4.532 | 78 | 634195 | 11.90 | UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 265859 | 9.81 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 162384 | 11.64 | UG/L | 95 |
| 41) n-Butanol | 5.213 | 56 | 454061 | 529.60 | UG/L | 100 |

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5223T.D
Acq On : 7 Nov 2009 11:31
Operator : HAROLD
Sample : A864541 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

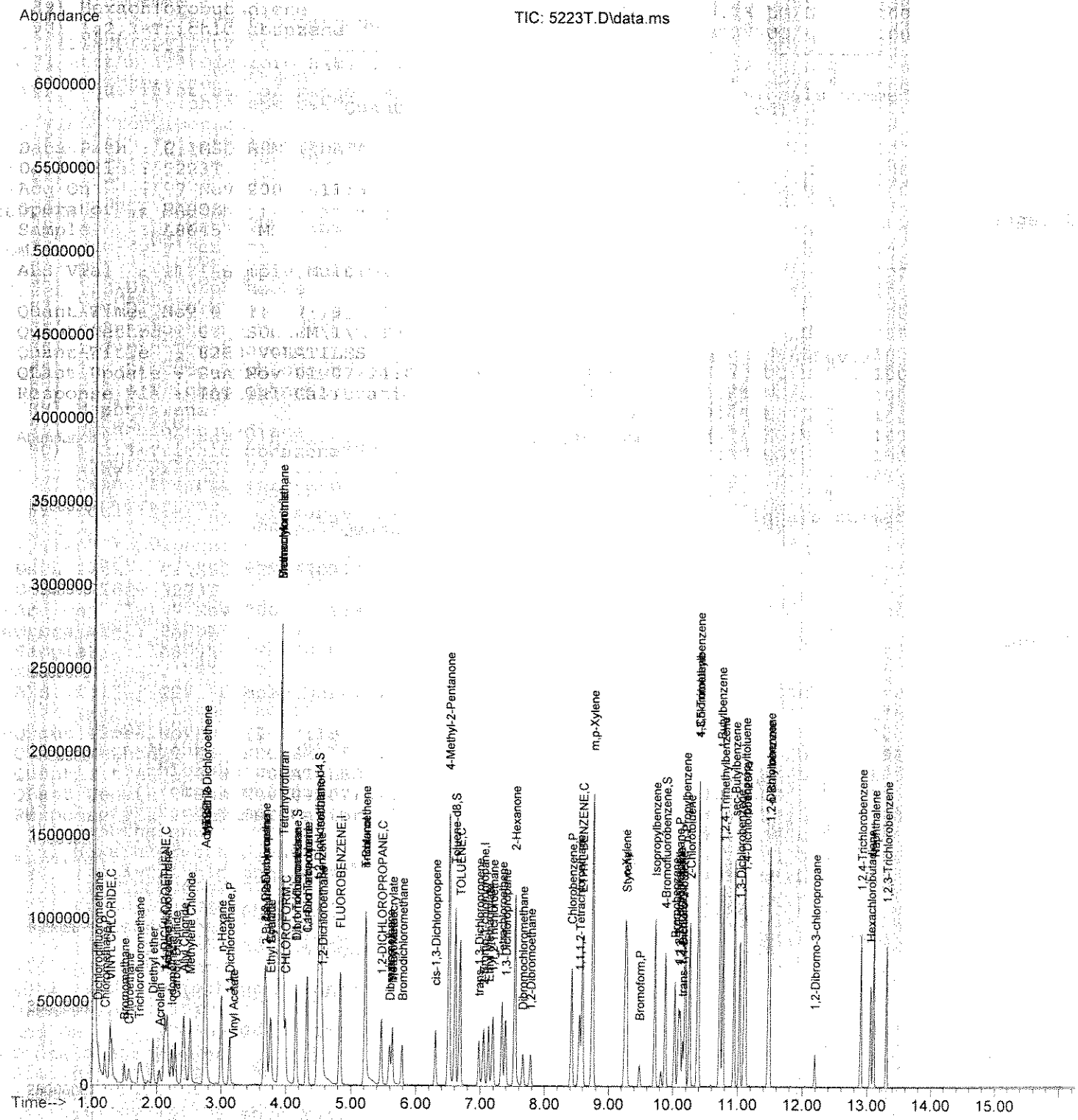
Quant Time: Nov 07 11:47:19 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 153513 | 12.48 | UG/L | | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 28699 | 67.44 | UG/L | | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 155110 | 12.50 | UG/L | # | 92 |
| 45) Bromodichloromethane | 5.786 | 83 | 160596 | 10.77 | UG/L | | 99 |
| 46) Dibromomethane | 5.585 | 93 | 88914 | 11.80 | UG/L | | 91 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1210689 | 62.62 | UG/L | # | 88 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 195935 | 10.52 | UG/L | | 100 |
| 51) TOLUENE | 6.681 | 91 | 664276 | 12.55 | UG/L | | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 150789 | 10.13 | UG/L | | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 136104 | 13.00 | UG/L | | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 136059 | 12.67 | UG/L | | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 817975 | 63.67 | UG/L | # | 87 |
| 57) 1,3-Dichloropropane | 7.391 | 76 | 248379 | 13.22 | UG/L | | 100 |
| 58) Ethyl Methacrylate | 7.126 | 69 | 206376 | 11.68 | UG/L | # | 63 |
| 59) Tetrachloroethene | 7.333 | 166 | 161947 | 11.12 | UG/L | | 99 |
| 60) Dibromochloromethane | 7.663 | 129 | 106626 | 10.35 | UG/L | | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 414664 | 12.13 | UG/L | | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 133261 | 10.88 | UG/L | | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 224959 | 11.84 | UG/L | | 75 |
| 64) m,p-Xylene | 8.744 | 106 | 560719 | 23.66 | UG/L | # | 62 |
| 65) o-Xylene | 9.253 | 106 | 274930 | 11.44 | UG/L | | 78 |
| 66) Styrene | 9.274 | 104 | 376338 | 9.82 | UG/L | # | 86 |
| 67) Bromoform | 9.482 | 173 | 60851 | 8.80 | UG/L | | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 214454 | 12.25 | UG/L | | 99 |
| 70) Isopropylbenzene | 9.719 | 105 | 663103 | 11.65 | UG/L | | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 60998 | 12.32 | UG/L | # | 8 |
| 72) Bromobenzene | 10.027 | 77 | 272814 | 11.71 | UG/L | | 100 |
| 73) 1,2,3-Trichloropropane | 10.113 | 110 | 67776 | 12.11 | UG/L | | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 91904 | 11.42 | UG/L | | 83 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 612183 | 11.33 | UG/L | | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 176132 | 11.68 | UG/L | | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 162743 | 11.42 | UG/L | | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 350045 | 11.73 | UG/L | # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 586032 | 10.62 | UG/L | | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 815619 | 11.39 | UG/L | | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 674192 | 11.21 | UG/L | | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 325018 | 11.06 | UG/L | | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 329279 | 11.18 | UG/L | | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 333569 | 10.61 | UG/L | | 98 |
| 85) 1,2-Dichlorobenzene | 11.473 | 146 | 322185 | 10.89 | UG/L | | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 40814 | 9.40 | UG/L | | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 225799 | 9.65 | UG/L | | 100 |
| 88) Naphthalene | 13.100 | 128 | 659902 | 9.49 | UG/L | | 100 |
| 89) Hexachlorobutadiene | 13.057 | 225 | 103171 | 9.73 | UG/L | | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 213443 | 9.37 | UG/L | | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5223T.D
Acq On : 7 Nov 2009 11:31
Operator : HAROLD
Sample : A864541 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 07 11:47:19 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration






59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5224T.D
Acq On : 7 Nov 2009 11:56
Operator : HAROLD
Sample : A864541 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 07 12:13:11 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 651796 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 211523 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 216122 | 14.04 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 140.40% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 259704 | 14.15 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 141.50% | |
| 50) Toluene-d8 | 6.603 | 98 | 901400 | 15.39 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 153.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 254257 | 14.08 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 140.80% | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 87996 | 9.50 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 128630 | 9.26 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 229899 | 15.01 | UG/L | 100 |
| 5) Bromomethane | 1.495 | 94 | 70876 | 10.75 | UG/L | 96 |
| 6) Chloroethane | 1.567 | 64 | 83817 | 10.19 | UG/L | 92 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 188542 | 9.75 | UG/L # | 80 |
| 8) Acrolein | 2.040 | 56 | 63974 | 56.16 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 294823 | 44.28 | UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 127012 | 9.83 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 140717 | 9.55 | UG/L | 93 |
| 12) Acrylonitrile | 2.735 | 53 | 424161 | 94.05 | UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 292342 | 7.11 | UG/L | 98 |
| 14) Methylene Chloride | 2.520 | 84 | 156423 | 9.18 | UG/L # | 76 |
| 15) Allyl Chloride | 2.412 | 41 | 393977 | 8.51 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 10387 | 3.48 | UG/L # | 76 |
| 17) MTBE | 2.756 | 73 | 466490 | 9.45 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 150249 | 10.15 | UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 250093 | 10.06 | UG/L | 100 |
| 20) 2-Butanone | 3.702 | 72 | 135435 | 51.33 | UG/L # | 34 |
| 21) Ethyl Acetate | 3.766 | 43 | 204773 | 10.71 | UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 183390 | 11.66 | UG/L | 89 |
| 23) Ethyl Cyanide | 3.759 | 54 | 313236 | 104.32 | UG/L | 100 |
| 24) CHLOROFORM | 3.995 | 83 | 232408 | 9.65 | UG/L | 100 |
| 25) Methacrylonitrile | 3.902 | 41 | 1544485 | 139.63 | UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 782993 | 133.93 | UG/L # | 82 |
| 27) Bromochloromethane | 3.902 | 128 | 70218 | 9.98 | UG/L | 85 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 132912 | 8.49 | UG/L | 93 |
| 29) Diethyl ether | 1.939 | 59 | 138087 | 9.73 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 192298 | 9.61 | UG/L | 99 |
| 31) Iodomethane | 2.233 | 142 | 205796 | 9.75 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 68655 | 9.91 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 160029 | 9.10 | UG/L | 91 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 184984 | 10.21 | UG/L | 99 |
| 37) Isobutanol | 4.504 | 43 | 804551 | 767.16 | UG/L # | 97 |
| 38) Benzene | 4.532 | 78 | 586071 | 10.33 | UG/L | 100 |
| 39) n-Hexane | 3.000 | 57 | 238358 | 8.27 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 149361 | 10.06 | UG/L | 97 |
| 41) n-Butanol | 5.213 | 56 | 420826 | 461.44 | UG/L | 100 |

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5224T.D
Acq On : 7 Nov 2009 11:56
Operator : HAROLD
Sample : A864541 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

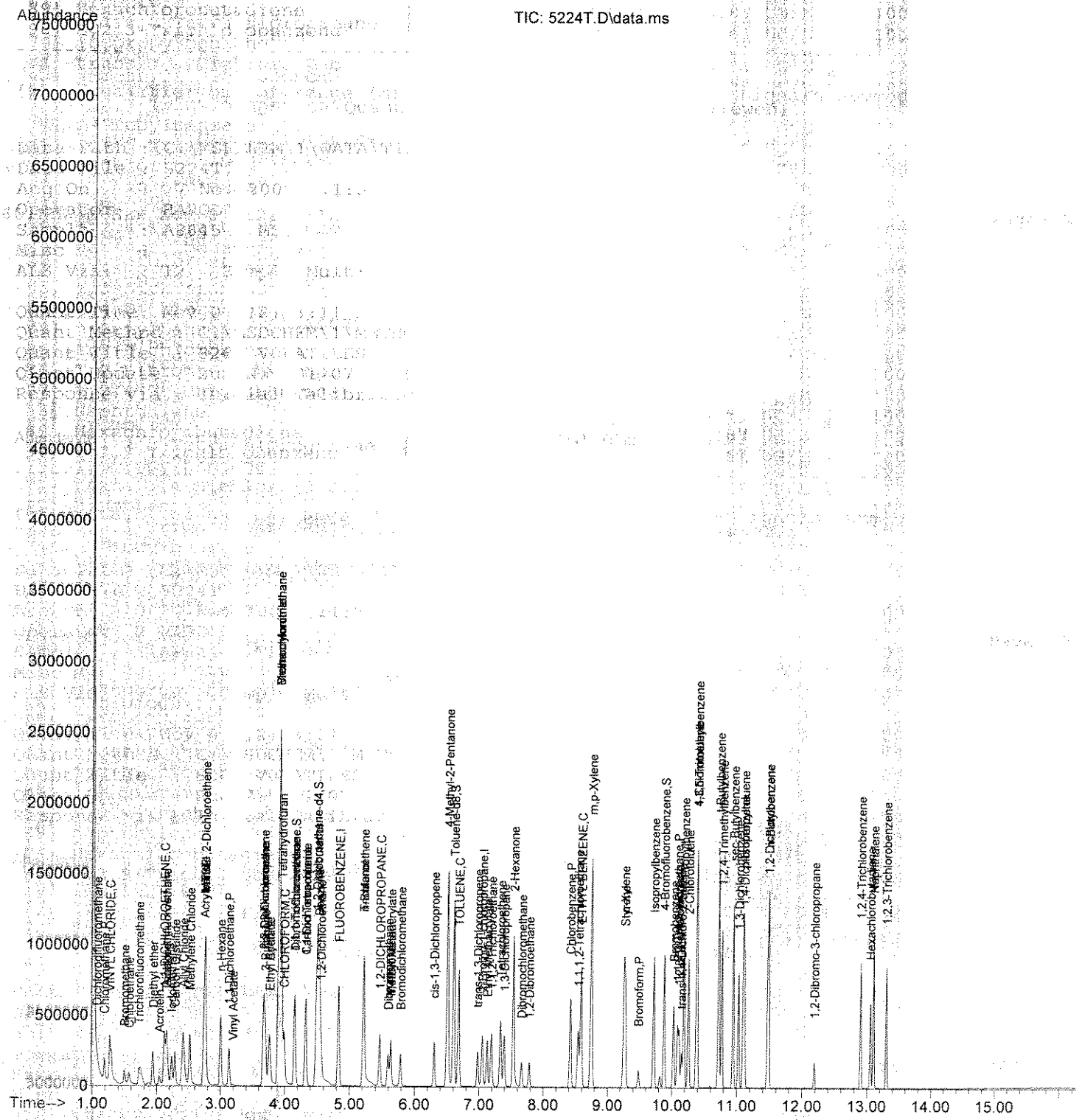
Quant Time: Nov 07 12:13:11 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 143084 | 10.94 UG/L | 100 |
| 43) 1,4-Dioxane | 5.636 | 88 | 24034 | 53.97 UG/L | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 143017 | 10.83 UG/L # | 94 |
| 45) Bromodichloromethane | 5.786 | 83 | 150450 | 9.48 UG/L | 100 |
| 46) Dibromomethane | 5.593 | 93 | 81435 | 10.16 UG/L | 94 |
| 47) 4-Methyl-2-Pentanone | 6.509 | 43 | 1127412 | 54.82 UG/L # | 88 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 179972 | 9.08 UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 613791 | 10.90 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 140625 | 8.88 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 123255 | 11.07 UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 123790 | 10.84 UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 757889 | 55.01 UG/L # | 87 |
| 57) 1,3-Dichloropropane | 7.391 | 76 | 228470 | 11.34 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 189334 | 9.99 UG/L # | 62 |
| 59) Tetrachloroethene | 7.333 | 166 | 149677 | 9.59 UG/L | 99 |
| 60) Dibromochloromethane | 7.663 | 129 | 99652 | 9.02 UG/L | 100 |
| 61) Chlorobenzene | 8.422 | 112 | 384036 | 10.48 UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 124866 | 9.51 UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 210184 | 10.32 UG/L | 75 |
| 64) m,p-Xylene | 8.744 | 106 | 524099 | 20.62 UG/L # | 61 |
| 65) o-Xylene | 9.253 | 106 | 260357 | 10.10 UG/L | 81 |
| 66) Styrene | 9.274 | 104 | 347422 | 8.45 UG/L # | 86 |
| 67) Bromoform | 9.482 | 173 | 55820 | 7.53 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 196853 | 10.49 UG/L | 100 |
| 70) Isopropylbenzene | 9.719 | 105 | 609762 | 9.99 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 55690 | 10.49 UG/L # | 12 |
| 72) Bromobenzene | 10.027 | 77 | 256777 | 10.28 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 61122 | 10.19 UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 85863 | 9.95 UG/L | 84 |
| 75) 1,3,5-Trimethylbenzene | 10.392 | 105 | 567558 | 9.80 UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 160724 | 9.94 UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 150587 | 9.85 UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 332681 | 10.39 UG/L # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 542661 | 9.17 UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 770953 | 10.04 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 621865 | 9.64 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 302474 | 9.59 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 309107 | 9.79 UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 313166 | 9.29 UG/L | 98 |
| 85) 1,2-Dichlorobenzene | 11.473 | 146 | 301225 | 9.50 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 38313 | 8.23 UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 213609 | 8.51 UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 644314 | 8.64 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 100890 | 8.87 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 210123 | 8.61 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5224T.D
Acq On : 7 Nov 2009 11:56
Operator : HAROLD
Sample : A864541 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 07 12:13:11 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864542

Method SW846-8260B
Sample Description DUP-01
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5225T.D Date/Time 07Nov09 12:22:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 2.0 | | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

11/11/09

59169b

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864542

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | 5.3 | | 1.0 | UG/L | |
| 630-20-6 | 1804 | | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | | | |
| 127-18-4 | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 103 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 90 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864542

Method SW846-8260B
Sample Description DUP-01
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5225T Date/Time 11/7/09 12:
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 181 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 268 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 293 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 210 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 248 | CIS-1,2-DICHLOROETHENE | | 2.0 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 230 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 833 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 831 | 1,1-DCE | | | | 1 | ug/L | | |
| 236 | C-DCE | | | | 1 | ug/L | | |
| 746 | T-DCE | | | | 1 | ug/L | | |
| 248 | C-DCE | | | | 1 | ug/L | | |

59169b

# Heritage Environmental Services, LLC

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A864542

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 498 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 142 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3[illegible]2 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 708 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2[illegible] | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4[illegible] | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17[illegible] | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 766 | VINYL CHLORIDE | | 5.3 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 3804 | [illegible] | | | | [illegible] | [illegible] |
| 971 | SURROGATE RECOVERY | | | | [illegible] | [illegible] |
| 972 | [illegible] | | | | [illegible] | [illegible] |
| 301 | DICHLOROETHANE-D4 | | 103 98 | | | %Rec |
| 726 | TOLUENE-D8 | | 103 | | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 90 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | %Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5225T.D
Acq On : 7 Nov 2009 12:22
Operator : HAROLD
Sample : A864542
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 07 12:38:35 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 605522 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 194910 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 131429 | 9.19 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 167098 | 9.80 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.00% | |
| 50) Toluene-d8 | 6.603 | 98 | 562582 | 10.34 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 103.40% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 150479 | 9.04 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 90.40% | |
| Target Compounds | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 75476 | 5.30 | UG/L | 98 |
| 8) Acrolein | 2.054 | 56 | 2540 | 2.40 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 9287 | 1.50 | UG/L | 96 |
| 14) Methylene Chloride | 2.513 | 84 | 4481 | Below Cal | # | 66 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 28910 | 1.98 | UG/L | 85 |
| 37) Isobutanol | 4.497 | 43 | 1108 | 1.14 | UG/L # | 25 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3480 | 0.24 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 2492 | 0.24 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 6045 | 0.27 | UG/L | 100 |

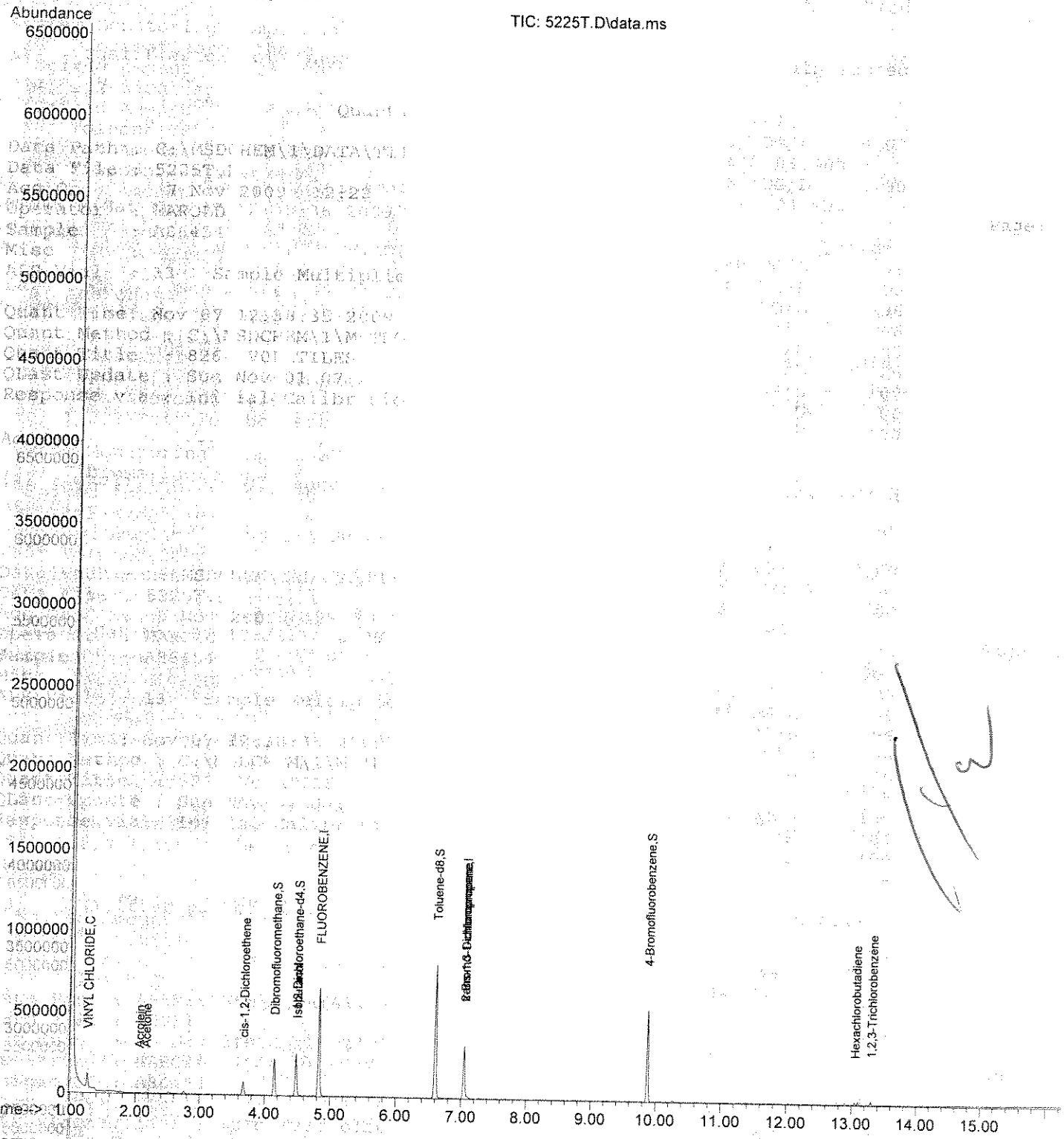
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5225T.D
Acq On : 7 Nov 2009 12:22
Operator : HAROLD
Sample : A864542
Misc :
ALS Vial : 13 Sample Multiplier: 1

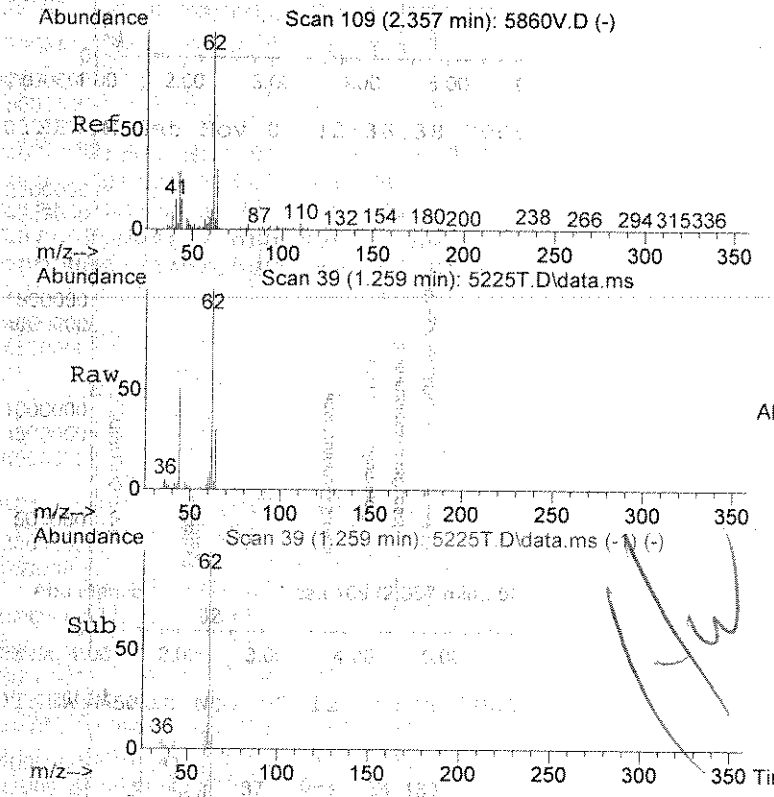
Quant Time: Nov 07 12:38:35 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 12:38:38 2009



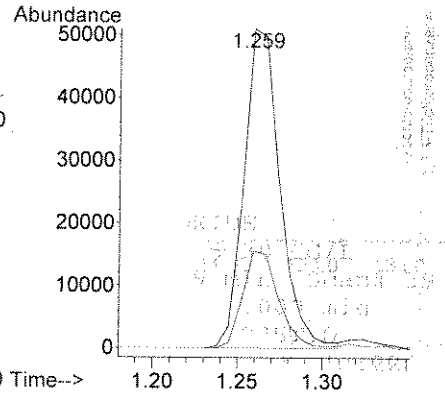
59169b

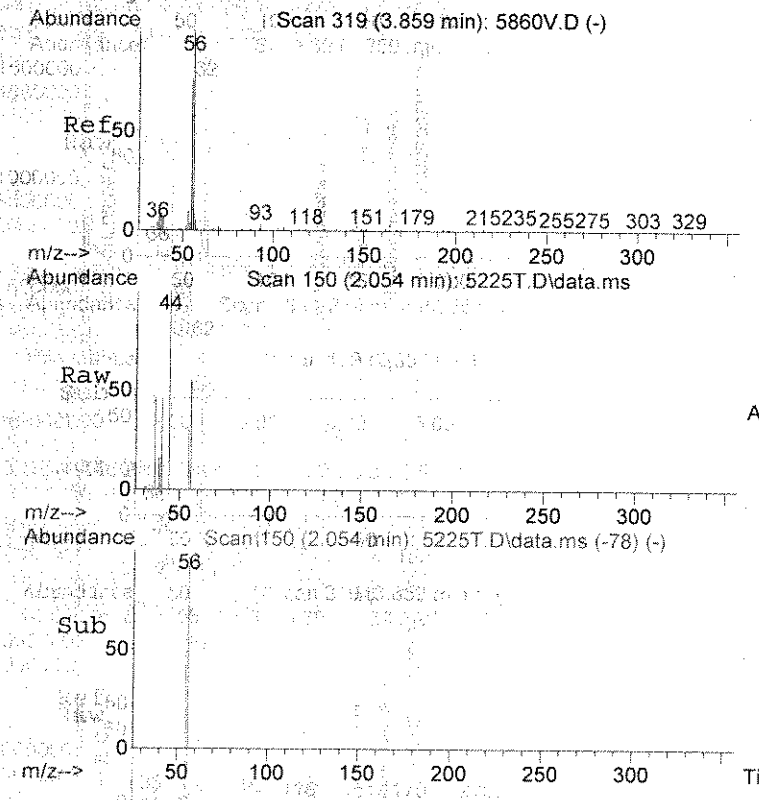



#4
VINYL CHLORIDE
Concen: 5.30 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion: 62 Resp: 75476

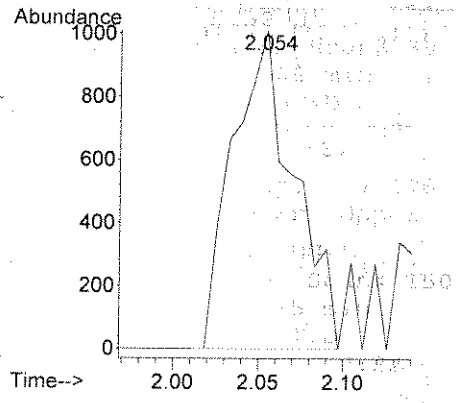
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.2 | 24.9 | 37.3 |

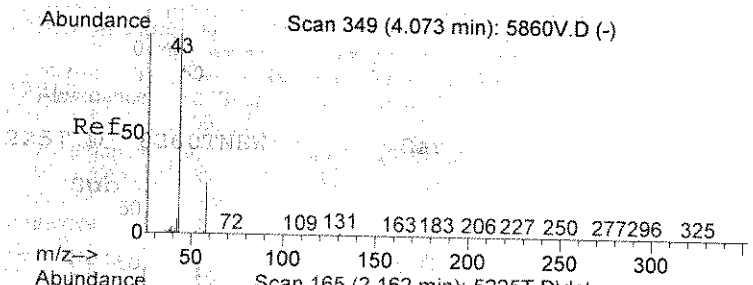



#8
Acrolein
Concen: 2.40 UG/L
RT: 2.054 min Scan# 150
Delta R.T. 0.015 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion: 56 Resp: 2540

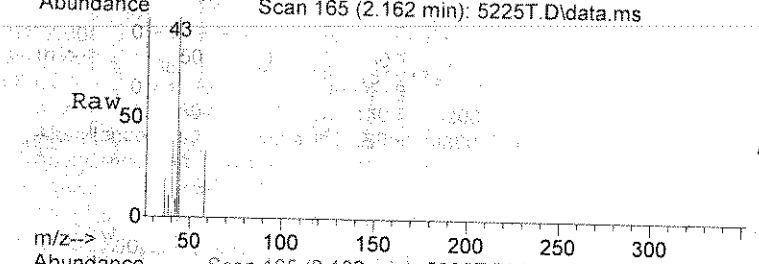


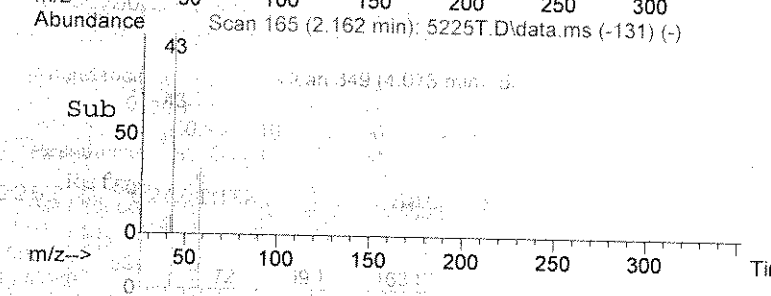


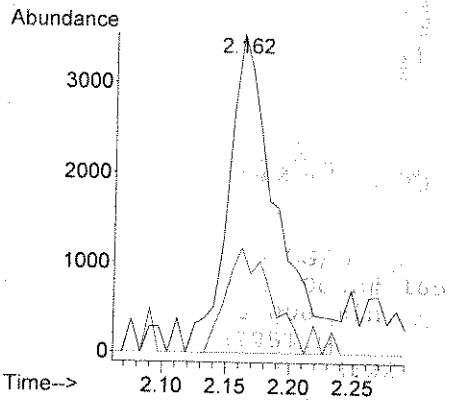

#9
Acetone
Concen: 1.50 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

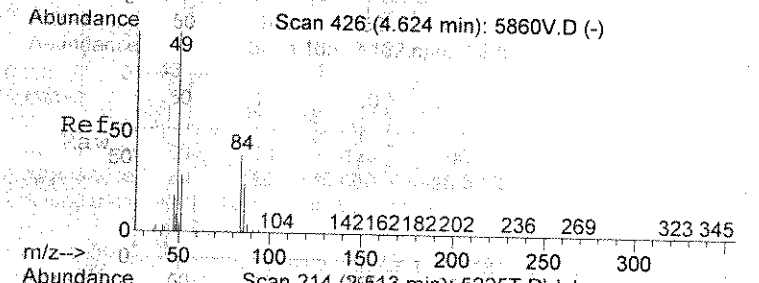
Tgt Ion: 43 Resp: 9287

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.9 | 23.1 | 34.7 |



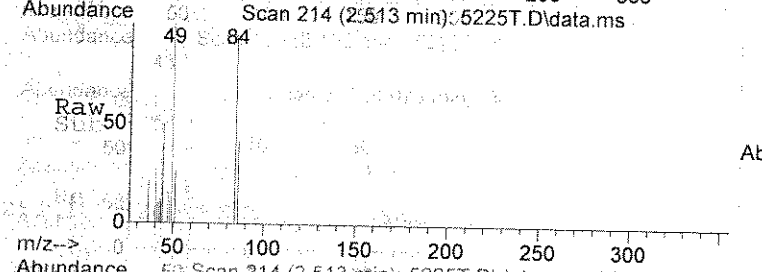



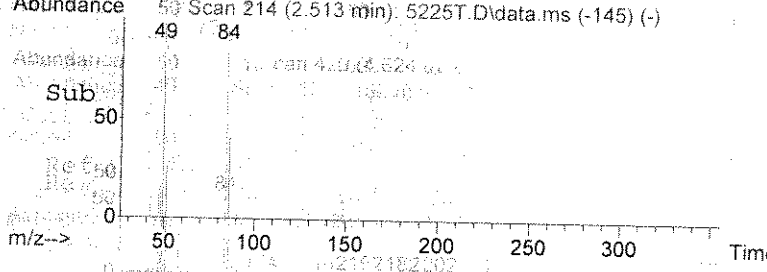



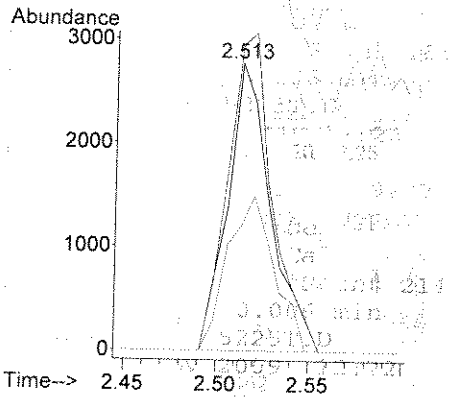

#14
Methylene Chloride
Concen: Below Cal
RT: 2.513 min Scan# 214
Delta R.T. -0.006 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

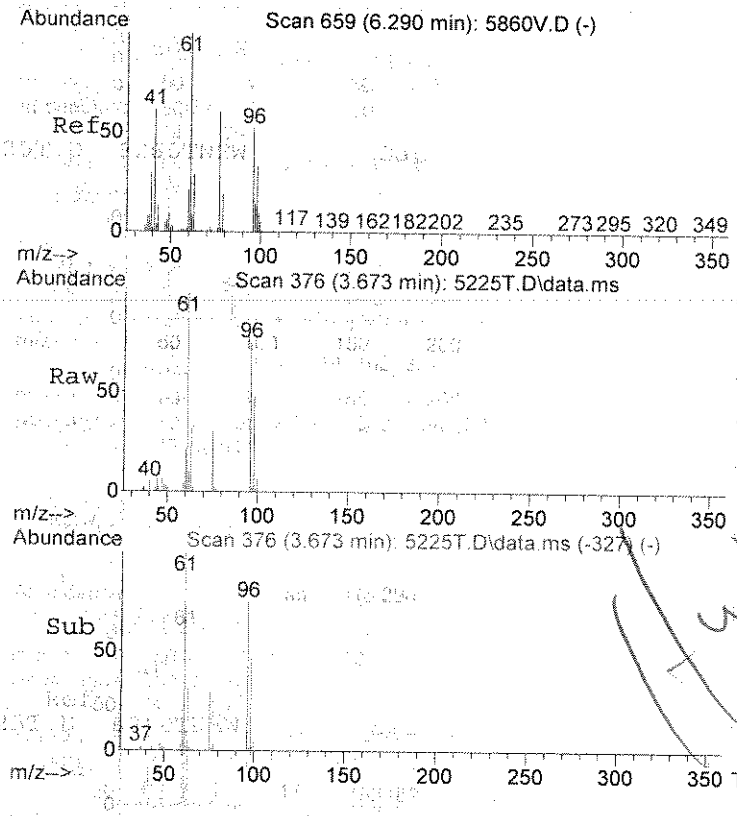
Tgt Ion: 84 Resp: 4481

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 114.1 | 140.2 | 210.2# |
| 86 | 58.2 | 51.1 | 76.7 |



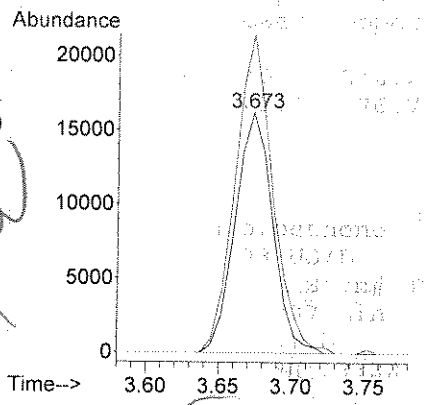



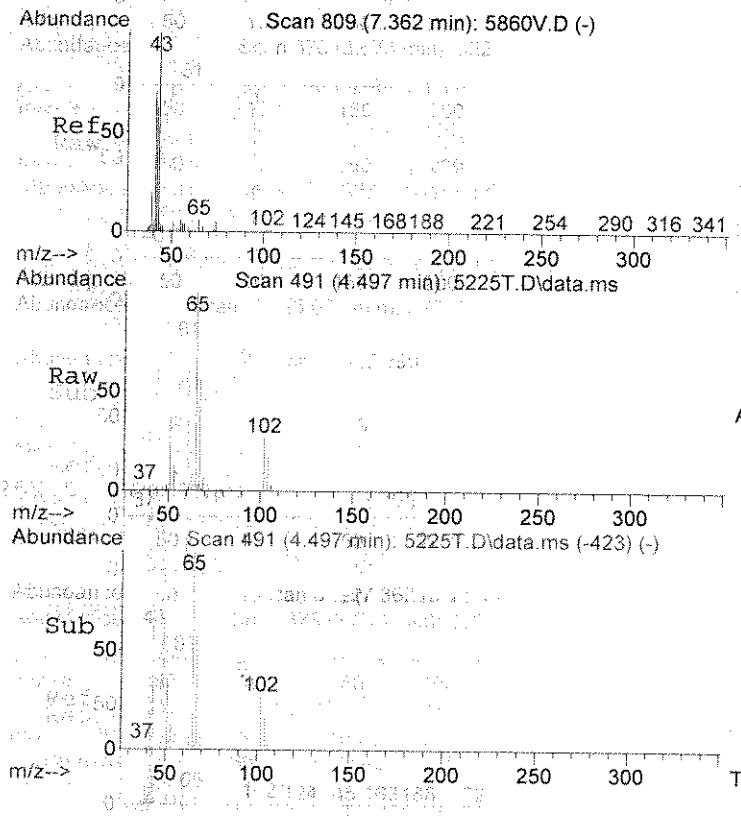



#22
cis-1,2-Dichloroethene
Concen: 1.98 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion: 96 Resp: 28910

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 133.1 | 121.8 | 182.6 |

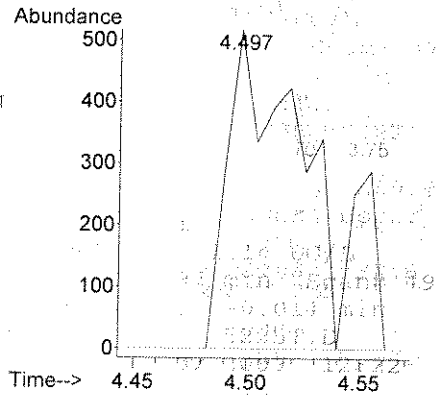


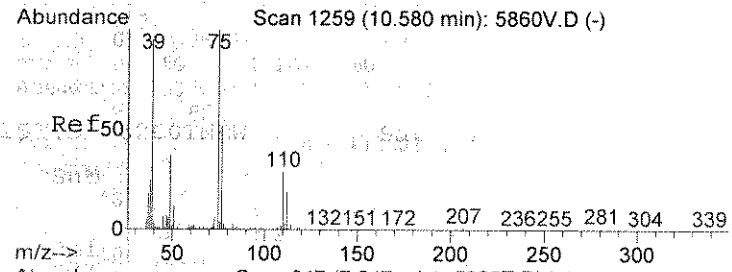




#37
Isobutanol
Concen: 1.14 UG/L
RT: 4.497 min Scan# 491
Delta R.T. -0.014 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion: 43 Resp: 1108

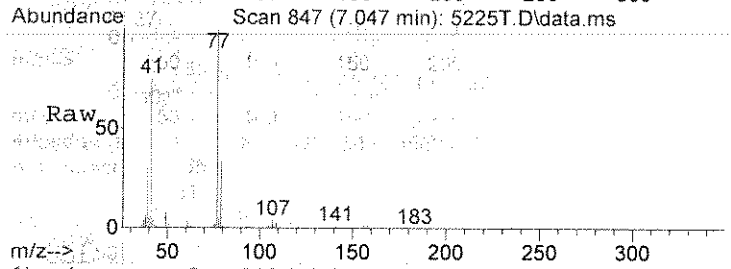
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |

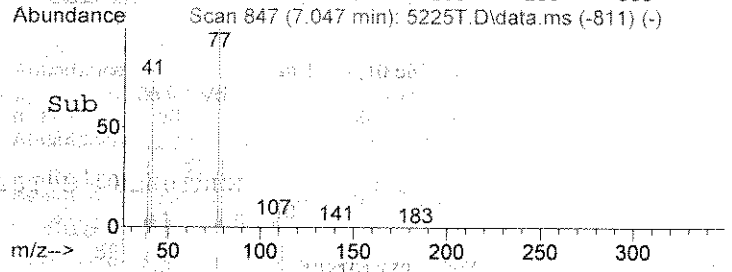


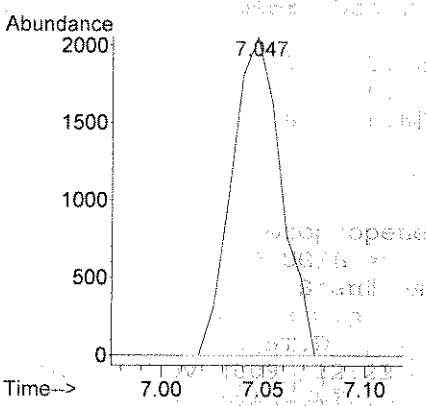


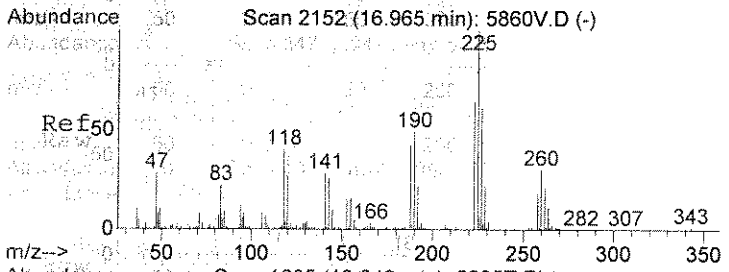

#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion: 75 Resp: 3480



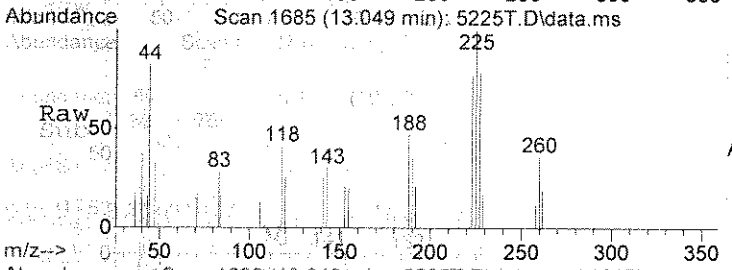



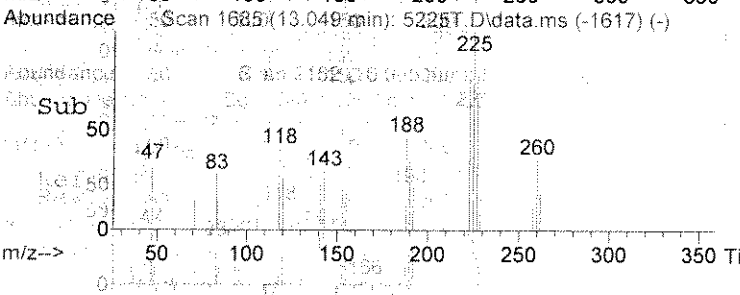



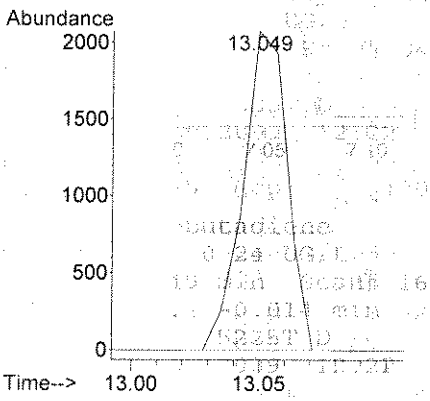



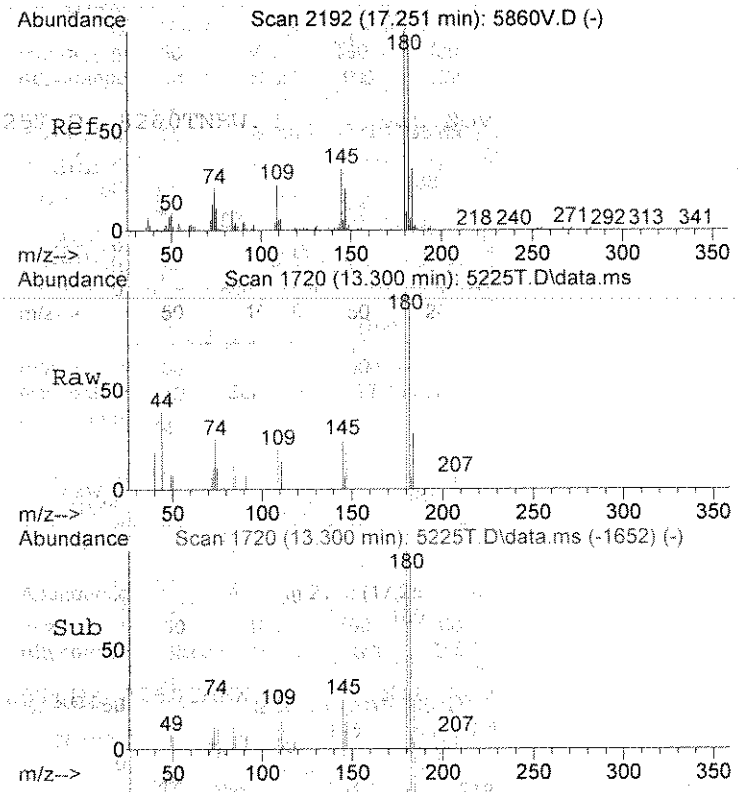

#89
Hexachlorobutadiene
Concen: 0.24 UG/L
RT: 13.049 min Scan# 1685
Delta R.T. -0.014 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion:225 Resp: 2492



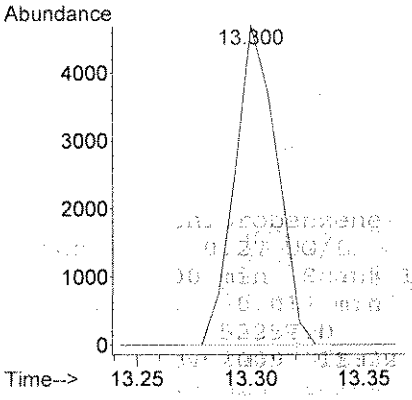






#90
1,2,3-Trichlorobenzene
Concen: 0.27 UG/L
RT: 13.300 min Scan# 1720
Delta R.T. -0.014 min
Lab File: 5225T.D
Acq: 7 Nov 2009 12:22

Tgt Ion:180 Resp: 6045



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864543

Method SW846-8260B
Sample Description 170D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5226T.D Date/Time 07Nov09 12:47:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| 110-57-6 | 748 | | | BDL | 1.0 | UG/L | |
| 75-34-3 | 7 | | | | | | |
| 107-06-2 | 21 | | | | | | |

11/11/09

59169b

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864543

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | EX | 1.0 | UG/L | |
| | 1804 | | | BDL | 2.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 91 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

EX Exceeds calibration range. See Replicate

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864543

ORIGINAL

Method SW846-8260B
Sample Description 170D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5226T Date/Time 11/7/09 12:4
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 210 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 801 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 230 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 270 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

TC#89

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A864543

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | N. | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 98 | | | % Rec |
| 726 | TOLUENE-D8 | | 99 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 97 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 97 | | | % Rec |

EX

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5226T.D
Acq On : 7 Nov 2009 12:47
Operator : HAROLD
Sample : A864543
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 07 13:04:02 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 603240 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 192741 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 131398 | 9.22 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 92.20% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 167074 | 9.84 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.40% | |
| 50) Toluene-d8 | 6.603 | 98 | 554623 | 10.23 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.30% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 150215 | 9.13 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.30% | |
| **Target Compounds** | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 3027150 | 213.54 | UG/L | 99 |
| 8) Acrolein | 2.033 | 56 | 1467 | 1.39 | UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 12304 | 2.00 | UG/L | 91 |
| 14) Methylene Chloride | 2.513 | 84 | 4112 | Below | Cal # | 73 |
| 17) MTBE | 2.756 | 73 | 11179 | 0.24 | UG/L | 100 |
| 37) Isobutanol | 4.590 | 43 | 782 | 0.81 | UG/L # | 25 |
| 39) n-Hexane | 3.000 | 57 | 5858 | 0.22 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 19191 | 0.37 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3245 | 0.22 | UG/L | 100 |

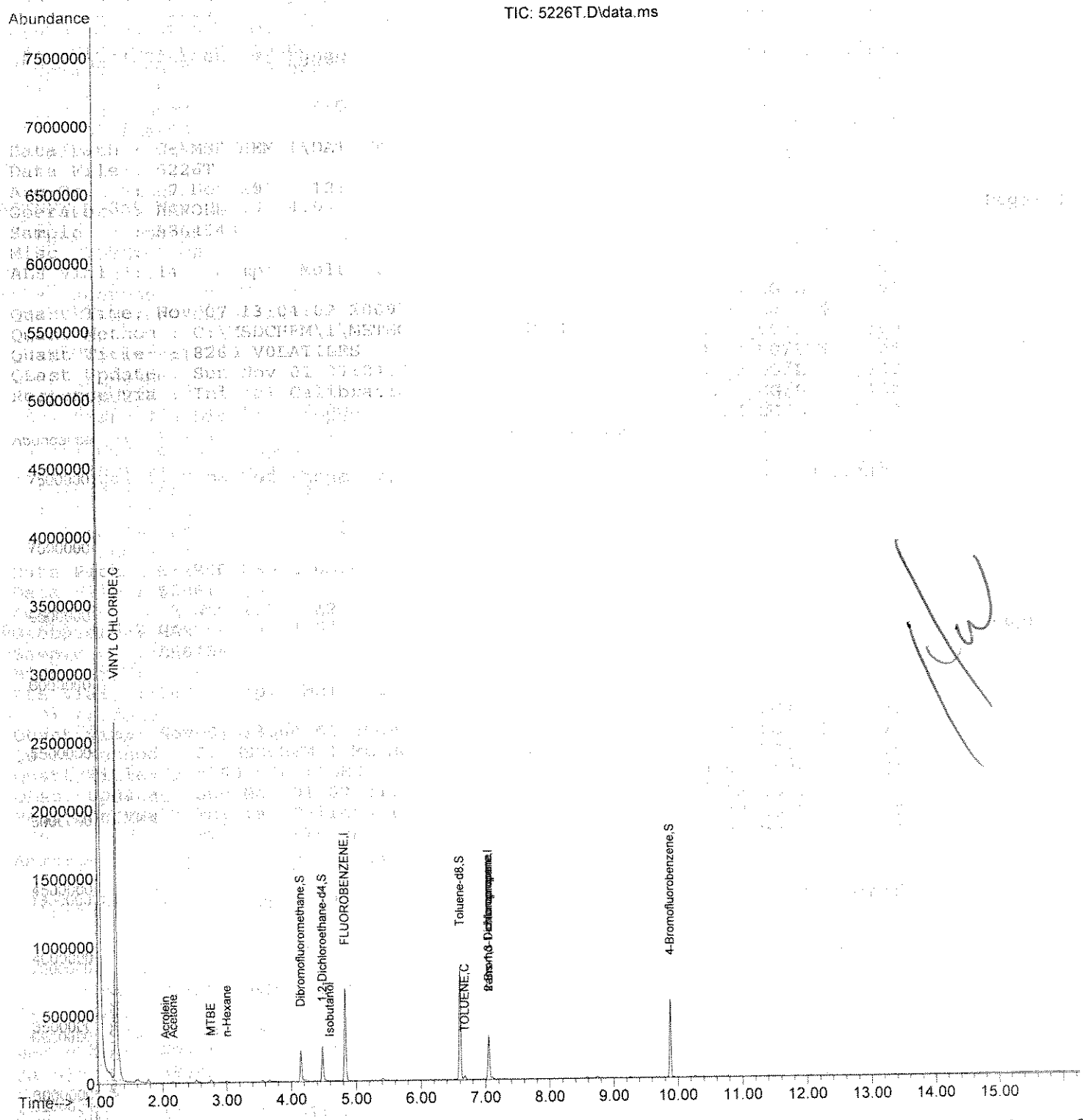
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

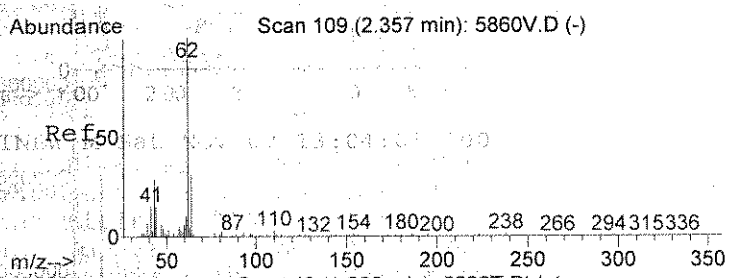
Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5226T.D
Acq On : 7 Nov 2009 12:47
Operator : HAROLD
Sample : A864543
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 07 13:04:02 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





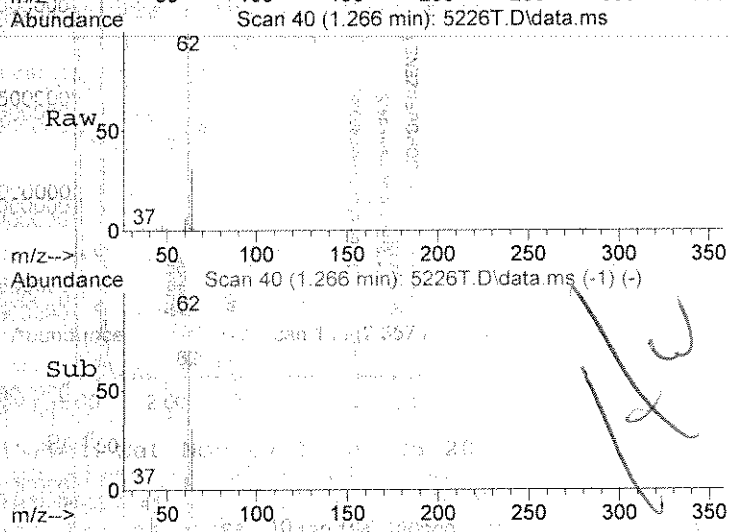

59169b

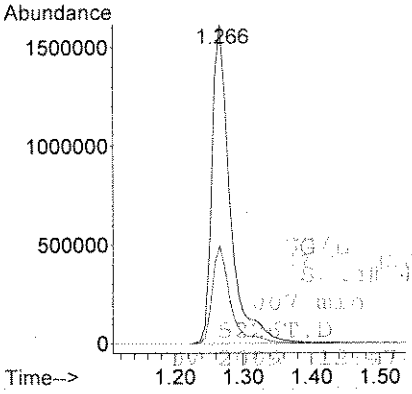


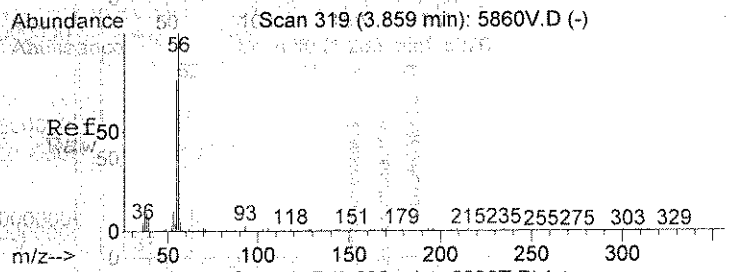

#4
VINYL CHLORIDE
Concen: 213.54 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 62 Resp: 3027150

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.8 | 24.9 | 37.3 |

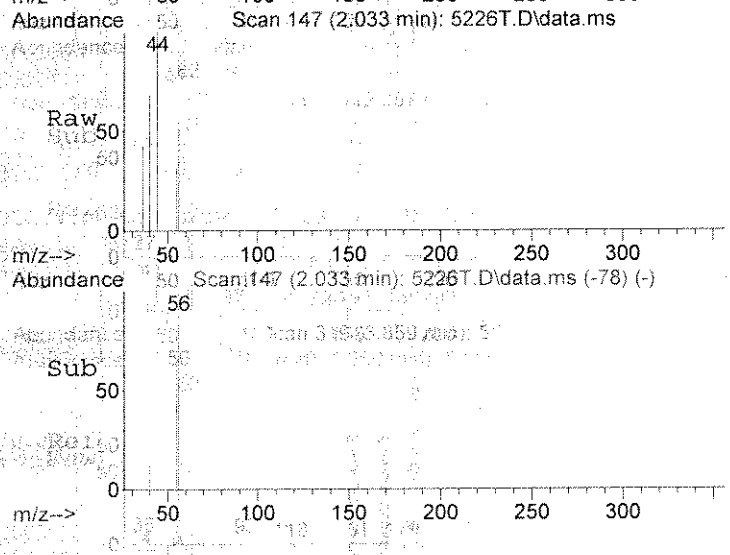


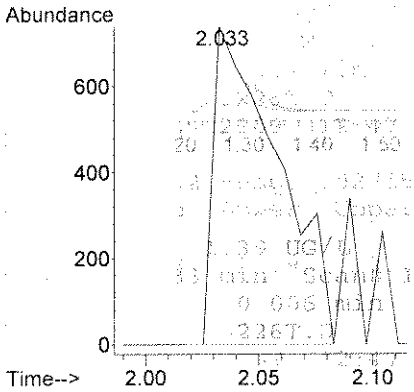



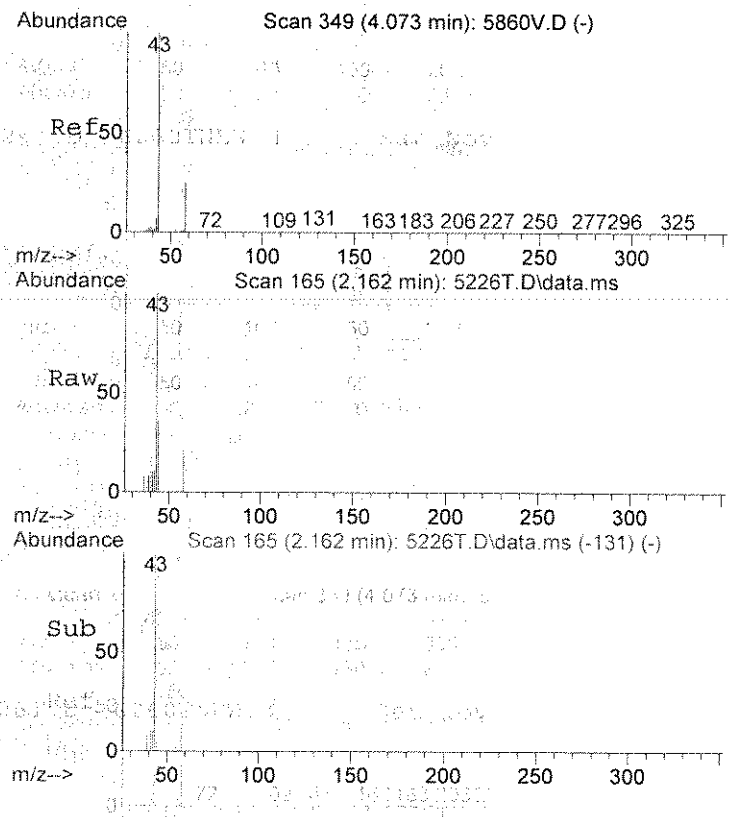




#8
Acrolein
Concen: 1.39 UG/L
RT: 2.033 min Scan# 147
Delta R.T. -0.006 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 56 Resp: 1467



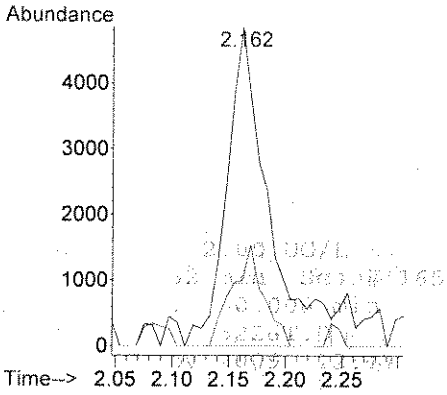



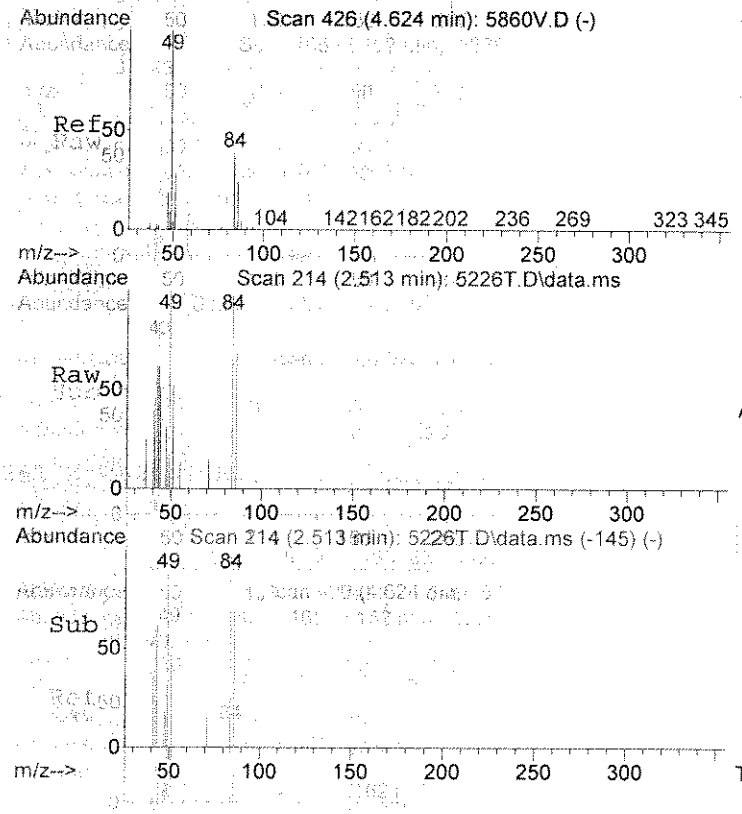



#9
Acetone
Concen: 2.00 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 43 Resp: 12304

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 24.2 | 23.1 | 34.7 |

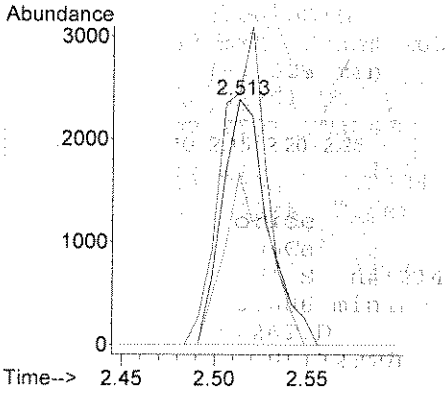


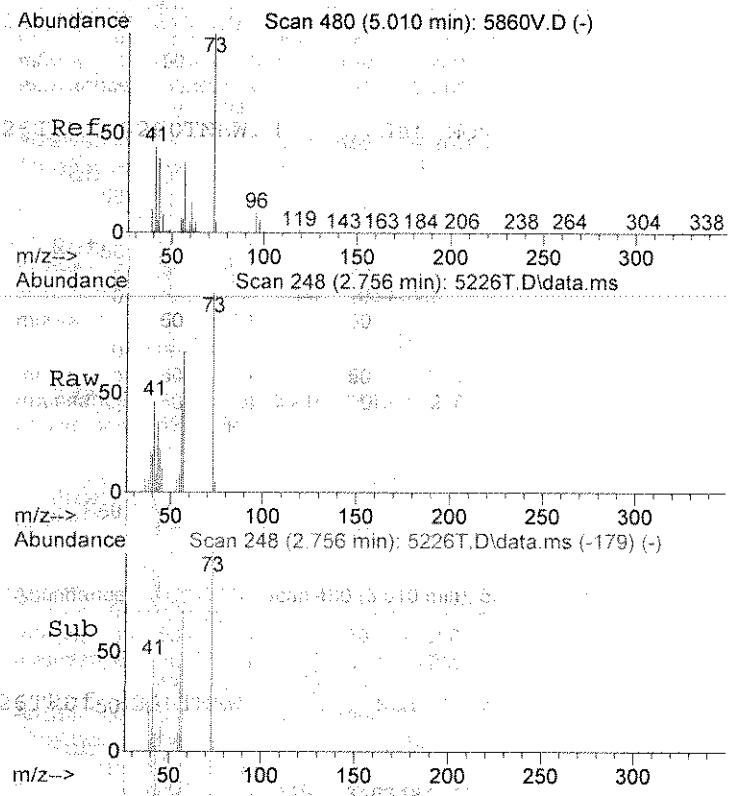




#14
Methylene Chloride
Concen: Below Cal
RT: 2.513 min Scan# 214
Delta R.T. -0.006 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 84 Resp: 4112

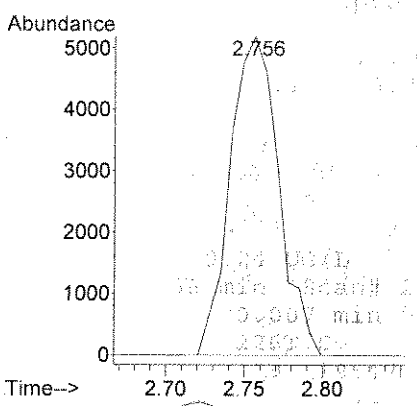
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 126.8 | 140.2 | 210.2# |
| 86 | 68.7 | 51.1 | 76.7 |

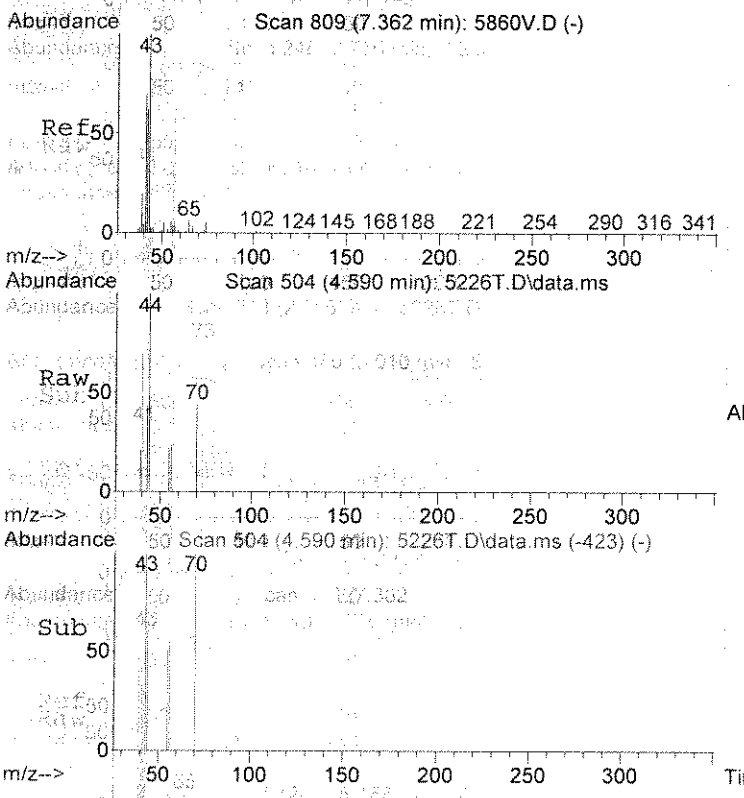





#17
MTBE
Concen: 0.24 UG/L
RT: 2.756 min Scan# 248
Delta R.T. -0.007 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 73 Resp: 11179

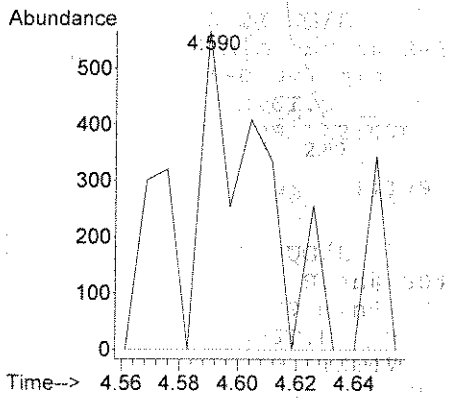


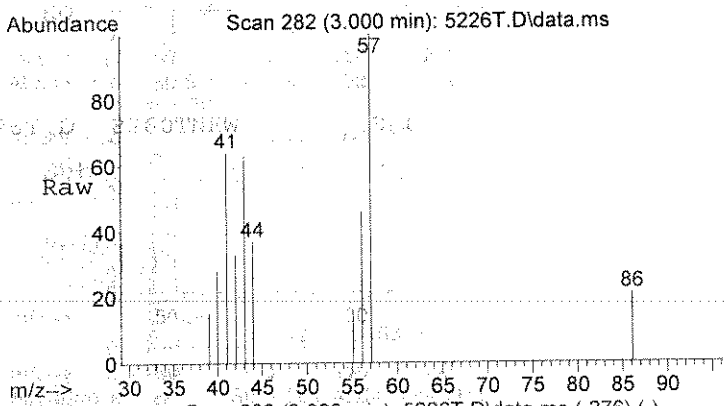




#37
Isobutanol
Concen: 0.81 UG/L
RT: 4.590 min Scan# 504
Delta R.T. 0.079 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 43 Resp: 782

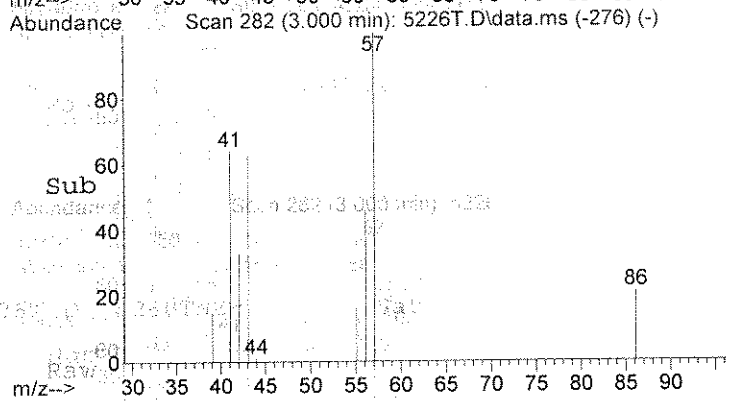
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |

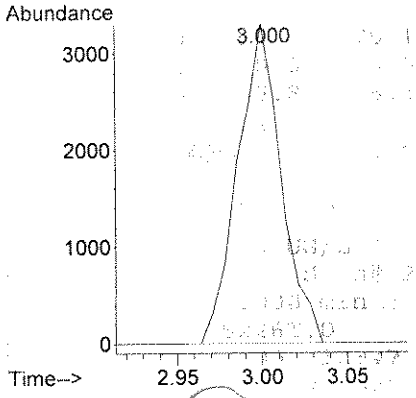


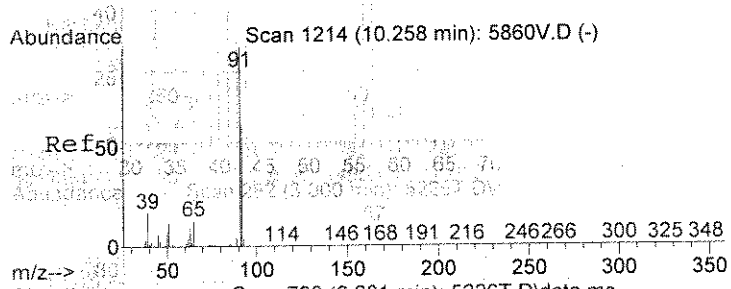



#39
n-Hexane
Concen: 0.22 UG/L
RT: 3.000 min Scan# 282
Delta R.T. 0.000 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 57 Resp: 5858

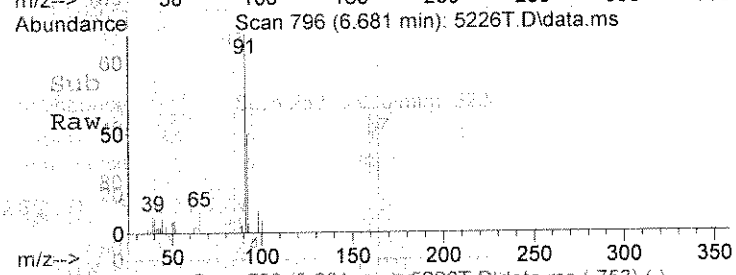


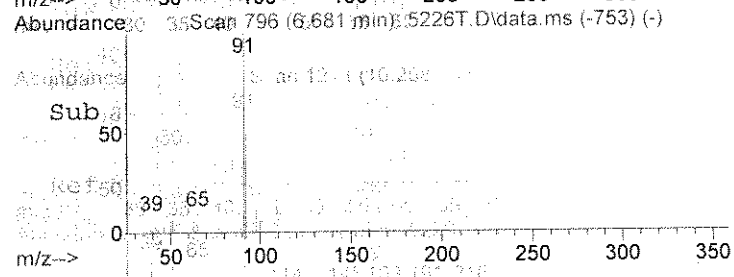



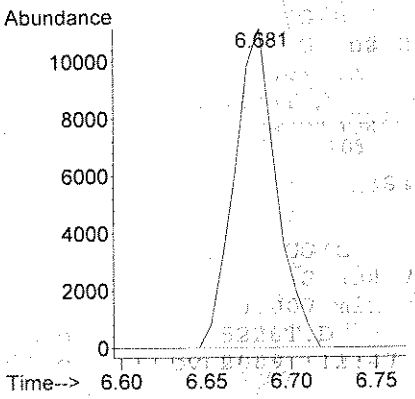



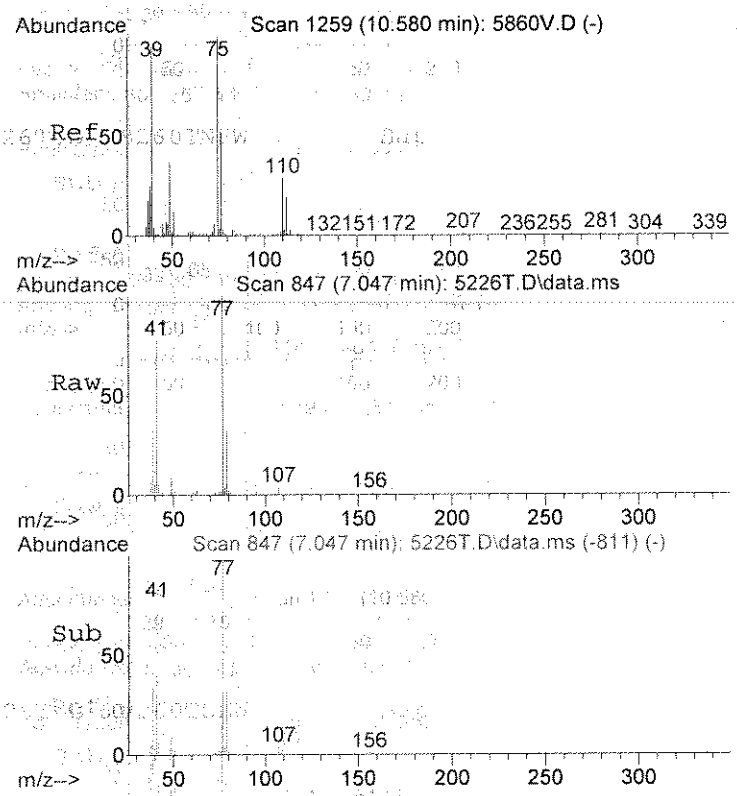

#51
TOLUENE
Concen: 0.37 UG/L
RT: 6.681 min Scan# 796
Delta R.T. -0.007 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 91 Resp: 19191



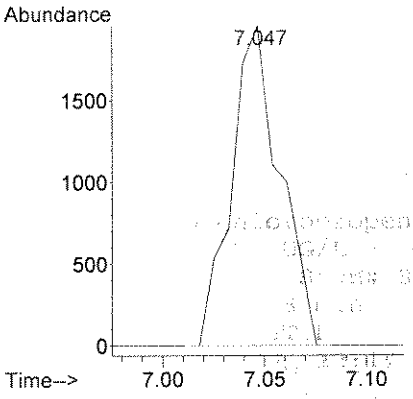






#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5226T.D
Acq: 7 Nov 2009 12:47

Tgt Ion: 75 Resp: 3245



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864544

Method SW846-8260B
Sample Description 167S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5227T.D Date/Time 07Nov09 13:13:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | BDL | 10 | | UG/L | |
| 107-02-8 | 105 | ACROLEIN | BDL | 50 | | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | BDL | 10 | | UG/L | |
| 71-43-2 | 151 | BENZENE | BDL | 1.0 | | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | BDL | 1.0 | | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | BDL | 1.0 | | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | BDL | 1.0 | | UG/L | |
| 75-25-2 | 197 | BROMOFORM | BDL | 1.0 | | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | BDL | 1.0 | | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | BDL | 1.0 | | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | BDL | 1.0 | | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | BDL | 1.0 | | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | BDL | 1.0 | | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | BDL | 1.0 | | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | BDL | 1.0 | | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | BDL | 1.0 | | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | BDL | 1.0 | | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | BDL | 1.0 | | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | BDL | 1.0 | | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | BDL | 1.0 | | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | BDL | 1.0 | | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | BDL | 1.0 | | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | BDL | 1.0 | | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | BDL | 1.0 | | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | BDL | 1.0 | | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | BDL | 1.0 | | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | BDL | 1.0 | | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | BDL | 1.0 | | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | BDL | 1.0 | | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | BDL | 2.0 | | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | BDL | 1.0 | | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | BDL | 1.0 | | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | BDL | 1.0 | | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | BDL | 1.0 | | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | BDL | 1.0 | | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | BDL | 1.0 | | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | BDL | 1.0 | | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | BDL | 1.0 | | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | BDL | 1.0 | | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | BDL | 1.0 | | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | BDL | 1.0 | | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | BDL | 1.0 | | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | BDL | 10 | | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | BDL | 10 | | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | BDL | 1.0 | | UG/L | |

11/11/09

59169b

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864544

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 99 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 101 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 90 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 95 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864544

Method SW846-8260B
Sample Description 167S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5227T Date/Time 11/7/09 13:
Dilution Factor 1

Prep :
Analytical Comments

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 293 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 718 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 83 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 239 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 275 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 528 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

59169b

# Heritage Environmental Services, LLC

A864544

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 99 | | | % Rec |
| 726 | TOLUENE-D8 | | 101 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 90 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 85 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5227T.D
Acq On : 7 Nov 2009 13:13
Operator : HAROLD
Sample : A864544
Misc :
ALS Vial : 15 Sample Multiplier: 1

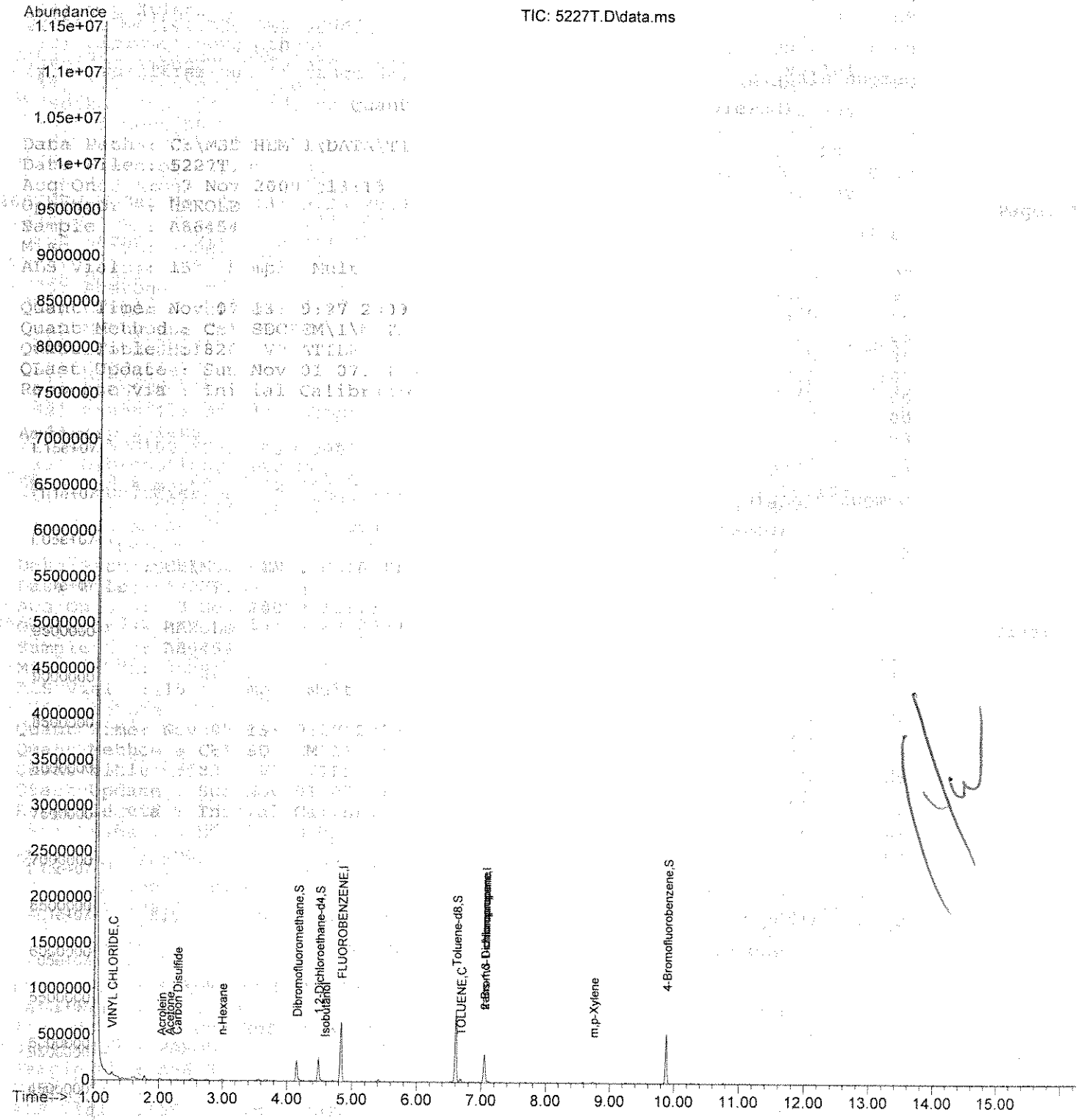
Quant Time: Nov 07 13:29:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 587763 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 189086 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 132049 | 9.51 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 95.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 163381 | 9.87 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 98.70% | |
| 50) Toluene-d8 | 6.602 | 98 | 534621 | 10.12 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 101.20% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 144593 | 8.96 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 89.60% | |
| Target Compounds | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 10062 | 0.73 | UG/L | 97 |
| 8) Acrolein | 2.047 | 56 | 1003 | 0.98 | UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 8492 | 1.41 | UG/L | 93 |
| 13) Carbon Disulfide | 2.283 | 76 | 18137 | 0.49 | UG/L | 96 |
| 14) Methylene Chloride | 2.520 | 84 | 4084 | Below | Cal # | 68 |
| 37) Isobutanol | 4.575 | 43 | 952 | 1.01 | UG/L # | 25 |
| 39) n-Hexane | 2.999 | 57 | 6862 | 0.26 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 25349 | 0.50 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3497 | 0.24 | UG/L | 100 |
| 64) m,p-Xylene | 8.744 | 106 | 4853 | 0.21 | UG/L # | 58 |

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

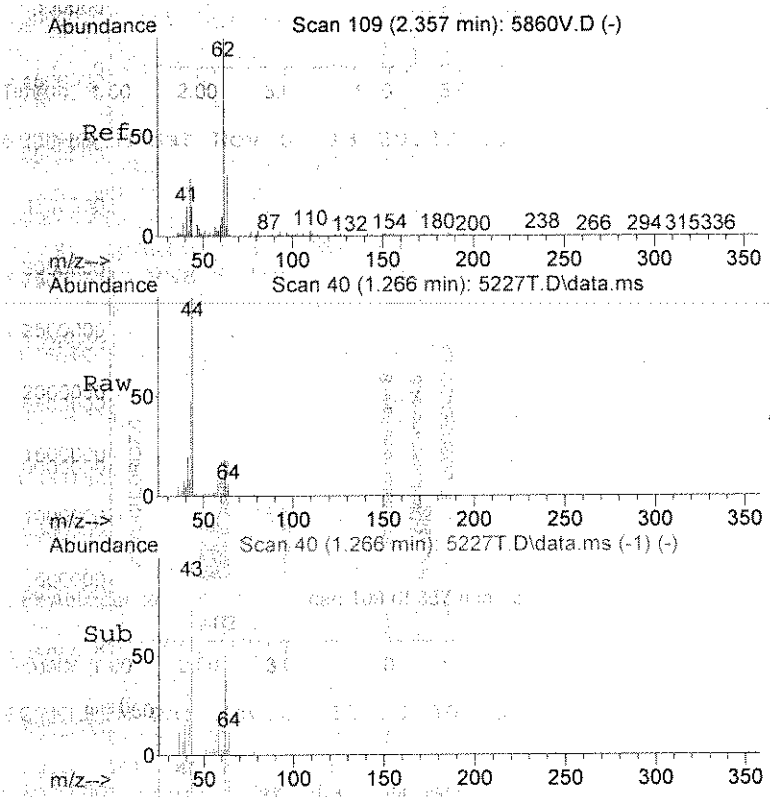
Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5227T.D
Acq On : 7 Nov 2009 13:13
Operator : HAROLD
Sample : A864544
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 07 13:29:27 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





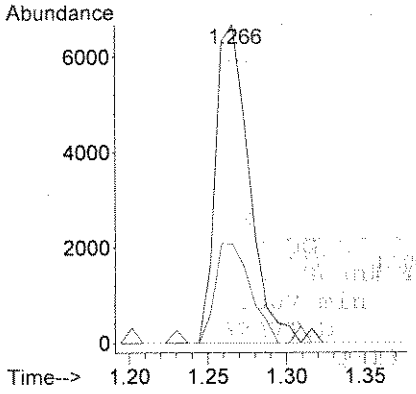

59169b

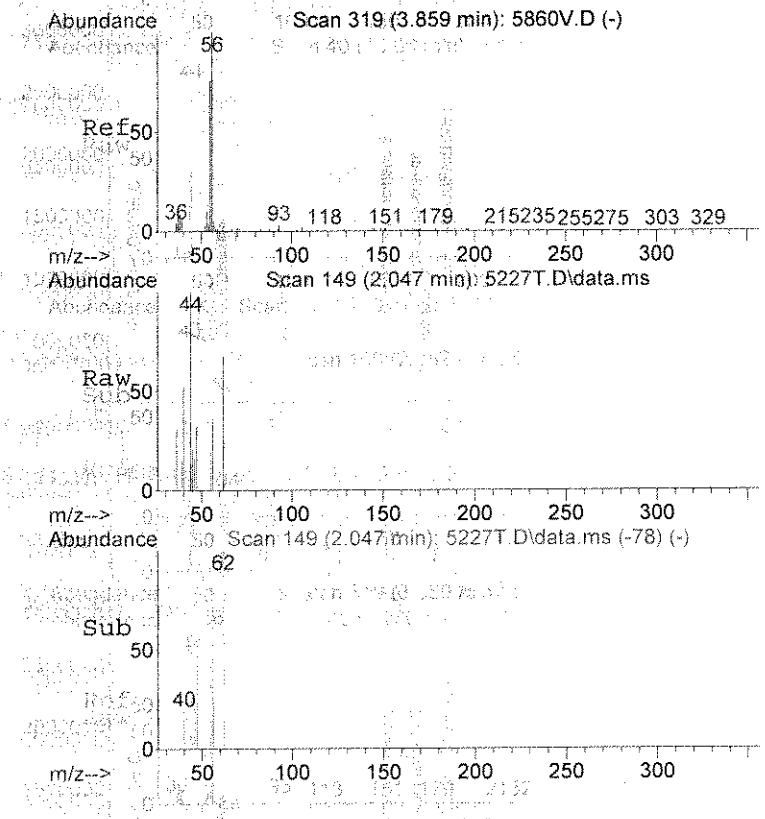



#4
VINYL CHLORIDE
Concen: 0.73 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 62 Resp: 10062

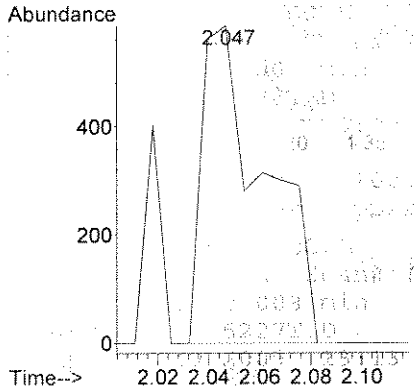
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.6 | 24.9 | 37.3 |

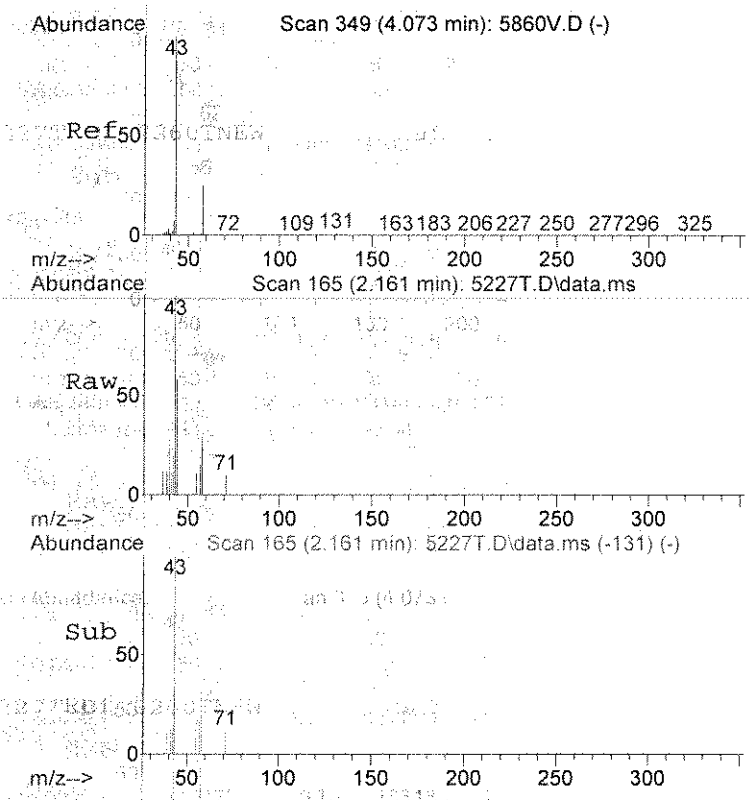



#8
Acrolein
Concen: 0.98 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 56 Resp: 1003

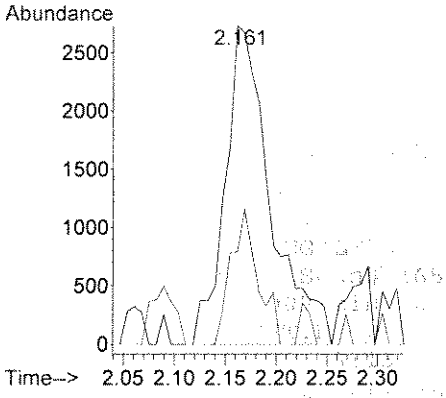


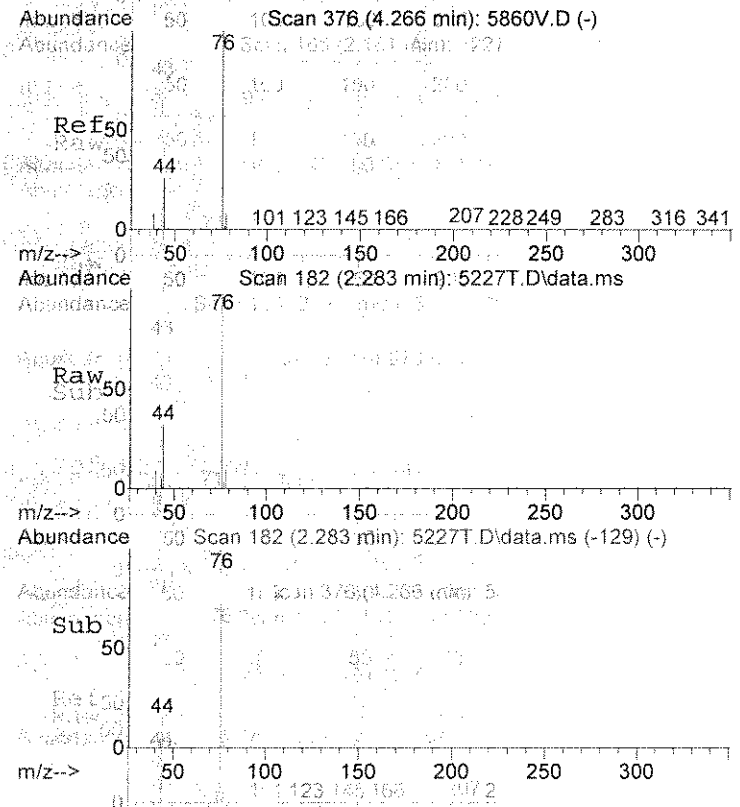



#9
Acetone
Concen: 1.41 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 43 Resp: 8492

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.4 | 23.1 | 34.7 |

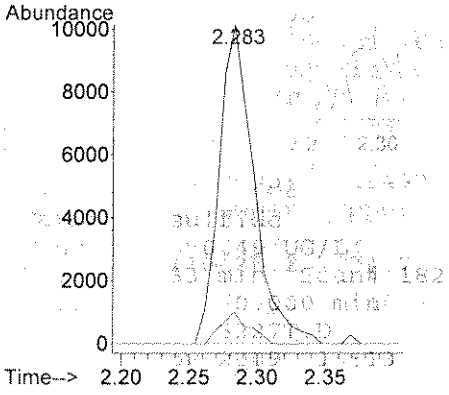


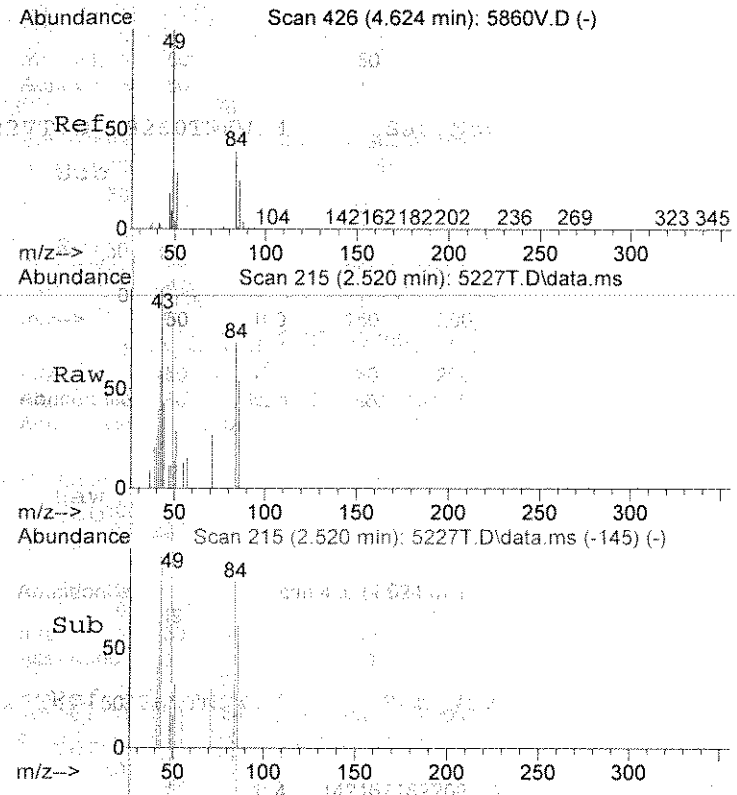




#13
Carbon Disulfide
Concen: 0.49 UG/L
RT: 2.283 min Scan# 182
Delta R.T. -0.000 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 76 Resp: 18137

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.0 | 7.5 | 11.3 |

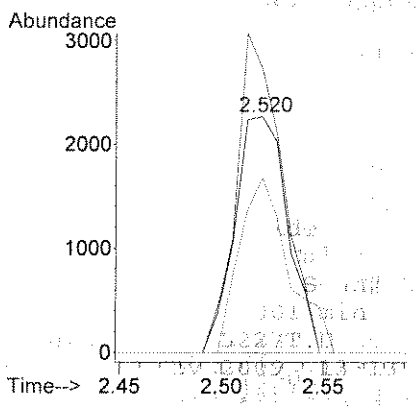


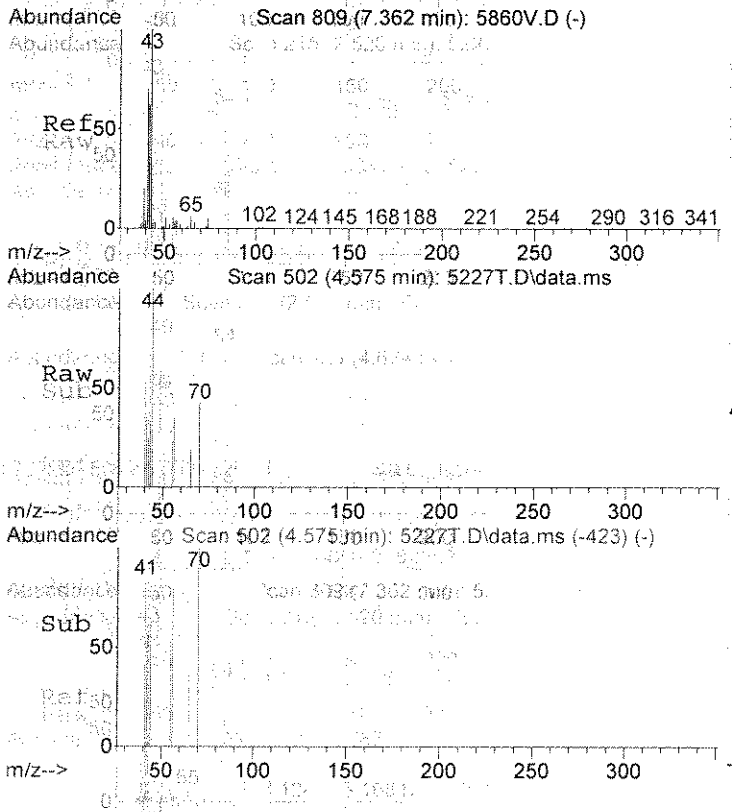



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 84 Resp: 4084

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 118.0 | 140.2 | 210.2# |
| 86 | 70.0 | 51.1 | 76.7 |

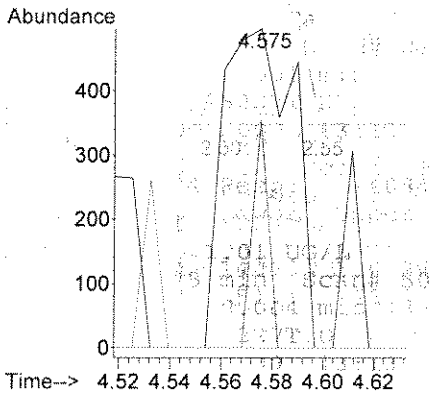



#37
Isobutanol
Concen: 1.01 UG/L
RT: 4.575 min Scan# 502
Delta R.T. 0.064 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

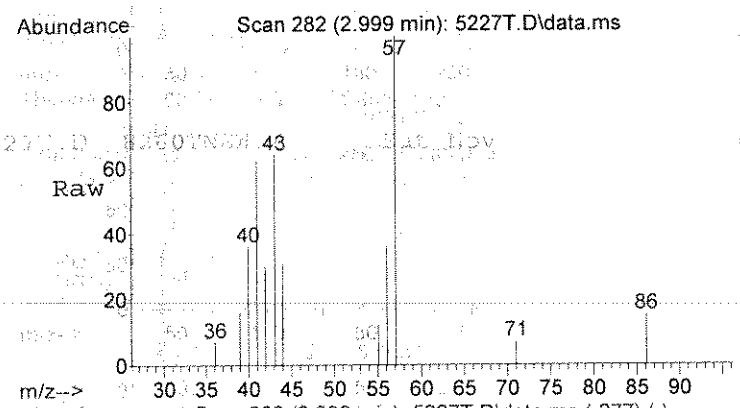
Tgt Ion: 43 Resp: 952

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |



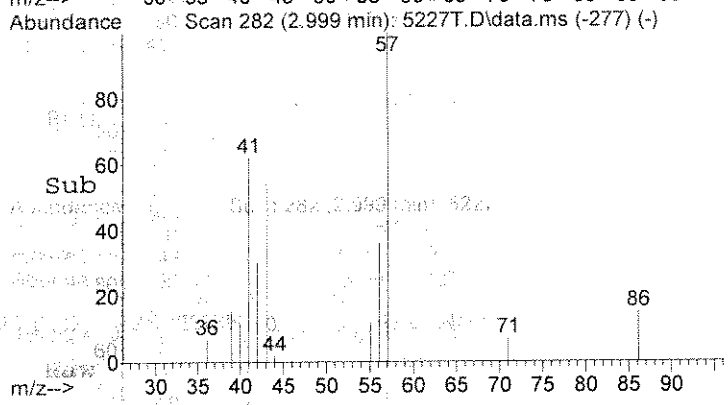


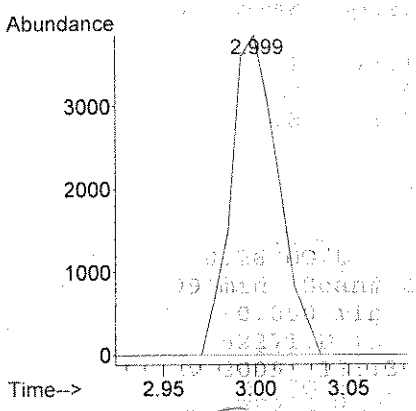

59169b

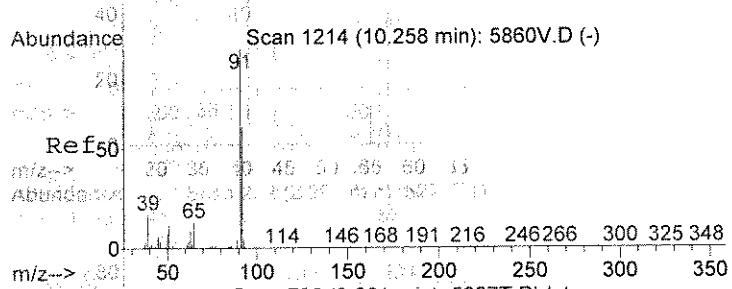



#39
n-Hexane
Concen: 0.26 UG/L
RT: 2.999 min Scan# 282
Delta R.T. -0.000 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 57 Resp: 6862

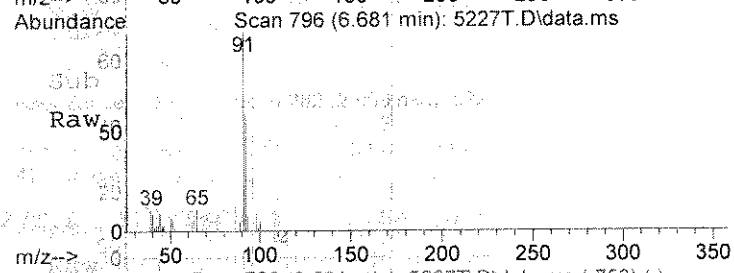


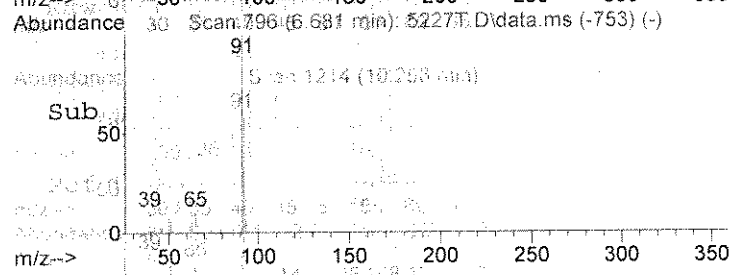



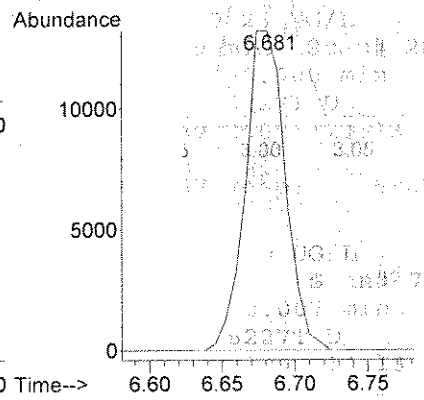



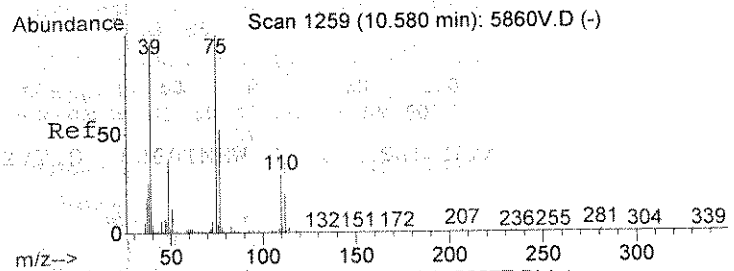

#51
TOLUENE
Concen: 0.50 UG/L
RT: 6.681 min Scan# 796
Delta R.T. -0.007 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 91 Resp: 25349



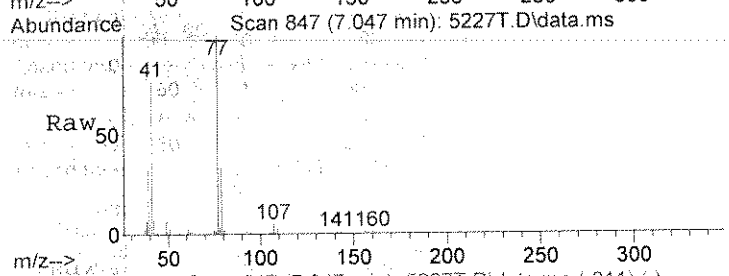



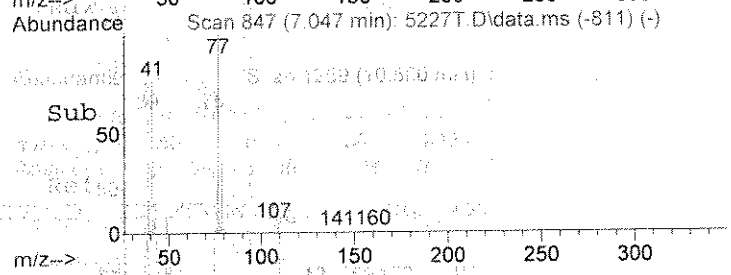



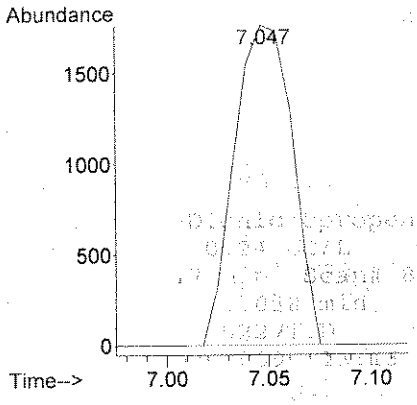


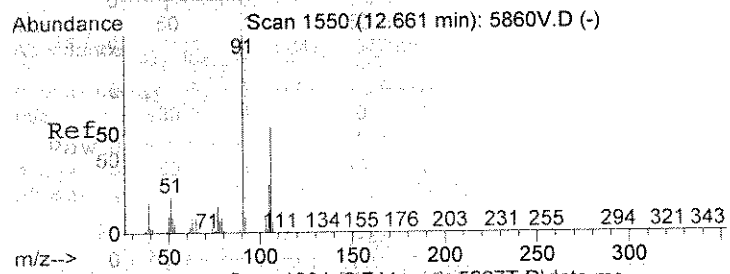

#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion: 75 Resp: 3497



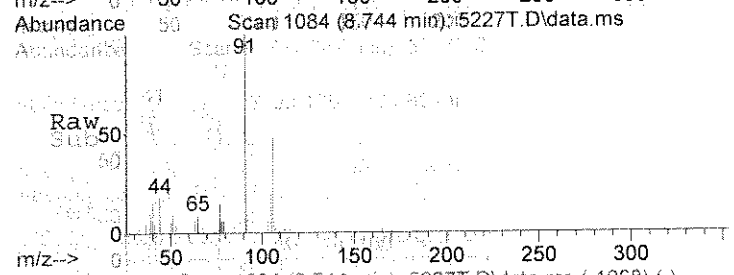



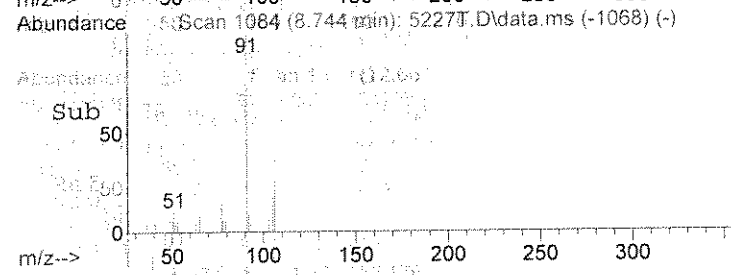



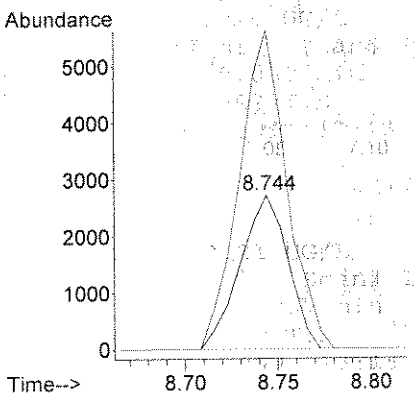

#64
m,p-Xylene
Concen: 0.21 UG/L
RT: 8.744 min Scan# 1084
Delta R.T. -0.007 min
Lab File: 5227T.D
Acq: 7 Nov 2009 13:13

Tgt Ion:106 Resp: 4853

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 206.5 | 122.4 | 183.6# |



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864545

Method SW846-8260B
Sample Description 167D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5228T.D Date/Time 07Nov09 13:39:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | EX | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | 25 | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 10 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 1.0 | UG/L | |

11/11/09

R560082 Heritage Environmental Services, LLC A864545

GC/MS VOA

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 171 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 34 | | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 2.0 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 90 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** Dilution necessary due to high concentration of target analytes. Prep Method SW846-5030B Purge and Trap

**Qualifiers**

EX Exceeds calibration range. See Replicate

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864545

ORIGINAL

Method SW846-8260B
Sample Description 167D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 5228T Date/Time 11/7/09 13:3
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 600 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 7 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 8 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | EX | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 25 | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 93 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 375 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |
| 245 | [illegible] | | | | [illegible] | ug/L | | |
| 736 | [illegible] | | | | [illegible] | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |

TC#89

59169b

A864545

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | EX 34 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 97 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 90 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 94 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5228T.D
Acq On : 7 Nov 2009 13:39
Operator : HAROLD
Sample : A864545
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 07 13:55:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 605565 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 195499 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 133986 | 9.37 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 93.70% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 165930 | 9.73 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.30% | |
| 50) Toluene-d8 | 6.603 | 98 | 555438 | 10.20 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.00% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 149723 | 8.97 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 89.70% | |
| **Target Compounds** | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 487411 | 34.25 | UG/L | 100 |
| 8) Acrolein | 2.047 | 56 | 886 | 0.84 | UG/L | 100 |
| 9) Acetone | 2.169 | 43 | 9021 | 1.46 | UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.118 | 96 | 3810 | 0.32 | UG/L | 100 |
| 14) Methylene Chloride | 2.512 | 84 | 4515 | Below | Cal # | 66 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 344160 | 25.02 | UG/L | 99 |
| 20) 2-Butanone | 3.673 | 72 | 65914 | 26.89 | UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 9757764 | 667.53 | UG/L | 82 |
| 52) trans-1,3-Dichloropropene | 7.039 | 75 | 3256 | 0.22 | UG/L | 100 |

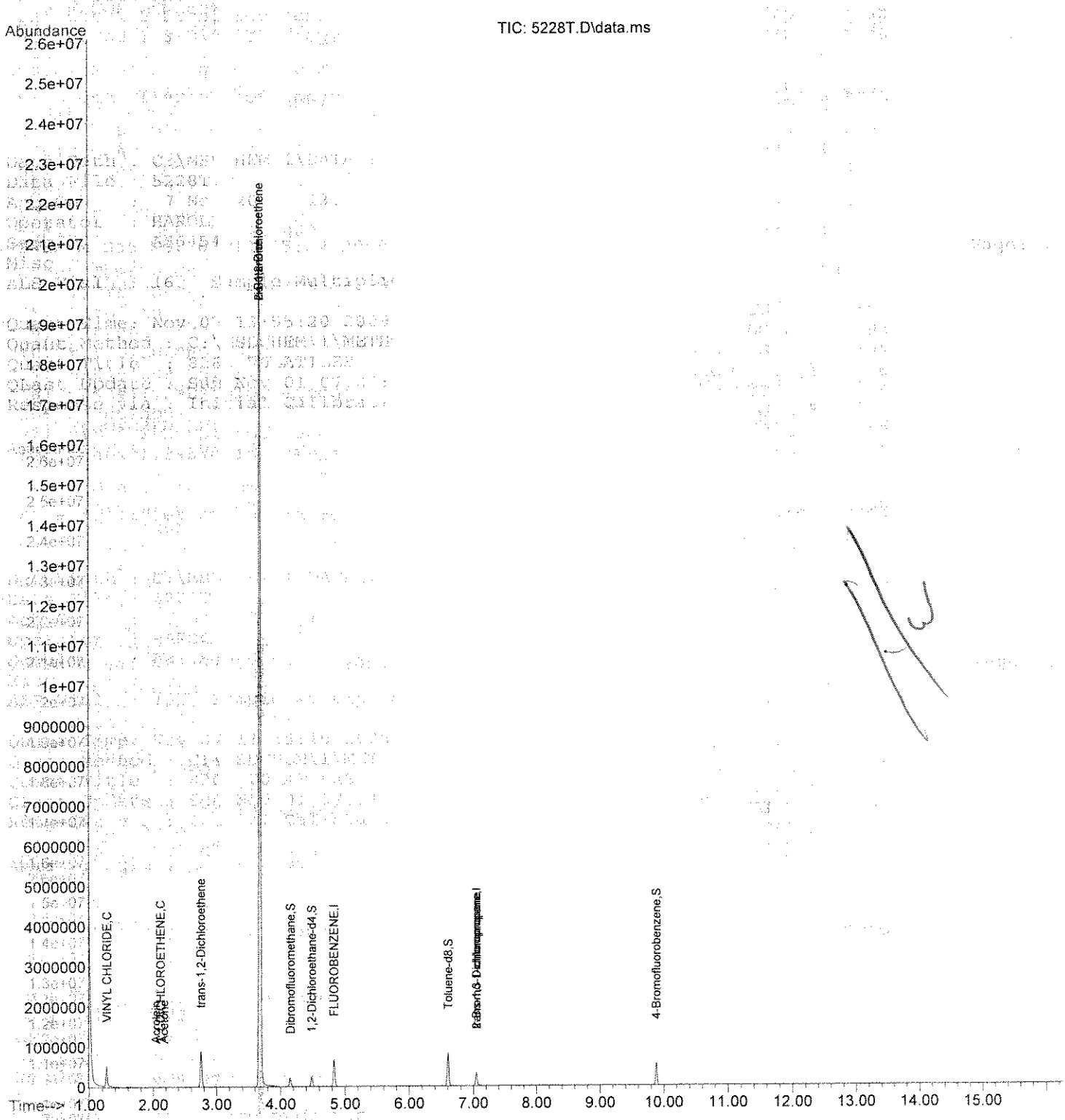
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

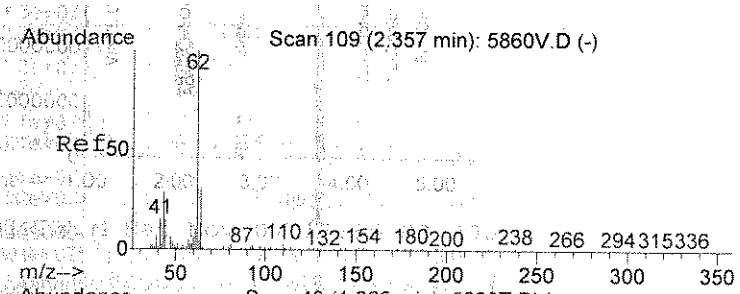
Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5228T.D
Acq On : 7 Nov 2009 13:39
Operator : HAROLD
Sample : A864545
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 07 13:55:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





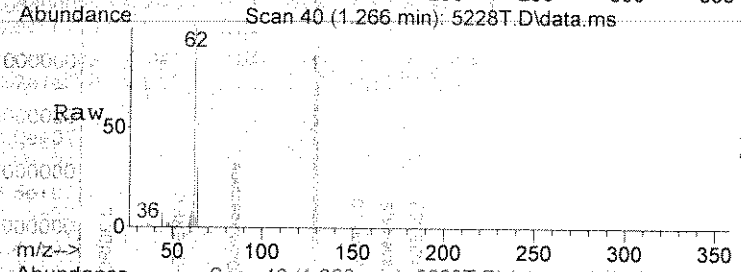

59169b

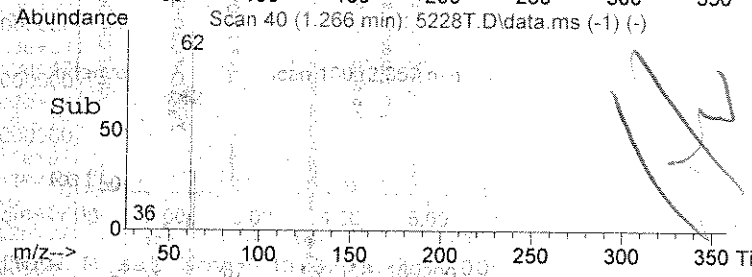


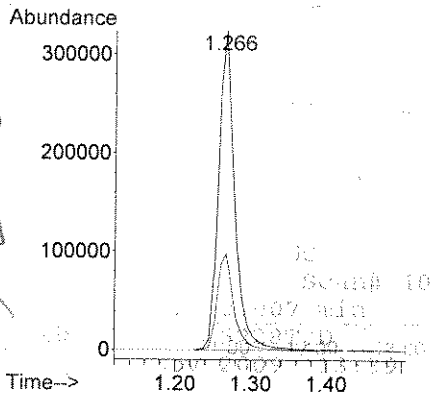

#4
VINYL CHLORIDE
Concen: 34.25 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

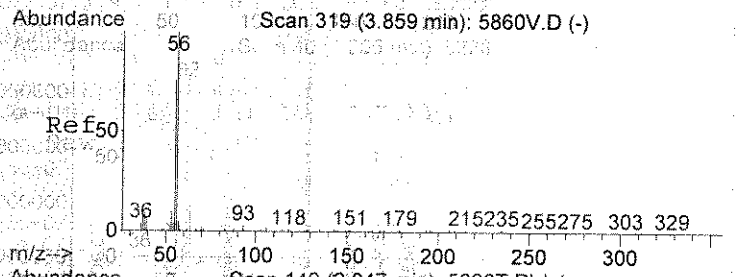
Tgt Ion: 62 Resp: 487411

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.1 | 24.9 | 37.3 |



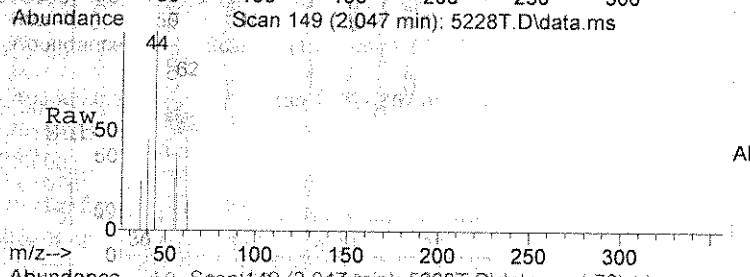



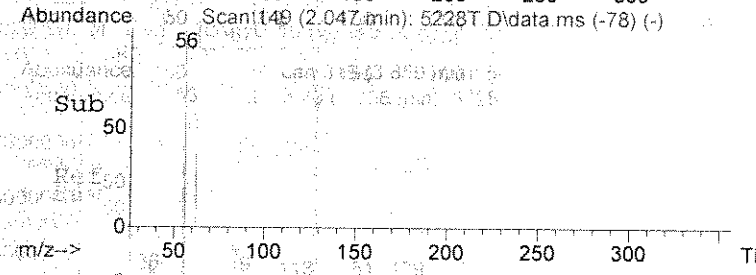



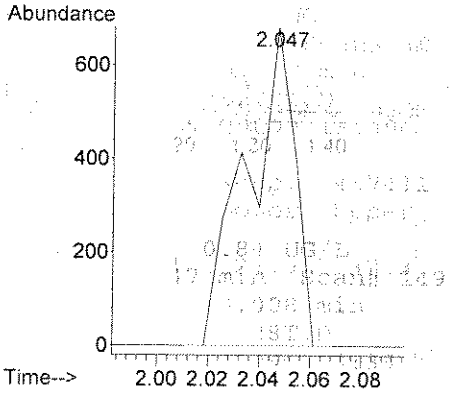



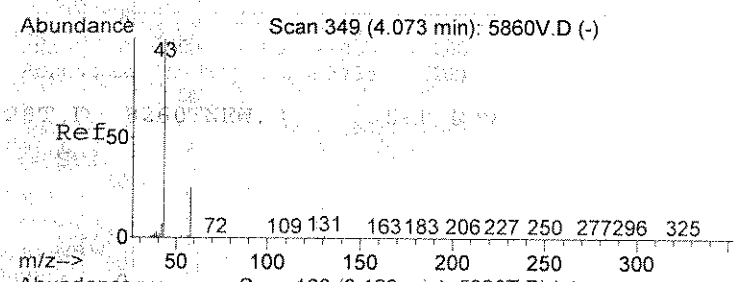

#8
Acrolein
Concen: 0.84 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 56 Resp: 886



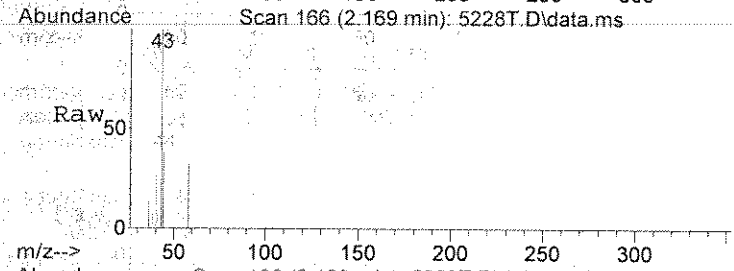



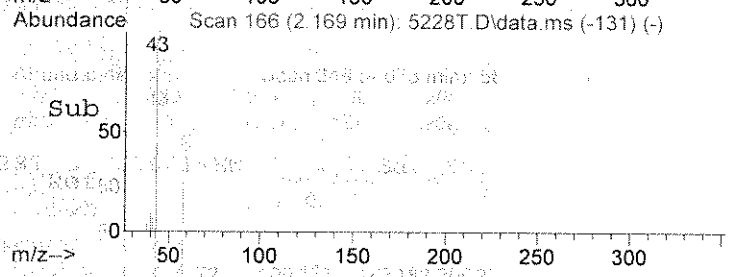


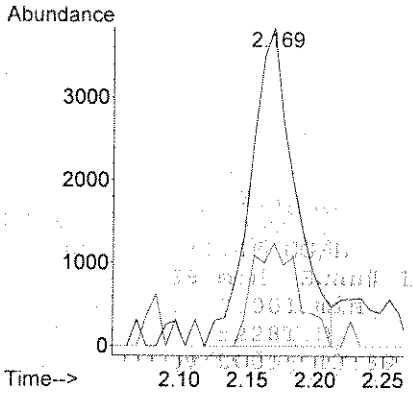

#9
Acetone
Concen: 1.46 UG/L
RT: 2.169 min Scan# 166
Delta R.T. 0.001 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

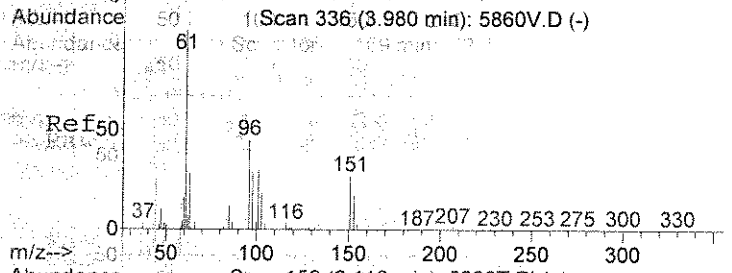
Tgt Ion: 43 Resp: 9021

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.6 | 23.1 | 34.7 |



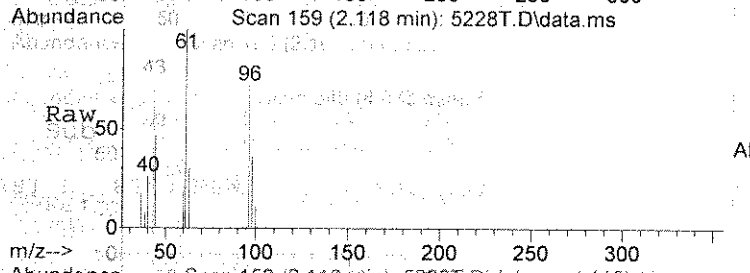



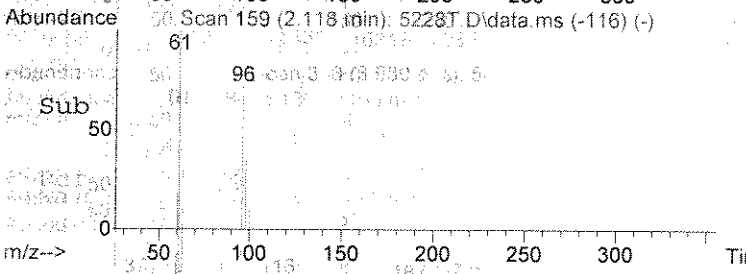



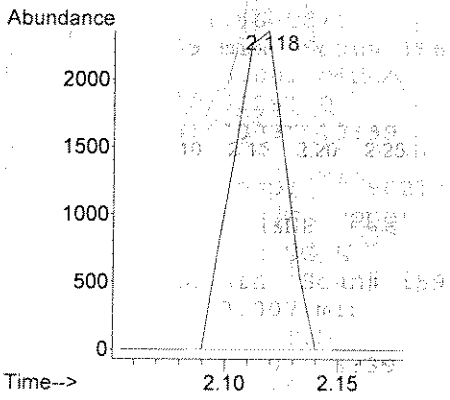



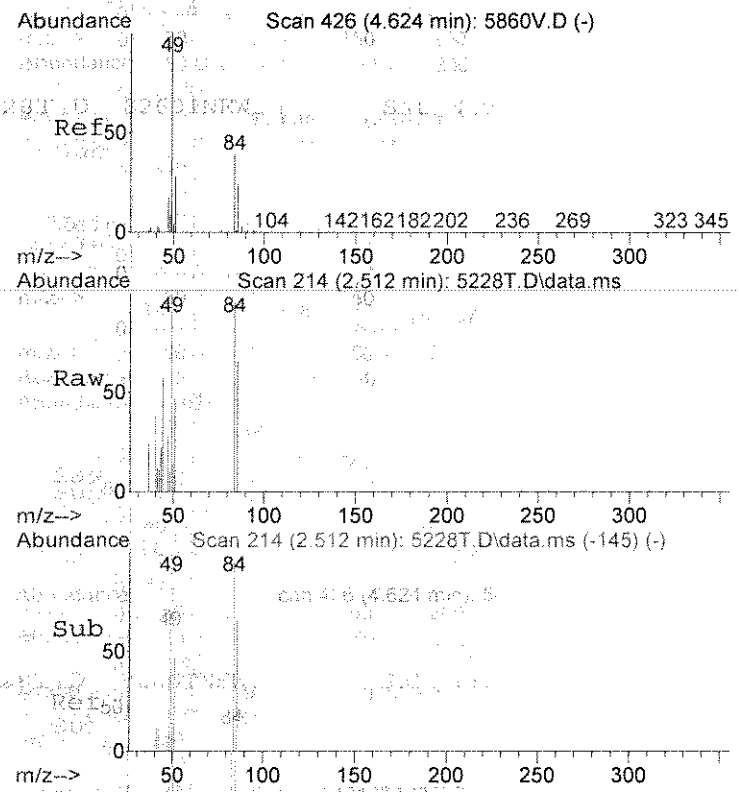

#10
1,1-DICHLOROETHENE
Concen: 0.32 UG/L
RT: 2.118 min Scan# 159
Delta R.T. 0.007 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 96 Resp: 3810



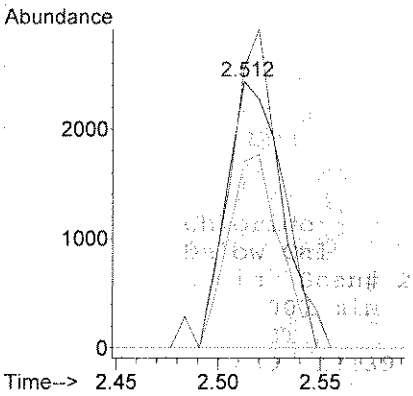



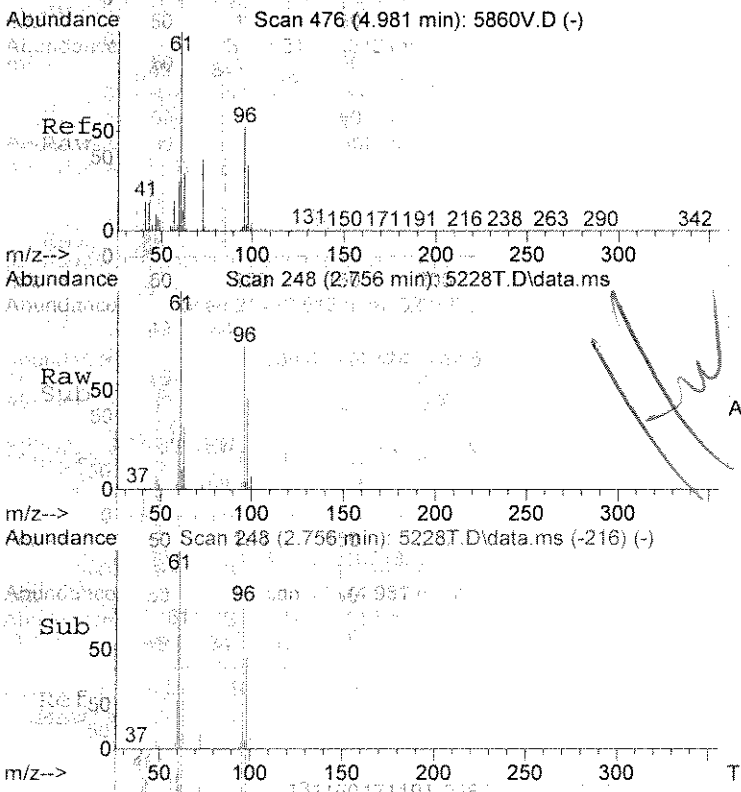



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 84 Resp: 4515

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 115.2 | 140.2 | 210.2# |
| 86 | 71.3 | 51.1 | 76.7 |

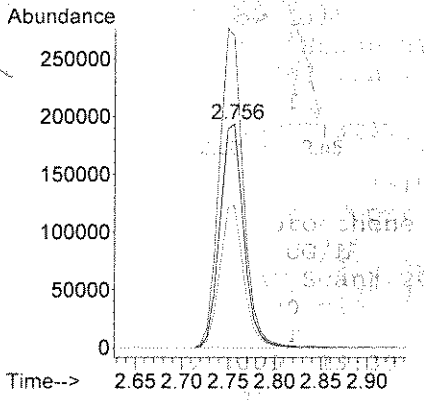


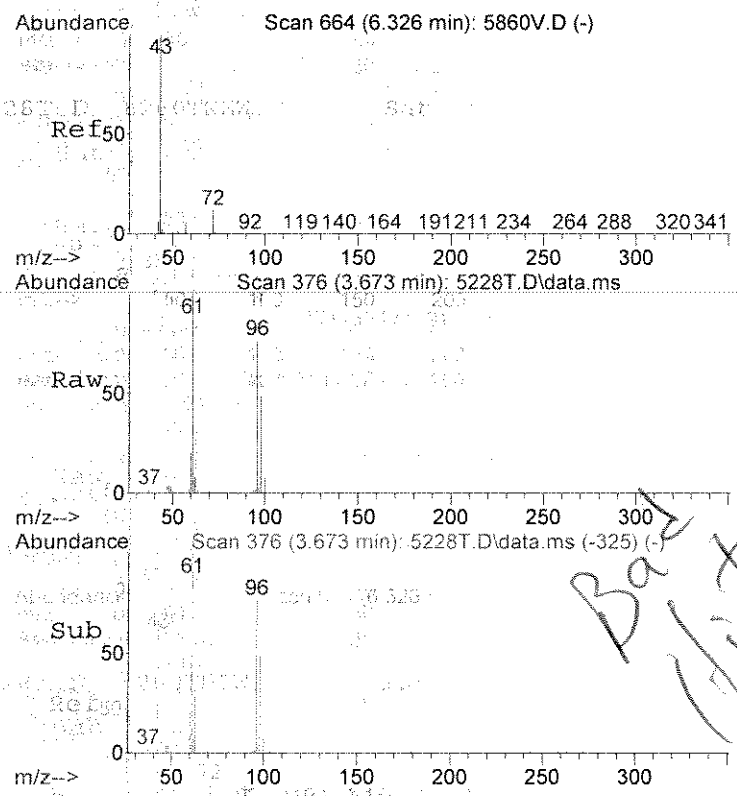




#18
trans-1,2-Dichloroethene
Concen: 25.02 UG/L
RT: 2.756 min Scan# 248
Delta R.T. 0.000 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 96 Resp: 344160

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 144.0 | 114.1 | 171.1 |
| 98 | 63.8 | 50.7 | 76.1 |

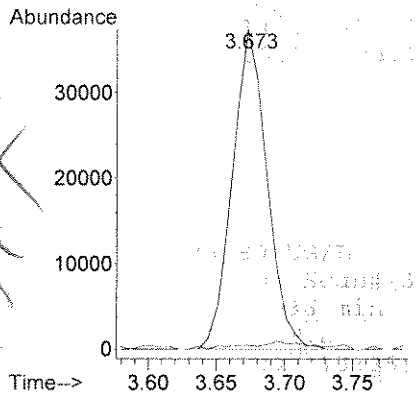


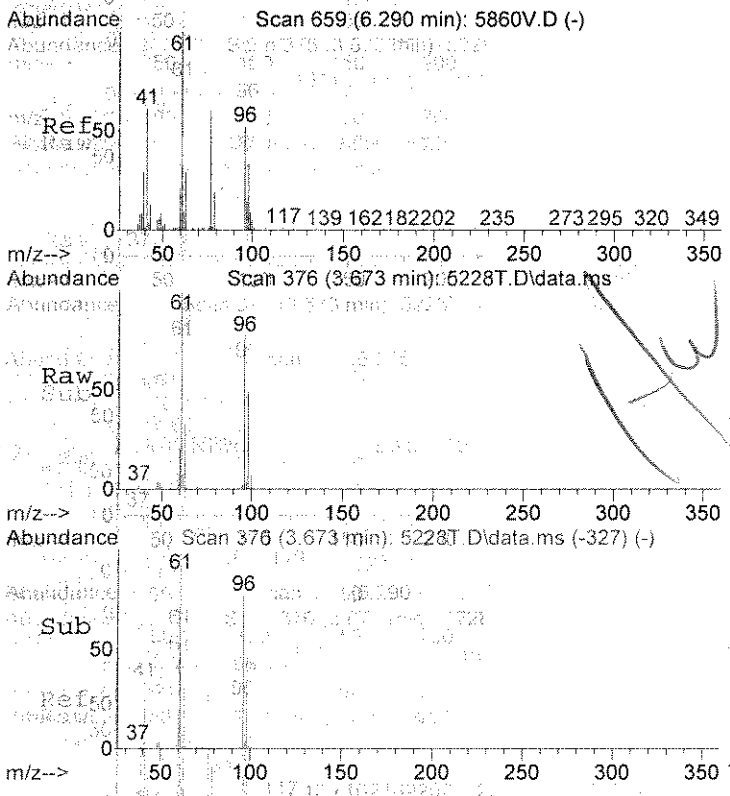



#20
2-Butanone
Concen: 26.89 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 72 Resp: 65914

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 4.2 | 449.0 | 673.4# |

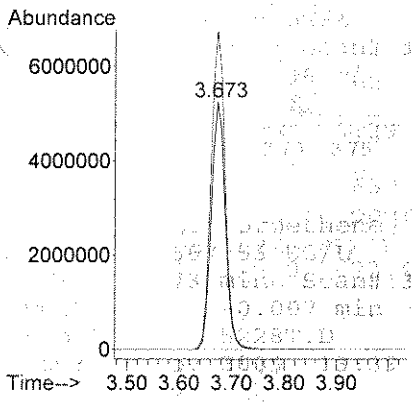


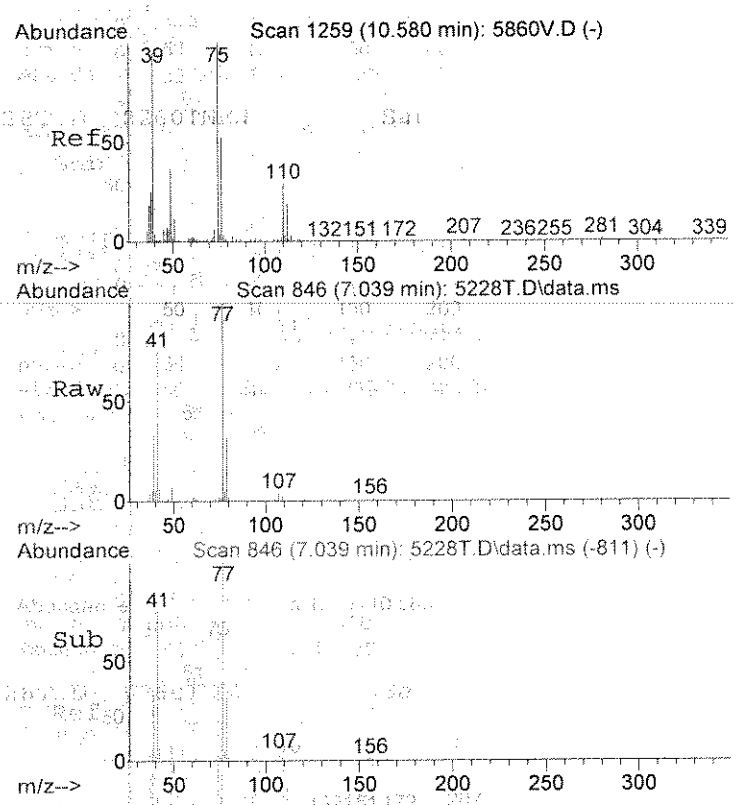




#22
cis-1,2-Dichloroethene
Concen: 667.53 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 96 Resp: 9757764

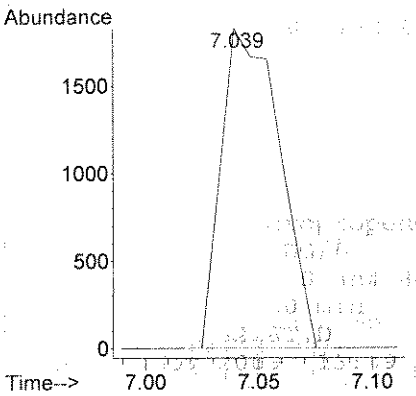
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.3 | 121.8 | 182.6 |






#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.039 min Scan# 846
Delta R.T. 0.050 min
Lab File: 5228T.D
Acq: 7 Nov 2009 13:39

Tgt Ion: 75 Resp: 3256



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864555

Method SW846-8260B
Sample Description 156
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5216T.D Date/Time 07Nov09 08:31:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 79-01-6 | 750 | TRICHLOROETHENE | 140 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 103 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 86 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 95 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/11/09

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864555

Repol

Method : SW846-8260B
Sample Description 156
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 52167 Date/Time 11/7/09 8:3
Dilution Factor 1:10 10:00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 293 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 718 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 81 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

59169b

# Heritage Environmental Services, LLC

A864555

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 436 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1922 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3632 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 135 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | 140 | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 26 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 970 | SURROGATE RECOVERY | | | | | |
| 972 | | | 97 | | | |
| 301 | DICHLOROETHANE-D4 | | | | | %Rec |
| 726 | TOLUENE-D8 | | 103 | | | %Rec |
| 186 | 4-BROMOFLUOROBENZENE | | 86 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 95 | | | %Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5216T.D
Acq On : 7 Nov 2009 8:31
Operator : HAROLD
Sample : A864555 1:10
Misc : REP01
ALS Vial : 4 Sample Multiplier: 1

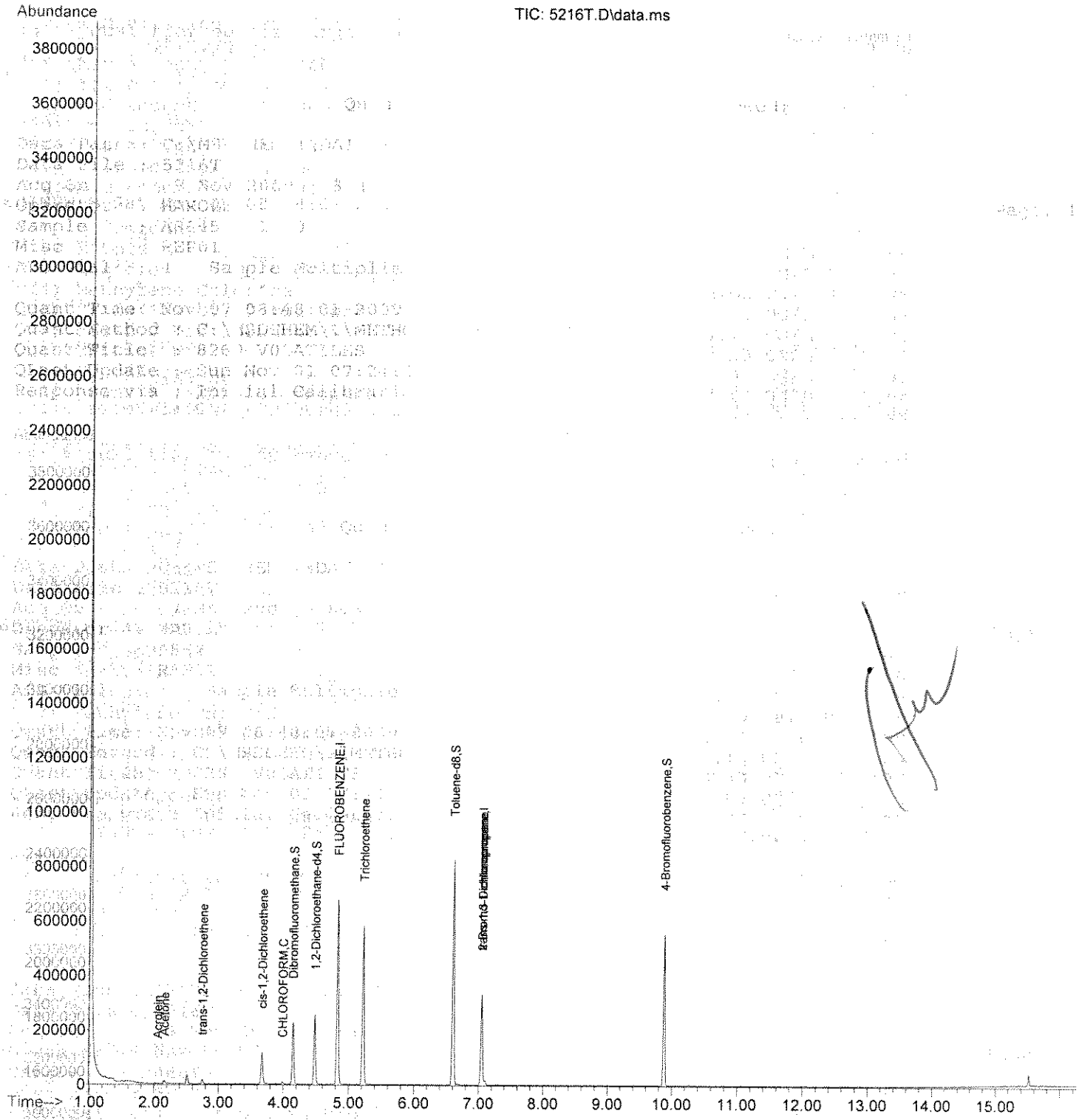
Quant Time: Nov 07 08:48:01 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 613893 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 206539 | 10.00 UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 137458 | 9.48 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.80% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 167205 | 9.67 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.70% | |
| 50) Toluene-d8 | 6.603 | 98 | 566200 | 10.26 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.60% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 151801 | 8.61 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 86.10% | |
| **Target Compounds** | | | | | Qvalue |
| 8) Acrolein | 2.047 | 56 | 891 | 0.83 UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 17816 | 2.84 UG/L # | 89 |
| 14) Methylene Chloride | 2.520 | 84 | 14347 | Below Cal # | 75 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 4270 | 0.31 UG/L | 99 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 45961 | 3.10 UG/L | 83 |
| 24) CHLOROFORM | 3.988 | 83 | 6735 | 0.30 UG/L | 97 |
| 40) Trichloroethene | 5.220 | 130 | 195532 | 13.99 UG/L | 95 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3704 | 0.25 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5216T.D
Acq On : 7 Nov 2009 8:31
Operator : HAROLD
Sample : A864555 1:10
Misc : REP01
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 07 08:48:01 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

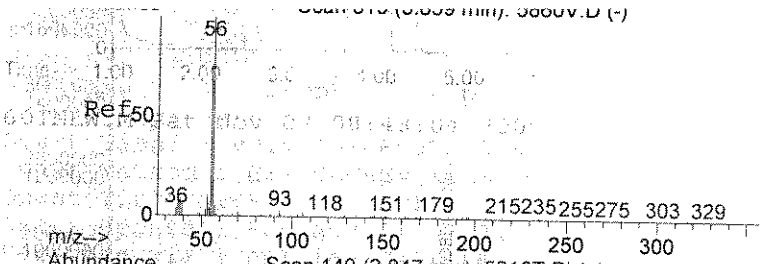


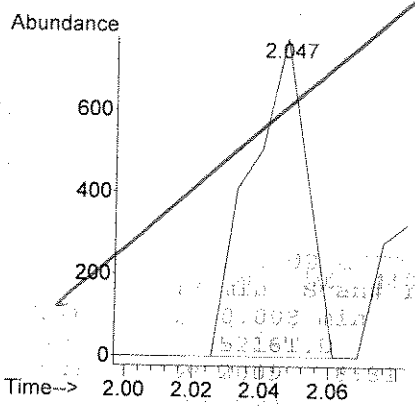



591696

#8
Acrolein
Concen: 0.83 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 56 Resp: 891

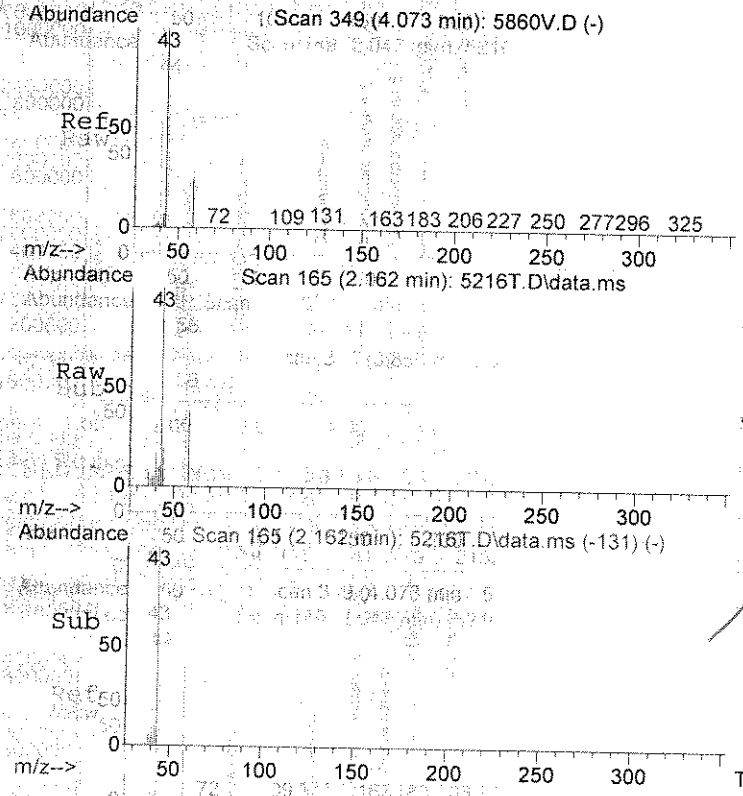


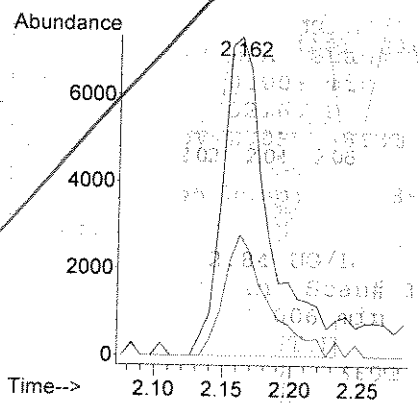



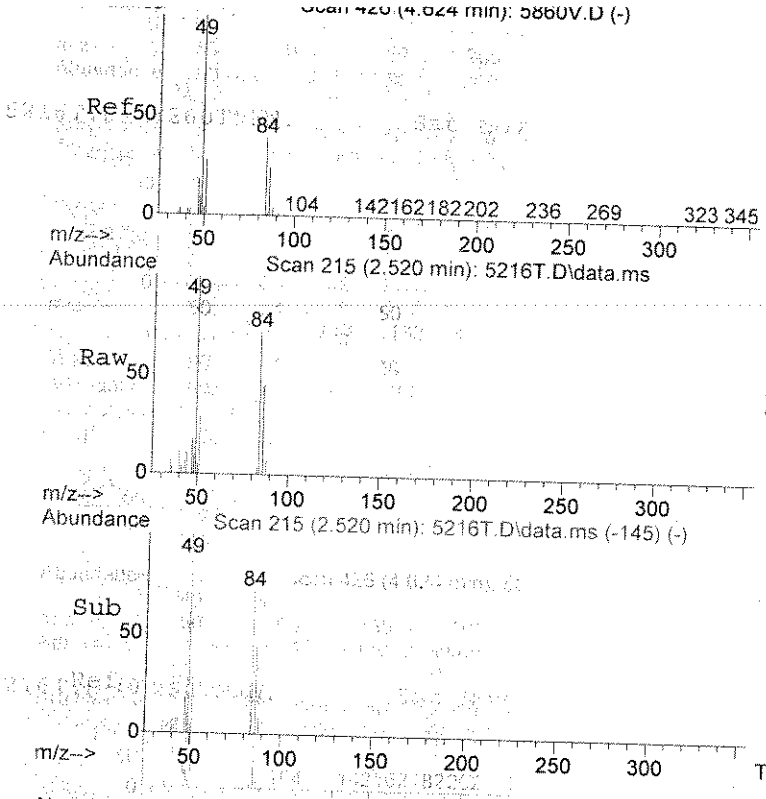

#9
Acetone
Concen: 2.84 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 43 Resp: 17816

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 34.9 | 23.1 | 34.7# |



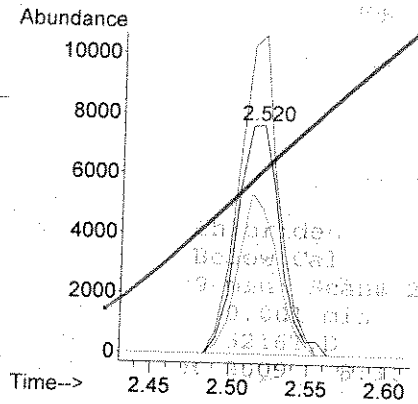



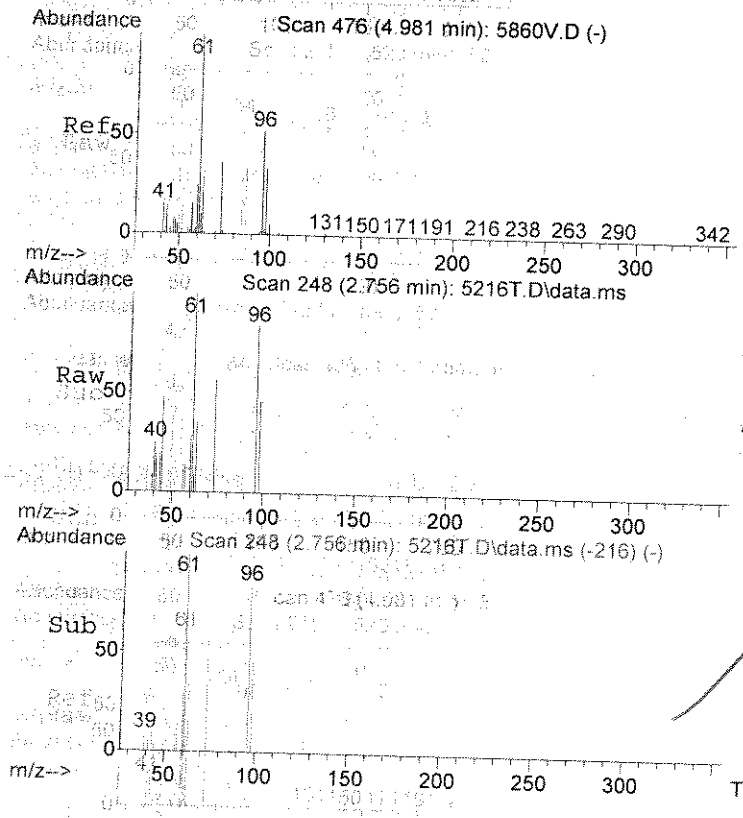



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 84 Resp: 14347

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 128.5 | 140.2 | 210.2# |
| 86 | 64.3 | 51.1 | 76.7 |

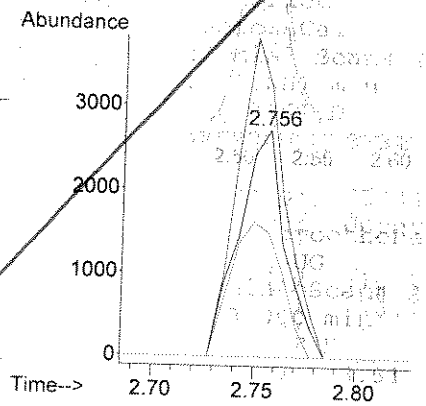


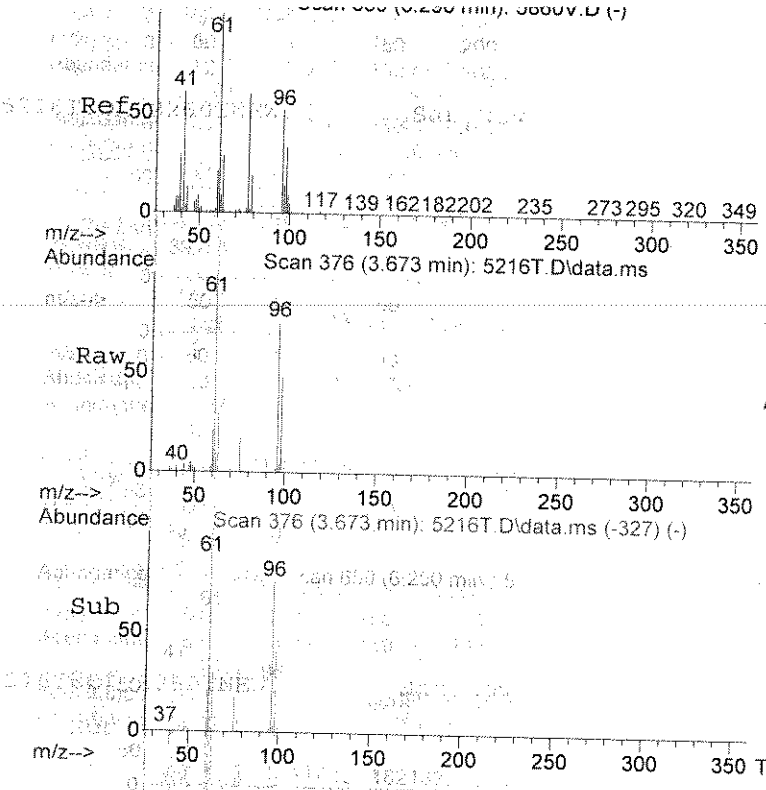




#18
trans-1,2-Dichloroethene
Concen: 0.31 UG/L
RT: 2.756 min Scan# 248
Delta R.T. 0.000 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 96 Resp: 4270

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 141.6 | 114.1 | 171.1 |
| 98 | 65.1 | 50.7 | 76.1 |

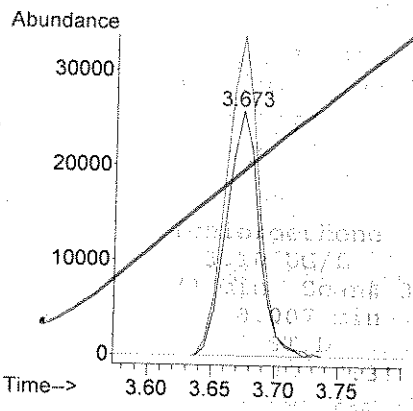


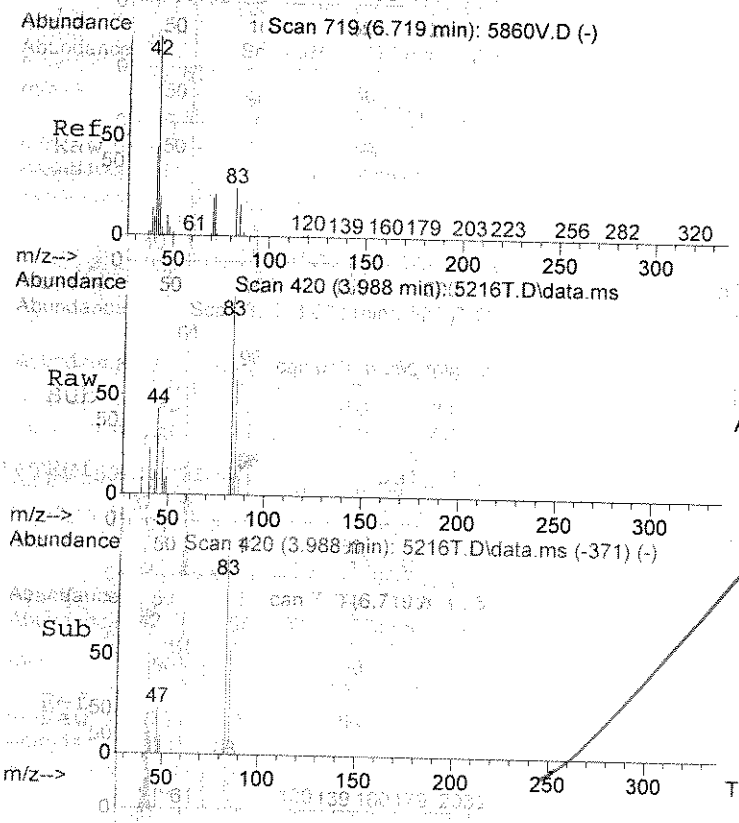



#22
cis-1,2-Dichloroethene
Concen: 3.10 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 96 Resp: 45961

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 130.2 | 121.8 | 182.6 |

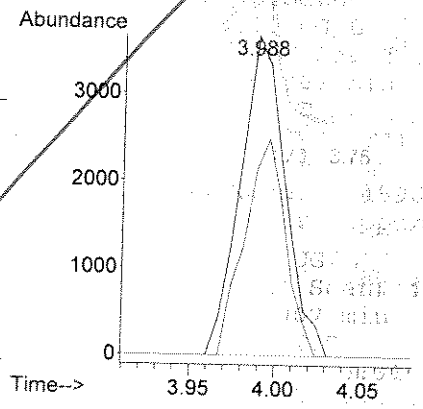


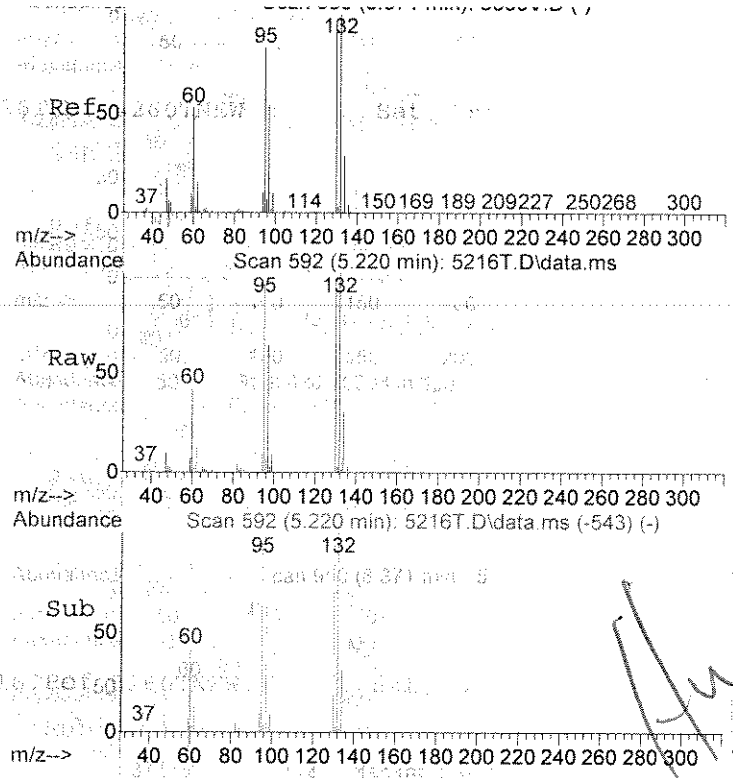




#24
CHLOROFORM
Concen: 0.30 UG/L
RT: 3.988 min Scan# 420
Delta R.T. -0.007 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 83 Resp: 6735

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 62.1 | 51.3 | 76.9 |

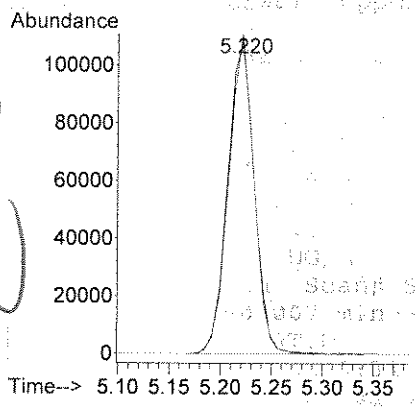


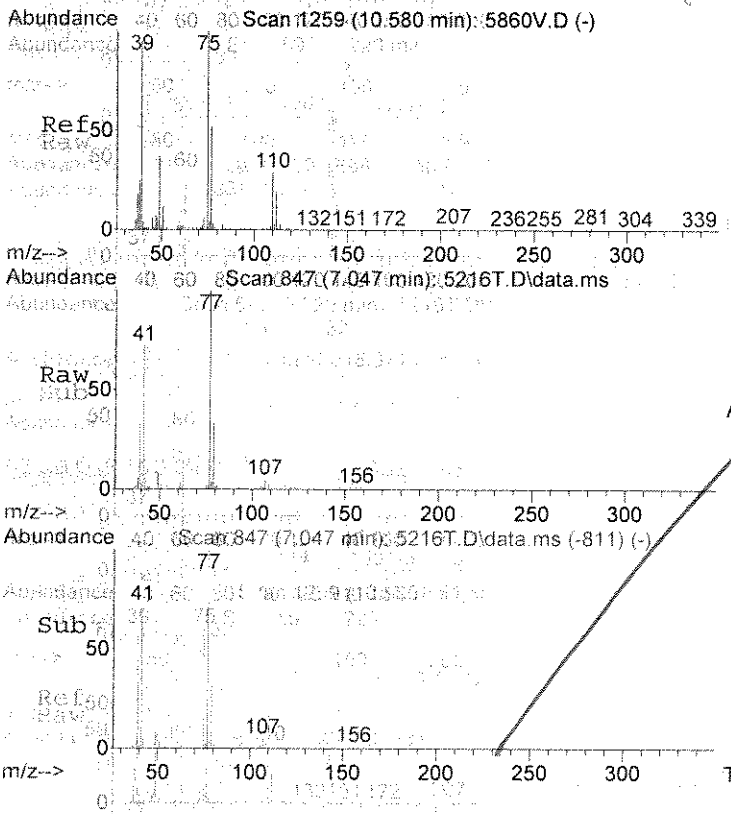



Trichloroethene
Concen: 13.99 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion:130 Resp: 195532

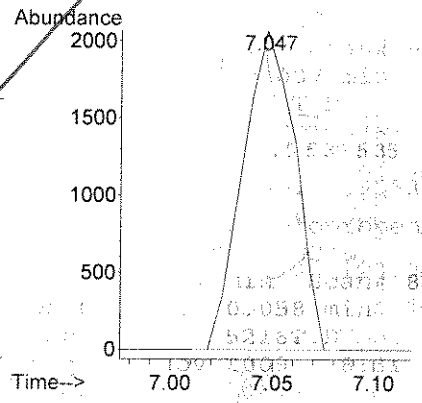
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 97.5 | 82.0 | 123.0 |




#52
trans-1,3-Dichloropropene
Concen: 0.25 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5216T.D
Acq: 7 Nov 2009 8:31

Tgt Ion: 75 Resp: 3704






59169b

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864558

Method SW846-8260B
Sample Description 157
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5217T.D Date/Time 07Nov09 08:57:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 79-01-6 | 750 | TRICHLOROETHENE | 92 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 101 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 93 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 98 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/11/09

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864558
Repo1

Method SW846-8260B
Sample Description 157
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 52177 Date/Time 11/7/09 8
Dilution Factor 1:10 (0.00)

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 181 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 293 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 715 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 83 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 233 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 273 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| [illegible] | [illegible] | | | | 10 | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |

# Heritage Environmental Services, LLC

GC/MS VOA

A864558

| | | | | | |
|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | 1.0 | ug/L |
| 680 | STYRENE | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | 1.0 | ug/L |
| 724 | TOLUENE | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | 92 | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | 2.0 | ug/L |
| 1804 | | | | | |
| 971 | SURROGATE RECOVERY | | | | |
| 972 | | | | | |
| 301 | DICHLOROETHANE-D4 | | 101 | | %Rec |
| 726 | TOLUENE-D8 | | 96 | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 93 | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 98 | | %Rec |

Comments to Laboratory (do not record)

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5217T.D
Acq On : 7 Nov 2009 8:57
Operator : HAROLD
Sample : A864558 1:10
Misc : REP01
ALS Vial : 5 Sample Multiplier: 1

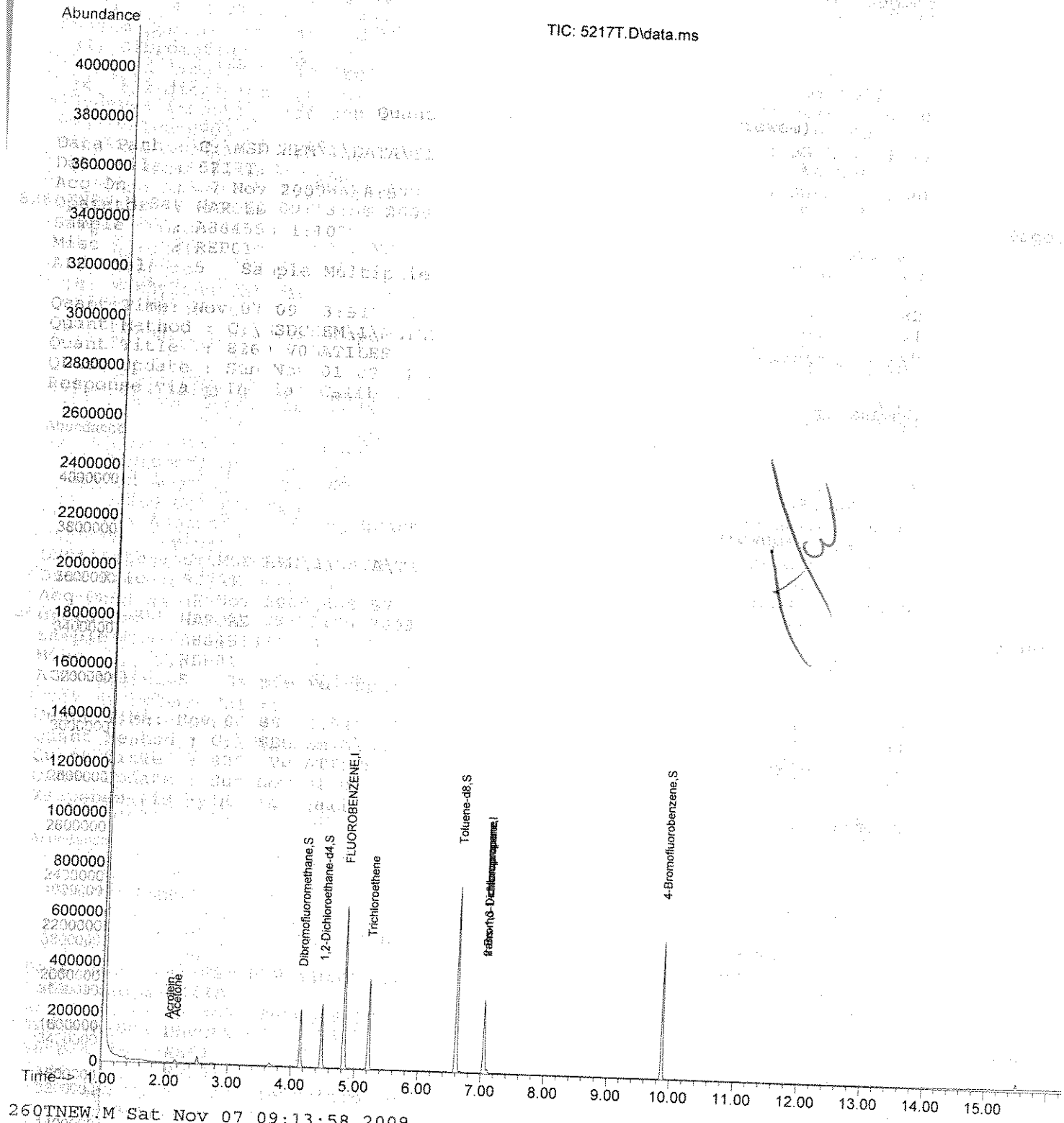
Quant Time: Nov 07 09:13:54 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 588347 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 181192 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 136623 | 9.83 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.30% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 166857 | 10.07 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.70% | |
| 50) Toluene-d8 | 6.603 | 98 | 508777 | 9.62 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.20% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 144333 | 9.33 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 93.30% | |
| Target Compounds | | | | | Qvalue |
| 8) Acrolein | 2.054 | 56 | 1034 | 1.01 UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 18814 | 3.13 UG/L | 99 |
| 14) Methylene Chloride | 2.520 | 84 | 12548 | Below Cal | 82 |
| 40) Trichloroethene | 5.220 | 130 | 122909 | 9.17 UG/L | 94 |
| 52) trans-1,3-Dichloropropene | 7.040 | 75 | 3020 | 0.21 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5217T.D
Acq On : 7 Nov 2009 8:57
Operator : HAROLD
Sample : A864558 1:10
Misc : REP01
ALS Vial : 5 Sample Multiplier: 1

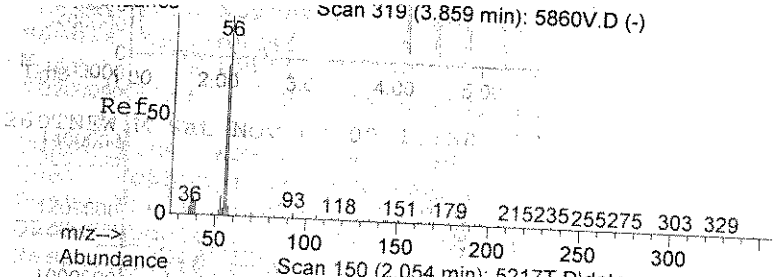
Quant Time: Nov 07 09:13:54 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




260TNEW.M Sat Nov 07 09:13:58 2009

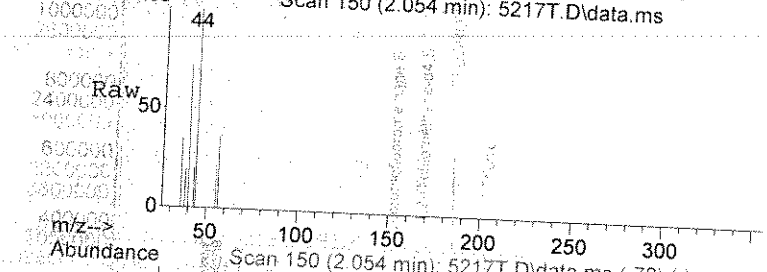


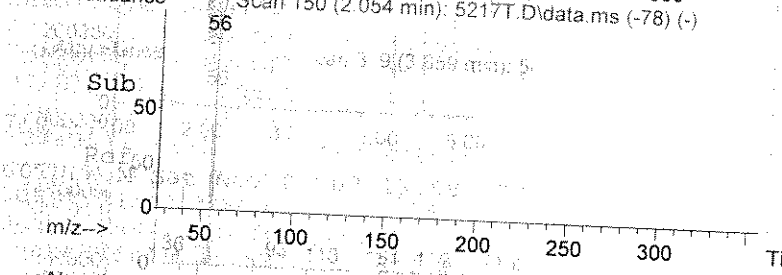
59169b

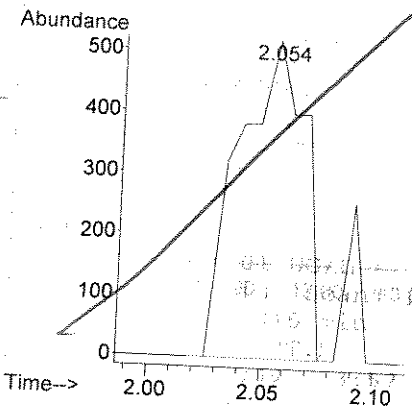


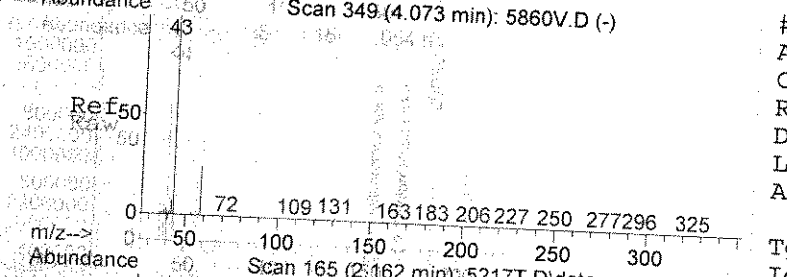

#8
Acrolein
Concen: 1.01 UG/L
RT: 2.054 min Scan# 150
Delta R.T. 0.015 min
Lab File: 5217T.D
Acq: 7 Nov 2009 8:57

Tgt Ion: 56 Resp: 1034



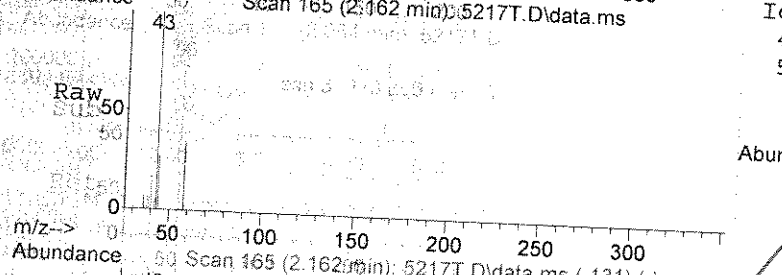



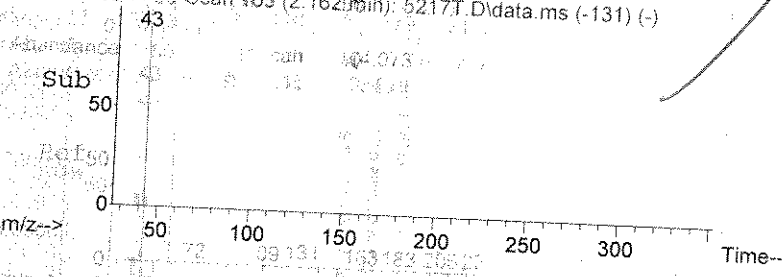



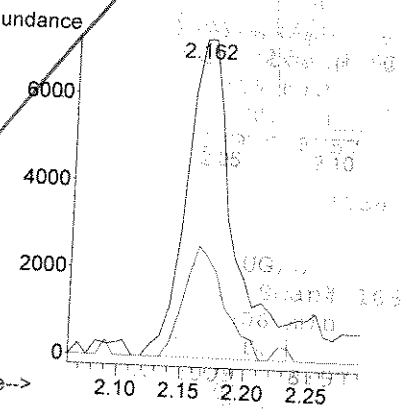

#9
Acetone
Concen: 3.13 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5217T.D
Acq: 7 Nov 2009 8:57

Tgt Ion: 43 Resp: 18814

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.7 | 23.1 | 34.7 |



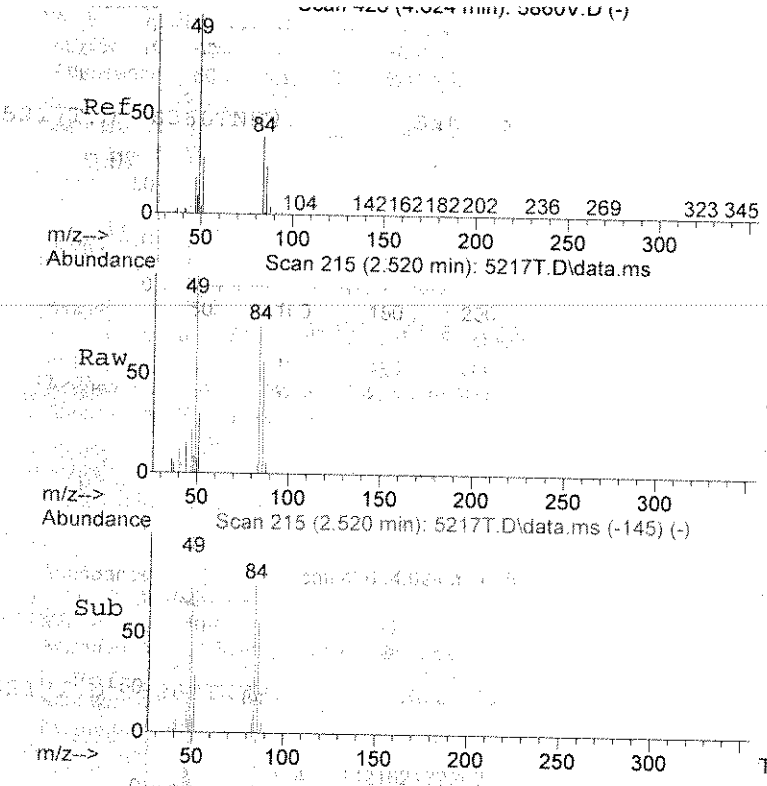




5217T.D 8260TNEW.M Sat Nov 07 09:13:59 2009



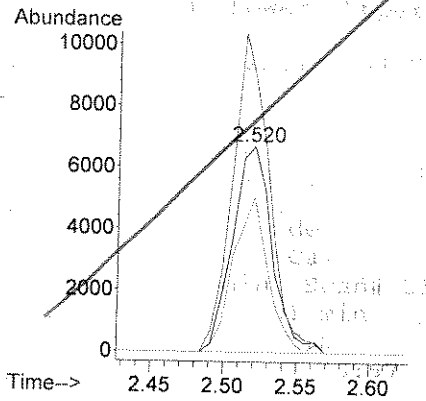
59169b

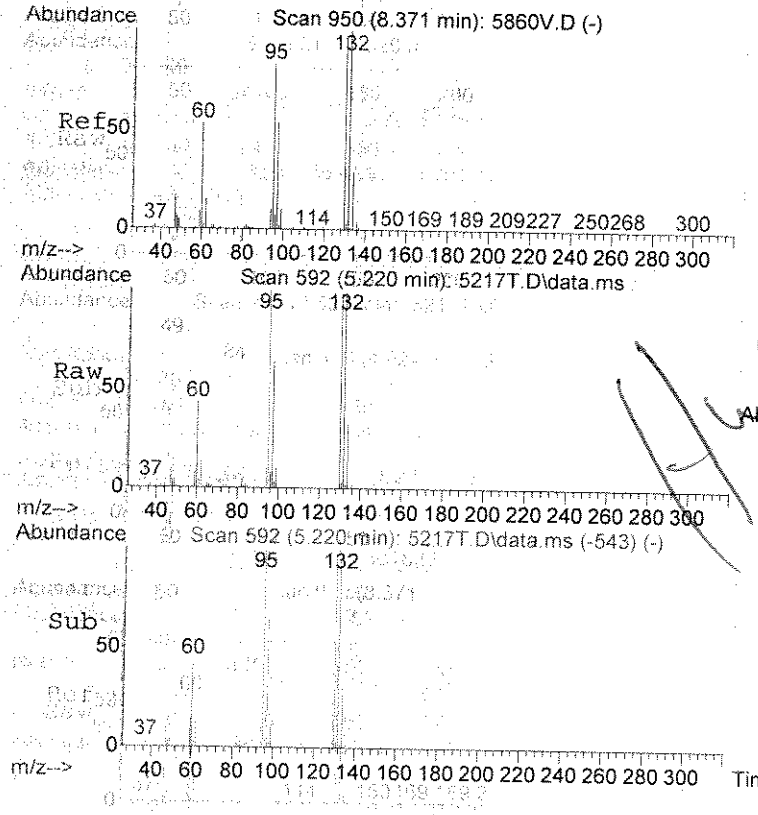



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5217T.D
Acq: 7 Nov 2009 8:57

Tgt Ion: 84 Resp: 12548

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 143.4 | 140.2 | 210.2 |
| 86 | 67.0 | 51.1 | 76.7 |

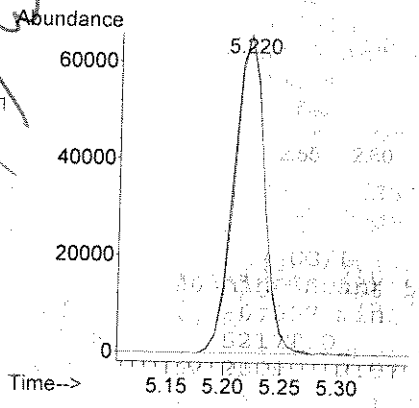



#40
Trichloroethene
Concen: 9.17 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5217T.D
Acq: 7 Nov 2009 8:57

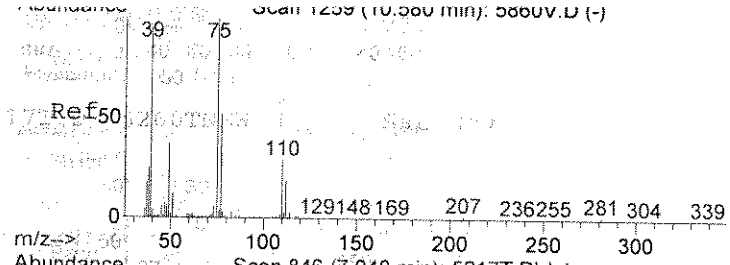
Tgt Ion:130 Resp: 122909

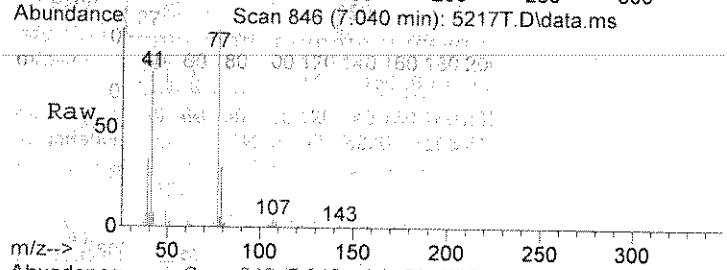
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 96.3 | 82.0 | 123.0 |

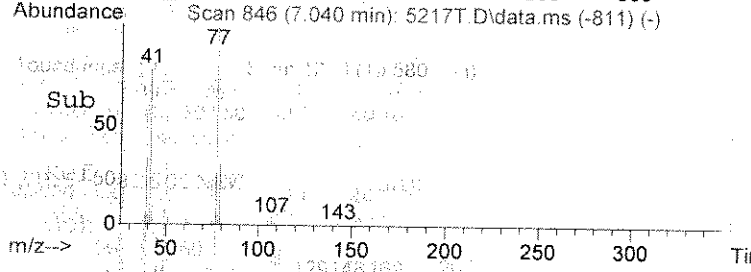


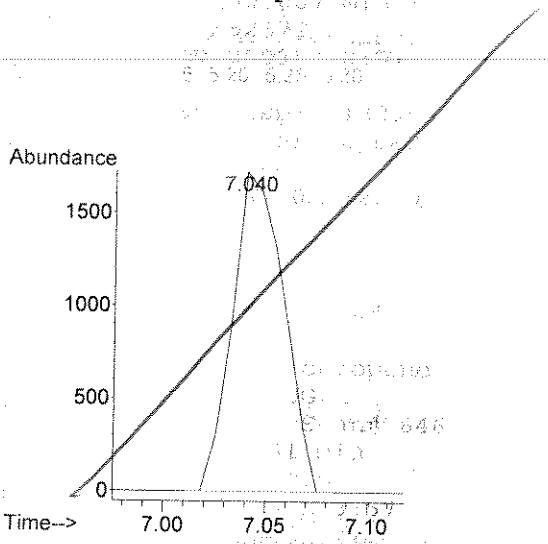
#52
trans-1,3-Dichloropropene
Concen: 0.21 UG/L
RT: 7.040 min Scan# 846
Delta R.T. 0.051 min
Lab File: 5217T.D
Acq: 7 Nov 2009 8:57

Tgt Ion: 75 Resp: 3020



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

Method SW846-8260B
Sample Description 161
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5218T.D Date/Time 07Nov09 09:22:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 100 | | 10 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | 110 | | 10 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 100 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 96 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 96 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 99 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

Repol

Method SW846-8260B
Sample Description 161
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____
Prep :

Test Code O510.5.1
Analyst HHW
File 52187 Date/Time 11/7/099
Dilution Factor 1:10 10.00

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 236 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 296 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 210 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | 100 | | 1.0 | ug/L | | |
| 235 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 335 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 301 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 59 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 10 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| 831 | [illegible] | | | | 10 | ug/L | | |
| 245 | [illegible] | | | | | ug/L | | |
| 746 | [illegible] | | | | | ug/L | | |
| [illegible] | [illegible] | | | | | ug/L | | |

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864559

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | 110 | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 1.0 | ug/L |
| 1804 | | | | | 2.0 | ug/L |
| 970 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 100 | | | % Rec |
| 726 | TOLUENE-D8 | | 96 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 96 | | | % Rec |
| 5362 | DIBROMOFLUOROMETHANE | | 99 | | | % Rec |

**Comments to Laboratory (do not record)**

500ML H2SO4 SQPL, 4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5218T.D
Acq On : 7 Nov 2009 9:22
Operator : HAROLD
Sample : A864559 1:10
Misc : REP01
ALS Vial : 6 Sample Multiplier: 1

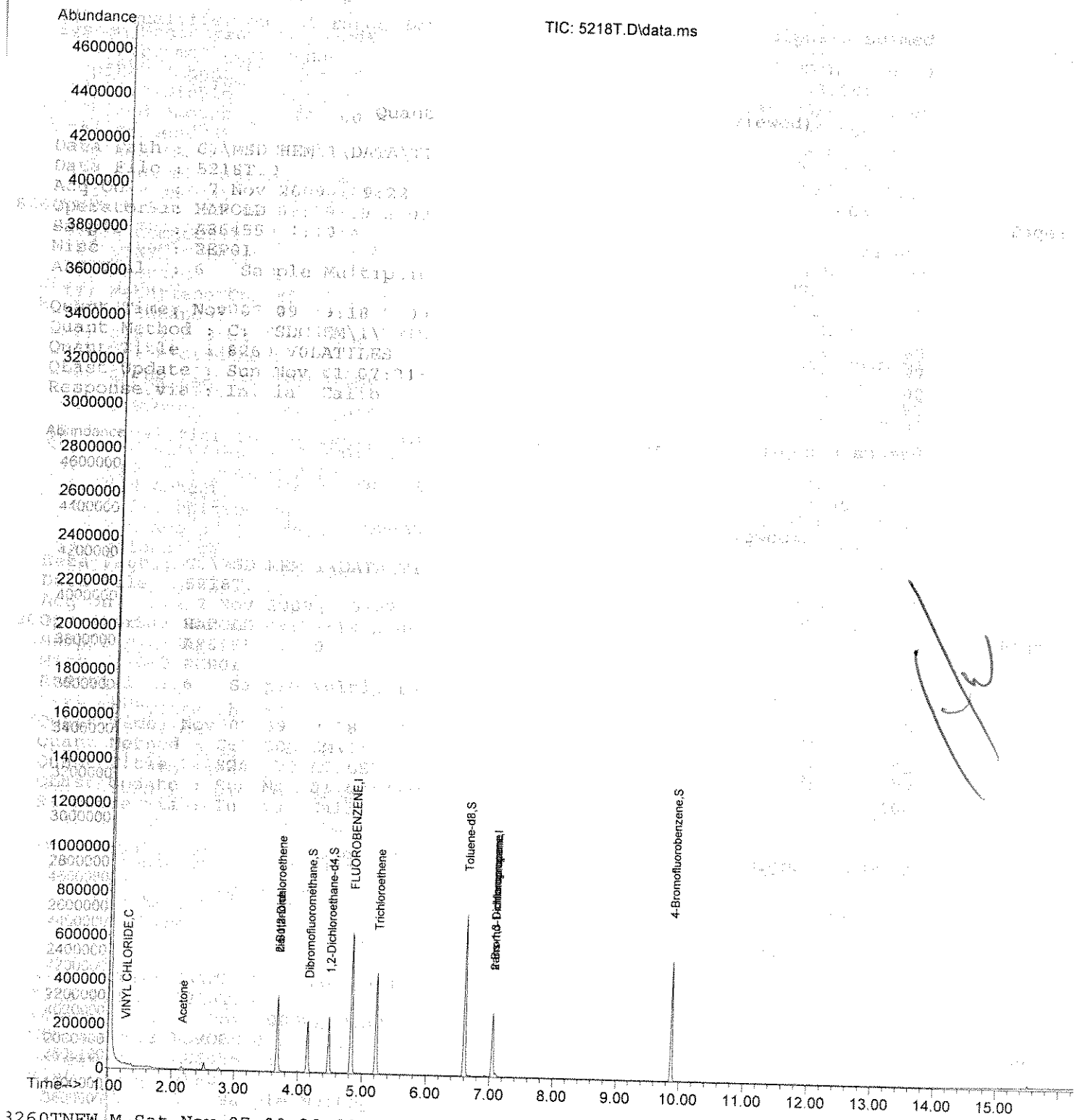
Quant Time: Nov 07 09:39:18 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 584041 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 177367 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 135932 | 9.85 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.50% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 163648 | 9.95 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.50% | |
| 50) Toluene-d8 | 6.603 | 98 | 503273 | 9.59 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 144714 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 95.60% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 5679 | 0.41 UG/L | 94 |
| 9) Acetone | 2.162 | 43 | 18322 | 3.07 UG/L | 89 |
| 14) Methylene Chloride | 2.520 | 84 | 13076 | Below Cal # | 75 |
| 20) 2-Butanone | 3.673 | 72 | 1010 | 0.43 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 141862 | 10.06 UG/L | 82 |
| 40) Trichloroethene | 5.220 | 130 | 151984 | 11.43 UG/L | 97 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3031 | 0.21 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5218T.D
Acq On : 7 Nov 2009 9:22
Operator : HAROLD
Sample : A864559 1:10
Misc : REP01
ALS Vial : 6 Sample Multiplier: 1

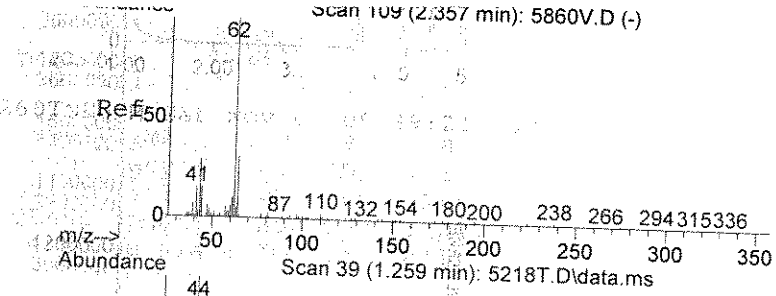
Quant Time: Nov 07 09:39:18 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 09:39:21 2009



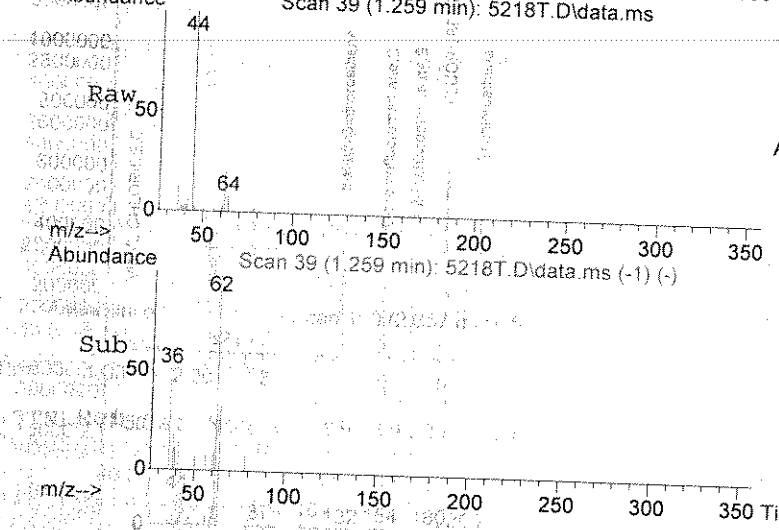
59169b

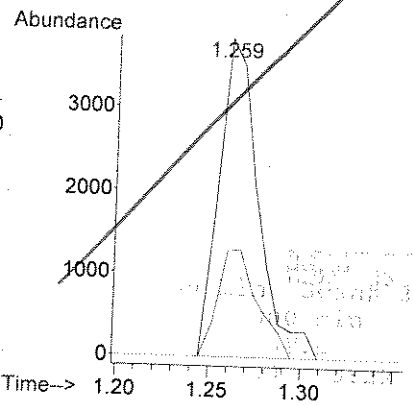


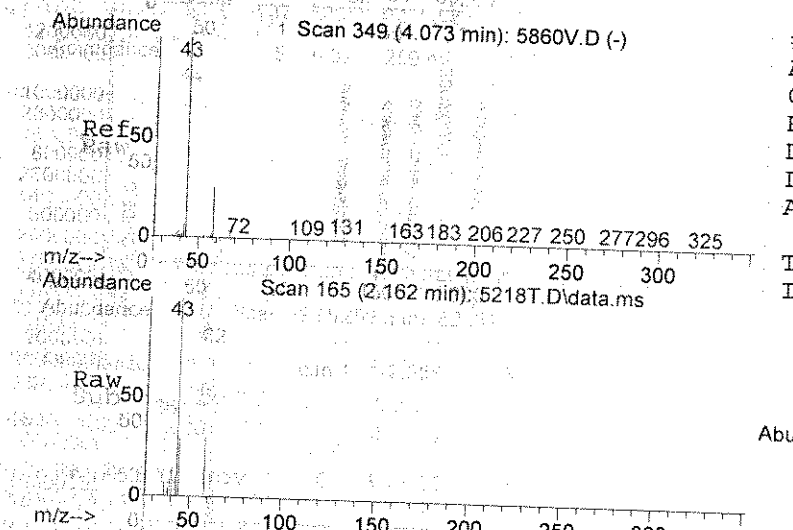

#4
VINYL CHLORIDE
Concen: 0.41 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

Tgt Ion: 62 Resp: 5679

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 34.4 | 24.9 | 37.3 |



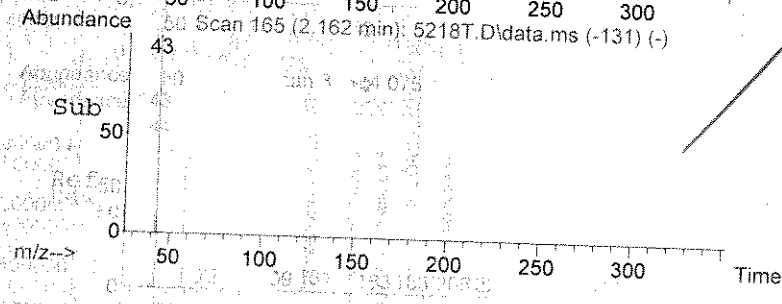



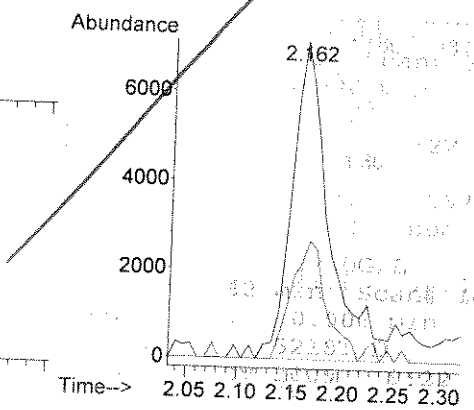



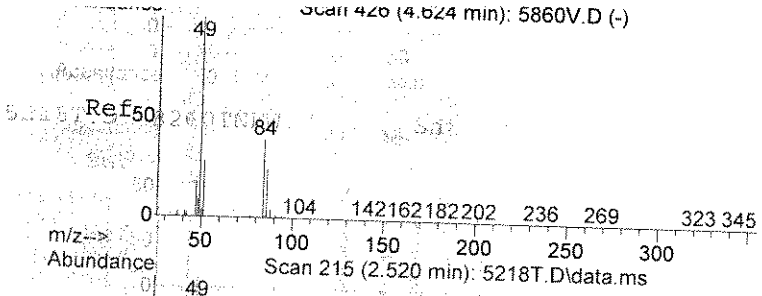

#9
Acetone
Concen: 3.07 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

Tgt Ion: 43 Resp: 18322

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 34.6 | 23.1 | 34.7 |



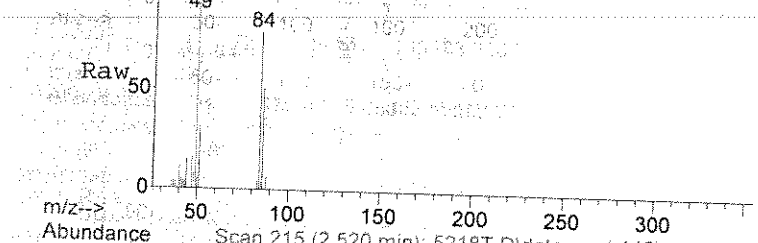



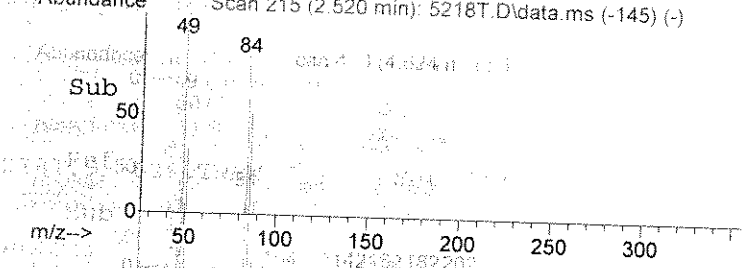


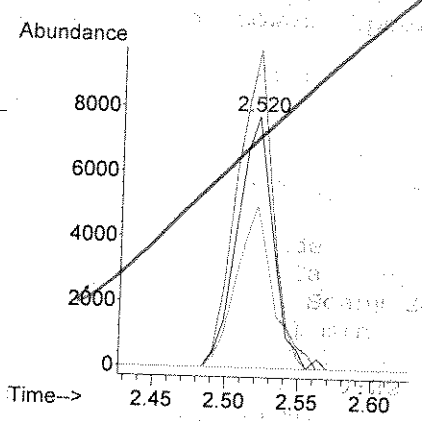

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

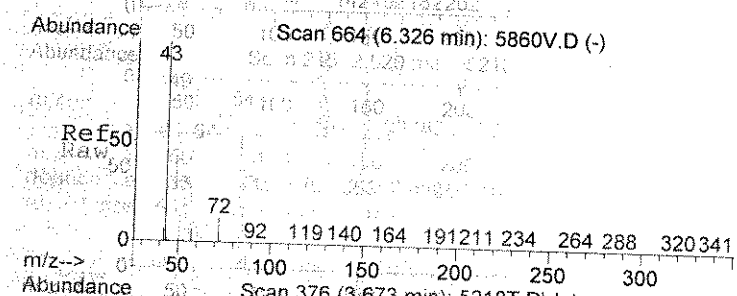
Tgt Ion: 84 Resp: 13076

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 128.4 | 140.2 | 210.2# |
| 86 | 64.2 | 51.1 | 76.7 |



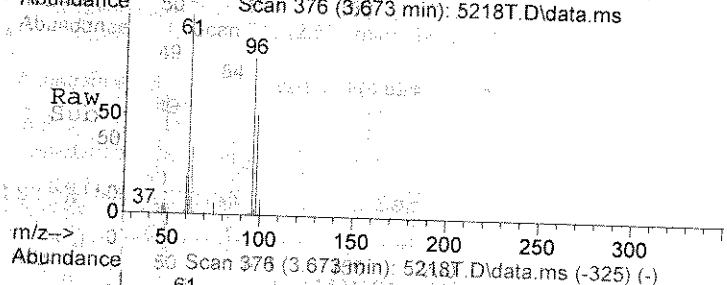



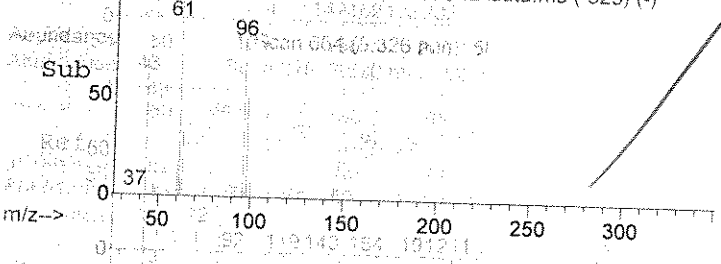



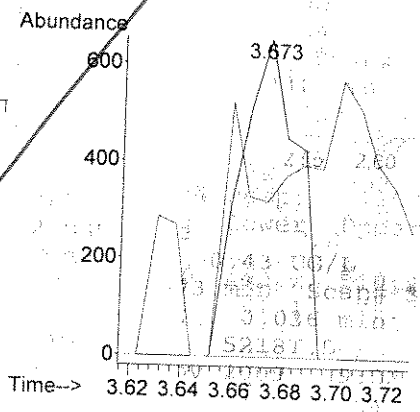

#20
2-Butanone
Concen: 0.43 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

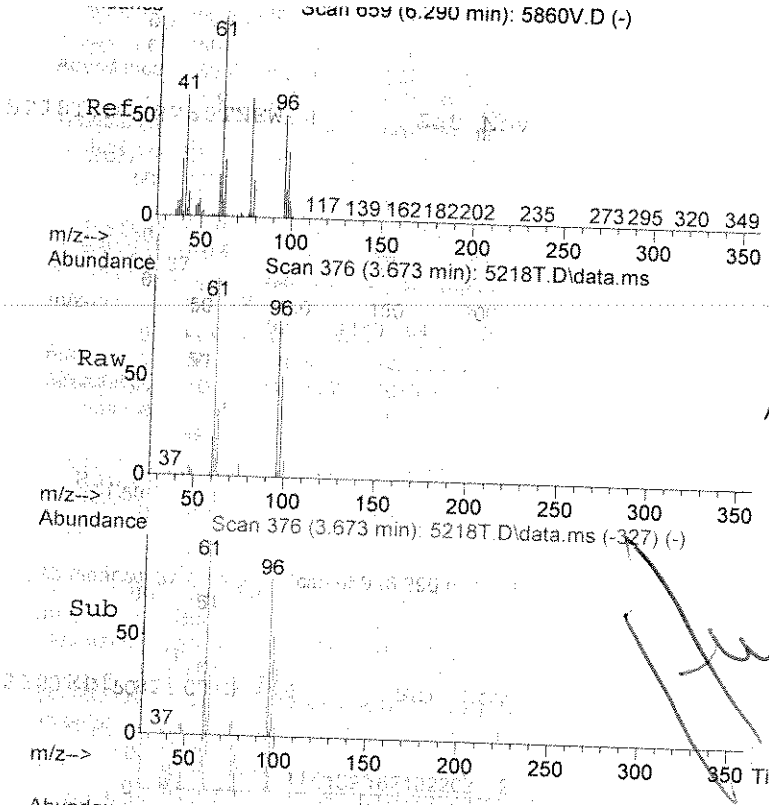
Tgt Ion: 72 Resp: 1010

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 122.1 | 449.0 | 673.4# |



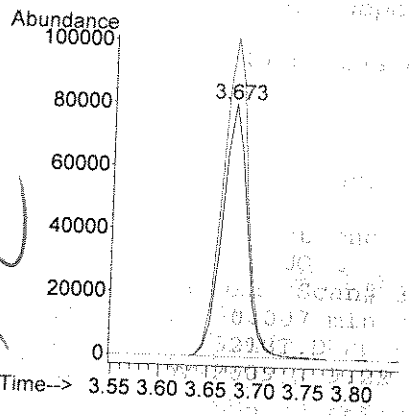



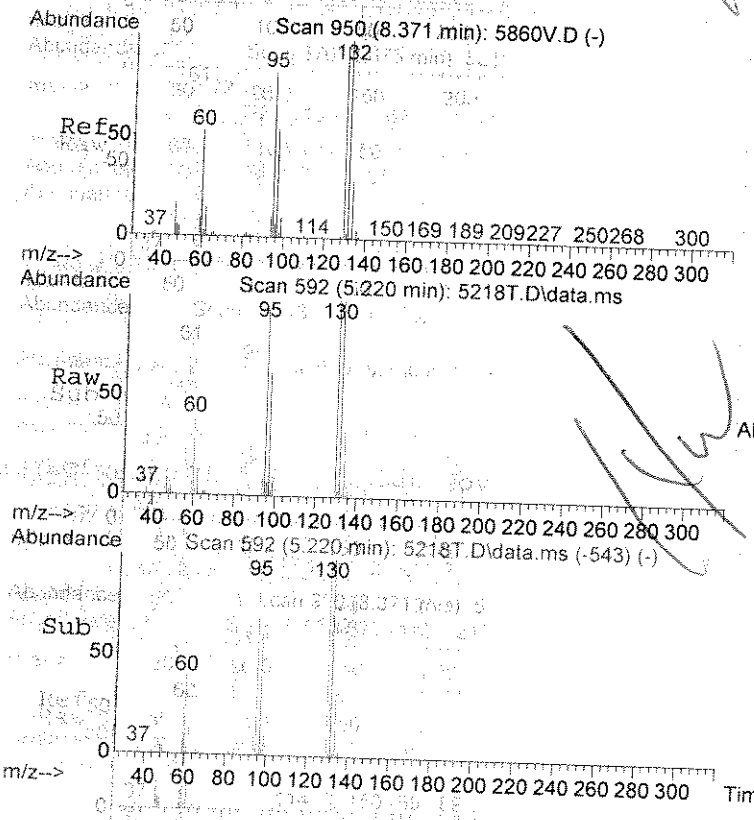



#22
cis-1,2-Dichloroethene
Concen: 10.06 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

Tgt Ion: 96 Resp: 141862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.7 | 121.8 | 182.6 |

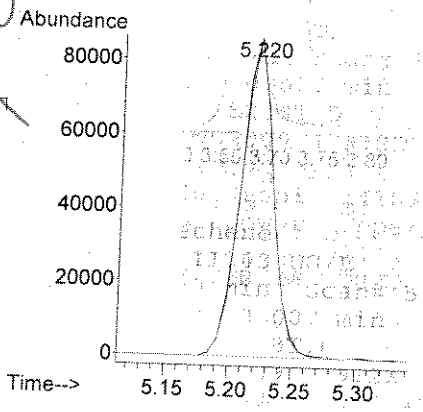


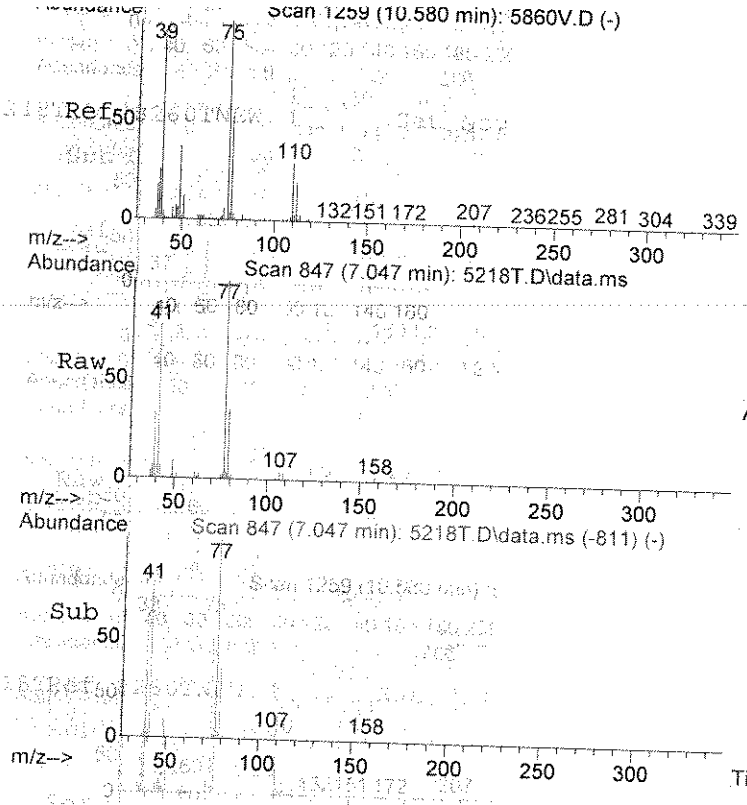




#40
Trichloroethene
Concen: 11.43 UG/L
RT: 5.220 min Scan# 592
Delta R.T. -0.007 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

Tgt Ion:130 Resp: 151984

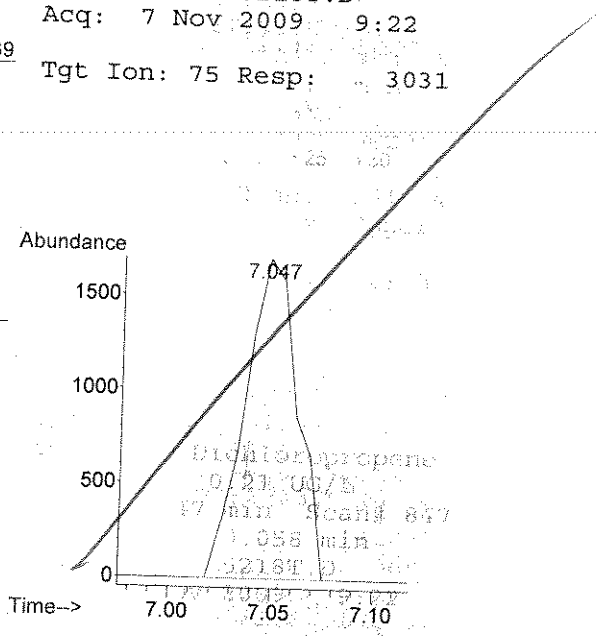
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 99.1 | 82.0 | 123.0 |






#52
trans-1,3-Dichloropropene
Concen: 0.21 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5218T.D
Acq: 7 Nov 2009 9:22

Tgt Ion: 75 Resp: 3031



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864540

Method SW846-8260B
Sample Description 169S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5221T.D Date/Time 07Nov09 10:40:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 2.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864540

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 1.0 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 10 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 1.0 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 10 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | | BDL | 1.0 | UG/L | |
| | 1804 | | | BDL | 2.0 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 91 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864540

Method SW846-8260B
Sample Description 169S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____
Prep :

Test Code O510.5.0
Analyst HHW
File 5221T Date/Time 11/7/09
Dilution Factor

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 71 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 21 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 83 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 10 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| [illegible] | [illegible] | | | | 10 | ug/L | | |
| 295 | [illegible] | | | | 1.0 | ug/L | | |
| 746 | [illegible] | | | | 1.0 | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |

# Heritage Environmental Services, LLC

A864540

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 1.0 | ug/L |
| 1804 | | | | | 2.0 | ug/L |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 97 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 91 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by

Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5221T.D
Acq On : 7 Nov 2009 10:40
Operator : HAROLD
Sample : A864540
Misc :
ALS Vial : 9 Sample Multiplier: 1

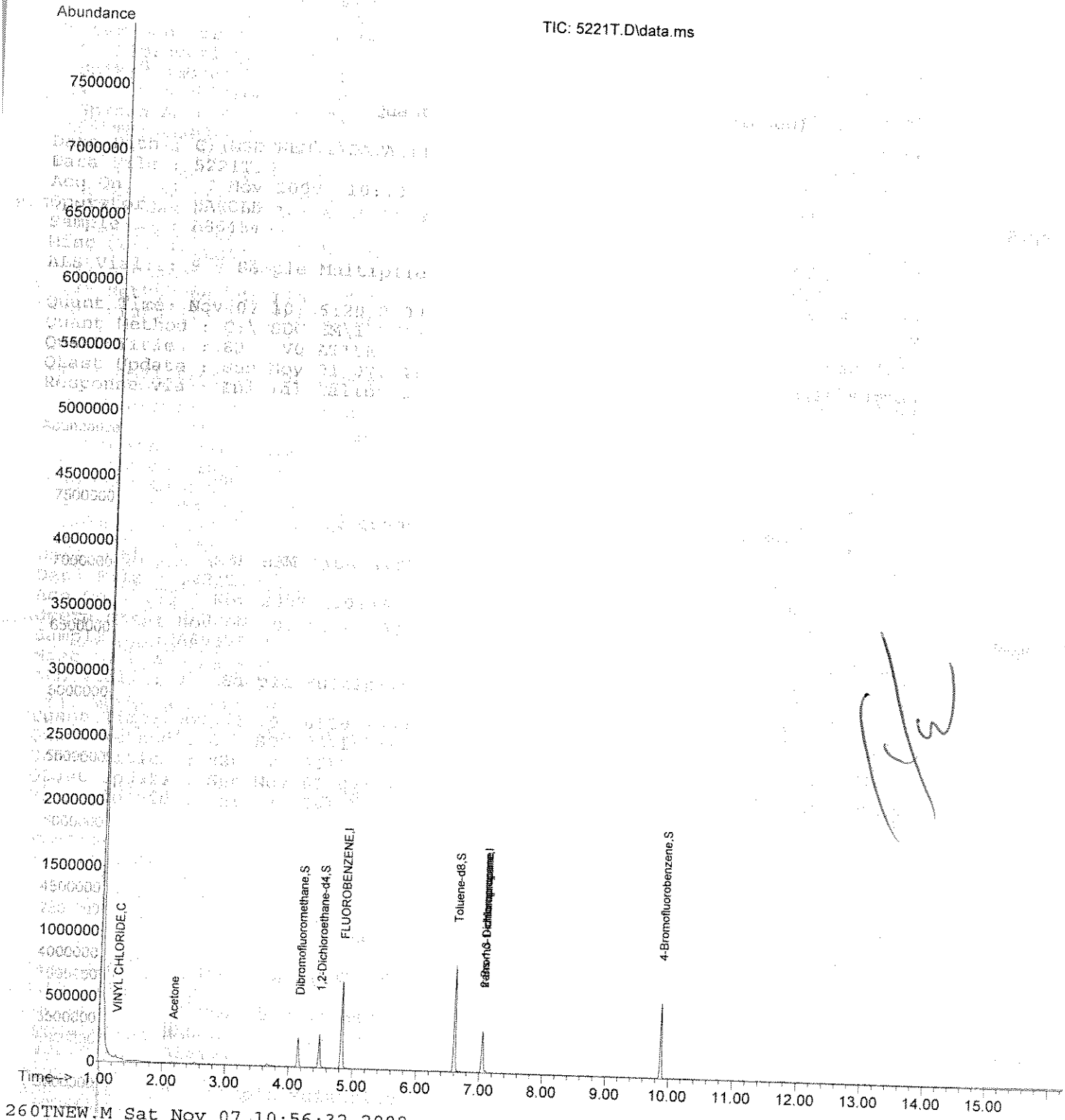
Quant Time: Nov 07 10:56:29 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 608904 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 193957 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 132150 | 9.19 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 166328 | 9.70 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.00% | |
| 50) Toluene-d8 | 6.603 | 98 | 555901 | 10.16 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.60% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 150936 | 9.11 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.10% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 12105 | 0.85 UG/L | 95 |
| 9) Acetone | 2.161 | 43 | 13378 | 2.15 UG/L | 95 |
| 14) Methylene Chloride | 2.512 | 84 | 5114 | Below Cal # | 79 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3501 | 0.24 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5221T.D
Acq On : 7 Nov 2009 10:40
Operator : HAROLD
Sample : A864540
Misc :
ALS Vial : 9 Sample Multiplier: 1

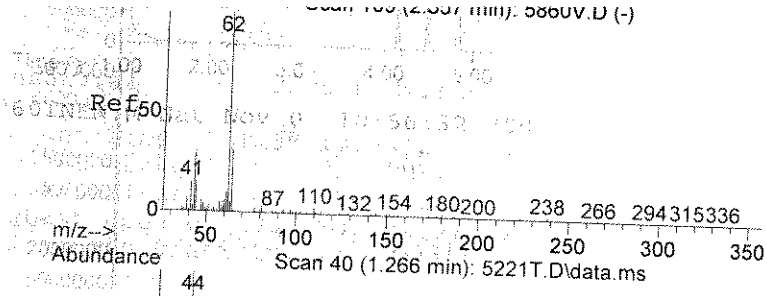
Quant Time: Nov 07 10:56:29 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




260TNEW.M Sat Nov 07 10:56:32 2009



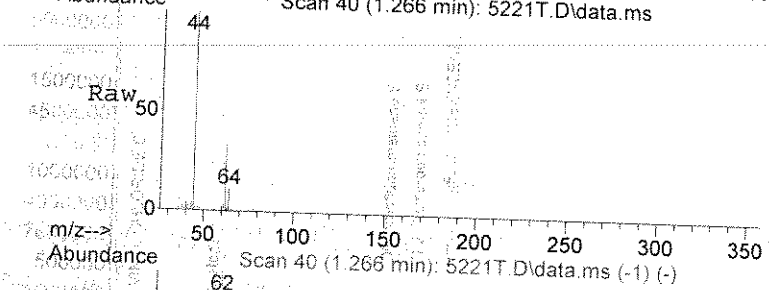
59169b

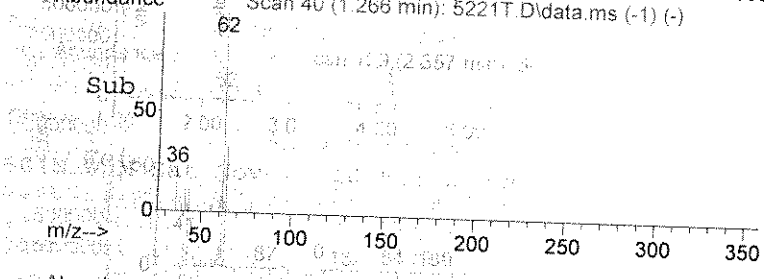


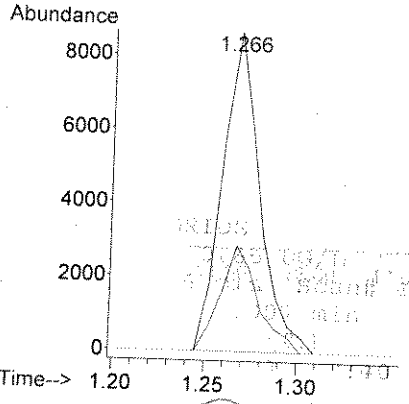

#4
VINYL CHLORIDE
Concen: 0.85 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5221T.D
Acq: 7 Nov 2009 10:40

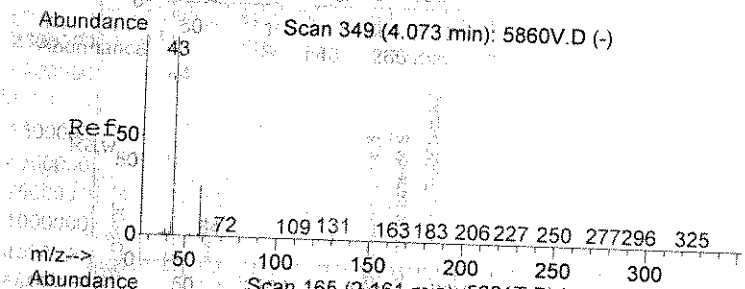
Tgt Ion: 62 Resp: 12105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 33.7 | 24.9 | 37.3 |



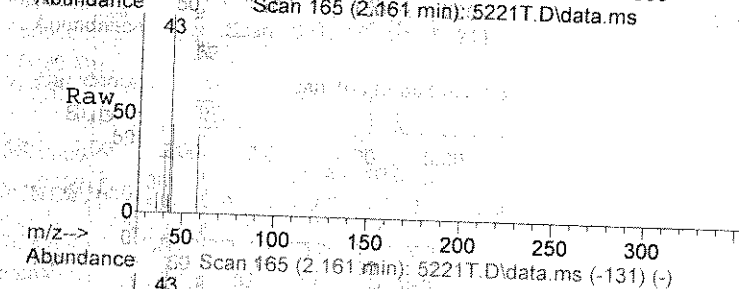



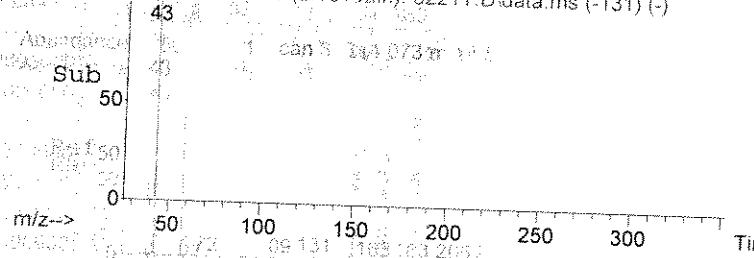



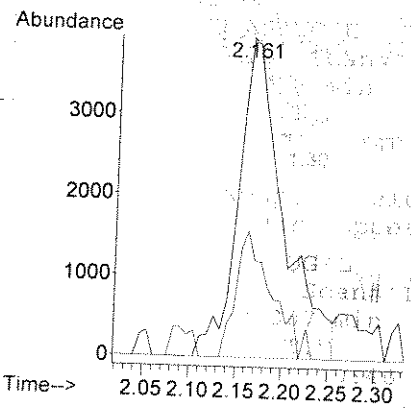

#9
Acetone
Concen: 2.15 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5221T.D
Acq: 7 Nov 2009 10:40

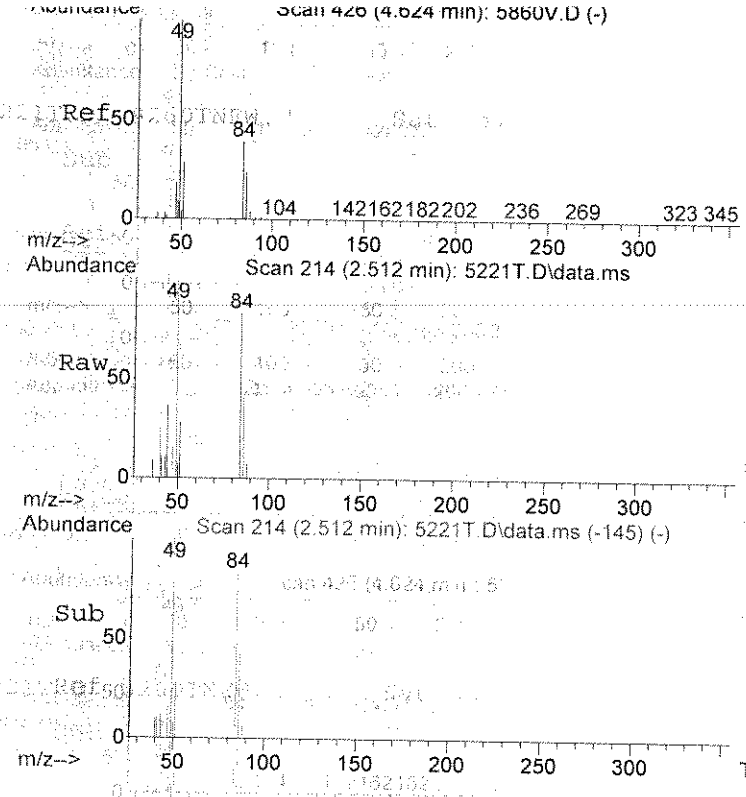
Tgt Ion: 43 Resp: 13378

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.8 | 23.1 | 34.7 |



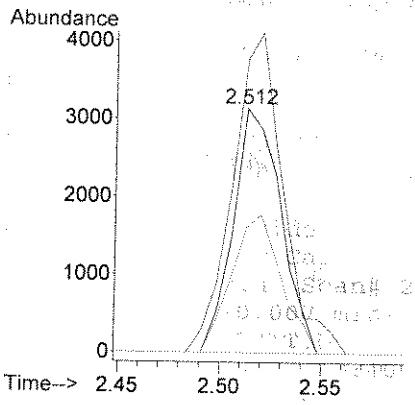



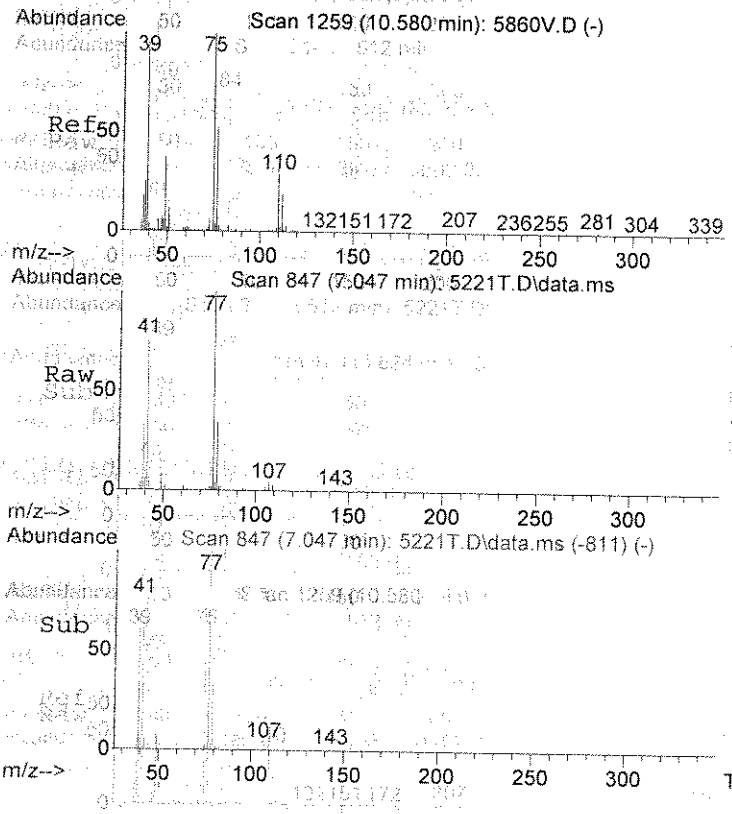



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5221T.D
Acq: 7 Nov 2009 10:40

Tgt Ion: 84 Resp: 5114

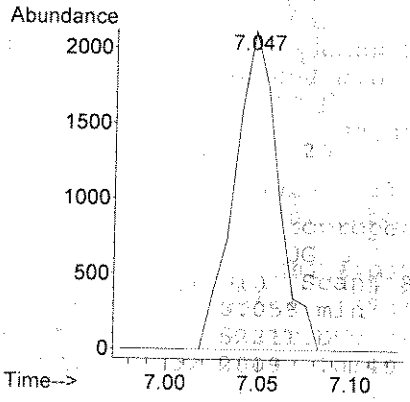
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 138.7 | 140.2 | 210.2# |
| 86 | 58.7 | 51.1 | 76.7 |




#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5221T.D
Acq: 7 Nov 2009 10:40

Tgt Ion: 75 Resp: 3501



R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864541

Method SW846-8260B
Sample Description 170S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.0
Analyst 1365 H. WILLIAMS
File 5222T.D Date/Time 07Nov09 11:05:00
Dilution Factor 1

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 67-64-1 | 99 | ACETONE (2-PROPANONE) | | BDL | 10 | UG/L | |
| 107-02-8 | 105 | ACROLEIN | | BDL | 50 | UG/L | |
| 107-13-1 | 106 | ACRYLONITRILE | | BDL | 10 | UG/L | |
| 71-43-2 | 151 | BENZENE | | BDL | 1.0 | UG/L | |
| 108-86-1 | 193 | BROMOBENZENE | | BDL | 1.0 | UG/L | |
| 74-97-5 | 194 | BROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-27-4 | 195 | BROMODICHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-25-2 | 197 | BROMOFORM | | BDL | 1.0 | UG/L | |
| 74-83-9 | 198 | BROMOMETHANE | | BDL | 1.0 | UG/L | |
| 104-51-8 | 519 | N-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 135-98-8 | 644 | SEC-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 98-06-6 | 702 | TERT-BUTYLBENZENE | | BDL | 1.0 | UG/L | |
| 75-15-0 | 216 | CARBON DISULFIDE | | BDL | 1.0 | UG/L | |
| 56-23-5 | 217 | CARBON TETRACHLORIDE | | BDL | 1.0 | UG/L | |
| 108-90-7 | 231 | CHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 124-48-1 | 295 | DIBROMOCHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 75-00-3 | 234 | CHLOROETHANE | | BDL | 1.0 | UG/L | |
| 67-66-3 | 235 | CHLOROFORM | | BDL | 1.0 | UG/L | |
| 74-87-3 | 236 | CHLOROMETHANE | | BDL | 1.0 | UG/L | |
| 95-49-8 | 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 106-43-4 | 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | BDL | 1.0 | UG/L | |
| 110-75-8 | 54 | 2-CHLOROETHYLVINYLETHER | | BDL | 1.0 | UG/L | |
| 96-12-8 | 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | BDL | 1.0 | UG/L | |
| 106-93-4 | 18 | 1,2-DIBROMOETHANE (EDB) | | BDL | 1.0 | UG/L | |
| 74-95-3 | 296 | DIBROMOMETHANE | | BDL | 1.0 | UG/L | |
| 95-50-1 | 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 541-73-1 | 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 106-46-7 | 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | BDL | 1.0 | UG/L | |
| 75-71-8 | 300 | DICHLORODIFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 110-57-6 | 748 | TRANS-1,4-DICHLORO-2-BUTENE | | BDL | 1.0 | UG/L | |
| 75-34-3 | 7 | 1,1-DICHLOROETHANE | | BDL | 2.0 | UG/L | |
| 107-06-2 | 21 | 1,2-DICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 75-35-4 | 8 | 1,1-DICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 2.0 | BDL | 1.0 | UG/L | |
| 156-60-5 | 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | UG/L | |
| 78-87-5 | 23 | 1,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 142-28-9 | 27 | 1,3-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 594-20-7 | 33 | 2,2-DICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 563-58-6 | 10 | 1,1-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-01-5 | 247 | CIS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 10061-02-6 | 747 | TRANS-1,3-DICHLOROPROPENE | | BDL | 1.0 | UG/L | |
| 100-41-4 | 349 | ETHYL BENZENE | | BDL | 1.0 | UG/L | |
| 97-63-2 | 351 | ETHYL METHACRYLATE | | BDL | 1.0 | UG/L | |
| 591-78-6 | 60 | 2-HEXANONE | | BDL | 10 | UG/L | |
| 87-68-3 | 398 | HEXACHLOROBUTADIENE | | BDL | 10 | UG/L | |
| | | | | BDL | 1.0 | UG/L | |

11/11/09

R560082

# Heritage Environmental Services, LLC

GC/MS VOA

A864541

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 74-88-4 | 422 | IODOMETHANE | | BDL | 1.0 | UG/L | |
| 98-82-8 | 432 | ISOPROPYLBENZENE (CUMENE) | | BDL | 1.0 | UG/L | |
| 99-87-6 | 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | BDL | 1.0 | UG/L | |
| 75-09-2 | 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | BDL | 1.0 | UG/L | |
| 78-93-3 | 475 | METHYL ETHYL KETONE | | BDL | 10 | UG/L | |
| 1634-04-4 | 859 | METHYL-T-BUTYL ETHER (MTBE) | | BDL | 1.0 | UG/L | |
| 108-10-1 | 476 | METHYL ISOBUTYL KETONE | | BDL | 10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 1.0 | UG/L | |
| 103-65-1 | 532 | N-PROPYLBENZENE | | BDL | 1.0 | UG/L | |
| 100-42-5 | 680 | STYRENE | | BDL | 1.0 | UG/L | |
| 630-20-6 | 1 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-34-5 | 3 | 1,1,2,2-TETRACHLOROETHANE | | BDL | 1.0 | UG/L | |
| 127-18-4 | 703 | TETRACHLOROETHENE | | BDL | 1.0 | UG/L | |
| 108-88-3 | 724 | TOLUENE | | BDL | 1.0 | UG/L | |
| 87-61-6 | 13 | 1,2,3-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 120-82-1 | 16 | 1,2,4-TRICHLOROBENZENE | | BDL | 1.0 | UG/L | |
| 71-55-6 | 2 | 1,1,1-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-00-5 | 4 | 1,1,2-TRICHLOROETHANE | | BDL | 1.0 | UG/L | |
| 79-01-6 | 750 | TRICHLOROETHENE | | BDL | 1.0 | UG/L | |
| 75-69-4 | 372 | TRICHLOROFLUOROMETHANE | | BDL | 1.0 | UG/L | |
| 96-18-4 | 14 | 1,2,3-TRICHLOROPROPANE | | BDL | 1.0 | UG/L | |
| 95-63-6 | 17 | 1,2,4-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-67-8 | 25 | 1,3,5-TRIMETHYLBENZENE | | BDL | 1.0 | UG/L | |
| 108-05-4 | 767 | VINYL ACETATE | | BDL | 1.0 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | | BDL | 1.0 | UG/L | |
| 1330-20-7 | 803 | XYLENES (O/M/P-XYLENE) | 5.2 | | 1.0 | UG/L | |
| 630-20-6 | 1804 | 1,1,1,2-TETRACHLOROETHANE | | BDL | 2.0 | UG/L | |
| 79-34-5 | 971 | SURROGATE RECOVERY | | | 1.0 | UG/L | |
| 127-18-4 | 972 | [illegible] | | | 1.0 | UG/L | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 99 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 87 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** Prep Method SW846-5030B Purge and Trap

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

12 HCL VIALS

**********MS/MSD THIS SAMPLE**********

**********REPORT ALL RESULTS IN UG/L.**********

# Heritage Environmental Services, LLC

GC/MS VOA

A864541

Method SW846-8260B
Sample Description 170S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.0
Analyst HHW
File 52221 Date/Time 11/7/07 11:0
Dilution Factor 1

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 716 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 851 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 2.0 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 236 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 849 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 391 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 110 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 822 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 832 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 375 | METHYL ETHYL KETONE | | | | 110 | ug/L | | |
| [illegible] | [illegible] | | | | | ug/L | | |
| 289 | [illegible] | | | | | ug/L | | |
| 734 | [illegible] | | | | | ug/L | | |
| 29[illegible] | [illegible] | | | | | ug/L | | |

59169b

A864541

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 5.2 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 99 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 87 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | % Rec |

**Comments to Laboratory (do not record)**

12-HCL VIALS

**********MS/MSD THIS SAMPLE**********

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5222T.D
Acq On : 7 Nov 2009 11:05
Operator : HAROLD
Sample : A864541
Misc :
ALS Vial : 10 Sample Multiplier: 1

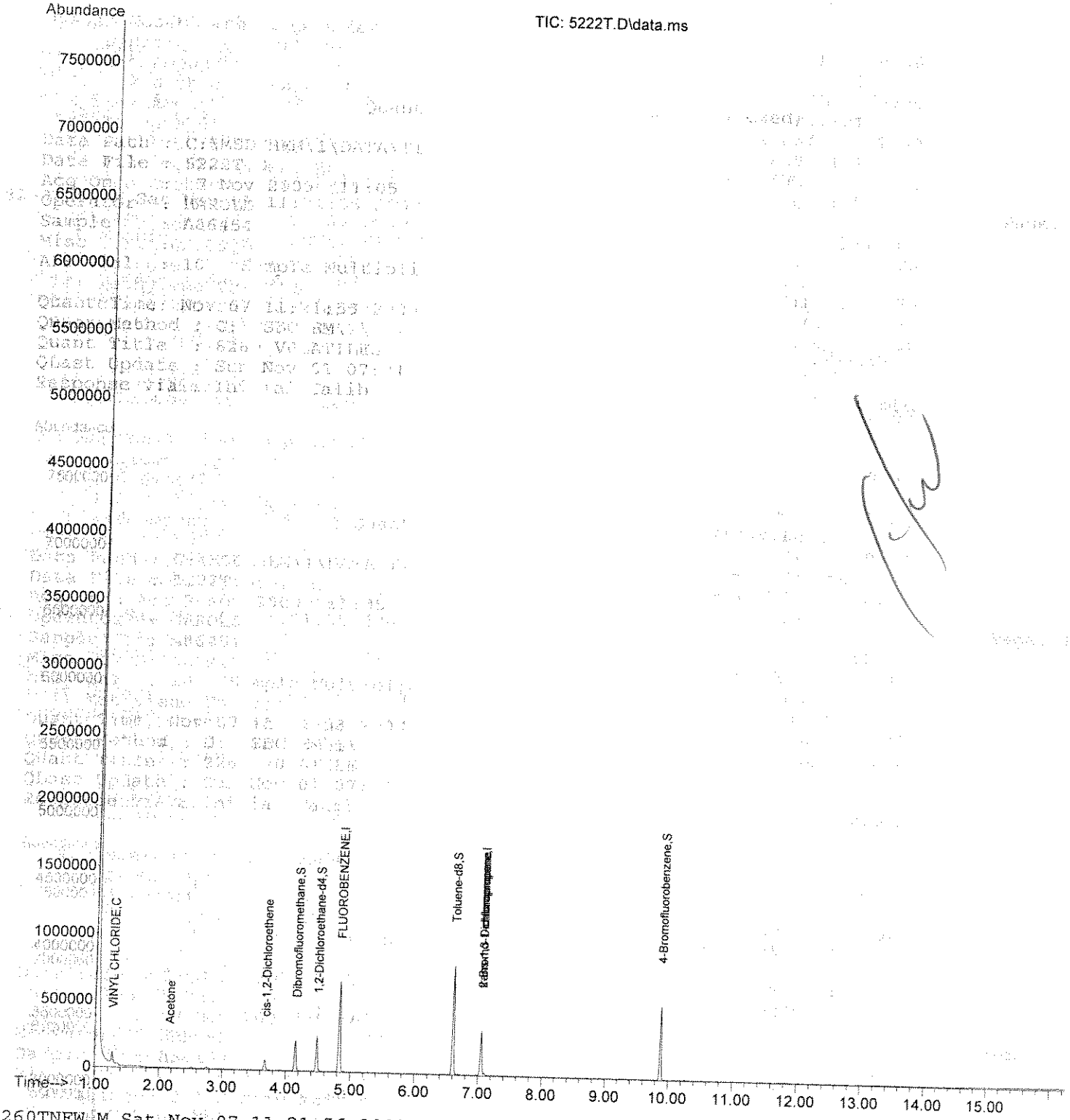
Quant Time: Nov 07 11:21:53 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 607524 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 197694 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 131748 | 9.18 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.80% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 168561 | 9.85 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.50% | |
| 50) Toluene-d8 | 6.602 | 98 | 559146 | 10.24 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.40% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 146251 | 8.66 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 86.60% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 74871 | 5.24 UG/L | 99 |
| 9) Acetone | 2.161 | 43 | 5621 | 0.91 UG/L | 93 |
| 14) Methylene Chloride | 2.520 | 84 | 3736 | Below Cal # | 75 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 29729 | 2.03 UG/L | 82 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3438 | 0.23 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110709\
Data File : 5222T.D
Acq On : 7 Nov 2009 11:05
Operator : HAROLD
Sample : A864541
Misc :
ALS Vial : 10 Sample Multiplier: 1

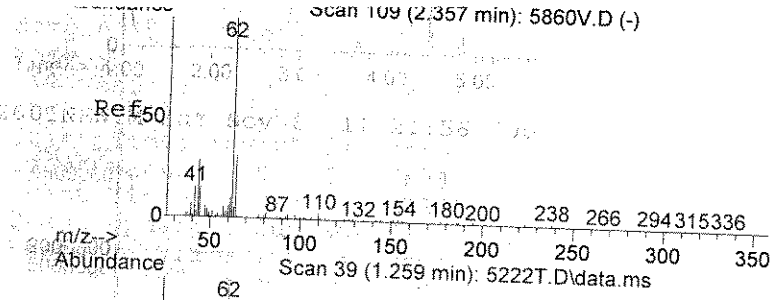
Quant Time: Nov 07 11:21:53 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 11:21:56 2009



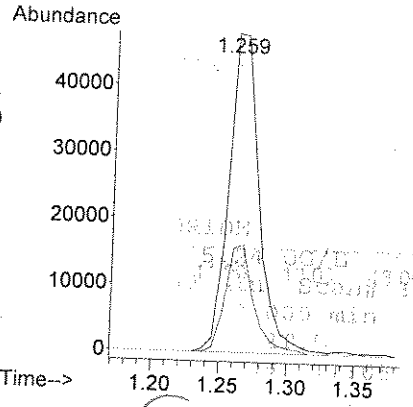
59169b

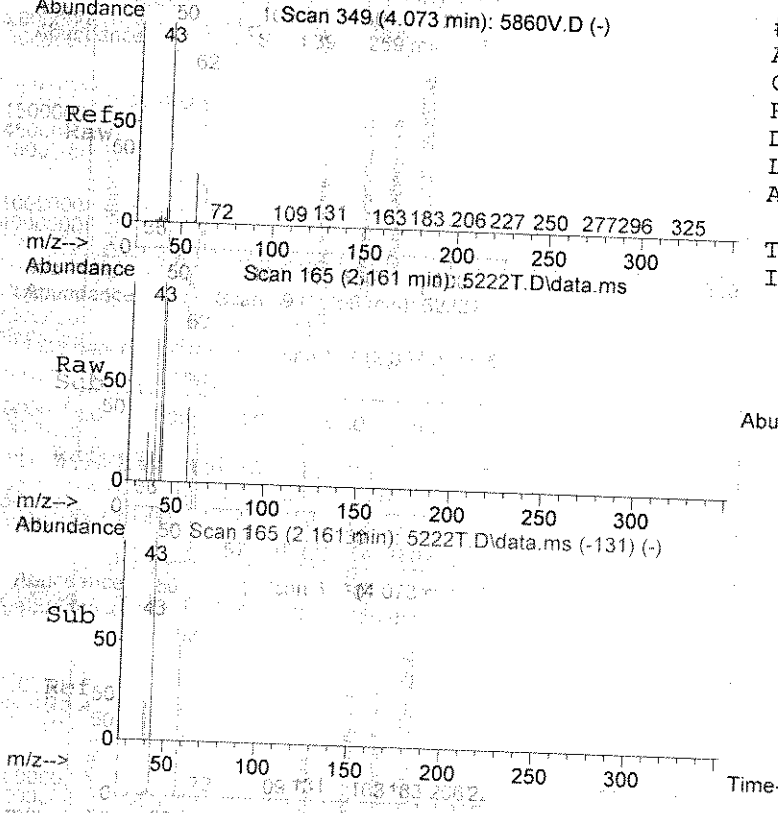



#4
VINYL CHLORIDE
Concen: 5.24 UG/L
RT: 1.259 min Scan# 39
Delta R.T. -0.000 min
Lab File: 5222T.D
Acq: 7 Nov 2009 11:05

Tgt Ion: 62 Resp: 74871

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.7 | 24.9 | 37.3 |

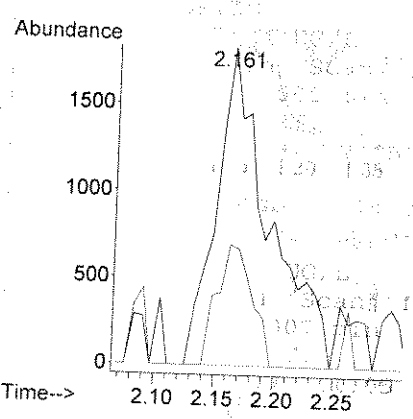


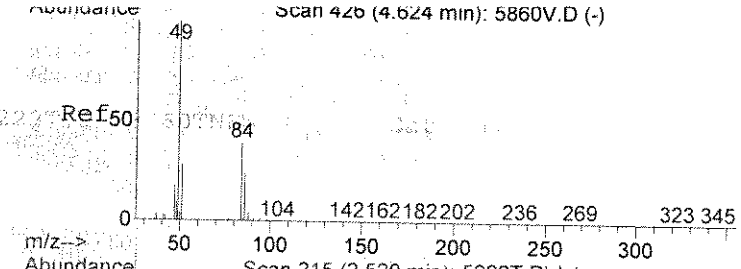




#9
Acetone
Concen: 0.91 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5222T.D
Acq: 7 Nov 2009 11:05

Tgt Ion: 43 Resp: 5621

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.4 | 23.1 | 34.7 |

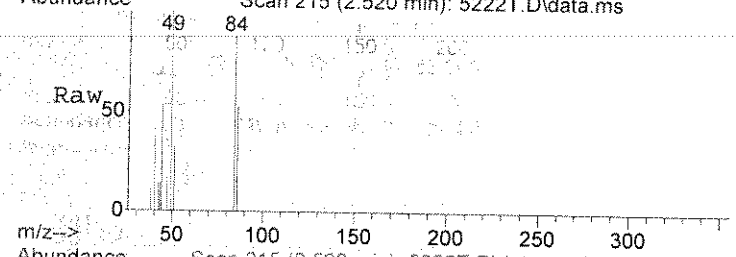


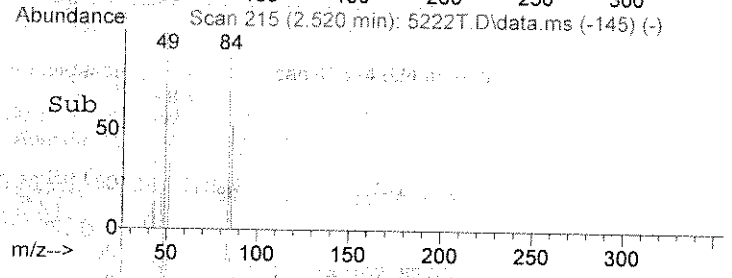


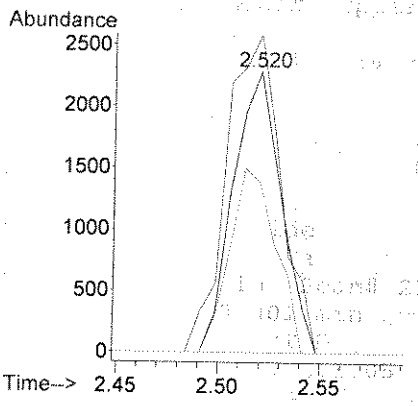

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5222T.D
Acq: 7 Nov 2009 11:05

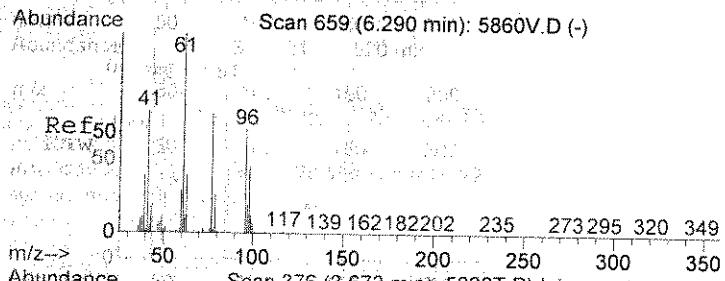
Tgt Ion: 84 Resp: 3736

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 128.3 | 140.2 | 210.2# |
| 86 | 63.6 | 51.1 | 76.7 |



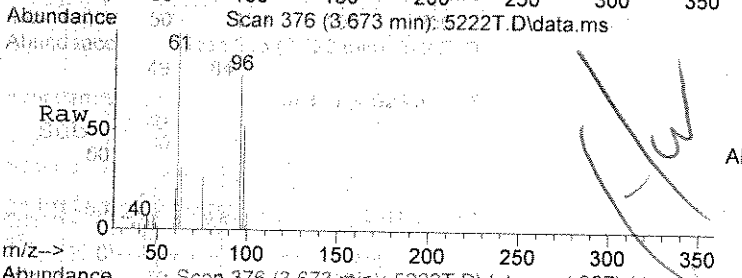



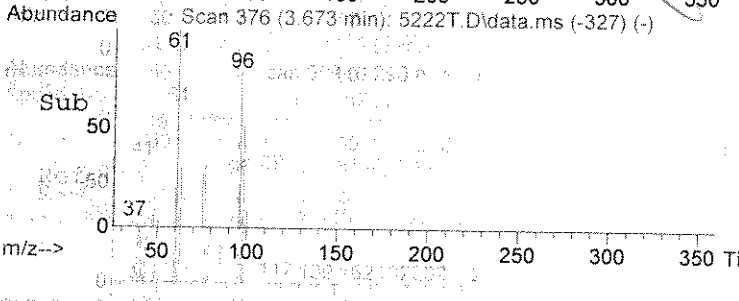



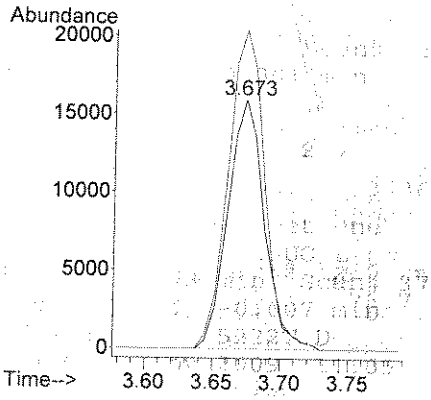

#22
cis-1,2-Dichloroethene
Concen: 2.03 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5222T.D
Acq: 7 Nov 2009 11:05

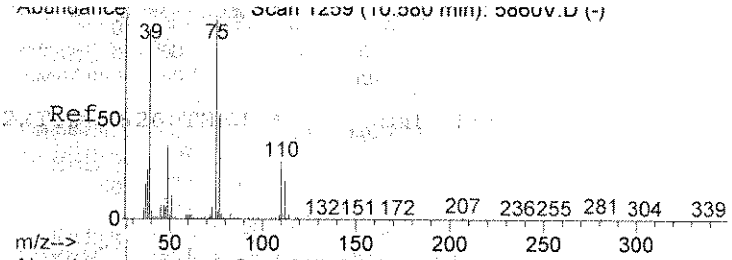
Tgt Ion: 96 Resp: 29729

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 128.6 | 121.8 | 182.6 |



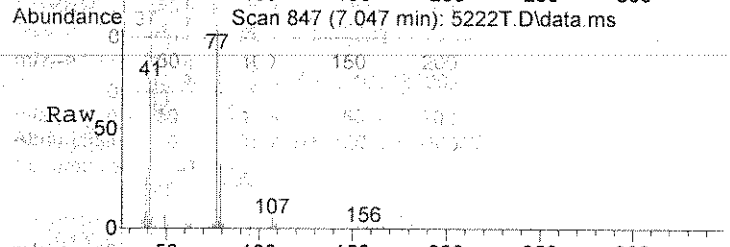



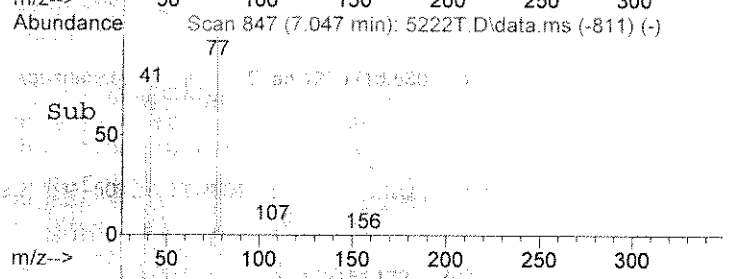



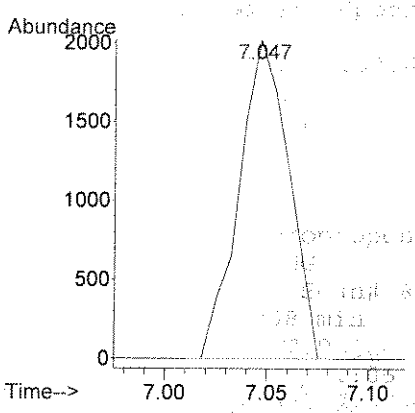



#32
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5222T.D
Acq: 7 Nov 2009 11:05

Tgt Ion: 75 Resp: 3438



**REMEDIATION SYSTEM EVALUATION REPORT**
**OCTOBER THROUGH DECEMBER 2009**
**FORMER GENERAL MOTORS CORPORATION**
**ALLISON GAS TURBINE DIVISION, PLANT 10**
**700 NORTH OLIN AVENUE**
**INDIANAPOLIS, INDIANA**
**IDEM VRP #6991004**
**KERAMIDA PROJECT NO. 2829E**

# ATTACHMENT 6

## November 2009 - Groundwater Analytical Report

## Part 4 of 4

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 5209T.D BFB Injection Date: 11/07/09

Instrument ID: GCMS#394 BFB Injection Time: 05:25

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.1 |
| 75 | 30.0 - 60.0% of mass 95 | 47.6 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 79.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.4)1 |
| 176 | 95.0 - 101.0% of mass 174 | 80.0 ( 100.8)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.0 ( 6.3)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD010 | VSTD010 | 5210T.D | 11/07/09 | 05:43 |
| 02 | VBLK | VBLK | 5211T.D | 11/07/09 | 06:08 |
| 03 | DI MS | DI MS | 5212T.D | 11/07/09 | 06:44 |
| 04 | A864575 1:10 | A864575 1:10 | 5213T.D | 11/07/09 | 07:14 |
| 05 | A864576 1:10 | A864576 1:10 | 5214T.D | 11/07/09 | 07:40 |
| 06 | A864554 1:10 | A864554 1:10 | 5215T.D | 11/07/09 | 08:05 |
| 07 | A864555 1:10 | A864555 1:10 | 5216T.D | 11/07/09 | 08:31 |
| 08 | A864558 1:10 | A864558 1:10 | 5217T.D | 11/07/09 | 08:57 |
| 09 | A864559 1:10 | A864559 1:10 | 5218T.D | 11/07/09 | 09:22 |
| 10 | A864560 1:10 | A864560 1:10 | 5219T.D | 11/07/09 | 09:48 |
| 11 | A864564 1:20 | A864564 1:20 | 5220T.D | 11/07/09 | 10:14 |
| 12 | A864540 | A864540 | 5221T.D | 11/07/09 | 10:40 |
| 13 | A864541 | A864541 | 5222T.D | 11/07/09 | 11:05 |
| 14 | A864541 MS | A864541 MS | 5223T.D | 11/07/09 | 11:31 |
| 15 | A864541 MSD | A864541 MSD | 5224T.D | 11/07/09 | 11:56 |
| 16 | A864542 | A864542 | 5225T.D | 11/07/09 | 12:22 |
| 17 | A864543 | A864543 | 5226T.D | 11/07/09 | 12:47 |
| 18 | A864544 | A864544 | 5227T.D | 11/07/09 | 13:13 |
| 19 | A864545 | A864545 | 5228T.D | 11/07/09 | 13:39 |
| 20 | A864546 | A864546 | 5229T.D | 11/07/09 | 14:04 |
| 21 | A864547 | A864547 | 5230T.D | 11/07/09 | 14:30 |
| 22 | A864548 | A864548 | 5231T.D | 11/07/09 | 14:56 |

11/11/09



59169b

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Lab File ID: 5209T.D BFB Injection Date: 11/07/09
Instrument ID: GCMS#394 BFB Injection Time: 05:25
GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.1 |
| 75 | 30.0 - 60.0% of mass 95 | 47.6 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | >50.0% of mass 95 | 79.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.4 )1 |
| 176 | 95.0 - 101.0% of mass 174 | 80.0 ( 100.8 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.0 ( 6.3 )2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 23 | A864549 | A864549 | 5232T.D | 11/07/09 | 15:22 |
| 24 | A864550 | A864550 | 5233T.D | 11/07/09 | 15:47 |
| 25 | A864563 | A864563 | 5234T.D | 11/07/09 | 16:13 |

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59169b

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5210T.D Date Analyzed: 11/07/09

Instrument ID: GCMS#394 Time Analyzed: 05:43

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 653147 | 4.83 | 233558 | 7.05 | | |
| UPPER LIMIT | 1306294 | 5.33 | 467116 | 7.55 | | |
| LOWER LIMIT | 326574 | 4.33 | 116779 | 6.55 | | |
| EPA SAMPLE NO. | | | | | | |
| 01 VBLK | 637779 | 4.83 | 210303 | 7.05 | | |
| 02 DI MS | 643510 | 4.83 | 214152 | 7.05 | | |
| 03 A864575 1:10 | 617973 | 4.83 | 210101 | 7.05 | | |
| 04 A864576 1:10 | 613476 | 4.83 | 201348 | 7.05 | | |
| 05 A864554 1:10 | 630466 | 4.83 | 210656 | 7.05 | | |
| 06 A864555 1:10 | 613893 | 4.83 | 206539 | 7.05 | | |
| 07 A864558 1:10 | 588347 | 4.83 | 181192 | 7.05 | | |
| 08 A864559 1:10 | 584041 | 4.83 | 177367 | 7.05 | | |
| 09 A864560 1:10 | 596259 | 4.83 | 200797 | 7.05 | | |
| 10 A864564 1:20 | 623159 | 4.83 | 202312 | 7.05 | | |
| 11 A864540 | 608904 | 4.83 | 193957 | 7.05 | | |
| 12 A864541 | 607524 | 4.83 | 197694 | 7.05 | | |
| 13 A864541 MS | 612758 | 4.83 | 197257 | 7.05 | | |
| 14 A864541 MSD | 651796 | 4.83 | 211523 | 7.05 | | |
| 15 A864542 | 605522 | 4.83 | 194910 | 7.05 | | |
| 16 A864543 | 603240 | 4.83 | 192741 | 7.05 | | |
| 17 A864544 | 587763 | 4.83 | 189086 | 7.05 | | |
| 18 A864545 | 605565 | 4.83 | 195499 | 7.05 | | |
| 19 A864546 | 599561 | 4.83 | 191710 | 7.05 | | |
| 20 A864547 | 589670 | 4.83 | 200942 | 7.05 | | |
| 21 A864548 | 591409 | 4.83 | 190881 | 7.05 | | |

IS1 = FLUOROBENZENE

IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits



FORM VIII VOA

3/90

59169b

8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5210T.D Date Analyzed: 11/07/09

Instrument ID: GCMS#394 Time Analyzed: 05:43

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 653147 | 4.83 | 233558 | 7.05 | | |
| UPPER LIMIT | 1306294 | 5.33 | 467116 | 7.55 | | |
| LOWER LIMIT | 326574 | 4.33 | 116779 | 6.55 | | |
| EPA SAMPLE NO. | | | | | | |
| 22 A864549 | 597578 | 4.83 | 192730 | 7.05 | | |
| 23 A864550 | ~~597578~~ 597984 | 4.83 | ~~192730~~ 190371 | 7.05 | | |
| 24 A864563 | ~~597578~~ 578201 | 4.83 | ~~192730~~ 181986 | 7.05 | | |

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IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits



FORM VIII VOA

2A

# WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: HERITAGE Contract:

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

Date Injected: 07-Nov-09 Instrument: GCMS#394

| | EPA SAMPLE NO. | SMC1 # | SMC2 # | SMC3 # | SMC4 # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VBLK | 94 | 96 | 103 | 91 | 0 |
| 02 | DI MS | 96 | 96 | 104 | 95 | 0 |
| 03 | A864575 1:10 | 89 | 98 | 103 | 88 | 0 |
| 04 | A864576 1:10 | 92 | 98 | 104 | 93 | 0 |
| 05 | A864554 1:10 | 92 | 96 | 102 | 89 | 0 |
| 06 | A864555 1:10 | 95 | 97 | 103 | 86 | 0 |
| 07 | A864558 1:10 | 98 | 101 | 96 | 93 | 0 |
| 08 | A864559 1:10 | 99 | 100 | 96 | 96 | 0 |
| 09 | A864560 1:10 | 94 | 99 | 103 | 87 | 0 |
| 10 | A864564 1:20 | 93 | 98 | 104 | 89 | 0 |
| 11 | A864540 | 92 | 97 | 102 | 91 | 0 |
| 12 | A864541 | 92 | 99 | 102 | 87 | 0 |
| 13 | A864541 MS | 120 | 122 | 133 * | 123 | 1 |
| 14 | A864541 MSD | 140 * | 142 * | 154 * | 141 * | 4 |
| 15 | A864542 | 92 | 98 | 103 | 90 | 0 |
| 16 | A864543 | 92 | 98 | 102 | 91 | 0 |
| 17 | A864544 | 95 | 99 | 101 | 90 | 0 |
| 18 | A864545 | 94 | 97 | 102 | 90 | 0 |
| 19 | A864546 | 94 | 98 | 101 | 92 | 0 |
| 20 | A864547 | 92 | 99 | 102 | 88 | 0 |
| 21 | A864548 | 94 | 98 | 102 | 90 | 0 |
| 22 | A864549 | 94 | 98 | 101 | 89 | 0 |
| 23 | A864550 | 94 | 99 | 101 | 90 | 0 |
| 24 | A864563 | 93 | 100 | 103 | 92 | 0 |

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QC LIMITS

| | | | |
|---|---|---|---|
| SMC1 | = | Dibromofluoromethane | (83-139) |
| SMC2 | = | 1,2-Dichloroethane-d4 | (79-137) |
| SMC3 | = | toluene-d8 | (85-123) |
| SMC4 | = | 4-bromofluorobenzene | (76-129) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out



FORM II VOA-1

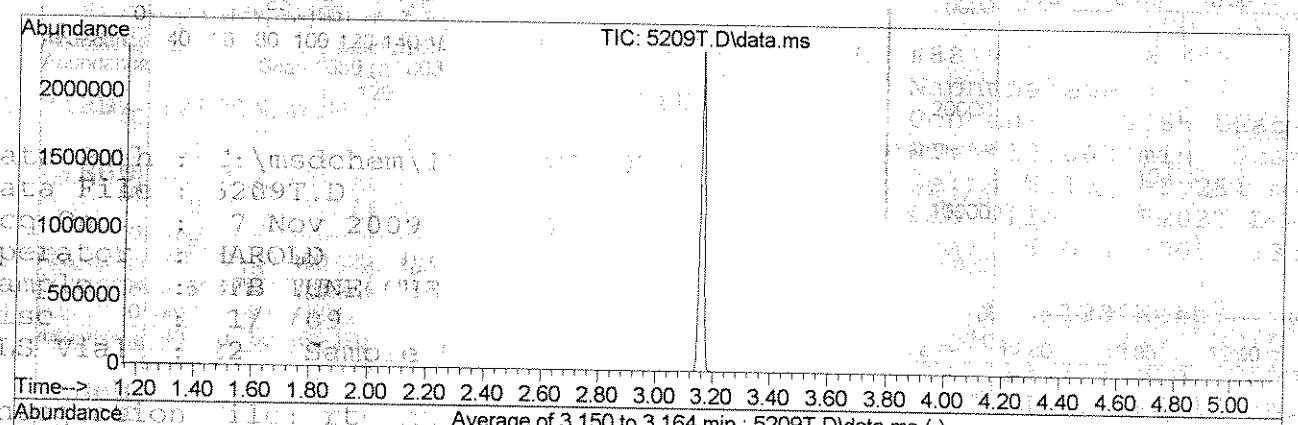
3/90

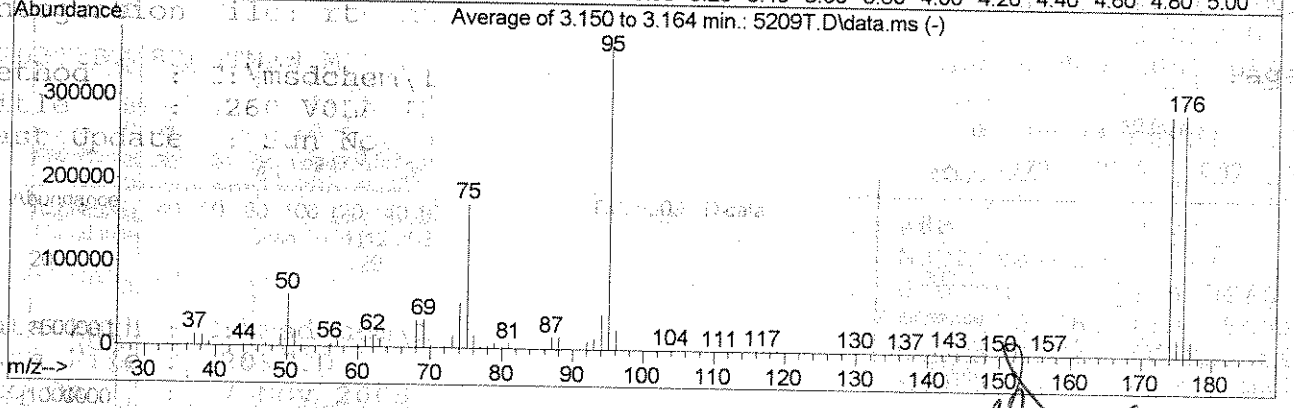
59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5209T.D
Acq On : 7 Nov 2009 5:25
Operator : HAROLD
Sample : BFB TUNE CHECK
Misc : 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Integration File: rteint2.p

Method : C:\msdchem\1\METHODS\8260TNEW.M
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009




11/11/09

AutoFind: Scans 303, 304, 305; Background Corrected with Scan 298

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 17.1 | 62338 | PASS |
| 75 | 95 | 30 | 60 | 47.6 | 173418 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 364586 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 23840 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 79.3 | 289210 | PASS |
| 175 | 174 | 5 | 9 | 7.4 | 21306 | PASS |
| 176 | 174 | 95 | 101 | 100.8 | 291640 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 18379 | PASS |

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 2712 | 49.10 | 12583 | 63.05 | 10774 | 77.00 | 2023 |
| 37.10 | 14009 | 50.10 | 62338 | 64.05 | 1018 | 78.00 | 1302 |
| 38.10 | 12558 | 51.10 | 19079 | 67.00 | 802 | 78.90 | 6368 |
| 39.10 | 5038 | 52.05 | 871 | 68.00 | 33077 | 80.00 | 1950 |
| 39.95 | 84 | 55.05 | 716 | 69.05 | 33469 | 80.95 | 6498 |
| 43.10 | 110 | 56.05 | 4503 | 70.05 | 2400 | 81.90 | 1209 |
| 44.00 | 1435 | 57.05 | 7663 | 72.00 | 1648 | 83.00 | 83 |
| 45.05 | 2499 | 58.00 | 179 | 73.00 | 13765 | 85.90 | 253 |
| 46.00 | 194 | 60.00 | 2840 | 74.05 | 54440 | 87.00 | 14421 |
| 47.10 | 4050 | 61.00 | 14365 | 75.10 | 173418 | 88.00 | 13636 |
| 48.00 | 1770 | 62.00 | 14544 | 76.05 | 14762 | 90.95 | 959 |

Average of 3.150 to 3.164 min.: 5209T.D\data.ms

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 92.00 | 9673 | 112.90 | 188 | 136.95 | 480 | 147.85 | 744 |
| 93.00 | 14349 | 114.95 | 296 | 138.90 | 90 | 149.90 | 435 |
| 94.05 | 41306 | 115.90 | 1047 | 139.80 | 117 | 153.10 | 91 |
| 95.05 | 364586 | 116.95 | 1918 | 140.95 | 3131 | 154.00 | 102 |
| 96.10 | 23840 | 117.90 | 1019 | 141.95 | 458 | 154.90 | 1790 |
| 97.05 | 692 | 118.95 | 1481 | 142.95 | 3446 | 156.95 | 807 |
| 103.90 | 1205 | 127.95 | 1227 | 143.90 | 100 | 158.90 | 348 |
| 104.95 | 393 | 128.85 | 502 | 144.85 | 214 | 160.90 | 298 |
| 105.90 | 1146 | 129.95 | 1274 | 145.85 | 520 | 171.80 | 106 |
| 106.90 | 287 | 130.90 | 373 | 146.70 | 94 | 174.00 | 289210 |
| 110.90 | 200 | 134.90 | 629 | 147.00 | 97 | 175.00 | 21306 |

Average of 3.150 to 3.164 min.: 5209T.D\data.ms

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 176.00 | 291640 | | | | | | |
| 176.95 | 18379 | | | | | | |
| 177.95 | 577 | | | | | | |



59169b

R560082

# Heritage Environmental Services, LLC

Q2256325

QC Report

QCType CCVD
Date Entered 11Nov09
Analysis Date/Time 07Nov0905:43:00

Duplicate SampleID
Duplicate QCSampleID
Method
Matrix

DataFile 5210T.D
Analyst 1365 H. WILLIAMS
Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0.1421 | | 0.1275 | | | 10.3 |
| 236 | CHLOROMETHANE | 0.2131 | | 0.1833 | | | 14 |
| 768 | VINYL CHLORIDE | 0.2350 | | 0.2136 | | | 9.1 |
| 198 | BROMOMETHANE | 0.1012 | | 0.0992 | | | 2 |
| 234 | CHLOROETHANE | 0.1262 | | 0.1192 | | | 5.5 |
| 372 | TRICHLOROFLUOROMETHANE | 0.2968 | | 0.2676 | | | 9.8 |
| 105 | ACROLEIN | 0.0175 | | 0.0258 | | | 47.4 |
| 8 | 1,1-DICHLOROETHENE | 0.1982 | | 0.1902 | | | 4 |
| 99 | ACETONE (2-PROPANONE) | 0.1022 | | 0.1092 | | | 6.8 |
| 422 | IODOMETHANE | 0.3240 | | 0.2964 | | | 8.5 |
| 216 | CARBON DISULFIDE | 0.6311 | | 0.5285 | | | 16.3 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0.7104 | | 0.5895 | | | 17 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | 9.16 | LIN | | 8.4 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0.2272 | | 0.2094 | | | 7.8 |
| 106 | ACRYLONITRILE | 0.0692 | | 0.1465 | | | 111.7 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | 0.6748 | | | 10.9 |
| 37 | 1,1-DICHLOROETHANE | 0.3815 | | 0.3605 | | | 5.5 |
| 767 | VINYL ACETATE | 10.0 | | 5.36 | LIN | | 46.4 |
| 246 | CIS-1,2-DICHLOROETHENE | 0.2414 | | 0.2213 | | | 8.3 |
| 52 | 2-BUTANONE | 0.0405 | | 0.0406 | | | 2 |
| 348 | ETHYL ACETATE | 0.2932 | | 0.3229 | | | 10.1 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0.0461 | | 0.0425 | | | 7.8 |
| 194 | BROMOCHLOROMETHANE | 0.1079 | | 0.0997 | | | 7.6 |
| 3457 | 2-METHYL-2-PROPENENITRILE | 0.1697 | | 0.1701 | | | 2 |
| 471 | METHACRYLONITRILE | 0.1697 | | 0.1701 | | | 2 |
| 709 | TETRAHYDROFURAN | 0.0897 | | 0.0898 | | | 1.1 |
| 235 | CHLOROFORM | 0.3695 | | 0.3315 | | | 10.3 |
| 302 | 1,1,1-TRICHLOROETHANE | 0.3069 | | 0.2736 | | | 10.9 |
| 217 | CARBON TETRACHLORIDE | 0.2699 | | 0.2399 | | | 11.1 |
| 10 | 1,1-DICHLOROPROPENE | 0.1063 | | 0.0950 | | | 10.6 |
| 151 | BENZENE | 0.8701 | | 0.8941 | | | 2.8 |
| 21 | 1,2-DICHLOROETHANE | 0.2779 | | 0.2675 | | | 3.7 |
| 1525 | 2-BUTANOL | 0.0161 | | 0.0127 | LIN | | 21.1 |
| 750 | TRICHLOROETHENE | 0.2277 | | 0.2206 | | | 3.1 |
| 517 | N-BUTANOL | 0.0140 | | 0.0096 | | | 31.4 |
| 23 | 1,2-DICHLOROPROPANE | 0.2007 | | 0.2052 | | | 2.2 |
| 296 | DIBROMOMETHANE | 0.1230 | | 0.1224 | | | 7.5 |
| 30 | 1,4-DIOXANE | 200.0 | | 108.3 | LIN | | 45.9 |
| 1147 | METHYL METHACRYLATE | 0.2026 | | 0.2134 | | | 5.3 |
| 195 | BROMODICHLOROMETHANE | 0.2434 | | 0.2240 | | | 8 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0.1420 | | 0.1597 | | | 12.5 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0.3040 | | 0.2899 | | | 4.6 |
| 91 | 4-METHYL-2-PENTANONE | 0.3155 | | 0.3244 | | | 2.8 |
| 724 | TOLUENE | 0.8639 | | 0.9095 | | | 5.3 |

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R560082

# Heritage Environmental Services, LLC

Q2256325

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 747 | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | 0.2321 | | | 4.4 |
| 4 | 1,1,2-TRICHLOROETHANE | 0.1709 | | 0.1799 | | | 5.3 |
| 351 | ETHYL METHACRYLATE | 0.8960 | | 0.8041 | | | 10.3 |
| 703 | TETRACHLOROETHENE | 0.7380 | | 0.6480 | | | 12.2 |
| 27 | 1,3-DICHLOROPROPANE | 0.9526 | | 0.9356 | | | 1.8 |
| 260 | 2-HEXANONE | 0.6513 | | 0.6044 | | | 7.2 |
| 295 | DIBROMOCHLOROMETHANE | 0.5223 | | 0.4242 | | | 18.8 |
| 718 | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | 0.1830 | | | 4.4 |
| 231 | CHLOROBENZENE | 1.7328 | | 1.5793 | | | 8.9 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | 0.5097 | | | 17.9 |
| 349 | ETHYL BENZENE | 0.9633 | | 0.8740 | | | 9.3 |
| 492 | M/P-XYLENE | 1.2016 | | 1.0877 | | | 9.5 |
| 549 | O-XYLENE | 1.2181 | | 1.0637 | | | 12.7 |
| 680 | STYRENE | 1.9432 | | 1.7002 | | | 12.5 |
| 197 | BROMOFORM | 0.3505 | | 0.2598 | | | 25.9 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | 2.6021 | | | 9.8 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | 0.7880 | | | 11.2 |
| 193 | BROMOBENZENE | 1.1810 | | 1.0362 | | | 12.3 |
| 714 | 1,2,3-TRICHLOROPROPANE | 0.2837 | | 0.2419 | | | 14.7 |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | 0.1877 | | | 25.2 |
| 532 | N-PROPYLBENZENE | 0.4079 | | 0.3657 | | | 10.3 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | 0.6941 | | | 9.2 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | 2.4164 | | | 11.8 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | 0.6316 | | | 12.6 |
| 702 | TERT-BUTYLBENZENE | 1.5134 | | 1.3638 | | | 9.9 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | 2.4400 | | | 12.8 |
| 644 | SEC-BUTYLBENZENE | 3.6289 | | 3.2350 | | | 10.9 |
| 626 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | 1.2751 | | | 14.4 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | 2.6593 | | | 12.8 |
| 629 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | 1.2626 | | | 15.4 |
| 519 | N-BUTYLBENZENE | 1.5933 | | 1.3688 | | | 14.1 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | 1.2590 | | | 16 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | 0.1599 | | | 27.4 |
| 16 | 1,2,4-TRICHLOROBENZENE | 1.1867 | | 0.9288 | | | 21.7 |
| 398 | HEXACHLOROBUTADIENE | 0.5378 | | 0.4407 | | | 18.1 |
| 493 | NAPHTHALENE | 3.5250 | | 2.6492 | | | 24.8 |
| 13 | 1,2,3-TRICHLOROBENZENE | 1.1543 | | 0.8462 | | | 26.7 |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | 0.2261 | | 0.2063 | | | 8.8 |
| 305 | DIETHYL ETHER | 0.2179 | | 0.1935 | | | 11.2 |
| 866 | HEXANE | 0.4423 | | 0.5639 | | | 27.5 |
| 301 | DICHLOROETHANE-D4 | 0.2816 | | 0.2637 | | | 6.4 |
| 726 | TOLUENE-D8 | 0.8989 | | 0.9386 | | | 4.4 |
| 196 | 4-BROMOFLUOROBENZENE | 0.8538 | | 0.7290 | | | 14.6 |
| 3362 | DIBROMOFLUOROMETHANE | 0.2362 | | 0.2178 | | | 7.8 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration (

R560082

Heritage Environmental Services, LLC

QC Report

Q2256325

**Qualifiers**

LIN Linear Regression Used

Data File : F:\1\DATA\T110709\5210T.D
Acq On : 7 Nov 2009 5:43
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

Q2256325

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 |
| 2 | | Dichlorodifluoromethane | 0.14206 | 0.12749 | 10.3 |
| 3 | P | Chloromethane | 0.21309 | 0.18334 | 14.0 |
| 4 | C | VINYL CHLORIDE | 0.23500 | 0.21365 | 9.1 |
| 5 | | Bromomethane | 0.10117 | 0.09918 | 2.0 |
| 6 | | Chloroethane | 0.12620 | 0.11923 | 5.5 |
| 7 | | Trichlorofluoromethane | 0.29674 | 0.26756 | 9.8 |
| 8 | | Acrolein | 0.01748 | 0.02585 | 47.9# |
| 9 | | Acetone | 0.10215 | 0.10917 | 6.9 |
| 10 | C | 1,1-DICHLOROETHENE | 0.19818 | 0.19019 | 4.0 |
| 11 | | Trichlorotrifluoroethane | 0.22605 | 0.20632 | 8.7 |
| 12 | | Acrylonitrile | 0.06919 | 0.14651 | 111.8# |
| 13 | | Carbon Disulfide | 0.63107 | 0.52853 | 16.2 |
| 14 | | Methylene Chloride | 10.000 | 9.156 | 8.4 |
| 15 | | Allyl Chloride | 0.71041 | 0.58948 | 17.0 |
| 16 | | Vinyl Acetate | 10.000 | 5.360 | 46.4# |
| 17 | | MTBE | 0.75761 | 0.67476 | 10.9 |
| 18 | | trans-1,2-Dichloroethene | 0.22719 | 0.20938 | 7.8 |
| 19 | P | 1,1-Dichloroethane | 0.38152 | 0.36046 | 5.5 |
| 20 | | 2-Butanone | 0.04048 | 0.04060 | 0.3 |
| 21 | | Ethyl Acetate | 0.29323 | 0.32291 | 10.1 |
| 22 | | cis-1,2-Dichloroethene | 0.24139 | 0.22128 | 8.3 |
| 23 | | Ethyl Cyanide | 0.04607 | 0.04249 | 7.8 |
| 24 | C | CHLOROFORM | 0.36950 | 0.33153 | 10.3 |
| 25 | | Methacrylonitrile | 0.16971 | 0.17005 | 0.2 |
| 26 | | Tetrahydrofuran | 0.08969 | 0.08975 | 0.1 |
| 27 | | Bromochloromethane | 0.10791 | 0.09968 | 7.6 |
| 28 | | 2,2-Dichloropropane | 0.24029 | 0.20102 | 16.3 |
| 29 | | Diethyl ether | 0.21782 | 0.19353 | 11.2 |
| 30 | | 1,1,1-Trichloroethane | 0.30689 | 0.27361 | 10.8 |
| 31 | | Iodomethane | 0.32398 | 0.29637 | 8.5 |
| 32 | S | Dibromofluoromethane | 0.23620 | 0.21781 | 7.8 |
| 33 | | 1,1-Dichloropropene | 0.10628 | 0.09498 | 10.6 |
| 34 | S | 1,2-Dichloroethane-d4 | 0.28157 | 0.26368 | 6.4 |
| 35 | | Carbon Tetrachloride | 0.26989 | 0.23990 | 11.1 |
| 36 | | 1,2-Dichloroethane | 0.27788 | 0.26749 | 3.7 |
| 37 | | Isobutanol | 0.01609 | 0.01271 | 21.0# |
| 38 | | Benzene | 0.87009 | 0.89412 | 2.8 |
| 39 | | n-Hexane | 0.44226 | 0.56388 | 27.5# |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : F:\1\DATA\T110709\5210T.D
Acq On : 7 Nov 2009 5:43
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.22770 | 0.22058 | 3.1 |
| 41 | | n-Butanol | 0.01399 | 0.00958 | 31.5# |
| 42 | C | 1,2-DICHLOROPROPANE | 0.20070 | 0.20523 | 2.3 |
| 43 | | 1,4-Dioxane | 200.000 | 108.330 | 45.8# |
| 44 | | Methyl Methacrylate | 0.20258 | 0.21338 | 5.3 |
| 45 | | Bromodichloromethane | 0.24341 | 0.22397 | 8.0 |
| 46 | | Dibromomethane | 0.12299 | 0.12240 | 0.5 |
| 47 | | 4-Methyl-2-Pentanone | 0.31553 | 0.32437 | 2.8 |
| 48 | | 2-Chloroethylvinylether | 0.14200 | 0.15970 | 12.5 |
| 49 | | cis-1,3-Dichloropropene | 0.30396 | 0.28993 | 4.6 |
| 50 | S | Toluene-d8 | 0.89888 | 0.93859 | 4.4 |
| 51 | C | TOLUENE | 0.86390 | 0.90949 | 5.3 |
| 52 | | trans-1,3-Dichloropropene | 0.24287 | 0.23210 | 4.4 |
| 53 | | 1,1,2-Trichloroethane | 0.17084 | 0.17986 | 5.3 |
| 54 | | 1,2-Dibromoethane | 0.17526 | 0.18303 | 4.4 |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 |
| 56 | | 2-Hexanone | 0.65133 | 0.60443 | 7.2 |
| 57 | | 1,3-Dichloropropane | 0.95260 | 0.93560 | 1.8 |
| 58 | | Ethyl Methacrylate | 0.89596 | 0.80410 | 10.3 |
| 59 | | Tetrachloroethene | 0.73802 | 0.64797 | 12.2 |
| 60 | | Dibromochloromethane | 0.52228 | 0.42418 | 18.8 |
| 61 | P | Chlorobenzene | 1.73283 | 1.57933 | 8.9 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.62097 | 0.50974 | 17.9 |
| 63 | C | ETHYL BENZENE | 0.96324 | 0.87401 | 9.3 |
| 64 | | m,p-Xylene | 1.20166 | 1.08767 | 9.5 |
| 65 | | o-Xylene | 1.21815 | 1.06374 | 12.7 |
| 66 | | Styrene | 1.94322 | 1.70018 | 12.5 |
| 67 | P | Bromoform | 0.35051 | 0.25975 | 25.9# |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.88714 | 0.78798 | 11.2 |
| 69 | S | 4-Bromofluorobenzene | 0.85384 | 0.72897 | 14.6 |
| 70 | | Isopropylbenzene | 2.88487 | 2.60212 | 9.8 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.25107 | 0.18773 | 25.2# |
| 72 | | Bromobenzene | 1.18100 | 1.03623 | 12.3 |
| 73 | | 1,2,3-Trichloropropane | 0.28364 | 0.24191 | 14.7 |
| 74 | | n-Propylbenzene | 0.40785 | 0.36571 | 10.3 |
| 75 | | 1,3,5-Trimethylbenzene | 2.73880 | 2.41642 | 11.8 |
| 76 | | 2-Chlorotoluene | 0.76471 | 0.69411 | 9.2 |
| 77 | | 4-Chlorotoluene | 0.72272 | 0.63156 | 12.6 |
| 78 | | t-Butylbenzene | 1.51344 | 1.36376 | 9.9 |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : F:\1\DATA\T110709\5210T.D
Acq On : 7 Nov 2009 5:43
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
MS Integration Params: rteint2.p

Vial: 22
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.79809 | 2.44001 | 12.8 |
| 80 | sec-Butylbenzene | 3.62895 | 3.23496 | 10.9 |

| | | | | |
|---|---|---|---|---|
| 82 | 1,3-Dichlorobenzene | 1.49038 | 1.27515 | 14.4 |
| 83 | 1,4-Dichlorobenzene | 1.49307 | 1.26263 | 15.4 |
| 84 | n-Butylbenzene | 1.59324 | 1.36879 | 14.1 |
| 85 | 1,2-Dichlorobenzene | 1.49964 | 1.25901 | 16.0 |
| 86 | 1,2-Dibromo-3-chloropropane | 0.22014 | 0.15989 | 27.4# |
| 87 | 1,2,4-Trichlorobenzene | 1.18673 | 0.92881 | 21.7# |
| 88 | Naphthalene | 3.52500 | 2.64920 | 24.8# |
| 89 | Hexachlorobutadiene | 0.53776 | 0.44069 | 18.1 |
| 90 | 1,2,3-Trichlorobenzene | 1.15426 | 0.84617 | 26.7# |

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

5003T.D 8260TNEW.M Wed Nov 11 08:45:15 2009
Average RPD= 13.28

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5210T.D
Acq On : 7 Nov 2009 5:43
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:05:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 2 | | Dichlorodifluoromethane | 0.142 | 0.127 | 10.6 | 86 | 0.00 |
| 3 | P | Chloromethane | 0.213 | 0.183 | 14.1 | 87 | 0.00 |
| 4 | C | VINYL CHLORIDE | 0.235 | 0.214 | 8.9 | 86 | 0.00 |
| 5 | | Bromomethane | 0.101 | 0.099 | 2.0 | 84 | 0.00 |
| 6 | | Chloroethane | 0.126 | 0.119 | 5.6 | 88 | 0.02 |
| 7 | | Trichlorofluoromethane | 0.297 | 0.268 | 9.8 | 87 | 0.00 |
| 8 | | Acrolein | 0.017 | 0.026 | -52.9# | 138 | 0.00 |
| 9 | | Acetone | 0.102 | 0.109 | -6.9 | 110 | -0.01 |
| 10 | C | 1,1-DICHLOROETHENE | 0.198 | 0.190 | 4.0 | 91 | 0.00 |
| 11 | | Trichlorotrifluoroethane | 0.226 | 0.206 | 8.8 | 88 | 0.00 |
| 12 | | Acrylonitrile | 0.069 | 0.147 | -113.0# | 207# | -0.01 |
| 13 | | Carbon Disulfide | 0.631 | 0.529 | 16.2 | 82 | 0.00 |
| 14 | | Methylene Chloride | 0.296 | 0.240 | 18.9 | 92 | 0.00 |
| 15 | | Allyl Chloride | 0.710 | 0.589 | 17.0 | 82 | 0.00 |
| 16 | | Vinyl Acetate | 0.032 | 0.020 | 37.5# | 68 | 0.00 |
| 17 | | MTBE | 0.758 | 0.675 | 10.9 | 87 | -0.01 |
| 18 | | trans-1,2-Dichloroethene | 0.227 | 0.209 | 7.9 | 86 | 0.00 |
| 19 | P | 1,1-Dichloroethane | 0.382 | 0.360 | 5.8 | 89 | -0.01 |
| 20 | | 2-Butanone | 0.040 | 0.041 | -2.5 | 103 | -0.01 |
| 21 | | Ethyl Acetate | 0.293 | 0.323 | -10.2 | 111 | 0.00 |
| 22 | | cis-1,2-Dichloroethene | 0.241 | 0.221 | 8.3 | 88 | 0.00 |
| 23 | | Ethyl Cyanide | 0.046 | 0.042 | 8.7 | 94 | -0.01 |
| 24 | C | CHLOROFORM | 0.369 | 0.332 | 10.0# | 86 | 0.00 |
| 25 | | Methacrylonitrile | 0.170 | 0.170 | 0.0 | 97 | -0.01 |
| 26 | | Tetrahydrofuran | 0.090 | 0.090 | 0.0 | 99 | -0.01 |
| 27 | | Bromochloromethane | 0.108 | 0.100 | 7.4 | 86 | -0.01 |
| 28 | | 2,2-Dichloropropane | 0.240 | 0.201 | 16.2 | 87 | -0.01 |
| 29 | | Diethyl ether | 0.218 | 0.194 | 11.0 | 86 | 0.00 |
| 30 | | 1,1,1-Trichloroethane | 0.307 | 0.274 | 10.7 | 84 | 0.00 |
| 31 | | Iodomethane | 0.324 | 0.296 | 8.6 | 85 | 0.00 |
| 32 | S | Dibromofluoromethane | 0.236 | 0.218 | 7.6 | 88 | 0.00 |
| 33 | | 1,1-Dichloropropene | 0.106 | 0.095 | 10.4 | 86 | -0.01 |
| 34 | S | 1,2-Dichloroethane-d4 | 0.282 | 0.264 | 6.4 | 88 | -0.01 |
| 35 | | Carbon Tetrachloride | 0.270 | 0.240 | 11.1 | 86 | 0.00 |
| 36 | | 1,2-Dichloroethane | 0.278 | 0.267 | 4.0 | 90 | -0.01 |
| 37 | | Isobutanol | 0.016 | 0.013 | 18.8 | 85 | -0.01 |
| 38 | | Benzene | 0.870 | 0.894 | -2.8 | 97 | -0.01 |
| 39 | | n-Hexane | 0.442 | 0.564 | -27.6# | 134 | -0.00 |
| 40 | | Trichloroethene | 0.228 | 0.221 | 3.1 | 92 | -0.01 |
| 41 | | n-Butanol | 0.014 | 0.010 | 28.6# | 71 | -0.01 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.201 | 0.205 | -2.0 | 99 | -0.01 |
| 43 | | 1,4-Dioxane | 0.007 | 0.004 | 42.9# | 65 | -0.01 |
| 44 | | Methyl Methacrylate | 0.203 | 0.213 | -4.9 | 109 | -0.01 |
| 45 | | Bromodichloromethane | 0.243 | 0.224 | 7.8 | 91 | -0.01 |
| | | Bromoform | | | -57.4# | 136 | -0.01 |
| | | 2,2-Dichloropropane | | | 16.2 | 87 | -0.01 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 47 | | 4-Methyl-2-Pentanone | 0.316 | 0.324 | -2.5 | 103 | -0.01 |
| 48 | | 2-Chloroethylvinylether | 0.142 | 0.160 | -12.7 | 113 | -0.01 |
| 49 | | cis-1,3-Dichloropropene | 0.304 | 0.290 | 4.6 | 95 | -0.01 |
| 50 | S | Toluene-d8 | 0.899 | 0.939 | -4.4 | 101 | -0.01 |
| 51 | C | TOLUENE | 0.864 | 0.909 | -5.2 | 103 | -0.01 |
| 52 | | trans-1,3-Dichloropropene | 0.243 | 0.232 | 4.5 | 99 | -0.01 |
| 53 | | 1,1,2-Trichloroethane | 0.171 | 0.180 | -5.3 | 105 | -0.01 |
| 54 | | 1,2-Dibromoethane | 0.175 | 0.183 | -4.6 | 106 | -0.01 |
| 55 | I | 2-Bromo-1-chloropropane | 1.000 | 1.000 | 0.0 | 110 | 0.00 |
| 56 | | 2-Hexanone | 0.651 | 0.604 | 7.2 | 109 | -0.01 |
| 57 | | 1,3-Dichloropropane | 0.953 | 0.936 | 1.8 | 110 | -0.01 |
| 58 | | Ethyl Methacrylate | 0.896 | 0.804 | 10.3 | 105 | -0.01 |
| 59 | | Tetrachloroethene | 0.738 | 0.648 | 12.2 | 89 | -0.01 |
| 60 | | Dibromochloromethane | 0.522 | 0.424 | 18.8 | 96 | -0.01 |
| 61 | P | Chlorobenzene | 1.733 | 1.579 | 8.9 | 101 | -0.01 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.621 | 0.510 | 17.9 | 91 | -0.01 |
| 63 | C | ETHYL BENZENE | 0.963 | 0.874 | 9.2 | 101 | -0.01 |
| 64 | | m,p-Xylene | 1.202 | 1.088 | 9.5 | 99 | -0.01 |
| 65 | | o-Xylene | 1.218 | 1.064 | 12.6 | 95 | -0.01 |
| 66 | | Styrene | 1.943 | 1.700 | 12.5 | 98 | -0.01 |
| 67 | P | Bromoform | 0.351 | 0.260 | 25.9# | 94 | 0.00 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.887 | 0.788 | 11.2 | 99 | 0.00 |
| 69 | S | 4-Bromofluorobenzene | 0.854 | 0.729 | 14.6 | 96 | -0.01 |
| 70 | | Isopropylbenzene | 2.885 | 2.602 | 9.8 | 99 | -0.01 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.251 | 0.188 | 25.1# | 90 | 0.00 |
| 72 | | Bromobenzene | 1.181 | 1.036 | 12.3 | 99 | -0.01 |
| 73 | | 1,2,3-Trichloropropane | 0.284 | 0.242 | 14.8 | 98 | -0.01 |
| 74 | | n-Propylbenzene | 0.408 | 0.366 | 10.3 | 100 | 0.00 |
| 75 | | 1,3,5-Trimethylbenzene | 2.739 | 2.416 | 11.8 | 97 | -0.01 |
| 76 | | 2-Chlorotoluene | 0.765 | 0.694 | 9.3 | 102 | 0.00 |
| 77 | | 4-Chlorotoluene | 0.723 | 0.632 | 12.6 | 97 | 0.00 |
| 78 | | t-Butylbenzene | 1.513 | 1.364 | 9.8 | 99 | -0.01 |
| 79 | | 1,2,4-Trimethylbenzene | 2.798 | 2.440 | 12.8 | 97 | 0.00 |
| 80 | | sec-Butylbenzene | 3.629 | 3.235 | 10.9 | 98 | 0.00 |
| 81 | | p-Isopropyltoluene | 3.050 | 2.659 | 12.8 | 97 | -0.01 |
| 82 | | 1,3-Dichlorobenzene | 1.490 | 1.275 | 14.4 | 96 | -0.01 |
| 83 | | 1,4-Dichlorobenzene | 1.493 | 1.263 | 15.4 | 94 | -0.01 |
| 84 | | n-Butylbenzene | 1.593 | 1.369 | 14.1 | 96 | 0.00 |
| 85 | | 1,2-Dichlorobenzene | 1.500 | 1.259 | 16.1 | 93 | -0.01 |
| 86 | | 1,2-Dibromo-3-chloropropane | 0.220 | 0.160 | 27.3# | 86 | 0.00 |
| 87 | | 1,2,4-Trichlorobenzene | 1.187 | 0.929 | 21.7# | 86 | -0.01 |
| 88 | | Naphthalene | 3.525 | 2.649 | 24.9# | 83 | -0.01 |
| 89 | | Hexachlorobutadiene | 0.538 | 0.441 | 18.0 | 92 | -0.01 |
| 90 | | 1,2,3-Trichlorobenzene | 1.154 | 0.846 | 26.7# | 81 | -0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 1

8260TNEW.M Sat Nov 07 06:05:20 2009

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5210T.D
Acq On : 7 Nov 2009 5:43
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:05:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 653147 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 233558 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 142261 | 9.22 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 92.20% | | | |
| 34) 1,2-Dichloroethane-d4 | 4.475 | 65 | 172220 | 9.36 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 93.60% | | | |
| 50) Toluene-d8 | 6.596 | 98 | 613038 | 10.44 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 104.40% | | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 170257 | 8.54 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 85.40% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.073 | 85 | 683267 | 18.97 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 119747 | 18.60 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 139543 | 9.09 | UG/L | 97 |
| 5) Bromomethane | 1.488 | 94 | 64776 | 9.80 | UG/L | 96 |
| 6) Chloroethane | 1.567 | 64 | 77873 | 9.45 | UG/L | 92 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 174753 | 9.02 | UG/L # | 77 |
| 8) Acrolein | 2.033 | 56 | 168829 | 147.90 | UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 356517 | 53.43 | UG/L | 92 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 124224 | 9.60 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 134759 | 9.13 | UG/L | 94 |
| 12) Acrylonitrile | 2.727 | 53 | 956915 | 211.74 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 345208 | 8.38 | UG/L | 98 |
| 14) Methylene Chloride | 2.513 | 84 | 156443 | 9.16 | UG/L # | 77 |
| 15) Allyl Chloride | 2.405 | 41 | 385015 | 8.30 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 13306 | 5.36 | UG/L # | 82 |
| 17) MTBE | 2.749 | 73 | 440717 | 8.91 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 136756 | 9.22 | UG/L | 98 |
| 19) 1,1-Dichloroethane | 3.121 | 63 | 235434 | 9.45 | UG/L | 100 |
| 20) 2-Butanone | 3.695 | 72 | 132604 | 50.15 | UG/L # | 136 |
| 21) Ethyl Acetate | 3.766 | 43 | 210909 | 11.01 | UG/L # | 196 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 144527 | 9.17 | UG/L | 92 |
| 23) Ethyl Cyanide | 3.752 | 54 | 277515 | 92.23 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 216538 | 8.97 | UG/L | 99 |
| 25) Methacrylonitrile | 3.895 | 41 | 1110692 | 100.20 | UG/L # | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5210T.D
Acq On : 7 Nov 2009 5:43
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:05:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.938 | 42 | 732767 | 125.08 | UG/L # | 82 |
| 27) Bromochloromethane | 3.895 | 128 | 65104 | 9.24 | UG/L | 86 |
| 28) 2,2-Dichloropropane | 3.659 | 77 | 131296 | 8.37 | UG/L # | 88 |
| 29) Diethyl ether | 1.932 | 59 | 126405 | 8.88 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 178706 | 8.92 | UG/L | 99 |
| 31) Iodomethane | 2.226 | 142 | 193575 | 9.15 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.318 | 110 | 62036 | 8.94 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 156689 | 8.89 | UG/L | 92 |
| 36) 1,2-Dichloroethane | 4.554 | 62 | 174713 | 9.63 | UG/L | 97 |
| 37) Isobutanol | 4.497 | 43 | 684793 | 651.62 | UG/L # | 94 |
| 38) Benzene | 4.525 | 78 | 583993 | 10.28 | UG/L | 100 |
| 39) n-Hexane | 2.993 | 57 | 368296 | 12.75 | UG/L | 100 |
| 40) Trichloroethene | 5.213 | 130 | 144071 | 9.69 | UG/L | 97 |
| 41) n-Butanol | 5.206 | 56 | 323883 | 354.41 | UG/L | 100 |
| 42) 1,2-DICHLOROPROPANE | 5.457 | 63 | 134048 | 10.23 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.629 | 88 | 50159 | 108.33 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.629 | 41 | 139366 | 10.53 | UG/L # | 93 |
| 45) Bromodichloromethane | 5.779 | 83 | 146285 | 9.20 | UG/L | 100 |
| 46) Dibromomethane | 5.586 | 93 | 779947 | 129.95 | UG/L # | 88 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1059320 | 51.40 | UG/L # | 88 |
| 48) 2-Chloroethylvinylether | 6.151 | 63 | 104309 | 11.25 | UG/L # | 93 |
| 49) cis-1,3-Dichloropropene | 6.295 | 75 | 189369 | 9.54 | UG/L | 100 |
| 51) TOLUENE | 6.674 | 91 | 594028 | 10.53 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 151596 | 9.56 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.183 | 97 | 117472 | 10.53 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 119546 | 10.44 | UG/L | 98 |
| 56) 2-Hexanone | 7.527 | 43 | 705842 | 46.40 | UG/L # | 87 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 218518 | 659.82 | UG/L # | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 187804 | 8.97 | UG/L # | 163 |
| 59) Tetrachloroethene | 7.326 | 166 | 151339 | 8.78 | UG/L | 99 |
| 60) Dibromochloromethane | 7.656 | 129 | 99071 | 8.12 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 368864 | 9.11 | UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 119053 | 8.21 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 204131 | 9.07 | UG/L | 174 |
| 64) m,p-Xylene | 8.737 | 106 | 508066 | 18.10 | UG/L # | 60 |
| 65) o-Xylene | 9.253 | 106 | 248444 | 8.73 | UG/L | 181 |
| 66) Styrene | 9.274 | 104 | 397091 | 8.75 | UG/L | 89 |
| 67) Bromoform | 9.482 | 173 | 160667 | 57.41 | UG/L # | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 184038 | 8.88 | UG/L | 99 |
| 70) Isopropylbenzene | 9.711 | 105 | 607747 | 9.02 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 87692 | 14.95 | UG/L # | 118 |
| 72) Bromobenzene | 10.019 | 77 | 242019 | 8.77 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5210T.D
Acq On : 7 Nov 2009 5:43
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:05:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.105 | 110 | 56500 | 8.53 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 85414 | 8.97 | UG/L # | 84 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 564374 | 8.82 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 162116 | 9.08 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 147505 | 8.74 | UG/L | 100 |
| 78) t-Butylbenzene | 10.714 | 91 | 318516 | 9.01 | UG/L # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 569883 | 8.72 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.944 | 105 | 755551 | 8.91 | UG/L # | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 621094 | 8.72 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.022 | 146 | 297821 | 8.56 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 294898 | 8.46 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 319691 | 8.59 | UG/L | 196 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 294051 | 8.40 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 37344 | 7.26 | UG/L # | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 216931 | 7.83 | UG/L | 100 |
| 88) Naphthalene | 13.100 | 128 | 618743 | 7.52 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 102926 | 8.19 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 197630 | 7.33 | UG/L | 100 |

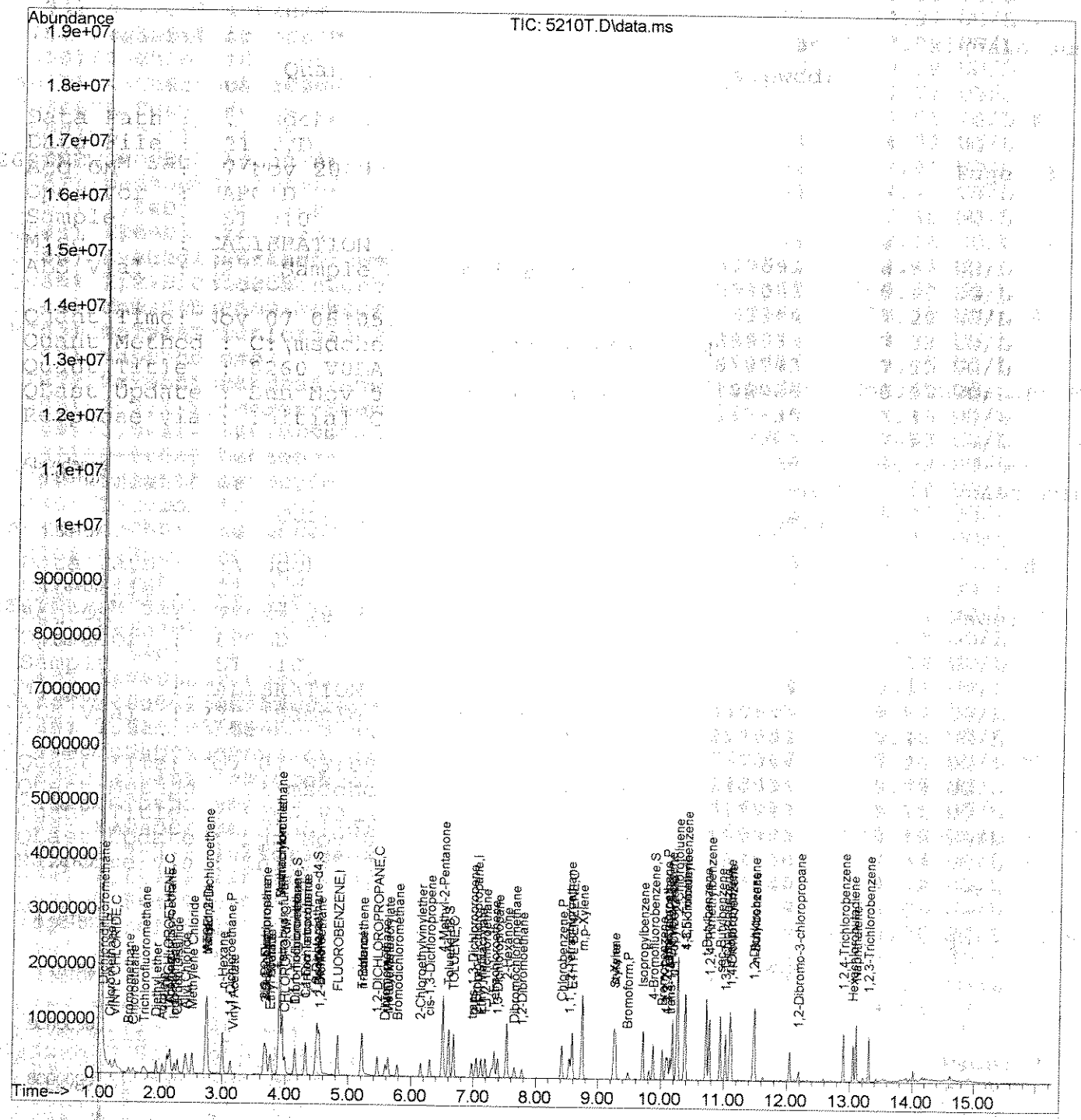
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5210T.D
Acq On : 7 Nov 2009 5:43
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:05:17 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration






59169b

R560082

# Heritage Environmental Services, LLC

QC Report

Q2256326

QCType BLA01
Date Entered 11Nov09
Analysis Date/Time 07Nov0906:08:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5211T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | | | 1.0 | BDL | | |
| 236 | CHLOROMETHANE | | | 1.0 | BDL | | |
| 768 | VINYL CHLORIDE | | | 1.0 | BDL | | |
| 198 | BROMOMETHANE | | | 1.0 | BDL | | |
| 234 | CHLOROETHANE | | | 1.0 | BDL | | |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | BDL | | |
| 105 | ACROLEIN | | | 25. | BDL | | |
| 8 | 1,1-DICHLOROETHENE | | | 1.0 | BDL | | |
| 99 | ACETONE (2-PROPANONE) | | | 10. | BDL | | |
| 422 | IODOMETHANE | | | 1.0 | BDL | | |
| 216 | CARBON DISULFIDE | | | 1.0 | BDL | | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | | | 1.0 | BDL | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | 1.0 | BDL | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 106 | ACRYLONITRILE | | | 5.0 | BDL | | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | BDL | | |
| 7 | 1,1-DICHLOROETHANE | | | 1.0 | BDL | | |
| 767 | VINYL ACETATE | | | 1.0 | BDL | | |
| 133 | 2,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 52 | 2-BUTANONE | | | 5.0 | BDL | | |
| 348 | ETHYL ACETATE | | | 1.0 | BDL | | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | | | 20. | BDL | | |
| 194 | BROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 471 | METHACRYLONITRILE | | | 1.0 | BDL | | |
| 3457 | 2-METHYL-2-PROPENENITRILE | | | 1.0 | BDL | | |
| 709 | TETRAHYDROFURAN | | | 20. | BDL | | |
| 235 | CHLOROFORM | | | 1.0 | BDL | | |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 217 | CARBON TETRACHLORIDE | | | 1.0 | BDL | | |
| 10 | 1,1-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 151 | BENZENE | | | 1.0 | BDL | | |
| 21 | 1,2-DICHLOROETHANE | | | 100 | BDL | | |
| 1525 | 2-BUTANOL | | | 1.0 | BDL | | |
| 750 | TRICHLOROETHENE | | | 100 | BDL | | |
| 517 | N-BUTANOL | | | 1.0 | BDL | | |
| 23 | 1,2-DICHLOROPROPANE | | | 100 | BDL | | |
| 296 | DIBROMOMETHANE | | | 1.0 | BDL | | |
| 30 | 1,4-DIOXANE | | | 100 | BDL | | |
| 1147 | METHYL METHACRYLATE | | | 1.0 | BDL | | |
| 195 | BROMODICHLOROMETHANE | | | 1.0 | BDL | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | 1.0 | BDL | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 91 | 4-METHYL-2-PENTANONE | | | 5.0 | BDL | | |

11/11/09

59169b

R560082

# Heritage Environmental Services, LLC

Q2256326

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | | | | 1.0 BDL | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 BDL | | |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 BDL | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 BDL | | |
| 703 | TETRACHLOROETHENE | | | | 1.0 BDL | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 BDL | | |
| 60 | 2-HEXANONE | | | | 5.0 BDL | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 BDL | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 BDL | | |
| 231 | CHLOROBENZENE | | | | 1.0 BDL | | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 BDL | | |
| 349 | ETHYL BENZENE | | | | 1.0 BDL | | |
| 492 | M/P-XYLENE | | | | 2.0 BDL | | |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 BDL | | |
| 549 | O-XYLENE | | | | 1.0 BDL | | |
| 680 | STYRENE | | | | 1.0 BDL | | |
| 197 | BROMOFORM | | | | 1.0 BDL | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 BDL | | |
| 33 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 BDL | | |
| 193 | BROMOBENZENE | | | | 1.0 BDL | | |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 BDL | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 BDL | | |
| 532 | N-PROPYLBENZENE | | | | 1.0 BDL | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 BDL | | |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 BDL | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 BDL | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 BDL | | |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 BDL | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 BDL | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 BDL | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 BDL | | |
| 129 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 BDL | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 BDL | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 BDL | | |
| 19 | 1,2-DIBROMO,3-CHLOROPROPANE (DBCP) | | | | 1.0 BDL | | |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 BDL | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 BDL | | |
| 493 | NAPHTHALENE | | | | 1.0 BDL | | |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 BDL | | |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | | | | 1.0 BDL | | |
| 305 | DIETHYL ETHER | | | | 1.0 BDL | | |
| 866 | HEXANE | | | | 1.0 BDL | | |
| 301 | DICHLOROETHANE-D4 | | | | | 96 | |
| 726 | TOLUENE-D8 | | | | | 103 | |
| 196 | 4-BROMOFLUOROBENZENE | | | | | 91 | |
| 3362 | DIBROMOFLUOROMETHANE | | | | | 94 | |

**Qualifiers**

591695

R560082

# Heritage Environmental Services, LLC

QC Report

Q2256326

BDL Below Detection Limit

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5211T.D
Acq On : 7 Nov 2009 6:08
Operator : HAROLD
Sample : VBLK
Misc : 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:30:31 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Q2256326

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 637779 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 210303 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 141770 | 9.41 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 94.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 171716 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.60% | |
| 50) Toluene-d8 | 6.603 | 98 | 591688 | 10.32 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 103.20% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 163507 | 9.11 UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = | 91.10% | |
| Target Compounds | | | | | Qvalue |
| 8) Acrolein | 2.047 | 56 | 4269 | 13.83 UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 2640 | 10.41 UG/L # | 46 |
| 14) Methylene Chloride | 2.520 | 84 | 7096 | Below Cal # | 74 |
| 37) Isobutanol | 4.497 | 43 | 863 | 0.84 UG/L # | 25 |
| 52) trans-1,3-Dichloropropene | 7.039 | 75 | 3606 | 0.23 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 2684 | 0.24 UG/L | 100 |

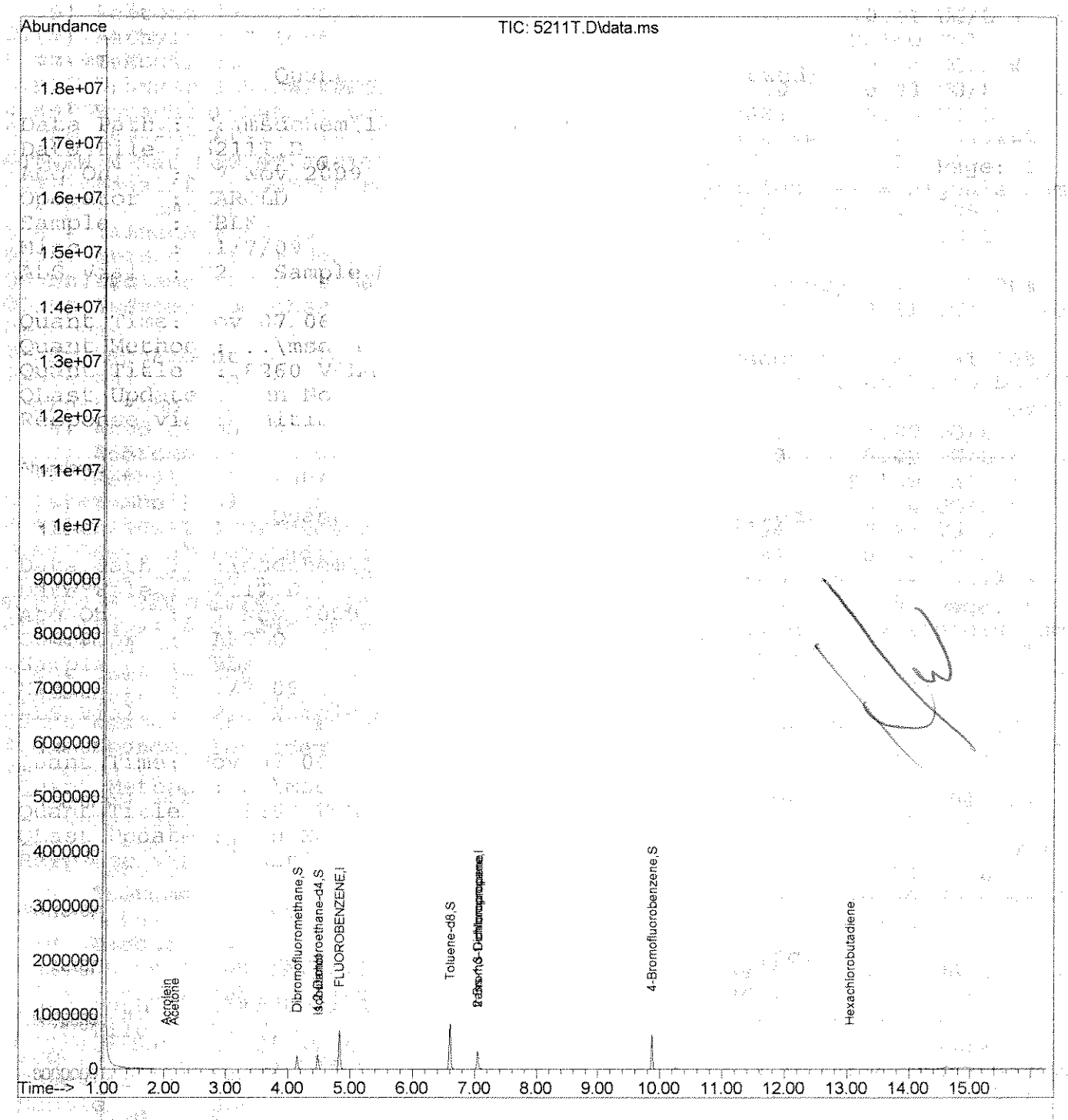
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

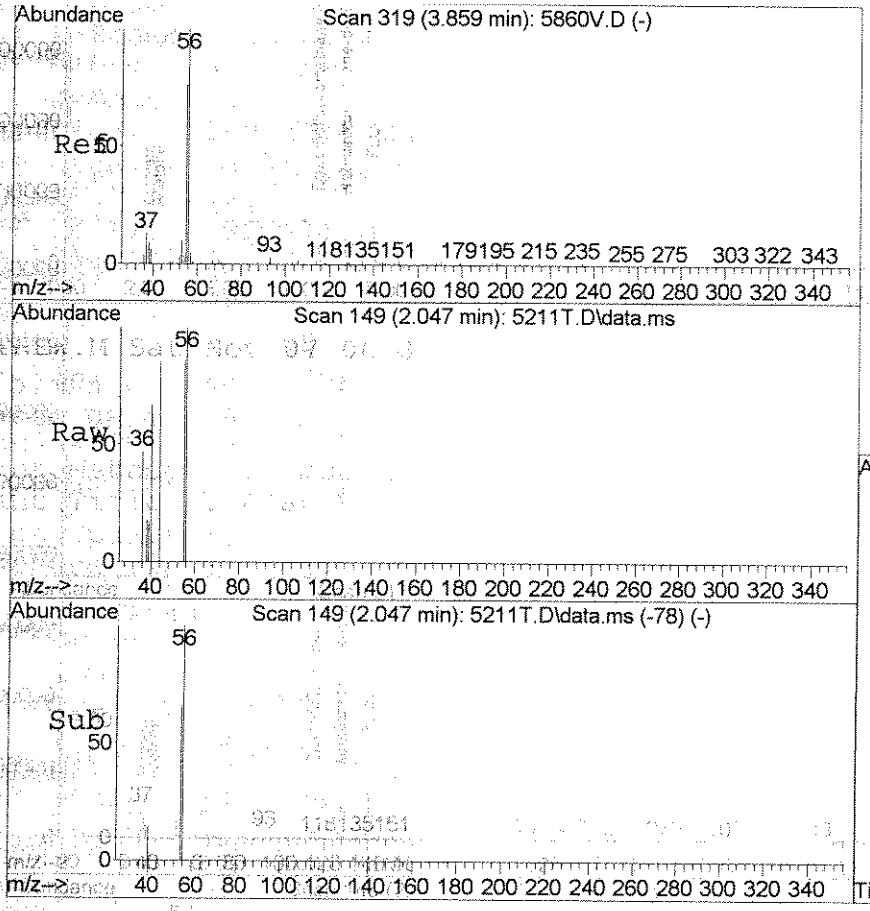
Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5211T.D
Acq On : 7 Nov 2009 6:08
Operator : HAROLD
Sample : VBLK
Misc : 11/7/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:30:31 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration



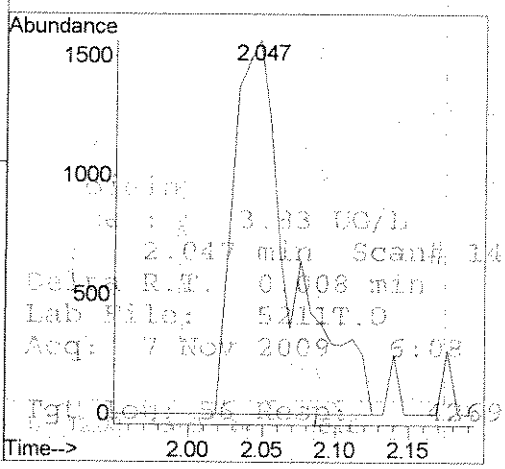


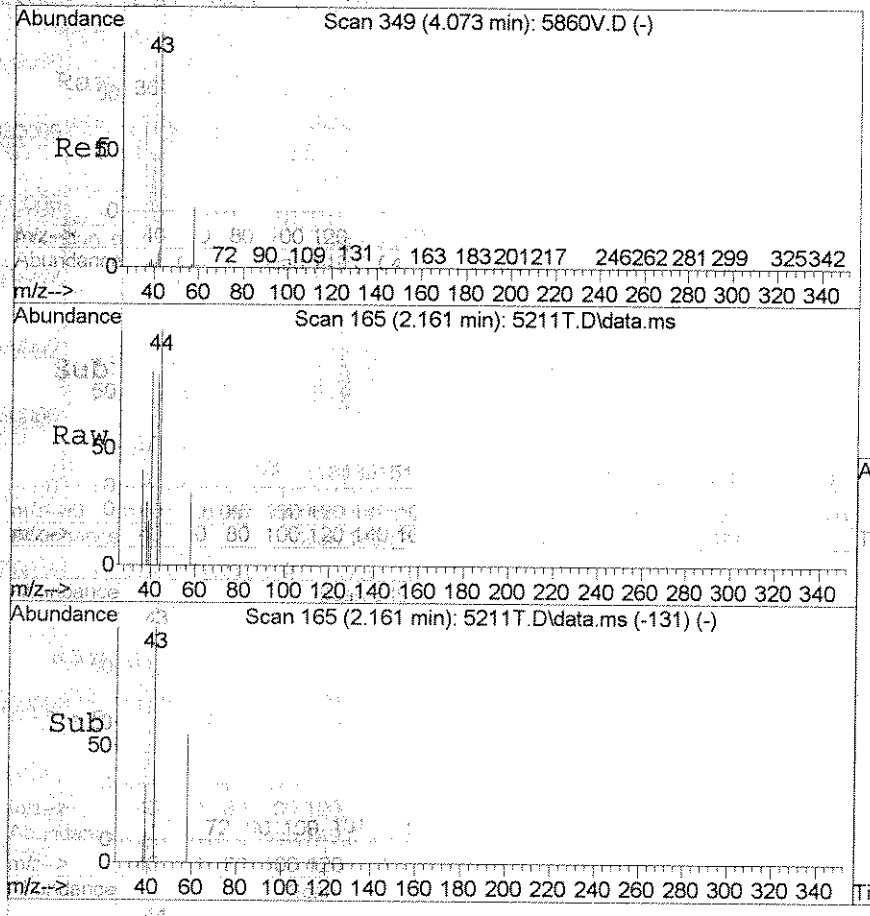

59169b




#8
Acrolein
Concen: 3.83 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

Tgt Ion: 56 Resp: 4269

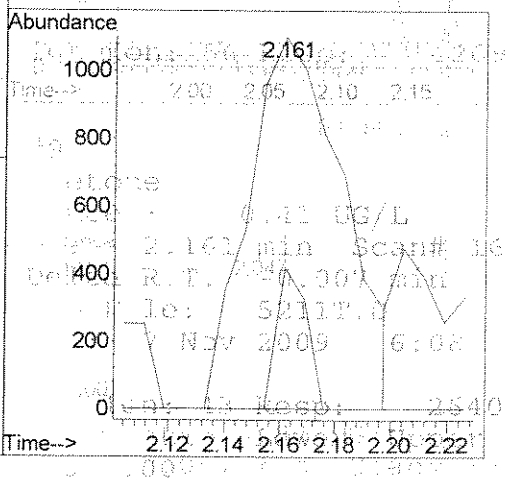



#9
Acetone
Concen: 0.41 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

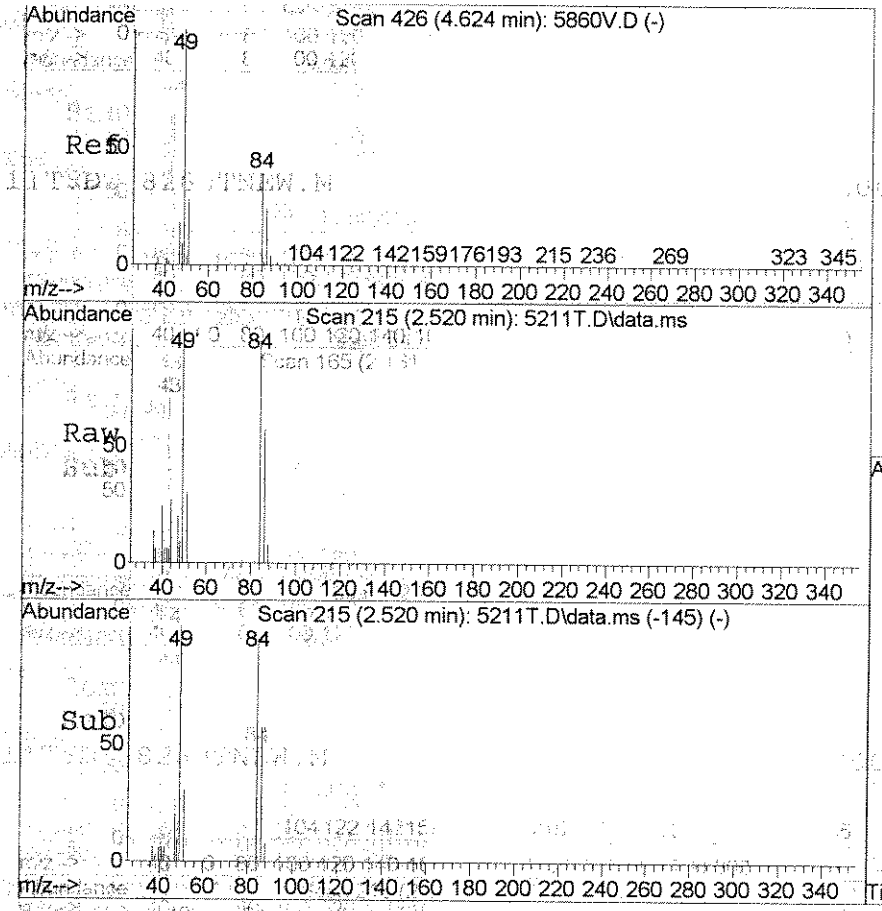
Tgt Ion: 43 Resp: 2640

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 0.0 | 23.1 | 34.7# |





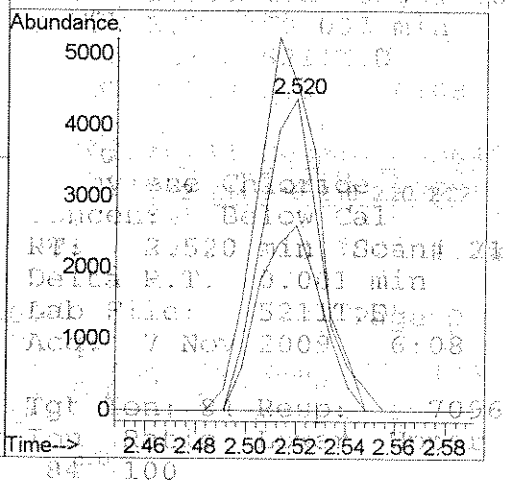

59169b

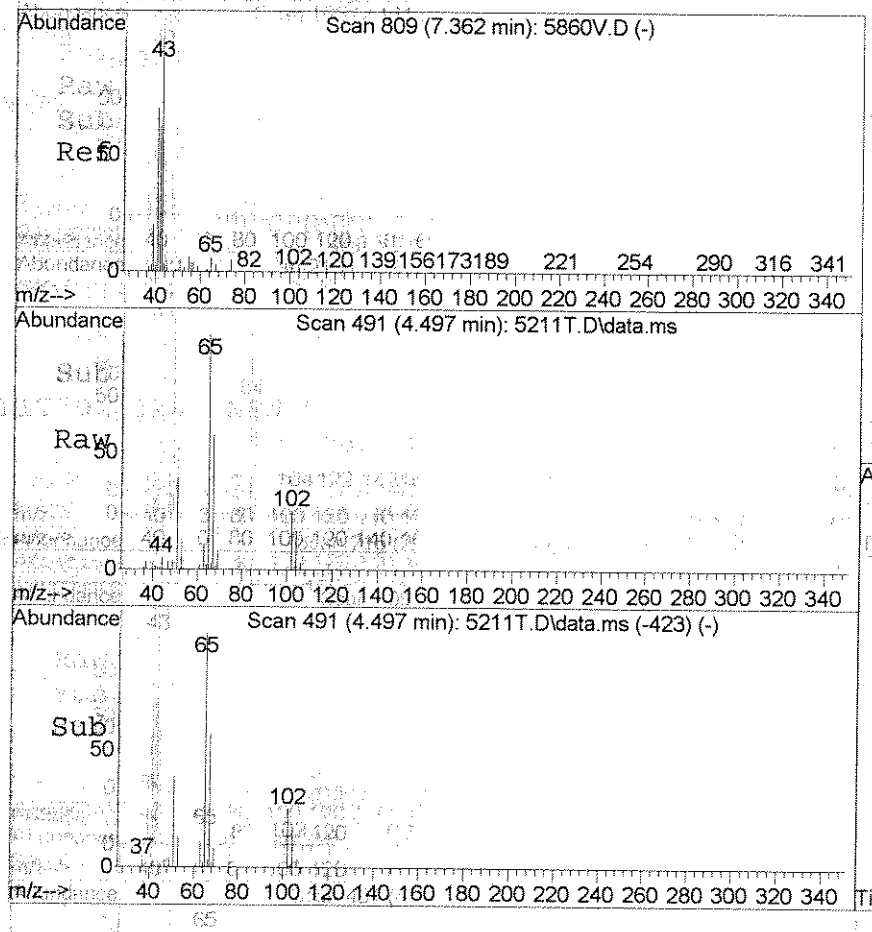



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

Tgt Ion: 84 Resp: 7096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 126.3 | 140.2 | 210.2# |
| 86 | 64.0 | 51.1 | 76.7 |

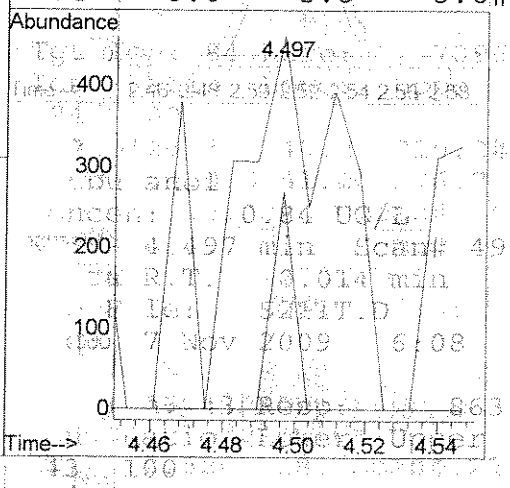



#37
Isobutanol
Concen: 0.84 UG/L
RT: 4.497 min Scan# 491
Delta R.T. -0.014 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

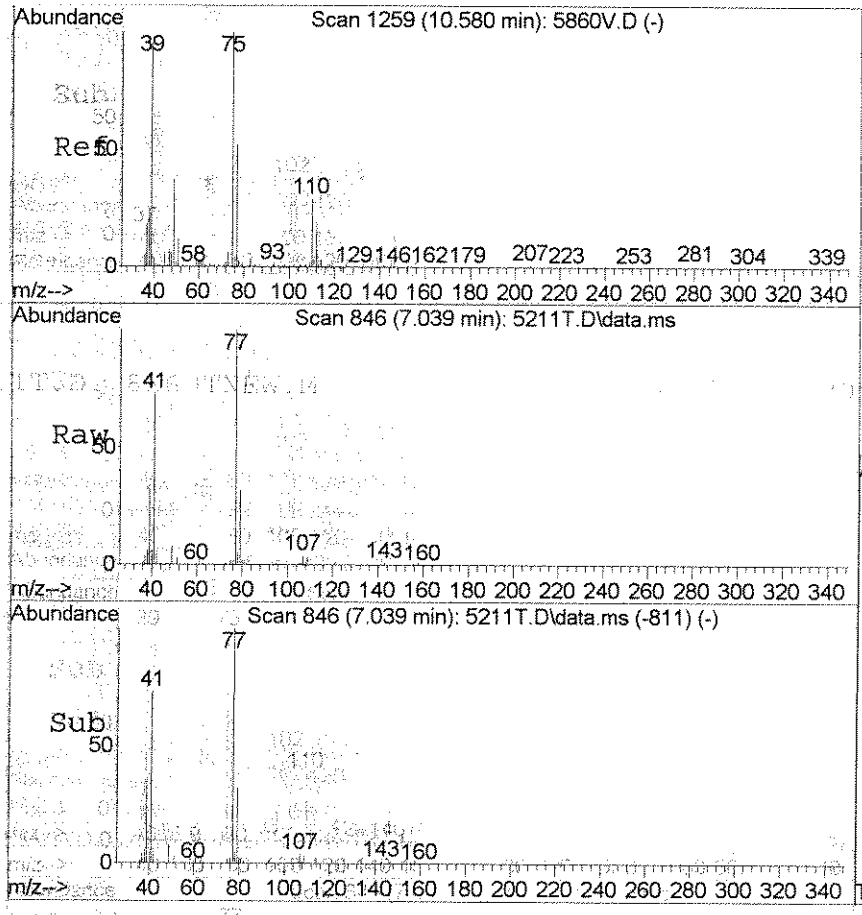
Tgt Ion: 43 Resp: 863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 50.1 | 75.1# |
| 33 | 0.0 | 0.0 | 0.0 |
| 74 | 0.0 | 5.8 | 8.6# |



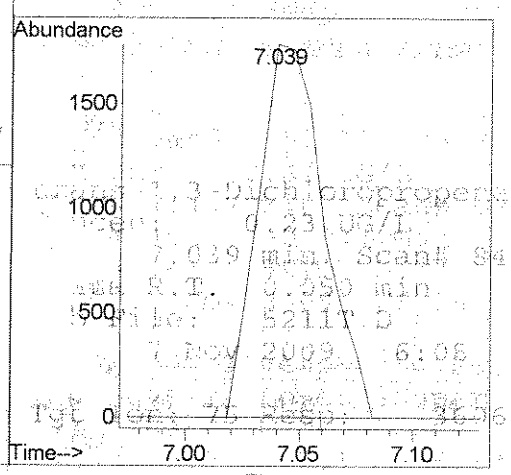


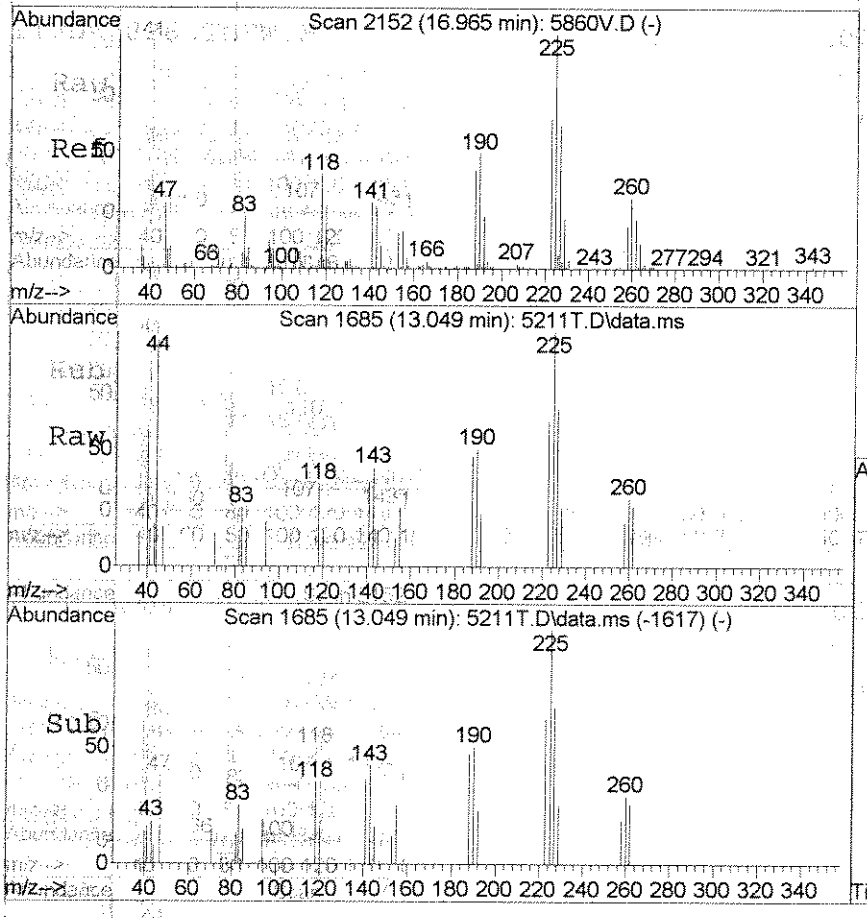

59169b




#52
trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.039 min Scan# 846
Delta R.T. 0.050 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

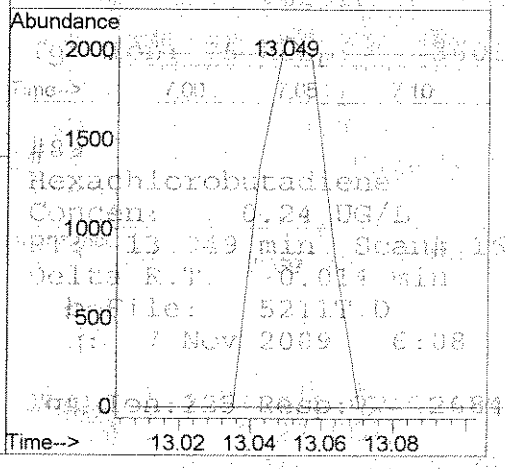
Tgt Ion: 75 Resp: 3606




#89
Hexachlorobutadiene
Concen: 0.24 UG/L
RT: 13.049 min Scan# 1685
Delta R.T. -0.014 min
Lab File: 5211T.D
Acq: 7 Nov 2009 6:08

Tgt Ion:225 Resp: 2684






59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5212T.
LCS Date/Time : 7 Nov 2009 6:44
Spike Conc : 10 uG/L
Dilution Factor: 1

Q22S6327

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| Benzene | 10.8 | 108.0 | 73 | 131.5 |
| Carbon Tetrachloride | 9.61 | 96.1 | 63 | 144.9 |
| 1,4-Dichlorobenzene | 10 | 100.0 | 74 | 136.7 |
| 1,2-Dichloroethane | 10.5 | 105.0 | 65 | 133.8 |
| 1,1-DICHLOROETHENE | 10.2 | 102.0 | 59 | 128.5 |
| 1,1,1-Trichloroethane | 9.9 | 99.0 | 65 | 135.2 |
| Trichloroethene | 10.4 | 104.0 | 67 | 120.9 |
| VINYL CHLORIDE | 8.74 | 87.4 | 43 | 144 |
| Bromobenzene | 10.4 | 104.0 | 56 | 159.4 |
| Bromodichloromethane | 10.1 | 101.0 | 70 | 129.4 |
| Bromoform | 8.56 | 85.6 | 59 | 163.5 |
| Bromomethane | 9.84 | 98.4 | 54 | 135.8 |
| Chlorobenzene | 10.8 | 108.0 | 76 | 132.6 |
| Dibromochloromethane | 9.6 | 96.0 | 67 | 145.6 |
| Chloroethane | 9.35 | 93.5 | 64 | 142.7 |
| CHLOROFORM | 9.95 | 99.5 | 73 | 136.2 |
| Chloromethane | 8.3 | 83.0 | 42 | 138.5 |
| 2-Chlorotoluene | 9.95 | 99.5 | 76 | 134.4 |
| 4-Chlorotoluene | 10.2 | 102.0 | 76 | 139.9 |
| Dibromomethane | 10.7 | 107.0 | 72 | 126 |
| 1,3-Dichlorobenzene | 9.88 | 98.8 | 74 | 140 |
| 1,2-Dichlorobenzene | 9.61 | 96.1 | 78 | 136.7 |
| trans-1,2-Dichloroethene | 9.74 | 97.4 | 57 | 116.1 |
| cis-1,2-Dichloroethene | 10 | 100.0 | 72 | 167.4 |
| Methylene Chloride | 9.49 | 94.9 | 71 | 133 |
| 1,1-Dichloroethane | 10.2 | 102.0 | 72 | 132.7 |
| 1,1-Dichloropropene | 10.2 | 102.0 | 68 | 124.6 |
| 1,2-DICHLOROPROPANE | 11.4 | 114.0 | 70 | 125.6 |
| 1,3-Dichloropropane | 11.5 | 115.0 | 74 | 127 |
| cis-1,3-Dichloropropene | 10.6 | 106.0 | 70 | 119.1 |
| trans-1,3-Dichloropropene | 11.3 | 113.0 | 72 | 131.8 |
| 2,2-Dichloropropane | 9.17 | 91.7 | 64 | 135 |
| ETHYL BENZENE | 10.7 | 107.0 | 47 | 155.6 |
| Styrene | 10.3 | 103.0 | 48 | 158.2 |
| 1,1,2-Trichloroethane | 12.1 | 121.0 | 73 | 121.4 |
| 1,1,1,2-Tetrachloroethane | 9.69 | 96.9 | 75 | 129.5 |
| 1,1,2,2-Tetrachloroethane | 10.6 | 106.0 | 76 | 126.3 |
| Tetrachloroethene | 10.6 | 106.0 | 69 | 135.2 |
| 1,2,3-Trichloropropane | 9.57 | 95.7 | 73 | 132.7 |



59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5212T.
LCS Date/Time : 7 Nov 2009 6:44
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery | Max Recovery |
|---|---|---|---|---|
| TOLUENE | 11.6 | 116.0 | 73 | 130 |
| m,p-Xylene | 21.1 | 105.5 | 73 | 137.2 |
| o-Xylene | 10.2 | 102.0 | 78 | 143.5 |
| Bromochloromethane | 10 | 100.0 | 65 | 141.4 |
| n-Butylbenzene | 9.8 | 98.0 | 77 | 137.1 |
| Dichlorodifluoromethane | 8.07 | 80.7 | 15 | 123.1 |
| Trichlorofluoromethane | 9.25 | 92.5 | 51 | 149.1 |
| Hexachlorobutadiene | 9.74 | 97.4 | 66 | 130.5 |
| Isopropylbenzene | 11.6 | 116.0 | 84 | 148.4 |
| p-Isopropyltoluene | 10.1 | 101.0 | 75 | 137.2 |
| Naphthalene | 8.7 | 87.0 | 75 | 133.3 |
| n-Propylbenzene | 10.4 | 104.0 | 74 | 140.8 |
| sec-Butylbenzene | 10.2 | 102.0 | 74 | 129.3 |
| t-Butylbenzene | 10.5 | 105.0 | 47 | 155.9 |
| 1,2,3-Trichlorobenzene | 8.51 | 85.1 | 69 | 143.8 |
| 1,2,4-Trichlorobenzene | 9.18 | 91.8 | 75 | 132.1 |
| 1,2,4-Trimethylbenzene | 9.95 | 99.5 | 77 | 136.1 |
| 1,3,5-Trimethylbenzene | 10.2 | 102.0 | 77 | 134.7 |
| Acrolein | 131 | 131.0 | D | 672 |
| Acetone | 43 | 86.0 | 62 | 135.2 |
| Acrylonitrile | 210 | 210.0 | D | 597.8 |
| Carbon Disulfide | 8.14 | 81.4 | 65 | 161.9 |
| Vinyl Acetate | 7.63 | 76.3 | 71 | 127.6 |
| 2-Butanone | 50.1 | 100.2 | 74 | 128.8 |
| 4-Methyl-2-Pentanone | 52.9 | 105.8 | 70 | 131.2 |
| 2-Hexanone | 52.3 | 104.6 | 76 | 131.7 |
| 2-Chloroethylvinylether | 11.5 | 115.0 | 49 | 136.5 |
| trans-1,4-Dichloro-2-butene | 16 | 80.0 | D | 114.1 |
| 1,2-Dibromoethane | 11.6 | 116.0 | 73 | 124 |
| 1,2-Dibromo-3-chloropropane | 8.28 | 82.8 | 67 | 127.4 |
| Iodomethane | 9.14 | 91.4 | 67 | 135.8 |

Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 50 uG/L



59169b

R560082

# Heritage Environmental Services, LLC

Q2256327

## QC Report

QCType LCS01
Date Entered 11Nov09
Analysis Date/Time 07Nov0906:44:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5212T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 10 | | 10.8 | | 108 | |
| 217 | CARBON TETRACHLORIDE | 10 | | 9.61 | | 96.1 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | 10 | | 100 | |
| 21 | 1,2-DICHLOROETHANE | 10 | | 10.5 | | 105 | |
| 8 | 1,1-DICHLOROETHENE | 10 | | 10.2 | | 102 | |
| 2 | 1,1,1-TRICHLOROETHANE | 10 | | 9.9 | | 99 | |
| 750 | TRICHLOROETHENE | 10 | | 10.4 | | 104 | |
| 768 | VINYL CHLORIDE | 10 | | 8.74 | | 87.4 | |
| 193 | BROMOBENZENE | 10 | | 10.4 | | 104 | |
| 195 | BROMODICHLOROMETHANE | 10 | | 10.1 | | 101 | |
| 197 | BROMOFORM | 10 | | 8.56 | | 85.6 | |
| 198 | BROMOMETHANE | 10 | | 9.84 | | 98.4 | |
| 231 | CHLOROBENZENE | 10 | | 10.8 | | 108 | |
| 295 | DIBROMOCHLOROMETHANE | 10 | | 9.6 | | 96 | |
| 234 | CHLOROETHANE | 10 | | 9.35 | | 93.5 | |
| 235 | CHLOROFORM | 10 | | 9.95 | | 99.5 | |
| 236 | CHLOROMETHANE | 10 | | 8.3 | | 83 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | 9.95 | | 99.5 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | 10.2 | | 102 | |
| 296 | DIBROMOMETHANE | 10 | | 10.7 | | 107 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | 9.88 | | 98.8 | |
| 720 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | 9.61 | | 96.1 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 10 | | 9.74 | | 97.4 | |
| 246 | CIS-1,2-DICHLOROETHENE | 10 | | 10 | | 100 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 9.49 | | 94.9 | |
| 7 | 1,1-DICHLOROETHANE | 10 | | 10.2 | | 102 | |
| 10 | 1,1-DICHLOROPROPENE | 10 | | 10.2 | | 102 | |
| 23 | 1,2-DICHLOROPROPANE | 10 | | 11.4 | | 114 | |
| 27 | 1,3-DICHLOROPROPANE | 10 | | 11.5 | | 115 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 10 | | 10.6 | | 106 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 10 | | 11.3 | | 113 | |
| 33 | 2,2-DICHLOROPROPANE | 10 | | 9.17 | | 91.7 | |
| 349 | ETHYL BENZENE | 10 | | 10.7 | | 107 | |
| 680 | STYRENE | 10 | | 10.3 | | 103 | |
| 4 | 1,1,2-TRICHLOROETHANE | 10 | | 12.1 | | 121 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 10 | | 9.69 | | 96.9 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 10 | | 10.6 | | 106 | |
| 703 | TETRACHLOROETHENE | 10 | | 10.6 | | 106 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 10 | | 9.57 | | 95.7 | |
| 724 | TOLUENE | 10 | | 11.6 | | 116 | |
| 492 | M/P-XYLENE | 20 | | 21.1 | | 105.5 | |
| 549 | O-XYLENE | 10 | | 10.2 | | 102 | |
| 194 | BROMOCHLOROMETHANE | 10 | | 10 | | 100 | |
| 519 | N-BUTYLBENZENE | 10 | | 9.8 | | 98 | |

11/11/09

59169b

R560082

# Heritage Environmental Services, LLC

Q2256327

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 10 | | 8.07 | | 80.7 | |
| 372 | TRICHLOROFLUOROMETHANE | 10 | | 9.25 | | 92.5 | |
| 398 | HEXACHLOROBUTADIENE | 10 | | 9.74 | | 97.4 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 10 | | 11.6 | | 116 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | 10.1 | | 101 | |
| 493 | NAPHTHALENE | 10 | | 8.7 | | 87 | |
| 532 | N-PROPYLBENZENE | 10 | | 10.4 | | 104 | |
| 644 | SEC-BUTYLBENZENE | 10 | | 10.2 | | 102 | |
| 702 | TERT-BUTYLBENZENE | 10 | | 10.5 | | 105 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 8.51 | | 85.1 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 10 | | 9.18 | | 91.8 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 10 | | 9.95 | | 99.5 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 10 | | 10.2 | | 102 | Q2256327 |
| 105 | ACROLEIN | 100 | | 131 | | 131 | |
| 99 | ACETONE (2-PROPANONE) | 50 | | 43 | RQL | 86 | Difference |
| 106 | ACRYLONITRILE | 100 | | 210 | | 210 | |
| 216 | CARBON DISULFIDE | 10 | | 8.14 | | 81.4 | |
| 767 | VINYL ACETATE | 10 | | 7.63 | | 76.3 | |
| 152 | 2-BUTANONE | 50 | | 50.1 | | 100.2 | |
| 91 | 4-METHYL-2-PENTANONE | 50 | | 52.9 | | 105.8 | |
| 60 | 2-HEXANONE | 50 | | 52.3 | | 104.6 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 10 | | 11.5 | | 115 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | 16 | | 80 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 10 | | 11.6 | | 116 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | 8.28 | | 82.8 | |
| 422 | IODOMETHANE | 10 | | 9.14 | | 91.4 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | 9.09 | | 90.9 | |
| 30 | 1,4-DIOXANE | 200 | | 97.2 | | 48.6 | Q2256327 |
| 709 | TETRAHYDROFURAN | 125 | | 130 | | 104 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 10 | | 9.05 | RQL | 90.5 | Difference |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 100 | | 109 | | 109 | |
| 975 | METHYLACRYLONITRILE | 100 | | 114 | | 114 | |
| 1147 | METHYL METHACRYLATE | 10 | | 11.6 | | 116 | |
| 351 | ETHYL METHACRYLATE | 10 | | 10.6 | | 106 | |
| 803 | XYLENES (O/M/P-XYLENE) | 30 | | 31.3 | | 104.3 | |

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5212T.D
Acq On : 7 Nov 2009 6:44
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:59:32 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 643510 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 214152 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 145251 | 9.56 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 95.60% | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 173734 | 9.59 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 95.90% | | |
| 50) Toluene-d8 | 6.602 | 98 | 602235 | 10.41 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 104.10% | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 173868 | 9.51 UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 95.10% | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) Dichlorodifluoromethane | 1.080 | 85 | 73753 | 8.07 UG/L | | 100 |
| 3) Chloromethane | 1.187 | 50 | 113825 | 8.30 UG/L | | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 132205 | 8.74 UG/L | | 99 |
| 5) Bromomethane | 1.488 | 94 | 64046 | 9.84 UG/L | | 96 |
| 6) Chloroethane | 1.560 | 64 | 75930 | 9.35 UG/L | # | 88 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 176703 | 9.25 UG/L | # | 82 |
| 8) Acrolein | 2.032 | 56 | 146916 | 130.63 UG/L | | 100 |
| 39) Acetone | 2.154 | 43 | 282482 | 42.97 UG/L | | 91 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 129431 | 10.15 UG/L | | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 140638 | 9.67 UG/L | | 93 |
| 12) Acrylonitrile | 2.734 | 53 | 933309 | 209.61 UG/L | | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 330372 | 8.14 UG/L | | 98 |
| 14) Methylene Chloride | 2.512 | 84 | 158770 | 9.49 UG/L | # | 77 |
| 15) Allyl Chloride | 2.405 | 41 | 413946 | 9.05 UG/L | | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 16561m | 7.63 UG/L | | |
| 17) MTBE | 2.756 | 73 | 443373 | 9.09 UG/L | | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 142372 | 9.74 UG/L | | 98 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 250785 | 10.21 UG/L | | 100 |
| 20) 2-Butanone | 3.694 | 72 | 130501 | 50.10 UG/L | # | 135 |
| 21) Ethyl Acetate | 3.766 | 43 | 221434 | 11.74 UG/L | # | 96 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 155564 | 10.01 UG/L | | 93 |
| 23) Ethyl Cyanide | 3.752 | 54 | 322987 | 108.95 UG/L | | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 236580 | 9.95 UG/L | # | 98 |
| 25) Methacrylonitrile | 3.902 | 41 | 1242724 | 113.79 UG/L | # | 100 |

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5212T.D
Acq On : 7 Nov 2009 6:44
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:59:32 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 752924 | 130.45 UG/L # | 82 |
| 27) Bromochloromethane | 3.902 | 128 | 69566 | 10.02 UG/L | 88 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 141782 | 9.17 UG/L | 89 |
| 29) Diethyl ether | 1.932 | 59 | 126740 | 9.04 UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 195520 | 9.90 UG/L | 99 |
| 31) Iodomethane | 2.226 | 142 | 190567 | 9.14 UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 69976 | 10.23 UG/L | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 166825 | 9.61 UG/L | 91 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 187767 | 10.50 UG/L | 96 |
| 37) Isobutanol | 4.497 | 43 | 257031 | 248.24 UG/L # | 89 |
| 38) Benzene | 4.532 | 78 | 606382 | 10.83 UG/L | 100 |
| 39) n-Hexane | 2.992 | 57 | 385967 | 13.56 UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 152997 | 10.44 UG/L | 97 |
| 41) n-Butanol | 5.213 | 56 | 32053 | 35.60 UG/L | 98 |
| 42) 1,2-DICHLOROPROPANE | 5.456 | 63 | 146841 | 11.37 UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 44185 | 97.17 UG/L | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 151579 | 11.63 UG/L # | 94 |
| 45) Bromodichloromethane | 5.779 | 83 | 158529 | 10.12 UG/L | 99 |
| 46) Dibromomethane | 5.592 | 93 | 84873 | 10.72 UG/L | 92 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1074456 | 52.92 UG/L # | 88 |
| 48) 2-Chloroethylvinylether | 6.158 | 63 | 105073 | 11.50 UG/L | 94 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 207237 | 10.59 UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 642183 | 11.55 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 176265 | 11.28 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 133361 | 12.13 UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 130904 | 11.61 UG/L | 100 |
| 56) 2-Hexanone | 7.534 | 43 | 728991 | 52.26 UG/L # | 87 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 234944 | 11.52 UG/L # | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 202620 | 10.56 UG/L # | 161 |
| 59) Tetrachloroethene | 7.333 | 166 | 166792 | 10.55 UG/L | 100 |
| 60) Dibromochloromethane | 7.655 | 129 | 107425 | 9.60 UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 399748 | 10.77 UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.536 | 131 | 128915 | 9.69 UG/L | 100 |
| 63) ETHYL BENZENE | 8.579 | 106 | 220223 | 10.68 UG/L | 77 |
| 64) m,p-Xylene | 8.744 | 106 | 544018 | 21.14 UG/L # | 62 |
| 65) o-Xylene | 9.253 | 106 | 266987 | 10.23 UG/L | 80 |
| 66) Styrene | 9.274 | 104 | 429948 | 10.33 UG/L | 88 |
| 67) Bromoform | 9.482 | 173 | 64281 | 8.56 UG/L # | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 201543 | 10.61 UG/L | 100 |
| 70) Isopropylbenzene | 9.718 | 105 | 718800 | 11.63 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 86201 | 16.03 UG/L # | 111 |
| 72) Bromobenzene | 10.026 | 77 | 262428 | 10.38 UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5212T.D
Acq On : 7 Nov 2009 6:44
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1
Quant Time: Nov 07 06:59:32 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | LDev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 58106 | 19.57 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 90461 | 10.36 | UG/L # | 84 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 599078 | 10.21 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 163007 | 9.95 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 158336 | 10.23 | UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 341759 | 10.54 | UG/L # | 68 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 596203 | 9.95 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 794084 | 10.22 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 657460 | 10.07 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 315259 | 9.88 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 320395 | 10.02 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 334210 | 9.80 | UG/L | 99 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 308721 | 9.61 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 39025 | 8.28 | UG/L # | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 233225 | 9.18 | UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 656443 | 8.70 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 112211 | 9.74 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 210381 | 8.51 | UG/L | 100 |

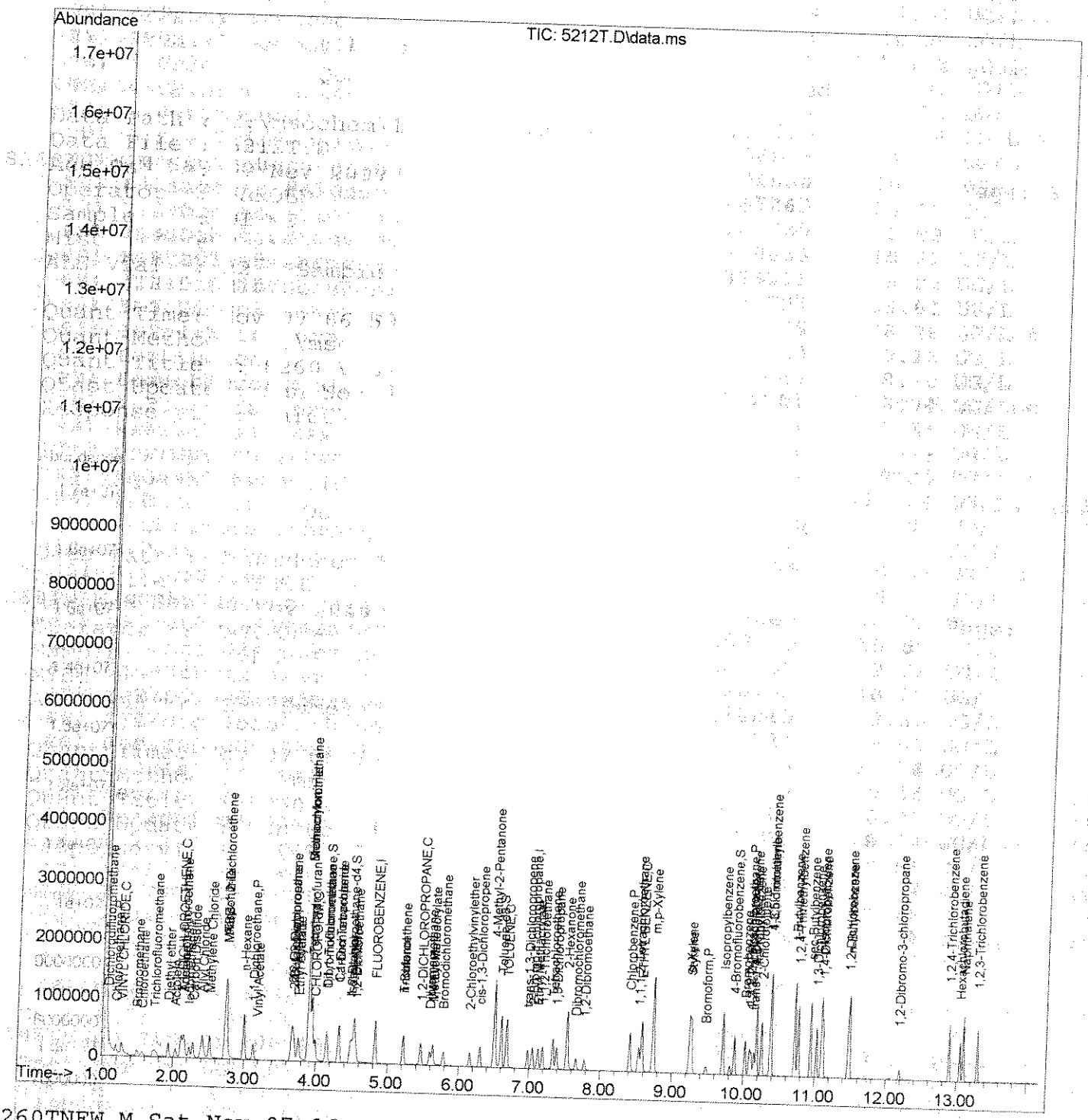
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T110709\
Data File : 5212T.D
Acq On : 7 Nov 2009 6:44
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 07 06:59:32 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Sat Nov 07 06:59:38 2009



59169b

R560121

# Heritage Environmental Services, LLC

GC/MS VOA

A864549

Method SW846-8260B
Sample Description 166D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5248T.D Date/Time 09Nov09 10:12:00
Dilution Factor 20

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 1100 | | 20 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 240 | | 20 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 102 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 91 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** 1:20 Dilution Prep Method SW846-5030B Purge and Trap

11/12/09

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864549

Repol

Method SW846-8260B
Sample Description 166D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 52481 Date/Time 11/9/09 10:1
Dilution Factor 1:20 20.00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 293 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 199 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 263 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 299 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 716 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | ~~570~~ | 100 | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 239 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 273 | 1,3-DICHLOROPROPANE | | 100 11/9/09 | | 1.0 | ug/L | | |
| 837 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 103 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 339 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 353 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 822 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 1.0 | ug/L | | |
| [illegible] | [illegible] | | | | 10 | ug/L | | |
| 296 | [illegible] | | | | | g/L | | |
| 748 | [illegible] | | | | | g/L | | |
| 283 | [illegible] | | | | | g/L | | |

59169b

A864549

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | ~~120~~ 240 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 98 | | | % Rec |
| 726 | TOLUENE-D8 | | 102 | | | % Rec |
| 195 | 4-BROMOFLUOROBENZENE | | 91 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5248T.D
Acq On : 9 Nov 2009 10:12
Operator : HAROLD
Sample : A864549 1:20
Misc : REP01
ALS Vial : 6 Sample Multiplier: 1

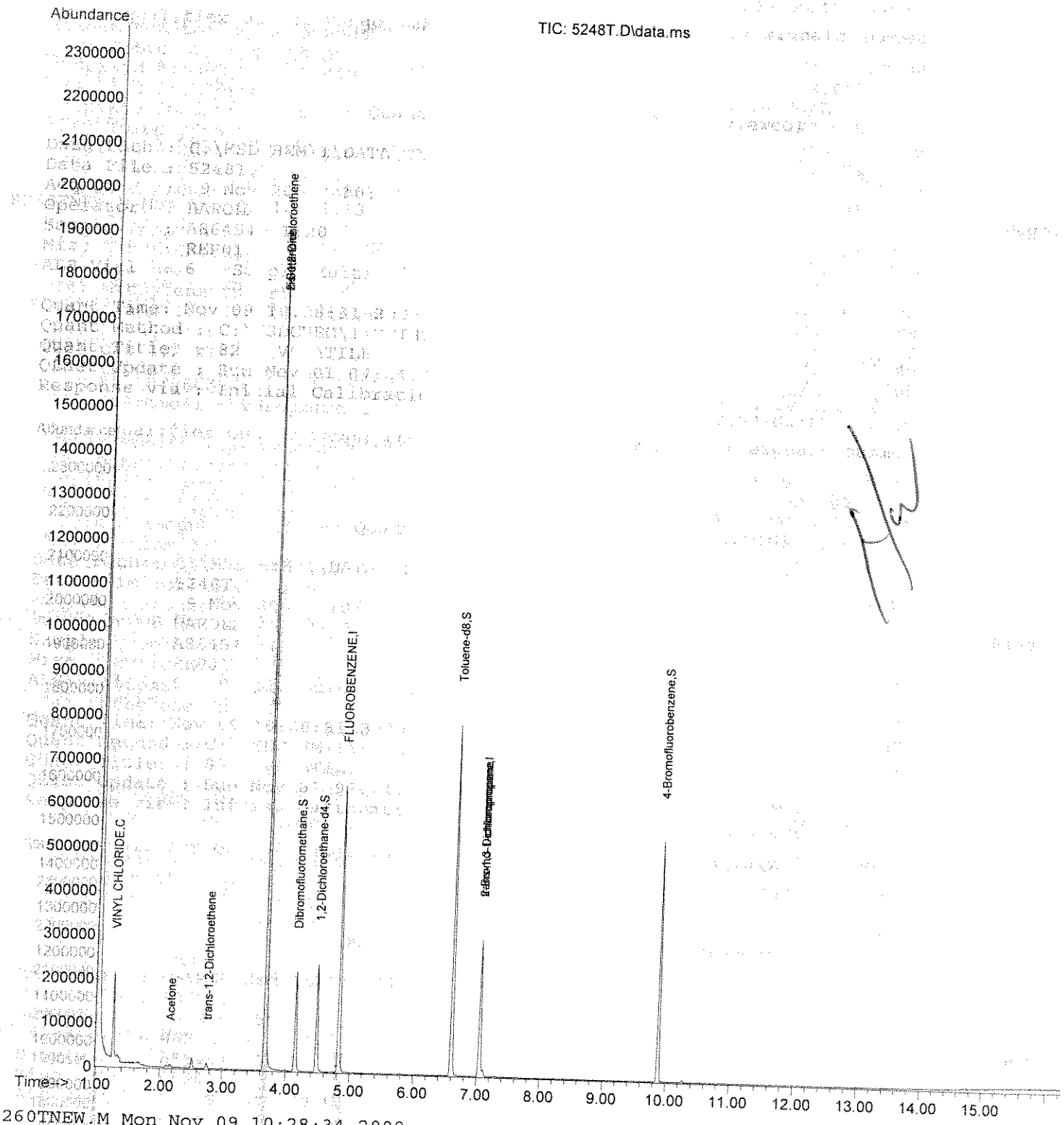
Quant Time: Nov 09 10:28:31 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 598199 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 192534 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 130036 | 9.20 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 92.00% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 164316 | 9.76 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.60% | |
| 50) Toluene-d8 | 6.603 | 98 | 549010 | 10.21 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 102.10% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 149920 | 9.12 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 91.20% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 170708 | 12.14 UG/L | 100 |
| 9) Acetone | 2.161 | 43 | 11104 | 1.82 UG/L | 91 |
| 14) Methylene Chloride | 2.512 | 84 | 10106 | Below Cal # | 72 |
| 18) trans-1,2-Dichloroethene | 2.756 | 96 | 3368 | 0.25 UG/L | 88 |
| 20) 2-Butanone | 3.666 | 72 | 5613 | 2.32 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 817775 | 56.63 UG/L | 82 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3068 | 0.21 UG/L | 100 |

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

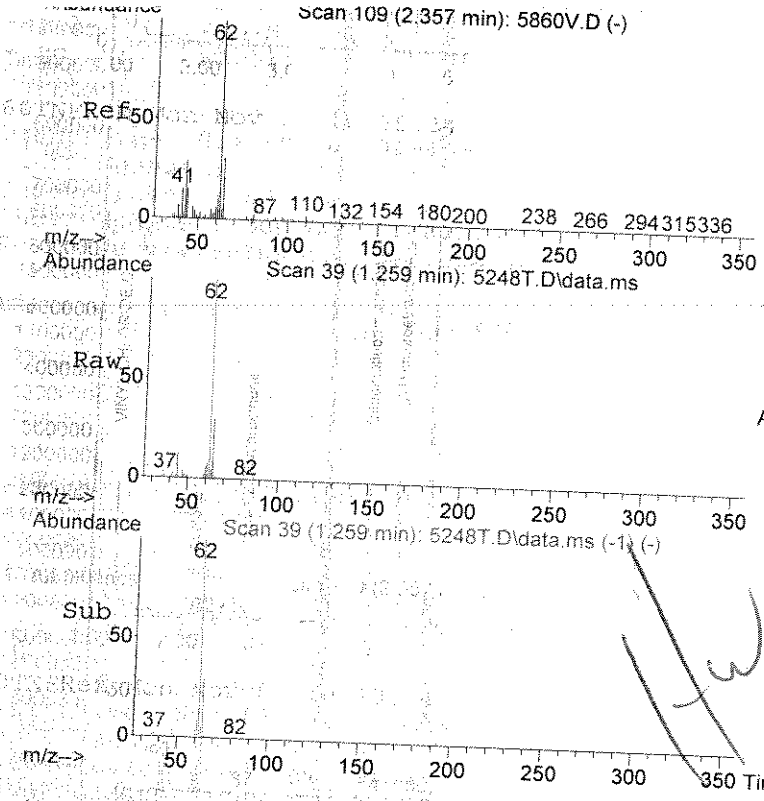
Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5248T.D
Acq On : 9 Nov 2009 10:12
Operator : HAROLD
Sample : A864549 1:20
Misc : REP01
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 09 10:28:31 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





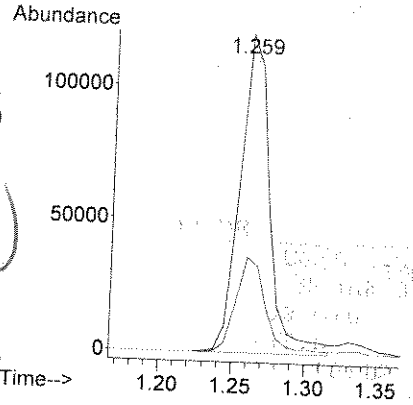

59169b

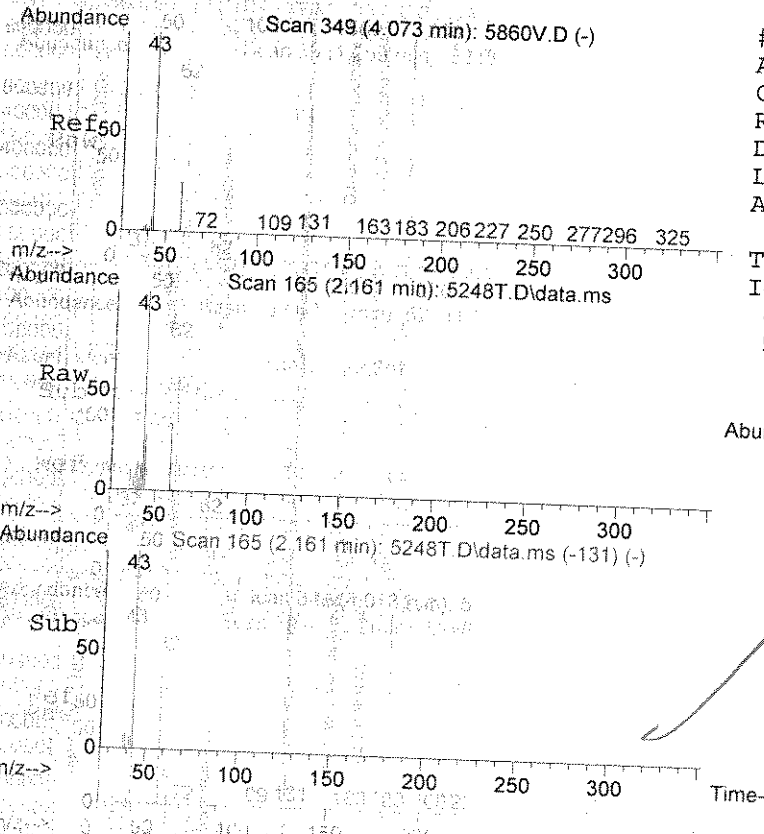



#4
VINYL CHLORIDE
Concen: 12.14 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 62 Resp: 170708

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.9 | 24.9 | 37.3 |

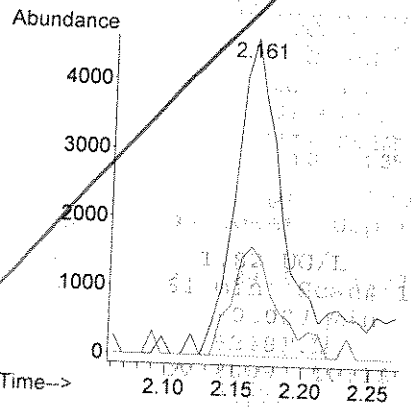


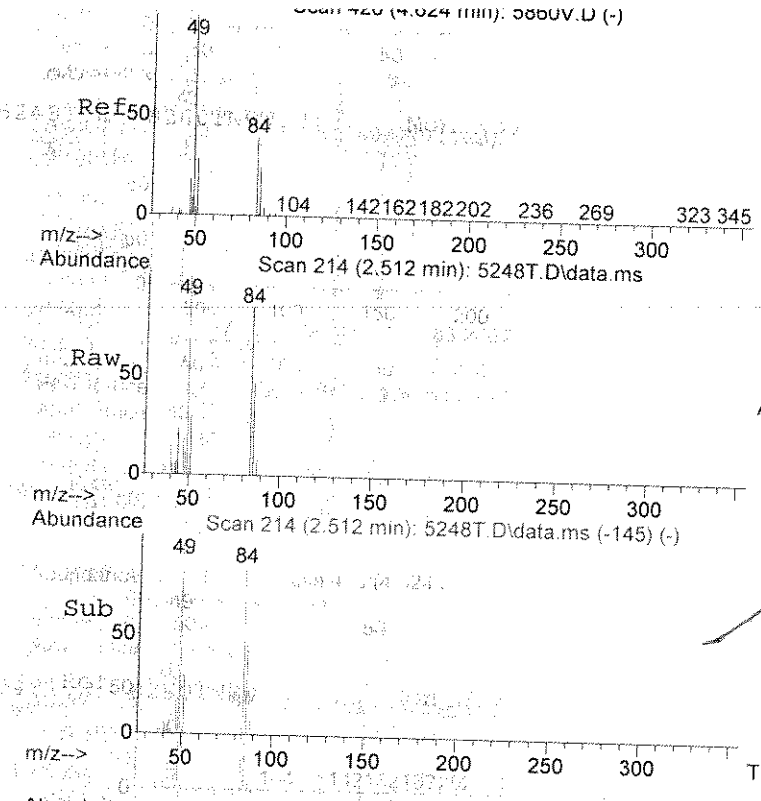




#9
Acetone
Concen: 1.82 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 43 Resp: 11104

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.8 | 23.1 | 34.7 |

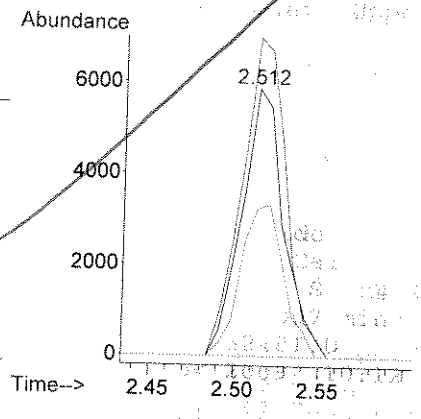


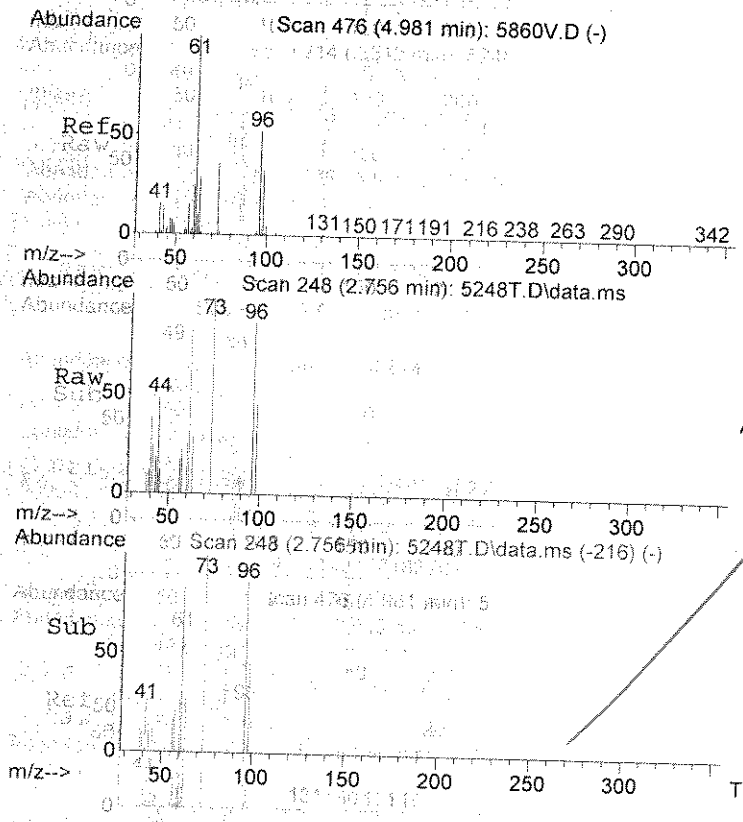



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 84 Resp: 10106

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 124.9 | 140.2 | 210.2# |
| 86 | 58.3 | 51.1 | 76.7 |

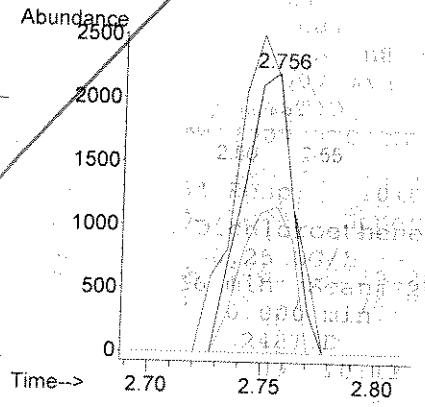


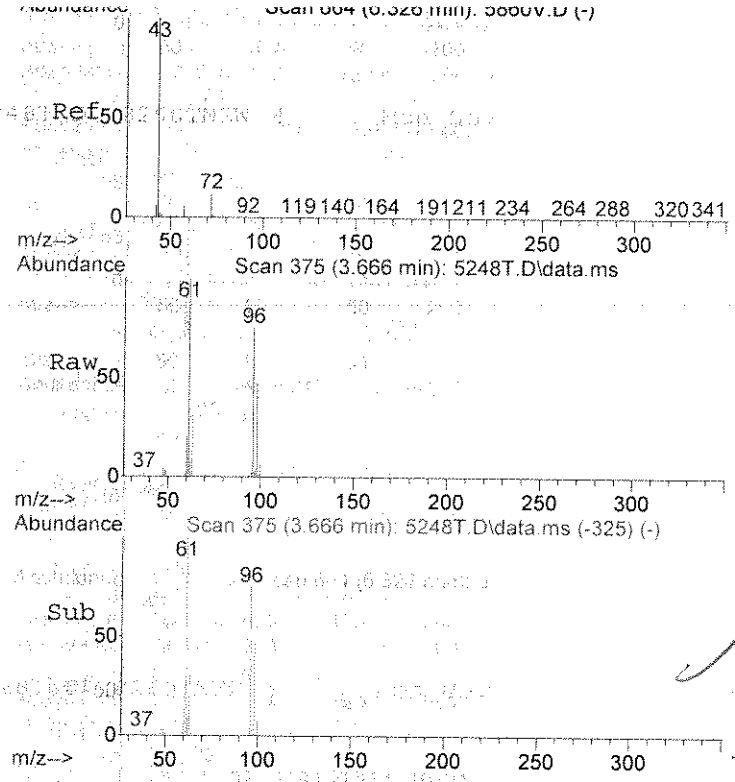




#18
trans-1,2-Dichloroethene
Concen: 0.25 UG/L
RT: 2.756 min Scan# 248
Delta R.T. 0.000 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 96 Resp: 3368

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 127.1 | 114.1 | 171.1 |
| 98 | 54.4 | 50.7 | 76.1 |

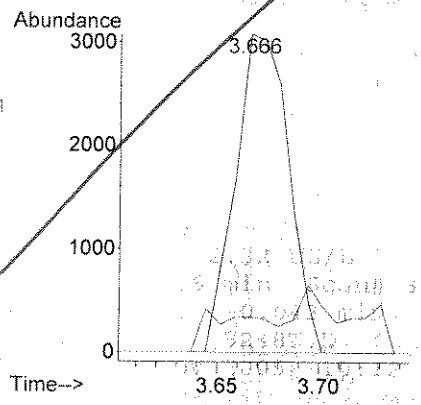


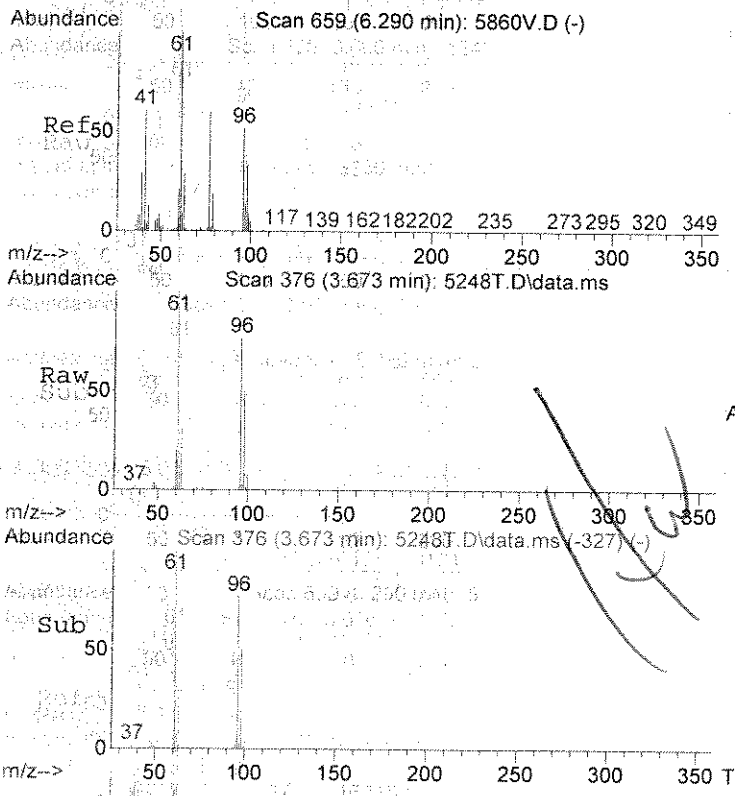



#20
2-Butanone
Concen: 2.32 UG/L
RT: 3.666 min Scan# 375
Delta R.T. -0.043 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 72 Resp: 5613

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 14.8 | 449.0 | 673.4# |

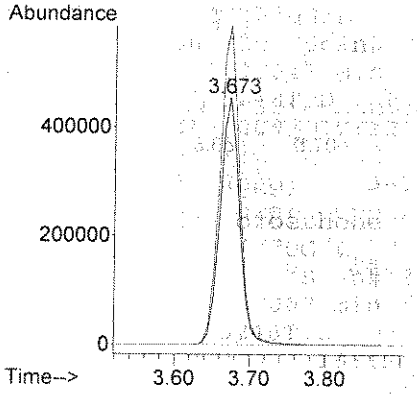



#22
cis-1,2-Dichloroethene
Concen: 56.63 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

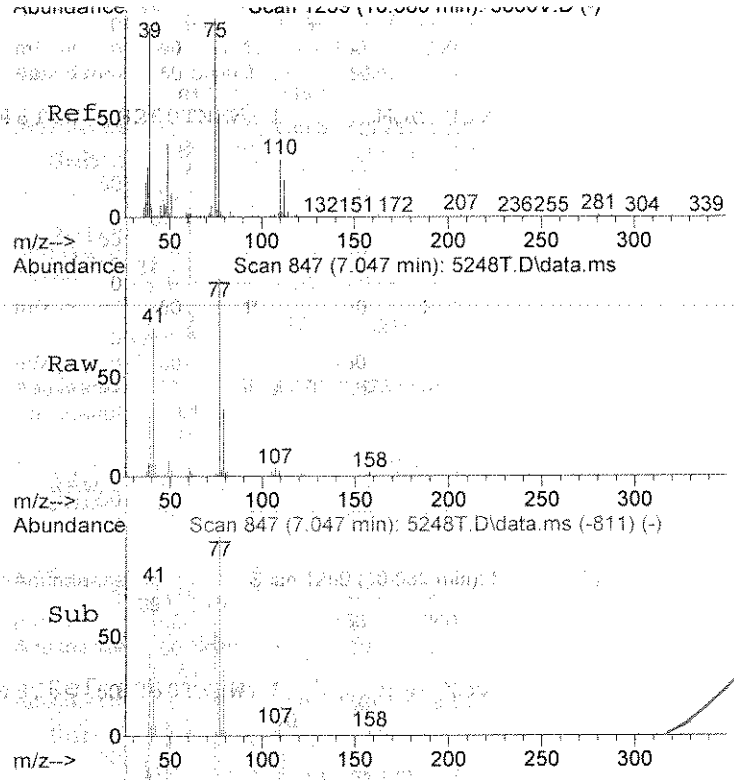
Tgt Ion: 96 Resp: 817775

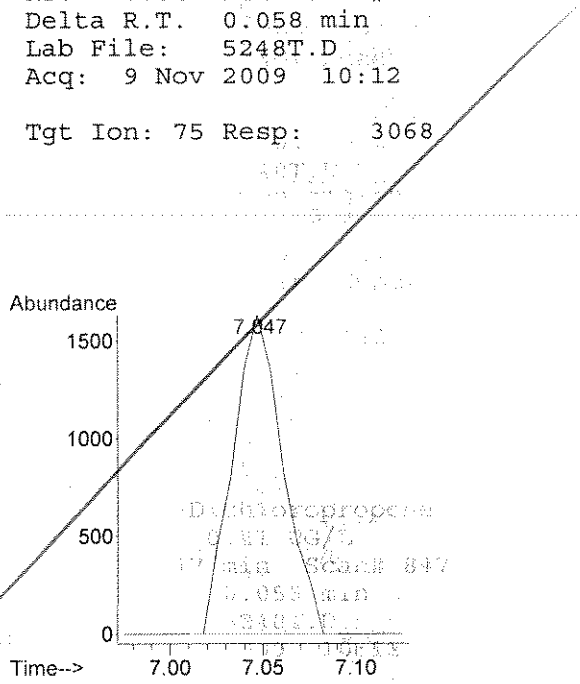
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.7 | 121.8 | 182.6 |



trans-1,3-Dichloropropene
Concen: 0.21 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5248T.D
Acq: 9 Nov 2009 10:12

Tgt Ion: 75 Resp: 3068



R560121

# Heritage Environmental Services, LLC

GC/MS VOA

A864550

Method SW846-8260B
Sample Description 166S
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5249T.D Date/Time 09Nov09 10:37:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 170 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 103 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 91 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 93 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/12/09

59169b

# Heritage Environmental Services, LLC

GC/MS VOA

A864550

Report

Method SW846-8260B
Sample Description 166S
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____
Prep :

Test Code O510.5.1
Analyst HHW
File 5249T Date/Time 11/9/09 10:
Dilution Factor 1.10 10.00

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 1.0 | ug/L | | |
| 718 | 1,1-DICHLOROETHANE | | | | 2.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 811 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 170 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 233 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 270 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 837 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 109 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 1.0 | ug/L | | |
| 80 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 10 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 482 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 875 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 851 | [illegible] | | | | | | | |
| 285 | [illegible] | | | | | | | |
| 744 | [illegible] | | | | | ug/L | | |
| 235 | [illegible] | | | | | ug/L | | |

59169b

# Heritage Environmental Services, LLC

A864550

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 1.0 | ug/L |
| 1804 | | | | | 2.0 | ug/L |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 97 | | | % Rec |
| 726 | TOLUENE-D8 | | 103 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 97 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 93 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5249T.D
Acq On : 9 Nov 2009 10:37
Operator : HAROLD
Sample : A864550 1:10
Misc : REP01
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 09 10:53:52 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 604108 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 196822 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 132495 | 9.29 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 92.90% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 164150 | 9.65 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 96.50% | |
| 50) Toluene-d8 | 6.603 | 98 | 557383 | 10.26 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.60% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 153410 | 9.13 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 91.30% | |
| Target Compounds | | | | | | Qvalue |
| ~~4) VINYL CHLORIDE~~ | 1.259 | 62 | 6944 | 0.49 | UG/L | 99 |
| ~~9) Acetone~~ | 2.161 | 43 | 15012 | 2.43 | UG/L | 96 |
| ~~14) Methylene Chloride~~ | 2.512 | 84 | 10562 | Below Cal | # | 72 |
| ~~18) trans-1,2-Dichloroethene~~ | 2.749 | 96 | 9558 | 0.70 | UG/L | 96 |
| 20) 2-Butanone | 3.680 | 72 | 1486 | 0.61 | UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 240733 | 16.51 | UG/L | 82 |
| ~~52) trans-1,3-Dichloropropene~~ | 7.047 | 75 | 3477 | 0.24 | UG/L | 100 |

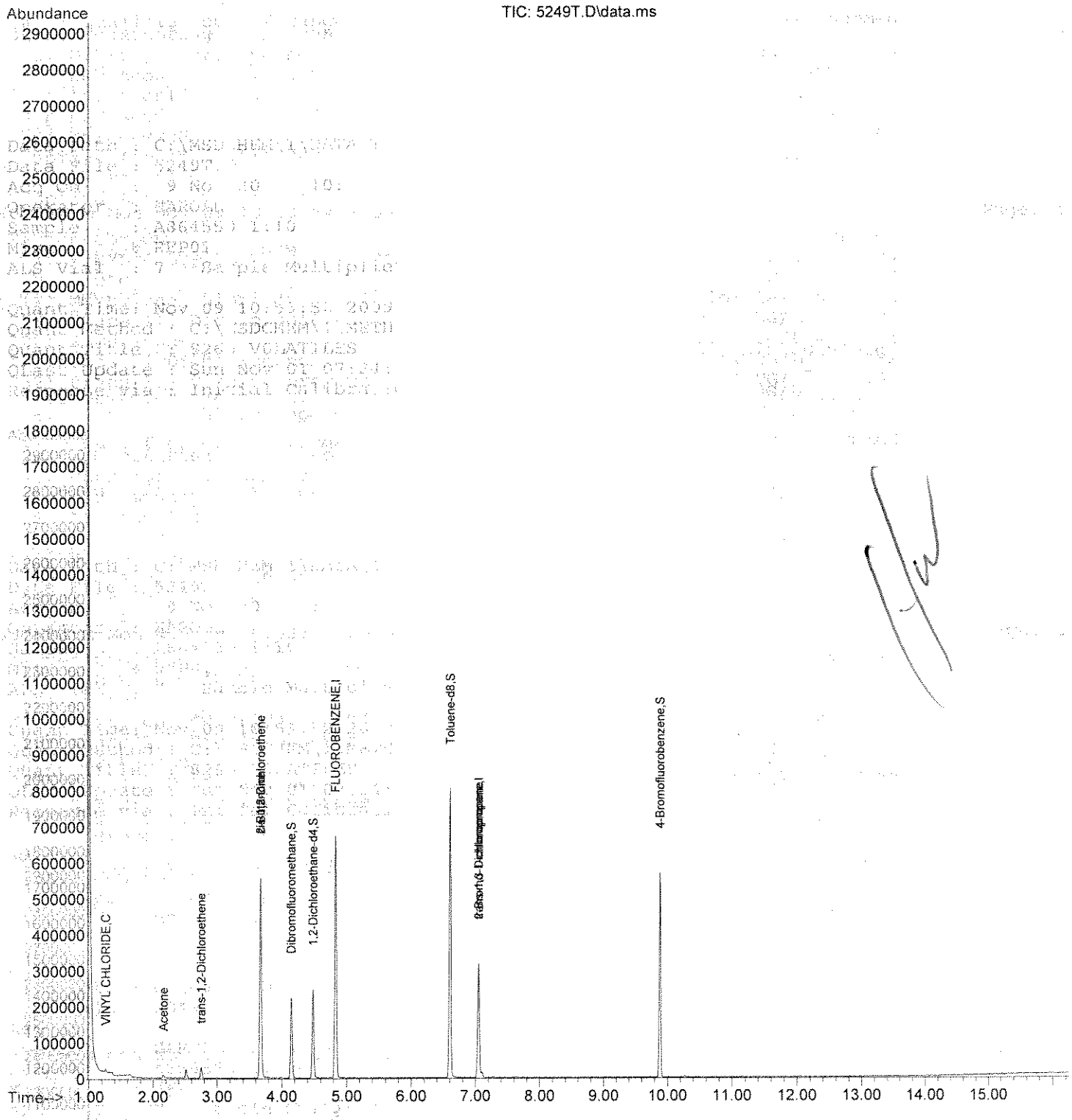
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

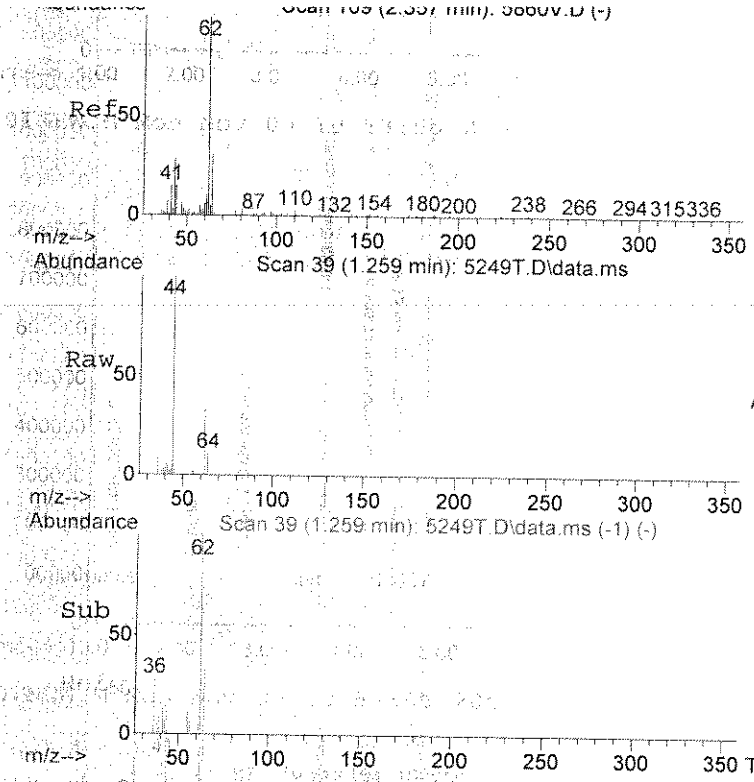
Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5249T.D
Acq On : 9 Nov 2009 10:37
Operator : HAROLD
Sample : A864550 1:10
Misc : REP01
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 09 10:53:52 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





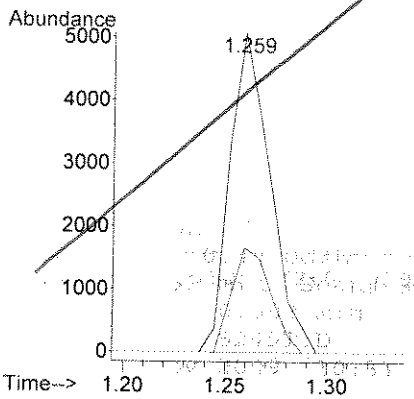

59169b

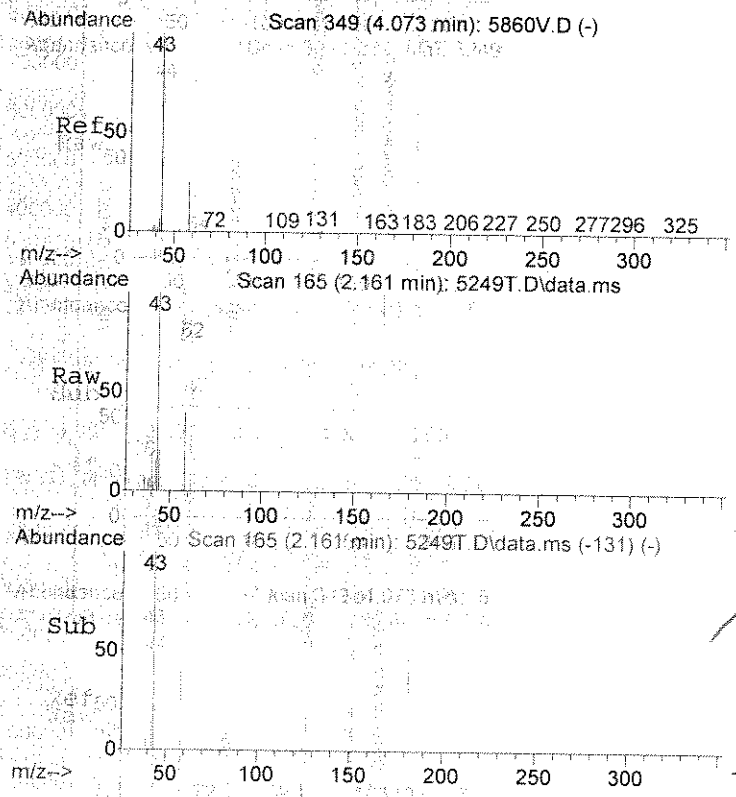



#4
VINYL CHLORIDE
Concen: 0.49 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 62 Resp: 6944

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.6 | 24.9 | 37.3 |

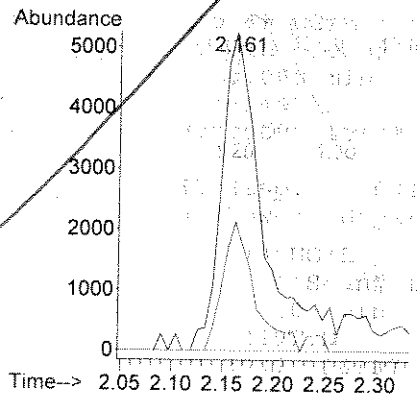


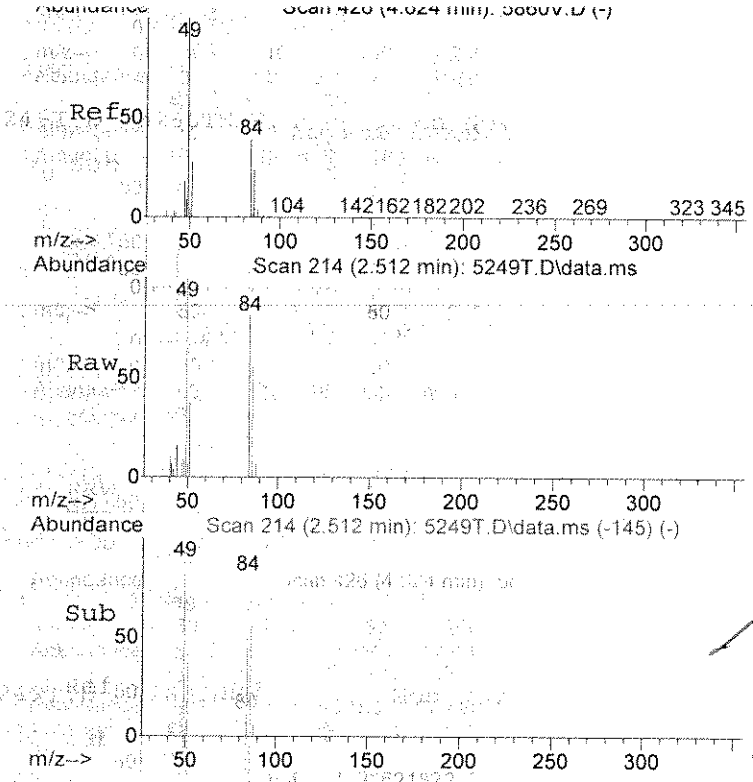




#9
Acetone
Concen: 2.43 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 43 Resp: 15012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.9 | 23.1 | 34.7 |

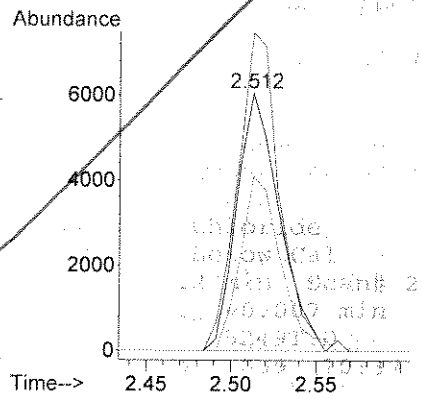


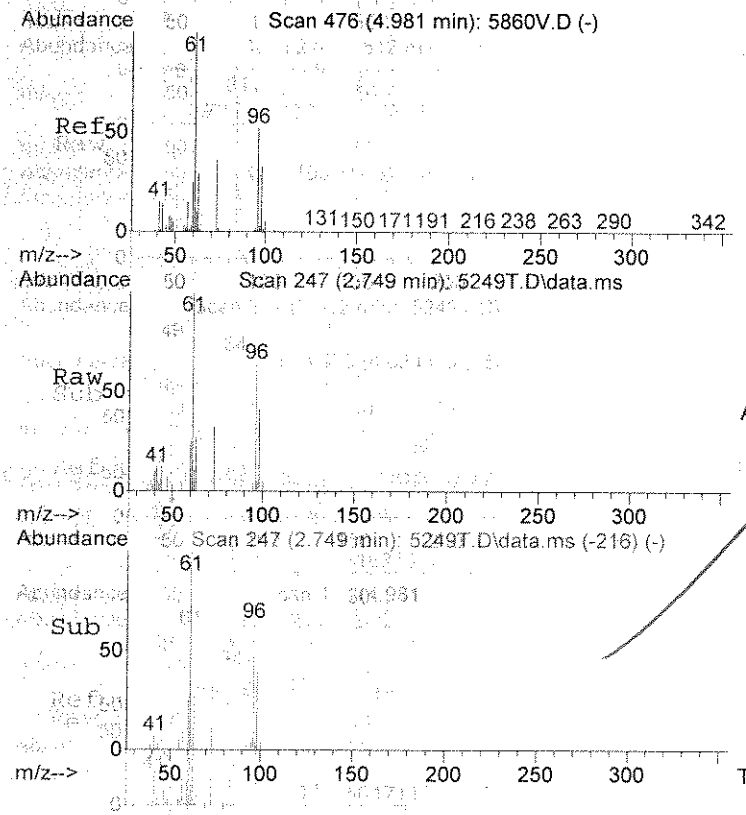



#14
Methylene Chloride
Concen: Below Cal
RT: 2.512 min Scan# 214
Delta R.T. -0.007 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 84 Resp: 10562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 121.5 | 140.2 | 210.2# |
| 86 | 64.2 | 51.1 | 76.7 |

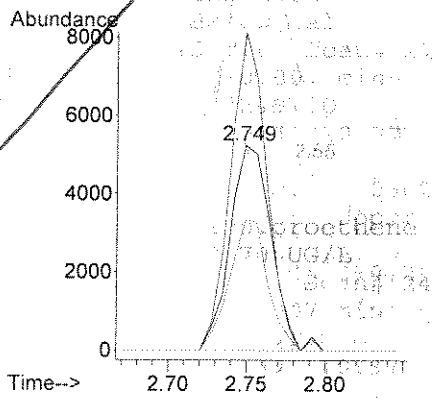


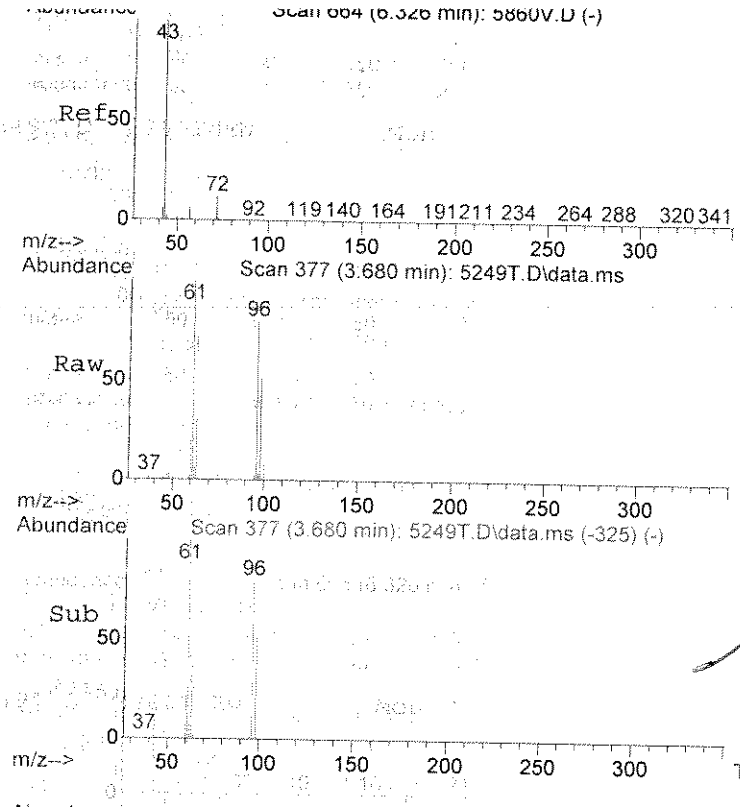




#18
trans-1,2-Dichloroethene
Concen: 0.70 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 96 Resp: 9558

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 138.0 | 114.1 | 171.1 |
| 98 | 59.2 | 50.7 | 76.1 |

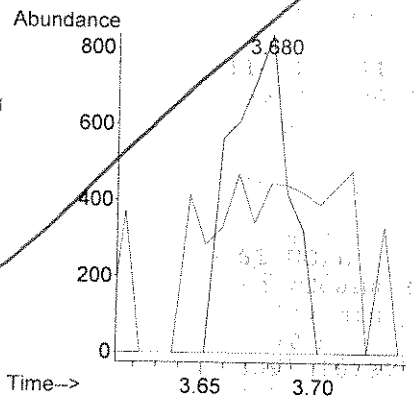


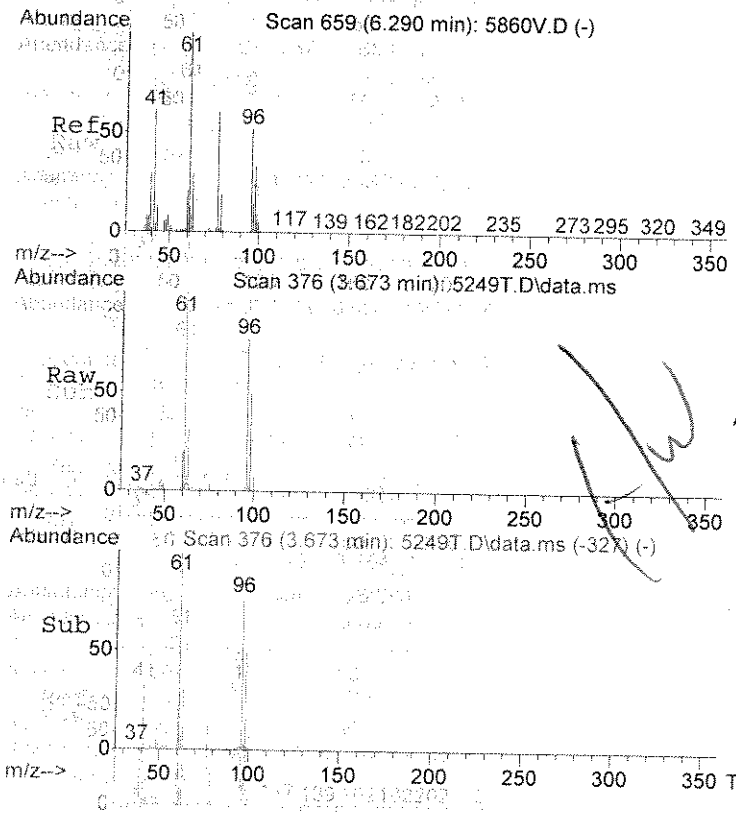



#20
2-Butanone
Concen: 0.61 UG/L
RT: 3.680 min Scan# 377
Delta R.T. -0.029 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 72 Resp: 1486

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 53.2 | 449.0 | 673.4# |

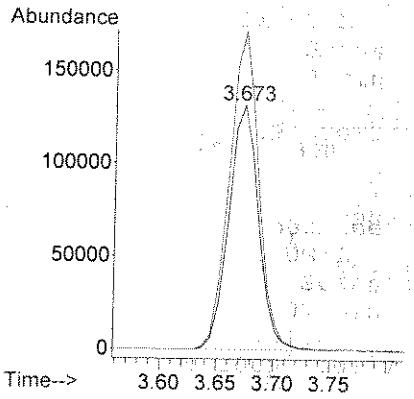



#22
cis-1,2-Dichloroethene
Concen: 16.51 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

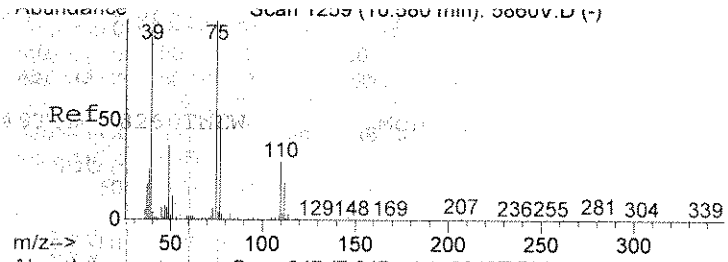
Tgt Ion: 96 Resp: 240733

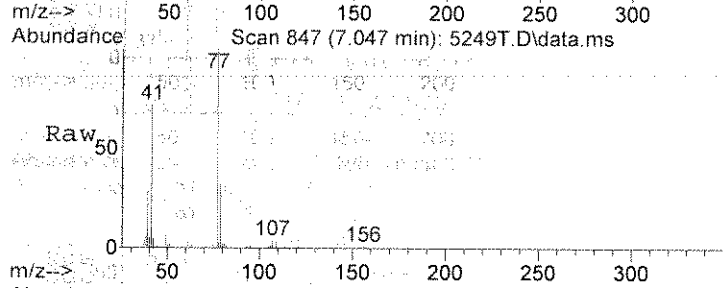
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.4 | 121.8 | 182.6 |

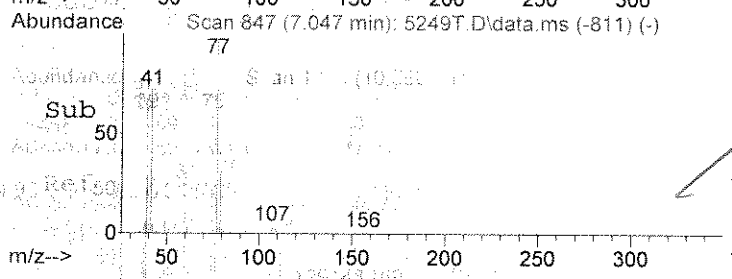


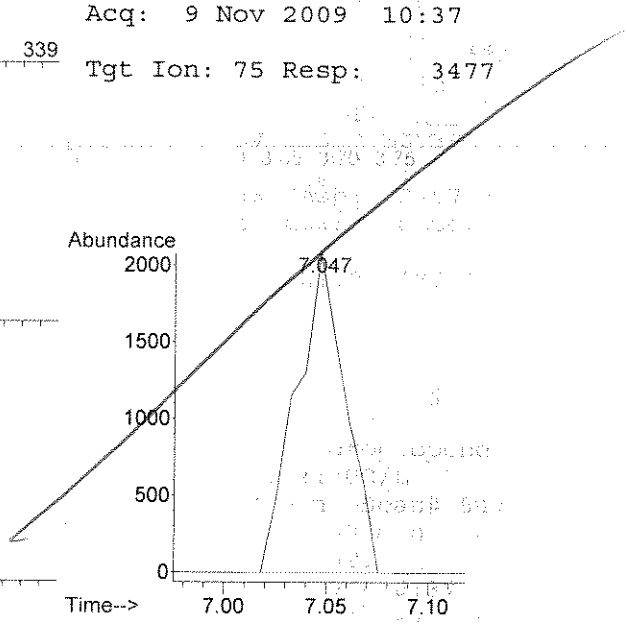
#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5249T.D
Acq: 9 Nov 2009 10:37

Tgt Ion: 75 Resp: 3477



QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 25 mL
Water

Laboratory Sample # : A864665
Data File :5251T. MS Data File : 5252T. MSD Data File : 5253T.
Date/Time : 9 Nov 2009 11:28 MS Date/Time : 9 Nov 2009 11:54 MSD Date/Time : 9 Nov 2009 12:19
Spike Conc : 10 uG/L
Dilution Factor: 1

Q226555 Q226556

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery | Max Recovery * |
|---|---|---|---|---|---|---|---|---|
| Benzene | 0 | 12 | 120.0 | 11.2 | 112.0 | 6.9 | 80 | 147.2 |
| Carbon Tetrachloride | 0 | 10.7 | 107.0 | 10.2 | 102.0 | 4.8 | 70 | 153.9 |
| 1,4-Dichlorobenzene | 0 | 10.4 | 104.0 | 10.7 | 107.0 | 2.8 | 59 | 152.5 |
| 1,2-Dichloroethane | 0 | 11.5 | 115.0 | 10.8 | 108.0 | 6.3 | 81 | 146.2 |
| 1,1-DICHLOROETHENE | 0 | 11.5 | 115.0 | 11 | 110.0 | 4.4 | 77 | 140.6 |
| 1,1,1-Trichloroethane | 0 | 11.1 | 111.0 | 10.6 | 106.0 | 4.6 | 81 | 145.3 |
| Trichloroethene | 0 | 11.8 | 118.0 | 11.2 | 112.0 | 5.2 | 65 | 158.8 |
| VINYL CHLORIDE | 0 | 10.7 | 107.0 | 10.2 | 102.0 | 4.8 | 55 | 146.3 |
| Bromobenzene | 0 | 10.5 | 105.0 | 10.9 | 109.0 | 3.7 | 69 | 154.9 |
| Bromodichloromethane | 0 | 11 | 110.0 | 10.3 | 103.0 | 6.6 | 73 | 146.5 |
| Bromoform | 0 | 8.3 | 83.0 | 8.66 | 86.6 | 4.2 | 41 | 147.3 |
| Bromomethane | 0 | 11.2 | 112.0 | 10.6 | 106.0 | 5.5 | 61 | 178.3 |
| Chlorobenzene | 0 | 11.2 | 112.0 | 11.3 | 113.0 | 0.9 | 69 | 143.7 |
| Dibromochloromethane | 0 | 9.74 | 97.4 | 9.86 | 98.6 | 1.2 | 63 | 141.9 |
| Chloroethane | 0 | 10.6 | 106.0 | 9.77 | 97.7 | 8.1 | 60 | 184.8 |
| CHLOROFORM | 0 | 11.1 | 111.0 | 10.3 | 103.0 | 7.5 | 79 | 145.2 |
| Chloromethane | 0 | 10.5 | 105.0 | 9.82 | 98.2 | 6.7 | 51 | 155.2 |
| 2-Chlorotoluene | 0 | 10.8 | 108.0 | 10.9 | 109.0 | 0.9 | 67 | 146.2 |
| 4-Chlorotoluene | 0 | 10.7 | 107.0 | 10.9 | 109.0 | 1.9 | 64 | 148.5 |
| Dibromomethane | 0 | 11.9 | 119.0 | 11.2 | 112.0 | 6.1 | 77 | 147.7 |
| 1,3-Dichlorobenzene | 0 | 10.2 | 102.0 | 10.6 | 106.0 | 3.8 | 62 | 152.7 |
| 1,2-Dichlorobenzene | 0 | 10.3 | 103.0 | 10.5 | 105.0 | 1.9 | 62 | 152 |
| trans-1,2-Dichloroethene | 0 | 11.6 | 116.0 | 10.6 | 106.0 | 9.0 | 78 | 146.9 |
| cis-1,2-Dichloroethene | 0 | 11.2 | 112.0 | 10.4 | 104.0 | 7.4 | 82 | 146.8 |
| Methylene Chloride | 0 | 10.6 | 106.0 | 9.78 | 97.8 | 8.0 | 24 | 193.9 |
| 1,1-Dichloroethane | 0 | 11.2 | 112.0 | 10.5 | 105.0 | 6.5 | 74 | 154.6 |
| 1,1-Dichloropropene | 0 | 11.3 | 113.0 | 10.7 | 107.0 | 5.5 | 74 | 143.5 |
| 1,2-DICHLOROPROPANE | 0 | 12.4 | 124.0 | 11.6 | 116.0 | 6.7 | 80 | 142.5 |
| 1,3-Dichloropropane | 0 | 11.9 | 119.0 | 12 | 120.0 | 0.8 | 77 | 141.5 |
| cis-1,3-Dichloropropene | 0 | 11.1 | 111.0 | 10.6 | 106.0 | 4.6 | 64 | 140.7 |
| trans-1,3-Dichloropropene | 0 | 11.4 | 114.0 | 10.6 | 106.0 | 7.3 | 56 | 144.2 |
| 2,2-Dichloropropane | 0 | 10.5 | 105.0 | 10.1 | 101.0 | 3.9 | 53 | 151.2 |
| ETHYL BENZENE | 0 | 11 | 110.0 | 10.9 | 109.0 | 0.9 | 67 | 144.9 |
| Styrene | 0 | 6.89 | 68.9 | 6.85 | 68.5 | 0.6 | 7 | 158.5 |
| 1,1,2-Trichloroethane | 0 | 13.1 | 131.0 | 12.4 | 124.0 | 5.5 | 75 | 143.4 |
| 1,1,1,2-Tetrachloroethane | 0 | 10.1 | 101.0 | 10.5 | 105.0 | 3.9 | 67 | 146.9 |
| 1,1,2,2-Tetrachloroethane | 0 | 11 | 110.0 | 11.1 | 111.0 | 0.9 | 76 | 143.5 |
| Tetrachloroethene | 0 | 10.5 | 105.0 | 10.7 | 107.0 | 1.9 | 60 | 150 |
| 1,2,3-Trichloropropane | 0 | 10.7 | 107.0 | 10.8 | 108.0 | 0.9 | 73 | 143.5 |



59169b

QC Std#605
Method # 309

Heritage Laboratories, Indianapolis
MS/MSD Volatile QC Report-EPA Method 8260 25 mL
Water

Laboratory Sample # : A864665
Data File: 5251T. MS Data File : 5252T. MSD Data File : 5253T
Date/Time : 9 Nov 2009 11:28 MS Date/Time : 9 Nov 2009 11:54 MSD Date/Time : 9 Nov 2009 12:19
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min Recovery | Max Recovery |
|---|---|---|---|---|---|---|---|---|
| TOLUENE | 0 | 12.7 | 127.0 | 11.9 | 119.0 | 6.5 | 77 | 141.5 |
| m,p-Xylene | 0 | 21.9 | 109.5 | 22.3 | 111.5 | 1.8 | 73 | 152.7 |
| o-Xylene | 0 | 10.6 | 106.0 | 10.8 | 108.0 | 1.9 | 56 | 148.7 |
| Bromochloromethane | 0 | 11.4 | 114.0 | 10.7 | 107.0 | 6.3 | 74 | 152.8 |
| n-Butylbenzene | 0 | 10.2 | 102.0 | 10.3 | 103.0 | 1.0 | 69 | 139.1 |
| Dichlorodifluoromethane | 0 | 10.7 | 107.0 | 10.1 | 101.0 | 5.8 | 24 | 144.5 |
| Trichlorofluoromethane | 0 | 11.3 | 113.0 | 10.7 | 107.0 | 5.5 | 60 | 154 |
| Hexachlorobutadiene | 0 | 10.3 | 103.0 | 10.6 | 106.0 | 2.9 | 28 | 174.8 |
| Isopropylbenzene | 0 | 10.6 | 106.0 | 10.8 | 108.0 | 1.9 | 65 | 143.7 |
| p-Isopropyltoluene | 0 | 10.5 | 105.0 | 10.8 | 108.0 | 2.8 | 61 | 145.9 |
| Naphthalene | 0 | 8.71 | 87.1 | 9.24 | 92.4 | 5.9 | 59 | 147 |
| n-Propylbenzene | 0 | 10.7 | 107.0 | 10.8 | 108.0 | 0.9 | 60 | 146.9 |
| sec-Butylbenzene | 0 | 10.7 | 107.0 | 10.9 | 109.0 | 1.9 | 63 | 144.2 |
| t-Butylbenzene | 0 | 11 | 110.0 | 11.1 | 111.0 | 0.9 | 68 | 141.5 |
| 1,2,3-Trichlorobenzene | 0 | 8.87 | 88.7 | 9.67 | 96.7 | 8.6 | 41 | 171.2 |
| 1,2,4-Trichlorobenzene | 0 | 9.07 | 90.7 | 9.7 | 97.0 | 6.7 | 38 | 169.8 |
| 1,2,4-Trimethylbenzene | 0 | 10.4 | 104.0 | 10.7 | 107.0 | 2.8 | 33 | 156.7 |
| 1,3,5-Trimethylbenzene | 0 | 10.8 | 108.0 | 11 | 110.0 | 1.8 | 38 | 153.9 |
| Acrolein | 0 | 10.5 | 10.5 | 2.2 | 2.2 | 130.7 | D | 408.1 |
| Acetone | 0 | 47.2 | 94.4 | 46.6 | 93.2 | 1.3 | 64 | 163.9 |
| Acrylonitrile | 0 | 44.3 | 44.3 | 6.83 | 6.8 | 146.8 | D | 493.1 |
| Carbon Disulfide | 0 | 8.23 | 82.3 | 7.8 | 78.0 | 5.4 | 42 | 166.1 |
| Vinyl Acetate | 0 | 12.6 | 126.0 | 8.23 | 82.3 | 42.0 | 62 | 138.2 |
| 2-Butanone | 0 | 54.9 | 109.8 | 54.1 | 108.2 | 1.5 | 82 | 137.9 |
| 4-Methyl-2-Pentanone | 0 | 59.2 | 118.4 | 56.3 | 112.6 | 5.0 | 76 | 145.4 |
| 2-Hexanone | 0 | 53.9 | 107.8 | 54.9 | 109.8 | 1.8 | 77 | 139.3 |
| 2-Chloroethylvinylether | 0 | 0 | 0.0 ! | 0 | 0.0 ! | 1.8 | 63 | 145.7 |
| trans-1,4-Dichloro-2-butene | 0 | 14 | 70.0 | 13.9 | 69.5 | 0.7 | D | 161.8 |
| 1,2-Dibromoethane | 0 | 12.7 | 127.0 | 12 | 120.0 | 5.7 | 73 | 144.8 |
| 1,2-Dibromo-3-chloropropar | 0 | 8.82 | 88.2 | 9.1 | 91.0 | 3.1 | 54 | 147.7 |
| Iodomethane | 0 | 11.3 | 113.0 | 10.8 | 108.0 | 4.5 | 67 | 161.4 |

Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 50 uG/L



59169b

R560121

# Heritage Environmental Services, LLC

Q2256555

QC Report

QCType SPI01
Date Entered 12Nov09
Analysis Date/Time 09Nov09 11:54:00

Duplicate SampleID A864665
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5252T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 12 | | 120 | |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 10.7 | | 107 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 10.4 | | 104 | |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 11.5 | | 115 | |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 11.5 | | 115 | |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 11.1 | | 111 | |
| 750 | TRICHLOROETHENE | 0 | 10 | 11.8 | | 118 | |
| 768 | VINYL CHLORIDE | 0 | 10 | 10.7 | | 107 | |
| 193 | BROMOBENZENE | 0 | 10 | 10.5 | | 105 | |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 11 | | 110 | |
| 197 | BROMOFORM | 0 | 10 | 8.3 | | 83 | |
| 198 | BROMOMETHANE | 0 | 10 | 11.2 | | 112 | |
| 231 | CHLOROBENZENE | 0 | 10 | 11.2 | | 112 | |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 9.74 | | 97.4 | |
| 234 | CHLOROETHANE | 0 | 10 | 10.6 | | 106 | |
| 235 | CHLOROFORM | 0 | 10 | 11.1 | | 111 | |
| 236 | CHLOROMETHANE | 0 | 10 | 10.5 | | 105 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 10.8 | | 108 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 10.7 | | 107 | |
| 296 | DIBROMOMETHANE | 0 | 10 | 11.9 | | 119 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 10.2 | | 102 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 10.3 | | 103 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 11.6 | | 116 | |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 11.2 | | 112 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 10.6 | | 106 | |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 11.2 | | 112 | |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 11.3 | | 113 | |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 12.4 | | 124 | |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 11.9 | | 119 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 11.1 | | 111 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 11.4 | | 114 | |
| 33 | 2,2-DICHLOROPROPANE | 0 | 10 | 10.5 | | 105 | |
| 349 | ETHYL BENZENE | 0 | 10 | 11 | | 110 | |
| 680 | STYRENE | 0 | 10 | 6.89 | | 68.9 | |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 13.1 | | 131 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 10.1 | | 101 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 11 | | 110 | |
| 703 | TETRACHLOROETHENE | 0 | 10 | 10.5 | | 105 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 10.7 | | 107 | |
| 724 | TOLUENE | 0 | 10 | 12.7 | | 127 | |
| 492 | M/P-XYLENE | 0 | 20 | 21.9 | | 109.5 | |
| 549 | O-XYLENE | 0 | 10 | 10.6 | | 106 | |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 11.4 | | 114 | |
| 519 | N-BUTYLBENZENE | 0 | 10 | 10.2 | | 102 | |

11/12/09

591690

R560121

# Heritage Environmental Services, LLC

Q2256555

## QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 10.7 | | 107 | |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 11.3 | | 113 | |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.3 | | 103 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 10.6 | | 106 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 10.5 | | 105 | |
| 493 | NAPHTHALENE | 0 | 10 | 8.71 | | 87.1 | |
| 532 | N-PROPYLBENZENE | 0 | 10 | 10.7 | | 107 | |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 10.7 | | 107 | |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 10.9 | | 109 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 8.87 | | 88.7 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 9.07 | | 90.7 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 10.4 | | 104 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 10.8 | | 108 | |
| 105 | ACROLEIN | 0 | 100 | 10.4 | | 10.4 | |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 47.2 | | 94.4 | |
| 106 | ACRYLONITRILE | 0 | 100 | 44.3 | | 44.3 | |
| 216 | CARBON DISULFIDE | 0 | 10 | 8.23 | | 82.3 | |
| 767 | VINYL ACETATE | 0 | 10 | 12.6 | | 126 | |
| 52 | 2-BUTANONE | 0 | 50 | 54.9 | | 109.8 | |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 59.2 | | 118.4 | |
| 60 | 2-HEXANONE | 0 | 50 | 53.9 | | 107.8 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 14 | | 70 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 12.7 | | 127 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 8.82 | | 88.2 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 10.8 | | 108 | |
| 422 | IODOMETHANE | 0 | 10 | 11.3 | | 113 | |
| 709 | TETRAHYDROFURAN | 0 | 125 | 146 | | 116.8 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 9.15 | | 91.5 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 118 | | 118 | |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 117 | | 117 | |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 12.6 | | 126 | |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 10.7 | | 107 | |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 32.5 | | 108.3 | |

**Comment:** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers:**

! Outside Lab Generated Control Limits

R560121

# Heritage Environmental Services, LLC

Q2256556

## QC Report

QCType DPS01
Date Entered 12Nov09
Analysis Date/Time 09Nov09 12:19:00

Duplicate SampleID A864665
Duplicate QCSampleID Q2256555
Method 309 Matrix 1

DataFile 5253T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 0 | 10 | 11.2 | | 112.1 | 6.5 |
| 217 | CARBON TETRACHLORIDE | 0 | 10 | 10.2 | | 102.1 | 4.3 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 0 | 10 | 10.7 | | 106.6 | 2.5 |
| 21 | 1,2-DICHLOROETHANE | 0 | 10 | 10.8 | | 107.8 | 6.5 |
| 8 | 1,1-DICHLOROETHENE | 0 | 10 | 11 | | 109.7 | 4.9 |
| 2 | 1,1,1-TRICHLOROETHANE | 0 | 10 | 10.6 | | 105.6 | 4.9 |
| 750 | TRICHLOROETHENE | 0 | 10 | 11.2 | | 111.9 | 5.6 |
| 768 | VINYL CHLORIDE | 0 | 10 | 10.2 | | 101.6 | 4.7 |
| 193 | BROMOBENZENE | 0 | 10 | 10.9 | | 108.6 | 3.3 |
| 195 | BROMODICHLOROMETHANE | 0 | 10 | 10.3 | | 103.4 | 5.8 |
| 197 | BROMOFORM | 0 | 10 | 8.66 | | 86.6 | 4.2 |
| 198 | BROMOMETHANE | 0 | 10 | 10.6 | | 105.5 | 5.8 |
| 231 | CHLOROBENZENE | 0 | 10 | 11.3 | | 113.3 | 1.6 |
| 295 | DIBROMOCHLOROMETHANE | 0 | 10 | 9.86 | | 98.6 | 1.2 |
| 234 | CHLOROETHANE | 0 | 10 | 9.77 | | 97.7 | 8.2 |
| 235 | CHLOROFORM | 0 | 10 | 10.3 | | 103 | 7.2 |
| 236 | CHLOROMETHANE | 0 | 10 | 9.82 | | 98.2 | 6.3 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0 | 10 | 10.9 | | 108.6 | 2.1 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0 | 10 | 10.9 | | 109 | 2.1 |
| 296 | DIBROMOMETHANE | 0 | 10 | 11.2 | | 112.4 | 5.5 |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 0 | 10 | 10.6 | | 105.9 | 3.4 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 0 | 10 | 10.4 | | 104.5 | 1.8 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0 | 10 | 10.6 | | 106.4 | 8.5 |
| 246 | CIS-1,2-DICHLOROETHENE | 0 | 10 | 10.4 | | 104.1 | 6.9 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 0 | 10 | 9.78 | | 97.8 | 7.6 |
| 7 | 1,1-DICHLOROETHANE | 0 | 10 | 10.5 | | 105.4 | 6.4 |
| 10 | 1,1-DICHLOROPROPENE | 0 | 10 | 10.7 | | 106.7 | 5.9 |
| 23 | 1,2-DICHLOROPROPANE | 0 | 10 | 11.6 | | 116.1 | 6.2 |
| 27 | 1,3-DICHLOROPROPANE | 0 | 10 | 12 | | 119.6 | 1.8 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0 | 10 | 10.6 | | 106.4 | 4.2 |
| 747 | TRANS-1,3-DICHLOROPROPENE | 0 | 10 | 10.6 | | 106.4 | 6.8 |
| 233 | 2,2-DICHLOROPROPANE | 0 | 10 | 10.1 | | 101.1 | 3.9 |
| 349 | ETHYL BENZENE | 0 | 10 | 10.9 | | 109 | 1.1 |
| 680 | STYRENE | 0 | 10 | 6.85 | | 68.5 | 2.6 |
| 4 | 1,1,2-TRICHLOROETHANE | 0 | 10 | 12.4 | | 124 | 5.7 |
| 21 | 1,1,1,2-TETRACHLOROETHANE | 0 | 10 | 10.5 | | 104.8 | 3.4 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0 | 10 | 11.1 | | 110.8 | 1.4 |
| 703 | TETRACHLOROETHENE | 0 | 10 | 10.7 | | 107.4 | 2.5 |
| 14 | 1,2,3-TRICHLOROPROPANE | 0 | 10 | 10.8 | | 108.3 | 1.2 |
| 724 | TOLUENE | 0 | 10 | 11.9 | | 119.4 | 6.5 |
| 492 | M/P-XYLENE | 0 | 20 | 22.3 | | 111.4 | 1.9 |
| 549 | O-XYLENE | 0 | 10 | 10.8 | | 107.9 | 1.4 |
| 194 | BROMOCHLOROMETHANE | 0 | 10 | 10.7 | | 107.2 | 6.5 |
| 519 | N-BUTYLBENZENE | 0 | 10 | 10.3 | | 103.3 | 1.4 |

R560121

# Heritage Environmental Services, LLC

Q2256556

## QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0 | 10 | 10.1 | | 101.1 | 5.6 |
| 372 | TRICHLOROFLUOROMETHANE | 0 | 10 | 10.7 | | 106.6 | 6.2 |
| 398 | HEXACHLOROBUTADIENE | 0 | 10 | 10.6 | | 105.9 | 2.4 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 0 | 10 | 10.8 | | 107.8 | 1.4 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 0 | 10 | 10.8 | | 107.6 | 2.4 |
| 493 | NAPHTHALENE | 0 | 10 | 9.24 | | 92.4 | 5.9 |
| 532 | N-PROPYLBENZENE | 0 | 10 | 10.8 | | 108.1 | 1.4 |
| 644 | SEC-BUTYLBENZENE | 0 | 10 | 10.9 | | 109.1 | 2.1 |
| 702 | TERT-BUTYLBENZENE | 0 | 10 | 11.1 | | 111.4 | 1.7 |
| 13 | 1,2,3-TRICHLOROBENZENE | 0 | 10 | 9.67 | | 96.7 | 8.6 |
| 16 | 1,2,4-TRICHLOROBENZENE | 0 | 10 | 9.7 | | 97 | 6.7 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 0 | 10 | 10.7 | | 107.3 | 3.2 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 0 | 10 | 11 | | 109.8 | 2.2 |
| 105 | ACROLEIN | 0 | 100 | 2.2 | | 2.2 | 130.2 |
| 99 | ACETONE (2-PROPANONE) | 0 | 50 | 46.6 | | 93.2 | 1.3 |
| 106 | ACRYLONITRILE | 0 | 100 | 6.83 | | 6.8 | 146.8 |
| 216 | CARBON DISULFIDE | 0 | 10 | 7.8 | | 78 | 5.4 |
| 767 | VINYL ACETATE | 0 | 10 | 8.23 | | 82.3 | 42 |
| 52 | 2-BUTANONE | 0 | 50 | 54.1 | | 108.1 | 1.5 |
| 91 | 4-METHYL-2-PENTANONE | 0 | 50 | 56.3 | | 112.6 | 5 |
| 60 | 2-HEXANONE | 0 | 50 | 54.9 | | 109.8 | 1.8 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0 | 10 | 0 | ! | 0 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0 | 20 | 13.9 | | 69.7 | 2.7 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0 | 10 | 12 | | 119.6 | 5.9 |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0 | 10 | 9.1 | | 91 | 3.1 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0 | 10 | 10.1 | | 101.2 | 6.3 |
| 422 | IODOMETHANE | 0 | 10 | 10.8 | | 107.9 | 3.5 |
| 709 | TETRAHYDROFURAN | 0 | 125 | 138 | | 110.3 | 5.4 |
| 76 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0 | 10 | 9.01 | | 90.1 | 1.5 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0 | 100 | 114 | | 114.4 | 3.4 |
| 975 | METHYLACRYLONITRILE | 0 | 100 | 111 | | 111 | 5.5 |
| 1147 | METHYL METHACRYLATE | 0 | 10 | 11.7 | | 117.1 | 7.4 |
| 351 | ETHYL METHACRYLATE | 0 | 10 | 10.9 | | 108.5 | 1.3 |
| 803 | XYLENES (O/M/P-XYLENE) | 0 | 30 | 33.1 | | 110.3 | 1.8 |

**Comment:** 2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery possible. Unacidified sample not available.

**Qualifiers:**

! Outside Lab Generated Control Limits

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5252T.D
Acq On : 9 Nov 2009 11:54
Operator : HAROLD
Sample : A864665 MS
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 09 12:10:38 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 603442 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 214992 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 137960 | 9.68 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 96.80% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 165110 | 9.72 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 97.20% | |
| 50) Toluene-d8 | 6.603 | 98 | 570926 | 10.53 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 105.30% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 165964 | 9.04 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 90.40% | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.073 | 85 | 91679 | 10.69 UG/L | 100 |
| 3) Chloromethane | 1.180 | 50 | 134490 | 10.46 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 151007 | 10.65 UG/L | 98 |
| 5) Bromomethane | 1.488 | 94 | 68241 | 11.18 UG/L | 100 |
| 6) Chloroethane | 1.560 | 64 | 80798 | 10.61 UG/L | 91 |
| 7) Trichlorofluoromethane | 1.732 | 101 | 203042 | 11.34 UG/L # | 77 |
| 8) Acrolein | 2.040 | 56 | 11020 | 10.45 UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 290878 | 47.19 UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 137817 | 11.52 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 150879 | 11.06 UG/L | 96 |
| 12) Acrylonitrile | 2.734 | 53 | 184891 | 44.28 UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 313483 | 8.23 UG/L | 98 |
| 14) Methylene Chloride | 2.512 | 84 | 162838 | 10.55 UG/L # | 75 |
| 15) Allyl Chloride | 2.405 | 41 | 392152 | 9.15 UG/L | 100 |
| 16) Vinyl Acetate | 3.193 | 43 | 22593 | 12.60 UG/L # | 93 |
| 17) MTBE | 2.756 | 73 | 493011 | 10.78 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 158785 | 11.58 UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 258827 | 11.24 UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 134009 | 54.86 UG/L # | 31 |
| 21) Ethyl Acetate | 3.766 | 43 | 226565 | 12.80 UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 162358 | 11.15 UG/L | 92 |
| 23) Ethyl Cyanide | 3.752 | 54 | 329164 | 118.40 UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 246801 | 11.07 UG/L | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 1200911 | 117.27 UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 787501 | 145.50 UG/L # | 81 |
| 27) Bromochloromethane | 3.902 | 128 | 74499 | 11.44 UG/L | 82 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 152470 | 10.51 UG/L | 90 |
| 29) Diethyl ether | 1.932 | 59 | 139622 | 10.62 UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 205366 | 11.09 UG/L | 98 |
| 31) Iodomethane | 2.226 | 142 | 221683 | 11.34 UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 72605 | 11.32 UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 173614 | 10.66 UG/L | 93 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 192855 | 11.50 UG/L | 97 |
| 37) Isobutanol | 4.497 | 43 | 816867 | 841.32 UG/L # | 95 |
| 38) Benzene | 4.532 | 78 | 627883 | 11.96 UG/L | 100 |
| 39) n-Hexane | 2.992 | 57 | 272457 | 10.21 UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 162671 | 11.84 UG/L | 98 |
| 41) n-Butanol | 5.206 | 56 | 414697 | 491.16 UG/L | 99 |

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5252T.D
Acq On : 9 Nov 2009 11:54
Operator : HAROLD
Sample : A864665 MS
Misc :
ALS Vial : 10 Sample Multiplier: 1

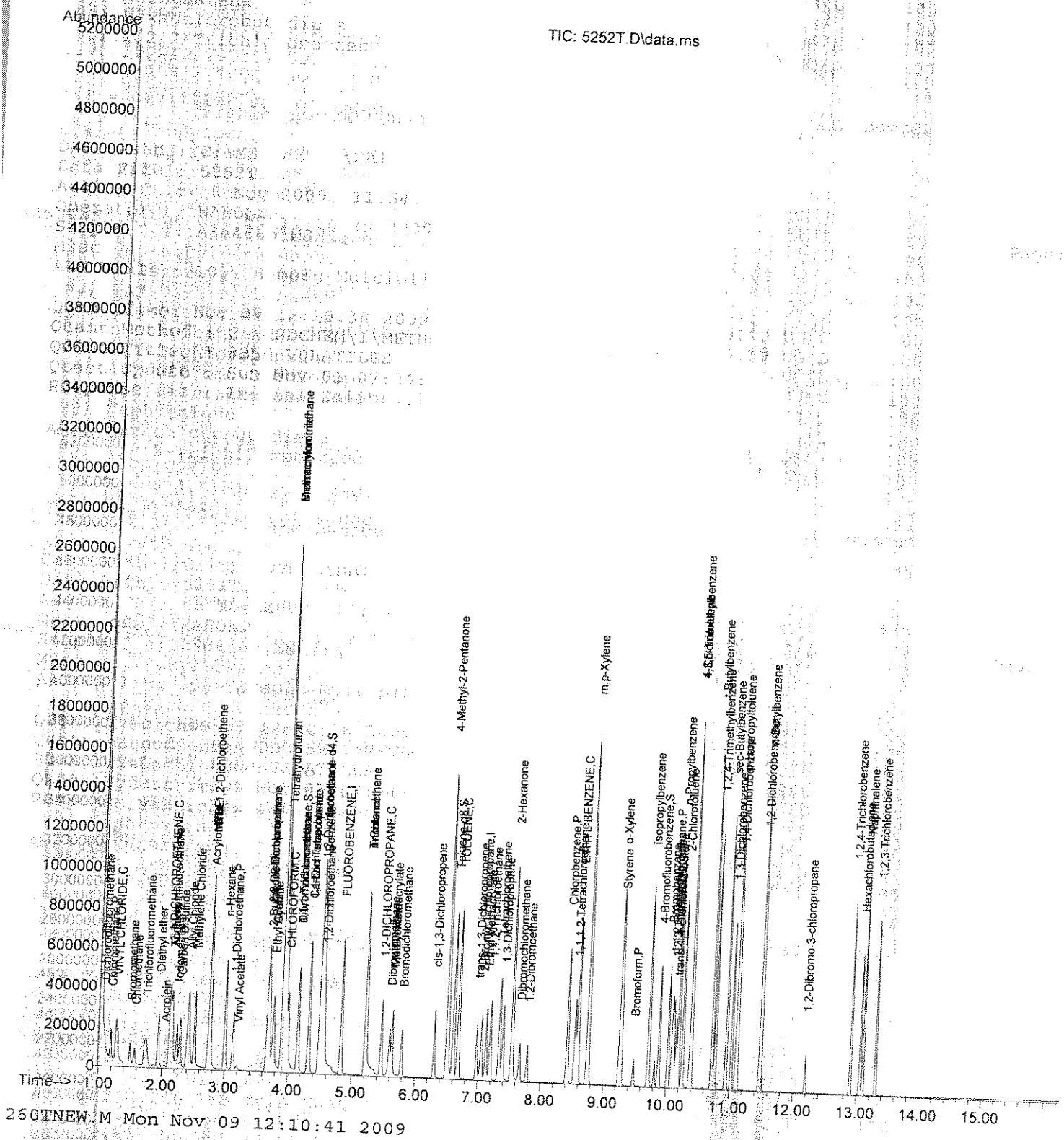
Quant Time: Nov 09 12:10:38 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 149555 | 12.35 UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 21911 | 53.21 UG/L | 100 |
| 44) Methyl Methacrylate | 5.636 | 41 | 154106 | 12.61 UG/L # | 94 |
| 45) Bromodichloromethane | 5.786 | 83 | 160927 | 10.96 UG/L | 99 |
| 46) Dibromomethane | 5.585 | 93 | 88133 | 11.88 UG/L | 91 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1127050 | 59.19 UG/L # | 88 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 203599 | 11.10 UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 664069 | 12.74 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 166882 | 11.39 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 135349 | 13.13 UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 134186 | 12.69 UG/L | 100 |
| 56) 2-Hexanone | 7.534 | 43 | 755107 | 53.92 UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.390 | 76 | 242819 | 11.86 UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 206351 | 10.71 UG/L # | 62 |
| 59) Tetrachloroethene | 7.333 | 166 | 166256 | 10.48 UG/L | 99 |
| 60) Dibromochloromethane | 7.655 | 129 | 109349 | 9.74 UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 415359 | 11.15 UG/L | 98 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 135212 | 10.13 UG/L | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 228315 | 11.02 UG/L | 77 |
| 64) m,p-Xylene | 8.744 | 106 | 564558 | 21.85 UG/L # | 60 |
| 65) o-Xylene | 9.253 | 106 | 278761 | 10.64 UG/L | 80 |
| 66) Styrene | 9.274 | 104 | 287763 | 6.89 UG/L # | 83 |
| 67) Bromoform | 9.482 | 173 | 62552 | 8.30 UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 210632 | 11.04 UG/L | 100 |
| 70) Isopropylbenzene | 9.718 | 105 | 659136 | 10.63 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 75737 | 14.03 UG/L # | 14 |
| 72) Bromobenzene | 10.026 | 77 | 266898 | 10.51 UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 65277 | 10.70 UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 93431 | 10.66 UG/L | 83 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 633582 | 10.76 UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 176694 | 10.75 UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 165777 | 10.67 UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 356443 | 10.95 UG/L # | 69 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 624826 | 10.39 UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 832924 | 10.68 UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 688870 | 10.50 UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 328223 | 10.24 UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 333809 | 10.40 UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 348991 | 10.19 UG/L | 100 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 330928 | 10.26 UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 41751 | 8.82 UG/L # | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 231424 | 9.07 UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 659800 | 8.71 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 119573 | 10.34 UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 220147 | 8.87 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5252T.D
Acq On : 9 Nov 2009 11:54
Operator : HAROLD
Sample : A864665 MS
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 09 12:10:38 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




260TNEW.M Mon Nov 09 12:10:41 2009



59169b

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5253T.D
Acq On : 9 Nov 2009 12:19
Operator : HAROLD
Sample : A864665 MSD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 09 12:36:02 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 585314 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 194776 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 131064 | 9.48 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.80% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 159843 | 9.70 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.00% | |
| 50) Toluene-d8 | 6.602 | 98 | 562436 | 10.69 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 106.90% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 159831 | 9.61 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 96.10% | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 84030 | 10.11 UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 122511 | 9.82 UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 139732 | 10.16 UG/L | 99 |
| 5) Bromomethane | 1.488 | 94 | 62477 | 10.55 UG/L | 98 |
| 6) Chloroethane | 1.567 | 64 | 72160 | 9.77 UG/L # | 86 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 185220 | 10.66 UG/L # | 76 |
| 8) Acrolein | 2.032 | 56 | 2252 | 2.20 UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 278599 | 46.59 UG/L | 95 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 127203 | 10.97 UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 137633 | 10.40 UG/L | 98 |
| 12) Acrylonitrile | 2.734 | 53 | 27672 | 6.83 UG/L | 100 |
| 13) Carbon Disulfide | 2.283 | 76 | 288083 | 7.80 UG/L | 99 |
| 14) Methylene Chloride | 2.512 | 84 | 148175 | 9.78 UG/L # | 74 |
| 15) Allyl Chloride | 2.412 | 41 | 374767 | 9.01 UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 15887 | 8.23 UG/L # | 90 |
| 17) MTBE | 2.756 | 73 | 448620 | 10.12 UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 141460 | 10.64 UG/L | 99 |
| 19) 1,1-Dichloroethane | 3.128 | 63 | 235402 | 10.54 UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 128086 | 54.06 UG/L # | 30 |
| 21) Ethyl Acetate | 3.766 | 43 | 202400 | 11.79 UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 147142 | 10.41 UG/L | 91 |
| 23) Ethyl Cyanide | 3.759 | 54 | 308366 | 114.36 UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 222745 | 10.30 UG/L | 100 |
| 25) Methacrylonitrile | 3.902 | 41 | 1102913 | 111.03 UG/L # | 100 |
| 26) Tetrahydrofuran | 3.945 | 42 | 723975 | 137.90 UG/L # | 80 |
| 27) Bromochloromethane | 3.902 | 128 | 67699 | 10.72 UG/L | 81 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 142214 | 10.11 UG/L | 89 |
| 29) Diethyl ether | 1.932 | 59 | 130710 | 10.25 UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 189691 | 10.56 UG/L | 99 |
| 31) Iodomethane | 2.226 | 142 | 204538 | 10.79 UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 66345 | 10.67 UG/L | 100 |
| 35) Carbon Tetrachloride | 4.317 | 117 | 161305 | 10.21 UG/L | 93 |
| 36) 1,2-Dichloroethane | 4.561 | 62 | 175337 | 10.78 UG/L | 98 |
| 37) Isobutanol | 4.504 | 43 | 779888 | 828.11 UG/L # | 95 |
| 38) Benzene | 4.532 | 78 | 570663 | 11.21 UG/L | 100 |
| 39) n-Hexane | 2.999 | 57 | 237953 | 9.19 UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 149082 | 11.19 UG/L | 96 |
| 41) n-Butanol | 5.206 | 56 | 403844 | 493.12 UG/L | 99 |

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5253T.D
Acq On : 9 Nov 2009 12:19
Operator : HAROLD
Sample : A864665 MSD
Misc :
ALS Vial : 11 Sample Multiplier: 1

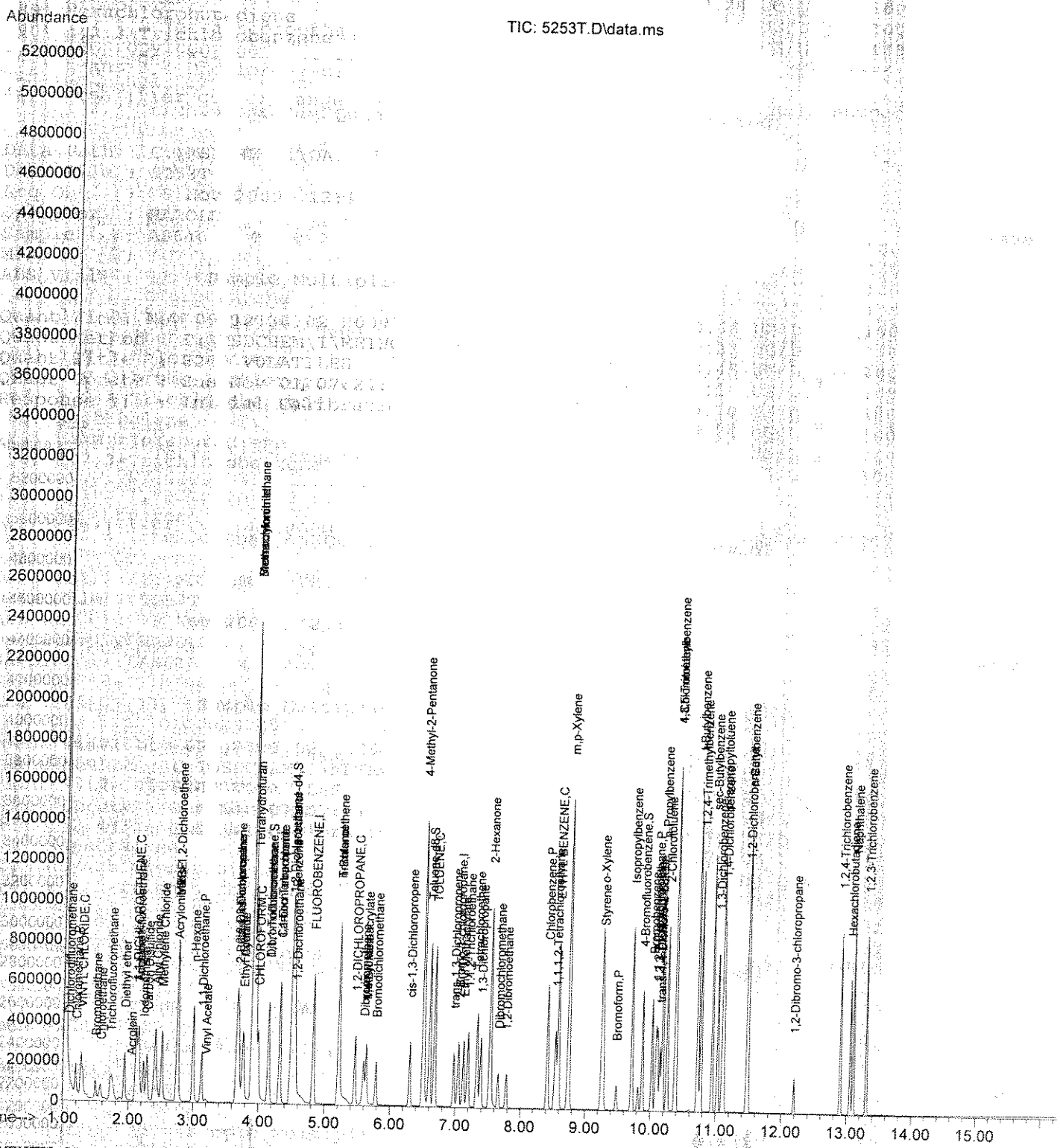
Quant Time: Nov 09 12:36:02 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 136407 | 11.61 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 22512 | 56.11 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.635 | 41 | 138881 | 11.71 | UG/L # | 94 |
| 45) Bromodichloromethane | 5.786 | 83 | 147322 | 10.34 | UG/L | 100 |
| 46) Dibromomethane | 5.592 | 93 | 80897 | 11.24 | UG/L | 92 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1039751 | 56.30 | UG/L # | 87 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 189250 | 10.64 | UG/L | 100 |
| 51) TOLUENE | 6.681 | 91 | 603832 | 11.94 | UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 151280 | 10.64 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 124032 | 12.40 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 122658 | 11.96 | UG/L | 99 |
| 56) 2-Hexanone | 7.534 | 43 | 696488 | 54.90 | UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.390 | 76 | 221891 | 11.96 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.125 | 69 | 189400 | 10.85 | UG/L # | 62 |
| 59) Tetrachloroethene | 7.333 | 166 | 154339 | 10.74 | UG/L | 99 |
| 60) Dibromochloromethane | 7.663 | 129 | 100298 | 9.86 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 382347 | 11.33 | UG/L | 99 |
| 62) 1,1,1,2-Tetrachloroethane | 8.544 | 131 | 126709 | 10.48 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.587 | 106 | 204487 | 10.90 | UG/L | 73 |
| 64) m,p-Xylene | 8.744 | 106 | 521305 | 22.27 | UG/L # | 62 |
| 65) o-Xylene | 9.253 | 106 | 255964 | 10.79 | UG/L | 82 |
| 66) Styrene | 9.274 | 104 | 259145 | 6.85 | UG/L # | 83 |
| 67) Bromoform | 9.482 | 173 | 59096 | 8.66 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 191496 | 11.08 | UG/L | 100 |
| 70) Isopropylbenzene | 9.718 | 105 | 605683 | 10.78 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 68165 | 13.94 | UG/L # | 15 |
| 72) Bromobenzene | 10.026 | 77 | 249916 | 10.86 | UG/L | 100 |
| 73) 1,2,3-Trichloropropane | 10.112 | 110 | 59821 | 10.83 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 85856 | 10.81 | UG/L | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 585820 | 10.98 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 161694 | 10.86 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.377 | 126 | 153452 | 10.90 | UG/L | 100 |
| 78) t-Butylbenzene | 10.721 | 91 | 328323 | 11.14 | UG/L # | 70 |
| 79) 1,2,4-Trimethylbenzene | 10.771 | 105 | 585050 | 10.73 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 770904 | 10.91 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 639433 | 10.76 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.029 | 146 | 307368 | 10.59 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 309943 | 10.66 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 320522 | 10.33 | UG/L | 98 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 305140 | 10.45 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 39010 | 9.10 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 224214 | 9.70 | UG/L | 100 |
| 88) Naphthalene | 13.099 | 128 | 634079 | 9.24 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.056 | 225 | 110916 | 10.59 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 217309 | 9.67 | UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5253T.D
Acq On : 9 Nov 2009 12:19
Operator : HAROLD
Sample : A864665 MSD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 09 12:36:02 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Mon Nov 09 12:36:06 2009



59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5242T.
LCS Date/Time : 9 Nov 2009 7:29
Spike Conc : 10 uG/L
Dilution Factor: 1

Q22564

| Compound | Spike Conc | Spike % Rec | Min Recovery | Max Recovery |
|---|---|---|---|---|
| Benzene | 11.3 | 113.0 | 73 | 131.5 |
| Carbon Tetrachloride | 11.2 | 112.0 | 63 | 144.9 |
| 1,4-Dichlorobenzene | 10.9 | 109.0 | 74 | 136.7 |
| 1,2-Dichloroethane | 11.1 | 111.0 | 65 | 133.8 |
| 1,1-DICHLOROETHENE | 11.2 | 112.0 | 59 | 128.5 |
| 1,1,1-Trichloroethane | 11.3 | 113.0 | 65 | 135.2 |
| Trichloroethene | 11.1 | 111.0 | 67 | 120.9 |
| VINYL CHLORIDE | 9.4 | 94.0 | 43 | 144 |
| Bromobenzene | 10.7 | 107.0 | 56 | 159.4 |
| Bromodichloromethane | 10.7 | 107.0 | 70 | 129.4 |
| Bromoform | 10.5 | 105.0 | 59 | 163.5 |
| Bromomethane | 10.4 | 104.0 | 54 | 135.8 |
| Chlorobenzene | 11 | 110.0 | 76 | 132.6 |
| Dibromochloromethane | 11.1 | 111.0 | 67 | 145.6 |
| Chloroethane | 9.59 | 95.9 | 64 | 142.7 |
| CHLOROFORM | 11.3 | 113.0 | 73 | 136.2 |
| Chloromethane | 8.77 | 87.7 | 42 | 138.5 |
| 2-Chlorotoluene | 11.1 | 111.0 | 76 | 134.4 |
| 4-Chlorotoluene | 10.9 | 109.0 | 76 | 139.9 |
| Dibromomethane | 11.5 | 115.0 | 72 | 126 |
| 1,3-Dichlorobenzene | 11 | 110.0 | 74 | 140 |
| 1,2-Dichlorobenzene | 10.8 | 108.0 | 78 | 136.7 |
| trans-1,2-Dichloroethene | 11.5 | 115.0 | 57 | 116.1 |
| cis-1,2-Dichloroethene | 11.6 | 116.0 | 72 | 167.4 |
| Methylene Chloride | 10.6 | 106.0 | 71 | 133 |
| 1,1-Dichloroethane | 11.4 | 114.0 | 72 | 132.7 |
| 1,1-Dichloropropene | 11 | 110.0 | 68 | 124.6 |
| 1,2-DICHLOROPROPANE | 11.4 | 114.0 | 70 | 125.6 |
| 1,3-Dichloropropane | 11.5 | 115.0 | 74 | 127 |
| cis-1,3-Dichloropropene | 10.9 | 109.0 | 70 | 119.1 |
| trans-1,3-Dichloropropene | 11.5 | 115.0 | 72 | 131.8 |
| 2,2-Dichloropropane | 11.1 | 111.0 | 64 | 135 |
| ETHYL BENZENE | 11.1 | 111.0 | 47 | 155.6 |
| Styrene | 10.9 | 109.0 | 48 | 158.2 |
| 1,1,2-Trichloroethane | 11.7 | 117.0 | 73 | 121.4 |
| 1,1,1,2-Tetrachloroethane | 10.8 | 108.0 | 75 | 129.5 |
| 1,1,2,2-Tetrachloroethane | 11.3 | 113.0 | 76 | 126.3 |
| Tetrachloroethene | 11.2 | 112.0 | 69 | 135.2 |
| 1,2,3-Trichloropropane | 10.2 | 102.0 | 73 | 132.7 |



59169b

QC Std# 605
Method # 309

Heritage Laboratories, Indianapolis
LCS01 Volatile QC Report-EPA Method 8260 25 mL
Water

LCS Data File : 5242T.
LCS Date/Time : 9 Nov 2009 7:29
Spike Conc : 10 uG/L
Dilution Factor: 1

| Compound | Spike Conc | Spike % Rec | Min Recovery * | Max Recovery * |
|---|---|---|---|---|
| TOLUENE | 11.6 | 116.0 | 73 | 130 |
| m,p-Xylene | 22.5 | 112.5 | 73 | 137.2 |
| o-Xylene | 11 | 110.0 | 78 | 143.5 |
| Bromochloromethane | 11.9 | 119.0 | 65 | 141.4 |
| n-Butylbenzene | 10.5 | 105.0 | 77 | 137.1 |
| Dichlorodifluoromethane | 8.1 | 81.0 | 15 | 123.1 |
| Trichlorofluoromethane | 10.3 | 103.0 | 51 | 149.1 |
| Hexachlorobutadiene | 10.6 | 106.0 | 66 | 130.5 |
| Isopropylbenzene | 12.4 | 124.0 | 84 | 148.4 |
| p-Isopropyltoluene | 11 | 110.0 | 75 | 137.2 |
| Naphthalene | 9.59 | 95.9 | 75 | 133.3 |
| n-Propylbenzene | 11.3 | 113.0 | 74 | 140.8 |
| sec-Butylbenzene | 10.9 | 109.0 | 74 | 129.3 |
| t-Butylbenzene | 10.8 | 108.0 | 47 | 155.9 |
| 1,2,3-Trichlorobenzene | 9.68 | 96.8 | 69 | 143.8 |
| 1,2,4-Trichlorobenzene | 10.2 | 102.0 | 75 | 132.1 |
| 1,2,4-Trimethylbenzene | 10.8 | 108.0 | 77 | 136.1 |
| 1,3,5-Trimethylbenzene | 11 | 110.0 | 77 | 134.7 |
| Acrolein | 61.8 | 61.8 | D | 672 |
| Acetone | 42.8 | 85.6 | 62 | 135.2 |
| Acrylonitrile | 100 | 100.0 | D | 597.8 |
| Carbon Disulfide | 10.4 | 104.0 | 65 | 161.9 |
| Vinyl Acetate | 12.8 | 128.0 | 71 | 127.6 |
| 2-Butanone | 46.9 | 93.8 | 74 | 128.8 |
| 4-Methyl-2-Pentanone | 49.2 | 98.4 | 70 | 131.2 |
| 2-Hexanone | 48.9 | 97.8 | 76 | 131.7 |
| 2-Chloroethylvinylether | 10.4 | 104.0 | 49 | 136.5 |
| trans-1,4-Dichloro-2-butene | 18.3 | 91.5 | D | 114.1 |
| 1,2-Dibromoethane | 11.4 | 114.0 | 73 | 124 |
| 1,2-Dibromo-3-chloropropane | 9.88 | 98.8 | 67 | 127.4 |
| Iodomethane | 10.4 | 104.0 | 67 | 135.8 |

* Recovery limit

Trans-1,4-dichloro-2-butene and co-eluting Dichlorobenzenes and Xylenes spiked at 20 uG/L
Acetone, MEK, MIBK, 2-Hexanone, Acrolein and Acrylonitrile spiked at 50 uG/L

R560121

# Heritage Environmental Services, LLC

Q2256554

QC Report

QCType LCS01
Date Entered 12Nov09
Analysis Date/Time 09Nov0907:29:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5242T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 151 | BENZENE | 10 | | 11.3 | | 113 | |
| 217 | CARBON TETRACHLORIDE | 10 | | 11.2 | | 112 | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 10 | | 10.9 | | 109 | |
| 21 | 1,2-DICHLOROETHANE | 10 | | 11.1 | | 111 | |
| 8 | 1,1-DICHLOROETHENE | 10 | | 11.2 | | 112 | |
| 2 | 1,1,1-TRICHLOROETHANE | 10 | | 11.3 | | 113 | |
| 750 | TRICHLOROETHENE | 10 | | 11.1 | | 111 | |
| 768 | VINYL CHLORIDE | 10 | | 9.4 | | 94 | |
| 193 | BROMOBENZENE | 10 | | 10.7 | | 107 | |
| 195 | BROMODICHLOROMETHANE | 10 | | 10.7 | | 107 | |
| 197 | BROMOFORM | 10 | | 10.4 | | 104 | |
| 198 | BROMOMETHANE | 10 | | 10.4 | | 104 | |
| 231 | CHLOROBENZENE | 10 | | 11 | | 110 | |
| 295 | DIBROMOCHLOROMETHANE | 10 | | 11.1 | | 111 | |
| 234 | CHLOROETHANE | 10 | | 9.59 | | 95.9 | |
| 235 | CHLOROFORM | 10 | | 11.3 | | 113 | |
| 236 | CHLOROMETHANE | 10 | | 8.77 | | 87.7 | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 10 | | 11.1 | | 111 | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 10 | | 10.9 | | 109 | |
| 296 | DIBROMOMETHANE | 10 | | 11.5 | | 115 | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 10 | | 11 | | 110 | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 10 | | 10.8 | | 108 | |
| 746 | TRANS-1,2-DICHLOROETHENE | 10 | | 11.5 | | 115 | |
| 246 | CIS-1,2-DICHLOROETHENE | 10 | | 11.6 | | 116 | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10 | | 10.6 | | 106 | |
| 7 | 1,1-DICHLOROETHANE | 10 | | 11.4 | | 114 | |
| 10 | 1,1-DICHLOROPROPENE | 10 | | 11 | | 110 | |
| 23 | 1,2-DICHLOROPROPANE | 10 | | 11.4 | | 114 | |
| 27 | 1,3-DICHLOROPROPANE | 10 | | 11.5 | | 115 | |
| 247 | CIS-1,3-DICHLOROPROPENE | 10 | | 10.9 | | 109 | |
| 747 | TRANS-1,3-DICHLOROPROPENE | 10 | | 11.5 | | 115 | |
| 33 | 2,2-DICHLOROPROPANE | 10 | | 11.1 | | 111 | |
| 349 | ETHYL BENZENE | 10 | | 11.1 | | 111 | |
| 680 | STYRENE | 10 | | 10.9 | | 109 | |
| 4 | 1,1,2-TRICHLOROETHANE | 10 | | 11.7 | | 117 | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 10 | | 10.8 | | 108 | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 10 | | 11.3 | | 113 | |
| 703 | TETRACHLOROETHENE | 10 | | 11.2 | | 112 | |
| 14 | 1,2,3-TRICHLOROPROPANE | 10 | | 10.2 | | 102 | |
| 724 | TOLUENE | 10 | | 11.6 | | 116 | |
| 492 | M/P-XYLENE | 20 | | 22.5 | | 112.5 | |
| 549 | O-XYLENE | 10 | | 11 | | 110 | |
| 194 | BROMOCHLOROMETHANE | 10 | | 11.9 | | 119 | |
| 519 | N-BUTYLBENZENE | 10 | | 10.5 | | 105 | |

11/12/09

59169b

R560121 Heritage Environmental Services, LLC Q2256554

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 10 | | 8.1 | | 81 | |
| 372 | TRICHLOROFLUOROMETHANE | 10 | | 10.3 | | 103 | |
| 398 | HEXACHLOROBUTADIENE | 10 | | 10.6 | | 106 | |
| 432 | ISOPROPYLBENZENE (CUMENE) | 10 | | 12.4 | | 124 | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 10 | | 11 | | 110 | |
| 493 | NAPHTHALENE | 10 | | 9.59 | | 95.9 | |
| 532 | N-PROPYLBENZENE | 10 | | 11.3 | | 113 | |
| 644 | SEC-BUTYLBENZENE | 10 | | 10.9 | | 109 | |
| 702 | TERT-BUTYLBENZENE | 10 | | 10.8 | | 108 | |
| 13 | 1,2,3-TRICHLOROBENZENE | 10 | | 9.68 | | 96.8 | |
| 16 | 1,2,4-TRICHLOROBENZENE | 10 | | 10.2 | | 102 | |
| 17 | 1,2,4-TRIMETHYLBENZENE | 10 | | 10.8 | | 108 | |
| 25 | 1,3,5-TRIMETHYLBENZENE | 10 | | 11 | | 110 | |
| 105 | ACROLEIN | 100 | | 61.8 | | 61.8 | |
| 99 | ACETONE (2-PROPANONE) | 50 | | 42.8 | L | 85.6 | |
| 106 | ACRYLONITRILE | 100 | | 100 | | 100 | |
| 216 | CARBON DISULFIDE | 10 | | 10.4 | | 104 | |
| 767 | VINYL ACETATE | 10 | | 12.8 | | 128 | |
| 52 | 2-BUTANONE | 50 | | 46.9 | | 93.8 | |
| 91 | 4-METHYL-2-PENTANONE | 50 | | 49.2 | | 98.4 | |
| 60 | 2-HEXANONE | 50 | | 48.9 | | 97.8 | |
| 54 | 2-CHLOROETHYLVINYLETHER | 10 | | 10.4 | | 104 | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 20 | | 18.3 | | 91.5 | |
| 18 | 1,2-DIBROMOETHANE (EDB) | 10 | | 11.4 | | 114 | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 10 | | 9.88 | | 98.8 | |
| 422 | IODOMETHANE | 10 | | 10.4 | | 104 | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 10 | | 10.1 | | 101 | |
| 30 | 1,4-DIOXANE | 200 | | 109 | | 54.5 | |
| 709 | TETRAHYDROFURAN | 125 | | 124 | | 99.2 | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 10 | | 9.52 | | 95.2 | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 100 | | 105 | | 105 | |
| 975 | METHYLACRYLONITRILE | 100 | | 110 | | 110 | |
| 1147 | METHYL METHACRYLATE | 10 | | 10.8 | | 108 | |
| 351 | ETHYL METHACRYLATE | 10 | | 10.3 | | 103 | |
| 808 | XYLENES (O/M/P-XYLENE) | 30 | | 33.5 | | 111.7 | |

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5242T.D
Acq On : 9 Nov 2009 7:29
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 07:45:22 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 583155 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 187798 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 140092 | 10.17 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 101.70% | | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 158932 | 9.68 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 96.80% | | | |
| 50) Toluene-d8 | 6.603 | 98 | 530072 | 10.11 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = 101.10% | | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 155073 | 9.67 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = 96.70% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.073 | 85 | 67110 | 18.10 | UG/L | 100 |
| 3) Chloromethane | 1.180 | 50 | 108997 | 18.77 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.259 | 62 | 128852 | 9.40 | UG/L | 100 |
| 5) Bromomethane | 1.488 | 94 | 61508 | 10.43 | UG/L | 98 |
| 6) Chloroethane | 1.560 | 64 | 70609 | 19.59 | UG/L # | 88 |
| 7) Trichlorofluoromethane | 1.717 | 101 | 178322 | 10.30 | UG/L # | 78 |
| 8) Acrolein | 2.033 | 56 | 63028 | 61.84 | UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 255188 | 42.84 | UG/L | 92 |
| 10) 1,1-DICHLOROETHENE | 2.104 | 96 | 128970 | 11.16 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.140 | 101 | 138684 | 10.52 | UG/L | 93 |
| 12) Acrylonitrile | 2.727 | 53 | 404421 | 100.23 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 381679 | 10.37 | UG/L | 98 |
| 14) Methylene Chloride | 2.513 | 84 | 158031 | 10.60 | UG/L # | 74 |
| 15) Allyl Chloride | 2.405 | 41 | 394227 | 9.52 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 22145 | 12.82 | UG/L # | 93 |
| 17) MTBE | 2.749 | 73 | 446767 | 10.11 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 152485 | 11.51 | UG/L | 96 |
| 19) 1,1-Dichloroethane | 3.121 | 63 | 253876 | 11.41 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 110758 | 46.92 | UG/L # | 30 |
| 21) Ethyl Acetate | 3.766 | 43 | 180302 | 10.54 | UG/L # | 97 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 162523 | 11.55 | UG/L | 90 |
| 23) Ethyl Cyanide | 3.752 | 54 | 281294 | 104.71 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 242509 | 11.25 | UG/L # | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 1089861 | 110.13 | UG/L # | 100 |

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Acq On : 9 Nov 2009 7:29
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Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 07:45:22 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.938 | 42 | 647948 | 123.88 UG/L # | 80 |
| 27) Bromochloromethane | 3.895 | 128 | 74699 | 11.87 UG/L | 76 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 155154 | 11.07 UG/L | 92 |
| 29) Diethyl ether | 1.932 | 59 | 129564 | 10.20 UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 201951 | 11.28 UG/L | 99 |
| 31) Iodomethane | 2.226 | 142 | 197205 | 10.44 UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 68246 | 11.01 UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 176165 | 11.19 UG/L | 91 |
| 36) 1,2-Dichloroethane | 4.554 | 62 | 179314 | 11.07 UG/L | 98 |
| 37) Isobutanol | 4.497 | 43 | 237387 | 253.00 UG/L # | 90 |
| 38) Benzene | 4.525 | 78 | 572185 | 11.28 UG/L | 100 |
| 39) n-Hexane | 2.992 | 57 | 354010 | 13.73 UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 146675 | 11.05 UG/L | 98 |
| 41) n-Butanol | 5.206 | 56 | 43095 | 52.82 UG/L | 99 |
| 42) 1,2-DICHLOROPROPANE | 5.464 | 63 | 133579 | 11.41 UG/L | 100 |
| 43) 1,4-Dioxane | 5.628 | 88 | 44958 | 108.74 UG/L | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 128028 | 10.84 UG/L # | 93 |
| 45) Bromodichloromethane | 5.779 | 83 | 151932 | 10.70 UG/L | 99 |
| 46) Dibromomethane | 5.585 | 93 | 82470 | 11.50 UG/L | 90 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 904744 | 49.17 UG/L # | 87 |
| 48) 2-Chloroethylvinylether | 6.151 | 63 | 86330 | 10.43 UG/L | 94 |
| 49) cis-1,3-Dichloropropene | 6.302 | 75 | 192379 | 10.85 UG/L | 100 |
| 51) TOLUENE | 6.674 | 91 | 584153 | 11.60 UG/L | 100 |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 162967 | 11.51 UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 116598 | 11.70 UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 116377 | 11.39 UG/L | 99 |
| 56) 2-Hexanone | 7.527 | 43 | 597679 | 48.86 UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 205342 | 11.48 UG/L # | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 173417 | 10.31 UG/L # | 59 |
| 59) Tetrachloroethene | 7.333 | 166 | 154685 | 11.16 UG/L | 99 |
| 60) Dibromochloromethane | 7.656 | 129 | 108912 | 11.10 UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 358119 | 11.00 UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 125489 | 10.76 UG/L | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 199822 | 11.05 UG/L | 175 |
| 64) m,p-Xylene | 8.744 | 106 | 508419 | 22.53 UG/L # | 64 |
| 65) o-Xylene | 9.253 | 106 | 251424 | 10.99 UG/L | 82 |
| 66) Styrene | 9.274 | 104 | 399259 | 10.94 UG/L | 89 |
| 67) Bromoform | 9.482 | 173 | 68798 | 10.45 UG/L # | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 187628 | 11.26 UG/L | 99 |
| 70) Isopropylbenzene | 9.719 | 105 | 671118 | 12.39 UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 886290 | 18.30 UG/L # | 124 |
| 72) Bromobenzene | 10.027 | 77 | 236232 | 10.65 UG/L | 100 |

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5242T.D
Acq On : 9 Nov 2009 7:29
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Misc :
ALS Vial : 22 Sample Multiplier: 1
Quant Time: Nov 09 07:45:22 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.113 | 110 | 454442 | 10.22 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 86640 | 11.31 | UG/L # | 87 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 564200 | 10.97 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 159164 | 11.08 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 148527 | 10.94 | UG/L | 100 |
| 78) t-Butylbenzene | 10.714 | 91 | 306859 | 10.80 | UG/L # | 72 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 565262 | 10.76 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.943 | 105 | 739463 | 10.85 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 628544 | 10.97 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.022 | 146 | 308219 | 11.01 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 306122 | 10.92 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 315365 | 10.54 | UG/L | 97 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 305011 | 10.83 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 40851 | 9.88 | UG/L | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 227767 | 10.22 | UG/L | 100 |
| 88) Naphthalene | 13.100 | 128 | 635030 | 9.59 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 107360 | 10.63 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 209892 | 9.68 | UG/L | 100 |

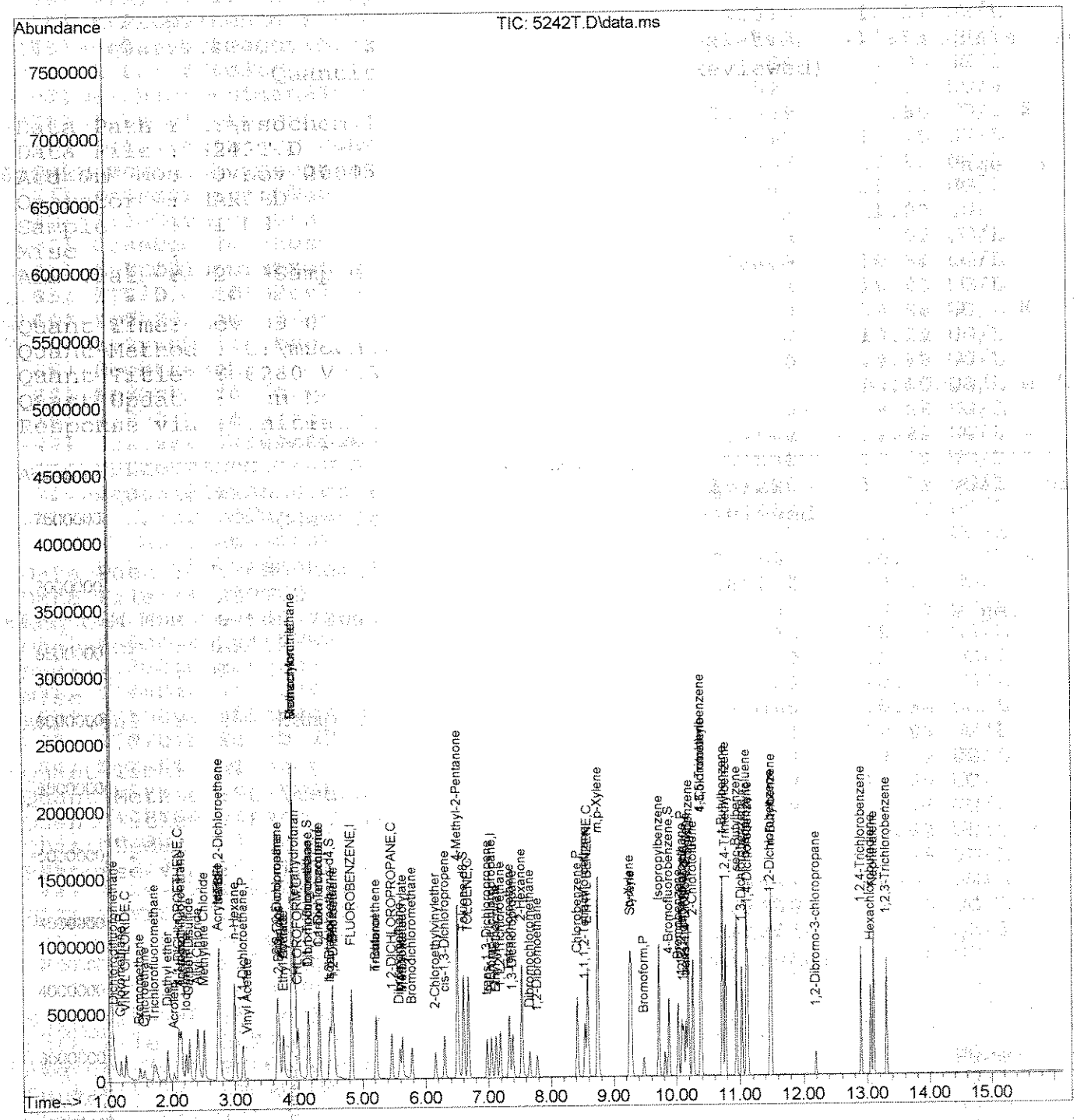
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5242T.D
Acq On : 9 Nov 2009 7:29
Operator : HAROLD
Sample : DI MS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 07:45:22 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration



R560121 Heritage Environmental Services, LLC A864543

GC/MS VOA

Method SW846-8260B
Sample Description 170D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5244T.D Date/Time 09Nov09 08:28:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 75-01-4 | 768 | VINYL CHLORIDE | 200 | | 10 | UG/L | |
| | 1804 | | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 101 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 98 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 95 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 100 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/12/09

# Heritage Environmental Services, LLC

GC/MS VOA

A864543
Repol

Method SW846-8260B
Sample Description 170D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

Test Code O510.5.1
Analyst HHW
File 5244T Date/Time 11/9/09 8:28
Dilution Factor 1:10 10.00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 7 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 21 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 8 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 27 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 33 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 10 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

A864543

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 200 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | [illegible] | | | | [illegible] | [illegible] |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | | 101 | | | %Rec |
| 726 | TOLUENE-D8 | | 98 | | | %Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 95 | | | %Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 100 | | | %Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : Date :

59169b

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5244T.D
Acq On : 9 Nov 2009 8:28
Operator : HAROLD
Sample : A864543 1:10
Misc : REP01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 09 08:45:04 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 582826 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 179322 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 137176 | 9.96 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.60% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 165598 | 10.09 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.90% | |
| 50) Toluene-d8 | 6.603 | 98 | 510981 | 9.75 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.50% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 145517 | 9.50 UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = 95.00% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 280691 | 20.49 UG/L | 100 |
| 8) Acrolein | 2.047 | 56 | 1447 | 1.42 UG/L | 100 |
| 9) Acetone | 2.169 | 43 | 9410 | 1.58 UG/L | 97 |
| 14) Methylene Chloride | 2.520 | 84 | 10780 | Below Cal # | 65 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3242 | 0.23 UG/L | 100 |

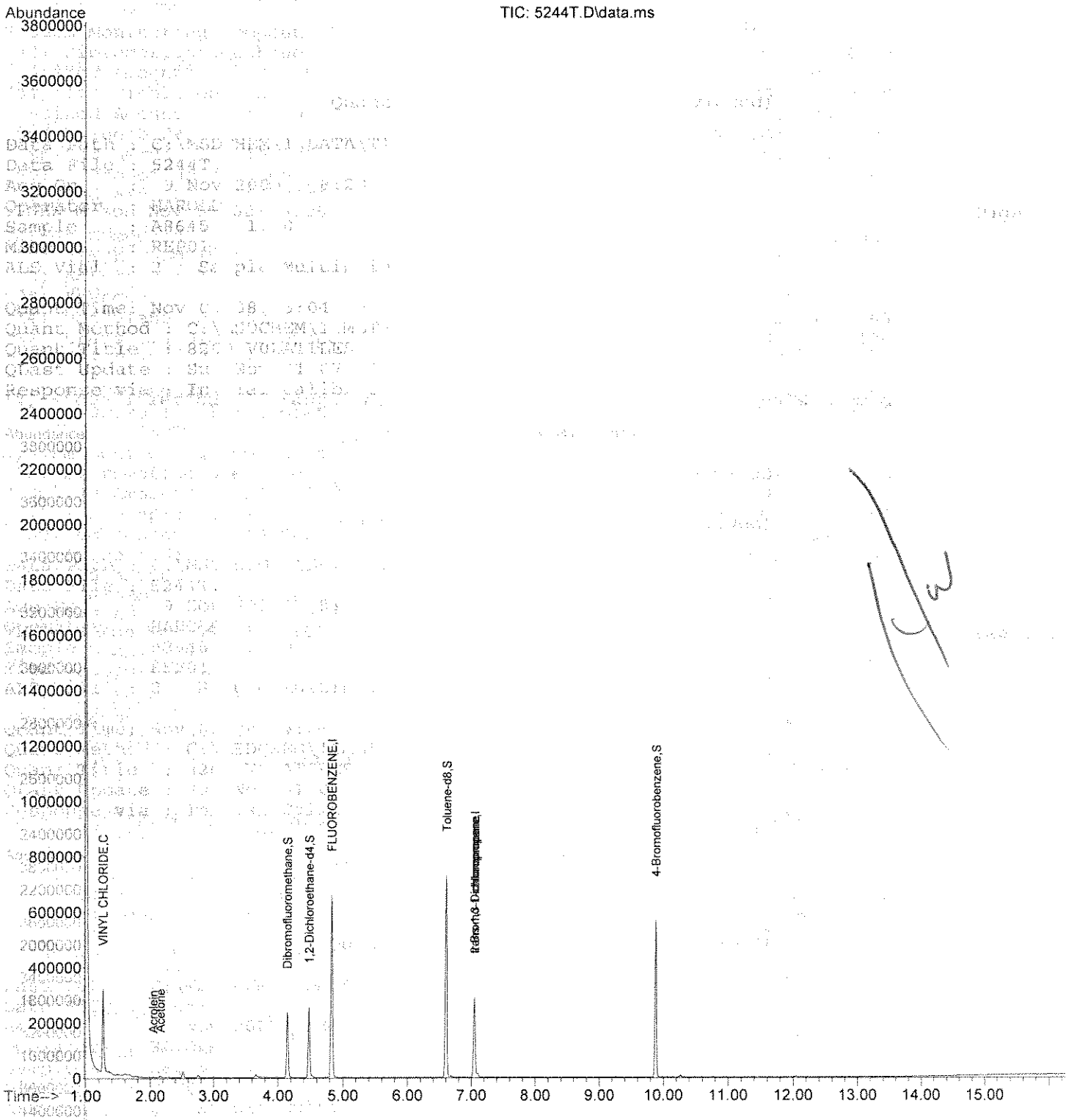
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

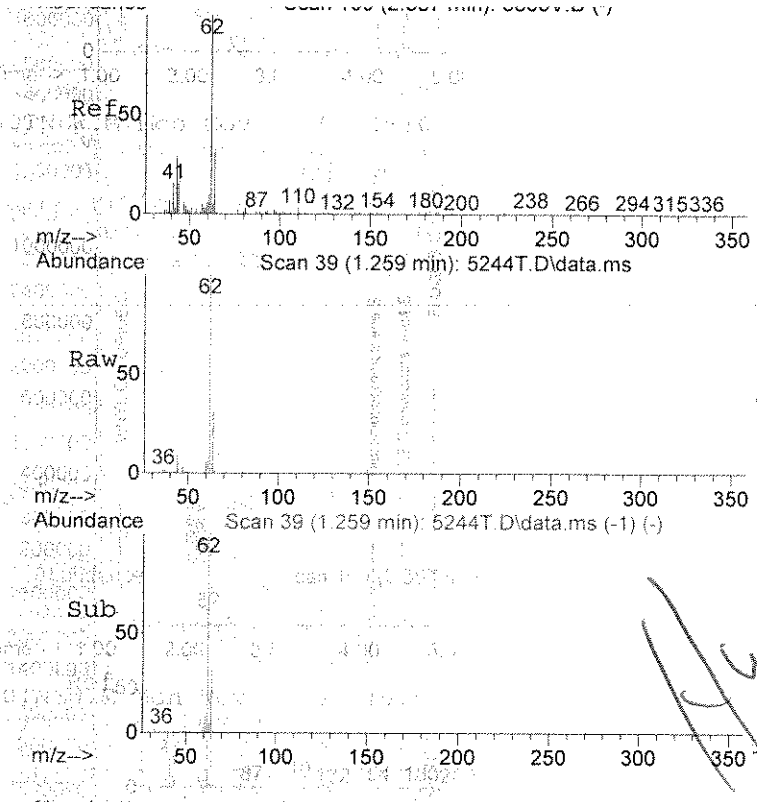
Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5244T.D
Acq On : 9 Nov 2009 8:28
Operator : HAROLD
Sample : A864543 1:10
Misc : REP01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 09 08:45:04 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





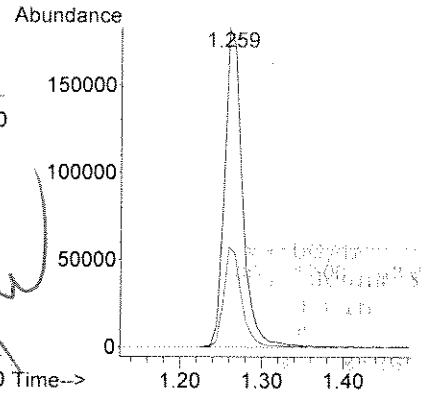

59169b

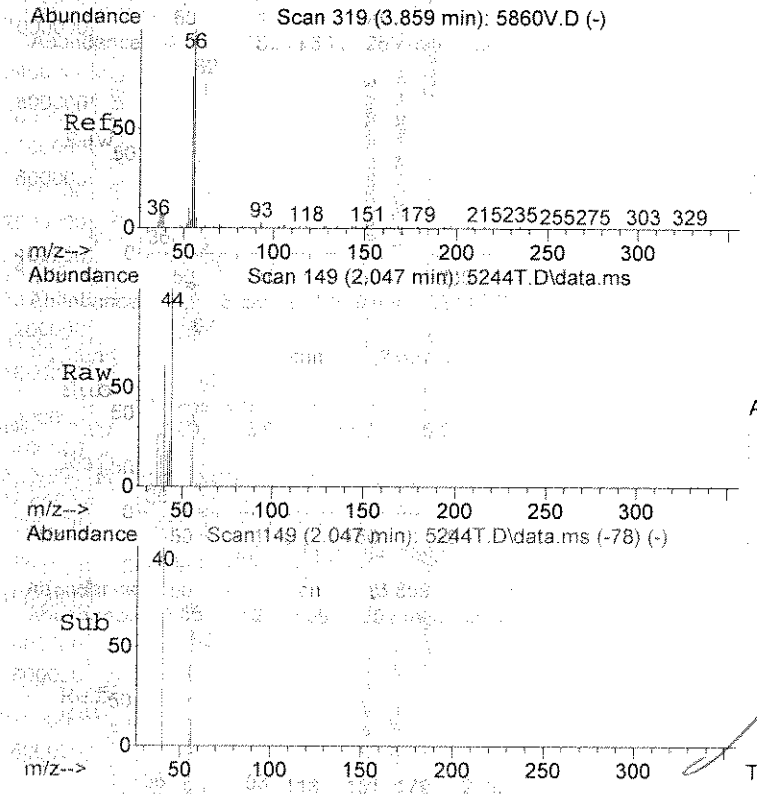



VINYL CHLORIDE
Concen: 20.49 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5244T.D
Acq: 9 Nov 2009 8:28

Tgt Ion: 62 Resp: 280691

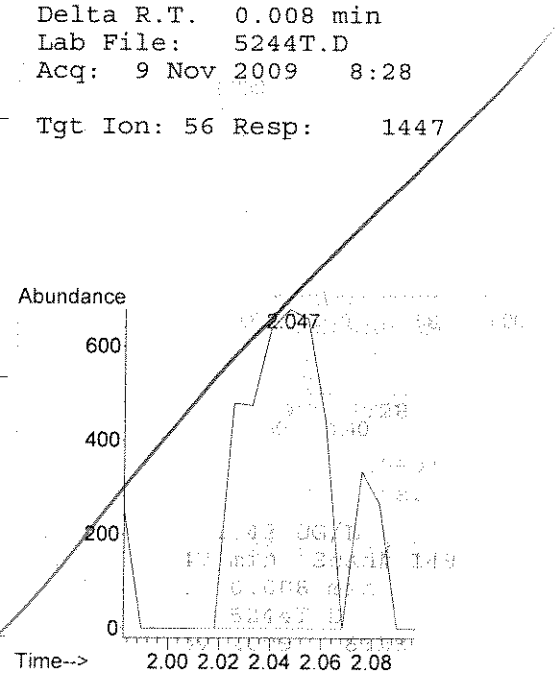
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.0 | 24.9 | 37.3 |

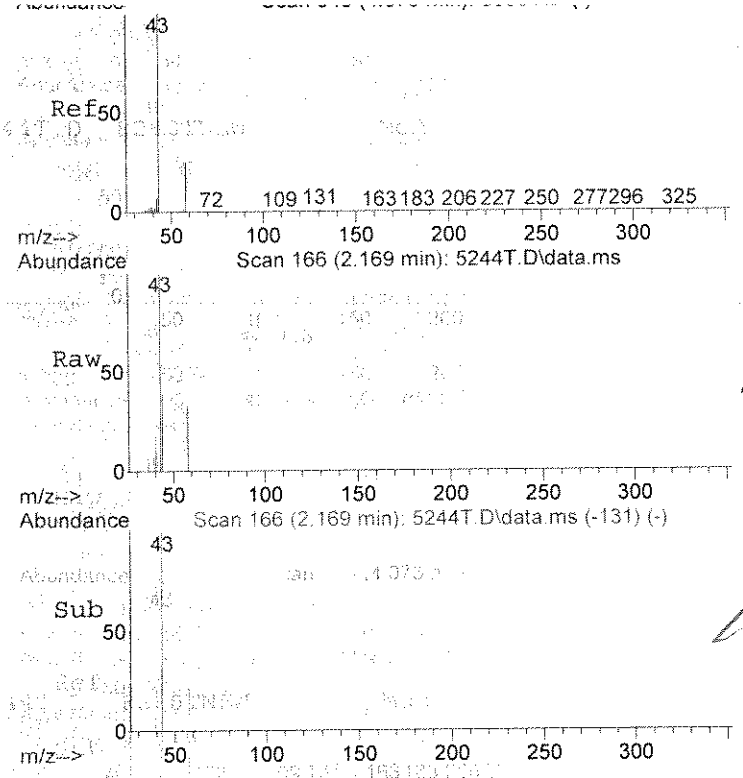



#8
Acrolein
Concen: 1.42 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5244T.D
Acq: 9 Nov 2009 8:28

Tgt Ion: 56 Resp: 1447

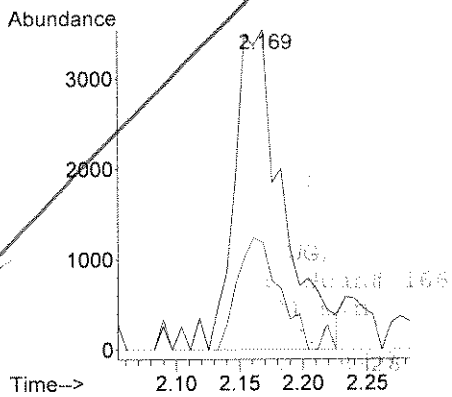


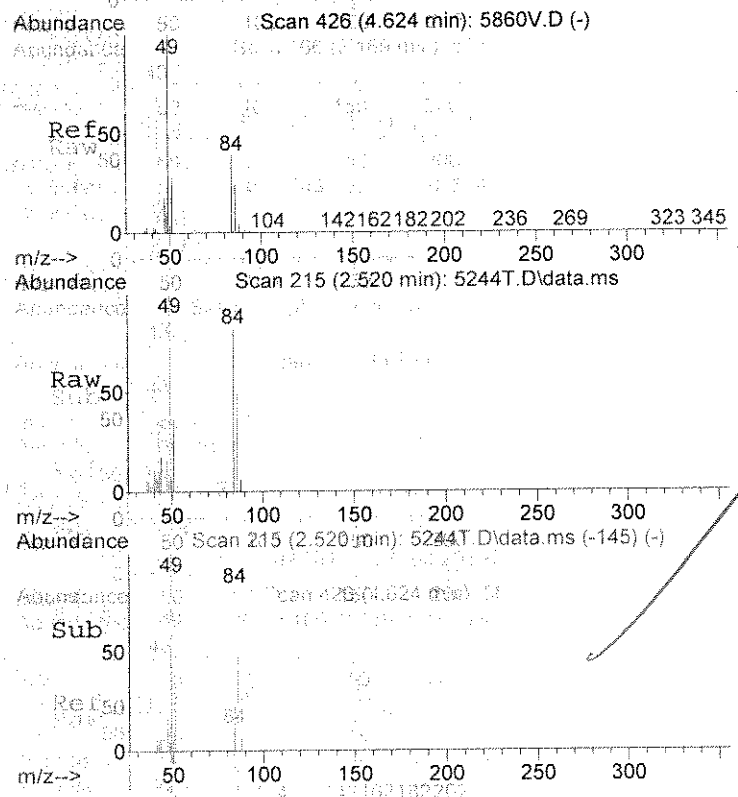



Acetone
Concen: 1.58 UG/L
RT: 2.169 min Scan# 166
Delta R.T. 0.001 min
Lab File: 5244T.D
Acq: 9 Nov 2009 8:28

Tgt Ion: 43 Resp: 9410

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.3 | 23.1 | 34.7 |

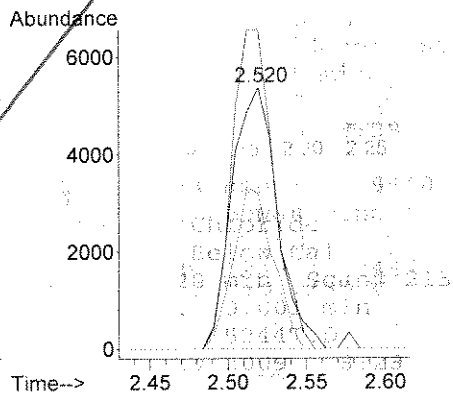



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5244T.D
Acq: 9 Nov 2009 8:28

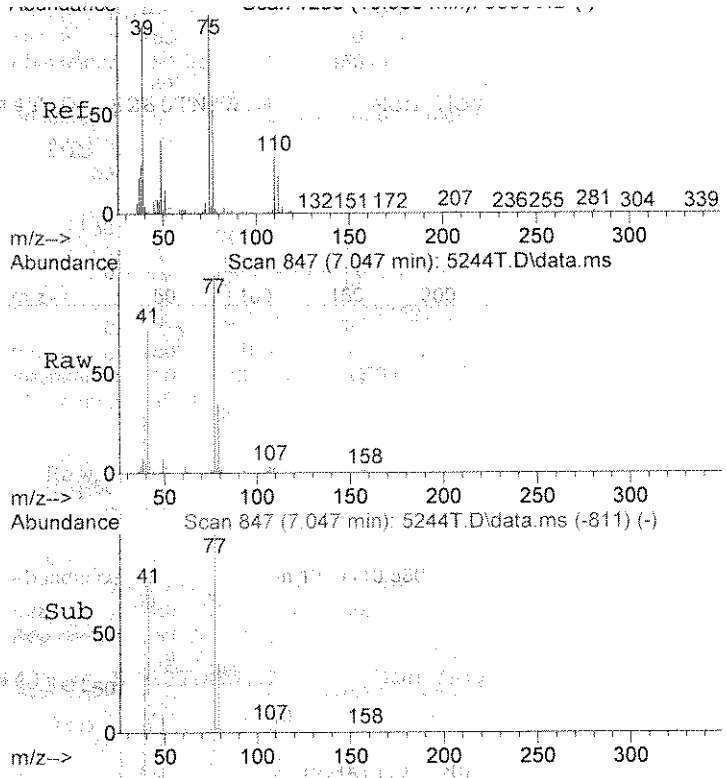
Tgt Ion: 84 Resp: 10780

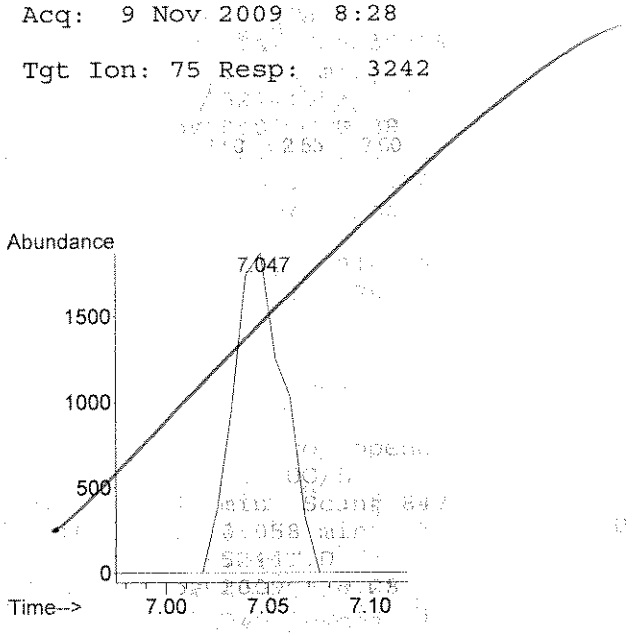
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 114.2 | 140.2 | 210.2# |
| 86 | 54.9 | 51.1 | 76.7 |



trans-1,3-Dichloropropene
Concen: 0.23 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5244T.D
Acq: 9 Nov 2009 8:28

Tgt Ion: 75 Resp: 3242






59169b

R560121 Heritage Environmental Services, LLC A864545

GC/MS VOA

Method SW846-8260B
Sample Description 167D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5245T.D Date/Time 09Nov09 08:54:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 580 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 98 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 103 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 89 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 94 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

MEP

11/12/09

# Heritage Environmental Services, LLC

GC/MS VOA

A864545

REPO1

Method SW846-8260B
Sample Description 167D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 52451 Date/Time 11/9/09 8:54
Dilution Factor 1:10 (0.00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 54 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 181 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 207 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 268 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 293 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 71 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 211 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 831 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 580 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 230 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 275 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 101 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| 85 | [illegible] | | | | 1.0 | ug/L | | |
| 216 | [illegible] | | | | 1.0 | ug/L | | |
| 746 | [illegible] | | | | 1.0 | ug/L | | |
| 295 | [illegible] | | | | 1.0 | ug/L | | |

A864545

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | ____ | ____ | ____ | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | ____ | ____ | ____ | 10 | ug/L |
| 493 | NAPHTHALENE | ____ | ____ | ____ | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 680 | STYRENE | ____ | ____ | ____ | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | ____ | ____ | ____ | 1.0 | ug/L |
| 724 | TOLUENE | ____ | ____ | ____ | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | ____ | ____ | ____ | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | ____ | ____ | ____ | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 767 | VINYL ACETATE | ____ | ____ | ____ | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | ____ | ____ | ____ | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | ____ | ____ | ____ | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | ____ | 98 | ____ | | % Rec |
| 726 | TOLUENE-D8 | ____ | 103 | ____ | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | ____ | 89 | ____ | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | ____ | 94 | ____ | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by _____ Date : _____

59169b

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5245T.D
Acq On : 9 Nov 2009 8:54
Operator : HAROLD
Sample : A864545 1:10
Misc : REP01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 09 09:10:55 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 596151 | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 193225 | 10.00 | UG/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 132775 | 9.43 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 94.30% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 163582 | 9.75 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 97.50% | |
| 50) Toluene-d8 | 6.602 | 98 | 550438 | 10.27 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = | 102.70% | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 147491 | 8.94 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery | = | 89.40% | |
| **Target Compounds** | | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 36453 | 2.60 | UG/L | 97 |
| 8) Acrolein | 2.047 | 56 | 1129 | 1.08 | UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 9127 | 1.50 | UG/L | 97 |
| 14) Methylene Chloride | 2.520 | 84 | 9227 | Below Cal | # | 73 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 26466 | 1.95 | UG/L | 94 |
| 20) 2-Butanone | 3.673 | 72 | 5364 | 2.22 | UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 837237 | 58.18 | UG/L | 81 |

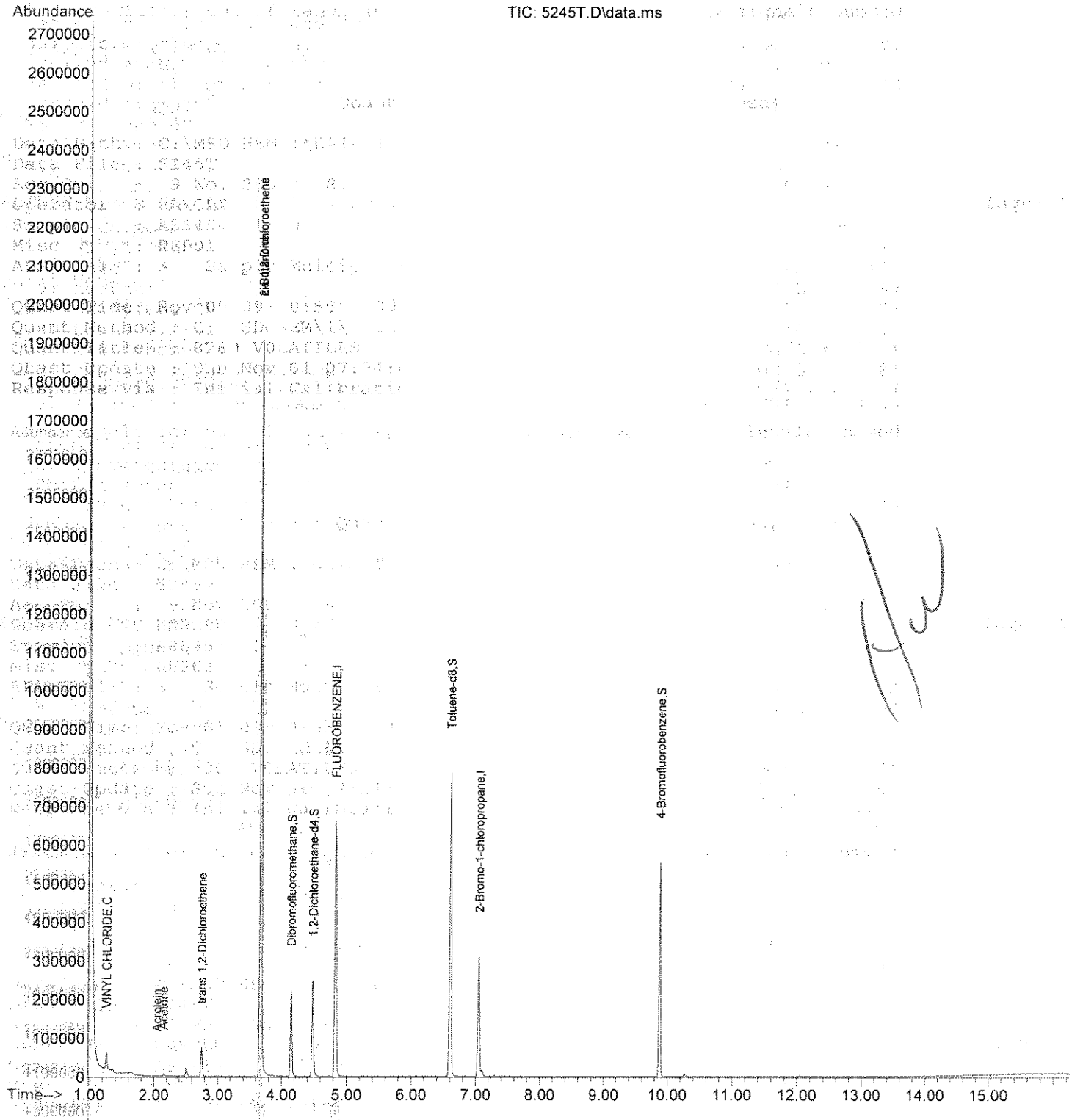
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

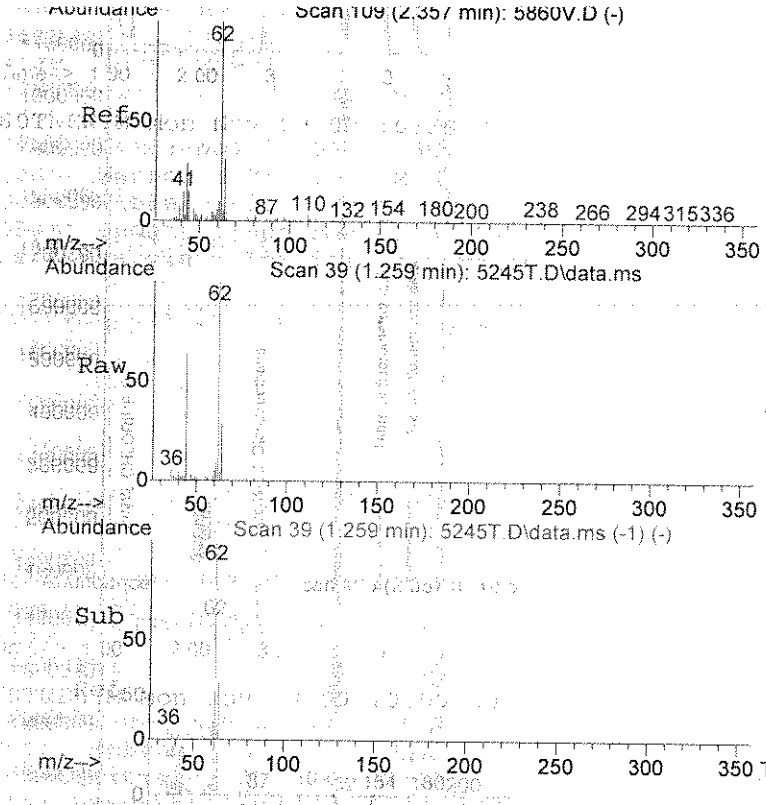
Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5245T.D
Acq On : 9 Nov 2009 8:54
Operator : HAROLD
Sample : A864545 1:10
Misc : REP01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 09 09:10:55 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration





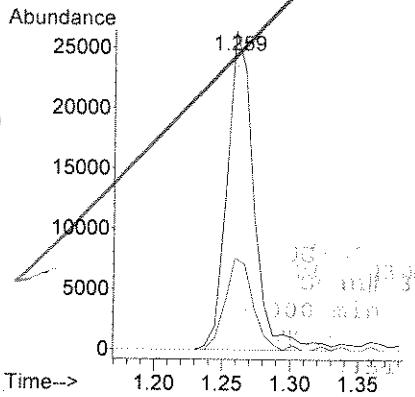

59169b

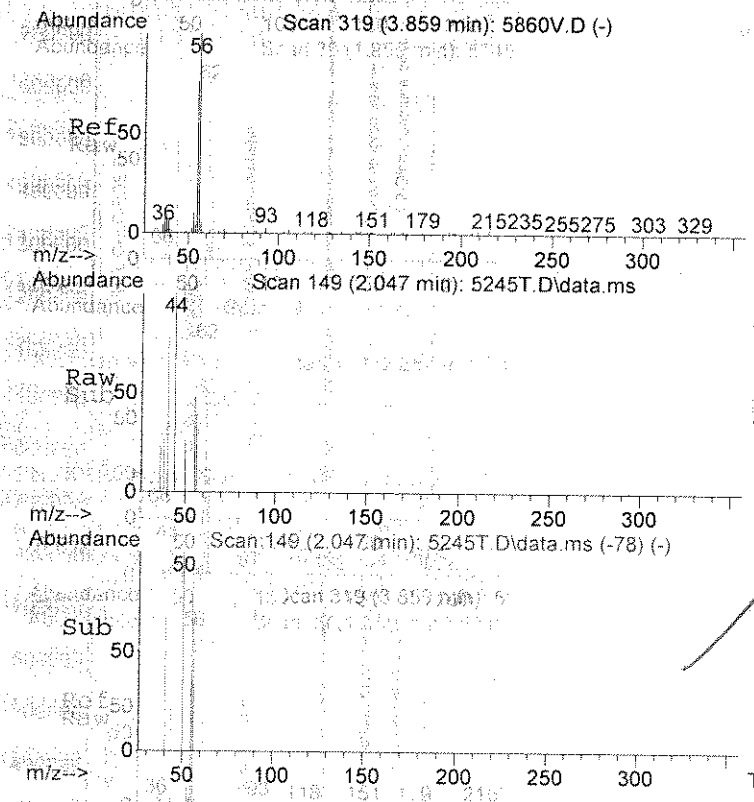



#4
VINYL CHLORIDE
Concen: 2.60 UG/L
RT: 1.259 min Scan# 39
Delta R.T. -0.000 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

Tgt Ion: 62 Resp: 36453

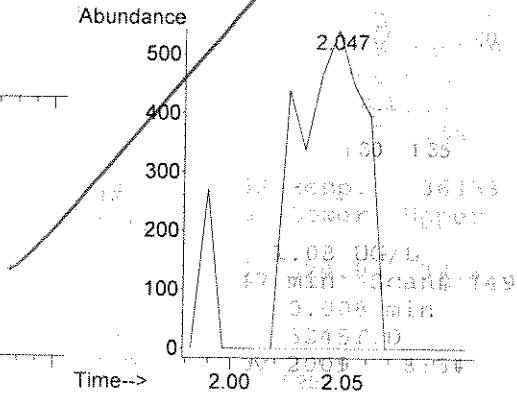
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 29.6 | 24.9 | 37.3 |

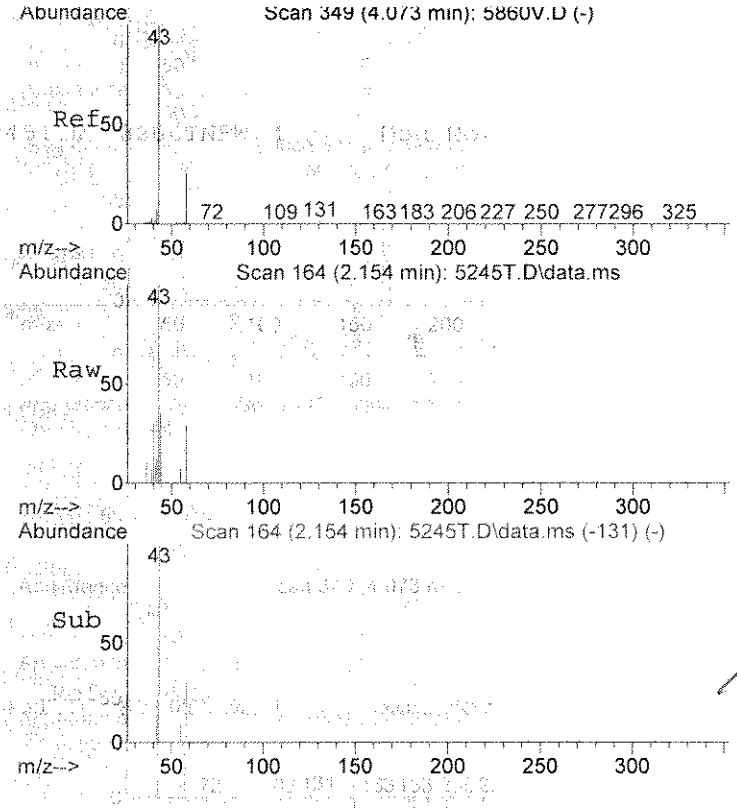



#8
Acrolein
Concen: 1.08 UG/L
RT: 2.047 min Scan# 149
Delta R.T. 0.008 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

Tgt Ion: 56 Resp: 1129

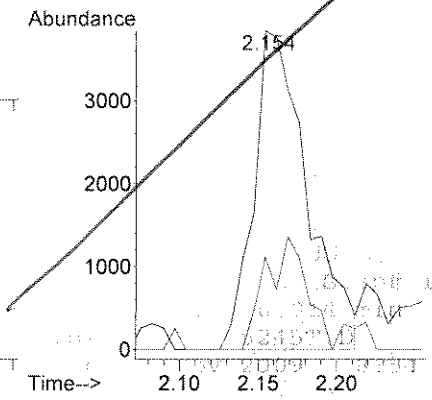


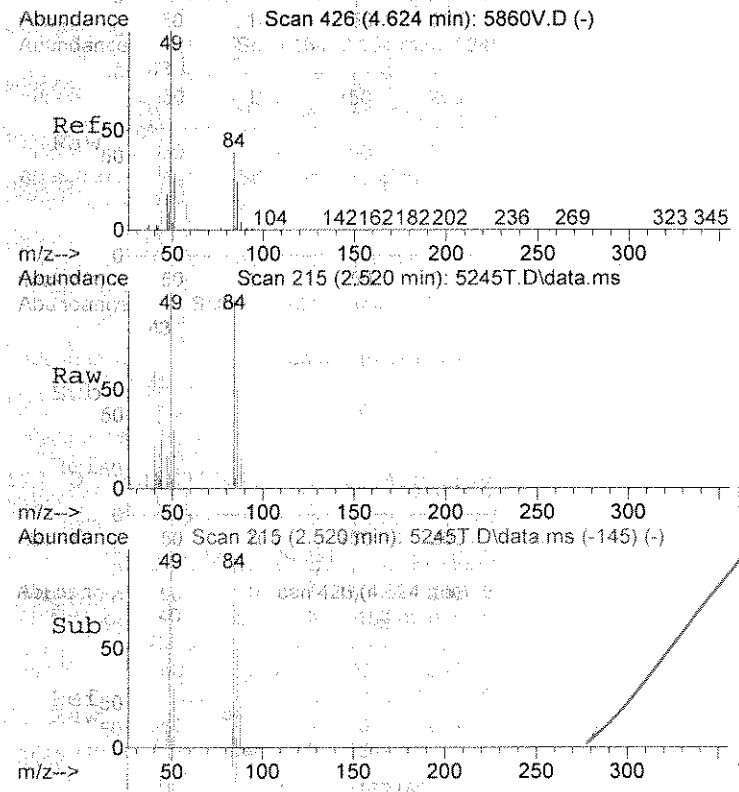



#9
Acetone
Concen: 1.50 UG/L
RT: 2.154 min Scan# 164
Delta R.T. -0.014 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

Tgt Ion: 43 Resp: 9127

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 27.2 | 23.1 | 34.7 |

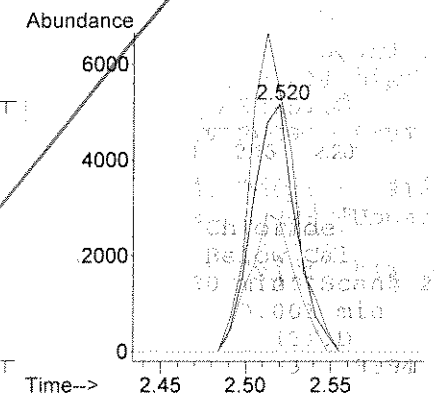


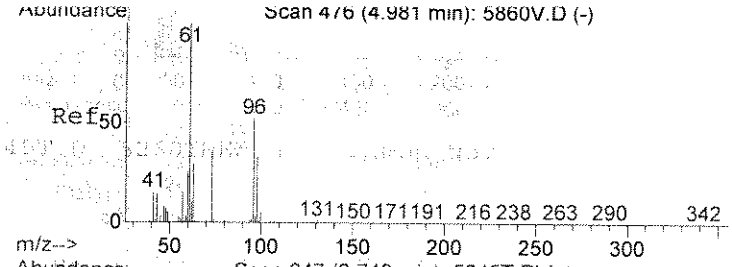



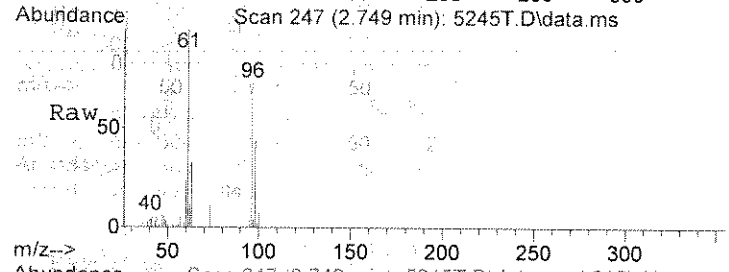

#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

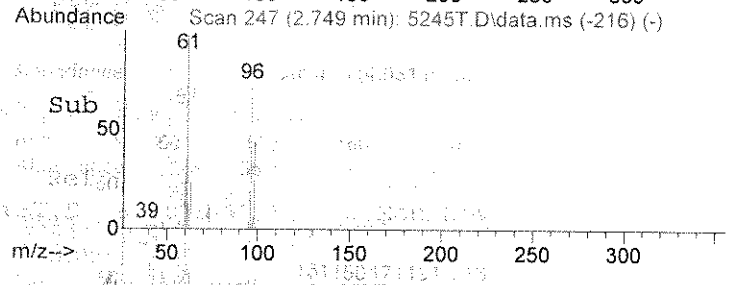
Tgt Ion: 84 Resp: 9227

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 127.0 | 140.2 | 210.2# |
| 86 | 58.2 | 51.1 | 76.7 |





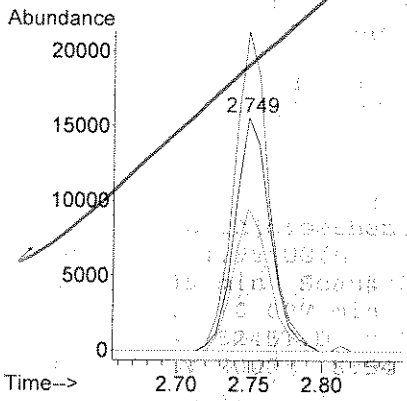



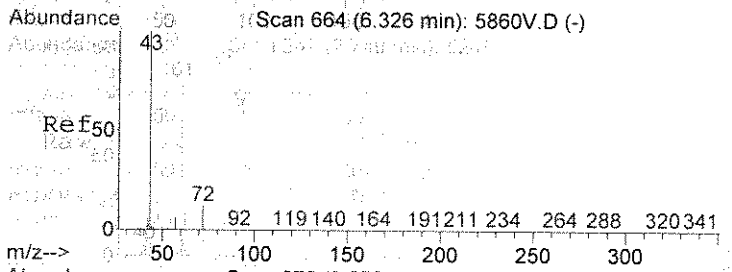



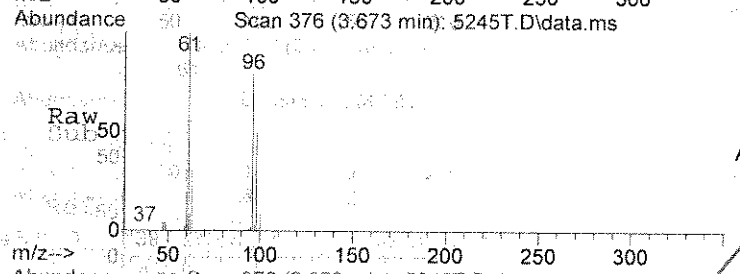

#18
trans-1,2-Dichloroethene
Concen: 1.95 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

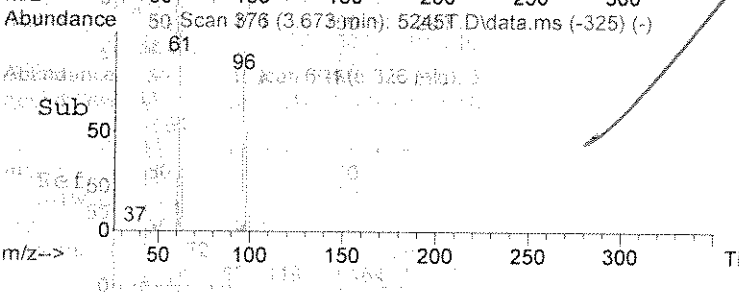
Tgt Ion: 96 Resp: 26466

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 134.0 | 114.1 | 171.1 |
| 98 | 61.3 | 50.7 | 76.1 |



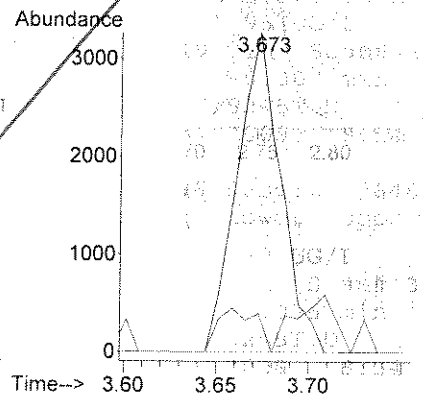



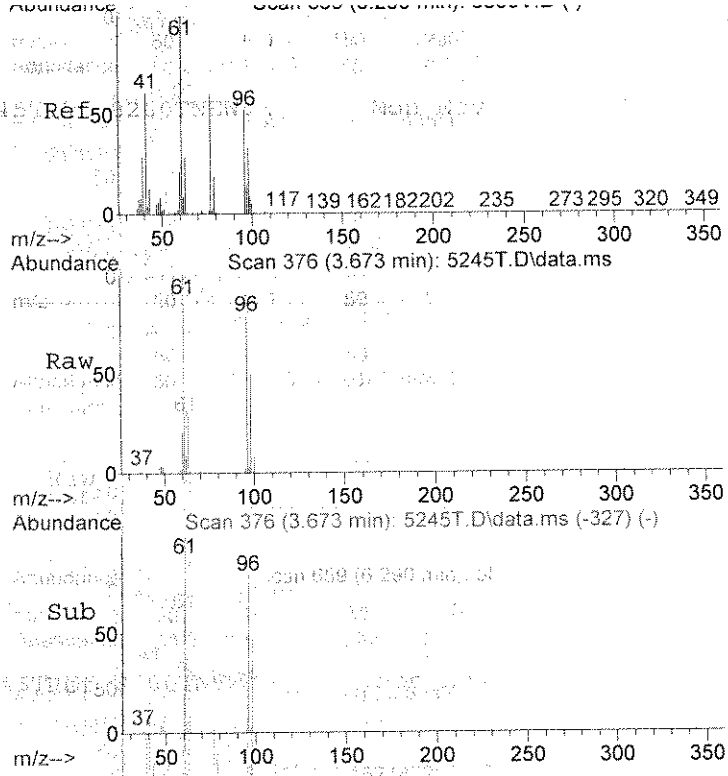




#20
2-Butanone
Concen: 2.22 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

Tgt Ion: 72 Resp: 5364

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 0.0 | 449.0 | 673.4# |

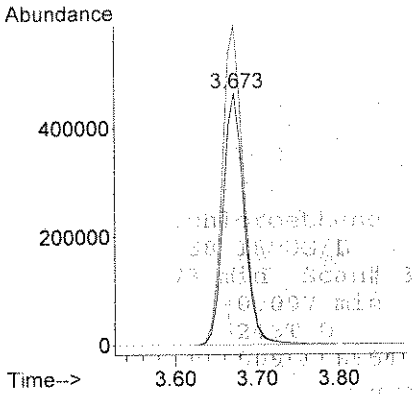





cis-1,2-Dichloroethene
Concen: 58.18 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5245T.D
Acq: 9 Nov 2009 8:54

Tgt Ion: 96 Resp: 837237

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 127.5 | 121.8 | 182.6 |



R560121 | Heritage Environmental Services, LLC | A864546

GC/MS VOA

Method SW846-8260B
Sample Description DUP-02
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5246T.D Date/Time 09Nov09 09:20:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 740 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 101 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 99 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 94 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 101 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/12/09

A864546
Repol

# Heritage Environmental Services, LLC

GC/MS VOA

Method SW846-8260B
Sample Description DUP-02
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 5246T Date/Time 11/9/09 9:20
Dilution Factor 1:10 10:00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 184 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 718 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 217 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 8 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 740 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 270 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 803 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 803 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 381 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |
| [illegible] | [illegible] | | | | [illegible] | ug/L | | |
| 246 | [illegible] | | | | | ug/L | | |
| 746 | [illegible] | | | | | ug/L | | |
| 23 | [illegible] | | | | | ug/L | | |

59169b

A864546

# Heritage Environmental Services, LLC

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | ____ | ____ | ____ | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | ____ | ____ | ____ | 10 | ug/L |
| 493 | NAPHTHALENE | ____ | ____ | ____ | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 680 | STYRENE | ____ | ____ | ____ | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | ____ | ____ | ____ | 1.0 | ug/L |
| 724 | TOLUENE | ____ | ____ | ____ | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | ____ | ____ | ____ | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | ____ | ____ | ____ | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | ____ | ____ | ____ | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | ____ | ____ | ____ | 1.0 | ug/L |
| 767 | VINYL ACETATE | ____ | ____ | ____ | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | ____ | ____ | ____ | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | ____ | ____ | ____ | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | ---------- | | | | | |
| 301 | DICHLOROETHANE-D4 | ____ | 101 | ____ | | % Rec |
| 726 | TOLUENE-D8 | ____ | 99 | ____ | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | ____ | 94 | ____ | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | ____ | 101 | ____ | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by : _____ Date : _____

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5246T.D
Acq On : 9 Nov 2009 9:20
Operator : HAROLD
Sample : A864546 1:10
Misc : REP01
ALS Vial : 4 Sample Multiplier: 1

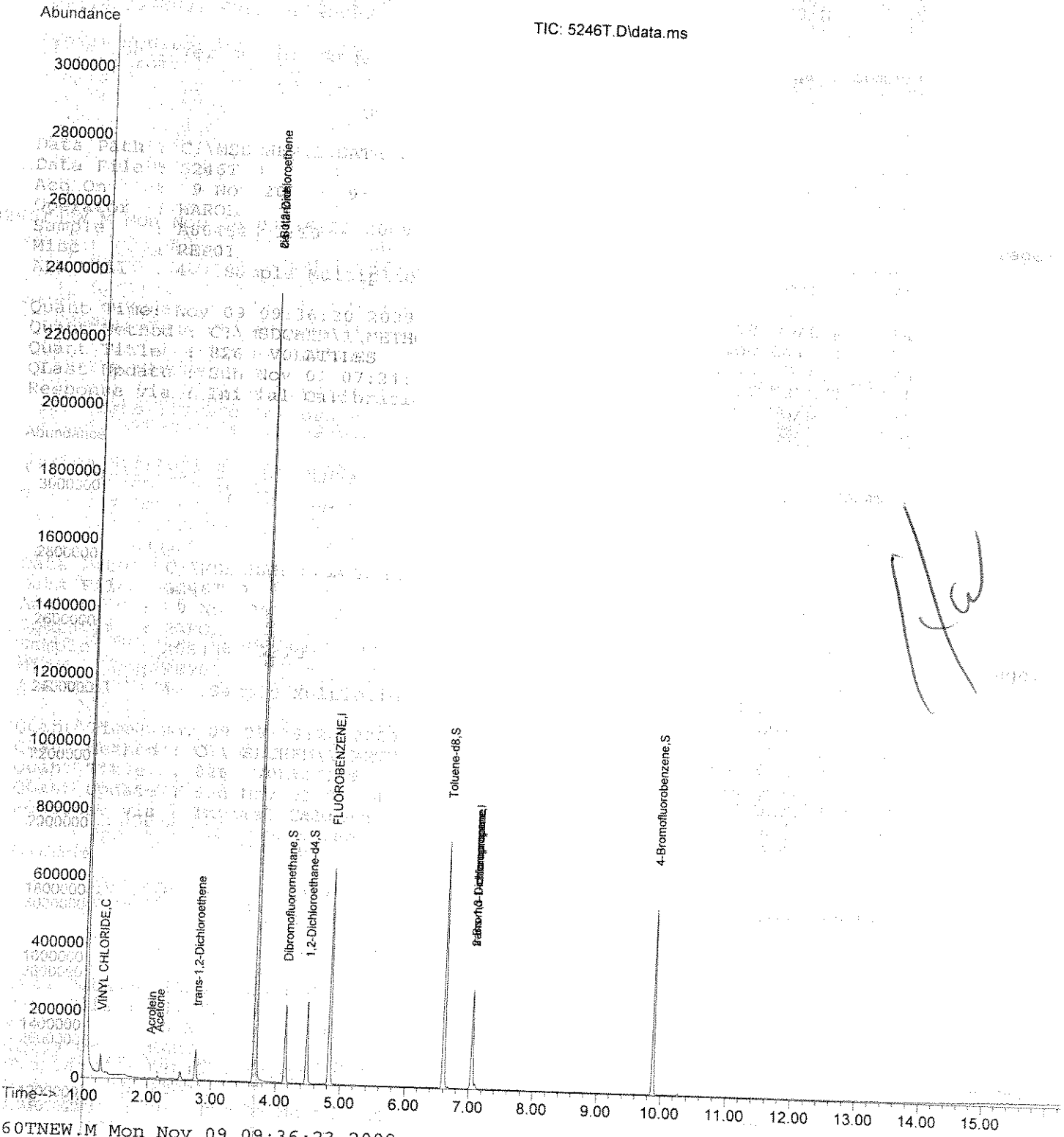
Quant Time: Nov 09 09:36:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 582287 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 184204 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 138563 | 10.07 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.70% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 166298 | 10.14 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 101.40% | |
| 50) Toluene-d8 | 6.603 | 98 | 518464 | 9.91 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.10% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 148319 | 9.43 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.30% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.259 | 62 | 45406 | 3.32 UG/L | 98 |
| 8) Acrolein | 2.033 | 56 | 1386 | 1.36 UG/L | 100 |
| 9) Acetone | 2.162 | 43 | 10607 | 1.78 UG/L # | 84 |
| 14) Methylene Chloride | 2.520 | 84 | 10335 | Below Cal # | 74 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 31719 | 2.40 UG/L | 95 |
| 20) 2-Butanone | 3.673 | 72 | 7221 | 3.06 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 1037463 | 73.81 UG/L | 81 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3399 | 0.24 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5246T.D
Acq On : 9 Nov 2009 9:20
Operator : HAROLD
Sample : A864546 1:10
Misc : REP01
ALS Vial : 4 Sample Multiplier: 1

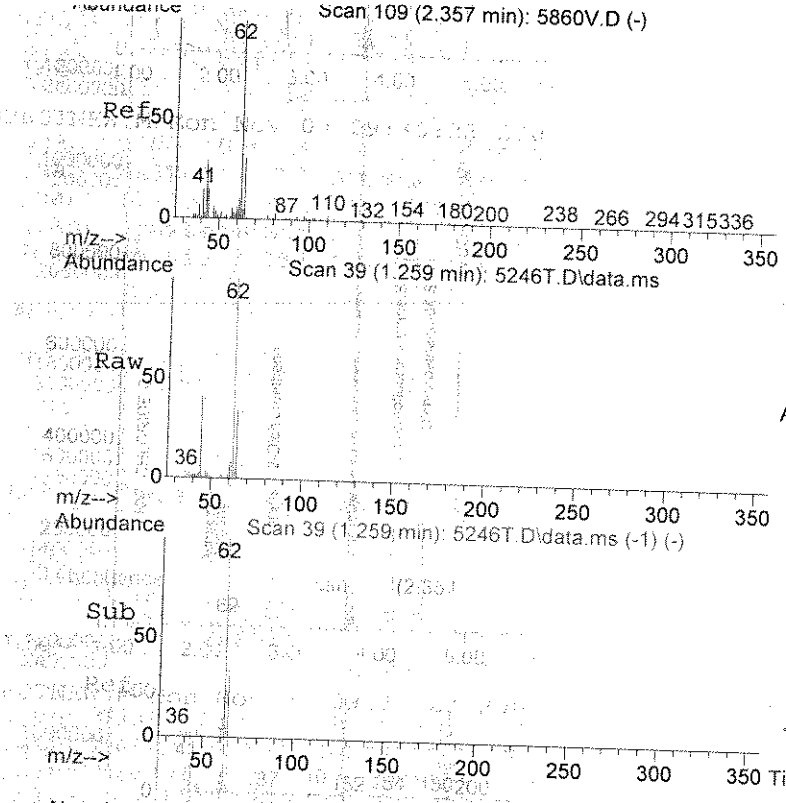
Quant Time: Nov 09 09:36:20 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Mon Nov 09 09:36:23 2009



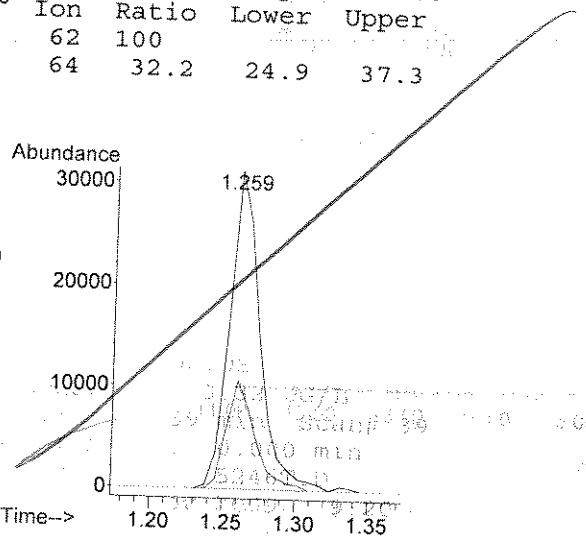
59169b

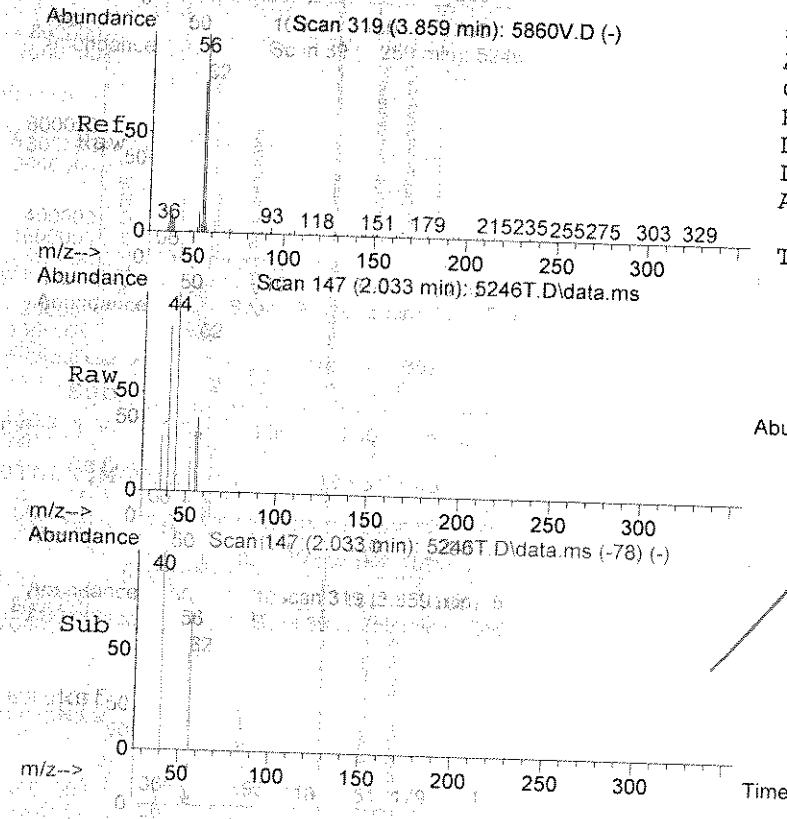



#4
VINYL CHLORIDE
Concen: 3.32 UG/L
RT: 1.259 min Scan# 39
Delta R.T. 0.000 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 62 Resp: 45406

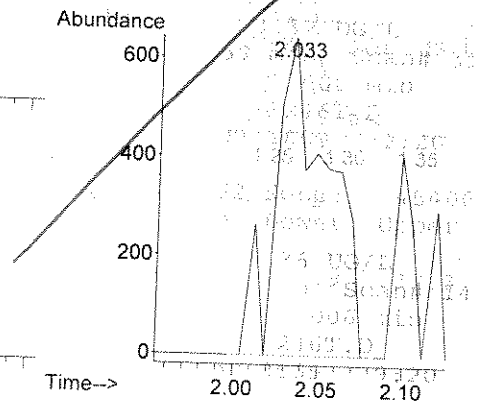
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 24.9 | 37.3 |

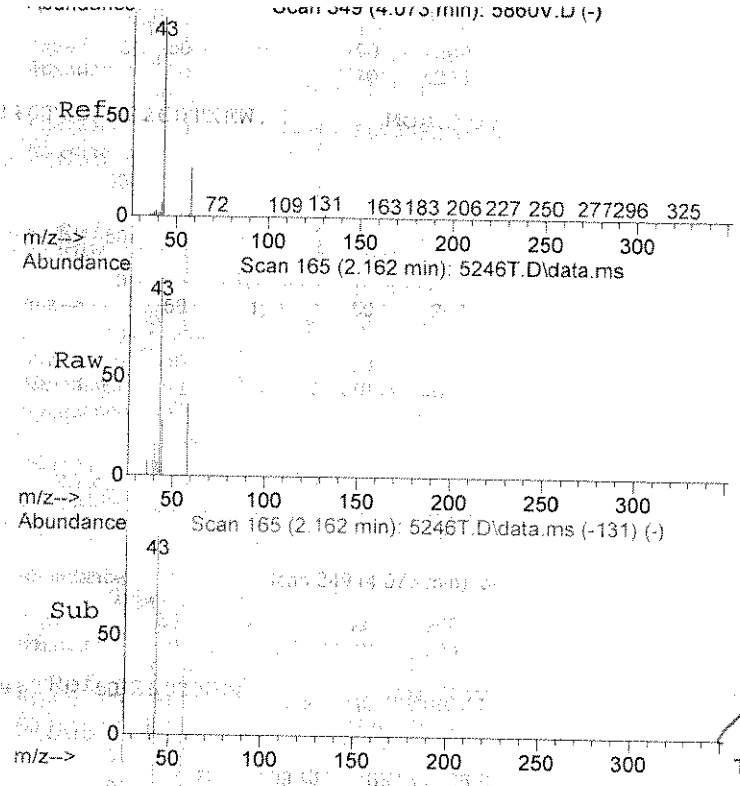



#8
Acrolein
Concen: 1.36 UG/L
RT: 2.033 min Scan# 147
Delta R.T. -0.006 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 56 Resp: 1386

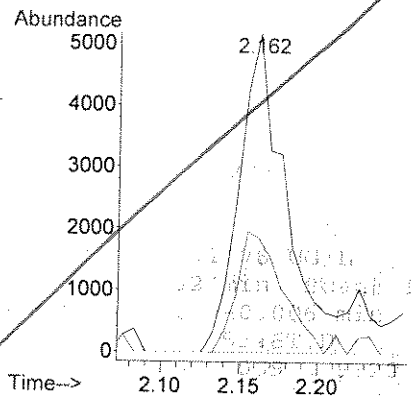


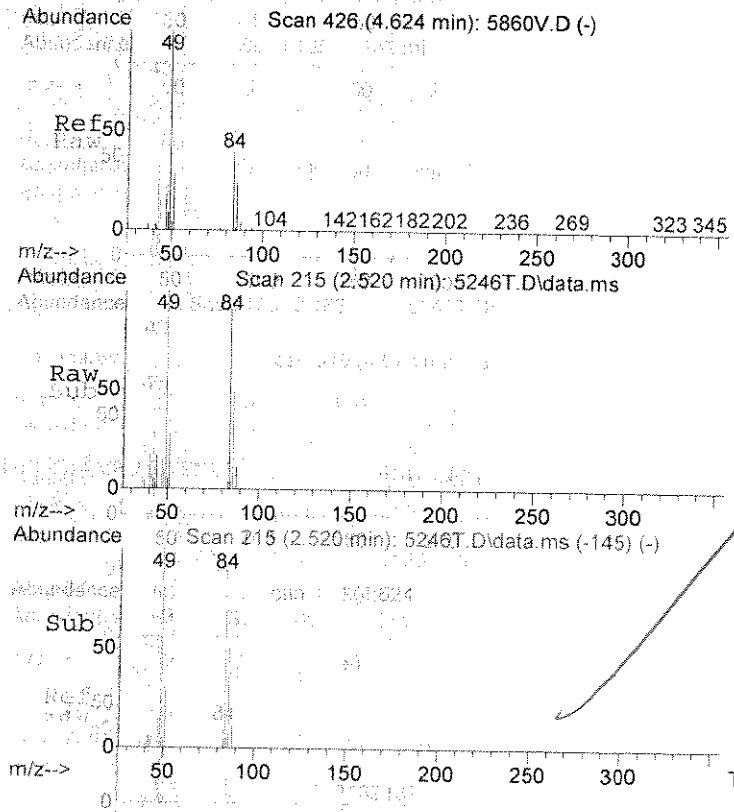



#9
Acetone
Concen: 1.78 UG/L
RT: 2.162 min Scan# 165
Delta R.T. -0.006 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 43 Resp: 10607

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 37.3 | 23.1 | 34.7# |

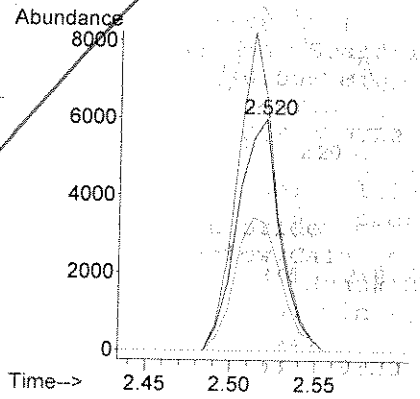


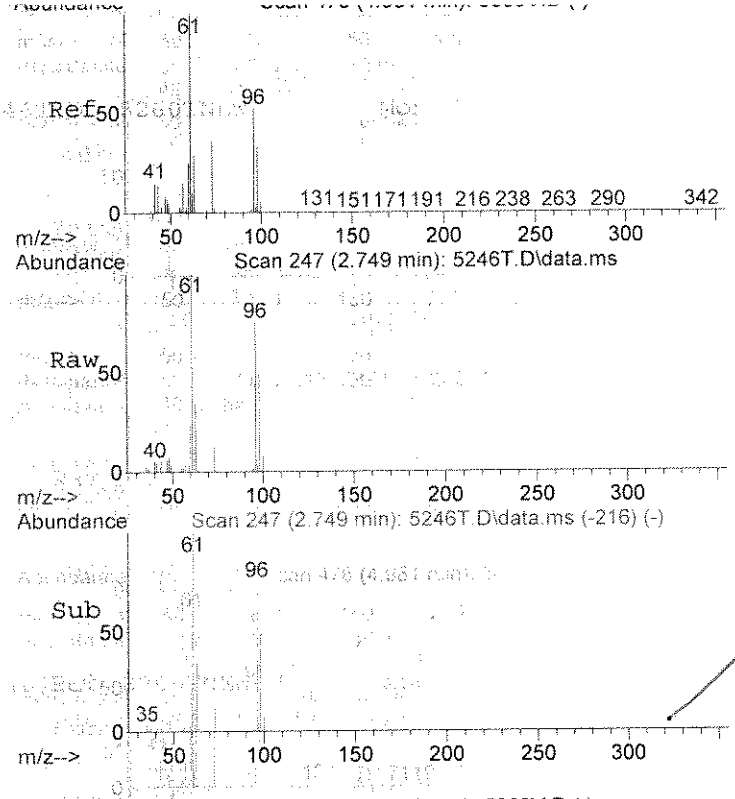




#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 84 Resp: 10335

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 126.0 | 140.2 | 210.2# |
| 86 | 62.7 | 51.1 | 76.7 |

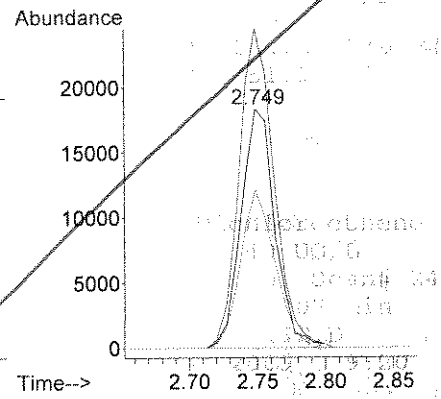


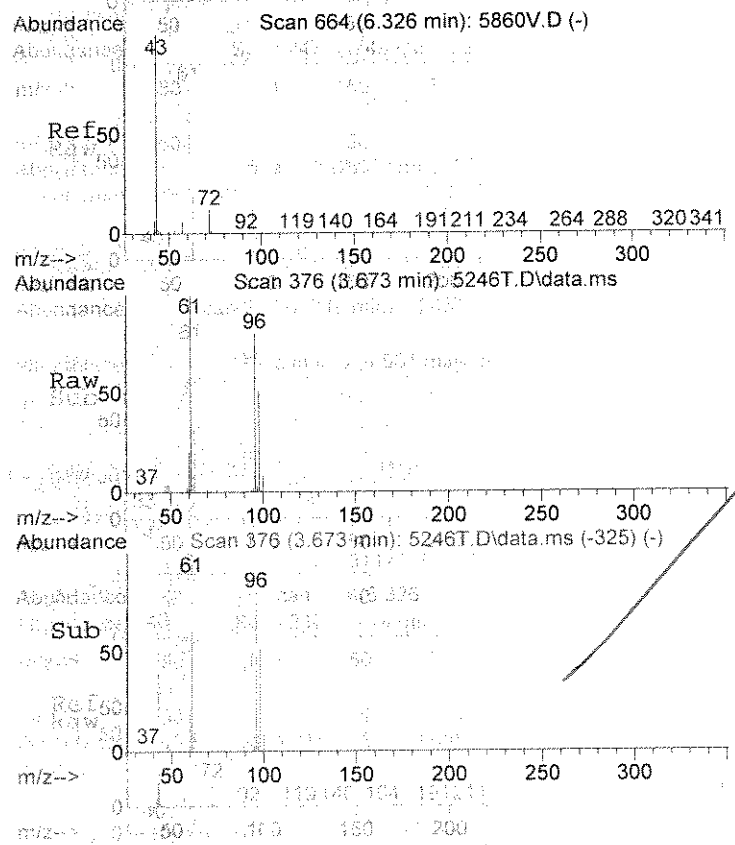



trans-1,2-Dichloroethene
Concen: 2.40 UG/L
RT: 2.749 min Scan# 247
Delta R.T. -0.007 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 96 Resp: 31719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 137.4 | 114.1 | 171.1 |
| 98 | 67.5 | 50.7 | 76.1 |

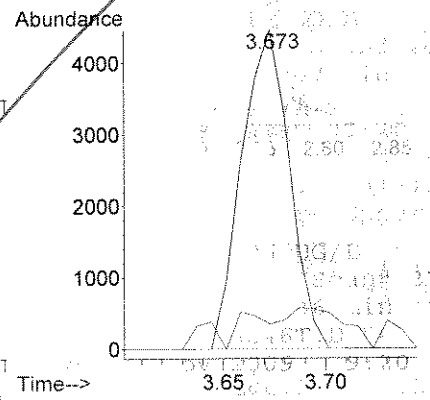



#20
2-Butanone
Concen: 3.06 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 72 Resp: 7221

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 16.0 | 449.0 | 673.4# |



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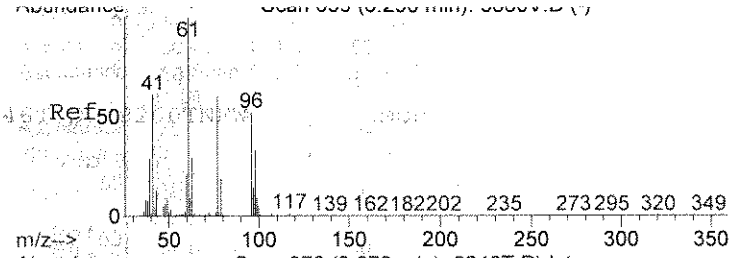
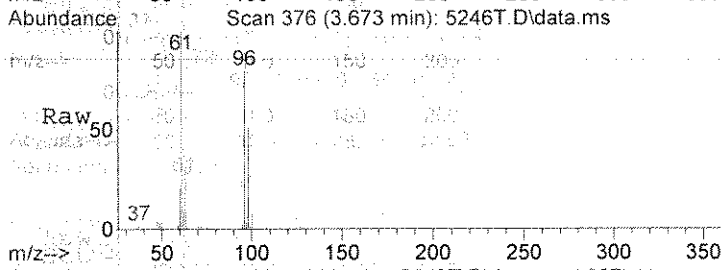
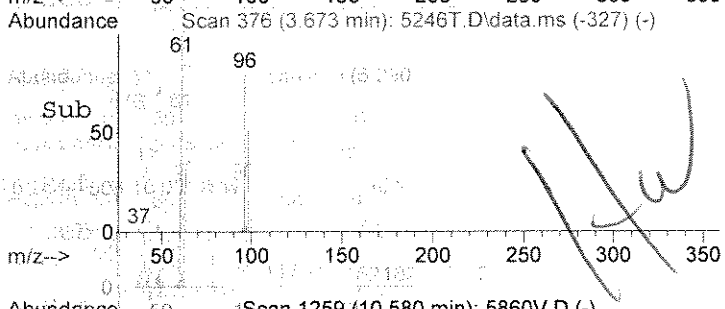


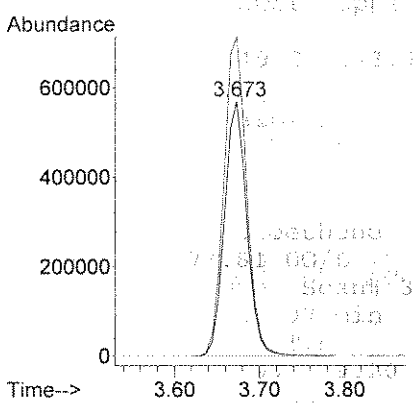



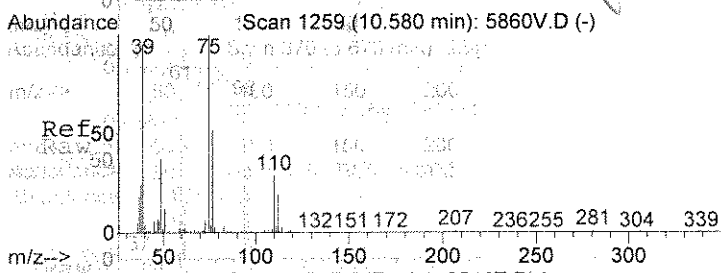




cis-1,2-Dichloroethene
Concen: 73.81 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 96 Resp: 1037463

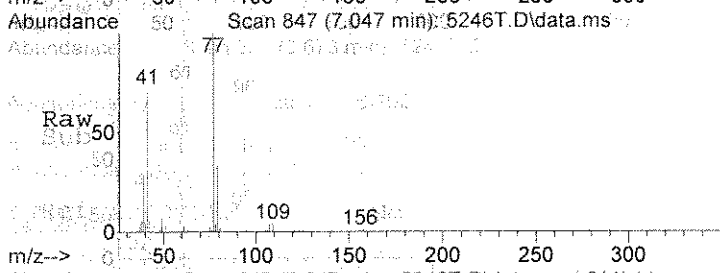
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 128.0 | 121.8 | 182.6 |

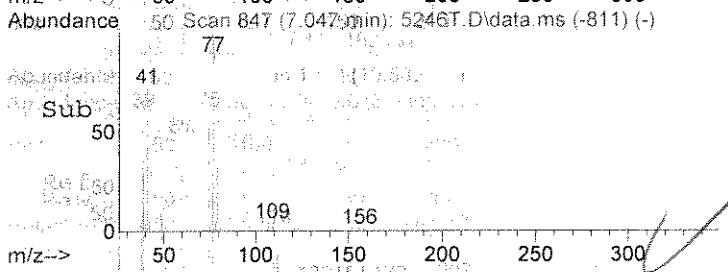


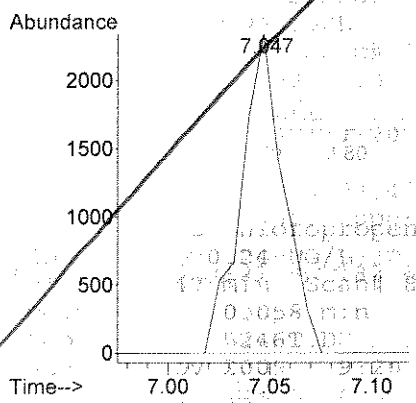




#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5246T.D
Acq: 9 Nov 2009 9:20

Tgt Ion: 75 Resp: 3399






59169b

R560121

# Heritage Environmental Services, LLC

A864548

GC/MS VOA

Method SW846-8260B
Sample Description 165D
Submitter KERAMIDA ENVIRONMENTAL
Instrument 394 Channel 1

**Test Code** O510.5.1
Analyst 1365 H. WILLIAMS
File 5247T.D Date/Time 09Nov09 09:46:00
Dilution Factor 10

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 156-59-2 | 246 | CIS-1,2-DICHLOROETHENE | 280 | | 10 | UG/L | |
| 75-01-4 | 768 | VINYL CHLORIDE | 400 | | 10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 17060-07-0 | 301 | DICHLOROETHANE-D4 | 97 | | | % RECOVERY | |
| 2037-26-5 | 726 | TOLUENE-D8 | 101 | | | % RECOVERY | |
| 460-00-4 | 196 | 4-BROMOFLUOROBENZENE | 85 | | | % RECOVERY | |
| 1868-53-7 | 3362 | DIBROMOFLUOROMETHANE | 92 | | | % RECOVERY | |

**Comment** 1:10 Dilution Prep Method SW846-5030B Purge and Trap

11/12/09

# Heritage Environmental Services, LLC

GC/MS VOA

A864548

Repol

Method SW846-8260B
Sample Description 165D
Submitter KERAMIDA ENVIRONMENTAL
Instrument _____ Channel _____

Test Code O510.5.1
Analyst HHW
File 52417 Date/Time 11/9/09 9:4
Dilution Factor 1:10 10.00

Prep :

| PRM | Parameter | Ext. Conc. | Result | RQL | Limit | Units | RT | Flag |
|---|---|---|---|---|---|---|---|---|
| 99 | ACETONE (2-PROPANONE) | | | | 10 | ug/L | | |
| 105 | ACROLEIN | | | | 50 | ug/L | | |
| 106 | ACRYLONITRILE | | | | 10 | ug/L | | |
| 151 | BENZENE | | | | 1.0 | ug/L | | |
| 193 | BROMOBENZENE | | | | 1.0 | ug/L | | |
| 194 | BROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 195 | BROMODICHLOROMETHANE | | | | 1.0 | ug/L | | |
| 197 | BROMOFORM | | | | 1.0 | ug/L | | |
| 198 | BROMOMETHANE | | | | 1.0 | ug/L | | |
| 519 | N-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 644 | SEC-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 702 | TERT-BUTYLBENZENE | | | | 1.0 | ug/L | | |
| 216 | CARBON DISULFIDE | | | | 1.0 | ug/L | | |
| 217 | CARBON TETRACHLORIDE | | | | 1.0 | ug/L | | |
| 231 | CHLOROBENZENE | | | | 1.0 | ug/L | | |
| 295 | DIBROMOCHLOROMETHANE | | | | 1.0 | ug/L | | |
| 234 | CHLOROETHANE | | | | 1.0 | ug/L | | |
| 235 | CHLOROFORM | | | | 1.0 | ug/L | | |
| 236 | CHLOROMETHANE | | | | 1.0 | ug/L | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | | 1.0 | ug/L | | |
| 541 | 2-CHLOROETHYLVINYLETHER | | | | 1.0 | ug/L | | |
| 193 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | | 1.0 | ug/L | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | | 1.0 | ug/L | | |
| 296 | DIBROMOMETHANE | | | | 1.0 | ug/L | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | | 1.0 | ug/L | | |
| 300 | DICHLORODIFLUOROMETHANE | | | | 1.0 | ug/L | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | | 2.0 | ug/L | | |
| 716 | 1,1-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 21 | 1,2-DICHLOROETHANE | | | | 1.0 | ug/L | | |
| 8 | 1,1-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 246 | CIS-1,2-DICHLOROETHENE | | 280 | | 1.0 | ug/L | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | | 1.0 | ug/L | | |
| 23 | 1,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 276 | 1,3-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 337 | 2,2-DICHLOROPROPANE | | | | 1.0 | ug/L | | |
| 100 | 1,1-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | | 1.0 | ug/L | | |
| 349 | ETHYL BENZENE | | | | 1.0 | ug/L | | |
| 351 | ETHYL METHACRYLATE | | | | 10 | ug/L | | |
| 60 | 2-HEXANONE | | | | 10 | ug/L | | |
| 398 | HEXACHLOROBUTADIENE | | | | 1.0 | ug/L | | |
| 422 | IODOMETHANE | | | | 1.0 | ug/L | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | | 1.0 | ug/L | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | | 1.0 | ug/L | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | | 1.0 | ug/L | | |
| 475 | METHYL ETHYL KETONE | | | | 10 | ug/L | | |

59169b

# Heritage Environmental Services, LLC

A864548

## GC/MS VOA

| | | | | | | |
|---|---|---|---|---|---|---|
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | | 1.0 | ug/L |
| 476 | METHYL ISOBUTYL KETONE | | | | 10 | ug/L |
| 493 | NAPHTHALENE | | | | 1.0 | ug/L |
| 532 | N-PROPYLBENZENE | | | | 1.0 | ug/L |
| 680 | STYRENE | | | | 1.0 | ug/L |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | | 1.0 | ug/L |
| 703 | TETRACHLOROETHENE | | | | 1.0 | ug/L |
| 724 | TOLUENE | | | | 1.0 | ug/L |
| 13 | 1,2,3-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 16 | 1,2,4-TRICHLOROBENZENE | | | | 1.0 | ug/L |
| 2 | 1,1,1-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 4 | 1,1,2-TRICHLOROETHANE | | | | 1.0 | ug/L |
| 750 | TRICHLOROETHENE | | | | 1.0 | ug/L |
| 372 | TRICHLOROFLUOROMETHANE | | | | 1.0 | ug/L |
| 14 | 1,2,3-TRICHLOROPROPANE | | | | 1.0 | ug/L |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | | 1.0 | ug/L |
| 767 | VINYL ACETATE | | | | 1.0 | ug/L |
| 768 | VINYL CHLORIDE | | 400 | | 1.0 | ug/L |
| 803 | XYLENES (O/M/P-XYLENE) | | | | 2.0 | ug/L |
| 1804 | | | | | | |
| 971 | SURROGATE RECOVERY | | | | | |
| 972 | | | | | | |
| 301 | DICHLOROETHANE-D4 | | 97 | | | % Rec |
| 726 | TOLUENE-D8 | | 101 | | | % Rec |
| 196 | 4-BROMOFLUOROBENZENE | | 83 | | | % Rec |
| 3362 | DIBROMOFLUOROMETHANE | | 92 | | | % Rec |

**Comments to Laboratory (do not record)**

4-HCL VIALS

**********REPORT ALL RESULTS IN UG/L.**********

Analytical Comments

Reviewed by :

Date :

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5247T.D
Acq On : 9 Nov 2009 9:46
Operator : HAROLD
Sample : A864548 1:10
Misc : REP01
ALS Vial : 5 Sample Multiplier: 1

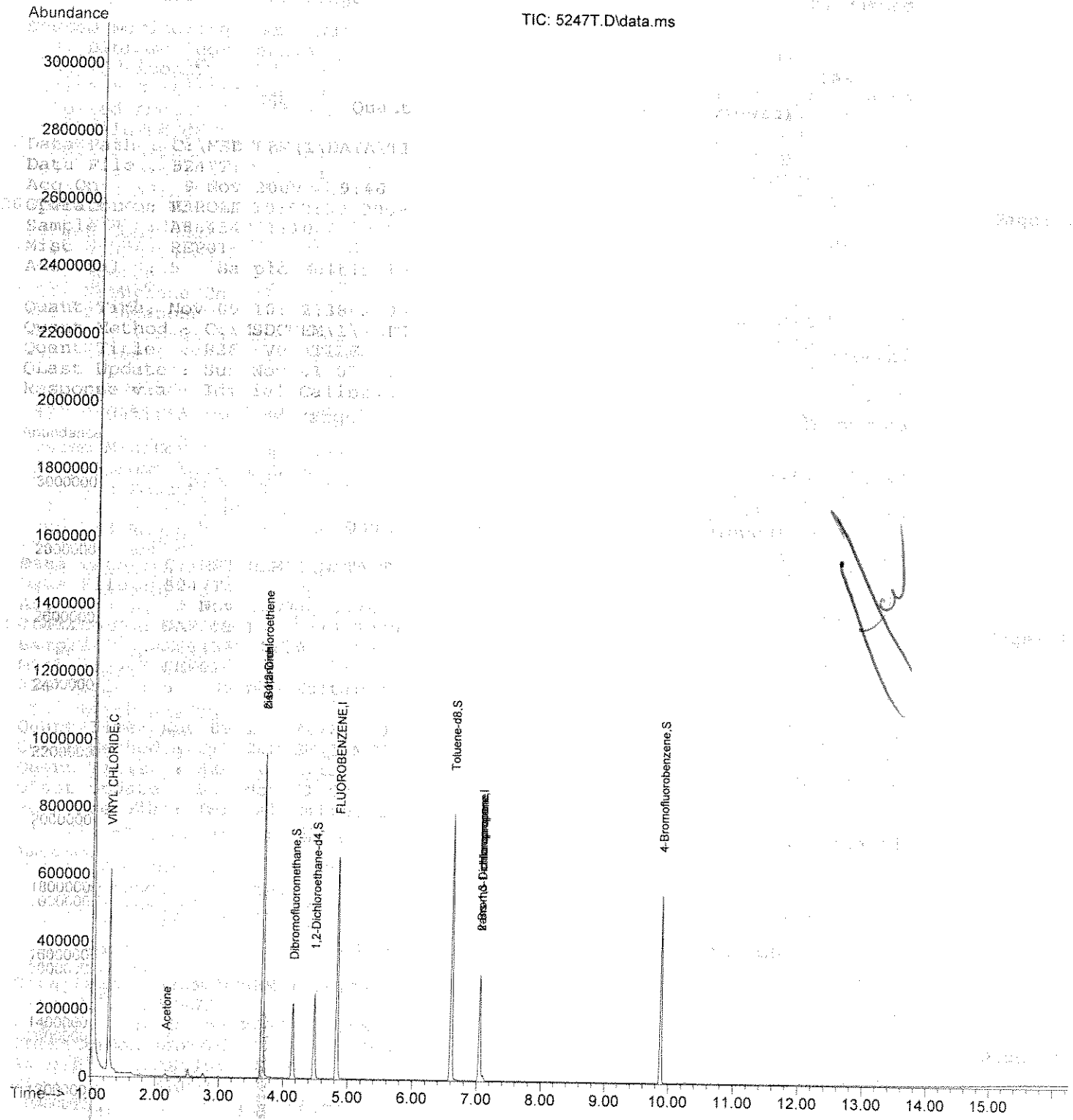
Quant Time: Nov 09 10:02:38 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.833 | 96 | 608185 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 204381 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.153 | 113 | 132302 | 9.21 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 92.10% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 166095 | 9.70 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.00% | |
| 50) Toluene-d8 | 6.602 | 98 | 550686 | 10.07 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 100.70% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 148343 | 8.50 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 85.00% | |
| Target Compounds | | | | | Qvalue |
| 4) VINYL CHLORIDE | 1.266 | 62 | 570656 | 39.93 UG/L | 99 |
| 9) Acetone | 2.161 | 43 | 11980 | 1.93 UG/L | 93 |
| 14) Methylene Chloride | 2.520 | 84 | 10305 | Below Cal # | 70 |
| 20) 2-Butanone | 3.673 | 72 | 2655 | 1.08 UG/L # | 1 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 415016 | 28.27 UG/L | 81 |
| 52) trans-1,3-Dichloropropene | 7.039 | 75 | 3582 | 0.24 UG/L | 100 |

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

Data Path : C:\MSDCHEM\1\DATA\T110909\
Data File : 5247T.D
Acq On : 9 Nov 2009 9:46
Operator : HAROLD
Sample : A864548 1:10
Misc : REP01
ALS Vial : 5 Sample Multiplier: 1

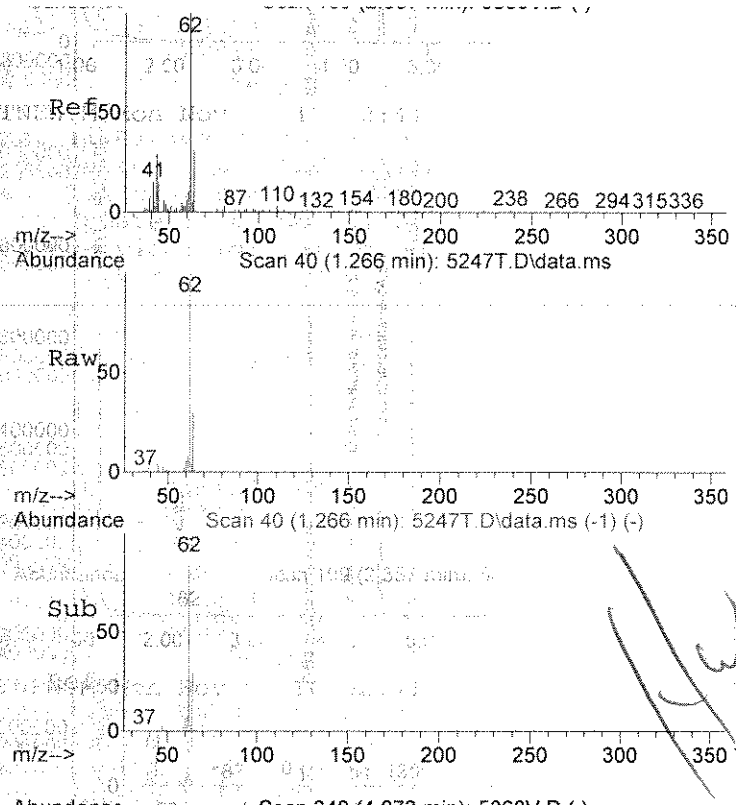
Quant Time: Nov 09 10:02:38 2009
Quant Method : C:\MSDCHEM\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




8260TNEW.M Mon Nov 09 10:02:41 2009



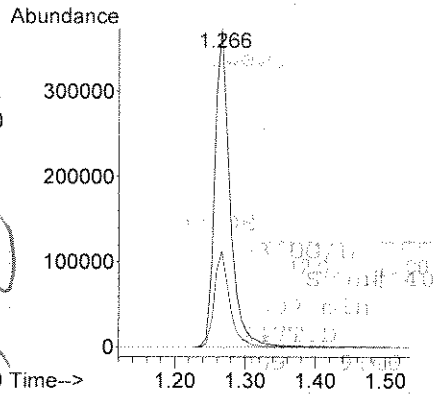
59169b

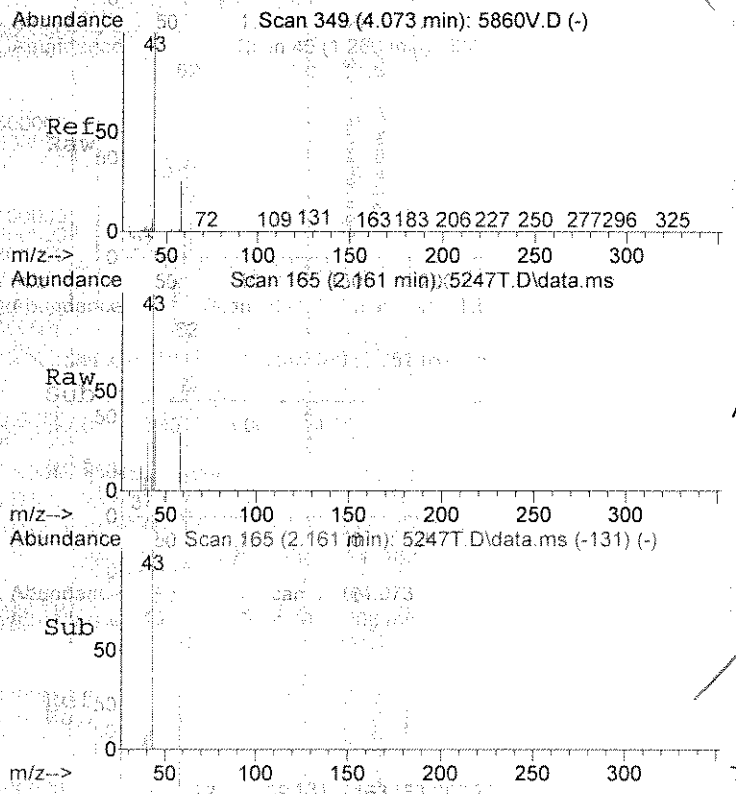



VINYL CHLORIDE
Concen: 39.93 UG/L
RT: 1.266 min Scan# 40
Delta R.T. 0.007 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

Tgt Ion: 62 Resp: 570656

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.6 | 24.9 | 37.3 |

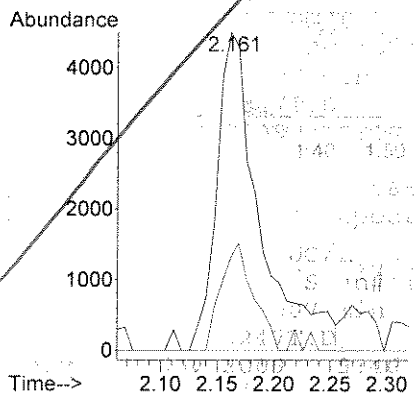



#9
Acetone
Concen: 1.93 UG/L
RT: 2.161 min Scan# 165
Delta R.T. -0.007 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

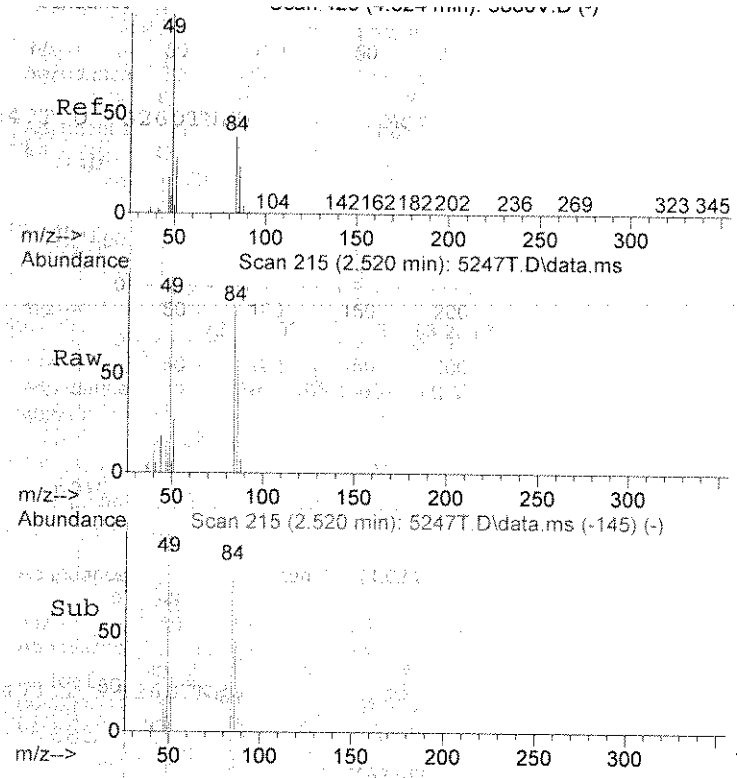
Tgt Ion: 43 Resp: 11980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.3 | 23.1 | 34.7 |





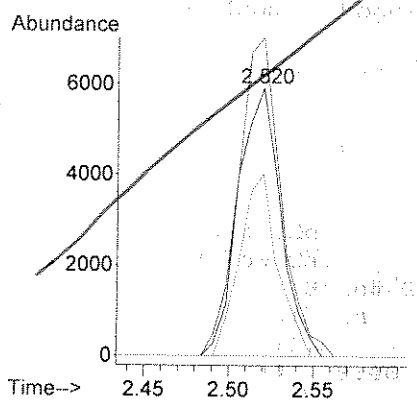

59169b

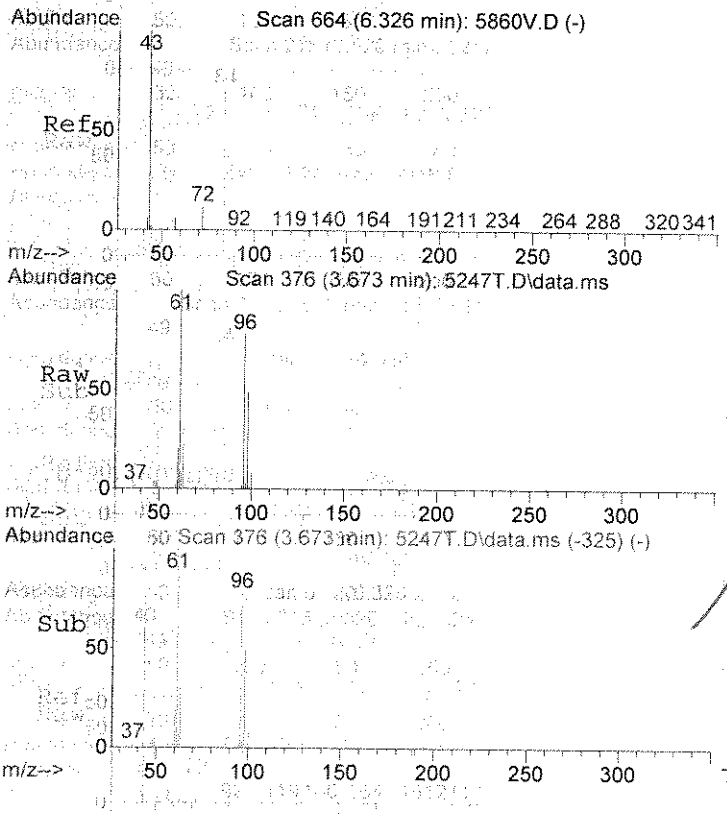



#21
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

Tgt Ion: 84 Resp: 10305

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 119.5 | 140.2 | 210.2# |
| 86 | 60.7 | 51.1 | 76.7 |

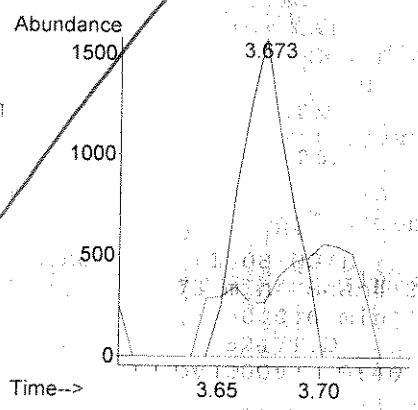


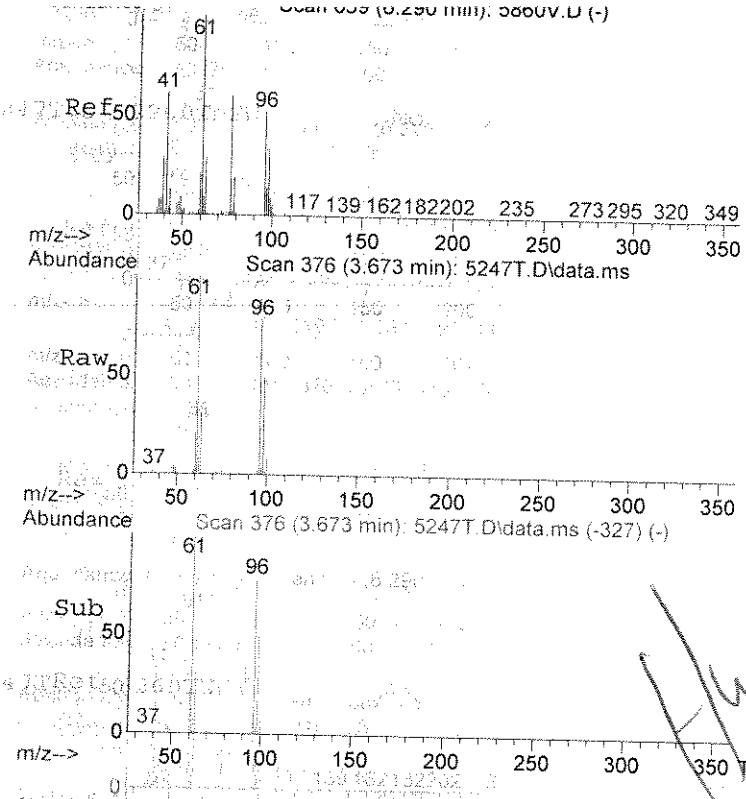




#20
2-Butanone
Concen: 1.08 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.036 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

Tgt Ion: 72 Resp: 2655

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 57.0 | 449.0 | 673.4# |

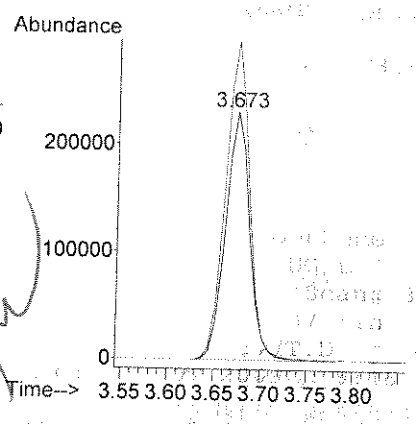


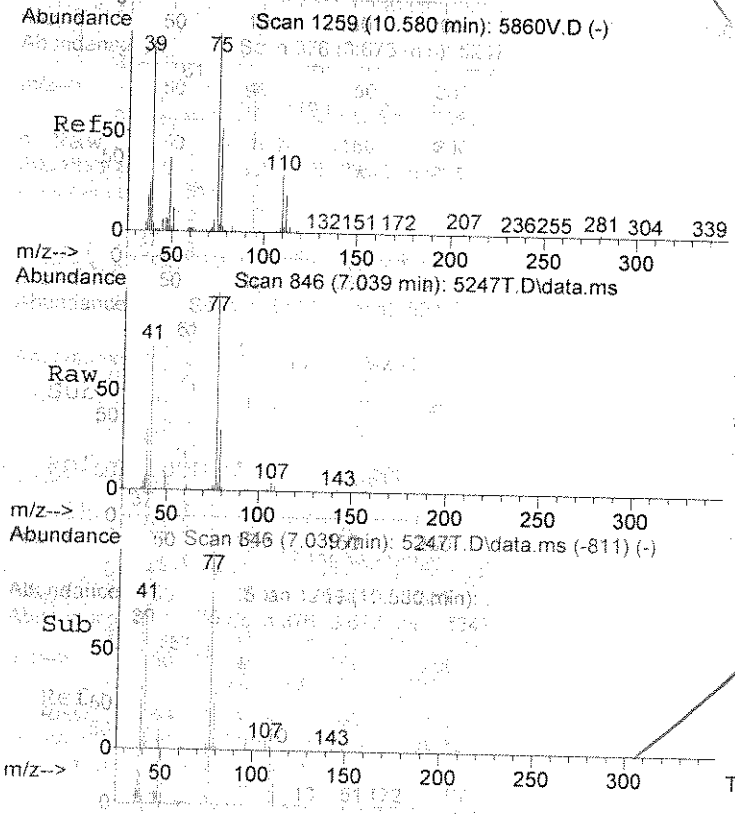



#22
cis-1,2-Dichloroethene
Concen: 28.27 UG/L
RT: 3.673 min Scan# 376
Delta R.T. -0.007 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

Tgt Ion: 96 Resp: 415016

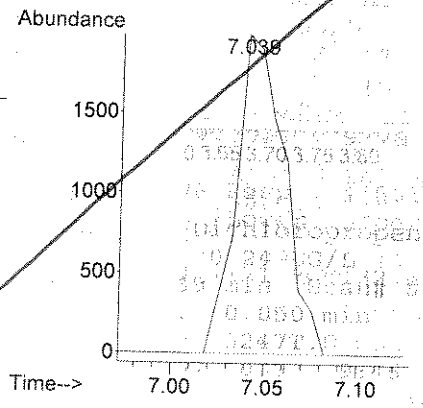
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 127.9 | 121.8 | 182.6 |




#52
trans-1,3-Dichloropropene
Concen: 0.24 UG/L
RT: 7.039 min Scan# 846
Delta R.T. 0.050 min
Lab File: 5247T.D
Acq: 9 Nov 2009 9:46

Tgt Ion: 75 Resp: 3582



5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 5239T.D BFB Injection Date: 11/09/09

Instrument ID: GCMS#394 BFB Injection Time: 06:00

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.6 |
| 75 | 30.0 - 60.0% of mass 95 | 48.0 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 81.3 |
| 175 | 5.0 - 9.0% of mass 174 | 6.1 ( 7.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 81.3 ( 99.9)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.4 ( 6.6)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD010 | VSTD010 | 5240T.D | 11/09/09 | 06:16 |
| 02 | VBLK | VBLK | 5241T.D | 11/09/09 | 06:56 |
| 03 | DI MS | DI MS | 5242T.D | 11/09/09 | 07:29 |
| 04 | A864564 1:10 | A864564 1:10 | 5243T.D | 11/09/09 | 08:02 |
| 05 | A864543 1:10 | A864543 1:10 | 5244T.D | 11/09/09 | 08:28 |
| 06 | A864545 1:10 | A864545 1:10 | 5245T.D | 11/09/09 | 08:54 |
| 07 | A864546 1:10 | A864546 1:10 | 5246T.D | 11/09/09 | 09:20 |
| 08 | A864548 1:10 | A864548 1:10 | 5247T.D | 11/09/09 | 09:46 |
| 09 | A864549 1:20 | A864549 1:20 | 5248T.D | 11/09/09 | 10:12 |
| 10 | A864550 1:10 | A864550 1:10 | 5249T.D | 11/09/09 | 10:37 |
| 11 | A865074 | A865074 | 5250T.D | 11/09/09 | 11:03 |
| 12 | A864665 | A864665 | 5251T.D | 11/09/09 | 11:28 |
| 13 | A864665 MS | A864665 MS | 5252T.D | 11/09/09 | 11:54 |
| 14 | A864665 MSD | A864665 MSD | 5253T.D | 11/09/09 | 12:19 |
| 15 | A864666 | A864666 | 5254T.D | 11/09/09 | 12:45 |
| 16 | A864674 | A864674 | 5255T.D | 11/09/09 | 13:10 |
| 17 | A864675 | A864675 | 5256T.D | 11/09/09 | 13:36 |
| 18 | A864676 | A864676 | 5257T.D | 11/09/09 | 14:01 |
| 19 | A864677 | A864677 | 5258T.D | 11/09/09 | 14:27 |
| 20 | A864678 | A864678 | 5259T.D | 11/09/09 | 14:52 |
| 21 | A864679 | A864679 | 5260T.D | 11/09/09 | 15:17 |
| 22 | A864703 | A864703 | 5261T.D | 11/09/09 | 15:43 |

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5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: HERITAGE Contract:

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

Lab File ID: 5239T.D BFB Injection Date: 11/09/09

Instrument ID: GCMS#394 BFB Injection Time: 06:00

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.6 |
| 75 | 30.0 - 60.0% of mass 95 | 48.0 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0)1 |
| 174 | >50.0% of mass 95 | 81.3 |
| 175 | 5.0 - 9.0% of mass 174 | 6.1 ( 7.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 81.3 ( 99.9)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.4 ( 6.6)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 23 | A864704 | A864704 | 5262T.D | 11/09/09 | 16:09 |
| 24 | A864705 | A864705 | 5263T.D | 11/09/09 | 16:34 |
| 25 | A864706 | A864706 | 5264T.D | 11/09/09 | 17:00 |

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8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5240T.D Date Analyzed: 11/09/09

Instrument ID: GCMS#394 Time Analyzed: 06:16

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 619175 | 4.83 | 223172 | 7.05 | | |
| | UPPER LIMIT | 1238350 | 5.33 | 446344 | 7.55 | | |
| | LOWER LIMIT | 309588 | 4.33 | 111586 | 6.55 | | |
| | EPA SAMPLE NO. | | | | | | |
| 01 | VBLK | 593943 | 4.83 | 191412 | 7.05 | | |
| 02 | DI MS | 583155 | 4.83 | 187798 | 7.05 | | |
| 03 | A864564 1:10 | 609244 | 4.83 | 211864 | 7.05 | | |
| 04 | A864543 1:10 | 582826 | 4.83 | 179322 | 7.05 | | |
| 05 | A864545 1:10 | 596151 | 4.83 | 193225 | 7.05 | | |
| 06 | A864546 1:10 | 582287 | 4.83 | 184204 | 7.05 | | |
| 07 | A864548 1:10 | 608185 | 4.83 | 204381 | 7.05 | | |
| 08 | A864549 1:20 | 598199 | 4.83 | 192534 | 7.05 | | |
| 09 | A864550 1:10 | 604108 | 4.83 | 196822 | 7.05 | | |
| 10 | A865074 S | 588548 | 4.83 | 196949 | 7.05 | | |
| 11 | A864665 | 586898 | 4.83 | 190142 | 7.05 | | |
| 12 | A864665 MS | 603442 | 4.83 | 214992 | 7.05 | | |
| 13 | A864665 MSD | 585314 | 4.83 | 194776 | 7.05 | | |
| 14 | A864666 | 597792 | 4.83 | 202021 | 7.05 | | |
| 15 | A864674 | 587334 | 4.83 | 188363 | 7.05 | | |
| 16 | A864675 | 563734 | 4.83 | 181839 | 7.05 | | |
| 17 | A864676 | 583961 | 4.83 | 183844 | 7.05 | | |
| 18 | A864677 | 573421 | 4.83 | 184011 | 7.05 | | |
| 19 | A864678 | 573576 | 4.83 | 186798 | 7.05 | | |
| 20 | A864679 | 530626 | 4.83 | 163451 | 7.05 | | |
| 21 | A864703 | 553974 | 4.83 | 178960 | 7.05 | | |

IS1 = FLUOROBENZENE
IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits



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8A

# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: HERITAGE Contract:

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

Lab File ID (Standard): 5240T.D Date Analyzed: 11/09/09

Instrument ID: GCMS#394 Time Analyzed: 06:16

GC Column: CAP ID: 0.18 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 619175 | 4.83 | 223172 | 7.05 | | |
| UPPER LIMIT | 1238350 | 5.33 | 446344 | 7.55 | | |
| LOWER LIMIT | 309588 | 4.33 | 111586 | 6.55 | | |
| EPA SAMPLE NO. | | | | | | |
| 22 A864704 | 551228 | 4.83 | 176770 | 7.05 | | |
| 23 A864705 | ~~551228~~ 561392 | 4.83 | ~~176770~~ 188491 | 7.05 | | |
| 24 A864706 | ~~551228~~ | 4.83 | ~~176770~~ | 7.05 | | |

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IS1 = FLUOROBENZENE

IS2 = 2-BROMO-1-CHLOROPROPANE

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits



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2A

# WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: HERITAGE Contract:

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

Date Injected: 09-Nov-09 Instrument: GCMS#394

| | EPA SAMPLE NO. | SMC1 # | SMC2 # | SMC3 # | SMC4 # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VBLK | 99 | 98 | 99 | 94 | 0 |
| 02 | DI MS | 102 | 97 | 101 | 97 | 0 |
| 03 | A864564 1:10 | 94 | 96 | 103 | 86 | 0 |
| 04 | A864543 1:10 | 100 | 101 | 98 | 95 | 0 |
| 05 | A864545 1:10 | 94 | 98 | 103 | 89 | 0 |
| 06 | A864546 1:10 | 101 | 101 | 99 | 94 | 0 |
| 07 | A864548 1:10 | 92 | 97 | 101 | 85 | 0 |
| 08 | A864549 1:20 | 92 | 98 | 102 | 91 | 0 |
| 09 | A864550 1:10 | 93 | 97 | 103 | 91 | 0 |
| 10 | A865074 | 94 | 94 | 102 | 87 | 0 |
| 11 | A864665 | 93 | 99 | 102 | 91 | 0 |
| 12 | A864665 MS | 97 | 97 | 105 | 90 | 0 |
| 13 | A864665 MSD | 95 | 97 | 107 | 96 | 0 |
| 14 | A864666 | 93 | 97 | 102 | 88 | 0 |
| 15 | A864674 | 93 | 96 | 101 | 90 | 0 |
| 16 | A864675 | 94 | 97 | 103 | 93 | 0 |
| 17 | A864676 | 92 | 97 | 102 | 93 | 0 |
| 18 | A864677 | 92 | 98 | 101 | 92 | 0 |
| 19 | A864678 | 93 | 97 | 102 | 89 | 0 |
| 20 | A864679 | 103 | 102 | 96 | 96 | 0 |
| 21 | A864703 | 94 | 98 | 101 | 93 | 0 |
| 22 | A864704 | 94 | 101 | 104 | 92 | 0 |
| 23 | A864705 | 95 | 100 | 103 | 89 | 0 |
| 24 | A864706 | 93 | 99 | 102 | 90 | 0 |

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QC LIMITS

| | | | |
|---|---|---|---|
| SMC1 | = | Dibromofluoromethane | (83-139) |
| SMC2 | = | 1,2-Dichloroethane-d4 | (79-137) |
| SMC3 | = | toluene-d8 | (85-123) |
| SMC4 | = | 4-bromofluorobenzene | (76-129) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

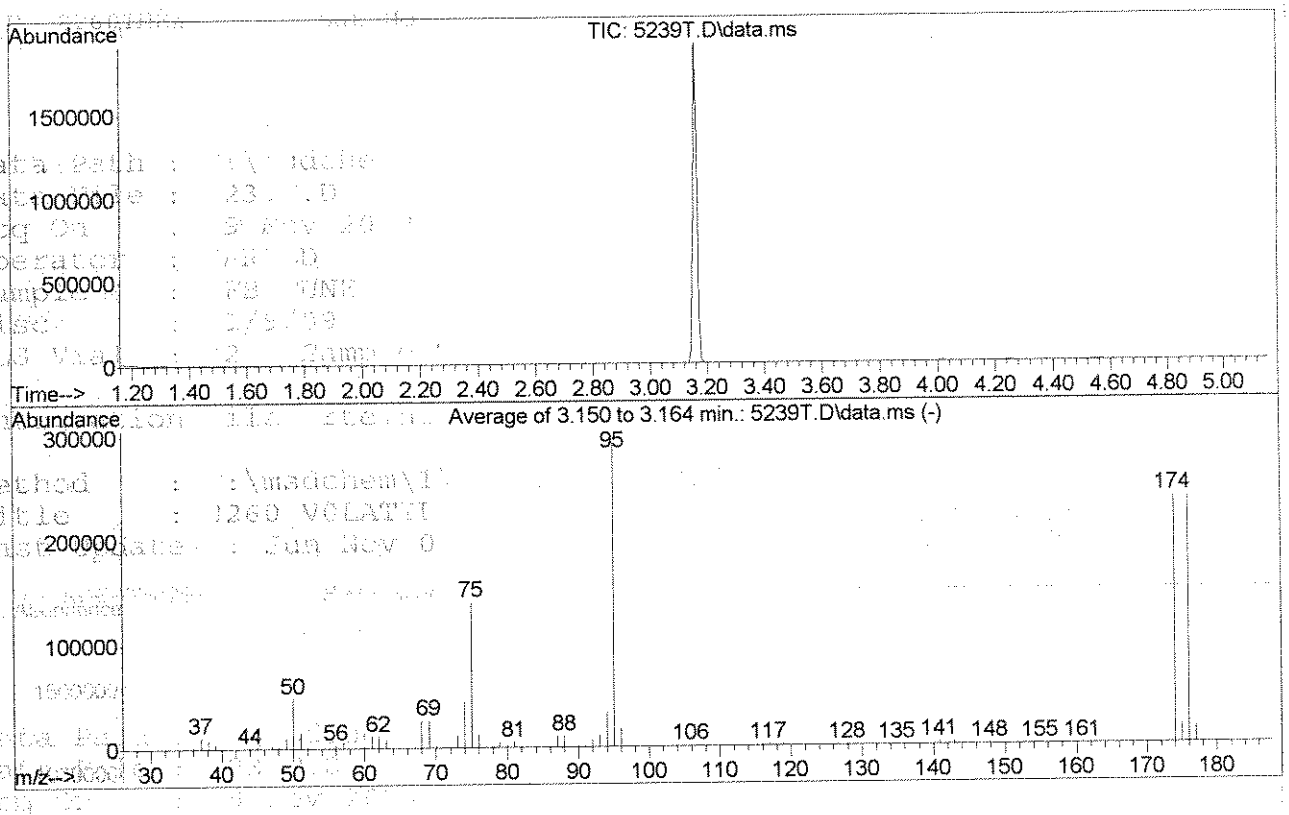


59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5239T.D
Acq On : 9 Nov 2009 6:00
Operator : HAROLD
Sample : BFB TUNE CHECK
Misc : 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Integration File: rteint2.p

Method : C:\msdchem\1\METHODS\8260TNEW.M
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009




AutoFind: Scans 303, 304, 305; Background Corrected with Scan 298

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.6 | 48296 | PASS |
| 75 | 95 | 30 | 60 | 48.0 | 139853 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 291498 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 18770 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 81.3 | 237130 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 17705 | PASS |
| 176 | 174 | 95 | 101 | 99.9 | 237000 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 15696 | PASS |

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BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 2202 | 50.05 | 48296 | 64.00 | 735 | 77.80 | 1508 |
| 37.10 | 10992 | 51.10 | 15044 | 67.05 | 762 | 78.00 | 480 |
| 38.10 | 9796 | 52.10 | 691 | 68.00 | 25941 | 78.90 | 5014 |
| 39.10 | 3760 | 55.05 | 718 | 69.05 | 26429 | 80.00 | 1628 |
| 40.00 | 199 | 56.00 | 3232 | 70.05 | 2024 | 80.95 | 5064 |
| 44.00 | 1142 | 57.05 | 6277 | 72.05 | 1437 | 81.95 | 1077 |
| 45.05 | 2061 | 58.00 | 122 | 73.05 | 11326 | 86.05 | 321 |
| 46.00 | 113 | 60.00 | 2340 | 74.05 | 44245 | 87.00 | 10340 |
| 47.05 | 3254 | 61.00 | 11217 | 75.05 | 139853 | 88.00 | 10876 |
| 48.00 | 1474 | 62.00 | 11245 | 76.05 | 12447 | 90.95 | 803 |
| 49.05 | 9962 | 63.05 | 8430 | 77.00 | 1676 | 92.00 | 7683 |

Average of 3.150 to 3.164 min.: 5239T.D\data.ms

BFB TUNE CHECK
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.00 | 11149 | 115.95 | 862 | 140.90 | 2543 | 154.95 | 556 |
| 94.05 | 33000 | 116.90 | 1422 | 141.95 | 277 | 156.95 | 425 |
| 95.05 | 291498 | 117.90 | 840 | 142.90 | 2397 | 158.85 | 327 |
| 96.05 | 18770 | 118.90 | 1226 | 144.95 | 198 | 160.85 | 301 |
| 97.10 | 439 | 127.95 | 1083 | 145.95 | 343 | 174.00 | 237130 |
| 103.90 | 987 | 128.95 | 441 | 147.90 | 689 | 175.00 | 17705 |
| 104.90 | 375 | 129.95 | 949 | 148.80 | 140 | 176.00 | 237000 |
| 105.95 | 991 | 130.85 | 362 | 149.95 | 231 | 177.00 | 15696 |
| 106.90 | 131 | 134.95 | 440 | 153.00 | 137 | 177.90 | 1357 |
| 113.00 | 117 | 136.90 | 380 | 153.90 | 1100 | 86.05 | 321 |
| 114.90 | 215 | 139.90 | 83 | 154.70 | 4131 | 87.00 | 10340 |
| | | | | | 139853 | 88.00 | 10876 |
| | | | | | 12447 | 90.95 | 803 |
| | | | | | 1676 | 92.00 | 7683 |

R560121 Heritage Environmental Services, LLC Q2256552

QC Report

QCType CCVD | Duplicate SampleID | DataFile 5240T.D
Date Entered 12Nov09 | Duplicate QCSampleID | Analyst 1365 H. WILLIAMS
Analysis Date/Time 09Nov0906:16:00 | Method | Matrix | Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | 0.1421 | | 0.1497 | | | 5.3 |
| 236 | CHLOROMETHANE | 0.2131 | | 0.2062 | | | 3.2 |
| 768 | VINYL CHLORIDE | 0.2350 | | 0.2379 | | | 1.2 |
| 198 | BROMOMETHANE | 0.1012 | | 0.1075 | | | 6.2 |
| 234 | CHLOROETHANE | 0.1262 | | 0.1332 | | | 5.5 |
| 372 | TRICHLOROFLUOROMETHANE | 0.2968 | | 0.3116 | | | 5 |
| 105 | ACROLEIN | 0.0175 | | 0.0115 | | | 34.3 |
| 8 | 1,1-DICHLOROETHENE | 0.1982 | | 0.2180 | | | 10 |
| 99 | ACETONE (2-PROPANONE) | 0.1022 | | 0.1333 | | | 30.4 |
| 422 | IODOMETHANE | 0.3240 | | 0.3459 | | | 6.8 |
| 216 | CARBON DISULFIDE | 0.6311 | | 0.7412 | | | 17.4 |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | 0.7104 | | 0.6427 | | | 9.5 |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | 10.0 | | 10.8 | LIN | | 8 |
| 746 | TRANS-1,2-DICHLOROETHENE | 0.2272 | | 0.2462 | | | 8.4 |
| 106 | ACRYLONITRILE | 0.0692 | | 0.0559 | | | 19.2 |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | 0.7576 | | 0.7988 | | | 5.4 |
| 7 | 1,1-DICHLOROETHANE | 0.3815 | | 0.4035 | | | 5.8 |
| 767 | VINYL ACETATE | 10.0 | | 40.0 | LIN | | 300 |
| 246 | CIS-1,2-DICHLOROETHENE | 0.2414 | | 0.2543 | | | 5.3 |
| 52 | 2-BUTANONE | 0.0405 | | 0.0457 | | | 12.8 |
| 348 | ETHYL ACETATE | 0.2932 | | 0.3621 | | | 23.5 |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | 0.0461 | | 0.0472 | | | 2.4 |
| 194 | BROMOCHLOROMETHANE | 0.1079 | | 0.1119 | | | 3.7 |
| 3457 | 2-METHYL-2-PROPENENITRILE | 0.1697 | | 0.1842 | | | 8.5 |
| 471 | METHACRYLONITRILE | 0.1697 | | 0.1842 | | | 8.5 |
| 709 | TETRAHYDROFURAN | 0.0897 | | 0.0963 | | | 7.4 |
| 235 | CHLOROFORM | 0.3695 | | 0.3861 | | | 4.5 |
| 2 | 1,1,1-TRICHLOROETHANE | 0.3069 | | 0.3172 | | | 3.4 |
| 217 | CARBON TETRACHLORIDE | 0.2699 | | 0.2899 | | | 7.4 |
| 10 | 1,1-DICHLOROPROPENE | 0.1063 | | 0.1122 | | | 5.6 |
| 151 | BENZENE | 0.8701 | | 0.9859 | | | 13.3 |
| 21 | 1,2-DICHLOROETHANE | 0.2779 | | 0.3023 | | | 8.8 |
| 1525 | 2-BUTANOL | 0.0161 | | 0.0142 | | | 11.8 |
| 750 | TRICHLOROETHENE | 0.2277 | | 0.2475 | | | 8.7 |
| 517 | N-BUTANOL | 0.0140 | | 0.0116 | | | 17.1 |
| 23 | 1,2-DICHLOROPROPANE | 0.2007 | | 0.2408 | | | 20 |
| 296 | DIBROMOMETHANE | 0.1230 | | 0.1395 | | | 13.4 |
| 30 | 1,4-DIOXANE | 200.0 | | 89.8 | LIN | | 55.1 |
| 1147 | METHYL METHACRYLATE | 0.2026 | | 0.2378 | | | 17.4 |
| 195 | BROMODICHLOROMETHANE | 0.2434 | | 0.2704 | | | 11.1 |
| 54 | 2-CHLOROETHYLVINYLETHER | 0.1420 | | 0.1885 | | | 32.7 |
| 247 | CIS-1,3-DICHLOROPROPENE | 0.3040 | | 0.3515 | | | 15.6 |
| 91 | 4-METHYL-2-PENTANONE | 0.3155 | | 0.3384 | | | 7.3 |
| 724 | TOLUENE | 0.8639 | | 1.0334 | | | 19.6 |

11/12/09

R560121

# Heritage Environmental Services, LLC

Q2256552

## QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 747 | TRANS-1,3-DICHLOROPROPENE | 0.2429 | | 0.2999 | | | 23.5 |
| 4 | 1,1,2-TRICHLOROETHANE | 0.1709 | | 0.2144 | | | 25.5 |
| 351 | ETHYL METHACRYLATE | 0.8960 | | 0.8729 | | | 2.6 |
| 703 | TETRACHLOROETHENE | 0.7380 | | 0.7483 | | | 1.4 |
| 27 | 1,3-DICHLOROPROPANE | 0.9526 | | 1.0609 | | | 11.4 |
| 60 | 2-HEXANONE | 0.6513 | | 0.6404 | | | 1.7 |
| 295 | DIBROMOCHLOROMETHANE | 0.5223 | | 0.5598 | | | 7.2 |
| 18 | 1,2-DIBROMOETHANE (EDB) | 0.1753 | | 0.2135 | | | 21.8 |
| 231 | CHLOROBENZENE | 1.7328 | | 1.7833 | | | 2.9 |
| 1 | 1,1,1,2-TETRACHLOROETHANE | 0.6210 | | 0.6111 | | | 1.6 |
| 349 | ETHYL BENZENE | 0.9633 | | 1.0005 | | | 3.9 |
| 492 | M/P-XYLENE | 1.2016 | | 1.2555 | | | 4.5 |
| 549 | O-XYLENE | 1.2181 | | 1.2110 | | | 6 |
| 680 | STYRENE | 1.9432 | | 1.9851 | | | 2.2 |
| 197 | BROMOFORM | 0.3505 | | 0.3600 | | | 2.7 |
| 432 | ISOPROPYLBENZENE (CUMENE) | 2.8849 | | 2.9521 | | | 2.3 |
| 3 | 1,1,2,2-TETRACHLOROETHANE | 0.8872 | | 0.9242 | | | 4.2 |
| 193 | BROMOBENZENE | 1.1810 | | 1.1818 | | | 2.1 |
| 714 | 1,2,3-TRICHLOROPROPANE | 0.2837 | | 0.2878 | | | 1.4 |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | 0.2511 | | 0.2468 | | | 1.7 |
| 532 | N-PROPYLBENZENE | 0.4079 | | 0.4155 | | | 1.9 |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | 0.7647 | | 0.8032 | | | 5 |
| 25 | 1,3,5-TRIMETHYLBENZENE | 2.7388 | | 2.7665 | | | 1 |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | 0.7227 | | 0.7360 | | | 1.8 |
| 702 | TERT-BUTYLBENZENE | 1.5134 | | 1.5296 | | | 1.1 |
| 17 | 1,2,4-TRIMETHYLBENZENE | 2.7981 | | 2.8087 | | | 3.4 |
| 644 | SEC-BUTYLBENZENE | 3.6289 | | 3.6835 | | | 1.5 |
| 526 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | 1.4904 | | 1.4736 | | | 1.1 |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | 3.0502 | | 3.0599 | | | 3 |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | 1.4931 | | 1.5019 | | | 2.6 |
| 519 | N-BUTYLBENZENE | 1.5933 | | 1.5642 | | | 1.8 |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | 1.4996 | | 1.4368 | | | 4.2 |
| 119 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | 0.2202 | | 0.2015 | | | 8.5 |
| 16 | 1,2,4-TRICHLOROBENZENE | 1.1867 | | 1.1025 | | | 7.1 |
| 398 | HEXACHLOROBUTADIENE | 0.5378 | | 0.5424 | | | 1.9 |
| 493 | NAPHTHALENE | 3.5250 | | 3.0990 | | | 12.1 |
| 13 | 1,2,3-TRICHLOROBENZENE | 1.1543 | | 1.0013 | | | 13.3 |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | 0.2261 | | 0.2453 | | | 8.5 |
| 305 | DIETHYL ETHER | 0.2179 | | 0.2162 | | | .8 |
| 866 | HEXANE | 0.4423 | | 0.6392 | | | 44.5 |
| 301 | DICHLOROETHANE-D4 | 0.2816 | | 0.2680 | | | 4.8 |
| 726 | TOLUENE-D8 | 0.8989 | | 0.9433 | | | 4.9 |
| 196 | 4-BROMOFLUOROBENZENE | 0.8538 | | 0.7673 | | | 10.1 |
| 3362 | DIBROMOFLUOROMETHANE | 0.2362 | | 0.2228 | | | 5.7 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration ( ).

59169b

R560121

# Heritage Environmental Services, LLC

QC Report

Q2256552

**Qualifiers**

LIN Linear Regression Used

Data File : F:\1\DATA\T110909\5240T.D
Acq On : 9 Nov 2009 6:16
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
MS Integration Params: rteint2.p

Vial: 22
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

Q2256552

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.00000 | 1.00000 | 0.0 |
| 2 | | Dichlorodifluoromethane | 0.14206 | 0.14970 | 5.4 |
| 3 | P | Chloromethane | 0.21309 | 0.20616 | 3.3 |
| 4 | C | VINYL CHLORIDE | 0.23500 | 0.23786 | 1.2 |
| 5 | | Bromomethane | 0.10117 | 0.10746 | 6.2 |
| 6 | | Chloroethane | 0.12620 | 0.13318 | 5.5 |
| 7 | | Trichlorofluoromethane | 0.29674 | 0.31161 | 5.0 |
| 8 | | Acrolein | 0.01748 | 0.01154 | 34.0# |
| 9 | | Acetone | 0.10215 | 0.13331 | 30.5# |
| 10 | C | 1,1-DICHLOROETHENE | 0.19818 | 0.21801 | 10.0 |
| 11 | | Trichlorotrifluoroethane | 0.22605 | 0.24526 | 8.5 |
| 12 | | Acrylonitrile | 0.06919 | 0.05590 | 19.2 |
| 13 | | Carbon Disulfide | 0.63107 | 0.74117 | 17.4 |
| 14 | | Methylene Chloride | 10.000 | 10.774 | 7.7 |
| 15 | | Allyl Chloride | 0.71041 | 0.64270 | 9.5 |
| 16 | | Vinyl Acetate | 10.000 | 39.964 | 299.6# |
| 17 | | MTBE | 0.75761 | 0.79876 | 5.4 |
| 18 | | trans-1,2-Dichloroethene | 0.22719 | 0.24620 | 8.4 |
| 19 | P | 1,1-Dichloroethane | 0.38152 | 0.40354 | 5.8 |
| 20 | | 2-Butanone | 0.04048 | 0.04574 | 13.0 |
| 21 | | Ethyl Acetate | 0.29323 | 0.36214 | 23.5# |
| 22 | | cis-1,2-Dichloroethene | 0.24139 | 0.25433 | 5.4 |
| 23 | | Ethyl Cyanide | 0.04607 | 0.04720 | 2.5 |
| 24 | C | CHLOROFORM | 0.36950 | 0.38608 | 4.5 |
| 25 | | Methacrylonitrile | 0.16971 | 0.18425 | 8.6 |
| 26 | | Tetrahydrofuran | 0.08969 | 0.09626 | 7.3 |
| 27 | | Bromochloromethane | 0.10791 | 0.11194 | 3.7 |
| 28 | | 2,2-Dichloropropane | 0.24029 | 0.23226 | 3.3 |
| 29 | | Diethyl ether | 0.21782 | 0.21618 | 0.8 |
| 30 | | 1,1,1-Trichloroethane | 0.30689 | 0.31722 | 3.4 |
| 31 | | Iodomethane | 0.32398 | 0.34592 | 6.8 |
| 32 | S | Dibromofluoromethane | 0.23620 | 0.22280 | 5.7 |
| 33 | | 1,1-Dichloropropene | 0.10628 | 0.11216 | 5.5 |
| 34 | S | 1,2-Dichloroethane-d4 | 0.28157 | 0.26797 | 4.8 |
| 35 | | Carbon Tetrachloride | 0.26989 | 0.28990 | 7.4 |
| 36 | | 1,2-Dichloroethane | 0.27788 | 0.30225 | 8.8 |
| 37 | | Isobutanol | 0.01609 | 0.01416 | 12.0 |
| 38 | | Benzene | 0.87009 | 0.98590 | 13.3 |
| 39 | | n-Hexane | 0.44226 | 0.63917 | 44.5# |

(#) = Out of Range (Advisory for non CCC, SPCC)



Continuing Calibration Report

Data File : F:\1\DATA\T110909\5240T.D
Acq On : 9 Nov 2009 6:16
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
MS Integration Params: rteint2.p

Vial: 22
Operator: HAROLD
Inst : GCMST
Multiplr: 1.00

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Diff | |
|---|---|---|---|---|---|---|
| 40 | | Trichloroethene | 0.22770 | 0.24754 | 8.7 | |
| 41 | | n-Butanol | 0.01399 | 0.01158 | 17.2 | |
| 42 | C | 1,2-DICHLOROPROPANE | 0.20070 | 0.24083 | 20.0 | |
| 43 | | 1,4-Dioxane | 200.000 | 89.831 | | 55.1# |
| 44 | | Methyl Methacrylate | 0.20258 | 0.23780 | 17.4 | |
| 45 | | Bromodichloromethane | 0.24341 | 0.27037 | 11.1 | |
| 46 | | Dibromomethane | 0.12299 | 0.13949 | 13.4 | |
| 47 | | 4-Methyl-2-Pentanone | 0.31553 | 0.33844 | 7.3 | |
| 48 | | 2-Chloroethylvinylether | 0.14200 | 0.18852 | 32.8# | |
| 49 | | cis-1,3-Dichloropropene | 0.30396 | 0.35152 | 15.6 | |
| 50 | S | Toluene-d8 | 0.89888 | 0.94334 | 4.9 | |
| 51 | C | TOLUENE | 0.86390 | 1.03344 | 19.6 | |
| 52 | | trans-1,3-Dichloropropene | 0.24287 | 0.29994 | 23.5# | |
| 53 | | 1,1,2-Trichloroethane | 0.17084 | 0.21440 | 25.5# | |
| 54 | | 1,2-Dibromoethane | 0.17526 | 0.21350 | 21.8# | |
| 55 | I | 2-Bromo-1-chloropropane | 1.00000 | 1.00000 | 0.0 | |
| 56 | | 2-Hexanone | 0.65133 | 0.64043 | 1.7 | |
| 57 | | 1,3-Dichloropropane | 0.95260 | 1.06092 | 11.4 | |
| 58 | | Ethyl Methacrylate | 0.89596 | 0.87291 | 2.6 | |
| 59 | | Tetrachloroethene | 0.73802 | 0.74826 | 1.4 | |
| 60 | | Dibromochloromethane | 0.52228 | 0.55981 | 7.2 | |
| 61 | P | Chlorobenzene | 1.73283 | 1.78327 | 2.9 | |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.62097 | 0.61113 | 1.6 | |
| 63 | C | ETHYL BENZENE | 0.96324 | 1.00049 | 3.9 | |
| 64 | | m,p-Xylene | 1.20166 | 1.25555 | 4.5 | |
| 65 | | o-Xylene | 1.21815 | 1.21095 | 0.6 | |
| 66 | | Styrene | 1.94322 | 1.98508 | 2.2 | |
| 67 | P | Bromoform | 0.35051 | 0.36003 | 2.7 | |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.88714 | 0.92415 | 4.2 | |
| 69 | S | 4-Bromofluorobenzene | 0.85384 | 0.76728 | 10.1 | |
| 70 | | Isopropylbenzene | 2.88487 | 2.95210 | 2.3 | |
| 71 | | trans-1,4-Dichloro-2-butene | 0.25107 | 0.24676 | 1.7 | |
| 72 | | Bromobenzene | 1.18100 | 1.18185 | 0.1 | |
| 73 | | 1,2,3-Trichloropropane | 0.28364 | 0.28782 | 1.5 | |
| 74 | | n-Propylbenzene | 0.40785 | 0.41555 | 1.9 | |
| 75 | | 1,3,5-Trimethylbenzene | 2.73880 | 2.76652 | 1.0 | |
| 76 | | 2-Chlorotoluene | 0.76471 | 0.80322 | 5.0 | |
| 77 | | 4-Chlorotoluene | 0.72272 | 0.73602 | 1.8 | |
| 78 | | t-Butylbenzene | 1.51344 | 1.52958 | 1.1 | |

(#) = Out of Range (Advisory for non CCC, SPCC) Page 2 of 3

Continuing Calibration Report

Data File : F:\1\DATA\T110909\5240T.D Vial: 22
Acq On : 9 Nov 2009 6:16 Operator: HAROLD
Sample : VSTD010 Inst : GCMST
Misc : CALIBRATION CHECK 11/9/09 Multiplr: 1.00
MS Integration Params: rteint2.p

Method : F:\1\METHODS\8260TNEW.M (RTE Integrator)
Title : 8260 VOLATILES
Last Update : Sun Nov 01 07:24:09 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 4991T.D cal 10 = 5003T.D cal 25 = 4995T.D
cal 50 = 4996T.D cal 5 = 4993T.D

| | Compound | AvgRF/TV | CCRF/OBS | %Diff |
|---|---|---|---|---|
| 79 | 1,2,4-Trimethylbenzene | 2.79809 | 2.80869 | 0.4 |
| 80 | sec-Butylbenzene | 3.62895 | 3.68349 | 1.5 |

| | | | | |
|---|---|---|---|---|
| 82 | 1,3-Dichlorobenzene | 1.49038 | 1.47359 | 1.1 |
| 83 | 1,4-Dichlorobenzene | 1.49307 | 1.50188 | 0.6 |
| 84 | n-Butylbenzene | 1.59324 | 1.56425 | 1.8 |
| 85 | 1,2-Dichlorobenzene | 1.49964 | 1.43677 | 4.2 |
| 86 | 1,2-Dibromo-3-chloropropane | 0.22014 | 0.20145 | 8.5 |
| 87 | 1,2,4-Trichlorobenzene | 1.18673 | 1.10251 | 7.1 |
| 88 | Naphthalene | 3.52500 | 3.09900 | 12.1 |
| 89 | Hexachlorobutadiene | 0.53776 | 0.54241 | 0.9 |
| 90 | 1,2,3-Trichlorobenzene | 1.15426 | 1.00129 | 13.3 |

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

5003T.D 8260TNEW.M Wed Nov 11 12:20:14 2009
Average RPD= 12.34 Page 3 of 3

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:46 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | FLUOROBENZENE | 1.000 | 1.000 | 0.0 | 91 | 0.00 |
| 2 | | Dichlorodifluoromethane | 0.142 | 0.150 | -5.6 | 96 | 0.00 |
| 3 | P | Chloromethane | 0.213 | 0.206 | 3.3 | 92 | 0.00 |
| 4 | C | VINYL CHLORIDE | 0.235 | 0.238 | -1.3 | 90 | 0.00 |
| 5 | | Bromomethane | 0.101 | 0.107 | -5.9 | 86 | 0.00 |
| 6 | | Chloroethane | 0.126 | 0.133 | -5.6 | 94 | 0.02 |
| 7 | | Trichlorofluoromethane | 0.297 | 0.312 | -5.1 | 96 | 0.00 |
| 8 | | Acrolein | 0.017 | 0.012 | 29.4# | 58 | 0.00 |
| 9 | | Acetone | 0.102 | 0.133 | -30.4# | 128 | -0.01 |
| 10 | C | 1,1-DICHLOROETHENE | 0.198 | 0.218 | -10.1# | 99 | 0.00 |
| 11 | | Trichlorotrifluoroethane | 0.226 | 0.245 | -8.4 | 100 | 0.00 |
| 12 | | Acrylonitrile | 0.069 | 0.056 | 18.8 | 75 | -0.01 |
| 13 | | Carbon Disulfide | 0.631 | 0.741 | -17.4 | 109 | 0.00 |
| 14 | | Methylene Chloride | 0.296 | 0.275 | 7.1 | 100 | 0.00 |
| 15 | | Allyl Chloride | 0.710 | 0.643 | 9.4 | 85 | 0.00 |
| 16 | | Vinyl Acetate | 0.032 | 0.102 | -218.7# | 320# | 0.00 |
| 17 | | MTBE | 0.758 | 0.799 | -5.4 | 97 | -0.01 |
| 18 | | trans-1,2-Dichloroethene | 0.227 | 0.246 | -8.4 | 96 | 0.00 |
| 19 | P | 1,1-Dichloroethane | 0.382 | 0.404 | -5.8 | 95 | 0.00 |
| 20 | | 2-Butanone | 0.040 | 0.046 | -15.0 | 110 | -0.01 |
| 21 | | Ethyl Acetate | 0.293 | 0.362 | -23.5# | 118 | 0.00 |
| 22 | | cis-1,2-Dichloroethene | 0.241 | 0.254 | -5.4 | 96 | 0.00 |
| 23 | | Ethyl Cyanide | 0.046 | 0.047 | -2.2 | 99 | -0.01 |
| 24 | C | CHLOROFORM | 0.369 | 0.386 | -4.6 | 95 | 0.00 |
| 25 | | Methacrylonitrile | 0.170 | 0.184 | -8.2 | 99 | 0.00 |
| 26 | | Tetrahydrofuran | 0.090 | 0.096 | -6.7 | 100 | 0.00 |
| 27 | | Bromochloromethane | 0.108 | 0.112 | -3.7 | 92 | 0.00 |
| 28 | | 2,2-Dichloropropane | 0.240 | 0.232 | 3.3 | 95 | 0.00 |
| 29 | | Diethyl ether | 0.218 | 0.216 | 0.9 | 91 | 0.00 |
| 30 | | 1,1,1-Trichloroethane | 0.307 | 0.317 | -3.3 | 93 | 0.00 |
| 31 | | Iodomethane | 0.324 | 0.346 | -6.8 | 94 | 0.00 |
| 32 | S | Dibromofluoromethane | 0.236 | 0.223 | 5.5 | 85 | 0.00 |
| 33 | | 1,1-Dichloropropene | 0.106 | 0.112 | -5.7 | 97 | 0.00 |
| 34 | S | 1,2-Dichloroethane-d4 | 0.282 | 0.268 | 5.0 | 85 | 0.00 |
| 35 | | Carbon Tetrachloride | 0.270 | 0.290 | -7.4 | 99 | 0.00 |
| 36 | | 1,2-Dichloroethane | 0.278 | 0.302 | -8.6 | 97 | -0.01 |
| 37 | | Isobutanol | 0.016 | 0.014 | 12.5 | 90 | -0.01 |
| 38 | P | Benzene | 0.870 | 0.986 | -13.3 | 101 | 0.00 |
| 39 | | n-Hexane | 0.442 | 0.639 | -44.6# | 144 | 0.00 |
| 40 | | Trichloroethene | 0.228 | 0.248 | -8.8 | 98 | 0.00 |
| 41 | | n-Butanol | 0.014 | 0.012 | 14.3 | 82 | -0.01 |
| 42 | C | 1,2-DICHLOROPROPANE | 0.201 | 0.241 | -19.9# | 110 | -0.01 |
| 43 | | 1,4-Dioxane | 0.007 | 0.003 | 57.1# | 51 | -0.02 |
| 44 | | Methyl Methacrylate | 0.203 | 0.238 | -17.2 | 115 | -0.01 |
| 45 | | Bromodichloromethane | 0.243 | 0.270 | -11.1 | 104 | -0.01 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 47 | | 4-Methyl-2-Pentanone | 0.316 | 0.338 | -7.0 | 102 | -0.01 |
| 48 | | 2-Chloroethylvinylether | 0.142 | 0.189 | -33.1# | 127 | -0.01 |
| 49 | | cis-1,3-Dichloropropene | 0.304 | 0.352 | -15.8 | 110 | -0.01 |
| 50 | S | Toluene-d8 | 0.899 | 0.943 | -4.9 | 97 | 0.00 |
| 51 | C | TOLUENE | 0.864 | 1.033 | -19.6# | 111 | -0.01 |
| 52 | | trans-1,3-Dichloropropene | 0.243 | 0.300 | -23.5# | 122 | -0.01 |
| 53 | | 1,1,2-Trichloroethane | 0.171 | 0.214 | -25.1# | 119 | 0.00 |
| 54 | | 1,2-Dibromoethane | 0.175 | 0.214 | -22.3# | 117 | -0.01 |
| 55 | I | 2-Bromo-1-chloropropane | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 56 | | 2-Hexanone | 0.651 | 0.640 | 1.7 | 110 | -0.01 |
| 57 | | 1,3-Dichloropropane | 0.953 | 1.061 | -11.3 | 119 | -0.01 |
| 58 | | Ethyl Methacrylate | 0.896 | 0.873 | 2.6 | 109 | -0.01 |
| 59 | | Tetrachloroethene | 0.738 | 0.748 | -1.4 | 98 | 0.00 |
| 60 | | Dibromochloromethane | 0.522 | 0.560 | -7.3 | 121 | -0.01 |
| 61 | P | Chlorobenzene | 1.733 | 1.783 | -2.9 | 109 | -0.01 |
| 62 | | 1,1,1,2-Tetrachloroethane | 0.621 | 0.611 | 1.6 | 104 | -0.01 |
| 63 | C | ETHYL BENZENE | 0.963 | 1.000 | -3.8 | 110 | -0.01 |
| 64 | | m,p-Xylene | 1.202 | 1.256 | -4.5 | 110 | 0.00 |
| 65 | | o-Xylene | 1.218 | 1.211 | 0.6 | 103 | -0.01 |
| 66 | | Styrene | 1.943 | 1.985 | -2.2 | 110 | -0.01 |
| 67 | P | Bromoform | 0.351 | 0.360 | -2.6 | 125 | 0.00 |
| 68 | P | 1,1,2,2-Tetrachloroethane | 0.887 | 0.924 | -4.2 | 111 | 0.00 |
| 69 | S | 4-Bromofluorobenzene | 0.854 | 0.767 | 10.2 | 97 | -0.01 |
| 70 | | Isopropylbenzene | 2.885 | 2.952 | -2.3 | 108 | -0.01 |
| 71 | | trans-1,4-Dichloro-2-butene | 0.251 | 0.247 | 1.6 | 113 | 0.00 |
| 72 | | Bromobenzene | 1.181 | 1.182 | -0.1 | 108 | -0.01 |
| 73 | | 1,2,3-Trichloropropane | 0.284 | 0.288 | -1.4 | 111 | -0.01 |
| 74 | | n-Propylbenzene | 0.408 | 0.416 | -2.0 | 109 | 0.00 |
| 75 | | 1,3,5-Trimethylbenzene | 2.739 | 2.767 | -1.0 | 106 | -0.01 |
| 76 | | 2-Chlorotoluene | 0.765 | 0.803 | -5.0 | 112 | 0.00 |
| 77 | | 4-Chlorotoluene | 0.723 | 0.736 | -1.8 | 108 | 0.00 |
| 78 | | t-Butylbenzene | 1.513 | 1.530 | -1.1 | 106 | -0.01 |
| 79 | | 1,2,4-Trimethylbenzene | 2.798 | 2.809 | -0.4 | 106 | 0.00 |
| 80 | P | sec-Butylbenzene | 3.629 | 3.683 | -1.5 | 107 | -0.01 |
| 81 | P | p-Isopropyltoluene | 3.050 | 3.060 | -0.3 | 106 | -0.01 |
| 82 | C | 1,3-Dichlorobenzene | 1.490 | 1.474 | 1.1 | 106 | -0.01 |
| 83 | | 1,4-Dichlorobenzene | 1.493 | 1.502 | -0.6 | 107 | -0.01 |
| 84 | | n-Butylbenzene | 1.593 | 1.564 | 1.8 | 105 | 0.00 |
| 85 | | 1,2-Dichlorobenzene | 1.500 | 1.437 | 4.2 | 101 | -0.01 |
| 86 | P | 1,2-Dibromo-3-chloropropane | 0.220 | 0.201 | 8.6 | 104 | 0.00 |
| 87 | P | 1,2,4-Trichlorobenzene | 1.187 | 1.103 | 7.1 | 97 | -0.01 |
| 88 | P | Naphthalene | 3.525 | 3.099 | 12.1 | 93 | -0.01 |
| 89 | | Hexachlorobutadiene | 0.538 | 0.542 | -0.7 | 108 | -0.01 |
| 90 | | 1,2,3-Trichlorobenzene | 1.154 | 1.001 | 13.3 | 192 | -0.01 |

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

8260TNEW.M Mon Nov 09 06:39:53 2009

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:46 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 619175m | 10.00 | UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 223172 | 10.00 | UG/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 137955 | 9.43 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 94.30% | | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 165922 | 9.52 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 95.20% | | |
| 50) Toluene-d8 | 6.603 | 98 | 584090 | 10.49 | UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery = | 104.90% | | |
| 69) 4-Bromofluorobenzene | 9.876 | 174 | 171236 | 8.99 | UG/L | -0.01 |
| Spiked Amount 10.000 | | | Recovery = | 89.90% | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.080 | 85 | 92693 | 10.54 | UG/L | 100 |
| 3) Chloromethane | 1.187 | 50 | 127647 | 19.67 | UG/L | 100 |
| 4) VINYL CHLORIDE | 1.266 | 62 | 147280 | 10.12 | UG/L | 97 |
| 5) Bromomethane | 1.488 | 94 | 66536 | 10.62 | UG/L | 99 |
| 6) Chloroethane | 1.567 | 64 | 82463 | 10.55 | UG/L # | 86 |
| 7) Trichlorofluoromethane | 1.739 | 101 | 192940 | 10.50 | UG/L # | 75 |
| 8) Acrolein | 2.033 | 56 | 71430 | 66.01 | UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 412713 | 65.25 | UG/L | 93 |
| 10) 1,1-DICHLOROETHENE | 2.111 | 96 | 134989 | 11.00 | UG/L | 100 |
| 11) Trichlorotrifluoroethane | 2.147 | 101 | 151858 | 10.85 | UG/L | 97 |
| 12) Acrylonitrile | 2.727 | 53 | 346108 | 80.79 | UG/L | 100 |
| 13) Carbon Disulfide | 2.276 | 76 | 458914 | 11.74 | UG/L | 99 |
| 14) Methylene Chloride | 2.513 | 84 | 170118 | 10.77 | UG/L # | 75 |
| 15) Allyl Chloride | 2.405 | 41 | 397943 | 9.05 | UG/L | 100 |
| 16) Vinyl Acetate | 3.186 | 43 | 63142 | 39.96 | UG/L # | 90 |
| 17) MTBE | 2.749 | 73 | 494570 | 10.54 | UG/L | 100 |
| 18) trans-1,2-Dichloroethene | 2.749 | 96 | 152439 | 10.84 | UG/L | 98 |
| 19) 1,1-Dichloroethane | 3.129 | 63 | 249864 | 10.58 | UG/L | 100 |
| 20) 2-Butanone | 3.694 | 72 | 141602 | 56.50 | UG/L # | 129 |
| 21) Ethyl Acetate | 3.766 | 43 | 224226 | 12.35 | UG/L # | 196 |
| 22) cis-1,2-Dichloroethene | 3.673 | 96 | 157472 | 10.54 | UG/L | 91 |
| 23) Ethyl Cyanide | 3.752 | 54 | 292265 | 102.46 | UG/L | 100 |
| 24) CHLOROFORM | 3.988 | 83 | 239049 | 10.45 | UG/L # | 99 |
| 25) Methacrylonitrile | 3.902 | 41 | 1140807 | 108.57 | UG/L # | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:46 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 26) Tetrahydrofuran | 3.945 | 42 | 744991 | 134.15 | UG/L # | 79 |
| 27) Bromochloromethane | 3.902 | 128 | 69311 | 10.37 | UG/L | 83 |
| 28) 2,2-Dichloropropane | 3.666 | 77 | 143809 | 9.67 | UG/L | 91 |
| 29) Diethyl ether | 1.932 | 59 | 133856 | 9.92 | UG/L | 100 |
| 30) 1,1,1-Trichloroethane | 4.153 | 97 | 196416 | 10.34 | UG/L | 98 |
| 31) Iodomethane | 2.226 | 142 | 214182 | 10.68 | UG/L | 100 |
| 33) 1,1-Dichloropropene | 4.325 | 110 | 69445 | 10.55 | UG/L | 100 |
| 35) Carbon Tetrachloride | 4.318 | 117 | 179500 | 10.74 | UG/L | 93 |
| 36) 1,2-Dichloroethane | 4.554 | 62 | 187147 | 10.88 | UG/L | 98 |
| 37) Isobutanol | 4.497 | 43 | 723296 | 726.02 | UG/L # | 95 |
| 38) Benzene | 4.533 | 78 | 610447 | 11.33 | UG/L | 100 |
| 39) n-Hexane | 2.993 | 57 | 395755 | 14.45 | UG/L | 100 |
| 40) Trichloroethene | 5.220 | 130 | 153269 | 10.87 | UG/L | 97 |
| 41) n-Butanol | 5.206 | 56 | 371178 | 428.45 | UG/L | 100 |
| 42) 1,2-DICHLOROPROPANE | 5.457 | 63 | 149114 | 12.00 | UG/L | 100 |
| 43) 1,4-Dioxane | 5.621 | 88 | 39193 | 89.83 | UG/L | 100 |
| 44) Methyl Methacrylate | 5.628 | 41 | 147242 | 11.74 | UG/L # | 92 |
| 45) Bromodichloromethane | 5.779 | 83 | 167407 | 11.11 | UG/L | 98 |
| 46) Dibromomethane | 5.586 | 93 | 86371 | 11.34 | UG/L | 89 |
| 47) 4-Methyl-2-Pentanone | 6.502 | 43 | 1047782 | 53.63 | UG/L # | 87 |
| 48) 2-Chloroethylvinylether | 6.151 | 63 | 116725 | 13.28 | UG/L | 94 |
| 49) cis-1,3-Dichloropropene | 6.295 | 75 | 217650 | 11.56 | UG/L | 100 |
| 51) TOLUENE | 6.674 | 91 | 639882m | 11.96 | UG/L | |
| 52) trans-1,3-Dichloropropene | 6.975 | 75 | 185717 | 12.35 | UG/L | 100 |
| 53) 1,1,2-Trichloroethane | 7.190 | 97 | 132751 | 12.55 | UG/L | 100 |
| 54) 1,2-Dibromoethane | 7.777 | 107 | 132196 | 12.18 | UG/L | 98 |
| 56) 2-Hexanone | 7.527 | 43 | 714625 | 49.16 | UG/L # | 85 |
| 57) 1,3-Dichloropropane | 7.383 | 76 | 236767 | 11.14 | UG/L | 100 |
| 58) Ethyl Methacrylate | 7.118 | 69 | 194808 | 9.74 | UG/L # | 60 |
| 59) Tetrachloroethene | 7.333 | 166 | 166991 | 10.14 | UG/L | 99 |
| 60) Dibromochloromethane | 7.656 | 129 | 124933 | 10.72 | UG/L | 100 |
| 61) Chlorobenzene | 8.415 | 112 | 397975 | 10.29 | UG/L | 100 |
| 62) 1,1,1,2-Tetrachloroethane | 8.537 | 131 | 136386 | 9.84 | UG/L | 100 |
| 63) ETHYL BENZENE | 8.580 | 106 | 223281 | 10.39 | UG/L | 76 |
| 64) m,p-Xylene | 8.744 | 106 | 560406 | 20.90 | UG/L # | 62 |
| 65) o-Xylene | 9.253 | 106 | 270251 | 9.94 | UG/L | 81 |
| 66) Styrene | 9.274 | 104 | 443015 | 10.22 | UG/L | 89 |
| 67) Bromoform | 9.482 | 173 | 80349 | 10.27 | UG/L | 100 |
| 68) 1,1,2,2-Tetrachloroethane | 10.084 | 83 | 206245 | 10.42 | UG/L | 99 |
| 70) Isopropylbenzene | 9.711 | 105 | 658825 | 10.23 | UG/L | 100 |
| 71) trans-1,4-Dichloro-2-b... | 10.148 | 53 | 110141 | 19.66 | UG/L # | 27 |
| 72) Bromobenzene | 10.019 | 77 | 263755 | 10.01 | UG/L | 100 |



59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

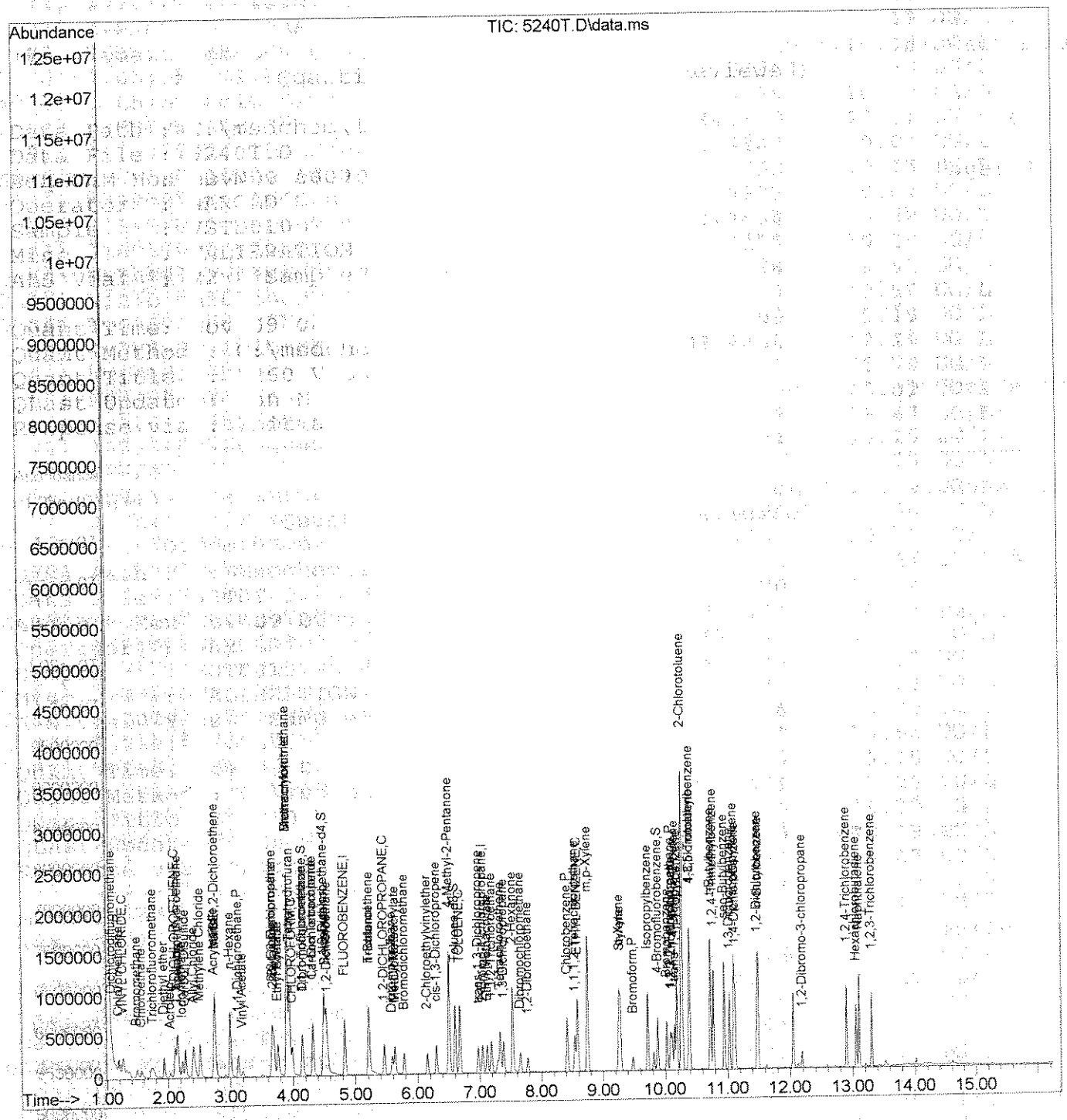
Quant Time: Nov 09 06:39:46 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 73) 1,2,3-Trichloropropane | 10.105 | 110 | 64234 | 10.15 | UG/L | 100 |
| 74) n-Propylbenzene | 10.184 | 92 | 92739 | 10.19 | UG/L | 82 |
| 75) 1,3,5-Trimethylbenzene | 10.385 | 105 | 617409 | 10.10 | UG/L | 100 |
| 76) 2-Chlorotoluene | 10.256 | 126 | 179256 | 10.50 | UG/L | 100 |
| 77) 4-Chlorotoluene | 10.378 | 126 | 164259 | 10.18 | UG/L | 100 |
| 78) t-Butylbenzene | 10.714 | 91 | 341360 | 10.11 | UG/L # | 71 |
| 79) 1,2,4-Trimethylbenzene | 10.772 | 105 | 626820 | 10.04 | UG/L | 100 |
| 80) sec-Butylbenzene | 10.936 | 105 | 822052 | 10.15 | UG/L | 100 |
| 81) p-Isopropyltoluene | 11.094 | 119 | 682893 | 10.03 | UG/L | 100 |
| 82) 1,3-Dichlorobenzene | 11.022 | 146 | 328864 | 9.89 | UG/L | 100 |
| 83) 1,4-Dichlorobenzene | 11.115 | 146 | 335177 | 10.06 | UG/L | 100 |
| 84) n-Butylbenzene | 11.488 | 92 | 349096 | 9.82 | UG/L | 97 |
| 85) 1,2-Dichlorobenzene | 11.466 | 146 | 320647 | 9.58 | UG/L | 100 |
| 86) 1,2-Dibromo-3-chloropr... | 12.190 | 157 | 44959 | 9.15 | UG/L # | 100 |
| 87) 1,2,4-Trichlorobenzene | 12.899 | 180 | 246050 | 9.29 | UG/L | 100 |
| 88) Naphthalene | 13.100 | 128 | 691609 | 8.79 | UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 121050 | 10.09 | UG/L | 100 |
| 90) 1,2,3-Trichlorobenzene | 13.300 | 180 | 223461 | 8.67 | UG/L | 100 |

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

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:46 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

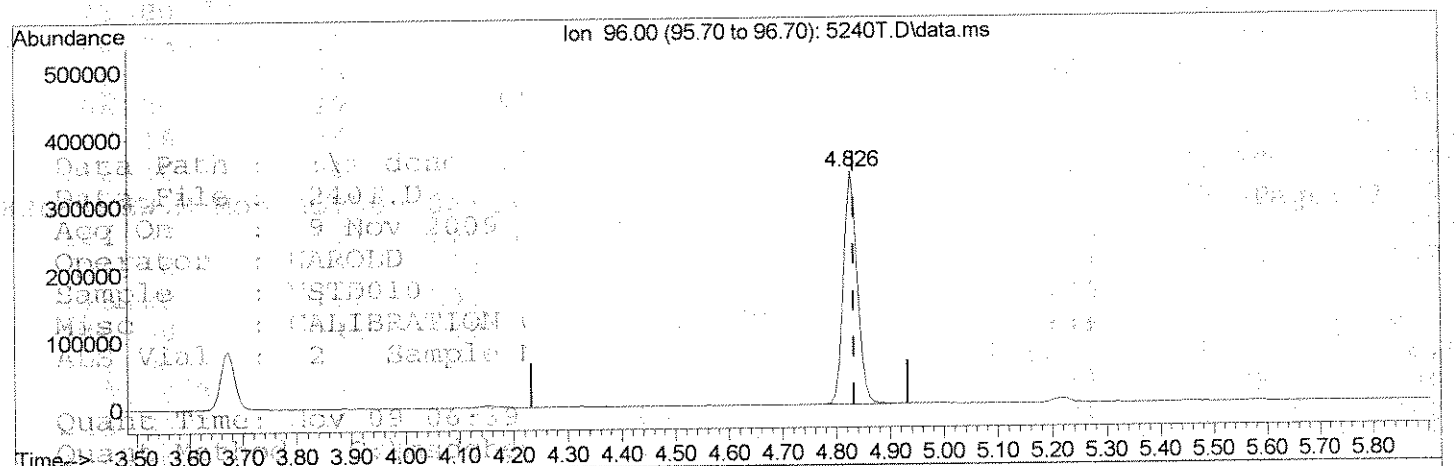


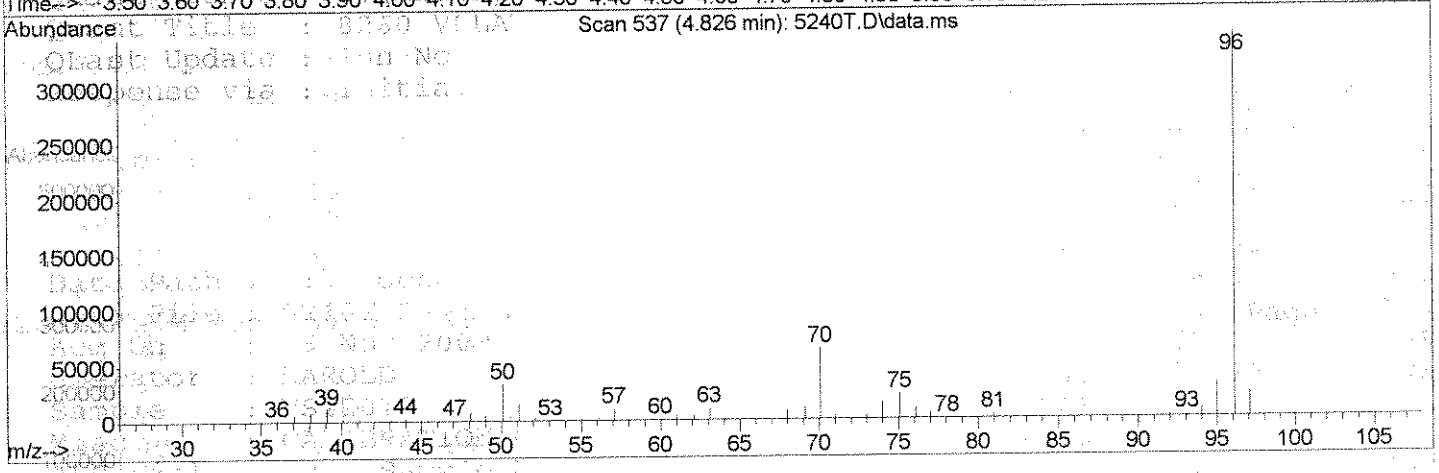



59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:04 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




TIC: 5240T.D\data.ms

(1) FLUOROBENZENE (I)
4.826min (-0.007) 10.00UG/L
response 616389

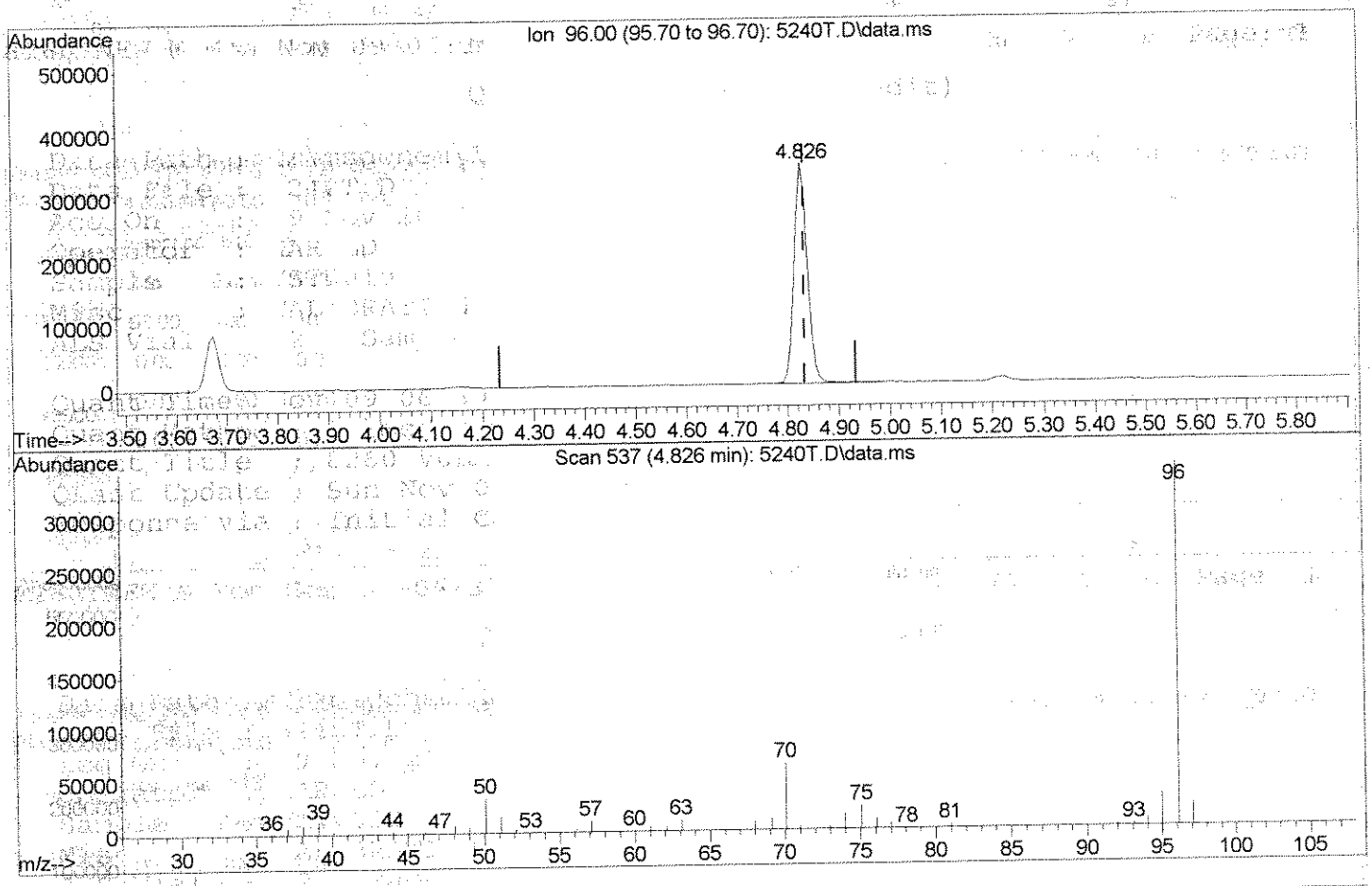
| Ion | Exp% | Act% |
|---|---|---|
| 96.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |



59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:04 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




TIC: 5240T.D\data.ms

(1) FLUOROBENZENE (I)
4.826min (-0.007) 10.00UG/L m
response 619175

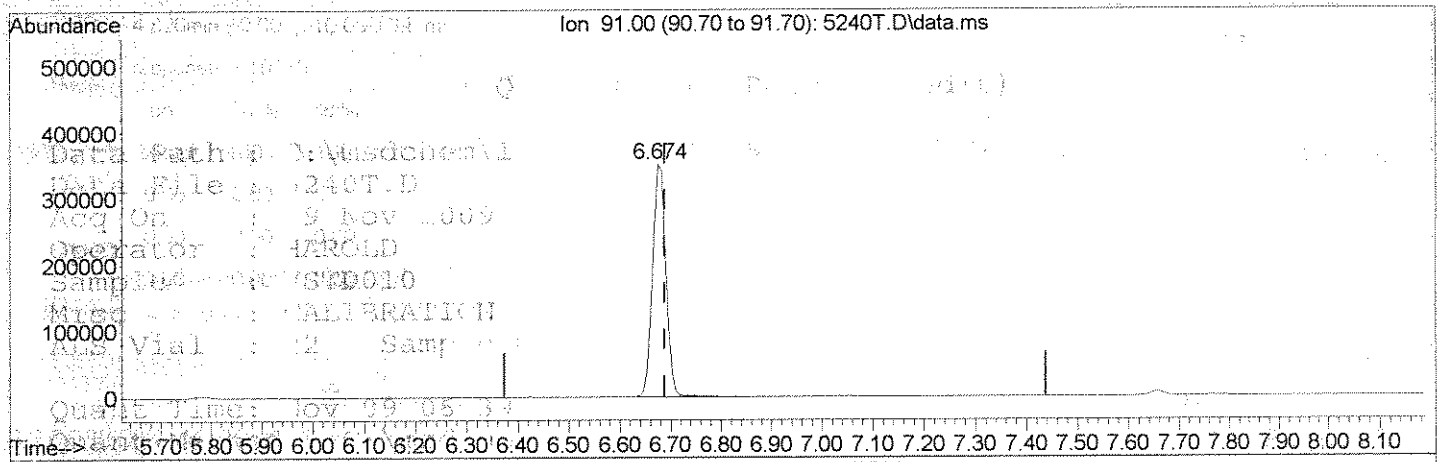
| Ion | Exp% | Act% |
|---|---|---|
| 96.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

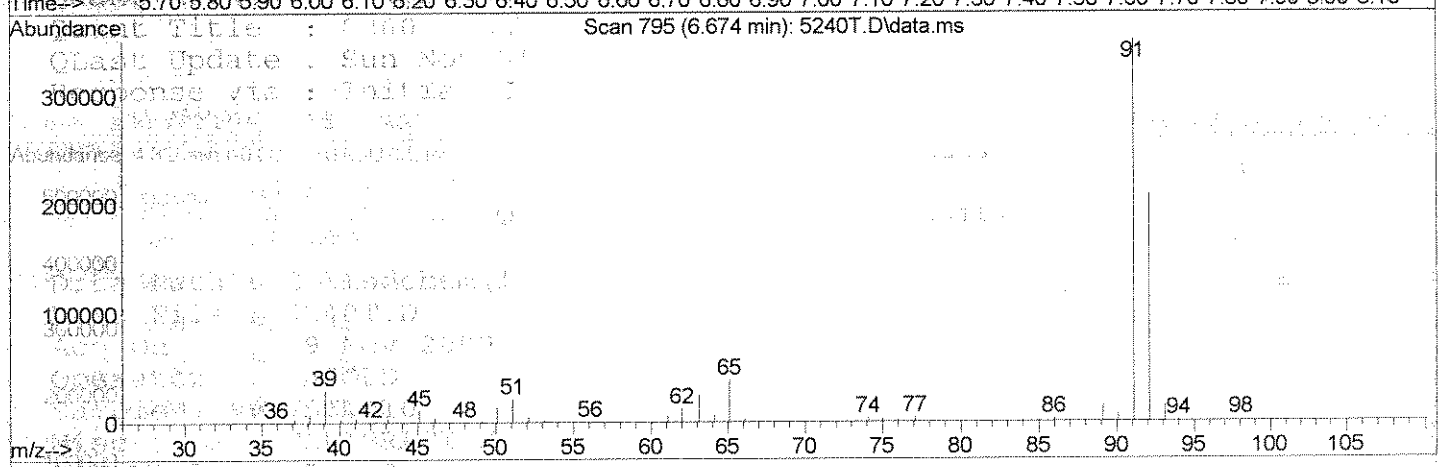


59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:04 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




TIC: 5240T.D\data.ms

(51) TOLUENE (C)
6.674min (-0.014) 12.02UG/L
response 642998

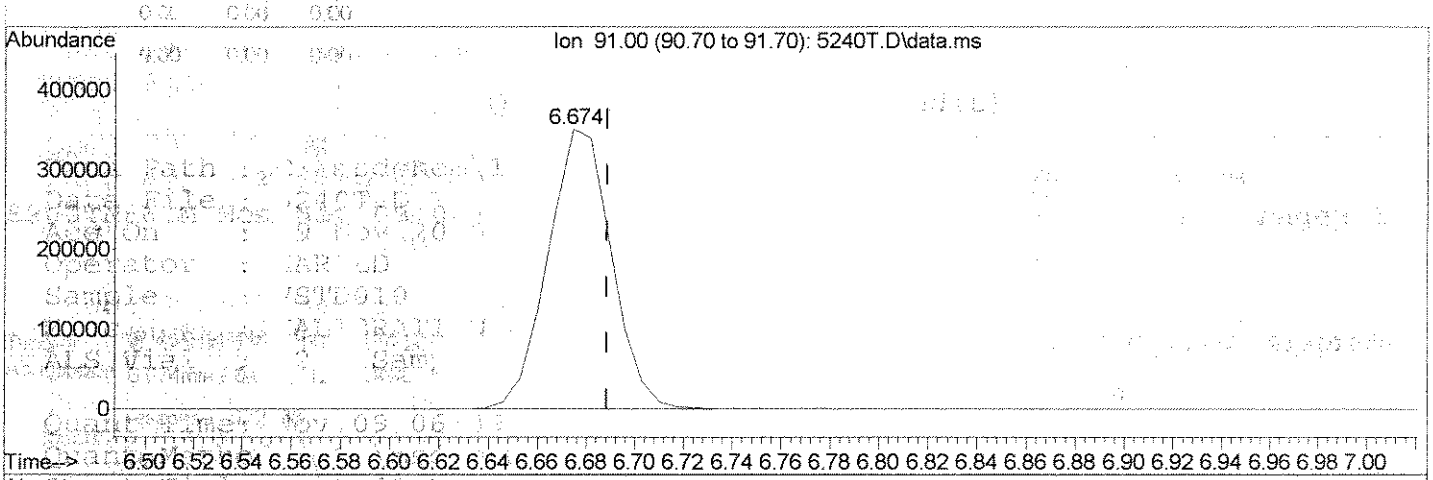
| Ion | Exp% | Act% |
|---|---|---|
| 91.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

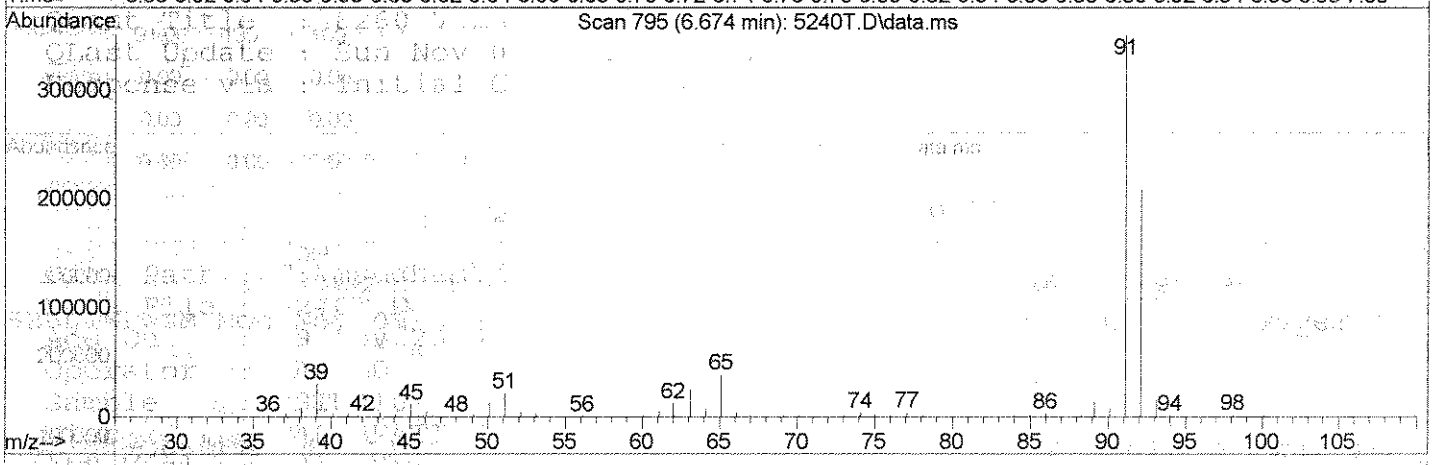


59169b

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5240T.D
Acq On : 9 Nov 2009 6:16
Operator : HAROLD
Sample : VSTD010
Misc : CALIBRATION CHECK 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 06:39:04 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration




TIC: 5240T.D\data.ms

(51) TOLUENE (C)
6.674min (-0.014) 11.96UG/L m
response 639882

| Ion | Exp% | Act% |
|---|---|---|
| 91.00 | 100 | 100 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |



59169b

R560121

# Heritage Environmental Services, LLC

Q2256553

QC Report

QCType BLA01
Date Entered 12Nov09
Analysis Date/Time 09Nov0906:56:00

Duplicate SampleID
Duplicate QCSampleID
Method 309 Matrix 1

DataFile 5241T.D
Analyst 1365 H. WILLIAMS
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 300 | DICHLORODIFLUOROMETHANE | | | 1.0 | BDL | | |
| 236 | CHLOROMETHANE | | | 1.0 | BDL | | |
| 768 | VINYL CHLORIDE | | | 1.0 | BDL | | |
| 198 | BROMOMETHANE | | | 1.0 | BDL | | |
| 234 | CHLOROETHANE | | | 1.0 | BDL | | |
| 372 | TRICHLOROFLUOROMETHANE | | | 1.0 | BDL | | |
| 105 | ACROLEIN | | | 25. | BDL | | |
| 8 | 1,1-DICHLOROETHENE | | | 1.0 | BDL | | |
| 99 | ACETONE (2-PROPANONE) | | | 10. | BDL | | |
| 422 | IODOMETHANE | | | 1.0 | BDL | | |
| 216 | CARBON DISULFIDE | | | 1.0 | BDL | | |
| 73 | 3-CHLOROPROPENE (ALLYL CHLORIDE) | | | 1.0 | BDL | | |
| 302 | DICHLOROMETHANE (METHYLENE CHLORIDE) | | | 1.0 | BDL | | |
| 746 | TRANS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 106 | ACRYLONITRILE | | | 5.0 | BDL | | |
| 859 | METHYL-T-BUTYL ETHER (MTBE) | | | 1.0 | BDL | | |
| 7 | 1,1-DICHLOROETHANE | | | 1.0 | BDL | | |
| 767 | VINYL ACETATE | | | 1.0 | BDL | | |
| 133 | 2,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 246 | CIS-1,2-DICHLOROETHENE | | | 1.0 | BDL | | |
| 52 | 2-BUTANONE | | | 5.0 | BDL | | |
| 348 | ETHYL ACETATE | | | 1.0 | BDL | | |
| 1146 | ETHYL CYANIDE (PROPIONITRILE) | | | 20. | BDL | | |
| 194 | BROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 471 | METHACRYLONITRILE | | | 1.0 | BDL | | |
| 3457 | 2-METHYL-2-PROPENENITRILE | | | 1.0 | BDL | | |
| 709 | TETRAHYDROFURAN | | | 20. | BDL | | |
| 235 | CHLOROFORM | | | 1.0 | BDL | | |
| 2 | 1,1,1-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 217 | CARBON TETRACHLORIDE | | | 1.0 | BDL | | |
| 10 | 1,1-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 151 | BENZENE | | | 1.0 | BDL | | |
| 21 | 1,2-DICHLOROETHANE | | | 1.0 | BDL | | |
| 1525 | 2-BUTANOL | | | 100 | BDL | | |
| 750 | TRICHLOROETHENE | | | 1.0 | BDL | | |
| 517 | N-BUTANOL | | | 100 | BDL | | |
| 23 | 1,2-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 296 | DIBROMOMETHANE | | | 1.0 | BDL | | |
| 130 | 1,4-DIOXANE | | | 100 | BDL | | |
| 1147 | METHYL METHACRYLATE | | | 1.0 | BDL | | |
| 195 | BROMODICHLOROMETHANE | | | 1.0 | BDL | | |
| 754 | 2-CHLOROETHYLVINYLETHER | | | 1.0 | BDL | | |
| 247 | CIS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 91 | 4-METHYL-2-PENTANONE | | | 5.0 | BDL | | |

11/12/09

R560121

# Heritage Environmental Services, LLC

Q2256553

QC Report

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 724 | TOLUENE | | | 1.0 | BDL | | |
| 747 | TRANS-1,3-DICHLOROPROPENE | | | 1.0 | BDL | | |
| 4 | 1,1,2-TRICHLOROETHANE | | | 1.0 | BDL | | |
| 351 | ETHYL METHACRYLATE | | | 1.0 | BDL | | |
| 703 | TETRACHLOROETHENE | | | 1.0 | BDL | | |
| 27 | 1,3-DICHLOROPROPANE | | | 1.0 | BDL | | |
| 60 | 2-HEXANONE | | | 5.0 | BDL | | |
| 295 | DIBROMOCHLOROMETHANE | | | 1.0 | BDL | | |
| 18 | 1,2-DIBROMOETHANE (EDB) | | | 1.0 | BDL | | |
| 231 | CHLOROBENZENE | | | 1.0 | BDL | | |
| 1 | 1,1,1,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 349 | ETHYL BENZENE | | | 1.0 | BDL | | |
| 492 | M/P-XYLENE | | | 2.0 | BDL | | |
| 803 | XYLENES (O/M/P-XYLENE) | | | 2.0 | BDL | | |
| 549 | O-XYLENE | | | 1.0 | BDL | | |
| 680 | STYRENE | | | 1.0 | BDL | | |
| 197 | BROMOFORM | | | 1.0 | BDL | | |
| 432 | ISOPROPYLBENZENE (CUMENE) | | | 1.0 | BDL | | |
| 3 | 1,1,2,2-TETRACHLOROETHANE | | | 1.0 | BDL | | |
| 193 | BROMOBENZENE | | | 1.0 | BDL | | |
| 14 | 1,2,3-TRICHLOROPROPANE | | | 1.0 | BDL | | |
| 748 | TRANS-1,4-DICHLORO-2-BUTENE | | | 2.0 | BDL | | |
| 532 | N-PROPYLBENZENE | | | 1.0 | BDL | | |
| 807 | 2-CHLOROTOLUENE (O-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 25 | 1,3,5-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 808 | 4-CHLOROTOLUENE (P-CHLOROTOLUENE) | | | 1.0 | BDL | | |
| 702 | TERT-BUTYLBENZENE | | | 1.0 | BDL | | |
| 17 | 1,2,4-TRIMETHYLBENZENE | | | 1.0 | BDL | | |
| 644 | SEC-BUTYLBENZENE | | | 1.0 | BDL | | |
| 26 | 1,3-DICHLOROBENZENE (M-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 628 | 4-ISOPROPYLTOLUENE (P-ISOPROPYLTOLUENE) | | | 1.0 | BDL | | |
| 29 | 1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 519 | N-BUTYLBENZENE | | | 1.0 | BDL | | |
| 20 | 1,2-DICHLOROBENZENE (O-DICHLOROBENZENE) | | | 1.0 | BDL | | |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE (DBCP) | | | 1.0 | BDL | | |
| 16 | 1,2,4-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 398 | HEXACHLOROBUTADIENE | | | 1.0 | BDL | | |
| 493 | NAPHTHALENE | | | 1.0 | BDL | | |
| 813 | 1,2,3-TRICHLOROBENZENE | | | 1.0 | BDL | | |
| 5 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | | | 1.0 | BDL | | |
| 305 | DIETHYL ETHER | | | 1.0 | BDL | | |
| 866 | HEXANE | | | 1.0 | BDL | | |
| 301 | DICHLOROETHANE-D4 | | | | | 98 | |
| 726 | TOLUENE-D8 | | | | | 99 | |
| 196 | 4-BROMOFLUOROBENZENE | | | | | 94 | |
| 3362 | DIBROMOFLUOROMETHANE | | | | | 99 | |

**Qualifiers**

5916962

R560121

# Heritage Environmental Services, LLC

QC Report

Q2256553

BDL Below Detection Limit

Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5241T.D
Acq On : 9 Nov 2009 6:56
Operator : HAROLD
Sample : VBLK
Misc : 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 07:14:48 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration

Q2256553

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) FLUOROBENZENE | 4.826 | 96 | 593943 | 10.00 UG/L | 0.00 |
| 55) 2-Bromo-1-chloropropane | 7.047 | 77 | 191412 | 10.00 UG/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 32) Dibromofluoromethane | 4.146 | 113 | 138826 | 9.90 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 99.00% | |
| 34) 1,2-Dichloroethane-d4 | 4.482 | 65 | 163446 | 9.77 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 97.70% | |
| 50) Toluene-d8 | 6.603 | 98 | 527352 | 9.88 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 98.80% | |
| 69) 4-Bromofluorobenzene | 9.883 | 174 | 153566 | 9.40 UG/L | 0.00 |
| Spiked Amount 10.000 | | | Recovery | = 94.00% | |
| Target Compounds | | | | | Qvalue |
| 8) Acrolein | 2.040 | 56 | 2356 | 12.27 UG/L | 100 |
| 9) Acetone | 2.154 | 43 | 3968 | 10.65 UG/L # | 82 |
| 14) Methylene Chloride | 2.520 | 84 | 9100 | Below Cal # | 68 |
| 26) Tetrahydrofuran | 3.952 | 42 | 1691 | 0.32 UG/L # | 44 |
| 52) trans-1,3-Dichloropropene | 7.047 | 75 | 3108 | 0.22 UG/L | 100 |
| 89) Hexachlorobutadiene | 13.049 | 225 | 2349 | 0.23 UG/L | 100 |

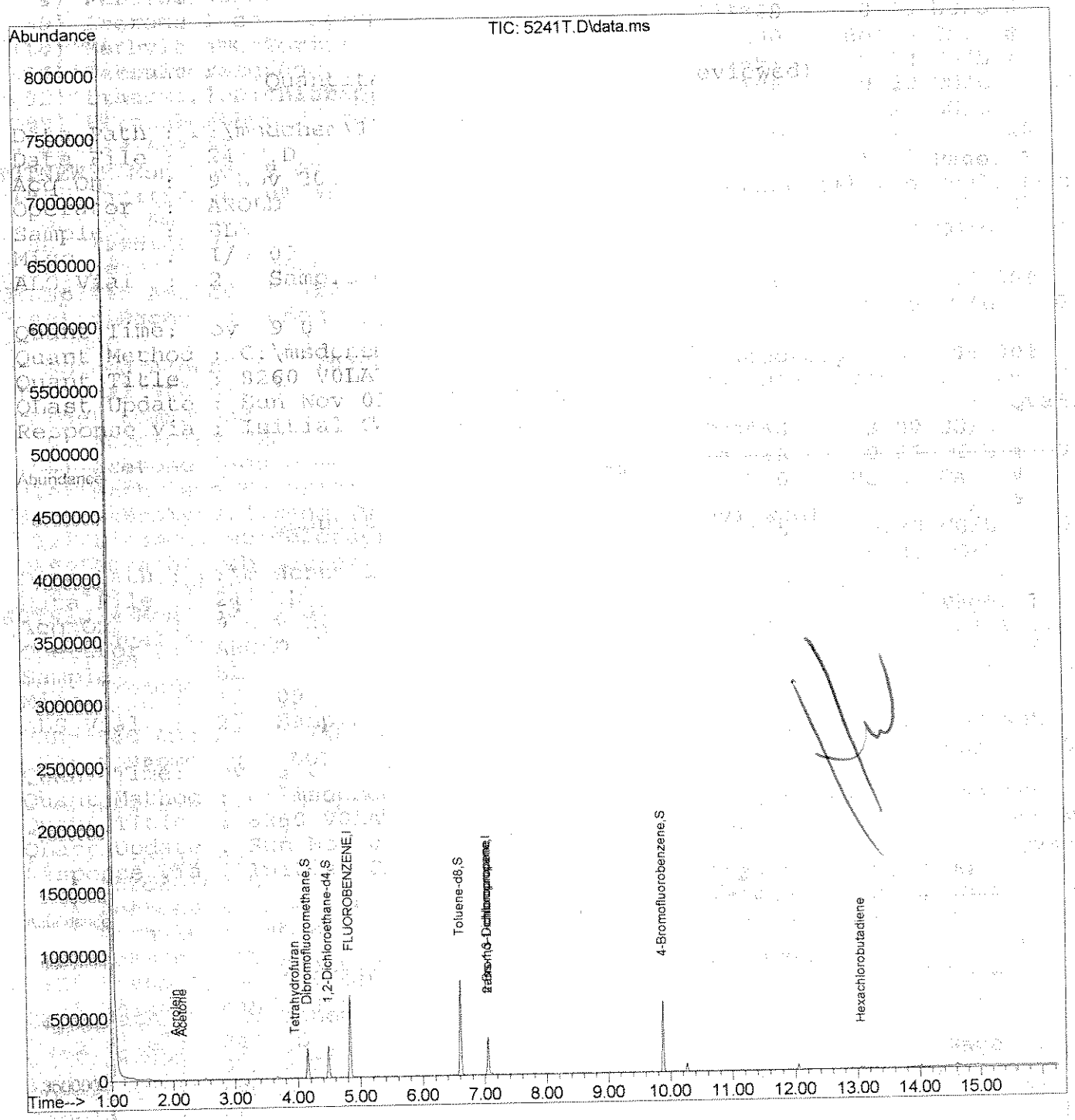
(#) = qualifier out of range (m) = manual integration (+) = signals summed



59169b

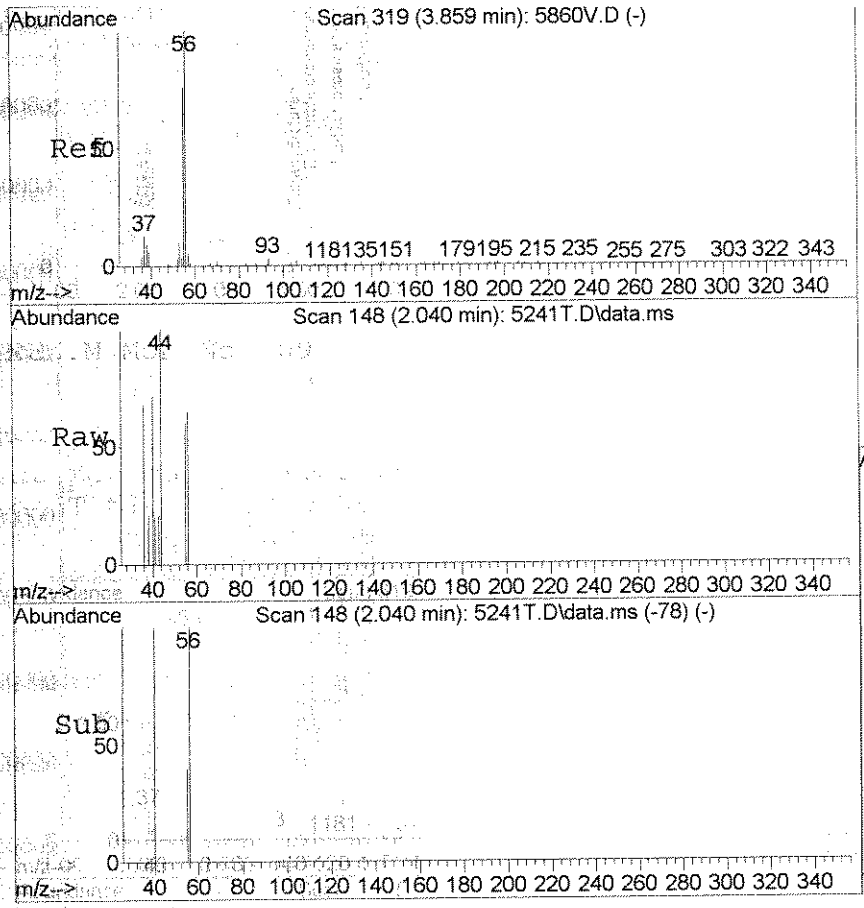
Data Path : C:\msdchem\1\DATA\T110909\
Data File : 5241T.D
Acq On : 9 Nov 2009 6:56
Operator : HAROLD
Sample : VBLK
Misc : 11/9/09
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 09 07:14:48 2009
Quant Method : C:\msdchem\1\METHODS\8260TNEW.M
Quant Title : 8260 VOLATILES
QLast Update : Sun Nov 01 07:24:09 2009
Response via : Initial Calibration



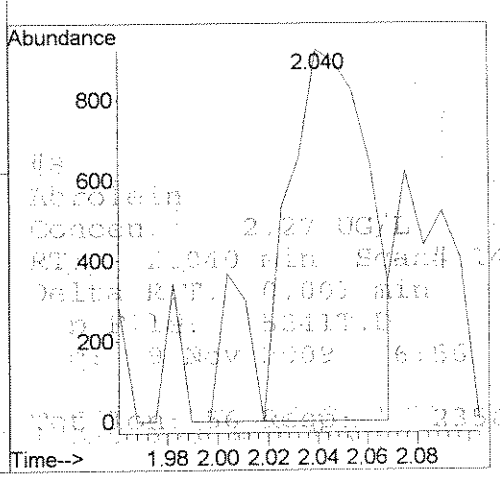


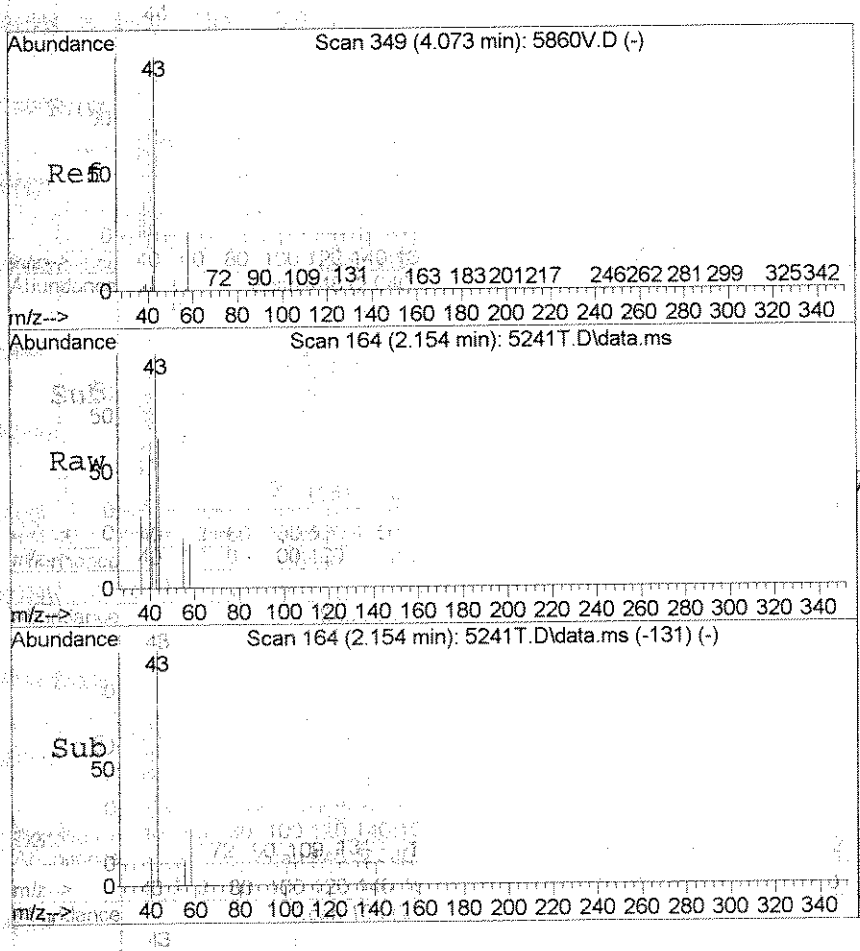

59169b




#8
Acrolein
Concen: 2.27 UG/L
RT: 2.040 min Scan# 148
Delta R.T. 0.001 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

Tgt Ion: 56 Resp: 2356

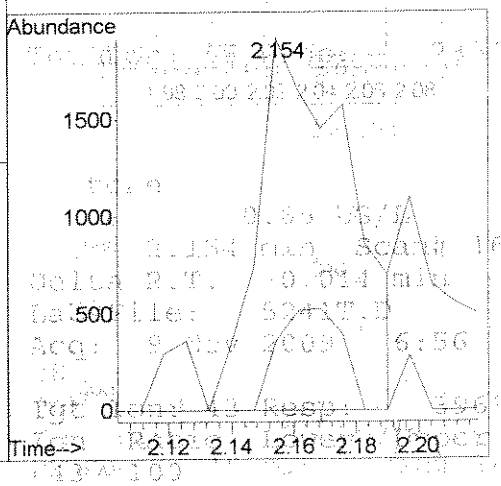



#9
Acetone
Concen: 0.65 UG/L
RT: 2.154 min Scan# 164
Delta R.T. -0.014 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

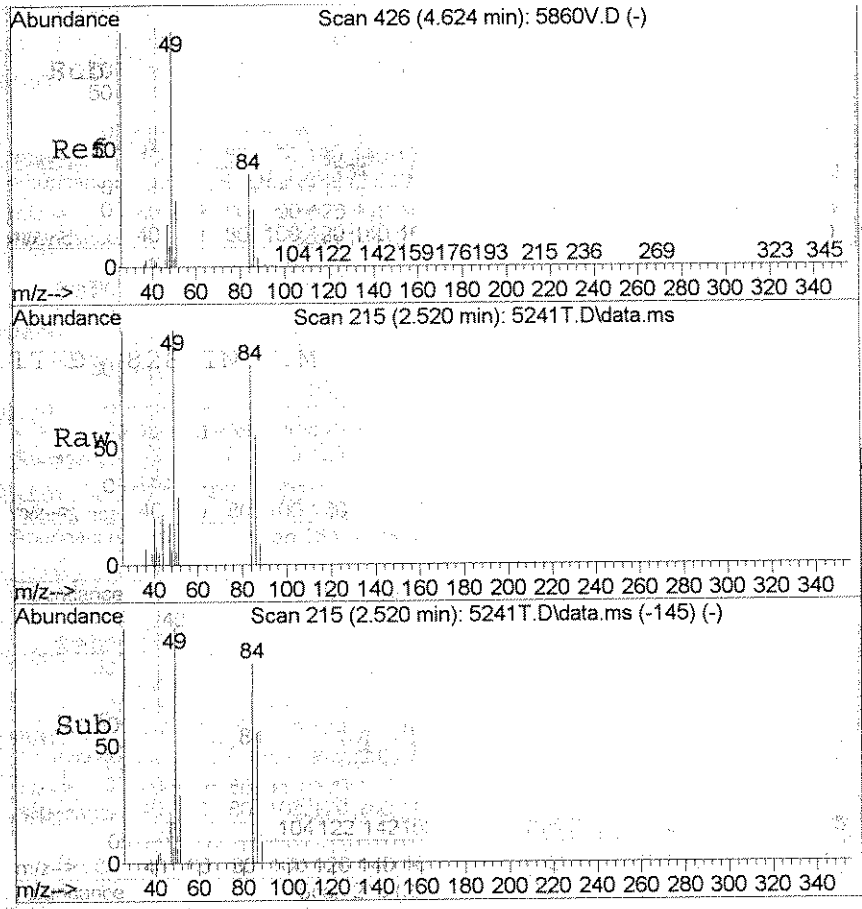
Tgt Ion: 43 Resp: 3968

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 19.4 | 23.1 | 34.7# |





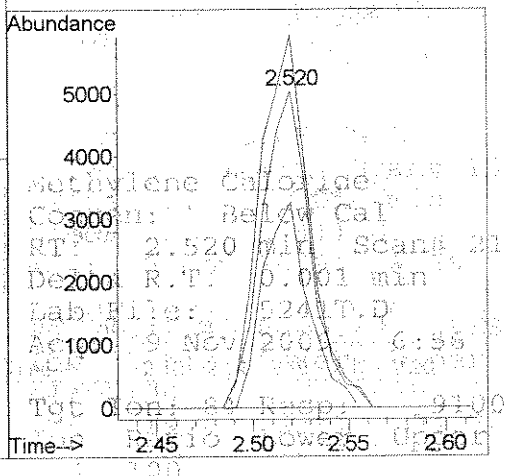

59169b

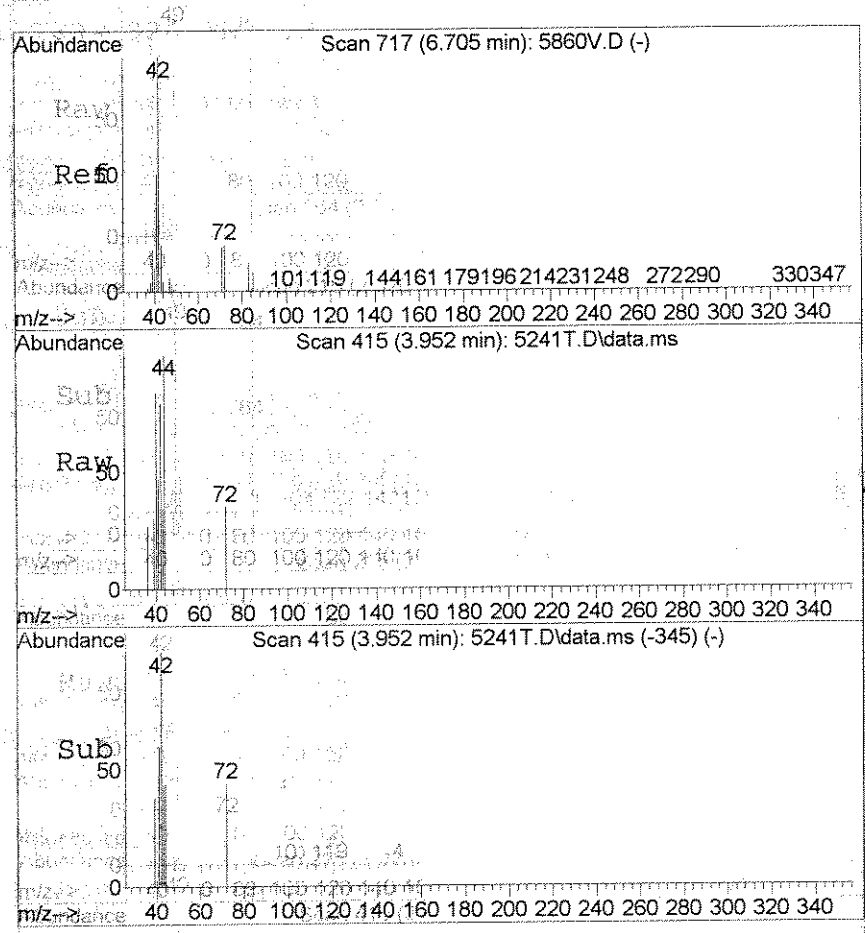



#14
Methylene Chloride
Concen: Below Cal
RT: 2.520 min Scan# 215
Delta R.T. 0.001 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

Tgt Ion: 84 Resp: 9100

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 117.0 | 140.2 | 210.2# |
| 86 | 60.3 | 51.1 | 76.7 |

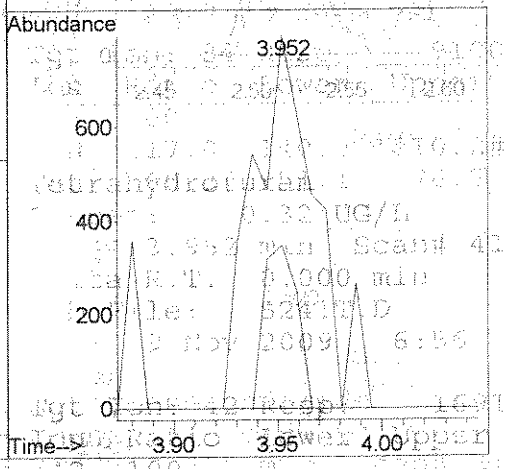



#26
Tetrahydrofuran
Concen: 0.32 UG/L
RT: 3.952 min Scan# 415
Delta R.T. 0.000 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

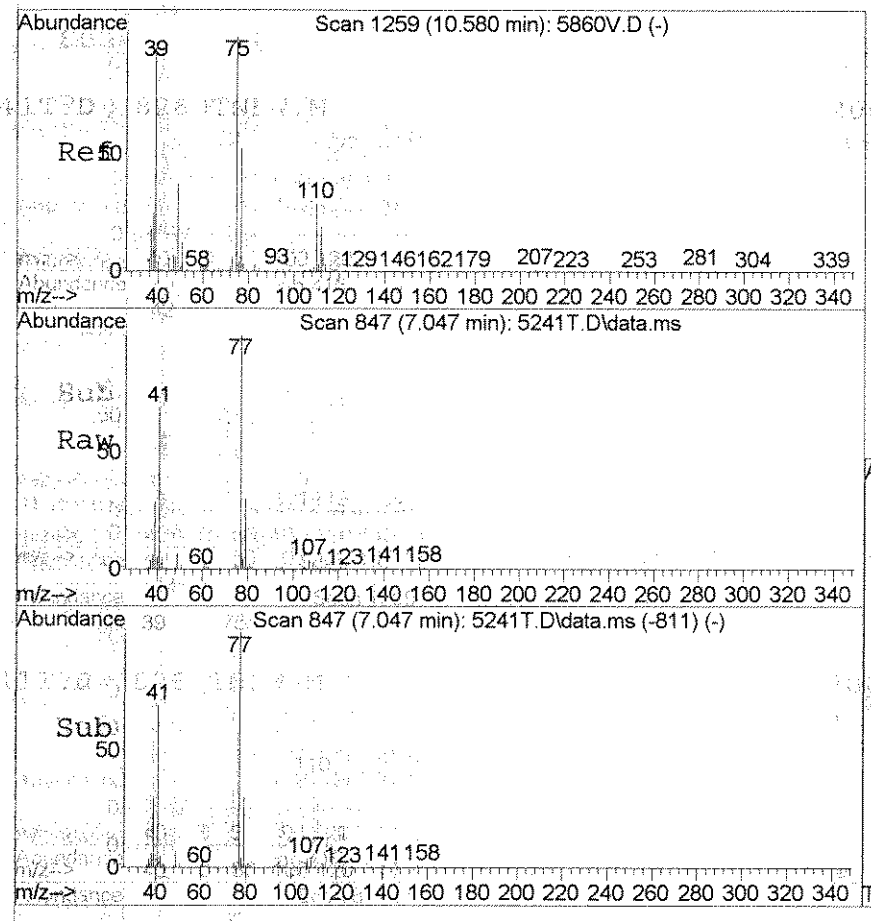
Tgt Ion: 42 Resp: 1691

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 0.0 | 24.5 | 36.7# |



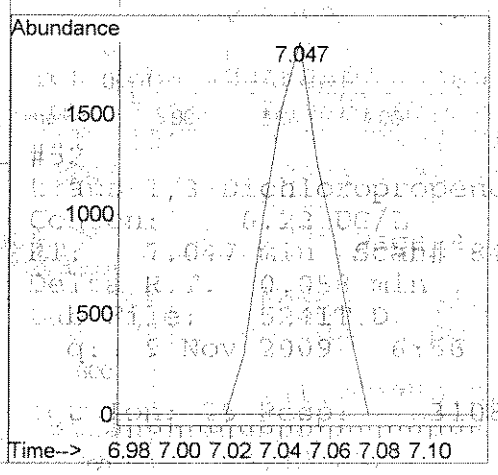


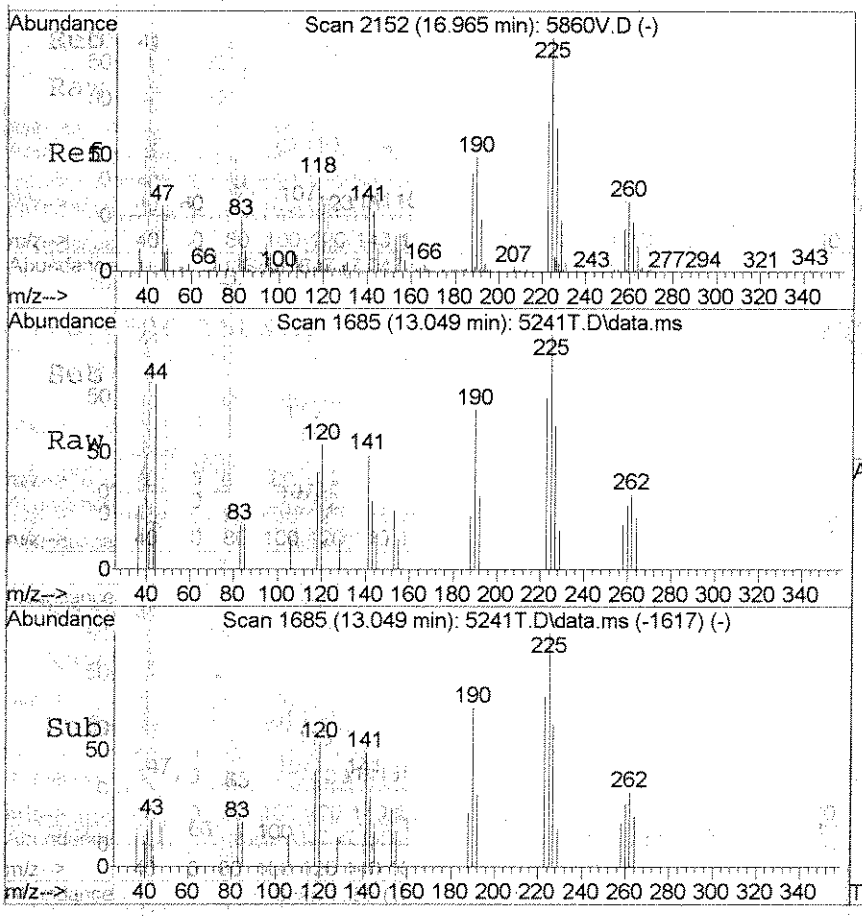

59169b




#52
trans-1,3-Dichloropropene
Concen: 0.22 UG/L
RT: 7.047 min Scan# 847
Delta R.T. 0.058 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

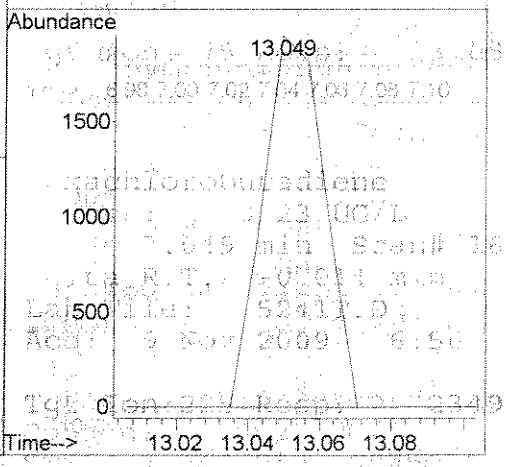
Tgt Ion: 75 Resp: 3108




#89
Hexachlorobutadiene
Concen: 0.23 UG/L
RT: 13.049 min Scan# 1685
Delta R.T. -0.014 min
Lab File: 5241T.D
Acq: 9 Nov 2009 6:56

Tgt Ion:225 Resp: 2349






59169b

R560105 Heritage Environmental Services, LLC Q2255318

QC Report

QCType BLA02 Duplicate SampleID DataFile 5689H.D
Date Entered 09Nov09 Duplicate QCSampleID Analyst 2447 J. MINNIEAR, II
Analysis Date/Time 09Nov0913:45:00 Method 370 Matrix 1 Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 97 | ACENAPHTHENE | | | 0.10 | BDL | | |
| 98 | ACENAPHTHYLENE | | | 0.10 | BDL | | |
| 128 | ANTHRACENE | | | 0.10 | BDL | | |
| 155 | BENZO(A)ANTHRACENE | | | 0.10 | BDL | | |
| 156 | BENZO(A)PYRENE | | | 0.02 | BDL | | |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | | 0.10 | BDL | | |
| 158 | BENZO(G,H,I)PERYLENE | | | 0.10 | BDL | | |
| 159 | BENZO(K)FLUORANTHENE | | | 0.10 | BDL | | |
| 245 | CHRYSENE | | | 0.10 | BDL | | |
| 294 | DIBENZ(A,H)ANTHRACENE | | | 0.10 | BDL | | |
| 363 | FLUORANTHENE | | | 0.10 | BDL | | |
| 366 | FLUORENE | | | 0.10 | BDL | | |
| 413 | INDENO(1,2,3-CD)PYRENE | | | 0.10 | BDL | | |
| 493 | NAPHTHALENE | | | 0.10 | BDL | | |
| 597 | PHENANTHRENE | | | 0.10 | BDL | | |
| 624 | PYRENE | | | 0.10 | BDL | | |
| 58 | 2-FLUOROBIPHENYL | | | | | 74 | |
| 701 | TERPHENYL-D14 | | | | | 126 | |

**Qualifiers**

BDL Below Detection Limit

LKS 11/11/09

Data File : X:\DATA\H110909\5689H.D
Acq On : 9 Nov 09 1:45 pm
Sample : SBLK-465
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

Vial: 7
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 953874 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 477805 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 779402 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.66 | 240 | 571927 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.11 | 264 | 372005 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 323442 | 3.68 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery | = 73.60%# | |
| 16) Terphenyl-d14 | 19.06 | 244 | 357975 | 6.31 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery | = 126.20%# | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 27.89 | 276 | 62 | 0.21 ug/ml | 89 |
| 24) Dibenz[a,h]anthracene | 28.16 | 278 | 289 | 0.23 ug/ml# | 53 |

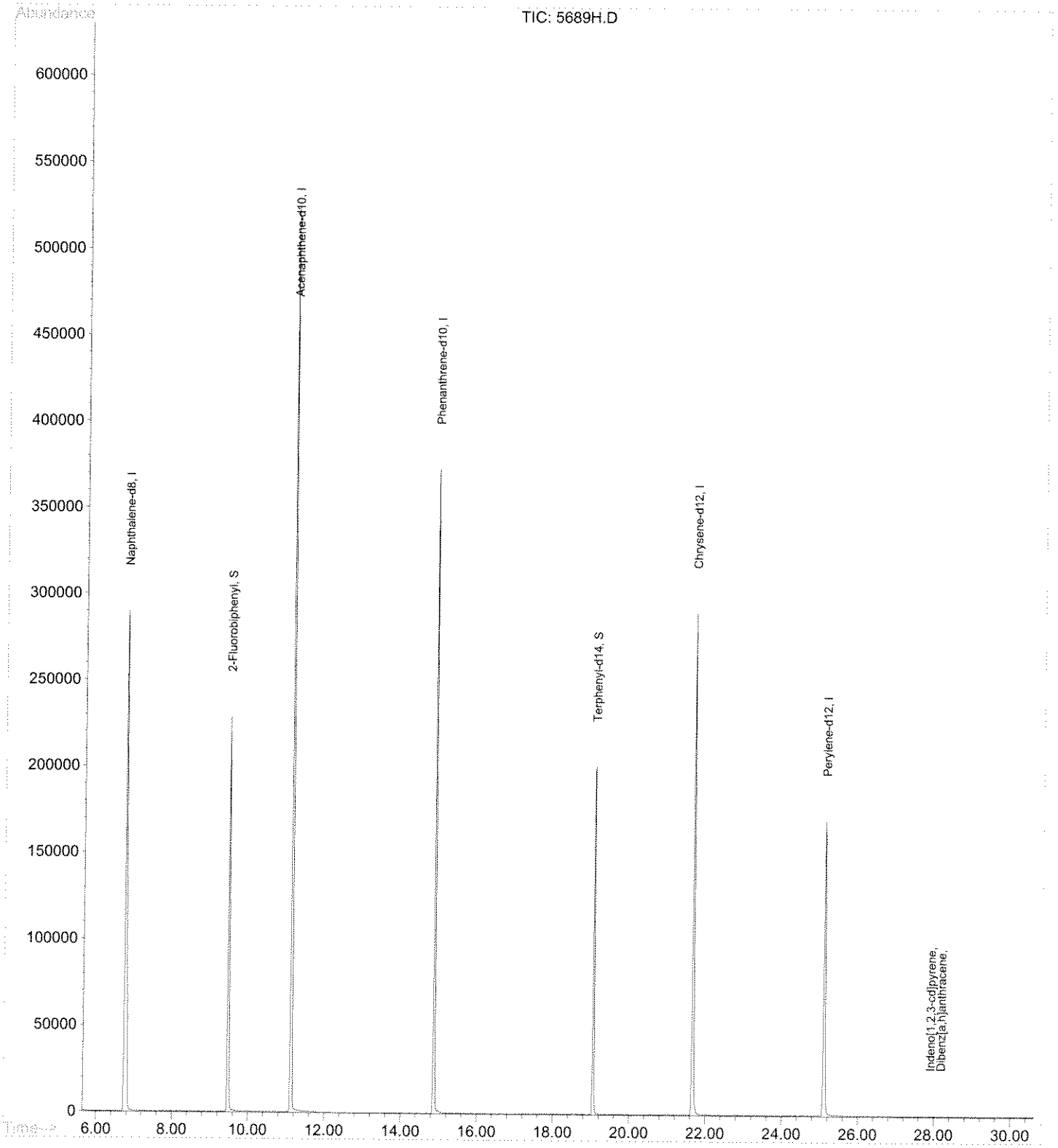
(#) = qualifier out of range (m) = manual integration

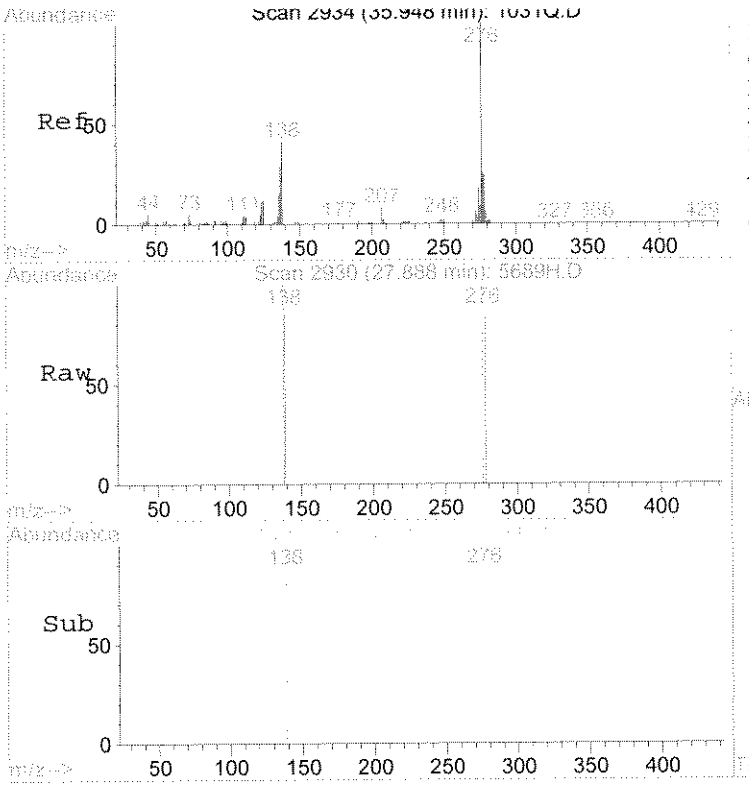
Data File : X:\DATA\H110909\5689H.D
Acq On : 9 Nov 09 1:45 pm
Sample : SBLK-465
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

Vial: 7
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration

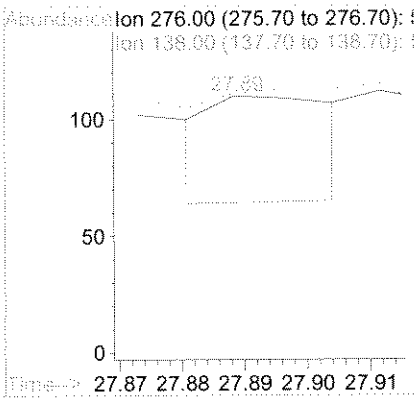


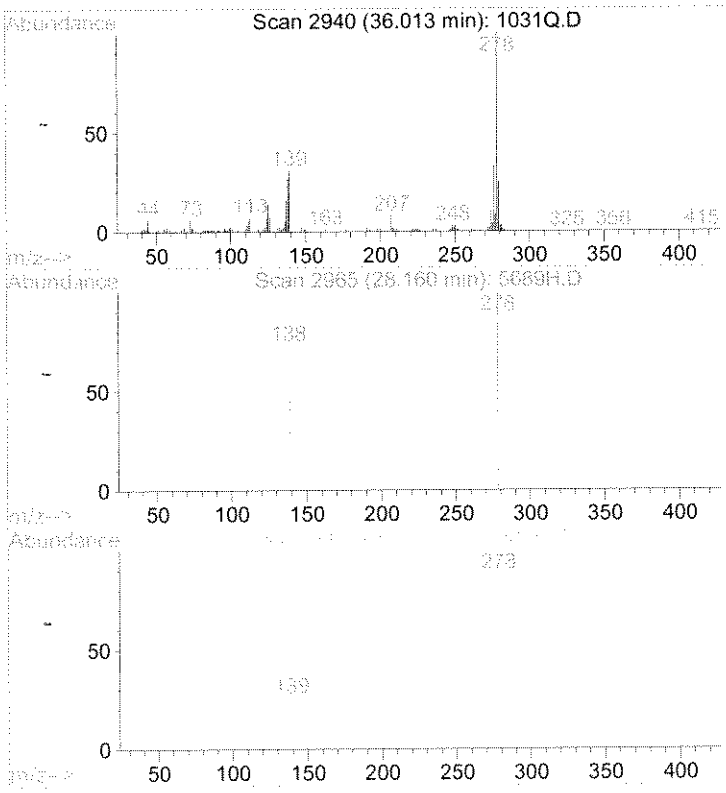


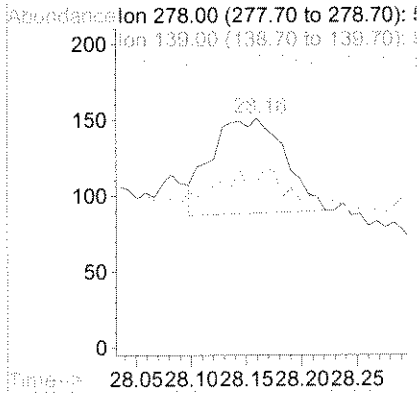

Indeno[1,2,3-cd]pyrene
Concen: 0.21 ug/ml
RT: 27.89 min Scan# 2930
Delta R.T. -0.20 min
Lab File: 5689H.D
Acq: 9 Nov 09 1:45 pm

Tgt Ion:276 Resp: 62

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 38.7 | 26.1 | 39.1 |



QC Std# 307
Method# 187

Heritage Environmental Services, Indianapolis
LCS Semi-Volatile QC Report-EPA Method 8270-PNA
Water

LCS Data File : 5690H.
LCS Date/Time : 9 Nov 09 2:21 pm
Spike Conc : 5 uG/L 5 uG/L
Prep Factor: 1

| Compound | Spike Conc | Spike % Rec | Min % Recovery * | Max |
|---|---|---|---|---|
| Acenaphthene | 3.740 | 74.8 | 51 | 113 |
| Acenaphthylene | 4.090 | 81.8 | 48 | 116 |
| Anthracene | 4.060 | 81.2 | 53 | 113 |
| Benzo(a)anthracene | 4.900 | 98.0 | 58 | 115 |
| Benzo(a)pyrene | 5.450 | 109.0 | 43 | 131 |
| Benzo(b)fluoranthene | 4.120 | 82.4 | 48 | 145 |
| Benzo(g,h,i)perylene | 4.960 | 99.2 | 31 | 139 |
| Benzo(k)fluoranthene | 3.800 | 76.0 | 31 | 122 |
| Chrysene | 3.820 | 76.4 | 37 | 120 |
| Dibenz(a,h)anthracene | 5.020 | 100.4 | D | 132 |
| Fluoranthene | 4.130 | 82.6 | 55 | 109 |
| Fluorene | 3.940 | 78.8 | 52 | 112 |
| Indeno(1,2,3-cd)pyrene | 4.620 | 92.4 | 44 | 126 |
| Naphthalene | 3.400 | 68.0 | 42 | 115 |
| Phenanthrene | 3.670 | 73.4 | 54 | 113 |
| Pyrene | 3.470 | 69.4 | 39 | 125 |

R560105 Heritage Environmental Services, LLC Q2255319

QC Report

QCType LCS Duplicate SampleID DataFile 5690H.D
Date Entered 09Nov09 Duplicate QCSampleID Analyst 2447 J. MINNIEAR, II
Analysis Date/Time 09Nov0914:21:00 Method 370 Matrix 1 Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 97 | ACENAPHTHENE | 5 | | 3.74 | | 74.8 | |
| 98 | ACENAPHTHYLENE | 5 | | 4.09 | | 81.8 | |
| 128 | ANTHRACENE | 5 | | 4.06 | | 81.2 | |
| 155 | BENZO(A)ANTHRACENE | 5 | | 4.9 | | 98 | |
| 156 | BENZO(A)PYRENE | 5 | | 5.45 | | 109 | |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | 5 | | 4.12 | | 82.4 | |
| 158 | BENZO(G,H,I)PERYLENE | 5 | | 4.96 | | 99.2 | |
| 159 | BENZO(K)FLUORANTHENE | 5 | | 3.8 | | 76 | |
| 245 | CHRYSENE | 5 | | 3.82 | | 76.4 | |
| 294 | DIBENZ(A,H)ANTHRACENE | 5 | | 5.02 | | 100.4 | |
| 363 | FLUORANTHENE | 5 | | 4.13 | | 82.6 | |
| 366 | FLUORENE | 5 | | 3.94 | | 78.8 | |
| 413 | INDENO(1,2,3-CD)PYRENE | 5 | | 4.61 | | 92.2 | |
| 493 | NAPHTHALENE | 5 | | 3.4 | | 68 | |
| 597 | PHENANTHRENE | 5 | | 3.67 | | 73.4 | |
| 624 | PYRENE | 5 | | 3.47 | | 69.4 | |

11/11/09

Data File : X:\DATA\H110909\5690H.D
Acq On : 9 Nov 09 2:21 pm
Sample : LCS 593
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

Vial: 8
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1304860 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 687863 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1199011 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.67 | 240 | 950681 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.12 | 264 | 666820 | 10.00 ug/ml | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 6) 2-Fluorobiphenyl | 9.48 | 172 | 463388 | 3.66 ug/ml | 0.01 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 73.20%# | | |
| 16) Terphenyl-d14 | 19.06 | 244 | 590179 | 6.26 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 125.20%# | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Naphthalene | 6.79 | 128 | 562718 | 3.40 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 370962 | 3.45 ug/ml | 97 |
| 7) Acenaphthylene | 10.72 | 152 | 626196 | 4.09 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 363738 | 3.74 ug/ml | 100 |
| 9) Fluorene | 12.50 | 166 | 420349 | 3.94 ug/ml# | 93 |
| 11) Phenanthrene | 14.93 | 178 | 588665 | 3.67 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 594985 | 4.06 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 633573 | 4.13 ug/ml | 96 |
| 15) Pyrene | 18.54 | 202 | 665474 | 3.47 ug/ml# | 81 |
| 17) Benzo[a]anthracene | 21.63 | 228 | 608369 | 4.90 ug/ml# | 53 |
| 18) Chrysene | 21.73 | 228 | 522225 | 3.82 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.22 | 252 | 460133 | 4.11 ug/ml# | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 416022 | 3.80 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.97 | 252 | 394899 | 5.45 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 302694 | 4.61 ug/ml# | 78 |
| 24) Dibenz[a,h]anthracene | 28.15 | 278 | 235390 | 5.02 ug/ml# | 62 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 250073 | 4.96 ug/ml# | 67 |

(#) = qualifier out of range (m) = manual integration
5690H.D SIMNEW.M Tue Nov 10 16:17:38 2009

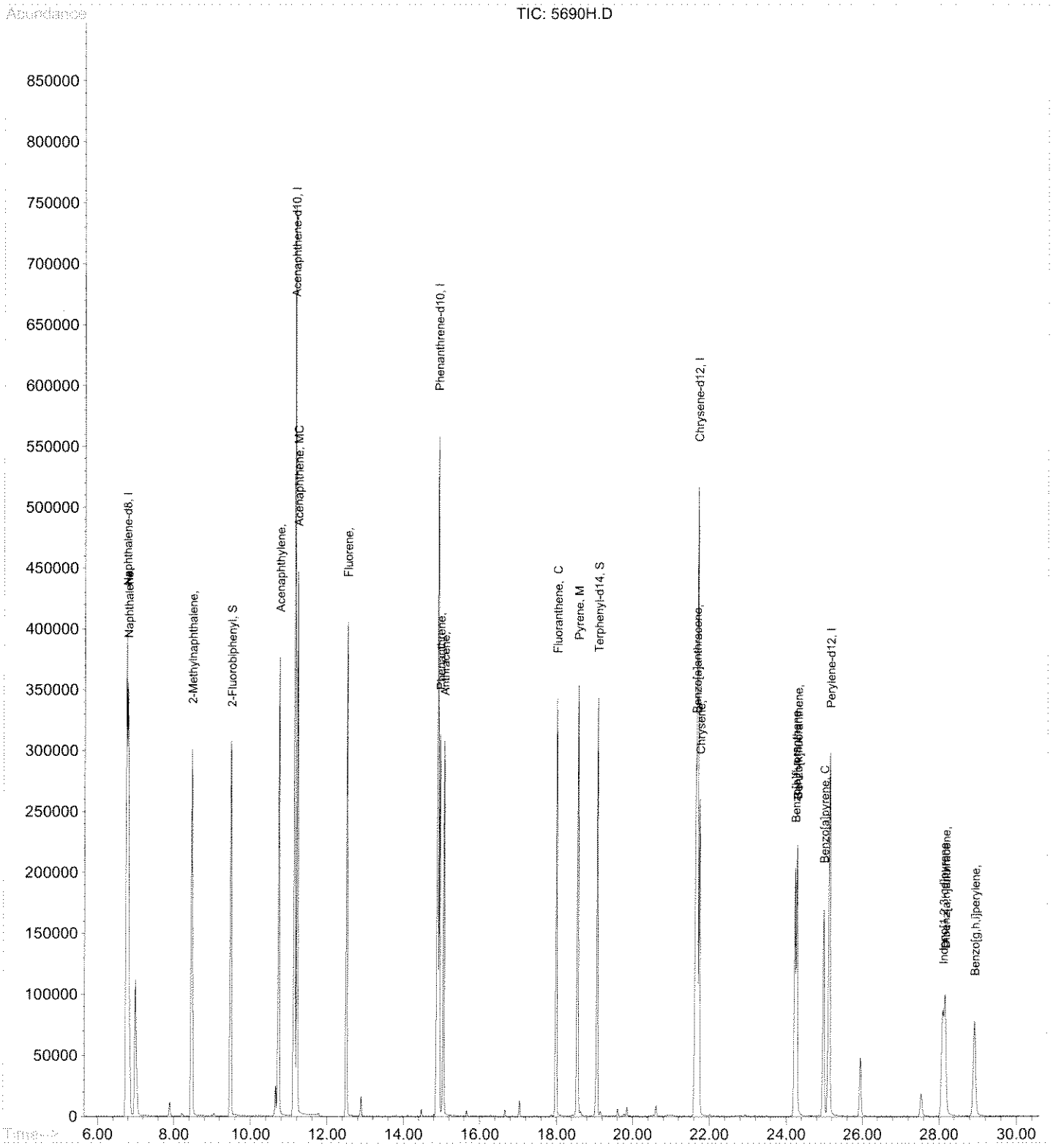


59169b

Data File : X:\DATA\H110909\5690H.D
Acq On : 9 Nov 09 2:21 pm
Sample : LCS 593
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

Vial: 8
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



# Heritage Environmental Services, LLC

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 153
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5691H.D Date/Time 09Nov09 14:57:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 66 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 94 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

6-LT AMBERS, 3-500ML HNO3 SQPL, 12-HCL VIALS
**********MS/MSD THIS SAMPLE**********
**********REPORT ALL RESULTS IN UG/L.**********

JK 11/11/09

Data File : X:\DATA\H110909\5691H.D
Acq On : 9 Nov 09 2:57 pm
Sample : A864529
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

Vial: 9
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1104541 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 621433 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1057053 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.67 | 240 | 884659 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.11 | 264 | 676631 | 10.00 ug/ml | 0.00 |
| System Monitoring Compounds | | | | | |
| 6) 2-Fluorobiphenyl | 9.48 | 172 | 379908 | 3.32 ug/ml | 0.01 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 66.40%# | | |
| 16) Terphenyl-d14 | 19.06 | 244 | 413494 | 4.71 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 94.20%# | | |
| Target Compounds | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 238 | 0.21 ug/ml# | 87 |
| 24) Dibenz[a,h]anthracene | 28.15 | 278 | 152 | 0.23 ug/ml# | 73 |

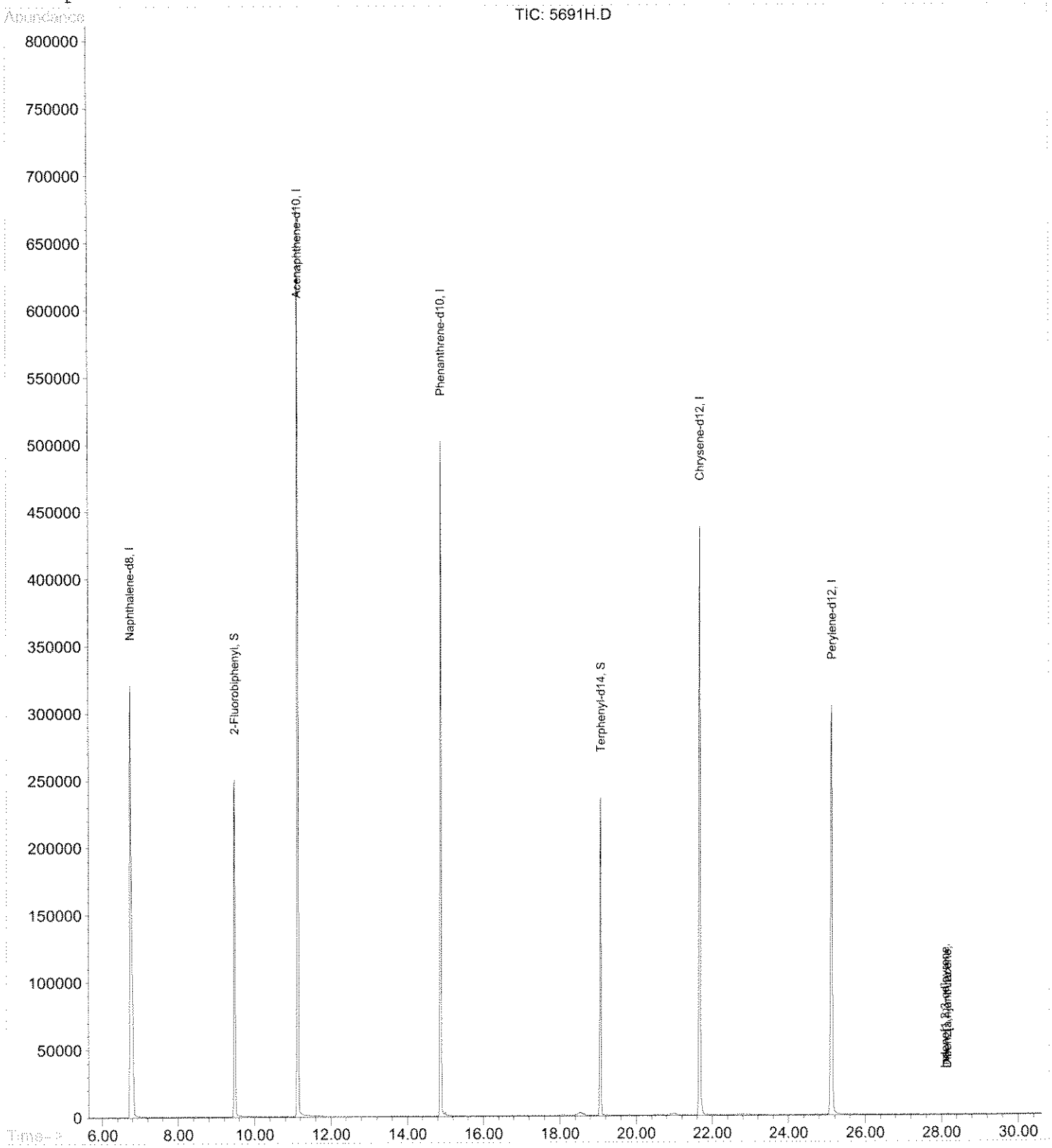
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5691H.D
Acq On : 9 Nov 09 2:57 pm
Sample : A864529
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:12 19109

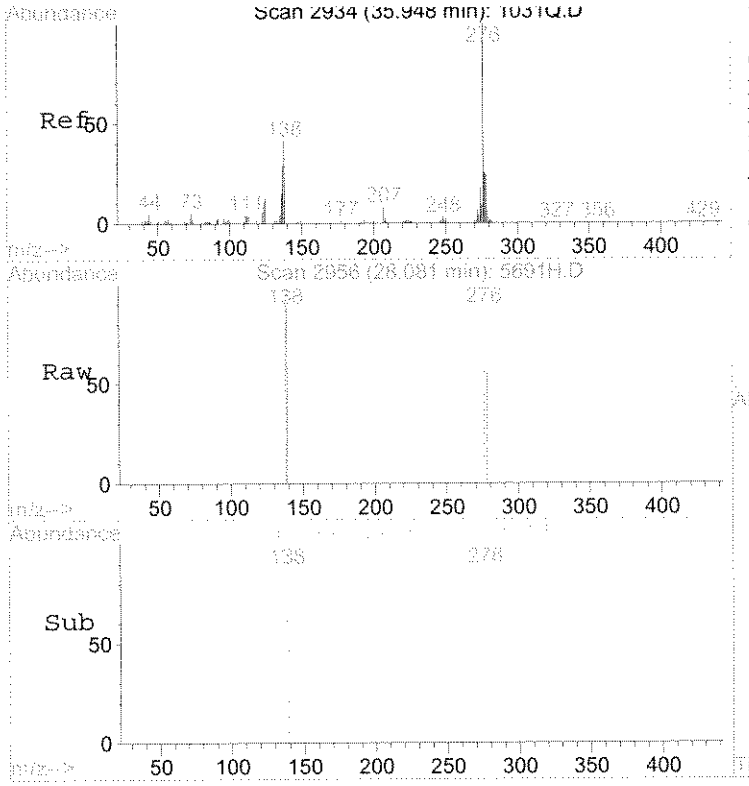
Vial: 9
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



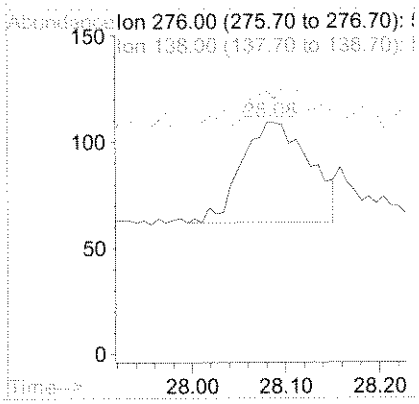
Bad



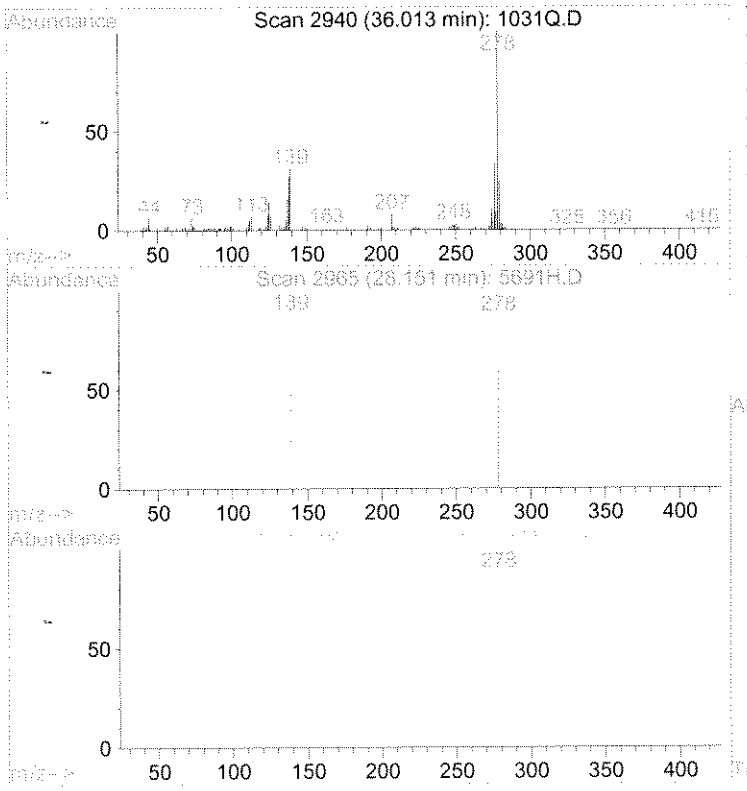

#23
Indeno[1,2,3-cd]pyrene
Concen: 0.21 ug/ml
RT: 28.08 min Scan# 2956
Delta R.T. -0.01 min
Lab File: 5691H.D
Acq: 9 Nov 09 2:57 pm

Tgt Ion:276 Resp: 238

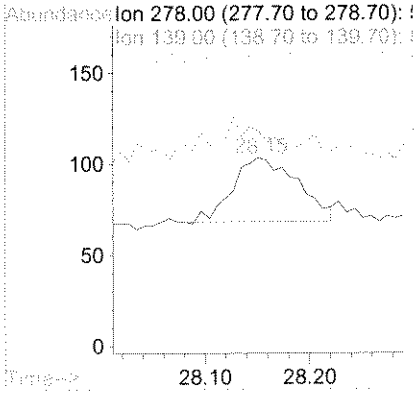
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 25.2 | 26.1 | 39.1# |




Bad




Abundance



# Heritage Environmental Services, LLC

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 132
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5694H.D Date/Time 09Nov09 16:43:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 71 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 81 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

JK 11/11/09

Data File : X:\DATA\H110909\5694H.D
Acq On : 9 Nov 09 4:43 pm
Sample : A864527
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:13 19109

Vial: 12
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.75 | 136 | 1100863 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 622006 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1087620 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.67 | 240 | 915065 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.11 | 264 | 703254 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.48 | 172 | 403926 | 3.53 ug/ml | 0.01 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery | = 70.60%# | |
| 16) Terphenyl-d14 | 19.05 | 244 | 367008 | 4.04 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery | = 80.80%# | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 467 | 0.22 ug/ml# | 72 |
| 24) Dibenz[a,h]anthracene | 28.16 | 278 | 273 | 0.23 ug/ml# | 71 |

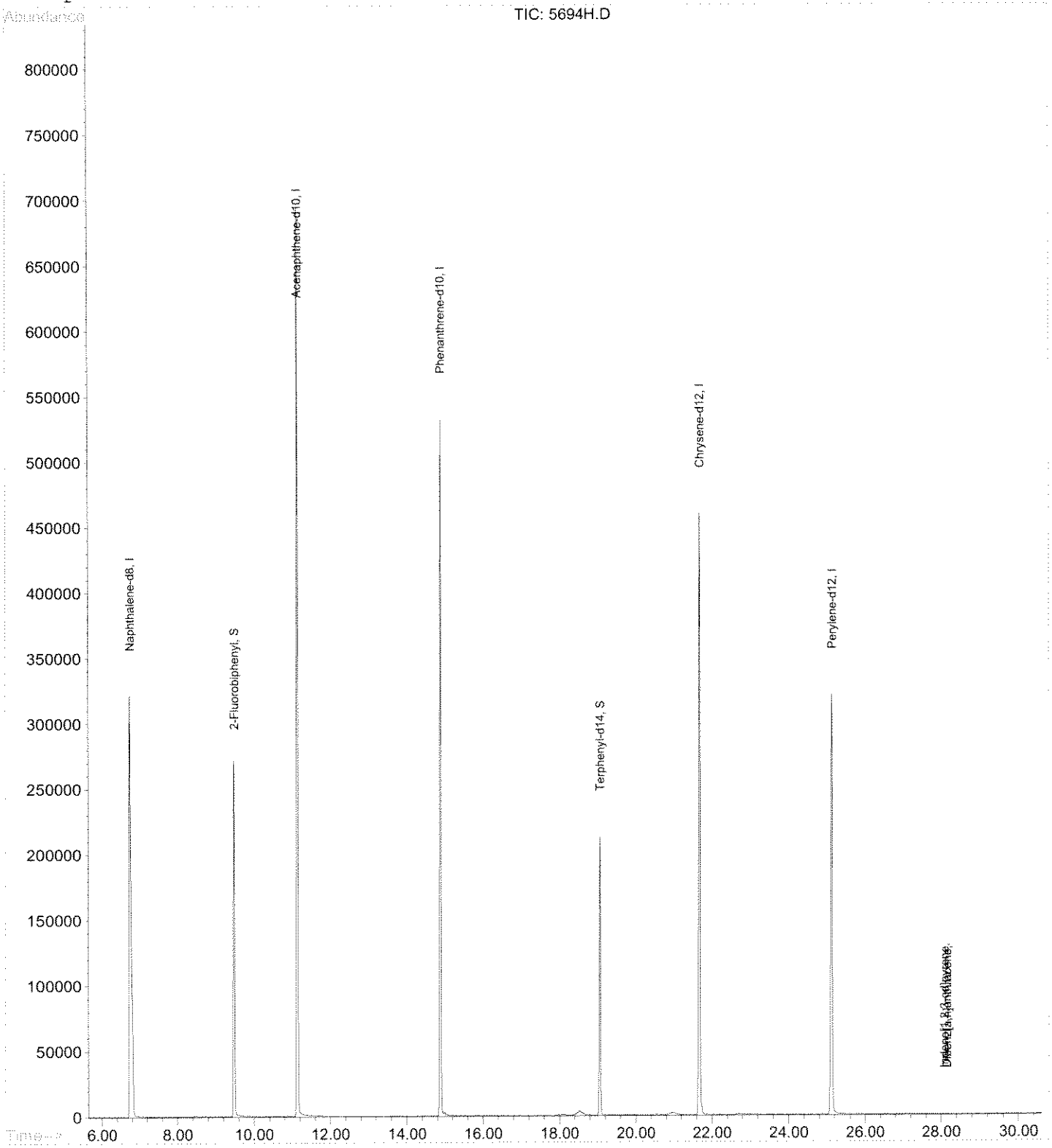
(#) = qualifier out of range (m) = manual integration
5694H.D SIMNEW.M Tue Nov 10 16:19:05 2009

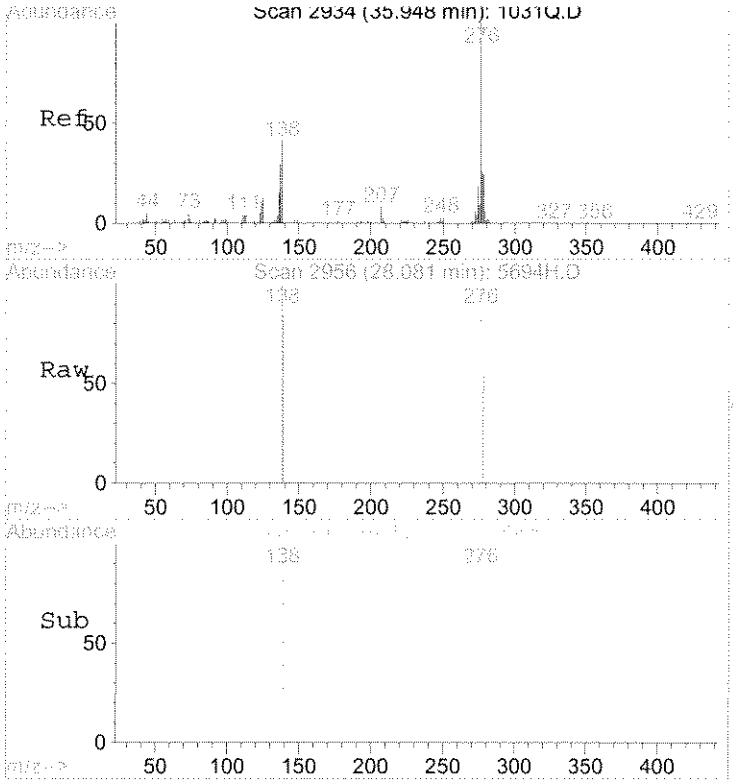
Data File : X:\DATA\H110909\5694H.D
Acq On : 9 Nov 09 4:43 pm
Sample : A864527
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:13 19109

Vial: 12
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration

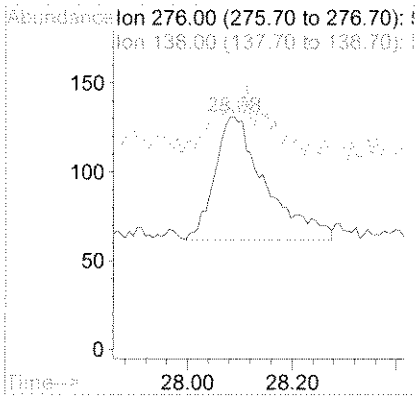


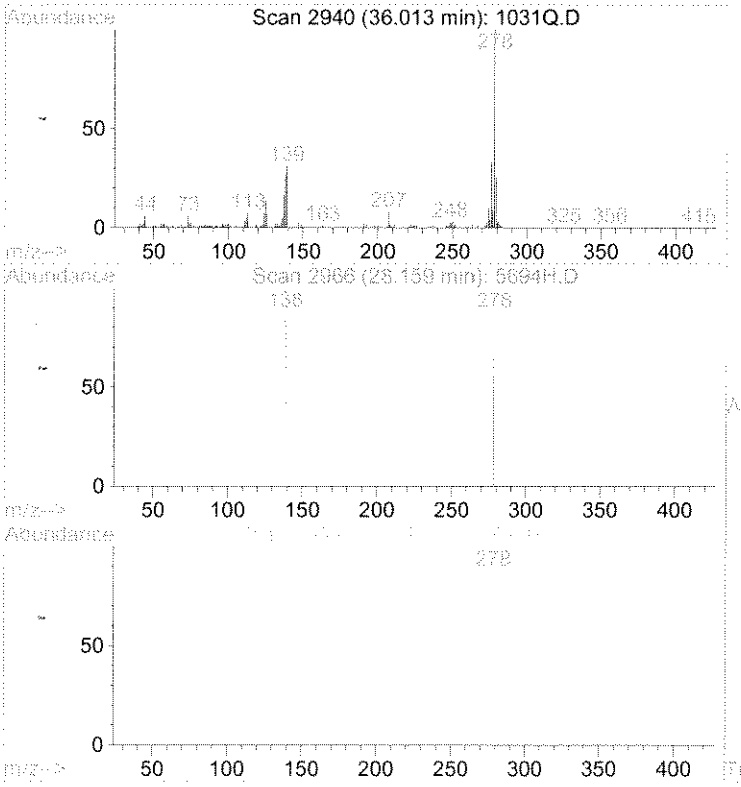


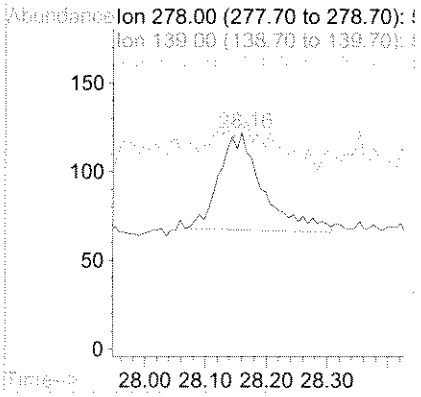

#23
Indeno[1,2,3-cd]pyrene
Concen: 0.22 ug/ml
RT: 28.08 min Scan# 2956
Delta R.T. -0.01 min
Lab File: 5694H.D
Acq: 9 Nov 09 4:43 pm

Tgt Ion:276 Resp: 467

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 17.1 | 26.1 | 39.1# |



R560105

# Heritage Environmental Services, LLC

A864528

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 148
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5695H.D Date/Time 09Nov09 17:19:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 70 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 93 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

11/11/09

Data File : X:\DATA\H110909\5695H.D
Acq On : 9 Nov 09 5:19 pm
Sample : A864528
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:13 19109

Vial: 13
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1143754 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 629592 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1088534 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.66 | 240 | 860976 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.11 | 264 | 554699 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 403913 | 3.48 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 69.60%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 398328 | 4.66 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 93.20%# | | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 28.10 | 276 | 240 | 0.21 ug/ml# | 84 |
| 24) Dibenz[a,h]anthracene | 28.16 | 278 | 191 | 0.23 ug/ml# | 65 |

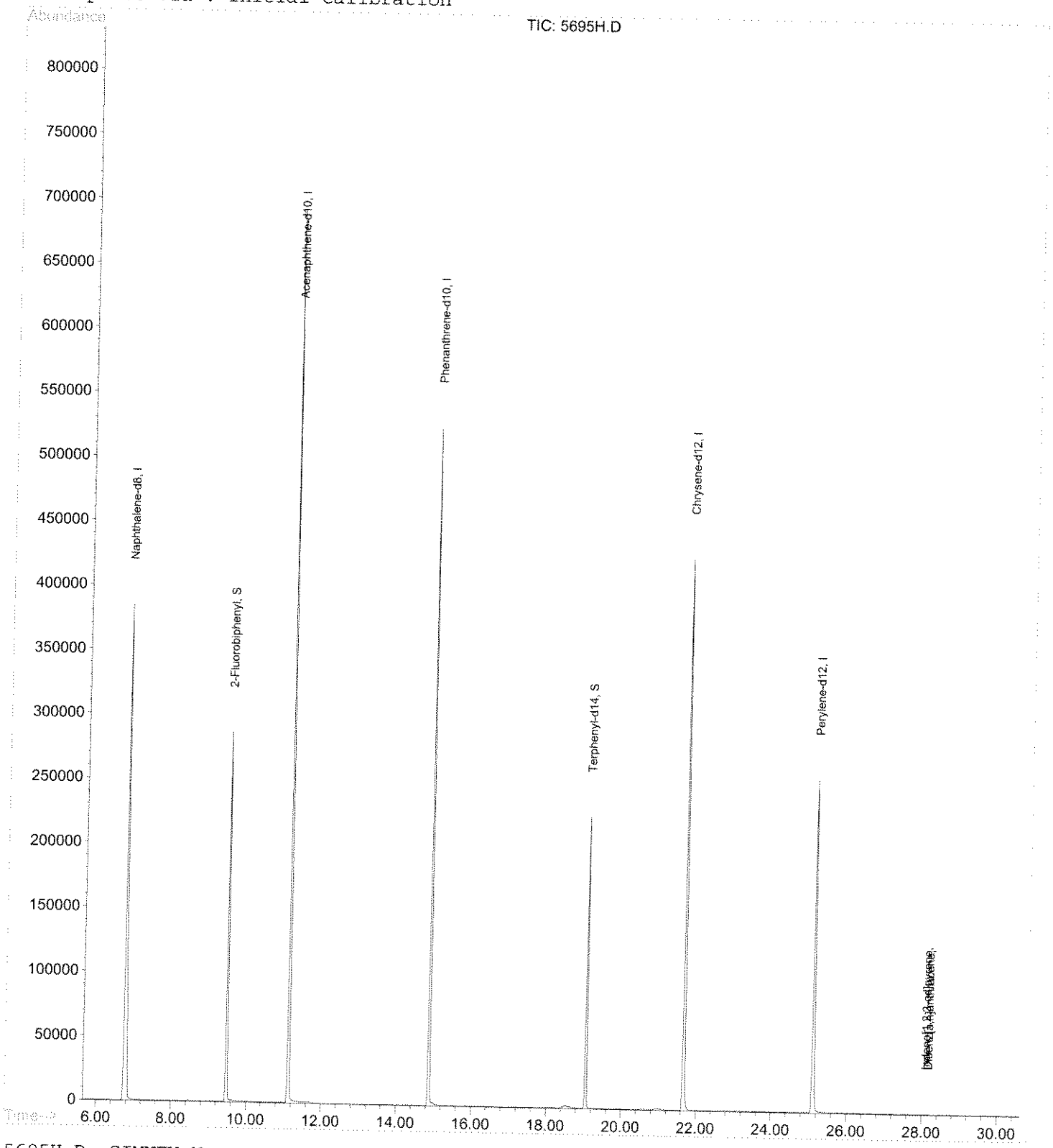
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5695H.D
Acq On : 9 Nov 09 5:19 pm
Sample : A864528
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:13 19109

Vial: 13
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

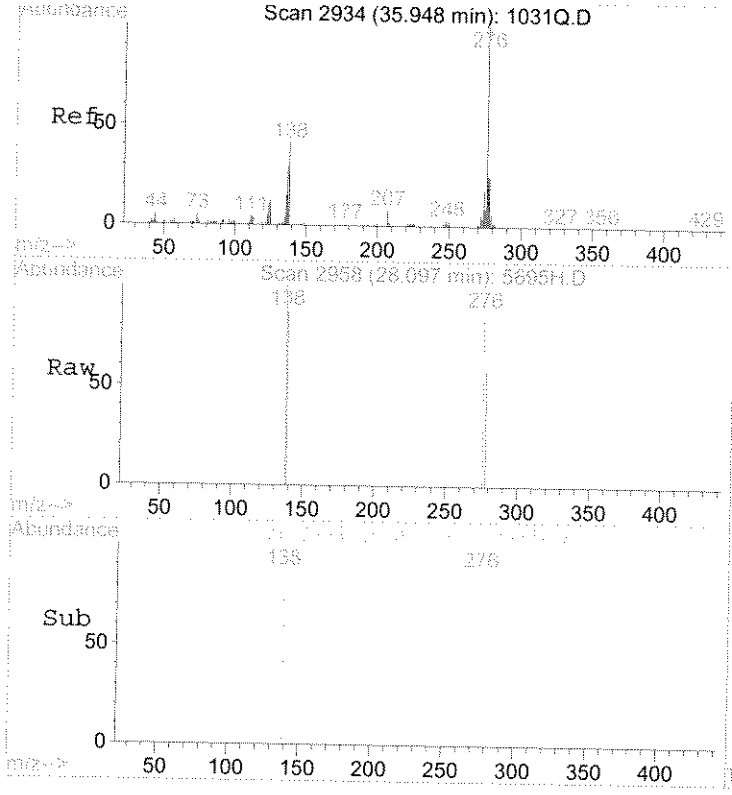
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5695H.D SIMNEW.M Tue Nov 10 16:19:20 2009



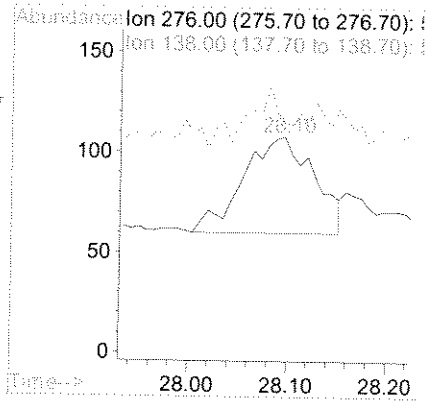
59169b

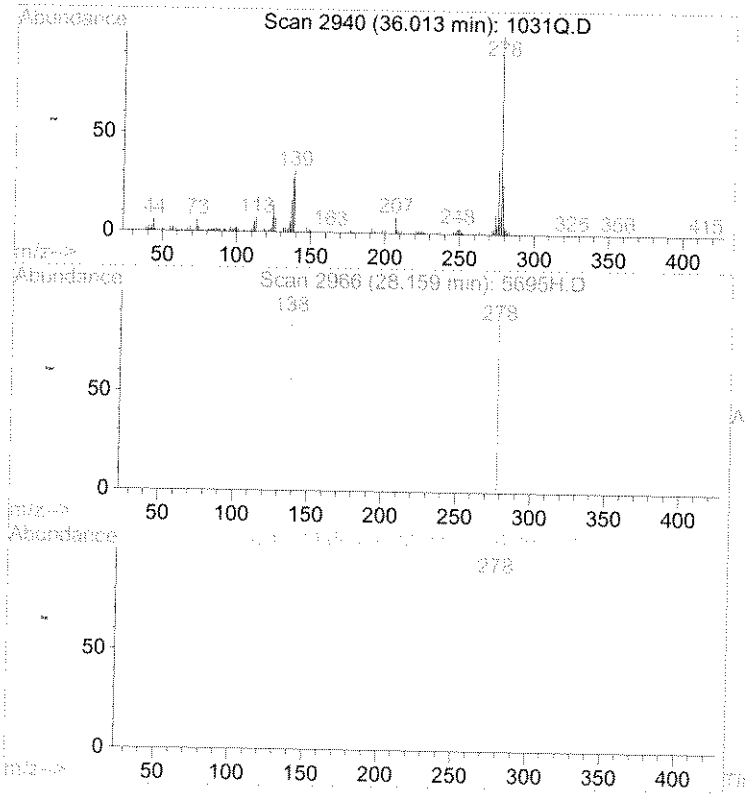


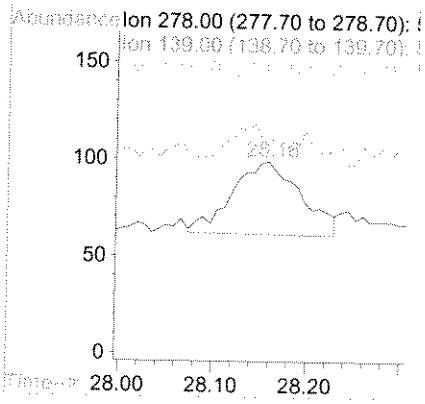

#23
Indeno[1,2,3-cd]pyrene
Concen: 0.21 ug/ml
RT: 28.10 min Scan# 2958
Delta R.T. 0.01 min
Lab File: 5695H.D
Acq: 9 Nov 09 5:19 pm

Tgt Ion:276 Resp: 240

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 23.3 | 26.1 | 39.1# |



R560105

# Heritage Environmental Services, LLC

A864530

GC/MS SVOA

Method SW846-8270C SIM
Sample Description DUP-03
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5696H.D Date/Time 09Nov09 17:55:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.10 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.020 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | BDL | 0.10 | UG/L | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 67 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 92 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

11-11-09

Data File : X:\DATA\H110909\5696H.D
Acq On : 9 Nov 09 5:55 pm
Sample : A864530
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:14 19109

Vial: 14
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1124378 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 633702 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1049358 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.66 | 240 | 809702 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.11 | 264 | 563715 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 393158 | 3.37 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 67.40%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 368787 | 4.59 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 91.80%# | | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 28.09 | 276 | 466 | 0.22 ug/ml# | 72 |
| 24) Dibenz[a,h]anthracene | 28.14 | 278 | 413 | 0.23 ug/ml# | 68 |

(#) = qualifier out of range (m) = manual integration
5696H.D SIMNEW.M Tue Nov 10 16:19:32 2009



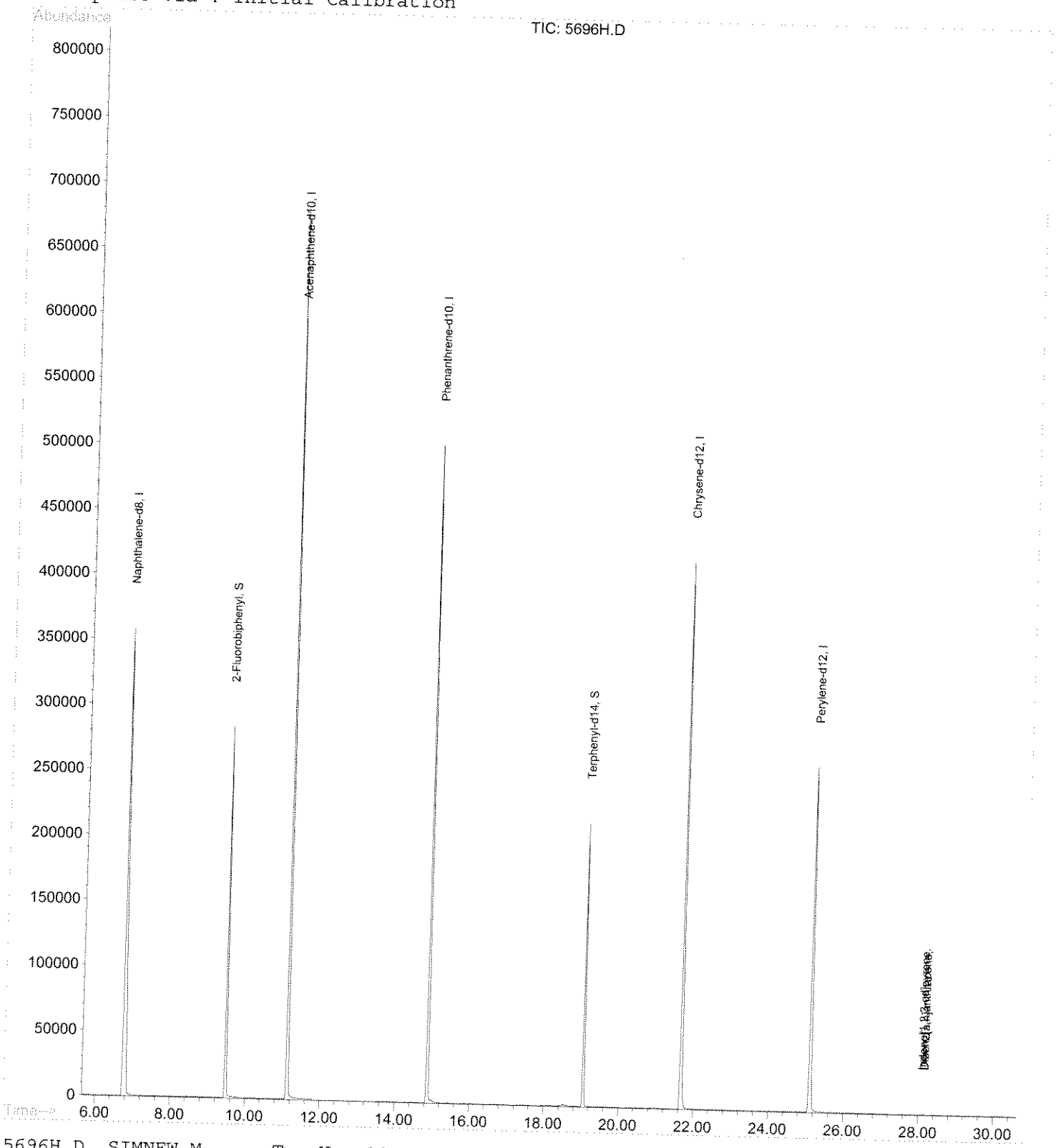
59169b

Data File : X:\DATA\H110909\5696H.D
Acq On : 9 Nov 09 5:55 pm
Sample : A864530
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 10 17:14 19109

Vial: 14
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

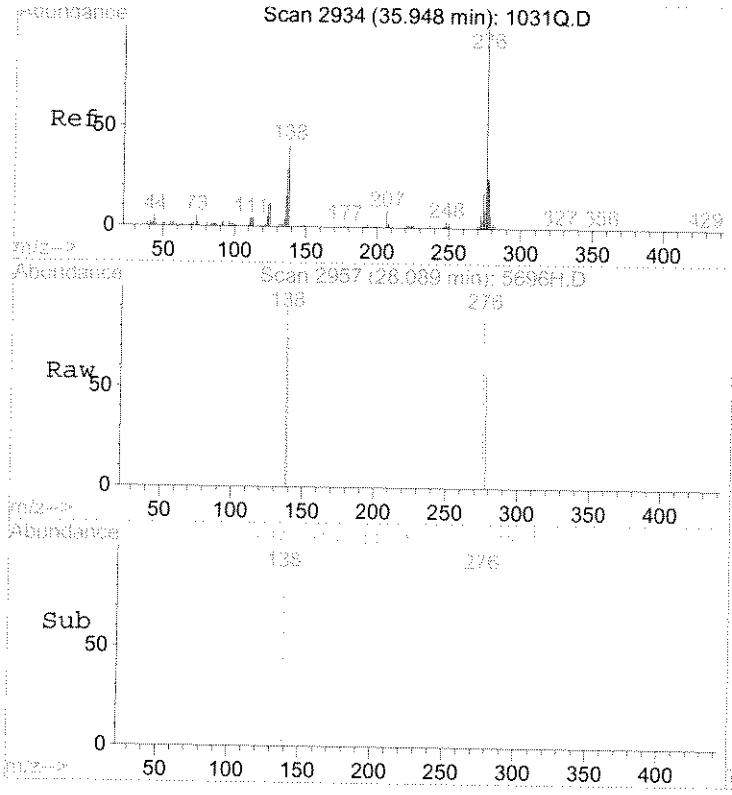
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5696H.D SIMNEW.M Tue Nov 10 16:19:34 2009



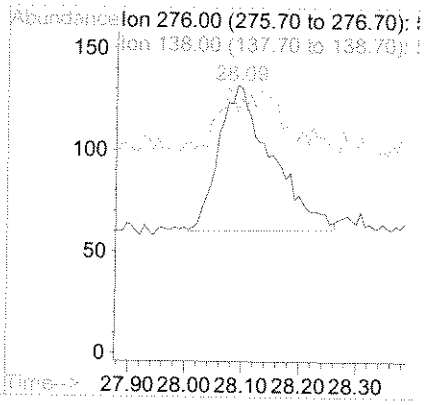
59169b

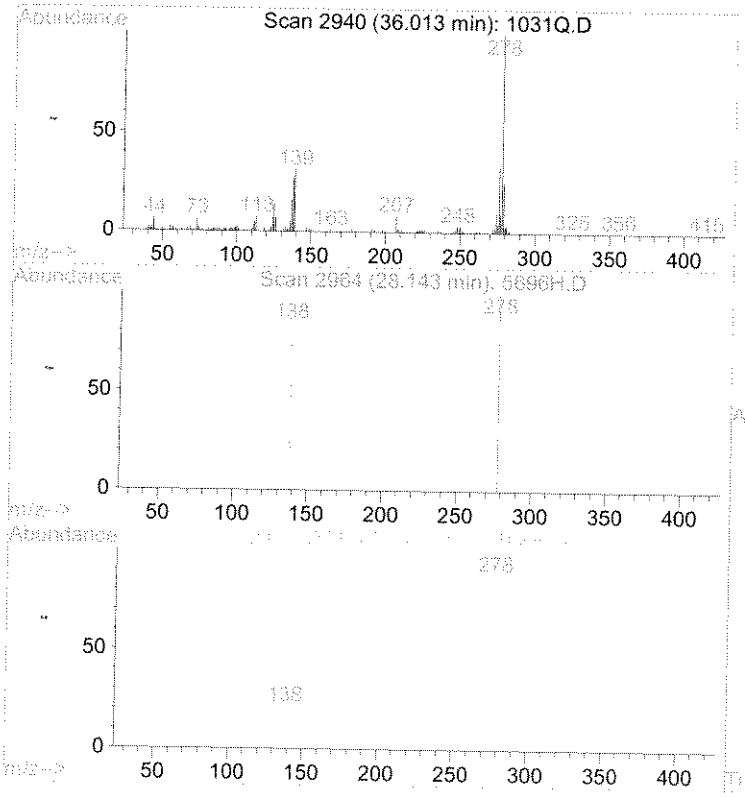


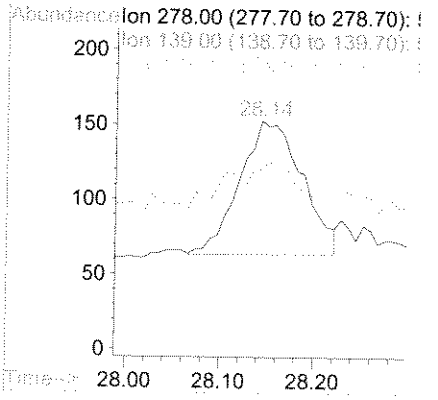

#23
Indeno[1,2,3-cd]pyrene
Concen: 0.22 ug/ml
RT: 28.09 min Scan# 2957
Delta R.T. 0.00 min
Lab File: 5696H.D
Acq: 9 Nov 09 5:55 pm

Tgt Ion:276 Resp: 466

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 16.7 | 26.1 | 39.1# |



5B

# SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Heritage Env Svc Contract:

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

Lab File ID: 5681H.D DFTPP Injection Date: 11/09/09

Instrument ID: 8 DFTPP Injection Time: 06:28

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 30.0 - 80.0% of mass 198 | 13.5 |
| 68 | Less than 2.0% of mass 69 | 0.0 ( 0.0 )1 |
| 69 | Mass 69 Relative abundance | 25.0 |
| 70 | Less than 2.0% of mass 69 | 0.1 ( 0.4 )1 |
| 127 | 25.0 - 75.0% of mass 198 | 31.5 |
| 197 | Less than 1.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100.0 |
| 199 | 5.0 to 9.0% of mass 198 | 6.3 |
| 275 | 10.0 - 30.0% of mass 198 | 18.1 |
| 365 | Greater than 0.75% of mass 198 | 1.8 |
| 441 | Present, but less than mass 443 | 7.1 |
| 442 | 40.0 - 110.0% of mass 198 | 50.1 |
| 443 | 15.0 - 24.0% of mass 442 | 9.7 ( 19.4 )2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | SSTD 1.0 | SSTD 1.0 | 5683H.D | 11/09/09 | 07:25 |
| 02 | SSTD 0.1 | SSTD 0.1 | 5684H.D | 11/09/09 | 08:00 |
| 03 | SSTD 0.5 | SSTD 0.5 | 5685H.D | 11/09/09 | 08:36 |
| 04 | SSTD 2.0 | SSTD 2.0 | 5686H.D | 11/09/09 | 09:12 |
| 05 | SSTD 5.0 | SSTD 5.0 | 5687H.D | 11/09/09 | 09:47 |
| 06 | SSTD 0.02 | SSTD 0.02 | 5688H.D | 11/09/09 | 10:23 |
| 07 | SBLK-465 | SBLK-465 | 5689H.D | 11/09/09 | 13:45 |
| 08 | LCS 593 | LCS 593 | 5690H.D | 11/09/09 | 14:21 |
| 09 | A864529 | A864529 | 5691H.D | 11/09/09 | 14:57 |
| 10 | A864529 MS | A864529 MS | 5692H.D | 11/09/09 | 15:32 |
| 11 | A864529 MSD | A864529 MSD | 5693H.D | 11/09/09 | 16:08 |
| 12 | A864527 | A864527 | 5694H.D | 11/09/09 | 16:43 |
| 13 | A864528 | A864528 | 5695H.D | 11/09/09 | 17:19 |
| 14 | A864530 | A864530 | 5696H.D | 11/09/09 | 17:55 |

A2255318
A2255319

11-11-09



59169b

8B

# SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Heritage Env Svc Contract:

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

Lab File ID (Standard): 5683H.D Date Analyzed: 11/09/09

Instrument ID: 8 Time Analyzed: 07:25

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1182367 | 6.74 | 656932 | 11.13 | 1049072 | 14.87 |
| | UPPER LIMIT | 2364734 | 6.24 | 1313864 | 10.63 | 2098144 | 14.37 |
| | LOWER LIMIT | 591184 | 7.24 | 328466 | 11.63 | 524536 | 15.37 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | SBLK-465 | 953874 | 6.74 | 477805 | 11.13 | 779402 | 14.87 |
| 02 | LCS 593 | 1304860 | 6.74 | 687863 | 11.13 | 1199011 | 14.87 |
| 03 | A864529 | 1104541 | 6.74 | 621433 | 11.13 | 1057053 | 14.87 |
| 04 | A864529 MS | 1270493 | 6.75 | 698683 | 11.13 | 1173305 | 14.87 |
| 05 | A864529 MSD | 1068723 | 6.75 | 592649 | 11.13 | 1030771 | 14.87 |
| 06 | A864527 | 1100863 | 6.75 | 622006 | 11.13 | 1087620 | 14.87 |
| 07 | A864528 | 1143754 | 6.74 | 629592 | 11.13 | 1088534 | 14.87 |
| 08 | A864530 | 1124378 | 6.74 | 633702 | 11.13 | 1049358 | 14.87 |

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10
IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

11-11-09

8C

# SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Heritage Env Svc Contract:

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

Lab File ID (Standard): 5683H.D Date Analyzed: 11/09/09

Instrument ID: 8 Time Analyzed: 07:25

| | | IS4 | | IS5 | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| | 12 HOUR STD | 688054 | 21.66 | 366064 | 25.11 | | |
| | UPPER LIMIT | 1376108 | 21.16 | 732128 | 24.61 | | |
| | LOWER LIMIT | 344027 | 22.16 | 183032 | 25.61 | | |
| | EPA SAMPLE NO. | | | | | | |
| 01 | SBLK-465 | 571927 | 21.66 | 372005 | 25.11 | | |
| 02 | LCS 593 | 950681 | 21.67 | 666820 | 25.12 | | |
| 03 | A864529 | 884659 | 21.67 | 676631 | 25.11 | | |
| 04 | A864529 MS | 992626 | 21.67 | 782815 * | 25.12 | | |
| 05 | A864529 MSD | 870665 | 21.67 | 665421 | 25.12 | | |
| 06 | A864527 | 915065 | 21.67 | 703254 | 25.11 | | |
| 07 | A864528 | 860976 | 21.66 | 554699 | 25.11 | | |
| 08 | A864530 | 809702 | 21.66 | 563715 | 25.11 | | |

(rerun)

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10
IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

LKB 11/11/09

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Heritage Env Svc Contract:

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

Date Injected: 09-Nov-09 Instrument: 8

| | EPA SAMPLE NO. | S1 # | S2 # | TOT OUT |
|---|---|---|---|---|
| 01 | SBLK-465 | 74 | 126 | 0 |
| 02 | LCS 593 | 73 | 125 | 0 |
| 03 | A864529 | 66 | 94 | 0 |
| 04 | A864529 MS | 71 | 31 | 0 |
| 05 | A864529 MSD | 76 | 26 | 0 |
| 06 | A864527 | 71 | 81 | 0 |
| 07 | A864528 | 70 | 93 | 0 |
| 08 | A864530 | 67 | 92 | 0 |

QC LIMITS

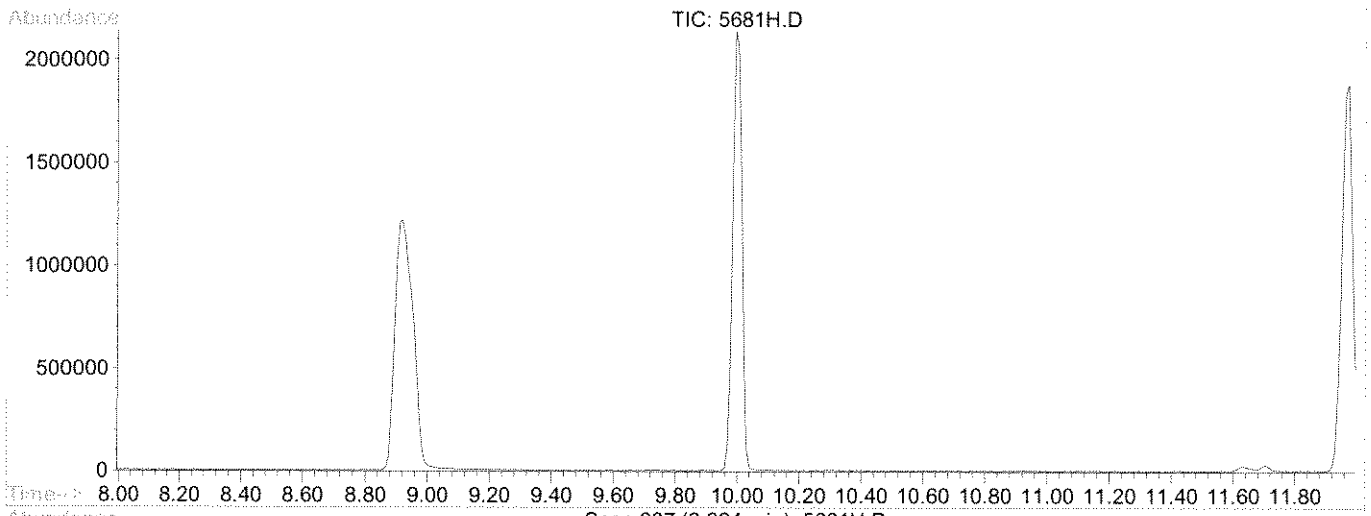
| | | | |
|---|---|---|---|
| S1 | = | 2-Fluorobiphenyl | (41-126) |
| S2 | = | Terphenyl-d14 | (10-145) |

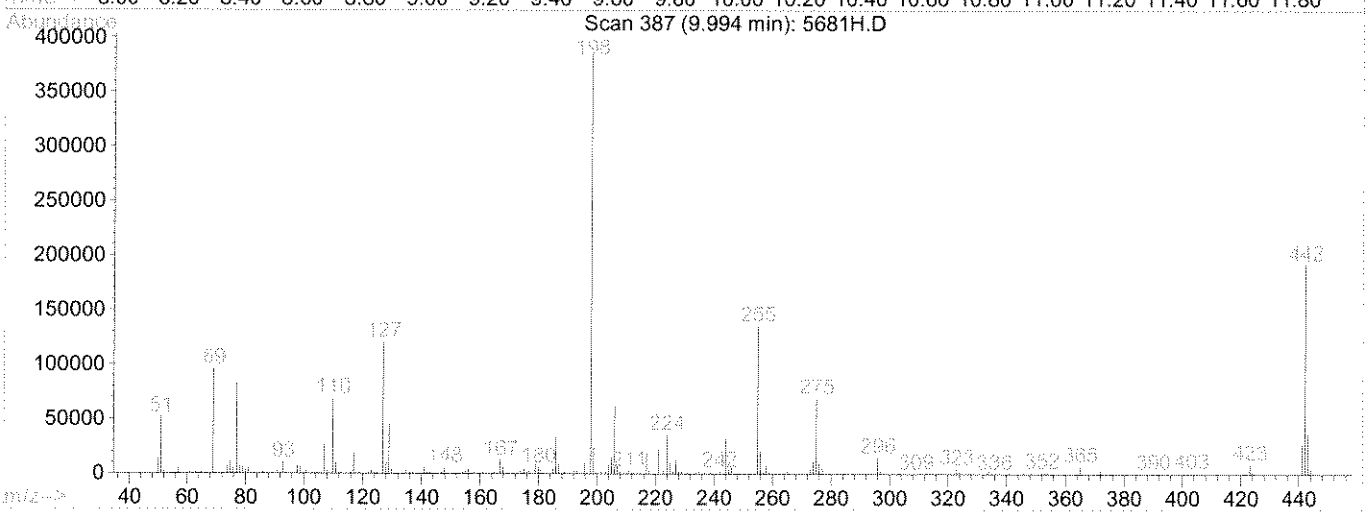
# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

11/7/09

Data File : X:\DATA\H110909\5681H.D
Acq On : 9 Nov 09 6:28 am
Sample : DFTPP
Misc :
MS Integration Params: rteint.p
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00




Spectrum Information: Scan 387

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 10 | 80 | 13.5 | 51560 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 25.0 | 95856 | PASS |
| 70 | 69 | 0.00 | 2 | 0.4 | 376 | PASS |
| 127 | 198 | 10 | 80 | 31.5 | 120720 | PASS |
| 197 | 198 | 0.00 | 2 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 383232 | PASS |
| 199 | 198 | 5 | 9 | 6.3 | 24248 | PASS |
| 275 | 198 | 10 | 60 | 18.1 | 69416 | PASS |
| 365 | 198 | 1 | 100 | 1.8 | 6918 | PASS |
| 441 | 443 | 0.01 | 100 | 73.4 | 27360 | PASS |
| 442 | 198 | 50 | 150 | 50.1 | 191936 | PASS |
| 443 | 442 | 15 | 24 | 19.4 | 37264 | PASS |

JB 11/11/09

5681H.D SIMNEW.M Tue Nov 10 16:14:46 2009

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 47.70 | 75 | 61.90 | 756 | 73.90 | 6223 | 85.00 | 1393 |
| 49.90 | 13154 | 62.90 | 1760 | 74.90 | 11778 | 85.90 | 1765 |
| 50.90 | 51560 | 63.90 | 266 | 75.90 | 4491 | 86.80 | 814 |
| 51.90 | 2170 | 64.90 | 1020 | 76.90 | 83152 | 87.80 | 452 |
| 53.00 | 95 | 66.10 | 461 | 77.90 | 6996 | 88.80 | 137 |
| 54.90 | 456 | 67.00 | 127 | 78.90 | 5690 | 89.70 | 124 |
| 55.80 | 1700 | 68.90 | 95856 | 79.90 | 4043 | 90.90 | 2061 |
| 56.90 | 4051 | 69.90 | 376 | 80.90 | 5351 | 91.90 | 1583 |
| 57.80 | 223 | 71.00 | 60 | 81.80 | 1696 | 92.90 | 10491 |
| 59.00 | 129 | 72.00 | 113 | 82.80 | 1067 | 93.90 | 741 |
| 60.90 | 754 | 72.80 | 255 | 84.00 | 241 | 94.80 | 133 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 95.90 | 513 | 106.90 | 25928 | 119.10 | 185 | 132.00 | 312 |
| 96.80 | 234 | 107.90 | 3226 | 119.90 | 239 | 132.90 | 142 |
| 97.90 | 7031 | 109.90 | 69080 | 121.90 | 1905 | 133.90 | 1859 |
| 98.90 | 6238 | 110.90 | 9553 | 122.90 | 3440 | 134.90 | 2673 |
| 99.90 | 672 | 111.90 | 907 | 123.90 | 1437 | 135.90 | 976 |
| 100.90 | 3740 | 112.90 | 425 | 124.90 | 1452 | 136.90 | 1959 |
| 101.80 | 159 | 114.60 | 248 | 126.90 | 120720 | 138.50 | 148 |
| 102.90 | 1776 | 116.00 | 1299 | 128.00 | 9755 | 138.90 | 194 |
| 103.90 | 2062 | 116.90 | 18344 | 128.90 | 45664 | 140.00 | 597 |
| 104.90 | 2024 | 117.90 | 1203 | 129.90 | 4374 | 140.90 | 5017 |
| 106.00 | 1168 | 118.80 | 159 | 130.90 | 831 | 141.90 | 2024 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 142.80 | 1622 | 153.90 | 1446 | 164.75 | 2328 | 175.95 | 2226 |
| 143.90 | 473 | 154.90 | 2537 | 166.05 | 1401 | 176.85 | 2091 |
| 144.90 | 319 | 156.00 | 4576 | 166.85 | 12543 | 178.85 | 8797 |
| 145.90 | 1040 | 156.95 | 847 | 167.85 | 6354 | 179.95 | 5981 |
| 146.90 | 2640 | 157.75 | 1093 | 168.75 | 343 | 180.85 | 4299 |
| 147.90 | 6133 | 158.85 | 627 | 169.85 | 453 | 181.85 | 522 |
| 148.90 | 1076 | 159.85 | 1775 | 170.95 | 826 | 182.85 | 237 |
| 149.90 | 620 | 160.85 | 2347 | 171.85 | 730 | 183.95 | 816 |
| 151.10 | 798 | 161.95 | 325 | 172.95 | 1304 | 184.95 | 4492 |
| 151.70 | 648 | 162.95 | 180 | 173.85 | 2886 | 185.95 | 33728 |
| 152.90 | 1593 | 163.85 | 463 | 174.95 | 4059 | 186.95 | 8805 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 187.95 | 870 | 202.95 | 1442 | 213.05 | 179 | 226.95 | 13358 |
| 188.85 | 2164 | 203.85 | 8730 | 213.85 | 61 | 227.95 | 1782 |
| 190.85 | 1431 | 204.95 | 15857 | 214.95 | 832 | 228.95 | 2796 |
| 191.95 | 3211 | 205.95 | 62000 | 216.85 | 18280 | 229.85 | 636 |
| 192.95 | 2202 | 206.95 | 7879 | 217.85 | 2385 | 230.95 | 1285 |
| 193.95 | 695 | 207.85 | 1876 | 218.95 | 300 | 231.85 | 270 |
| 195.85 | 11102 | 208.95 | 485 | 220.95 | 21848 | 232.85 | 363 |
| 197.85 | 383232 | 210.25 | 1466 | 222.85 | 4333 | 233.85 | 927 |
| 198.85 | 24248 | 210.95 | 2425 | 223.95 | 35768 | 234.95 | 1387 |
| 199.95 | 1393 | 211.95 | 295 | 224.95 | 9591 | 235.85 | 567 |
| 201.45 | 1642 | 212.55 | 66 | 226.05 | 1765 | 236.85 | 1142 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 237.65 | 171 | 250.95 | 450 | 263.75 | 206 | 275.95 | 10093 |
| 238.85 | 663 | 251.95 | 314 | 264.95 | 2771 | 276.95 | 5671 |
| 239.95 | 223 | 254.95 | 135552 | 265.85 | 414 | 277.95 | 655 |
| 240.85 | 1031 | 255.95 | 20312 | 266.75 | 230 | 278.95 | 159 |
| 241.95 | 2265 | 256.95 | 1496 | 267.65 | 123 | 281.85 | 60 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | 1064 | 270.95 | 182 | 282.95 | 317 |
| 245.95 | 5341 | 260.05 | 193 | 271.95 | 381 | 283.95 | 292 |
| 246.85 | 1039 | 260.95 | 352 | 272.85 | 4365 | 284.95 | 886 |
| 248.85 | 955 | 261.85 | 83 | 273.95 | 12121 | 285.95 | 80 |
| 249.95 | 318 | 262.75 | 68 | 274.95 | 69416 | 287.65 | 73 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 288.35 | 55 | 301.80 | 455 | 314.90 | 1289 | 326.90 | 996 |
| 288.95 | 133 | 302.90 | 1618 | 316.00 | 845 | 327.90 | 404 |
| 289.75 | 118 | 303.70 | 439 | 316.90 | 276 | 329.00 | 111 |
| 290.95 | 124 | 306.90 | 86 | 317.90 | 76 | 332.00 | 454 |
| 291.95 | 336 | 307.80 | 161 | 319.90 | 105 | 333.00 | 341 |
| 292.95 | 1082 | 309.00 | 140 | 321.00 | 464 | 333.90 | 2484 |
| 293.90 | 232 | 310.00 | 125 | 322.00 | 432 | 334.90 | 1186 |
| 295.90 | 14944 | 310.80 | 93 | 323.00 | 4626 | 335.80 | 163 |
| 296.90 | 2704 | 311.60 | 62 | 324.00 | 1302 | 338.70 | 118 |
| 297.80 | 211 | 313.00 | 322 | 324.90 | 137 | 339.80 | 88 |
| 300.80 | 376 | 314.00 | 549 | 325.70 | 121 | 340.90 | 656 |

Scan 387 (9.994 min): 5681H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 341.90 | 198 | 366.00 | 1152 | 391.00 | 217 | 423.10 | 9332 |
| 345.90 | 997 | 369.80 | 144 | 392.00 | 85 | 424.00 | 1890 |
| 346.80 | 225 | 370.90 | 419 | 395.20 | 57 | 425.00 | 193 |
| 352.00 | 1355 | 372.00 | 2130 | 400.90 | 106 | 438.65 | 96 |
| 353.00 | 677 | 373.00 | 580 | 401.90 | 1004 | 441.05 | 27360 |
| 354.00 | 945 | 374.00 | 98 | 403.00 | 1397 | 442.05 | 191936 |
| 355.10 | 133 | 380.40 | 52 | 404.00 | 317 | 443.05 | 37264 |
| 359.00 | 94 | 380.90 | 86 | 404.80 | 70 | 444.05 | 3801 |
| 359.90 | 123 | 382.90 | 483 | 409.70 | 57 | 445.05 | 212 |
| 361.10 | 85 | 383.80 | 113 | 421.00 | 1517 | | |
| 365.00 | 6918 | 390.00 | 489 | 422.10 | 1121 | | |

R560105

# Heritage Environmental Services, LLC

Q2256424

## QC Report

QCType CAL01
Date Entered 11Nov09
Analysis Date/Time 09Nov0907:25:00

Duplicate SampleID
Duplicate QCSampleID
Method
Matrix

DataFile 5683H.D
Analyst 2447 J. MINNIEAR, II
Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 98 | ACENAPHTHYLENE | 2.2282 | | | | | 5.4 |
| 97 | ACENAPHTHENE | 1.4157 | | | | | 1.8 |
| 366 | FLUORENE | 1.5517 | | | | | 2.8 |
| 597 | PHENANTHRENE | 1.3371 | | | | | 3.3 |
| 128 | ANTHRACENE | 1.2234 | | | | | 6.9 |
| 363 | FLUORANTHENE | 1.2804 | | | | | 6.6 |
| 624 | PYRENE | 2.0180 | | | | | 5.3 |
| 155 | BENZO(A)ANTHRACENE | 1.3064 | | | | | 5.7 |
| 245 | CHRYSENE | | | | LIN | | 1.000 |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | 1.6769 | | | | | 5.6 |
| 159 | BENZO(K)FLUORANTHENE | 1.6432 | | | | | 11.7 |
| 156 | BENZO(A)PYRENE | 1.0872 | | | | | 10.1 |
| 413 | INDENO(1,2,3-CD)PYRENE | | | | LIN | | 0.992 |
| 294 | DIBENZ(A,H)ANTHRACENE | | | | LIN | | 0.991 |
| 158 | BENZO(G,H,I)PERYLENE | 0.7561 | | | | | 13.6 |
| 493 | NAPHTHALENE | 1.2686 | | | | | 2.4 |
| 62 | 2-METHYLNAPHTHALENE | 0.8249 | | | | | 3.4 |
| 887 | 1-METHYLNAPHTHALENE | 0.7729 | | | | | 3.4 |
| 58 | 2-FLUOROBIPHENYL | 1.8415 | | | | | 2.1 |
| 701 | TERPHENYL-D14 | 0.9923 | | | | | 4.8 |

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is r2 (Coef. of Determination).

**Qualifiers**

LIN Linear Regression Used

JN 11-11-09

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration

Calibration Files

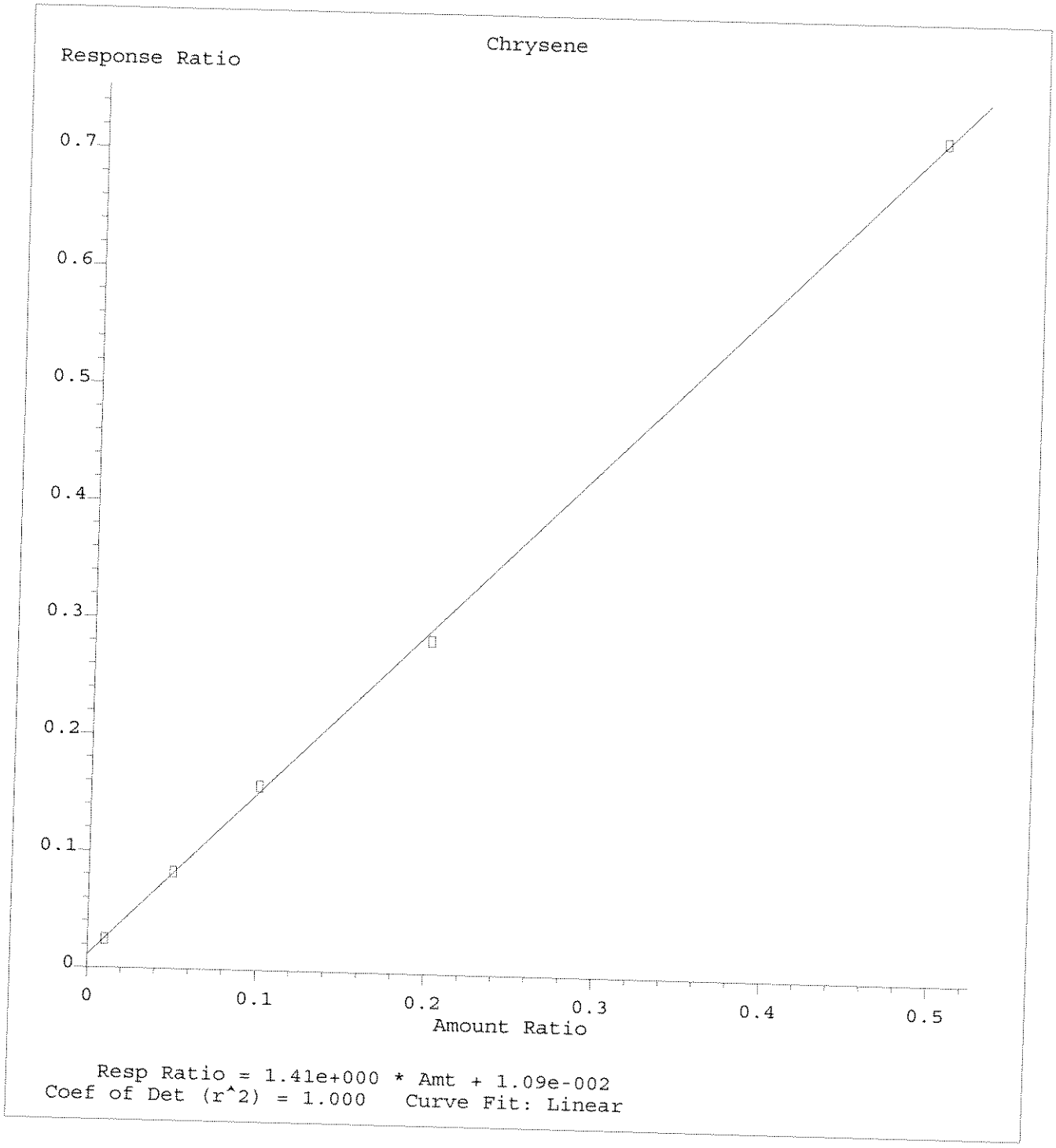
| | | | | | |
|---|---|---|---|---|---|
| 1.0 | =5683H.D | 0.1 | =5684H.D | .5 | =5685H.D |
| 2 | =5686H.D | 5 | =5687H.D | .02 | =5688H.D |

| | Compound | 1.0 | 0.1 | .5 | 2 | 5 | .02 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)I | Naphthalene-d8 | ----------ISTD---------- | | | | | | | |
| 2) | Naphthalene | 1.3045 | 1.2638 | 1.2949 | 1.2375 | 1.2425 | | 1.2686 | 2.4 |
| 3) | 2-Methylnaphthalene | 0.8591 | 0.7935 | 0.8329 | 0.7992 | 0.8397 | | 0.8249 | 3.4 |
| 4) | 1-Methylnaphthalene | 0.8102 | 0.7406 | 0.7843 | 0.7572 | 0.7721 | | 0.7729 | 3.4 |
| 5)I | Acenaphthene-d10 | ----------ISTD---------- | | | | | | | |
| 6)S | 2-Fluorobiphenyl | 1.8489 | 1.8295 | 1.9041 | 1.7998 | 1.8252 | | 1.8415 | 2.1 |
| 7) | Acenaphthylene | 2.2742 | 2.0432 | 2.2214 | 2.2294 | 2.3727 | | 2.2282 | 5.4 |
| 8)MC | Acenaphthene | 1.4283 | 1.3857 | 1.4527 | 1.3994 | 1.4122 | | 1.4157 | 1.8 |
| 9) | Fluorene | 1.5889 | 1.4850 | 1.5764 | 1.5325 | 1.5759 | | 1.5517 | 2.8 |
| 10)I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | | |
| 11) | Phenanthrene | 1.3688 | 1.3655 | 1.3734 | 1.2863 | 1.2913 | | 1.3371 | 3.3 |
| 12) | Anthracene | 1.3056 | 1.0903 | 1.2292 | 1.2065 | 1.2853 | | 1.2234 | 6.9 |
| 13) C | Fluoranthene | 1.3593 | 1.1497 | 1.2816 | 1.2602 | 1.3511 | | 1.2804 | 6.6 |
| 14)I | Chrysene-d12 | ----------ISTD---------- | | | | | | | |
| 15)M | Pyrene | 2.1460 | 1.8550 | 2.0574 | 2.0435 | 1.9880 | | 2.0180 | 5.3 |
| 16)S | Terphenyl-d14 | 1.0522 | 0.9191 | 1.0038 | 0.9963 | 0.9901 | | 0.9923 | 4.8 |
| 17) | Benzo[a]anthracene | 1.3422 | 1.3625 | 1.2329 | 1.2199 | 1.3745 | | 1.3064 | 5.7 |
| 18) | Chrysene | r = 0.01094 + 1.40940*a | | | | | | rE2 = 1.000 | LIN |
| 19)I | Perylene-d12 | ----------ISTD---------- | | | | | | | |
| 20) | Benzo[b]fluoranthen | 1.7138 | | 1.5834 | 1.6472 | 1.8201 | 1.6201 | 1.6769 | 5.6 |
| 21) | Benzo[k]fluoranthen | 1.8010 | 1.3447 | 1.5935 | 1.6554 | 1.8214 | | 1.6432 | 11.7 |
| 22)C | Benzo[a]pyrene | 1.1217 | | 0.9396 | 1.0418 | 1.2404 | 1.0923 | 1.0872 | 10.1 |
| 23) | Indeno[1,2,3-cd]pyren | r = -0.02161 + 1.03055*a | | | | | | rE2 = 0.992 | LIN |
| 24) | Dibenz[a,h]anthracene | r = -0.01641 + 0.73529*a | | | | | | rE2 = 0.991 | LIN |
| 25) | Benzo[g,h,i]perylen | 0.7235 | 0.6695 | 0.6881 | 0.7739 | 0.9256 | | 0.7561 | 13.6 |

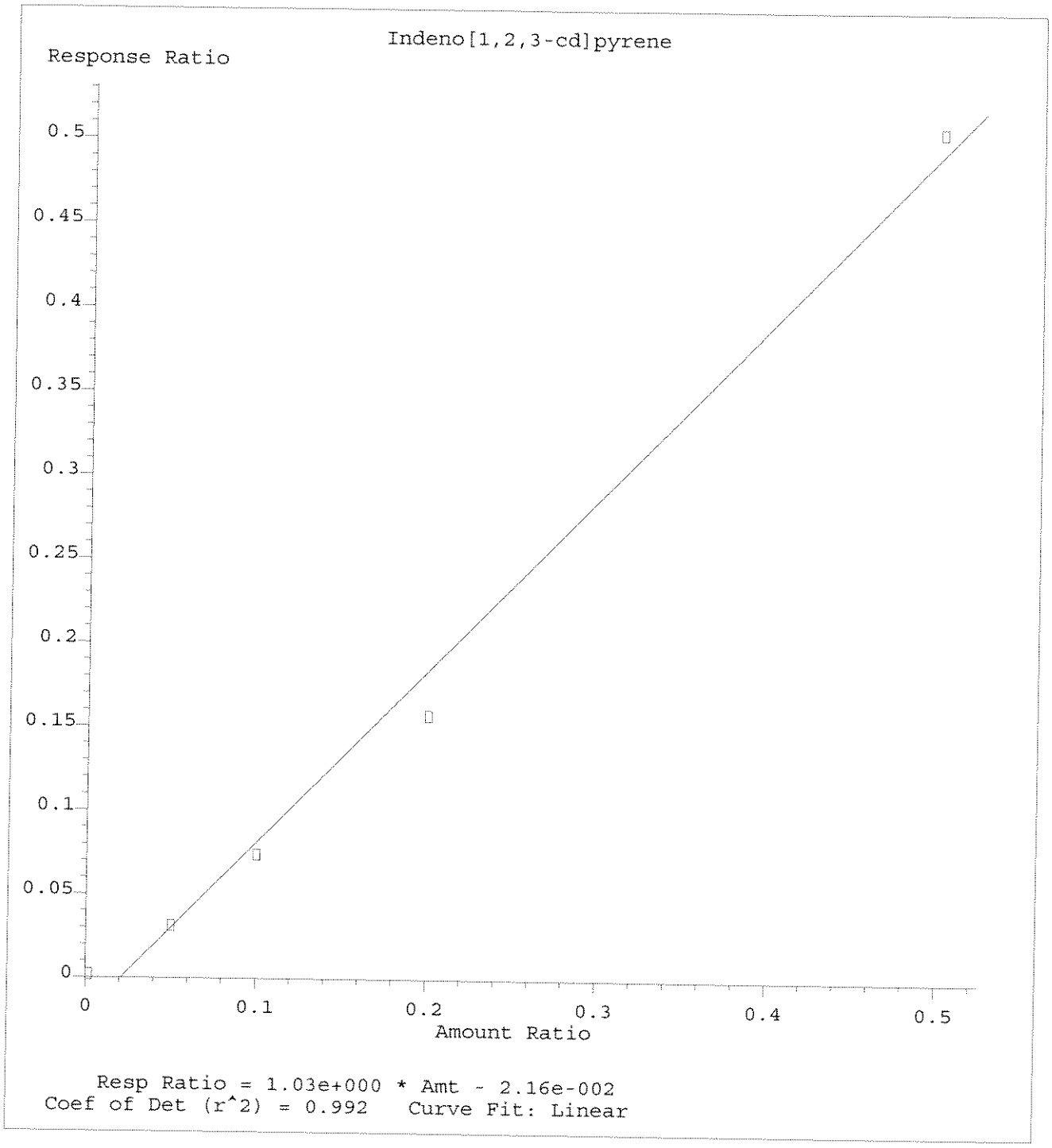
(#) = Out of Range (Advisory for non CCC, SPCC) 0 SPCC fail 0 CCC fail

SIMNEW.M Tue Nov 10 16:43:58 2009

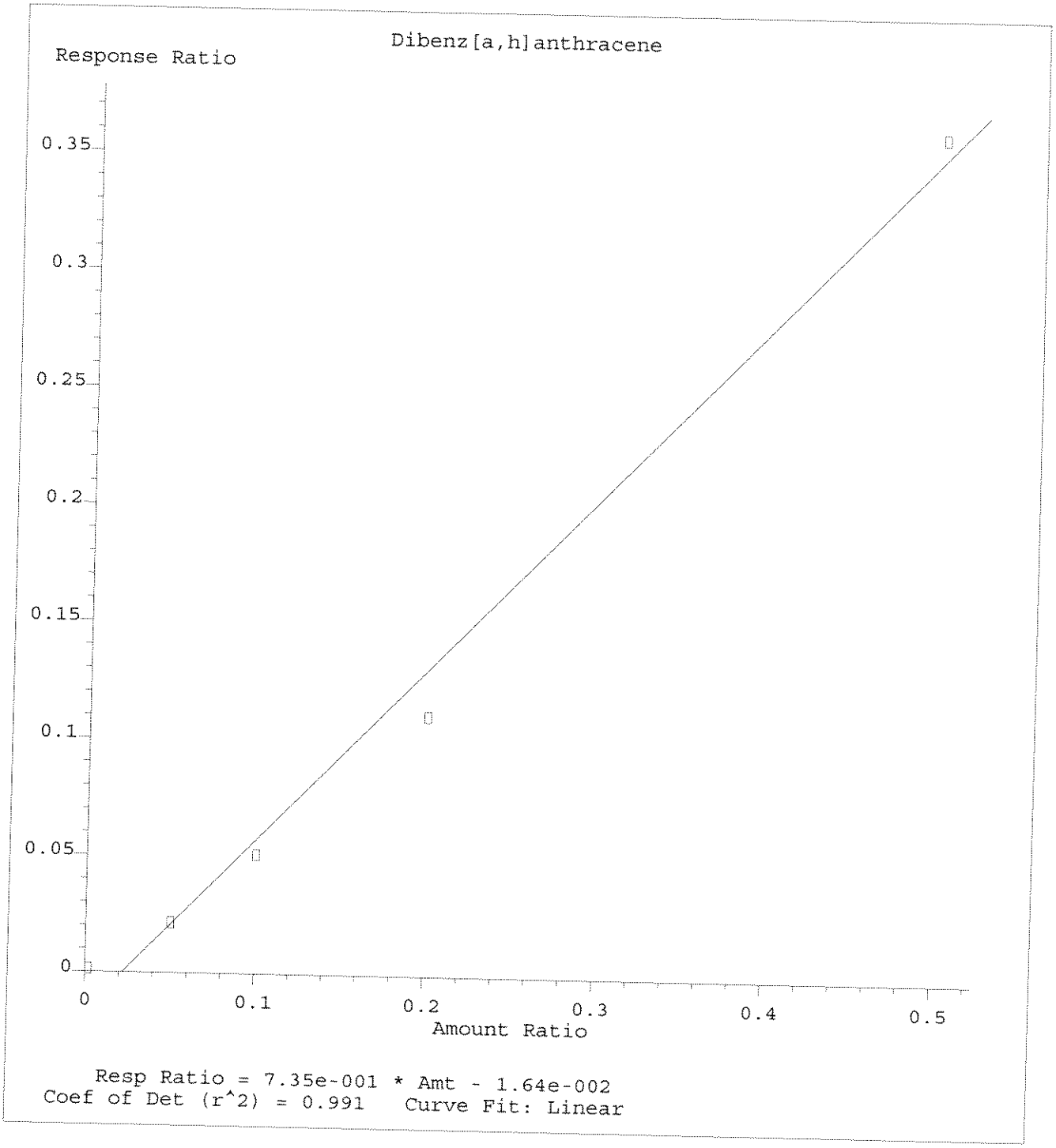
Average RSD= 7.95




Method Name: X:\1\METHODS\SIMNEW.M
Calibration Table Last Updated: Mon Nov 09 13:31:22 2009




Method Name: X:\1\METHODS\SIMNEW.M
Calibration Table Last Updated: Mon Nov 09 13:31:22 2009




Method Name: X:\1\METHODS\SIMNEW.M
Calibration Table Last Updated: Mon Nov 09 13:31:22 2009

Data File : X:\DATA\H110909\5683H.D
Acq On : 9 Nov 09 7:25 am
Sample : SSTD 1.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:21 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1182367 | 10.00 ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 656932 | 10.00 ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1049072 | 10.00 ug/ml | -0.03 |
| 14) Chrysene-d12 | 21.66 | 240 | 688054 | 10.00 ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 366064 | 10.00 ug/ml | -0.05 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 121460 | 1.02 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 20.40%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 72397 | 1.12 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 22.40% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Naphthalene | 6.79 | 128 | 154234 | 1.05 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 101575 | 1.09 ug/ml | 97 |
| 4) 1-Methylnaphthalene | 8.73 | 142 | 95793 | 1.10 ug/ml | 99 |
| 7) Acenaphthylene | 10.72 | 152 | 149398 | 1.03 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 93830 | 1.04 ug/ml | 99 |
| 9) Fluorene | 12.50 | 166 | 104379 | 1.06 ug/ml# | 93 |
| 11) Phenanthrene | 14.93 | 178 | 143600 | 1.07 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 136972 | 1.10 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 142597 | 1.11 ug/ml | 95 |
| 15) Pyrene | 18.54 | 202 | 147659 | 1.33 ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.62 | 228 | 92354 | 1.04 ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 108308 | 1.12 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 62736m | 1.08 ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.26 | 252 | 65928m | 1.19 ug/ml | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 41063 | 1.02 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.09 | 276 | 27011 | 0.68 ug/ml# | 81 |
| 24) Dibenz[a,h]anthracene | 28.15 | 278 | 18569 | 0.62 ug/ml# | 63 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 26485 | 0.73 ug/ml# | 69 |

(#) = qualifier out of range (m) = manual integration
5683H.D SIMNEW.M Tue Nov 10 16:15:03 2009



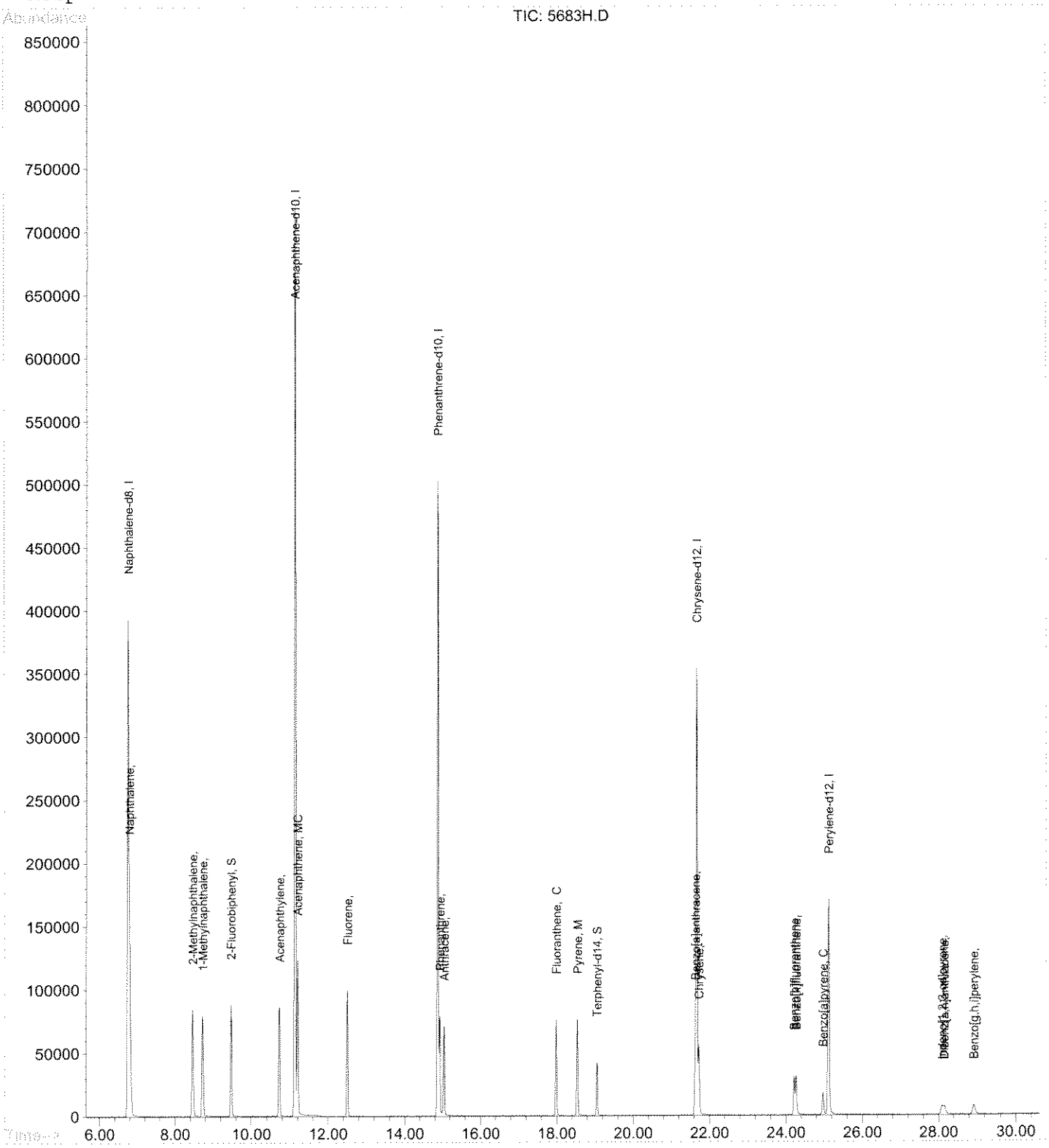
59169b

Data File : X:\DATA\H110909\5683H.D
Acq On : 9 Nov 09 7:25 am
Sample : SSTD 1.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:21 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5683H.D SIMNEW.M Tue Nov 10 16:15:04 2009

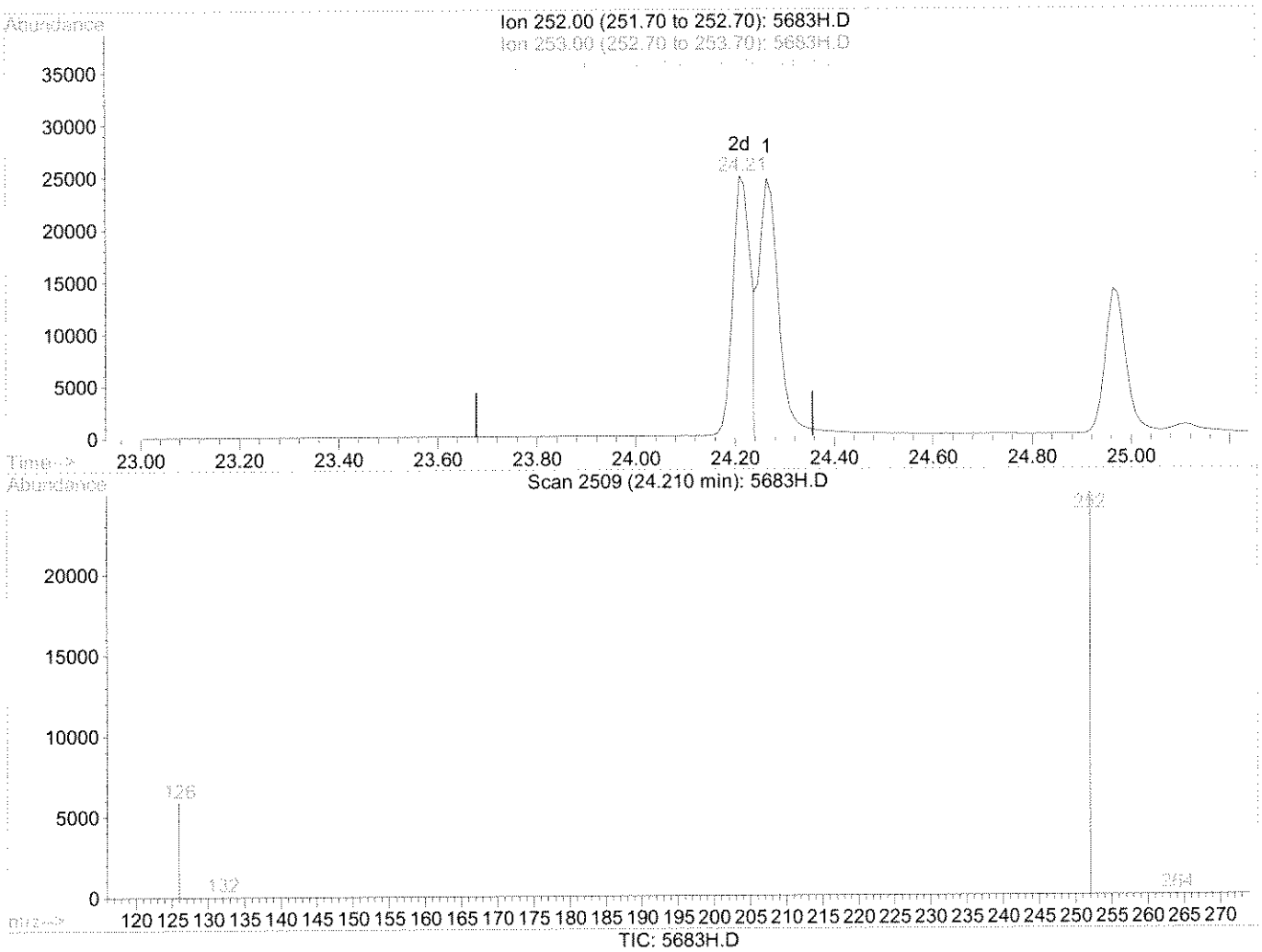


59169b

Data File : X:\DATA\H110909\5683H.D
Acq On : 9 Nov 09 7:25 am
Sample : SSTD 1.0
Misc : CAL SSTD
Quant Time: Nov 9 13:21 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




TIC: 5683H.D

(20) Benzo[b]fluoranthene

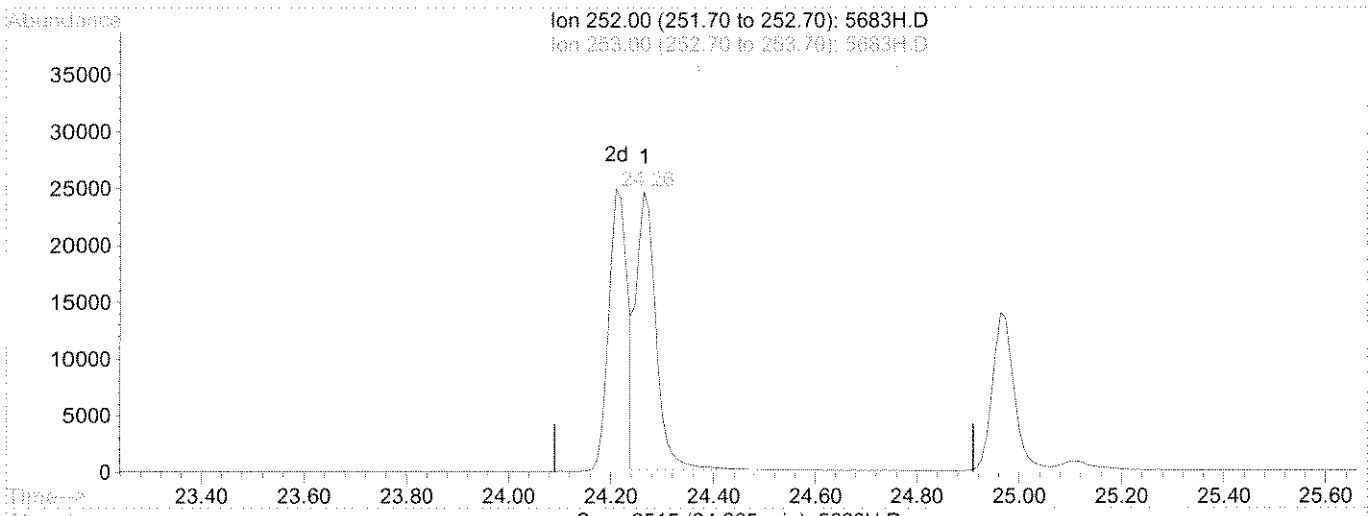
24.21min 1.08ug/ml m

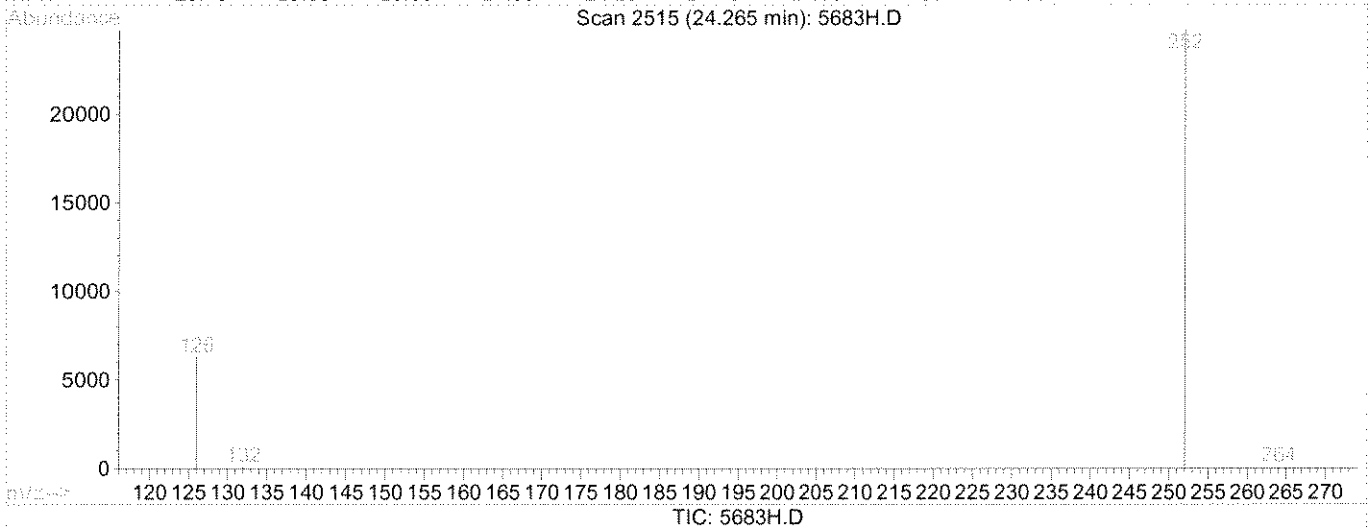
response 62736

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

```
Data File : X:\DATA\H110909\5683H.D                    Vial: 1
Acq On    :  9 Nov 09   7:25 am                     Operator: JCM
Sample    : SSTD 1.0                                Inst     : GC/MS Ins
Misc      : CAL SSTD                                Multiplr: 1.00
Quant Time: Nov  9 13:21 19109              Quant Results File: temp.res

Method       : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title        : CLP BNA Calibration
Last Update  : Mon Nov 09 13:31:22 2009
Response via : Multiple Level Calibration
```




(21) Benzo[k]fluoranthene

24.26min 1.19ug/ml m

response 65928

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 23.10 | 0.00# |
| 125.00 | 14.10 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5684H.D
Acq On : 9 Nov 09 8:00 am
Sample : SSTD 0.1
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:22 19109

Vial: 2
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1348264 | 10.00 | ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 720735 | 10.00 | ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1193390 | 10.00 | ug/ml | -0.03 |
| 14) Chrysene-d12 | 21.66 | 240 | 765227 | 10.00 | ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 445829 | 10.00 | ug/ml | -0.04 |
| **System Monitoring Compounds** | | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 13186 | 0.10 | ug/ml | -0.03 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery | = | 2.00%# | |
| 16) Terphenyl-d14 | 19.05 | 244 | 7033 | 0.10 | ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery | = | 2.00%# | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Naphthalene | 6.79 | 128 | 17040 | 0.10 | ug/ml# | 93 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 10698 | 0.10 | ug/ml | 98 |
| 4) 1-Methylnaphthalene | 8.73 | 142 | 9985 | 0.10 | ug/ml | 100 |
| 7) Acenaphthylene | 10.71 | 152 | 14726 | 0.09 | ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 9987 | 0.10 | ug/ml | 99 |
| 9) Fluorene | 12.50 | 166 | 10703 | 0.10 | ug/ml# | 93 |
| 11) Phenanthrene | 14.93 | 178 | 16296 | 0.11 | ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 13012 | 0.09 | ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 13720 | 0.09 | ug/ml | 94 |
| 15) Pyrene | 18.54 | 202 | 14195 | 0.12 | ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.62 | 228 | 10426 | 0.11 | ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 18815 | 0.09 | ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 5953m | 0.08 | ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 5995 | 0.09 | ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 3659 | 0.07 | ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.09 | 276 | 2598 | 0.05 | ug/ml# | 80 |
| 24) Dibenz[a,h]anthracene | 28.15 | 278 | 1693 | 0.05 | ug/ml# | 61 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 2985 | 0.07 | ug/ml# | 70 |

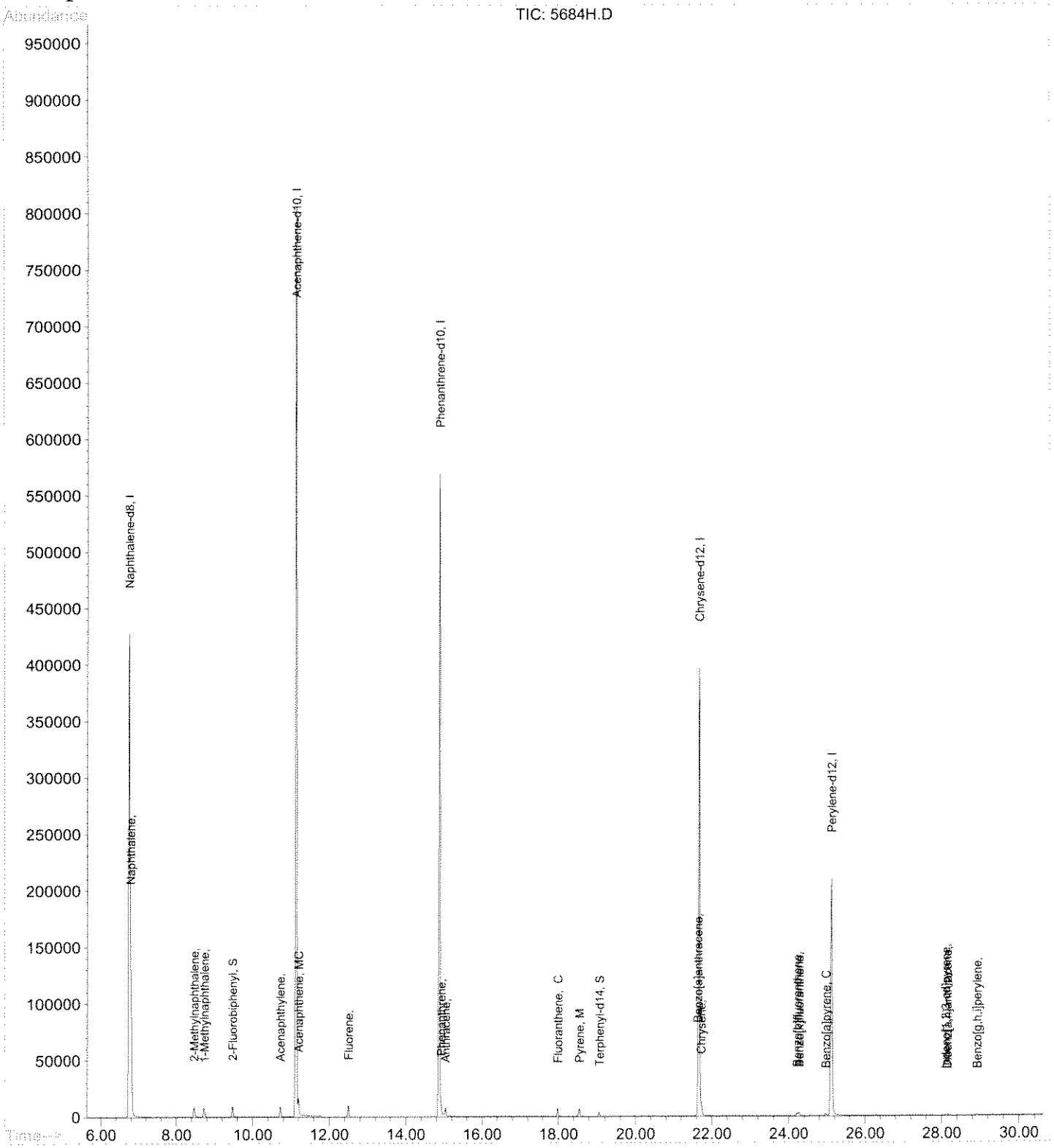
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5684H.D
Acq On : 9 Nov 09 8:00 am
Sample : SSTD 0.1
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:22 19109

Vial: 2
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



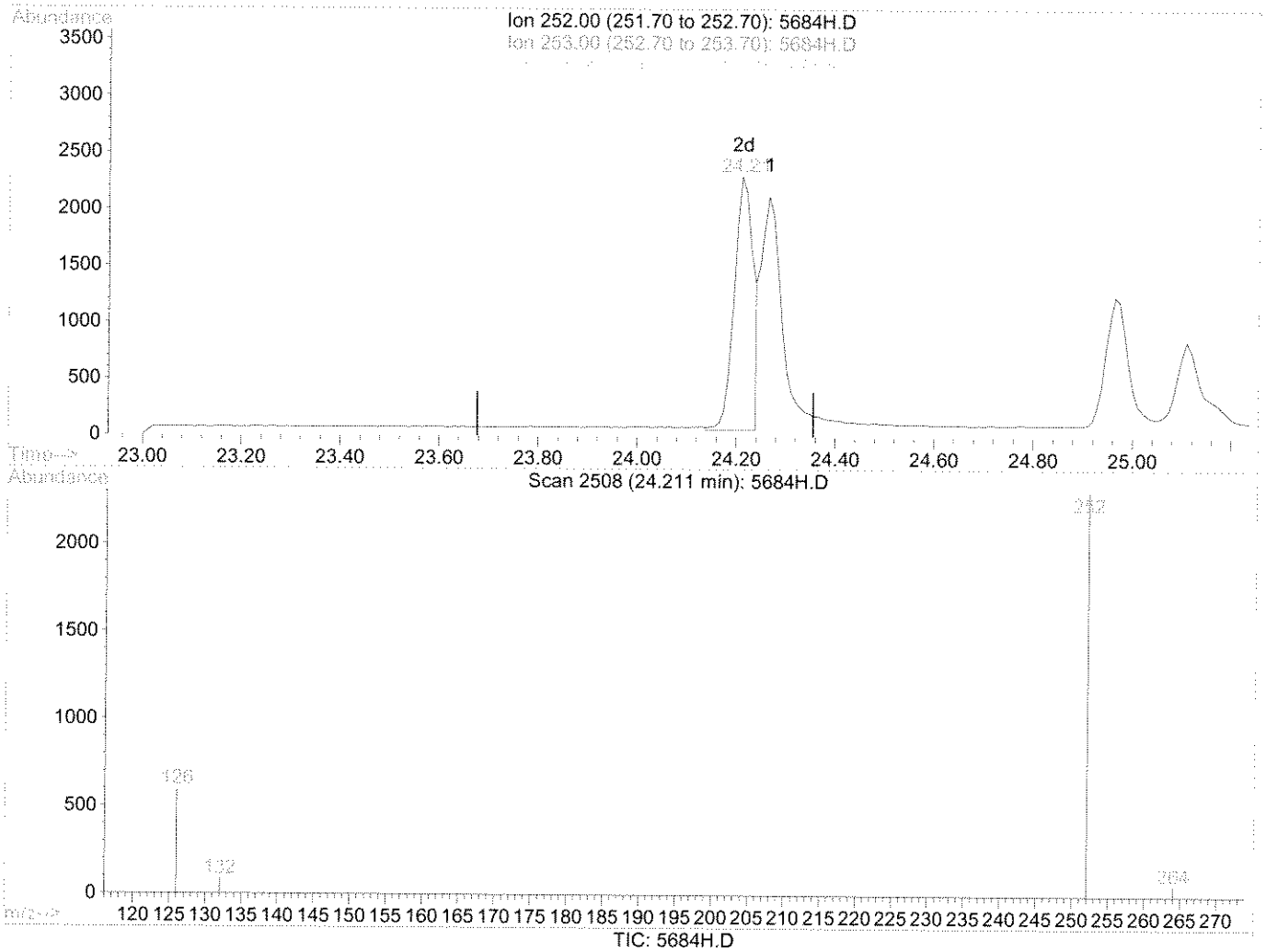



59169b

Data File : X:\DATA\H110909\5684H.D
Acq On : 9 Nov 09 8:00 am
Sample : SSTD 0.1
Misc : CAL SSTD
Quant Time: Nov 9 13:22 19109

Vial: 2
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




(20) Benzo[b]fluoranthene

24.21min 0.08ug/ml m

response 5953

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5685H.D
Acq On : 9 Nov 09 8:36 am
Sample : SSTD 0.5
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:23 19109

Vial: 3
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1395992 | 10.00 ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 747444 | 10.00 ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1225077 | 10.00 ug/ml | -0.03 |
| 14) Chrysene-d12 | 21.66 | 240 | 795335 | 10.00 ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 442882 | 10.00 ug/ml | -0.04 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 71162 | 0.52 ug/ml | -0.03 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 10.40%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 39919 | 0.53 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 10.60%# | | |

Target Compounds

| | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Naphthalene | 6.79 | 128 | 90381 | 0.52 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 58133 | 0.53 ug/ml | 97 |
| 4) 1-Methylnaphthalene | 8.73 | 142 | 54745 | 0.53 ug/ml | 99 |
| 7) Acenaphthylene | 10.71 | 152 | 83017 | 0.51 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 54292 | 0.53 ug/ml | 99 |
| 9) Fluorene | 12.50 | 166 | 58913 | 0.53 ug/ml# | 92 |
| 11) Phenanthrene | 14.93 | 178 | 84126 | 0.54 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 75294 | 0.52 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 78503 | 0.53 ug/ml | 95 |
| 15) Pyrene | 18.54 | 202 | 81816 | 0.64 ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.62 | 228 | 49027 | 0.48 ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 65786 | 0.54 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 35064m | 0.50 ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 35287 | 0.53 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 20807 | 0.43 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 13821 | 0.29 ug/ml# | 82 |
| 24) Dibenz[a,h]anthracene | 28.15 | 278 | 9459 | 0.26 ug/ml# | 61 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 15237 | 0.35 ug/ml# | 67 |

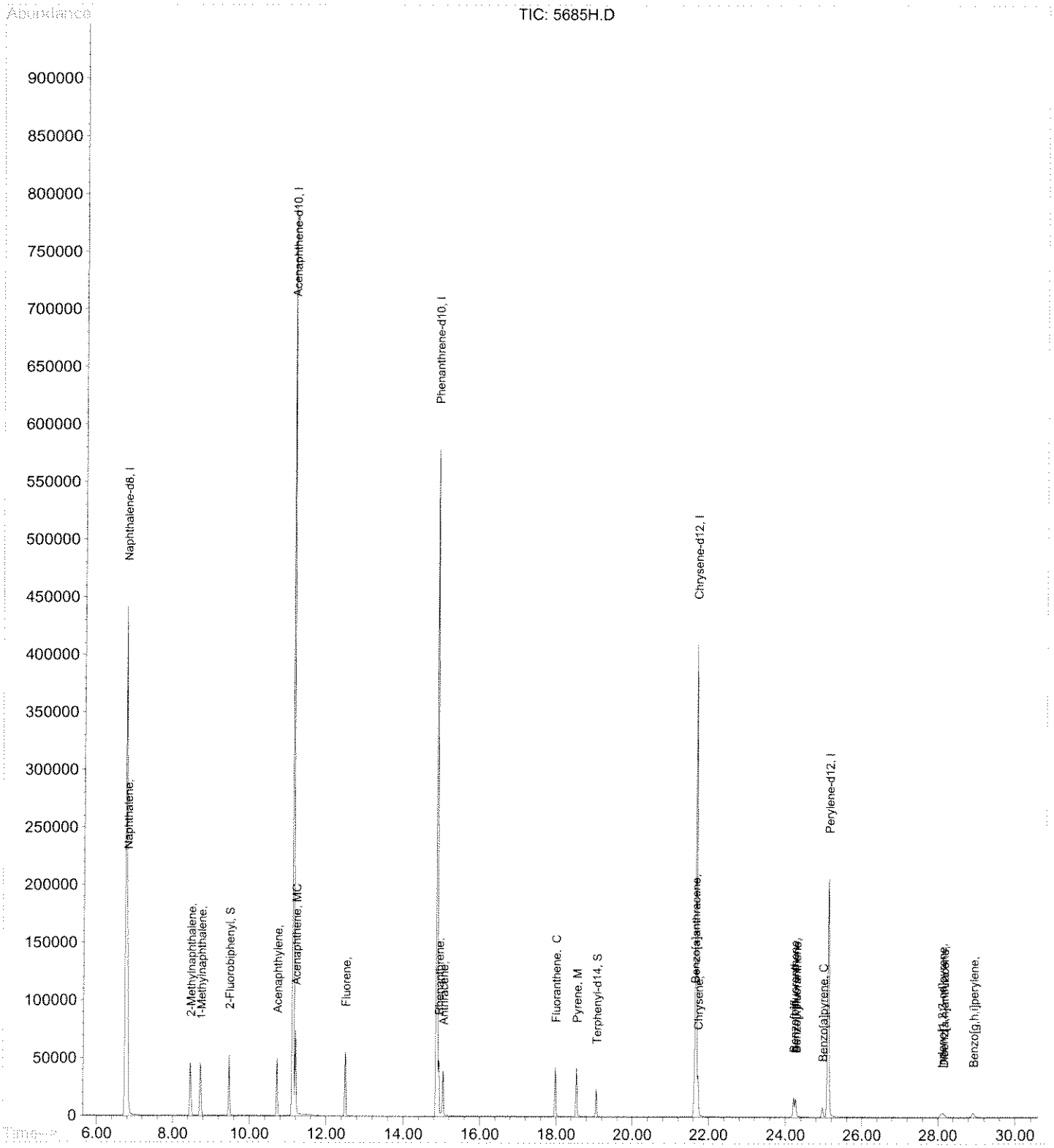
(#) = qualifier out of range (m) = manual integration
5685H.D SIMNEW.M Tue Nov 10 16:15:51 2009

Data File : X:\DATA\H110909\5685H.D
Acq On : 9 Nov 09 8:36 am
Sample : SSTD 0.5
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:23 19109

Vial: 3
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

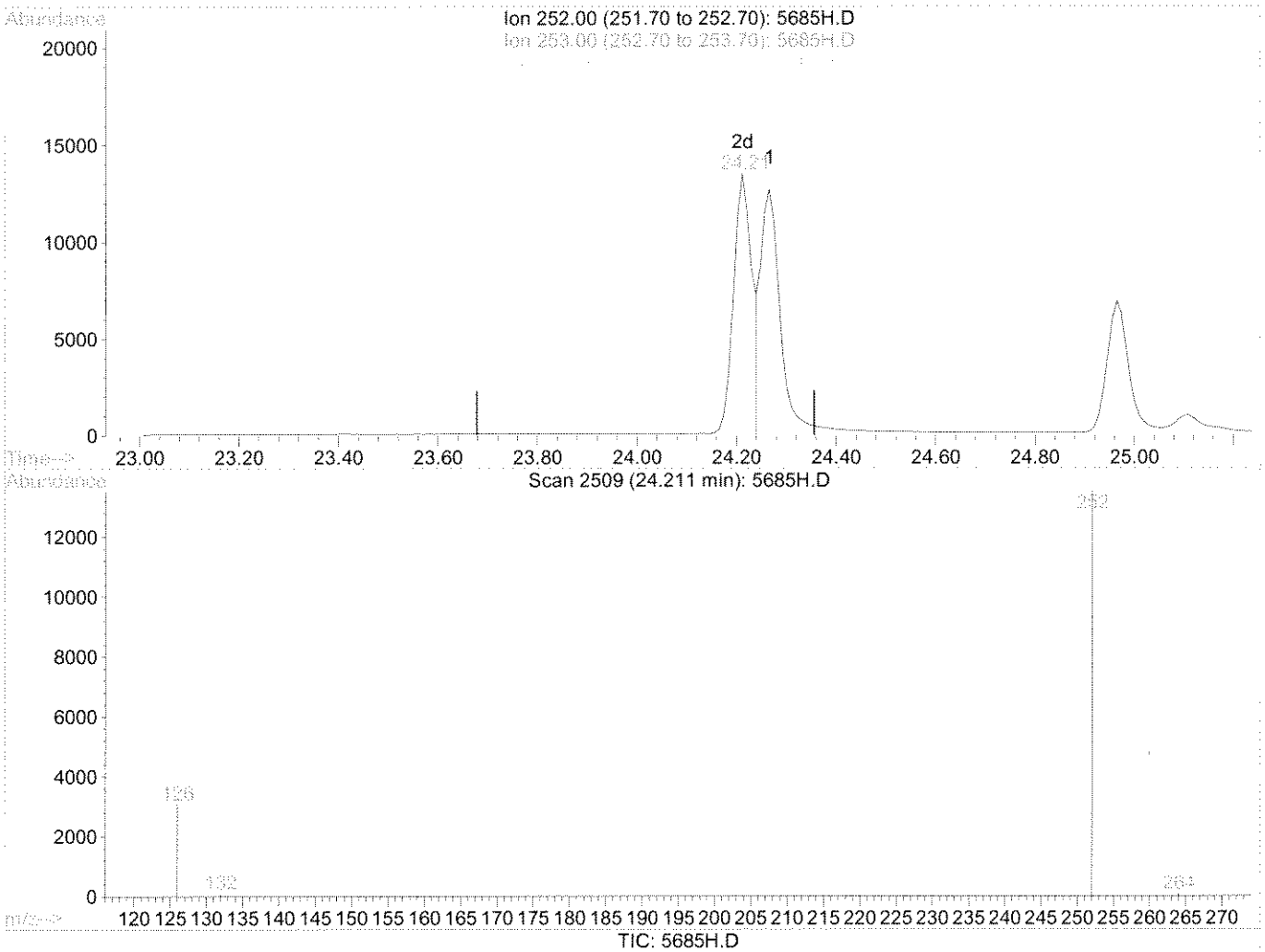
Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



Data File : X:\DATA\H110909\5685H.D  Vial: 3
Acq On : 9 Nov 09 8:36 am  Operator: JCM
Sample : SSTD 0.5  Inst : GC/MS Ins
Misc : CAL SSTD  Multiplr: 1.00
Quant Time: Nov 9 13:23 19109  Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration



TIC: 5685H.D

(20) Benzo[b]fluoranthene

24.21min 0.50ug/ml m

response 35064

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5686H.D  Vial: 4
Acq On : 9 Nov 09 9:12 am  Operator: JCM
Sample : SSTD 2.0  Inst : GC/MS Ins
Misc : CAL SSTD  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 13:25 19109  Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1038771 | 10.00 ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 548428 | 10.00 ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 900001 | 10.00 ug/ml | -0.03 |
| 14) Chrysene-d12 | 21.66 | 240 | 577640 | 10.00 ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 326275 | 10.00 ug/ml | -0.04 |
| System Monitoring Compounds | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 197409 | 1.98 ug/ml | -0.03 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 39.60% | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 115096 | 2.11 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 42.20% | | |
| Target Compounds | | | | | Qvalue |
| 2) Naphthalene | 6.78 | 128 | 257098 | 1.99 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 166043 | 2.02 ug/ml | 97 |
| 4) 1-Methylnaphthalene | 8.72 | 142 | 157318 | 2.06 ug/ml | 99 |
| 7) Acenaphthylene | 10.71 | 152 | 244535 | 2.03 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 153497 | 2.04 ug/ml | 99 |
| 9) Fluorene | 12.50 | 166 | 168097 | 2.05 ug/ml# | 93 |
| 11) Phenanthrene | 14.93 | 178 | 231535 | 2.01 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 217174 | 2.04 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 226829 | 2.06 ug/ml | 96 |
| 15) Pyrene | 18.53 | 202 | 236082 | 2.54 ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.62 | 228 | 140931 | 1.90 ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 164181 | 2.11 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 107486m | 2.08 ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 108021 | 2.20 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 67985 | 1.90 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 51292 | 1.45 ug/ml# | 80 |
| 24) Dibenz[a,h]anthracene | 28.14 | 278 | 36149 | 1.36 ug/ml# | 62 |
| 25) Benzo[g,h,i]perylene | 28.91 | 276 | 50501 | 1.55 ug/ml# | 67 |

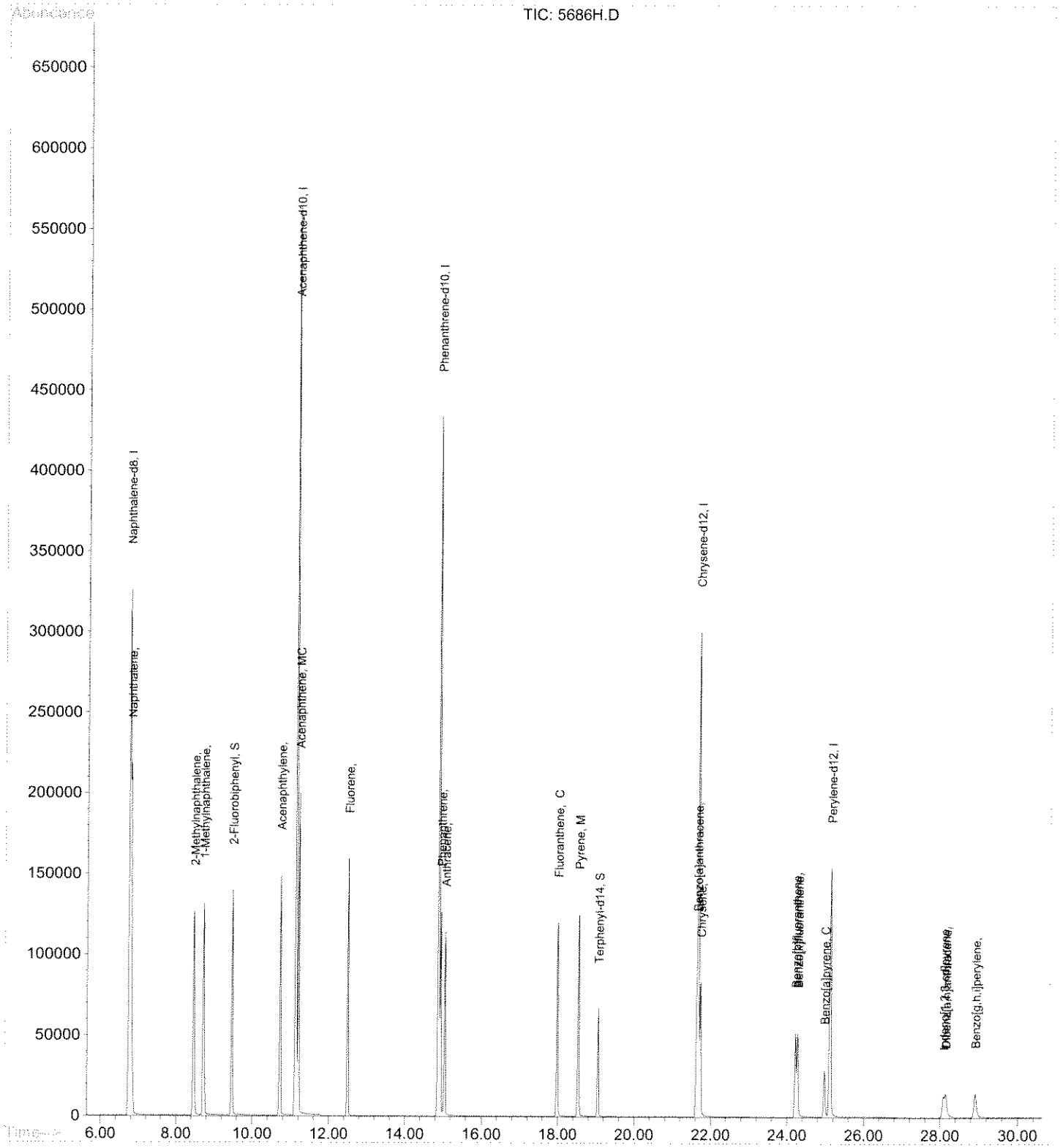
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5686H.D
Acq On : 9 Nov 09 9:12 am
Sample : SSTD 2.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:25 19109

Vial: 4
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



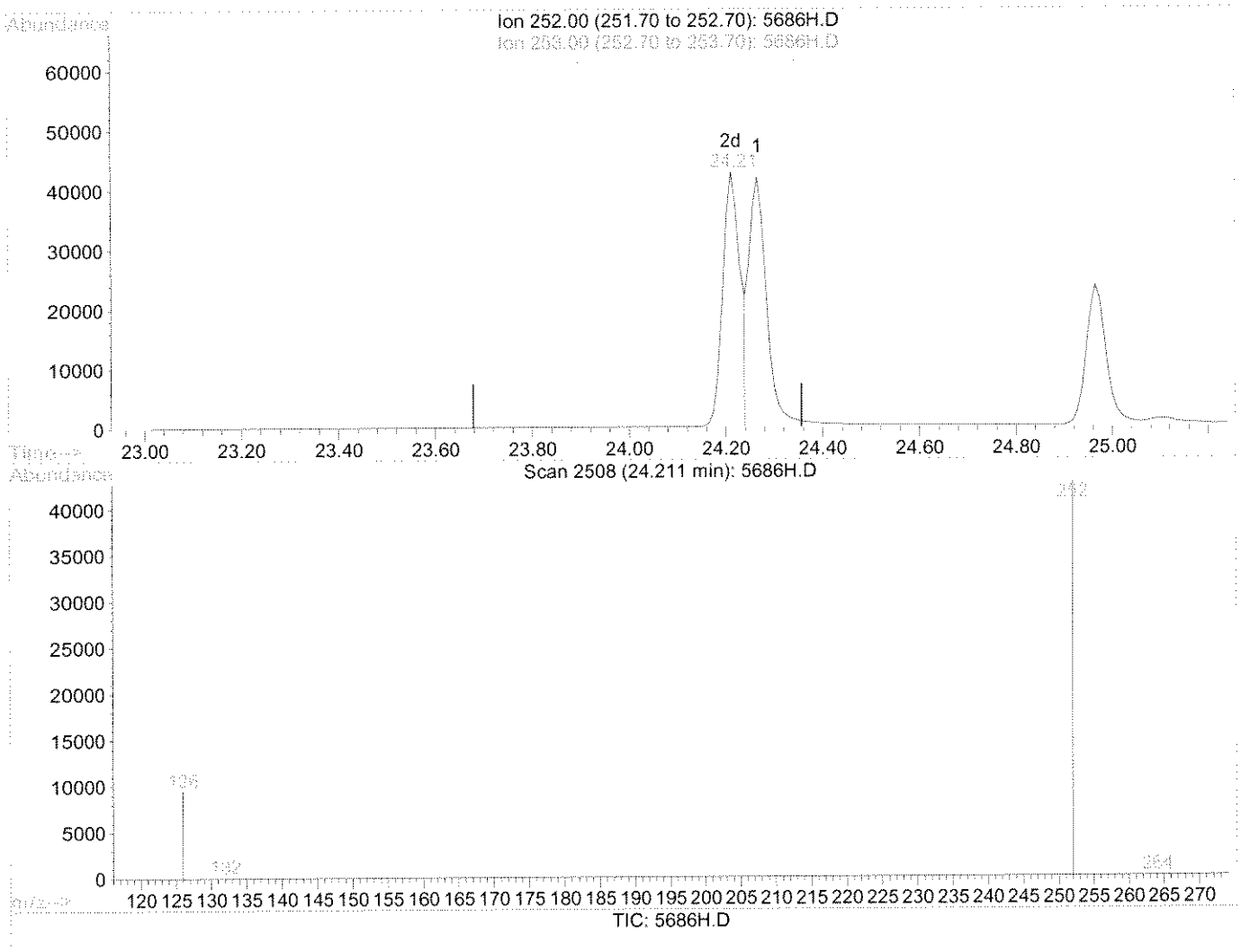



59169b

Data File : X:\DATA\H110909\5686H.D
Acq On : 9 Nov 09 9:12 am
Sample : SSTD 2.0
Misc : CAL SSTD
Quant Time: Nov 9 13:25 19109

Vial: 4
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




TIC: 5686H.D

(20) Benzo[b]fluoranthene

24.21min 2.08ug/ml m

response 107486

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5687H.D
Acq On : 9 Nov 09 9:47 am
Sample : SSTD 5.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:26 19109

Vial: 5
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1083335 | 10.00 ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 588587 | 10.00 ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1000366 | 10.00 ug/ml | -0.04 |
| 14) Chrysene-d12 | 21.66 | 240 | 692994 | 10.00 ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 421320 | 10.00 ug/ml | -0.04 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 537151 | 5.03 ug/ml | -0.03 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery | = 100.60%# | |
| 16) Terphenyl-d14 | 19.05 | 244 | 343082 | 5.25 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery | = 105.00%# | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Naphthalene | 6.79 | 128 | 673009 | 4.99 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 454828 | 5.32 ug/ml | 97 |
| 4) 1-Methylnaphthalene | 8.73 | 142 | 418223 | 5.26 ug/ml | 99 |
| 7) Acenaphthylene | 10.71 | 152 | 698267 | 5.40 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 415602 | 5.14 ug/ml | 98 |
| 9) Fluorene | 12.50 | 166 | 463769 | 5.28 ug/ml# | 93 |
| 11) Phenanthrene | 14.93 | 178 | 645873 | 5.05 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 642904 | 5.42 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 675812 | 5.53 ug/ml | 96 |
| 15) Pyrene | 18.54 | 202 | 688837 | 6.18 ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.62 | 228 | 476254 | 5.34 ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 497466 | 5.48 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 383414m | 5.76 ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 383686 | 6.04 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 261297 | 5.65 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.08 | 276 | 213148 | 4.67 ug/ml# | 79 |
| 24) Dibenz[a,h]anthracene | 28.14 | 278 | 151800 | 4.42 ug/ml# | 62 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 194992 | 4.65 ug/ml# | 67 |

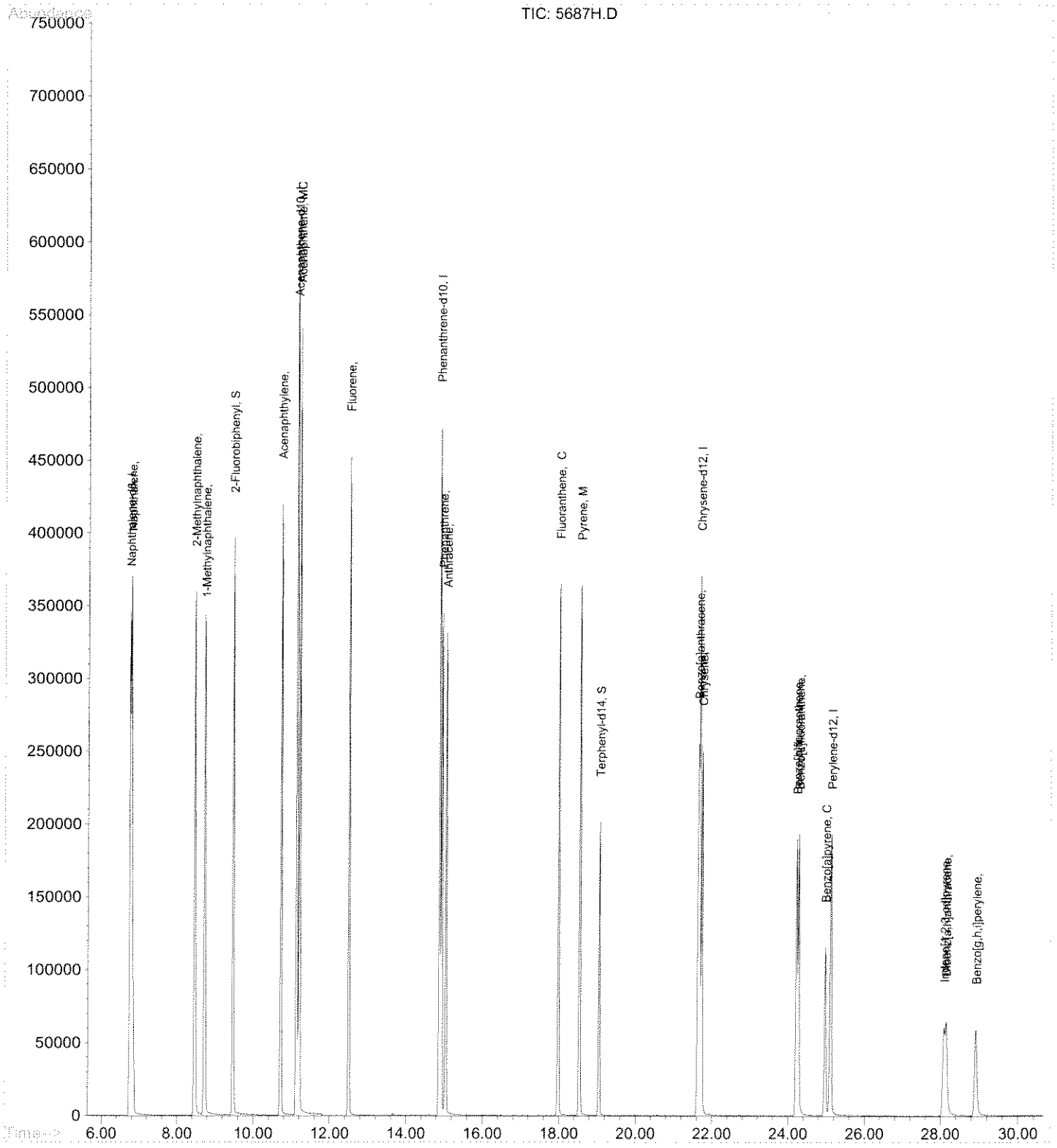
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5687H.D
Acq On : 9 Nov 09 9:47 am
Sample : SSTD 5.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:26 19109

Vial: 5
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

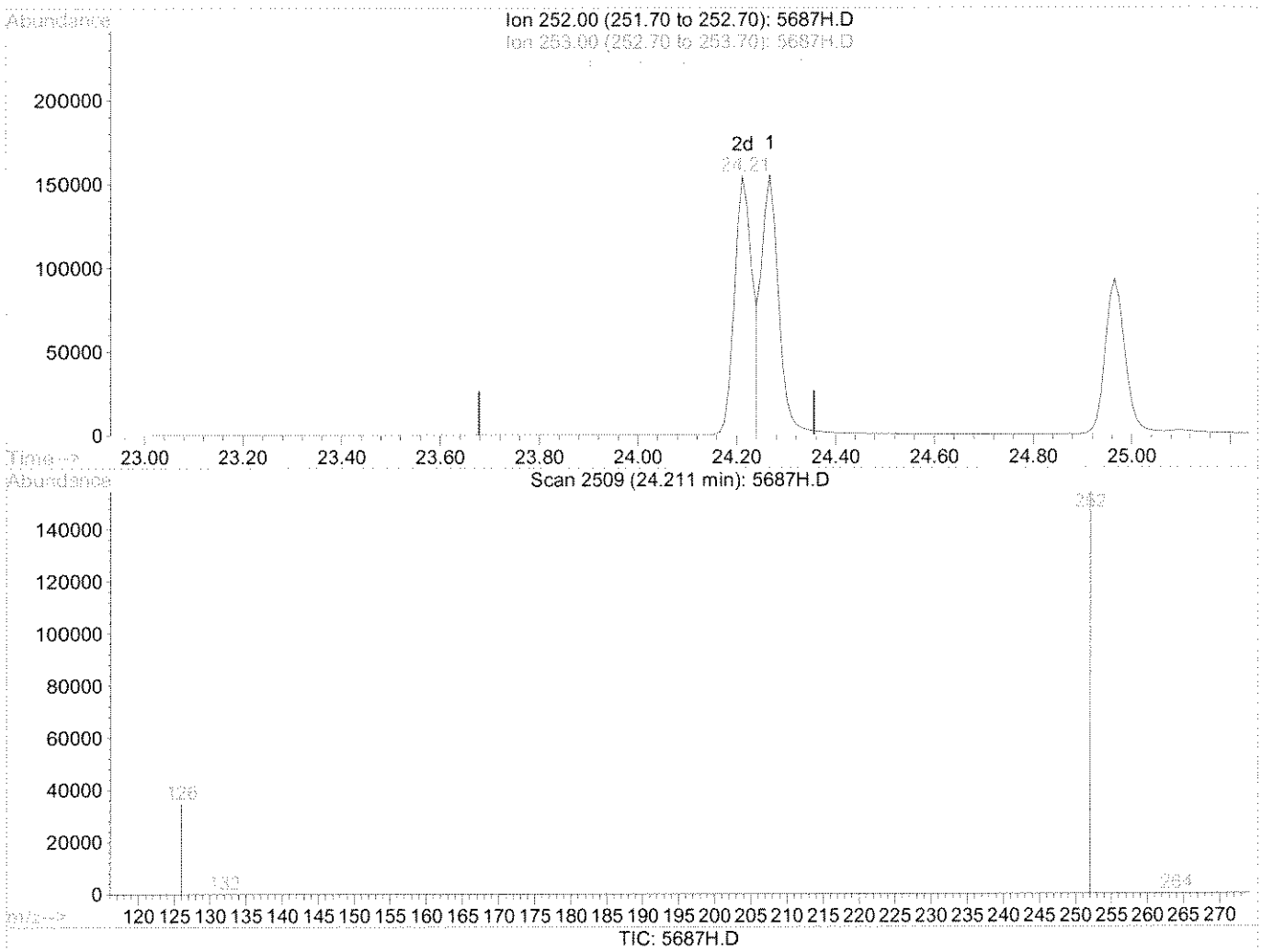
Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



```
Data File : X:\DATA\H110909\5687H.D                    Vial: 5
Acq On    :  9 Nov 09   9:47 am                     Operator: JCM
Sample    : SSTD 5.0                                Inst    : GC/MS Ins
Misc      : CAL SSTD                                Multiplr: 1.00
Quant Time: Nov  9 13:26 19109              Quant Results File: temp.res

Method       : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title        : CLP BNA Calibration
Last Update  : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration
```




(20) Benzo[b]fluoranthene

24.21min 5.76ug/ml m

response 383414

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5688H.D  Vial: 6
Acq On : 9 Nov 09 10:23 am  Operator: JCM
Sample : SSTD 0.02  Inst : GC/MS Ins
Misc : CAL SSTD  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 9 13:27 19109  Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Fri Oct 09 11:39:48 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.75 | 136 | 1247526 | 10.00 ug/ml | -0.02 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 685321 | 10.00 ug/ml | -0.03 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 1144259 | 10.00 ug/ml | -0.03 |
| 14) Chrysene-d12 | 21.66 | 240 | 744831 | 10.00 ug/ml | -0.04 |
| 19) Perylene-d12 | 25.11 | 264 | 517266 | 10.00 ug/ml | -0.04 |
| System Monitoring Compounds | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 2894 | 0.02 ug/ml | -0.03 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = | 0.40%# | |
| 16) Terphenyl-d14 | 19.05 | 244 | 1510 | 0.02 ug/ml | -0.04 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = | 0.40%# | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Naphthalene | 6.79 | 128 | 3634 | 0.02 ug/ml# | 89 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 2256 | 0.02 ug/ml | 96 |
| 4) 1-Methylnaphthalene | 8.73 | 142 | 2016 | 0.02 ug/ml | 97 |
| 7) Acenaphthylene | 10.71 | 152 | 2903 | 0.02 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 2131 | 0.02 ug/ml | 98 |
| 9) Fluorene | 12.50 | 166 | 2238 | 0.02 ug/ml# | 92 |
| 11) Phenanthrene | 14.93 | 178 | 3493 | 0.02 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 2612 | 0.02 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 2745 | 0.02 ug/ml | 96 |
| 15) Pyrene | 18.54 | 202 | 2820 | 0.02 ug/ml# | 79 |
| 17) Benzo[a]anthracene | 21.65 | 228 | 3847 | 0.04 ug/ml# | 53 |
| 18) Chrysene | 21.72 | 228 | 10445 | 0.01 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 1676m | 0.02 ug/ml | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 1900 | 0.02 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 1130 | 0.02 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.09 | 276 | 976 | 0.02 ug/ml | 91 |
| 24) Dibenz[a,h]anthracene | 28.17 | 278 | 650m | 0.02 ug/ml | 65 |
| 25) Benzo[g,h,i]perylene | 28.92 | 276 | 1054 | 0.02 ug/ml# | 70 |

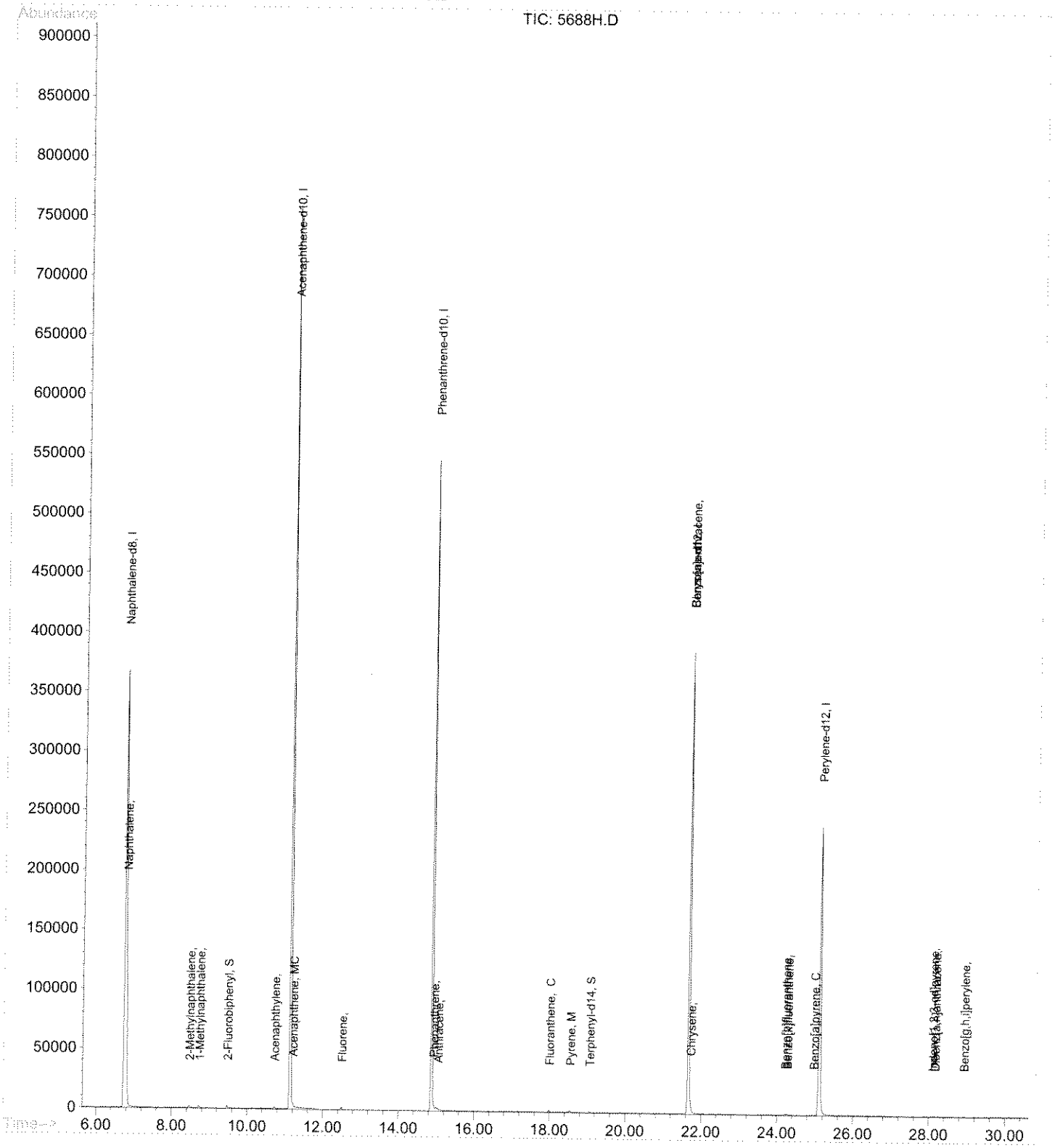
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H110909\5688H.D
Acq On : 9 Nov 09 10:23 am
Sample : SSTD 0.02
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 9 13:27 19109

Vial: 6
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5688H.D SIMNEW.M Tue Nov 10 16:16:40 2009

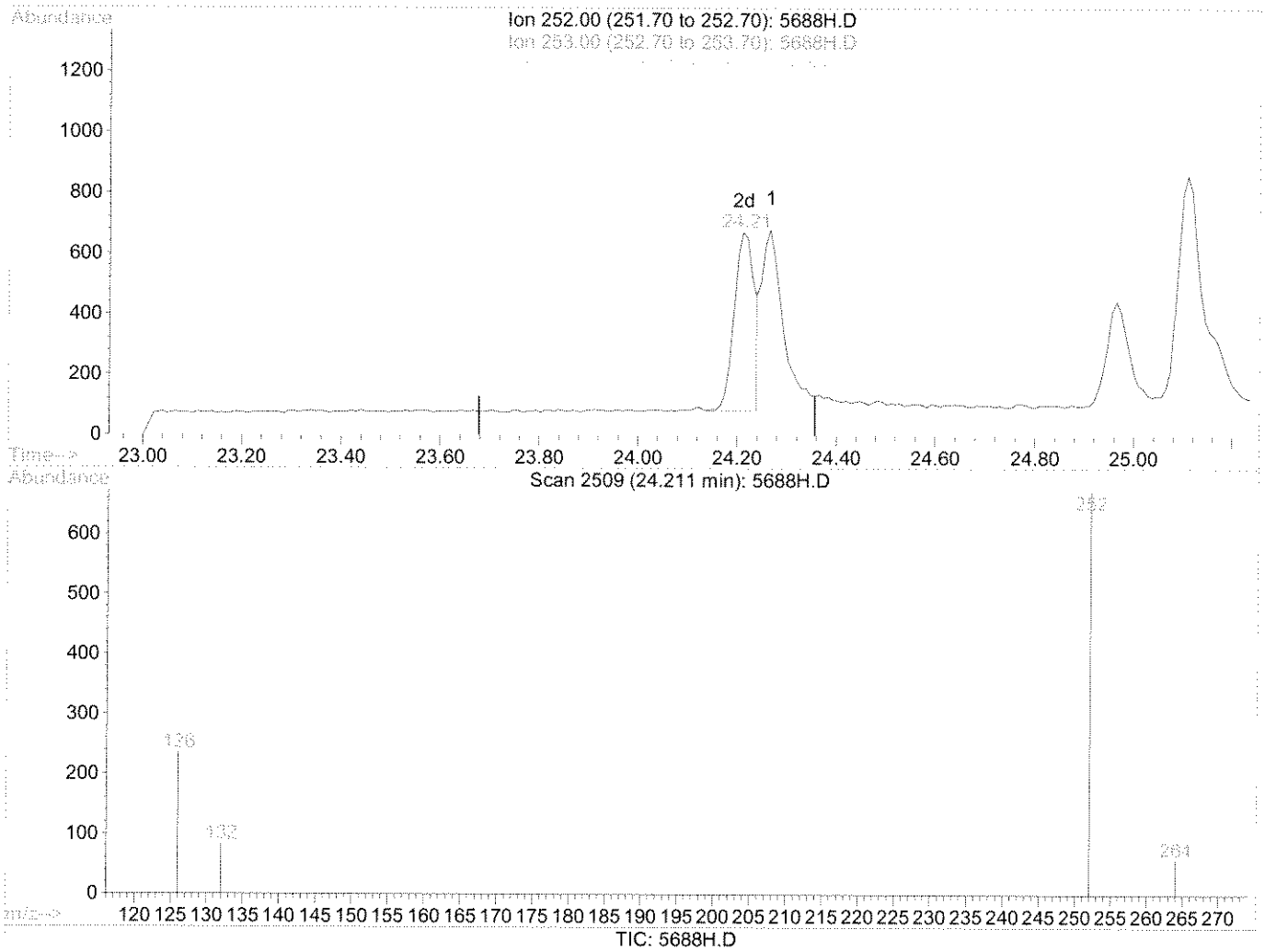


59169b

Data File : X:\DATA\H110909\5688H.D
Acq On : 9 Nov 09 10:23 am
Sample : SSTD 0.02
Misc : CAL SSTD
Quant Time: Nov 9 13:27 19109

Vial: 6
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




TIC: 5688H.D

(20) Benzo[b]fluoranthene

24.21min 0.02ug/ml m

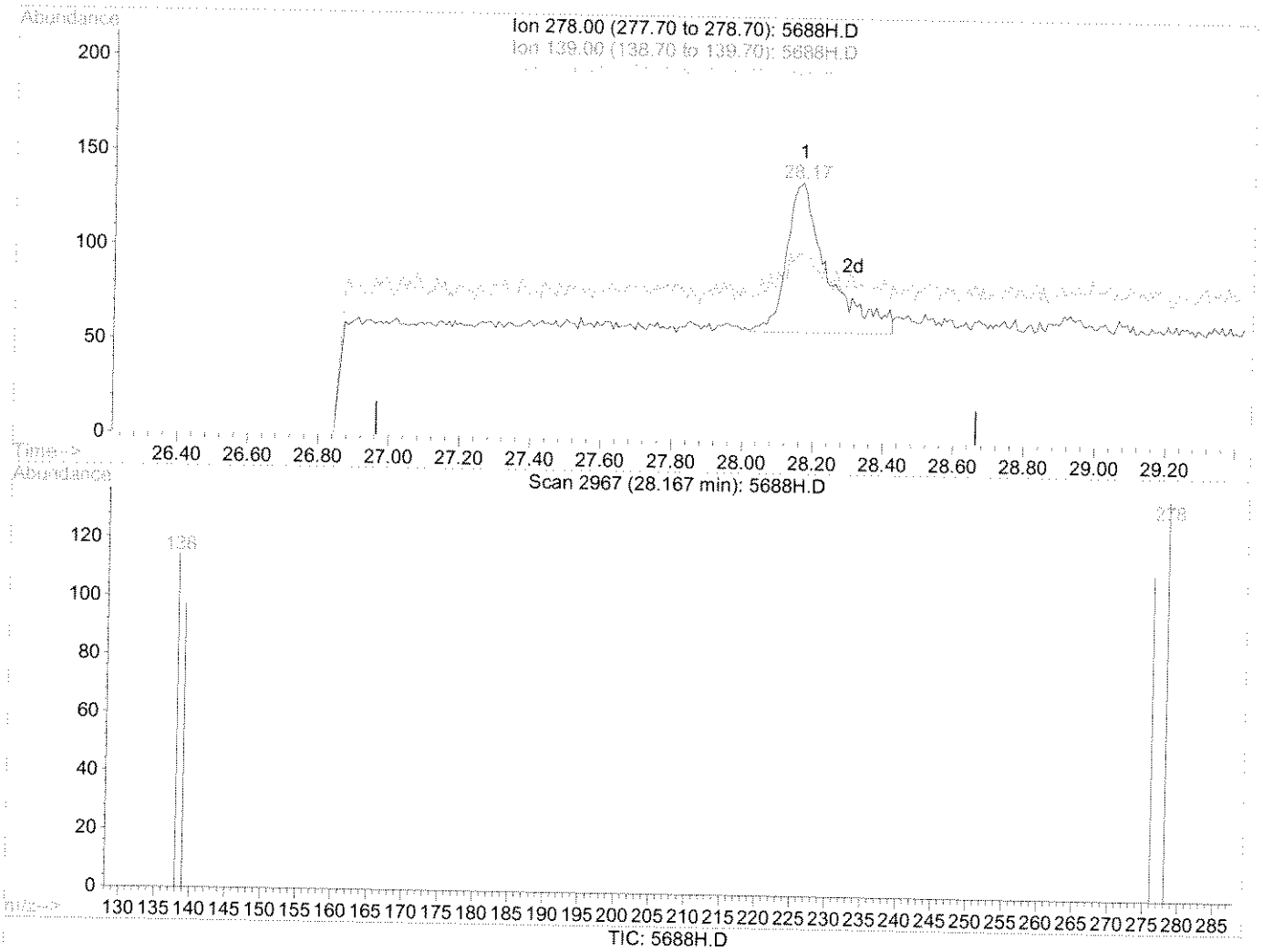
response 1676

| Ion | Exp% | Act% |
|---|---|---|
| 252.00 | 100 | 100 |
| 253.00 | 20.80 | 0.00# |
| 125.00 | 13.30 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H110909\5688H.D
Acq On : 9 Nov 09 10:23 am
Sample : SSTD 0.02
Misc : CAL SSTD
Quant Time: Nov 9 13:27 19109

Vial: 6
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




(24) Dibenz[a,h]anthracene

28.17min 0.02ug/ml m

response 650

| Ion | Exp% | Act% |
|---|---|---|
| 278.00 | 100 | 100 |
| 139.00 | 17.60 | 22.31# |
| 279.00 | 22.70 | 0.00# |
| 0.00 | 0.00 | 0.00 |

5B

# SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Heritage Env Svc Contract:

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

Lab File ID: 5700H.D DFTPP Injection Date: 11/10/09

Instrument ID: 8 DFTPP Injection Time: 16:56

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 30.0 - 80.0% of mass 198 | 12.5 |
| 68 | Less than 2.0% of mass 69 | 0.0 ( 0.0 )1 |
| 69 | Mass 69 Relative abundance | 23.4 |
| 70 | Less than 2.0% of mass 69 | 0.1 ( 0.3 )1 |
| 127 | 25.0 - 75.0% of mass 198 | 32.0 |
| 197 | Less than 1.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100.0 |
| 199 | 5.0 to 9.0% of mass 198 | 6.7 |
| 275 | 10.0 - 30.0% of mass 198 | 19.3 |
| 365 | Greater than 0.75% of mass 198 | 1.7 |
| 441 | Present, but less than mass 443 | 8.9 |
| 442 | 40.0 - 110.0% of mass 198 | 61.5 |
| 443 | 15.0 - 24.0% of mass 442 | 12.4 ( 20.1 )2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | SSTD 1.0 | SSTD 1.0 | 5701H.D | 11/10/09 | 17:26 |
| 02 | A864529 MS | A864529 MS | 5703H.D | 11/10/09 | 18:37 |
| 03 | A864529 MSD | A864529 MSD | 5704H.D | 11/10/09 | 19:13 |
| 04 | A864532 | A864532 | 5705H.D | 11/10/09 | 19:48 |
| 05 | A864533 | A864533 | 5706H.D | 11/10/09 | 20:24 |
| 06 | A864534 | A864534 | 5707H.D | 11/10/09 | 20:59 |
| 07 | A864535 | A864535 | 5708H.D | 11/10/09 | 21:35 |
| 08 | A864536 | A864536 | 5709H.D | 11/10/09 | 22:10 |
| 09 | A864537 | A864537 | 5710H.D | 11/10/09 | 22:46 |
| 10 | A864551 | A864551 | 5711H.D | 11/10/09 | 23:22 |

Q2255320
Q2255321

11-11-09



59169b

8B

# SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Heritage Env Svc Contract:

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

Lab File ID (Standard): 5701H.D Date Analyzed: 11/10/09

Instrument ID: 8 Time Analyzed: 17:26

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 1056209 | 6.74 | 553538 | 11.13 | 898748 | 14.87 |
| | UPPER LIMIT | 2112418 | 6.24 | 1107076 | 10.63 | 1797496 | 14.37 |
| | LOWER LIMIT | 528105 | 7.24 | 276769 | 11.63 | 449374 | 15.37 |
| | EPA SAMPLE NO. | | | | | | |
| 01 | A864529 MS | 981882 | 6.74 | 544163 | 11.12 | 938074 | 14.87 |
| 02 | A864529 MSD | 926008 | 6.74 | 500112 | 11.13 | 855117 | 14.87 |
| 03 | A864532 | 864719 | 6.74 | 478239 | 11.13 | 815265 | 14.86 |
| 04 | A864533 | 993783 | 6.74 | 551281 | 11.13 | 958496 | 14.87 |
| 05 | A864534 | 990532 | 6.74 | 549534 | 11.11 | 960611 | 14.86 |
| 06 | A864535 | 1064677 | 6.74 | 597644 | 11.12 | 1027863 | 14.86 |
| 07 | A864536 | 919573 | 6.74 | 493698 | 11.12 | 844120 | 14.86 |
| 08 | A864537 | 938292 | 6.74 | 487344 | 11.13 | 828122 | 14.86 |
| 09 | A864551 | 884929 | 6.74 | 465363 | 11.12 | 777369 | 14.86 |

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10
IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

UKB 11-11-09

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

# SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Heritage Env Svc Contract:

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

Lab File ID (Standard): 5701H.D Date Analyzed: 11/10/09

Instrument ID: 8 Time Analyzed: 17:26

| | | IS4 AREA # | RT # | IS5 AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 702404 | 21.66 | 454224 | 25.10 | | |
| | UPPER LIMIT | 1404808 | 21.16 | 908448 | 24.60 | | |
| | LOWER LIMIT | 351202 | 22.16 | 227112 | 25.60 | | |
| | EPA SAMPLE NO. | | | | | | |
| 01 | A864529 MS | 775501 | 21.65 | 521404 | 25.10 | | |
| 02 | A864529 MSD | 720807 | 21.66 | 515115 | 25.10 | | |
| 03 | A864532 | 690433 | 21.65 | 459465 | 25.10 | | |
| 04 | A864533 | 804074 | 21.65 | 617611 | 25.10 | | |
| 05 | A864534 | 827093 | 21.65 | 596016 | 25.10 | | |
| 06 | A864535 | 886651 | 21.65 | 646712 | 25.10 | | |
| 07 | A864536 | 715352 | 21.65 | 493503 | 25.10 | | |
| 08 | A864537 | 709093 | 21.65 | 493464 | 25.10 | | |
| 09 | A864551 | 633344 | 21.65 | 442438 | 25.10 | | |

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10
IS4 = Chrysene-d12
IS5 = Perylene-d12

JS 11-11-09

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Heritage Env Svc Contract:

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

Date Injected: 10-Nov-09 Instrument: 8

| | EPA SAMPLE NO. | S1 # | S2 # | TOT OUT |
|---|---|---|---|---|
| 01 | A864529 MS | 81 | 36 | 0 |
| 02 | A864529 MSD | 85 | 30 | 0 |
| 03 | A864532 | 82 | 23 | 0 |
| 04 | A864533 | 79 | 33 | 0 |
| 05 | A864534 | 80 | 44 | 0 |
| 06 | A864535 | 82 | 51 | 0 |
| 07 | A864536 | 83 | 43 | 0 |
| 08 | A864537 | 82 | 49 | 0 |
| 09 | A864551 | 80 | 40 | 0 |

QC LIMITS

| | | | |
|---|---|---|---|
| S1 | = | 2-Fluorobiphenyl | (41-126) |
| S2 | = | Terphenyl-d14 | (10-145) |

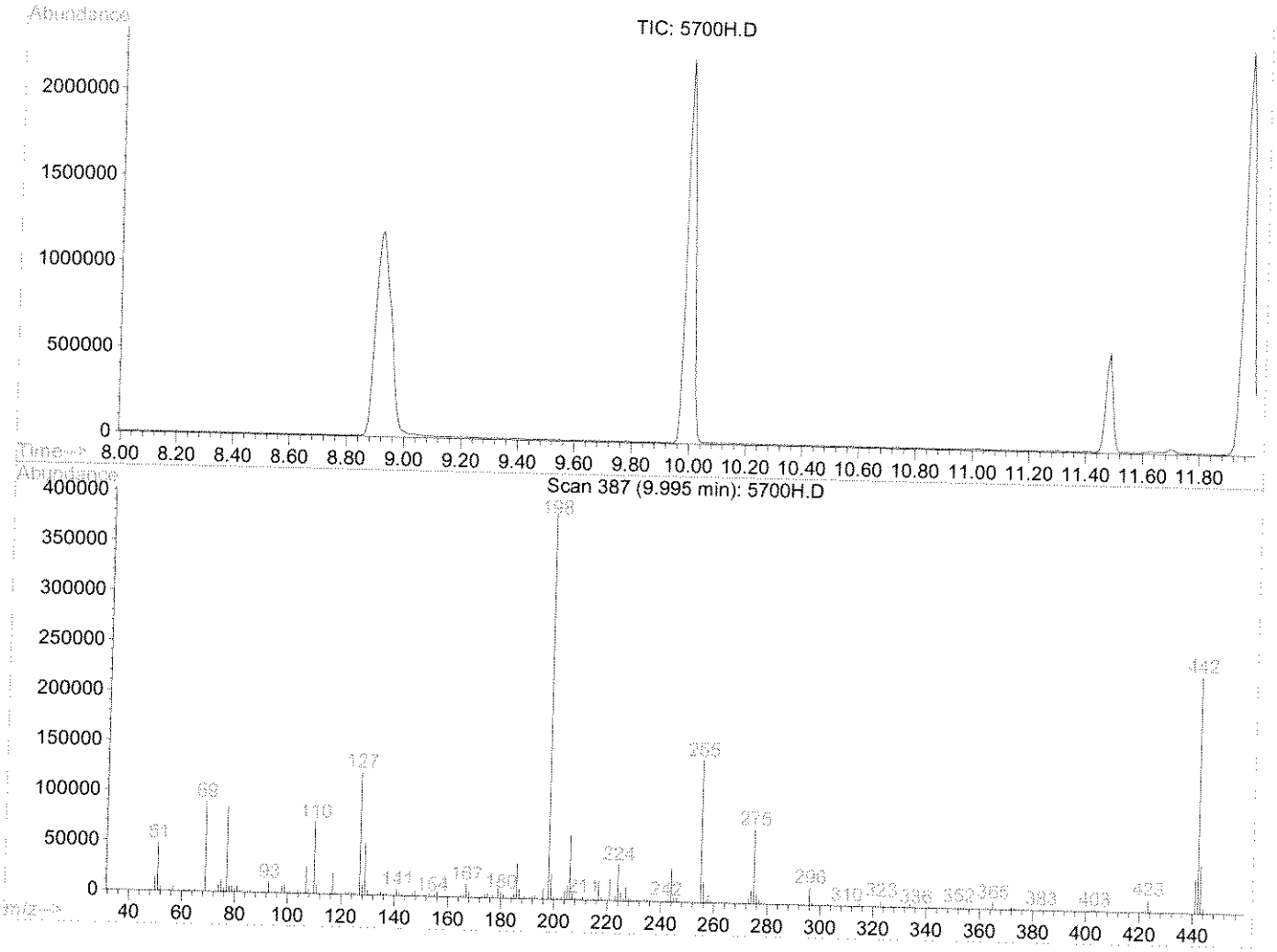
/KS 11/11/09

# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

# DFTPP

Data File : X:\DATA\H111009\5700H.D
Acq On : 10 Nov 09 4:56 pm
Sample : DFTPP
Misc :
MS Integration Params: rteint.p
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00




Spectrum Information: Scan 387

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 10 | 80 | 12.5 | 47768 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 23.4 | 89664 | PASS |
| 70 | 69 | 0.00 | 2 | 0.3 | 297 | PASS |
| 127 | 198 | 10 | 80 | 32.0 | 122624 | PASS |
| 197 | 198 | 0.00 | 2 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 383232 | PASS |
| 199 | 198 | 5 | 9 | 6.7 | 25592 | PASS |
| 275 | 198 | 10 | 60 | 19.3 | 74040 | PASS |
| 365 | 198 | 1 | 100 | 1.7 | 6394 | PASS |
| 441 | 443 | 0.01 | 100 | 72.2 | 34168 | PASS |
| 442 | 198 | 50 | 150 | 61.5 | 235712 | PASS |
| 443 | 442 | 15 | 24 | 20.1 | 47352 | PASS |

JM 11/11/09

5700H.D SIMNEW.M Wed Nov 11 14:06:47 2009

DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 44.90 | 113 | 59.70 | 134 | 72.00 | 51 | 82.80 | 1637 |
| 48.10 | 160 | 60.90 | 952 | 72.90 | 664 | 83.60 | 154 |
| 49.90 | 14114 | 61.90 | 1131 | 73.90 | 6916 | 84.90 | 741 |
| 50.90 | 47768 | 62.90 | 1734 | 74.90 | 11535 | 85.90 | 1716 |
| 51.90 | 3247 | 63.90 | 391 | 75.90 | 3568 | 86.90 | 472 |
| 52.90 | 114 | 64.90 | 1403 | 76.90 | 84656 | 87.90 | 243 |
| 54.90 | 306 | 65.80 | 74 | 77.90 | 5899 | 88.80 | 211 |
| 55.80 | 1363 | 66.80 | 159 | 78.90 | 5371 | 90.90 | 1366 |
| 56.80 | 4290 | 68.90 | 89664 | 79.80 | 3197 | 91.80 | 1389 |
| 57.80 | 197 | 69.80 | 297 | 80.90 | 5991 | 92.90 | 10295 |
| 58.90 | 153 | 70.60 | 172 | 81.90 | 1287 | 93.90 | 920 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 95.00 | 311 | 105.90 | 832 | 117.90 | 1608 | 131.00 | 419 |
| 95.90 | 663 | 106.90 | 26472 | 118.70 | 129 | 131.90 | 292 |
| 96.70 | 314 | 107.90 | 4123 | 119.90 | 395 | 132.60 | 211 |
| 97.90 | 7078 | 109.90 | 71504 | 121.90 | 1834 | 133.90 | 1450 |
| 98.90 | 7182 | 110.90 | 9431 | 122.90 | 3812 | 134.90 | 3330 |
| 100.00 | 378 | 111.90 | 1138 | 123.90 | 1987 | 135.90 | 1276 |
| 100.90 | 3033 | 112.80 | 229 | 124.90 | 1448 | 137.00 | 1551 |
| 101.70 | 226 | 113.90 | 361 | 126.90 | 122624 | 138.80 | 238 |
| 102.90 | 1380 | 114.90 | 204 | 127.90 | 9670 | 139.80 | 618 |
| 103.90 | 2128 | 116.00 | 1706 | 128.90 | 50760 | 140.90 | 5788 |
| 104.90 | 1747 | 116.90 | 20296 | 129.90 | 4749 | 141.90 | 2153 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 142.70 | 1228 | 152.90 | 1849 | 163.85 | 309 | 174.95 | 3905 |
| 144.00 | 303 | 154.00 | 1253 | 164.85 | 2060 | 175.85 | 1543 |
| 145.10 | 315 | 155.00 | 2791 | 165.85 | 2343 | 176.85 | 2053 |
| 145.90 | 1067 | 156.00 | 4365 | 166.85 | 12764 | 178.85 | 10055 |
| 146.90 | 2557 | 156.85 | 893 | 167.85 | 5527 | 179.85 | 5552 |
| 147.90 | 4980 | 157.85 | 1205 | 168.95 | 1331 | 180.95 | 3505 |
| 148.90 | 978 | 158.75 | 1135 | 170.45 | 472 | 181.95 | 625 |
| 149.90 | 291 | 159.95 | 1181 | 170.85 | 405 | 182.75 | 360 |
| 150.90 | 673 | 160.85 | 2127 | 171.85 | 1212 | 183.95 | 964 |
| 151.40 | 595 | 161.95 | 708 | 172.95 | 1131 | 184.95 | 3710 |
| 152.10 | 298 | 163.25 | 300 | 173.85 | 2370 | 185.95 | 34248 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 186.85 | 8996 | 199.85 | 1329 | 212.95 | 437 | 226.95 | 14041 |
| 187.95 | 875 | 201.25 | 1739 | 213.75 | 140 | 227.95 | 1910 |
| 188.85 | 2540 | 202.95 | 2519 | 214.95 | 663 | 228.85 | 2792 |
| 189.95 | 449 | 203.95 | 8207 | 216.85 | 18544 | 229.75 | 395 |
| 190.95 | 1037 | 204.95 | 13838 | 217.95 | 2766 | 230.95 | 1133 |
| 191.85 | 3213 | 205.95 | 64896 | 219.15 | 214 | 231.85 | 385 |
| 192.95 | 3299 | 206.95 | 8736 | 220.95 | 21792 | 232.85 | 336 |
| 193.95 | 810 | 207.95 | 2072 | 222.95 | 4145 | 233.85 | 1005 |
| 195.95 | 10809 | 208.85 | 656 | 223.95 | 36096 | 234.95 | 1034 |
| 197.85 | 383232 | 210.15 | 1320 | 224.95 | 8713 | 235.95 | 650 |
| 198.85 | 25592 | 210.95 | 2516 | 225.95 | 1245 | 236.85 | 1236 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 237.85 | 308 | 248.85 | 1067 | 261.95 | 126 | 274.95 | 74040 |
| 238.95 | 661 | 249.95 | 374 | 262.95 | 224 | 275.95 | 9686 |
| 239.95 | 374 | 250.75 | 185 | 264.05 | 368 | 276.95 | 4973 |
| 240.85 | 952 | 252.05 | 337 | 264.85 | 3181 | 278.05 | 648 |
| 241.95 | 1779 | 252.95 | 1045 | 265.85 | 562 | 278.85 | 280 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 243.95 | 32384 | 255.95 | 20216 | 269.95 | 153 | 281.95 | 131 |
| 244.95 | 3243 | 256.95 | 1477 | 270.95 | 276 | 283.05 | 390 |
| 245.95 | 4510 | 257.85 | 7868 | 271.75 | 274 | 283.85 | 397 |
| 246.85 | 1305 | 258.85 | 1512 | 272.95 | 4968 | 285.05 | 602 |
| 247.95 | 191 | 259.95 | 299 | 273.95 | 13213 | 285.75 | 68 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 288.35 | 131 | 302.10 | 472 | 314.90 | 2379 | 325.70 | 113 |
| 288.85 | 238 | 302.90 | 1465 | 316.00 | 1101 | 326.90 | 1108 |
| 290.05 | 97 | 303.90 | 415 | 316.80 | 89 | 328.00 | 366 |
| 290.95 | 62 | 304.80 | 75 | 318.10 | 70 | 329.90 | 61 |
| 291.85 | 314 | 308.00 | 312 | 319.00 | 65 | 331.20 | 161 |
| 292.95 | 1274 | 309.10 | 152 | 319.90 | 89 | 331.90 | 427 |
| 294.30 | 379 | 309.90 | 453 | 320.90 | 797 | 332.90 | 579 |
| 295.90 | 17000 | 310.80 | 66 | 321.90 | 398 | 333.90 | 3273 |
| 296.90 | 2521 | 311.80 | 74 | 323.00 | 5728 | 334.90 | 850 |
| 297.80 | 141 | 312.80 | 210 | 323.90 | 1066 | 336.00 | 191 |
| 301.10 | 275 | 313.90 | 875 | 325.00 | 130 | 340.00 | 107 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 340.90 | 451 | 355.90 | 54 | 373.90 | 61 | 402.00 | 1306 |
| 342.00 | 121 | 357.90 | 88 | 375.50 | 81 | 403.00 | 1338 |
| 342.80 | 129 | 358.90 | 199 | 376.90 | 92 | 404.00 | 419 |
| 345.90 | 1241 | 360.00 | 65 | 383.00 | 631 | 405.10 | 51 |
| 346.90 | 246 | 364.90 | 6394 | 383.90 | 428 | 408.00 | 75 |
| 348.90 | 79 | 365.90 | 980 | 388.10 | 58 | 414.90 | 188 |
| 350.90 | 69 | 367.80 | 52 | 389.90 | 389 | 421.00 | 1508 |
| 352.00 | 1837 | 370.00 | 191 | 391.00 | 405 | 422.10 | 1124 |
| 353.00 | 1006 | 371.00 | 436 | 391.90 | 231 | 423.10 | 12176 |
| 354.00 | 1659 | 372.00 | 3068 | 395.00 | 116 | 424.00 | 2200 |
| 355.00 | 368 | 373.00 | 687 | 401.00 | 223 | 425.00 | 195 |

Scan 387 (9.995 min): 5700H.D
DFTPP

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 428.20 | 56 | | | | | | |
| 433.15 | 59 | | | | | | |
| 436.55 | 50 | | | | | | |
| 438.25 | 126 | | | | | | |
| 441.05 | 34168 | | | | | | |
| 442.05 | 235712 | | | | | | |
| 443.05 | 47352 | | | | | | |
| 444.05 | 4568 | | | | | | |
| 445.75 | 79 | | | | | | |

R560106 Heritage Environmental Services, LLC Q2256425

QC Report

QCType CCVD | Duplicate SampleID | DataFile 5701H.D
Date Entered 11Nov09 | Duplicate QCSampleID | Analyst 2447 J. MINNIEAR, II
Analysis Date/Time 10Nov0917:26:00 | Method | Matrix | Units

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 98 | ACENAPHTHYLENE | 2.2282 | | 2.2896 | | | 2.8 |
| 97 | ACENAPHTHENE | 1.4157 | | 1.4311 | | | 1.1 |
| 366 | FLUORENE | 1.5517 | | 1.5626 | | | .7 |
| 597 | PHENANTHRENE | 1.3371 | | 1.3447 | | | .6 |
| 128 | ANTHRACENE | 1.2234 | | 1.2805 | | | 4.7 |
| 363 | FLUORANTHENE | 1.2804 | | 1.2981 | | | 1.4 |
| 624 | PYRENE | 2.0180 | | 1.7228 | | | 14.6 |
| 155 | BENZO(A)ANTHRACENE | 1.3064 | | 1.4082 | | | 7.8 |
| 245 | CHRYSENE | 1.000 ~~4.7088~~ | 1.000 | ~~1.5169~~ | LIN | | 6 ~~112~~ |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | 1.6769 | | 1.7729 | | | 5.7 |
| 159 | BENZO(K)FLUORANTHENE | 1.6432 | | 1.6592 | | | 1 |
| 156 | BENZO(A)PYRENE | 1.0872 | | 1.1645 | | | 7.1 |
| 413 | INDENO(1,2,3-CD)PYRENE | 1.000 | | 1.191 | LIN | | 19.1 |
| 294 | DIBENZ(A,H)ANTHRACENE | 1.000 | | 1.200 | LIN | | 20 |
| 158 | BENZO(G,H,I)PERYLENE | 0.7561 | | 0.9013 | | | 19.2 |
| 493 | NAPHTHALENE | 1.2686 | | 1.2980 | | | 2.3 |
| 62 | 2-METHYLNAPHTHALENE | 0.8249 | | 0.8119 | | | 1.6 |
| 887 | 1-METHYLNAPHTHALENE | 0.7729 | | 0.7726 | | | 0 |
| 58 | 2-FLUOROBIPHENYL | 1.8415 | | 1.8728 | | | 1.7 |
| 701 | TERPHENYL-D14 | 0.9923 | | 0.9567 | | | 3.6 |

JS 11-11-09

**Comment** Value reported for analytes calibrated by linear (LIN) or quadratic (QDR) equations is concentration (UG/ML).

**Qualifiers**

LIN Linear Regression Used

JS 11-11-09

Data File : X:\DATA\H111009\5701H.D  Vial: 1
Acq On : 10 Nov 09 5:26 pm  Operator: JCM
Sample : SSTD 1.0  Inst : GC/MS Ins
Misc : CAL SSTD  Multiplr: 1.00
MS Integration Params: rteint.p
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

cal 1 = 5683H.D cal 0 = 5684H.D cal 1 = 5685H.D
cal 2 = 5686H.D cal 5 = 5687H.D

| | | Compound | AvgRF/TV | CCRF/OBS | %Dev | |
|---|---|---|---|---|---|---|
| 1 | I | Naphthalene-d8 | 1.00000 | 1.00000 | 0.0 | |
| 2 | | Naphthalene | 1.26863 | 1.29803 | 2.3 | |
| 3 | | 2-Methylnaphthalene | 0.82486 | 0.81192 | 1.6 | |
| 4 | | 1-Methylnaphthalene | 0.77288 | 0.77261 | 0.0 | |
| 5 | I | Acenaphthene-d10 | 1.00000 | 1.00000 | 0.0 | |
| 6 | S | 2-Fluorobiphenyl | 1.84151 | 1.87275 | 1.7 | |
| 7 | | Acenaphthylene | 2.22817 | 2.28964 | 2.8 | |
| 8 | MC | Acenaphthene | 1.41567 | 1.43109 | 1.1 | |
| 9 | | Fluorene | 1.55174 | 1.56264 | 0.7 | |
| 10 | I | Phenanthrene-d10 | 1.00000 | 1.00000 | 0.0 | |
| 11 | | Phenanthrene | 1.33707 | 1.34467 | 0.6 | |
| 12 | | Anthracene | 1.22341 | 1.28051 | 4.7 | |
| 13 | C | Fluoranthene | 1.28036 | 1.29806 | 1.4 | |
| 14 | I | Chrysene-d12 | 1.00000 | 1.00000 | 0.0 | |
| 15 | M | Pyrene | 2.01799 | 1.72275 | 14.6 | |
| 16 | S | Terphenyl-d14 | 0.99230 | 0.95666 | 3.6 | |
| 17 | | Benzo[a]anthracene | 1.30639 | 1.40824 | 7.8 | |
| 18 | | Chrysene | 1.000 | 0.999 | | 0.1 L IN |
| 19 | I | Perylene-d12 | 1.00000 | 1.00000 | 0.0 | |
| 20 | | Benzo[b]fluoranthene | 1.67691 | 1.77289 | 5.7 | |
| 21 | | Benzo[k]fluoranthene | 1.64318 | 1.65920 | 1.0 | |
| 22 | C | Benzo[a]pyrene | 1.08717 | 1.16451 | 7.1 | |
| 23 | | Indeno[1,2,3-cd]pyrene | 1.000 | 1.191 | | 19.1 L IN |
| 24 | | Dibenz[a,h]anthracene | 1.000 | 1.200 | | 20.0 L IN |
| 25 | | Benzo[g,h,i]perylene | 0.75613 | 0.90125 | 19.2 | |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5701H.D SIMNEW.M Wed Nov 11 14:15:00 2009



59169b

Data File : X:\DATA\H111009\5701H.D
Acq On : 10 Nov 09 5:26 pm
Sample : SSTD 1.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 11 15:09 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SIMNEW.RES

Quant Method : C:\HPCHEM\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1056209 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 553538 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 898748 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.66 | 240 | 702404 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 454224 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 103664 | 1.02 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 20.40%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 67196 | 0.96 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 19.20% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Naphthalene | 6.78 | 128 | 137099 | 1.02 ug/ml# | 94 |
| 3) 2-Methylnaphthalene | 8.46 | 142 | 85756 | 0.98 ug/ml | 97 |
| 4) 1-Methylnaphthalene | 8.72 | 142 | 81604 | 1.00 ug/ml | 99 |
| 7) Acenaphthylene | 10.71 | 152 | 126740 | 1.03 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 79216 | 1.01 ug/ml | 99 |
| 9) Fluorene | 12.49 | 166 | 86498 | 1.01 ug/ml# | 93 |
| 11) Phenanthrene | 14.92 | 178 | 120852 | 1.01 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 115086 | 1.05 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 116663 | 1.01 ug/ml | 95 |
| 15) Pyrene | 18.53 | 202 | 121007 | 0.85 ug/ml# | 78 |
| 17) Benzo[a]anthracene | 21.61 | 228 | 98915 | 1.08 ug/ml# | 53 |
| 18) Chrysene | 21.71 | 228 | 106551 | 1.00 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.21 | 252 | 80529 | 1.06 ug/ml# | 60 |
| 21) Benzo[k]fluoranthene | 24.27 | 252 | 75365 | 1.01 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 52895 | 1.07 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.07 | 276 | 45939 | 1.19 ug/ml# | 79 |
| 24) Dibenz[a,h]anthracene | 28.14 | 278 | 32622m | 1.20 ug/ml | 63 |
| 25) Benzo[g,h,i]perylene | 28.91 | 276 | 40937m | 1.19 ug/ml | 67 |

(#) = qualifier out of range (m) = manual integration
5701H.D SIMNEW.M Wed Nov 11 14:15:50 2009



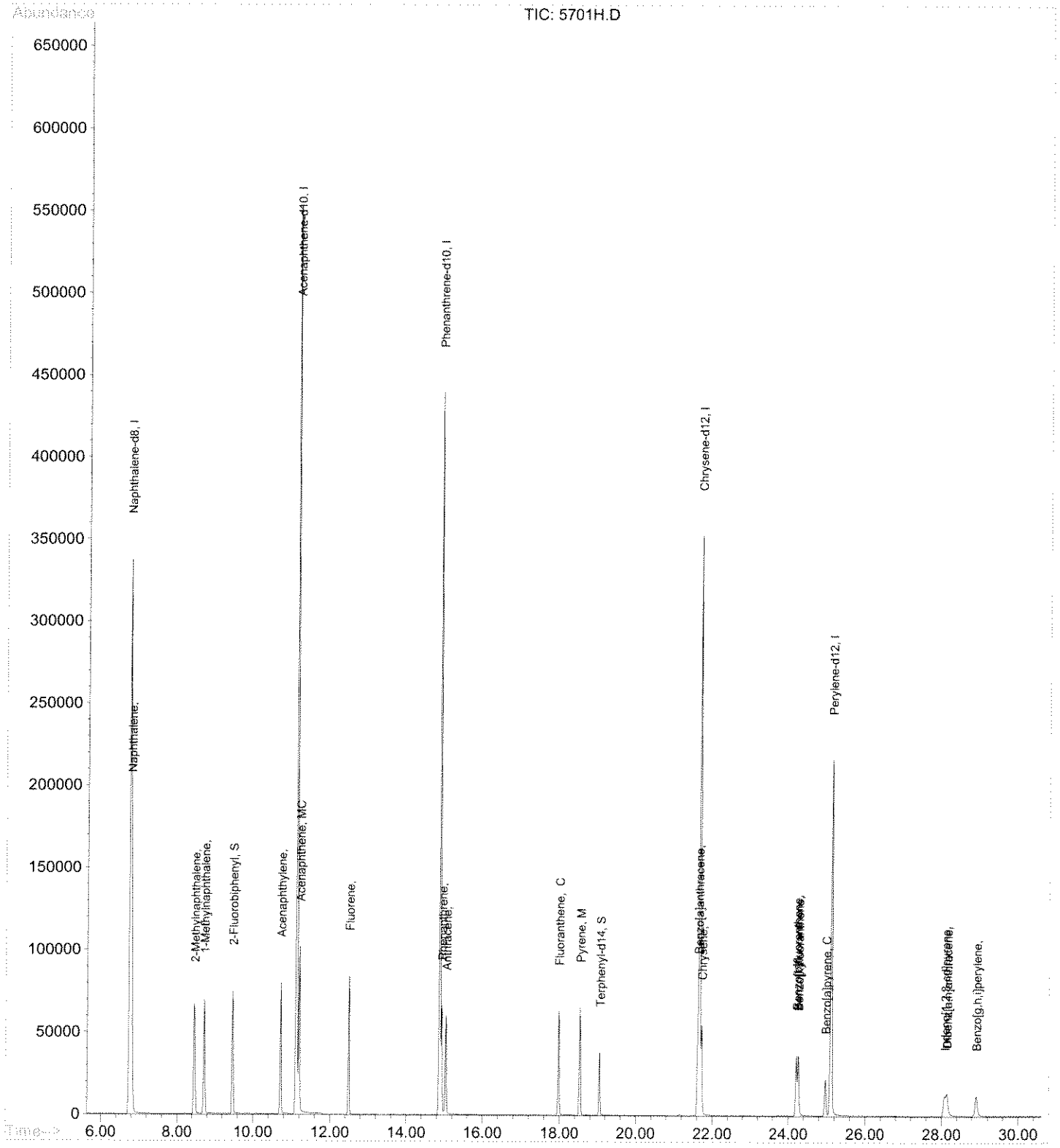
59169b

Data File : X:\DATA\H111009\5701H.D
Acq On : 10 Nov 09 5:26 pm
Sample : SSTD 1.0
Misc : CAL SSTD
MS Integration Params: rteint.p
Quant Time: Nov 11 15:09 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



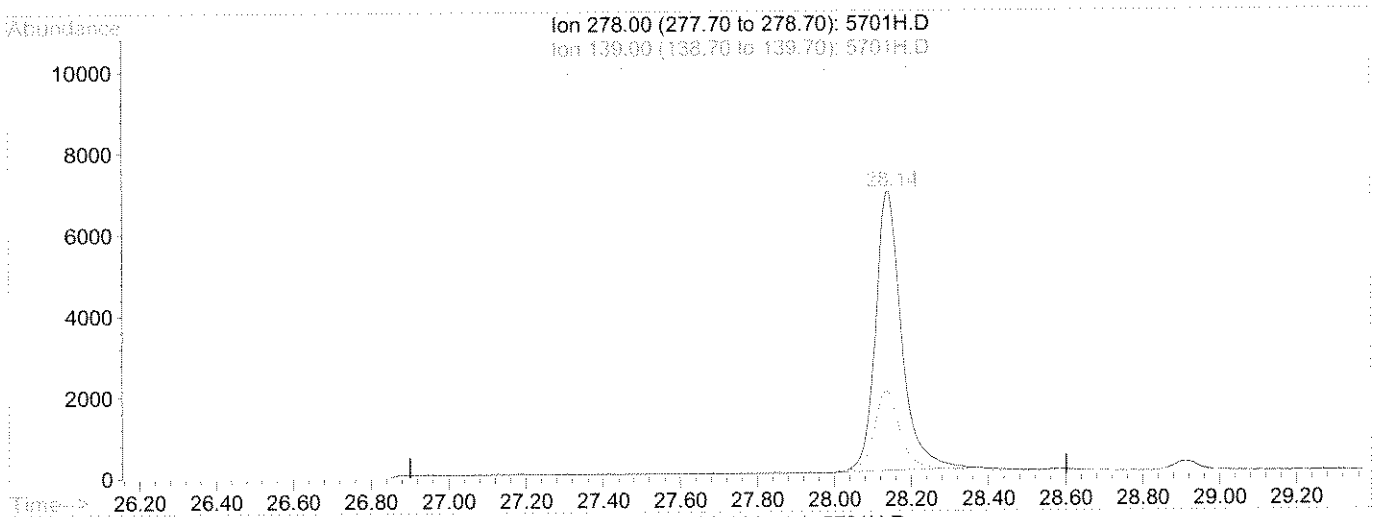


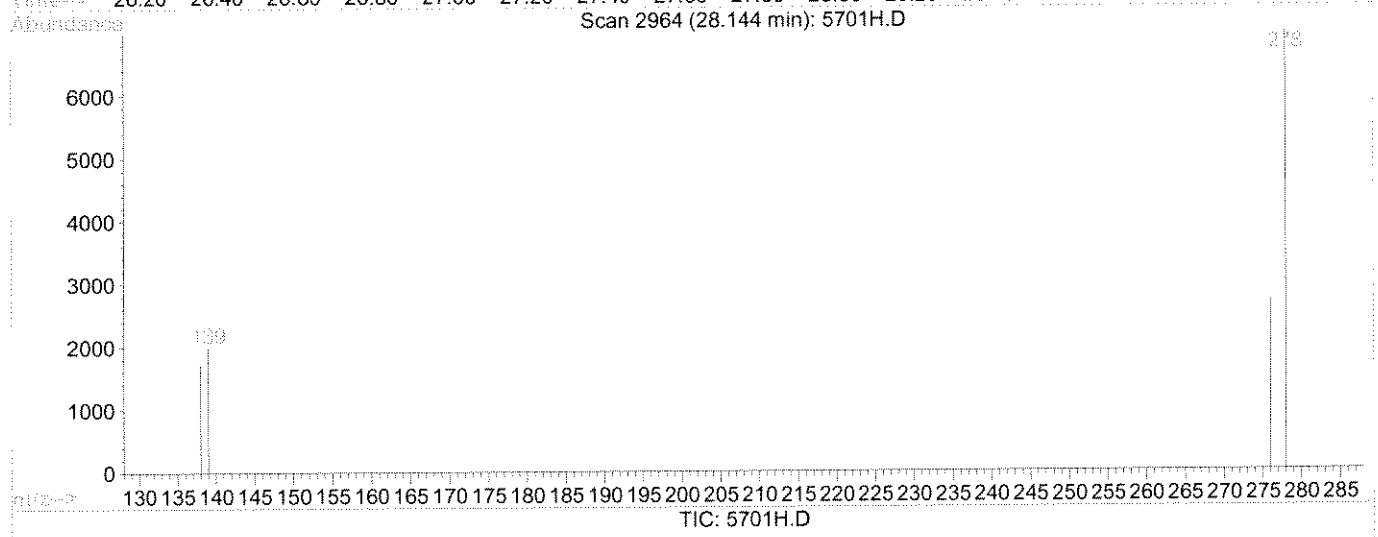

59169b

Data File : X:\DATA\H111009\5701H.D
Acq On : 10 Nov 09 5:26 pm
Sample : SSTD 1.0
Misc : CAL SSTD
Quant Time: Nov 11 15:09 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Single Level Calibration




(24) Dibenz[a,h]anthracene

28.14min 1.20ug/ml m

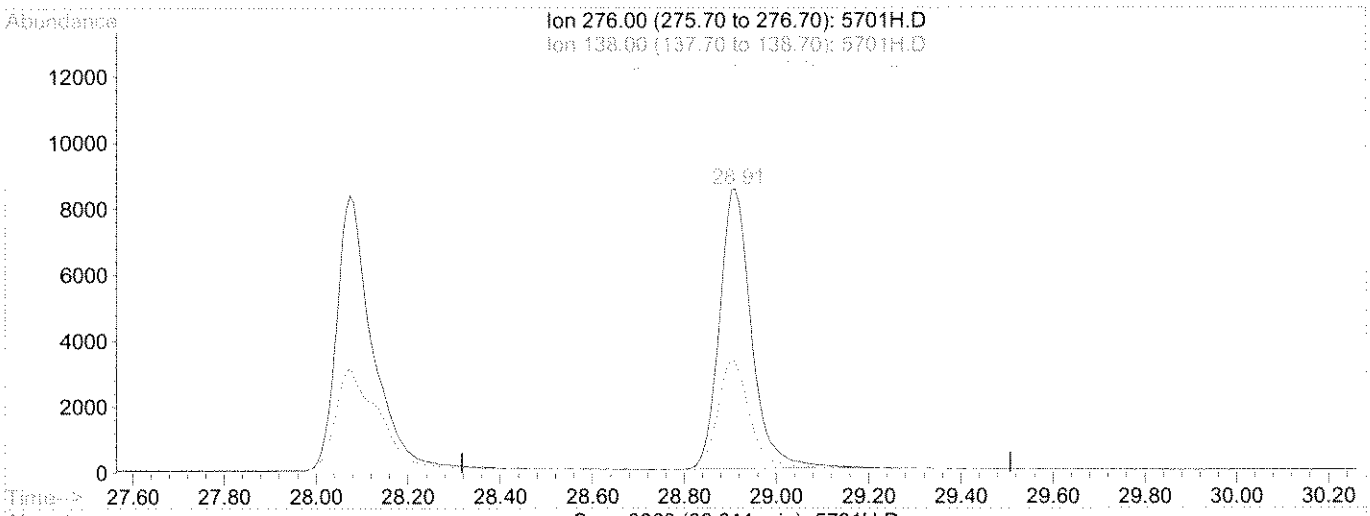
response 32622

| Ion | Exp% | Act% |
|---|---|---|
| 278.00 | 100 | 100 |
| 139.00 | 17.60 | 30.00# |
| 279.00 | 22.70 | 0.00# |
| 0.00 | 0.00 | 0.00 |

Data File : X:\DATA\H111009\5701H.D
Acq On : 10 Nov 09 5:26 pm
Sample : SSTD 1.0
Misc : CAL SSTD
Quant Time: Nov 11 15:09 19109

Vial: 1
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Multiple Level Calibration




(25) Benzo[g,h,i]perylene

28.91min 1.19ug/ml m

response 40937

| Ion | Exp% | Act% |
|---|---|---|
| 276.00 | 100 | 100 |
| 138.00 | 29.40 | 39.49# |
| 277.00 | 25.60 | 0.00# |
| 0.00 | 0.00 | 0.00 |

QC Std# 307
Method# 187

Heritage Environmental Services, Indianapolis
MS/MSD Semi-Volatile QC Report-EPA Method 8270-PNA
Water

Laboratory Sample # : A864529
Data File :5691H.
Date/Time : 9 Nov 09 2:57 pm
Spike Conc : 5 uG/L
Prep Factor: 1

MS Data File : 5703H.
MS Date/Time : 111009 18:37

MSD Data File : 5704H.
MSD Date/Time : 111009 19:13
5 uG/L

| Compound | Sample Conc | Spike Conc | Spike % Rec | Spike Dup Conc | Spike Dup % Rec | RPD | Min % Recovery * | Max % Recovery * |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 0 | 3.860 | 77.2 | 3.960 | 79.2 | 2.6 | 21 | 120 |
| Acenaphthylene | 0 | 4.110 | 82.2 | 4.190 | 83.8 | 1.9 | 30 | 106 |
| Anthracene | 0 | 3.560 | 71.2 | 3.370 | 67.4 | 5.5 | 38 | 107 |
| Benzo(a)anthracene | 0 | 3.770 | 75.4 | 3.390 | 67.8 | 10.6 | 40 | 107 |
| Benzo(a)pyrene | 0 | 3.800 | 76.0 | 3.220 | 64.4 | 16.5 | 29 | 131 |
| Benzo(b)fluoranthene | 0 | 4.000 | 80.0 | 3.320 | 66.4 | 18.6 | 25 | 145 |
| Benzo(g,h,i)perylene | 0 | 2.520 | 50.4 | 2.250 | 45.0 | 11.3 | 15 | 122 |
| Benzo(k)fluoranthene | 0 | 2.030 | 40.6 | 1.710 | 34.2 | 17.1 | 23 | 114 |
| Chrysene | 0 | 1.970 | 39.4 | 1.780 | 35.6 | 10.1 | 35 | 102 |
| Dibenz(a,h)anthracene | 0 | 2.570 | 51.4 | 2.200 | 44.0 | 15.5 | 20 | 123 |
| Fluoranthene | 0 | 4.830 | 96.6 | 4.670 | 93.4 | 3.4 | 37 | 108 |
| Fluorene | 0 | 4.140 | 82.8 | 4.130 | 82.6 | 0.2 | 35 | 106 |
| Indeno(1,2,3-cd)pyrene | 0 | 2.760 | 55.2 | 2.390 | 47.8 | 14.4 | 23 | 128 |
| Naphthalene | 0 | 3.540 | 70.8 | 3.540 | 70.8 | 0.0 | 20 | 113 |
| Phenanthrene | 0 | 4.090 | 81.8 | 3.980 | 79.6 | 2.7 | 34 | 109 |
| Pyrene | 0 | 3.820 | 76.4 | 3.650 | 73.0 | 4.6 | 23 | 116 |

R560106

# Heritage Environmental Services, LLC

Q2255320

## QC Report

QCType SPI02
Date Entered 09Nov09
Analysis Date/Time 10Nov0918:37:00

Duplicate SampleID A864529
Duplicate QCSampleID
Method 370 Matrix 1

DataFile 5703H.D
Analyst 2447 J. MINNIEAR, II
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 97 | ACENAPHTHENE | 0 | 5 | 3.86 | | 77.2 | |
| 98 | ACENAPHTHYLENE | 0 | 5 | 4.11 | | 82.2 | |
| 128 | ANTHRACENE | 0 | 5 | 3.56 | | 71.2 | |
| 155 | BENZO(A)ANTHRACENE | 0 | 5 | 3.77 | | 75.4 | |
| 156 | BENZO(A)PYRENE | 0 | 5 | 3.8 | | 76 | |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | 0 | 5 | 3.99 | | 79.8 | |
| 158 | BENZO(G,H,I)PERYLENE | 0 | 5 | 2.52 | | 50.4 | |
| 159 | BENZO(K)FLUORANTHENE | 0 | 5 | 2.03 | | 40.6 | |
| 245 | CHRYSENE | 0 | 5 | 1.97 | | 39.4 | |
| 294 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | 2.57 | | 51.4 | |
| 363 | FLUORANTHENE | 0 | 5 | 4.83 | | 96.6 | |
| 366 | FLUORENE | 0 | 5 | 4.14 | | 82.8 | |
| 413 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | 2.76 | | 55.2 | |
| 493 | NAPHTHALENE | 0 | 5 | 3.54 | | 70.8 | |
| 597 | PHENANTHRENE | 0 | 5 | 4.09 | | 81.8 | |
| 624 | PYRENE | 0 | 5 | 3.82 | | 76.4 | |

JS 11/11/09

Data File : X:\DATA\H111009\5703H.D
Acq On : 10 Nov 09 6:37 pm
Sample : A864529 MS
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:03 19109

Vial: 2
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 981882 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.12 | 164 | 544163 | 10.00 ug/ml | -0.01 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 938074 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.65 | 240 | 775501 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 521404 | 10.00 ug/ml | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 404645 | 4.04 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 80.80%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 139791 | 1.82 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 36.40% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Naphthalene | 6.78 | 128 | 441417 | 3.54 ug/ml# | 94 |
| 7) Acenaphthylene | 10.71 | 152 | 498846 | 4.11 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 297452 | 3.86 ug/ml | 100 |
| 9) Fluorene | 12.49 | 166 | 349686 | 4.14 ug/ml# | 93 |
| 11) Phenanthrene | 14.92 | 178 | 512748 | 4.09 ug/ml# | 57 |
| 12) Anthracene | 15.04 | 178 | 408891 | 3.56 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 579674 | 4.83 ug/ml | 96 |
| 15) Pyrene | 18.53 | 202 | 597383 | 3.82 ug/ml# | 81 |
| 17) Benzo[a]anthracene | 21.61 | 228 | 381804 | 3.77 ug/ml# | 53 |
| 18) Chrysene | 21.71 | 228 | 224153 | 1.97 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.20 | 252 | 349255 | 3.99 ug/ml# | 60 |
| 21) Benzo[k]fluoranthene | 24.26 | 252 | 173690 | 2.03 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.96 | 252 | 215187 | 3.80 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.07 | 276 | 136971 | 2.76 ug/ml# | 80 |
| 24) Dibenz[a,h]anthracene | 28.13 | 278 | 90077 | 2.57 ug/ml# | 62 |
| 25) Benzo[g,h,i]perylene | 28.90 | 276 | 99413 | 2.52 ug/ml# | 67 |

(#) = qualifier out of range (m) = manual integration
5703H.D SIMNEW.M Wed Nov 11 14:08:30 2009

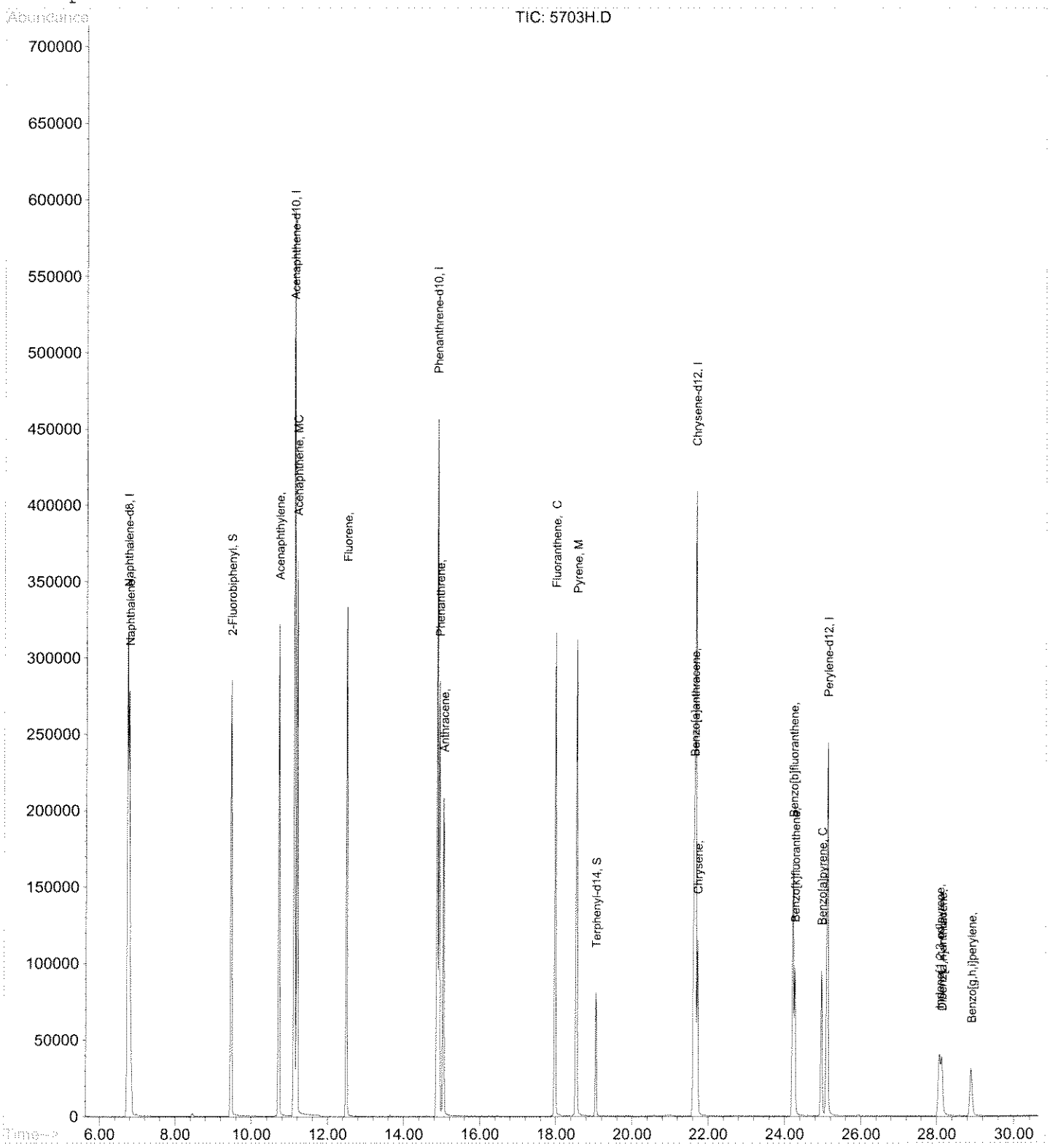


59169b

Data File : X:\DATA\H111009\5703H.D
Acq On : 10 Nov 09 6:37 pm
Sample : A864529 MS
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:03 19109

Vial: 2
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration



R560106

# Heritage Environmental Services, LLC

Q2255321

QC Report

QCType DPS02
Date Entered 09Nov09
Analysis Date/Time 10Nov0919:13:00

Duplicate SampleID A864529
Duplicate QCSampleID Q2255320
Method 370 Matrix 1

DataFile 5704H.D
Analyst 2447 J. MINNIEAR, II
Units ug/L

| PRM | Parameter | TruVal | SpikeVal | ObsVal | RQL | Rec | Difference |
|---|---|---|---|---|---|---|---|
| 97 | ACENAPHTHENE | 0 | 5 | 3.96 | | 79.1 | 2.4 |
| 98 | ACENAPHTHYLENE | 0 | 5 | 4.19 | | 83.8 | 1.8 |
| 128 | ANTHRACENE | 0 | 5 | 3.37 | | 67.5 | 5.5 |
| 155 | BENZO(A)ANTHRACENE | 0 | 5 | 3.39 | | 67.8 | 10.6 |
| 156 | BENZO(A)PYRENE | 0 | 5 | 3.22 | | 64.4 | 16.4 |
| 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | 0 | 5 | 3.32 | | 66.4 | 18.5 |
| 158 | BENZO(G,H,I)PERYLENE | 0 | 5 | 2.25 | | 45 | 11.3 |
| 159 | BENZO(K)FLUORANTHENE | 0 | 5 | 1.71 | | 34.1 | 17.2 |
| 245 | CHRYSENE | 0 | 5 | 1.78 | | 35.6 | 10.4 |
| 294 | DIBENZ(A,H)ANTHRACENE | 0 | 5 | 2.2 | | 44 | 15.5 |
| 363 | FLUORANTHENE | 0 | 5 | 4.67 | | 93.4 | 3.3 |
| 366 | FLUORENE | 0 | 5 | 4.13 | | 82.5 | .4 |
| 413 | INDENO(1,2,3-CD)PYRENE | 0 | 5 | 2.38 | | 47.6 | 14.8 |
| 493 | NAPHTHALENE | 0 | 5 | 3.54 | | 70.9 | 0 |
| 597 | PHENANTHRENE | 0 | 5 | 3.98 | | 79.6 | 2.7 |
| 624 | PYRENE | 0 | 5 | 3.65 | | 73.1 | 4.3 |

JN 11-11-09

Data File : X:\DATA\H111009\5704H.D  Vial: 3
Acq On : 10 Nov 09 7:13 pm  Operator: JCM
Sample : A864529 MSD  Inst : GC/MS Ins
Misc : 1000ML-1ML  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 11 15:03 19109  Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 926008 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.13 | 164 | 500112 | 10.00 ug/ml | 0.00 |
| 10) Phenanthrene-d10 | 14.87 | 188 | 855117 | 10.00 ug/ml | 0.00 |
| 14) Chrysene-d12 | 21.66 | 240 | 720807 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 515115 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 389270 | 4.23 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 84.60%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 108141 | 1.51 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 30.20% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Naphthalene | 6.78 | 128 | 416221 | 3.54 ug/ml# | 94 |
| 7) Acenaphthylene | 10.71 | 152 | 467178 | 4.19 ug/ml# | 91 |
| 8) Acenaphthene | 11.20 | 153 | 280183 | 3.96 ug/ml | 96 |
| 9) Fluorene | 12.49 | 166 | 320130 | 4.13 ug/ml# | 92 |
| 11) Phenanthrene | 14.92 | 178 | 455058 | 3.98 ug/ml# | 57 |
| 12) Anthracene | 15.03 | 178 | 352942 | 3.37 ug/ml# | 60 |
| 13) Fluoranthene | 17.98 | 202 | 511268 | 4.67 ug/ml | 95 |
| 15) Pyrene | 18.53 | 202 | 531510 | 3.65 ug/ml# | 81 |
| 17) Benzo[a]anthracene | 21.61 | 228 | 319059 | 3.39 ug/ml# | 53 |
| 18) Chrysene | 21.71 | 228 | 188692 | 1.78 ug/ml# | 50 |
| 20) Benzo[b]fluoranthene | 24.20 | 252 | 286709 | 3.32 ug/ml# | 60 |
| 21) Benzo[k]fluoranthene | 24.26 | 252 | 144442 | 1.71 ug/ml# | 57 |
| 22) Benzo[a]pyrene | 24.95 | 252 | 180343 | 3.22 ug/ml# | 57 |
| 23) Indeno[1,2,3-cd]pyrene | 28.07 | 276 | 115472 | 2.38 ug/ml# | 81 |
| 24) Dibenz[a,h]anthracene | 28.13 | 278 | 74957 | 2.20 ug/ml# | 62 |
| 25) Benzo[g,h,i]perylene | 28.90 | 276 | 87726 | 2.25 ug/ml# | 68 |

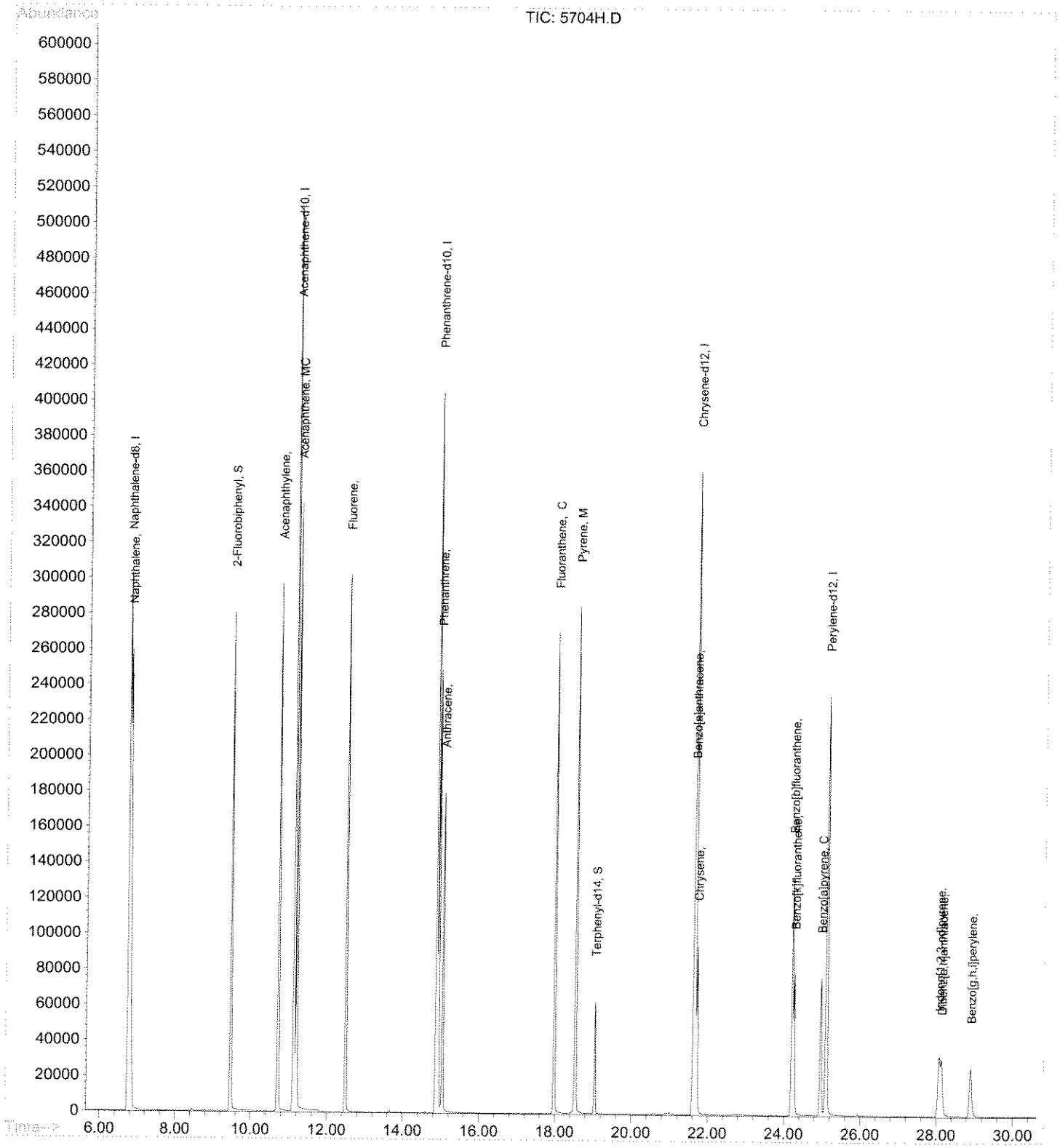
(#) = qualifier out of range (m) = manual integration

Data File : X:\DATA\H111009\5704H.D
Acq On : 10 Nov 09 7:13 pm
Sample : A864529 MSD
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:03 19109

Vial: 3
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5704H.D SIMNEW.M Wed Nov 11 14:08:47 2009



59169b

R560106

# Heritage Environmental Services, LLC

A864534

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 152
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5707H.D Date/Time 10Nov09 20:59:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 80 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 44 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

11/11/09

Data File : X:\DATA\H111009\5707H.D
Acq On : 10 Nov 09 8:59 pm
Sample : A864534
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:04 19109

Vial: 6
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 990532 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.11 | 164 | 549534 | 10.00 ug/ml | -0.01 |
| 10) Phenanthrene-d10 | 14.86 | 188 | 960611 | 10.00 ug/ml | -0.01 |
| 14) Chrysene-d12 | 21.65 | 240 | 827093 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 596016 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 403645 | 3.99 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 79.80%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 180220 | 2.20 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 44.00% | | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 28.07 | 276 | 306 | 0.21 ug/ml# | 42 |
| 24) Dibenz[a,h]anthracene | 28.12 | 278 | 137 | 0.23 ug/ml# | 56 |

(#) = qualifier out of range (m) = manual integration
5707H.D SIMNEW.M Wed Nov 11 14:09:55 2009



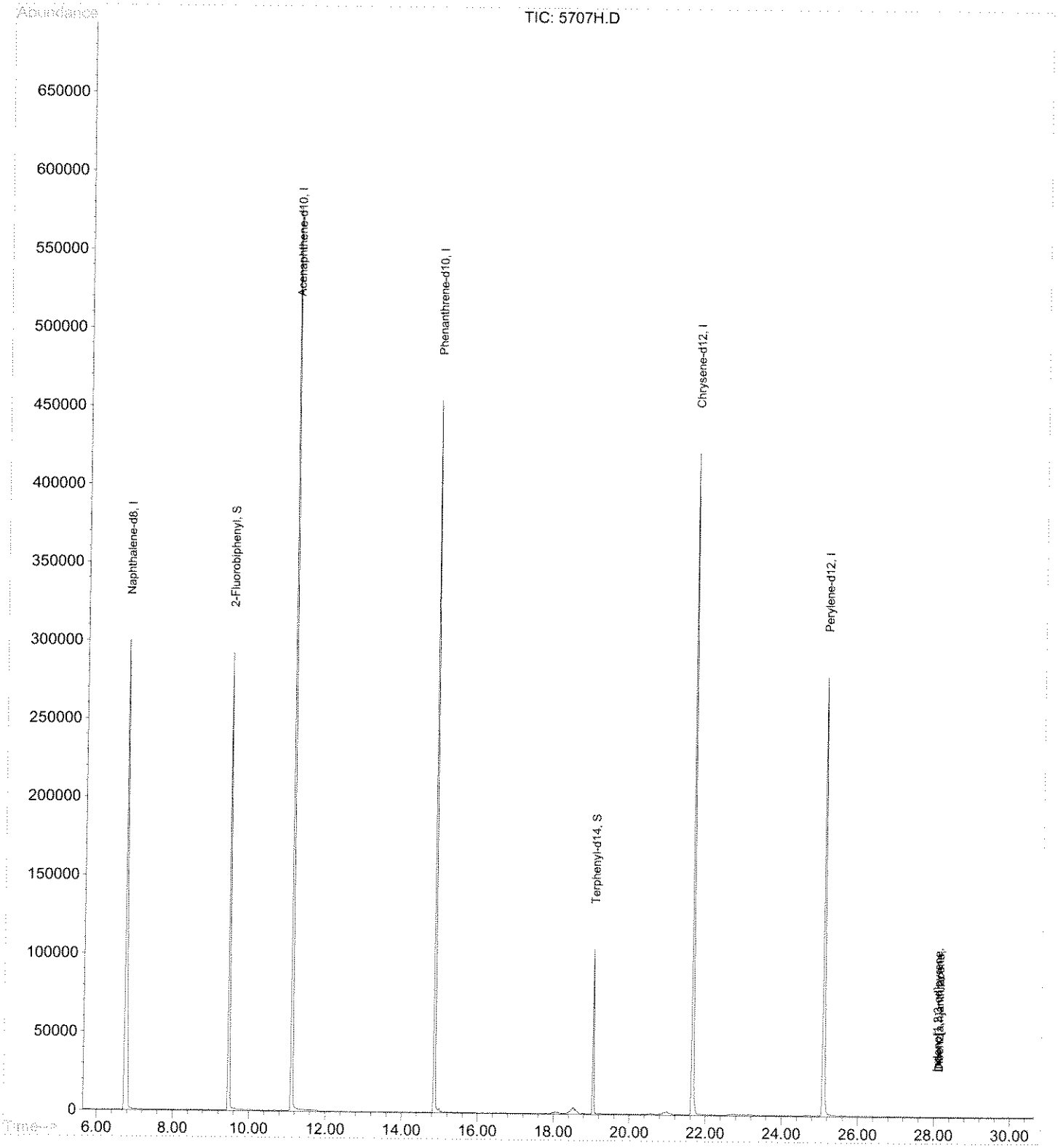
59169b

Data File : X:\DATA\H111009\5707H.D
Acq On : 10 Nov 09 8:59 pm
Sample : A864534
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:04 19109

Vial: 6
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

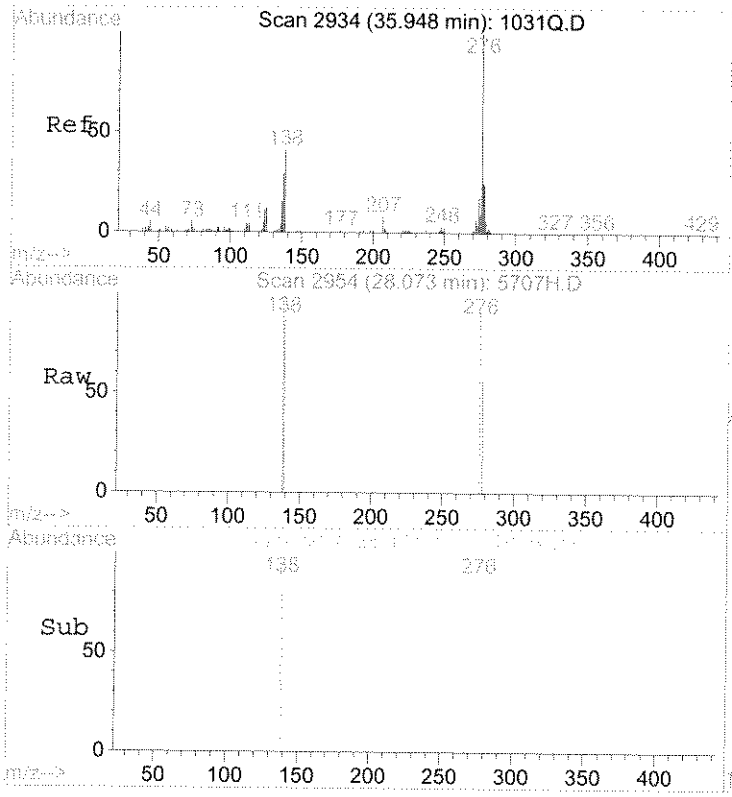
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5707H.D SIMNEW.M Wed Nov 11 14:09:56 2009



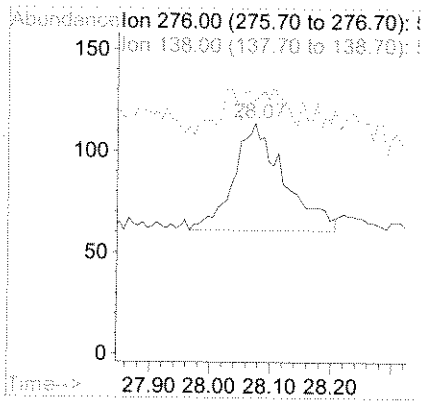
59169b

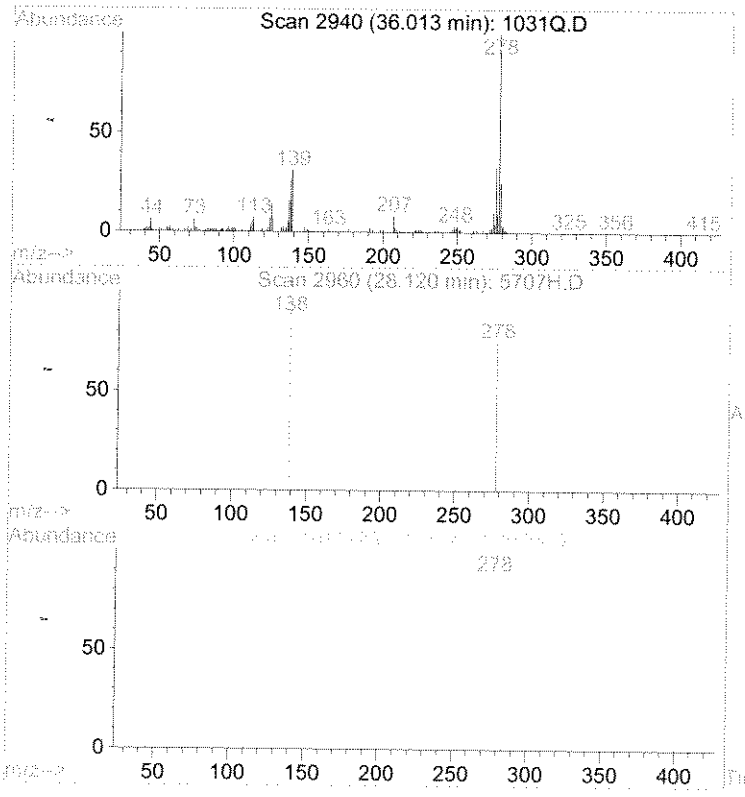


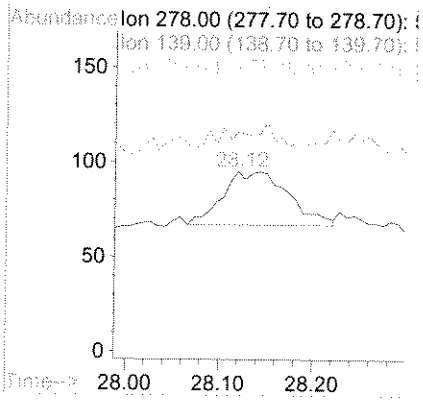

#23
Indeno[1,2,3-cd]pyrene
Concen: 0.21 ug/ml
RT: 28.07 min Scan# 2954
Delta R.T. -0.01 min
Lab File: 5707H.D
Acq: 10 Nov 09 8:59 pm

Tgt Ion:276 Resp: 306

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 0.0 | 26.1 | 39.1# |



R560106

# Heritage Environmental Services, LLC

A864535

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 146
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5708H.D Date/Time 10Nov09 21:35:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 82 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 51 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

11/11/09

Data File : X:\DATA\H111009\5708H.D
Acq On : 10 Nov 09 9:35 pm
Sample : A864535
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:04 19109

Vial: 7
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 1064677 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.12 | 164 | 597644 | 10.00 ug/ml | -0.01 |
| 10) Phenanthrene-d10 | 14.86 | 188 | 1027863 | 10.00 ug/ml | -0.01 |
| 14) Chrysene-d12 | 21.65 | 240 | 886651 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 646712 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 450538 | 4.09 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery | = 81.80%# | |
| 16) Terphenyl-d14 | 19.04 | 244 | 223599 | 2.54 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery | = 50.80% | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 27.10 | 276 | 465 | 0.22 ug/ml | 95 |
| 24) Dibenz[a,h]anthracene | 28.13 | 278 | 451 | 0.23 ug/ml# | 53 |

(#) = qualifier out of range (m) = manual integration
5708H.D SIMNEW.M Wed Nov 11 14:10:09 2009



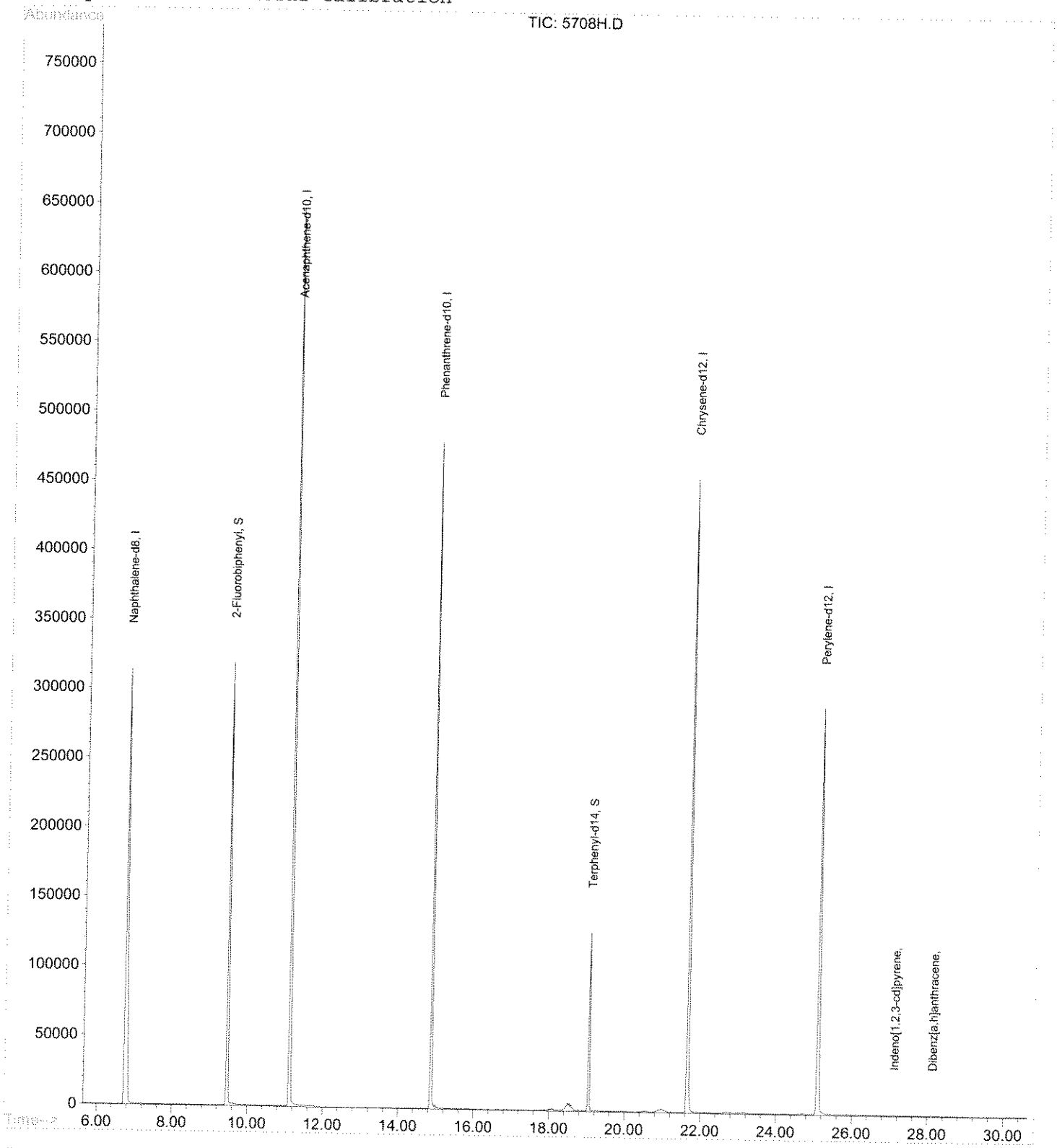
59169b

Data File : X:\DATA\H111009\5708H.D
Acq On : 10 Nov 09 9:35 pm
Sample : A864535
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:04 19109

Vial: 7
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

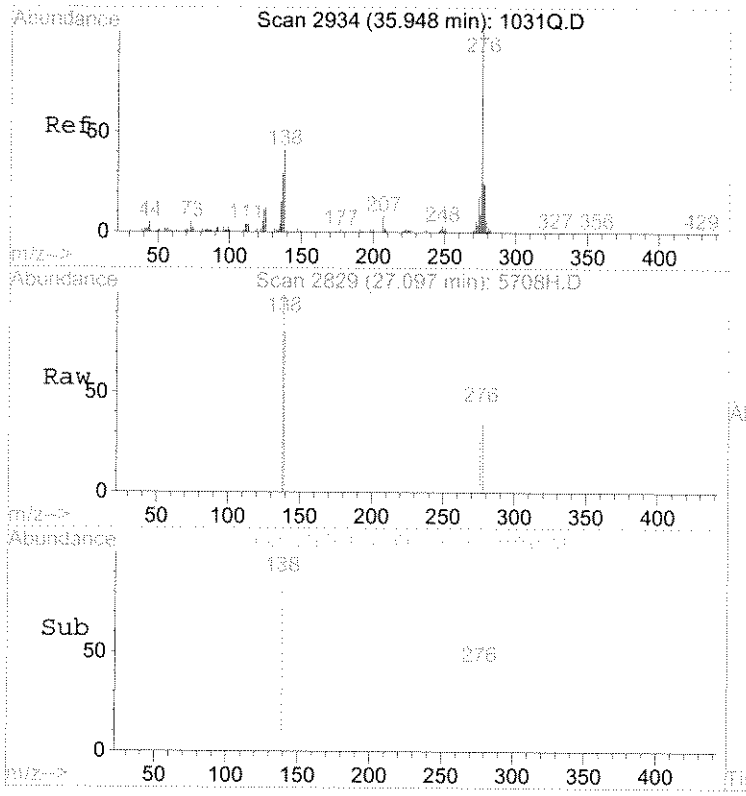
Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration




5708H.D SIMNEW.M Wed Nov 11 14:10:10 2009



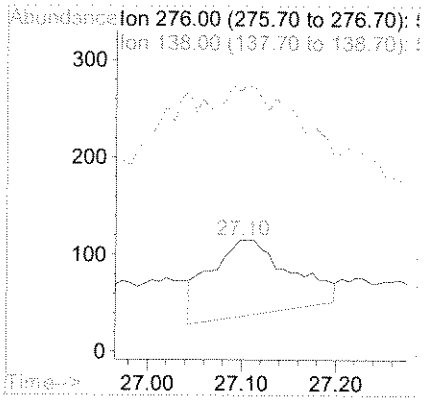
59169b




#23
Indeno[1,2,3-cd]pyrene
Concen: 0.22 ug/ml
RT: 27.10 min Scan# 2829
Delta R.T. -0.99 min
Lab File: 5708H.D
Acq: 10 Nov 09 9:35 pm

Tgt Ion:276 Resp: 465

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 35.5 | 26.1 | 39.1 |

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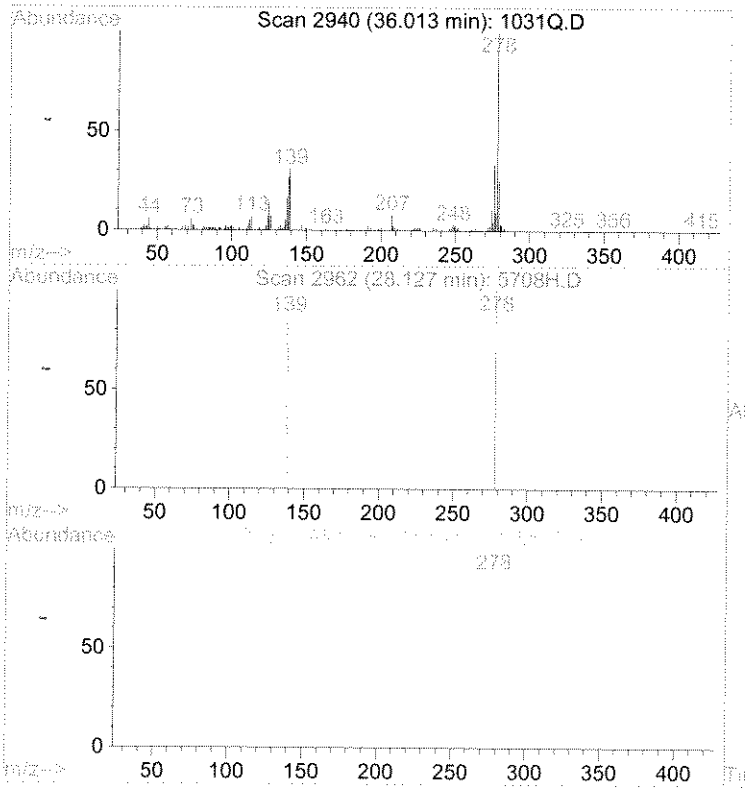
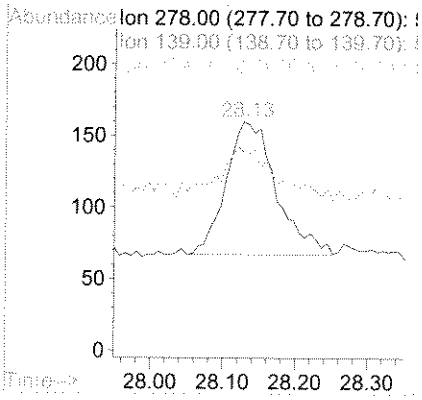



N. by lab contamination




Bad

R560106

# Heritage Environmental Services, LLC

A864536

GC/MS SVOA

Method SW846-8270C SIM
Sample Description 150
Submitter KERAMIDA ENVIRONMENTAL
Instrument 160 Channel 1

**Test Code** O517.4.0
Analyst 2447 J. MINNIEAR, II
File 5709H.D Date/Time 10Nov09 22:10:00
Dilution Factor 1

**Prep :** 1000 mL 1.0 mL

| CAS | PRM | Parameter | Concentration | RQL | Limit | Units | RT |
|---|---|---|---|---|---|---|---|
| 83-32-9 | 97 | ACENAPHTHENE | | BDL | 0.10 | UG/L | |
| 208-96-8 | 98 | ACENAPHTHYLENE | | BDL | 0.10 | UG/L | |
| 120-12-7 | 128 | ANTHRACENE | | BDL | 0.10 | UG/L | |
| 56-55-3 | 155 | BENZO(A)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 50-32-8 | 156 | BENZO(A)PYRENE | | BDL | 0.10 | UG/L | |
| 205-99-2 | 157 | BENZO(B)FLUORANTHENE (3,4-BENZOFLUORANTH | | BDL | 0.10 | UG/L | |
| 191-24-2 | 158 | BENZO(G,H,I)PERYLENE | | BDL | 0.10 | UG/L | |
| 207-08-9 | 159 | BENZO(K)FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 218-01-9 | 245 | CHRYSENE | | BDL | 0.10 | UG/L | |
| 53-70-3 | 294 | DIBENZ(A,H)ANTHRACENE | | BDL | 0.10 | UG/L | |
| 206-44-0 | 363 | FLUORANTHENE | | BDL | 0.10 | UG/L | |
| 86-73-7 | 366 | FLUORENE | | BDL | 0.10 | UG/L | |
| 193-39-5 | 413 | INDENO(1,2,3-CD)PYRENE | | BDL | 0.020 | UG/L | |
| 91-20-3 | 493 | NAPHTHALENE | | BDL | 0.10 | UG/L | |
| 85-01-8 | 597 | PHENANTHRENE | | BDL | 0.10 | UG/L | |
| 129-00-0 | 624 | PYRENE | | BDL | 0.10 | UG/L | |
| | 1804 | ... | | | | | |
| | 971 | SURROGATE RECOVERY | | | | | |
| | 972 | ---------- | | | | | |
| 321-60-8 | 58 | 2-FLUOROBIPHENYL | 83 | | | % RECOVERY | |
| 98904-43-9 | 701 | TERPHENYL-D14 | 43 | | | % RECOVERY | |

**Comment** NA

**Qualifiers**

BDL Below Detection Limit

**Comments to Laboratory (do not record)**

2-LT AMBERS, 500ML HNO3 SQPL, 4-HCL VIALS
**********REPORT ALL RESULTS IN UG/L.**********

JK 11-11-09

Data File : X:\DATA\H111009\5709H.D
Acq On : 10 Nov 09 10:10 pm
Sample : A864536
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:05 19109

Vial: 8
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SIMNEW.RES

Quant Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration
DataAcq Meth : SIMNEW

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Naphthalene-d8 | 6.74 | 136 | 919573 | 10.00 ug/ml | 0.00 |
| 5) Acenaphthene-d10 | 11.12 | 164 | 493698 | 10.00 ug/ml | -0.01 |
| 10) Phenanthrene-d10 | 14.86 | 188 | 844120 | 10.00 ug/ml | -0.01 |
| 14) Chrysene-d12 | 21.65 | 240 | 715352 | 10.00 ug/ml | 0.00 |
| 19) Perylene-d12 | 25.10 | 264 | 493503 | 10.00 ug/ml | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 6) 2-Fluorobiphenyl | 9.47 | 172 | 375307 | 4.13 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 22 - 58 | | Recovery = 82.60%# | | |
| 16) Terphenyl-d14 | 19.05 | 244 | 150869 | 2.13 ug/ml | 0.00 |
| Spiked Amount 5.000 | Range 17 - 71 | | Recovery = 42.60% | | |
| **Target Compounds** | | | | | Qvalue |
| 23) Indeno[1,2,3-cd]pyrene | 27.10 | 276 | 238 | 0.21 ug/ml | 99 |
| 24) Dibenz[a,h]anthracene | 28.14 | 278 | 66 | 0.22 ug/ml# | 67 |

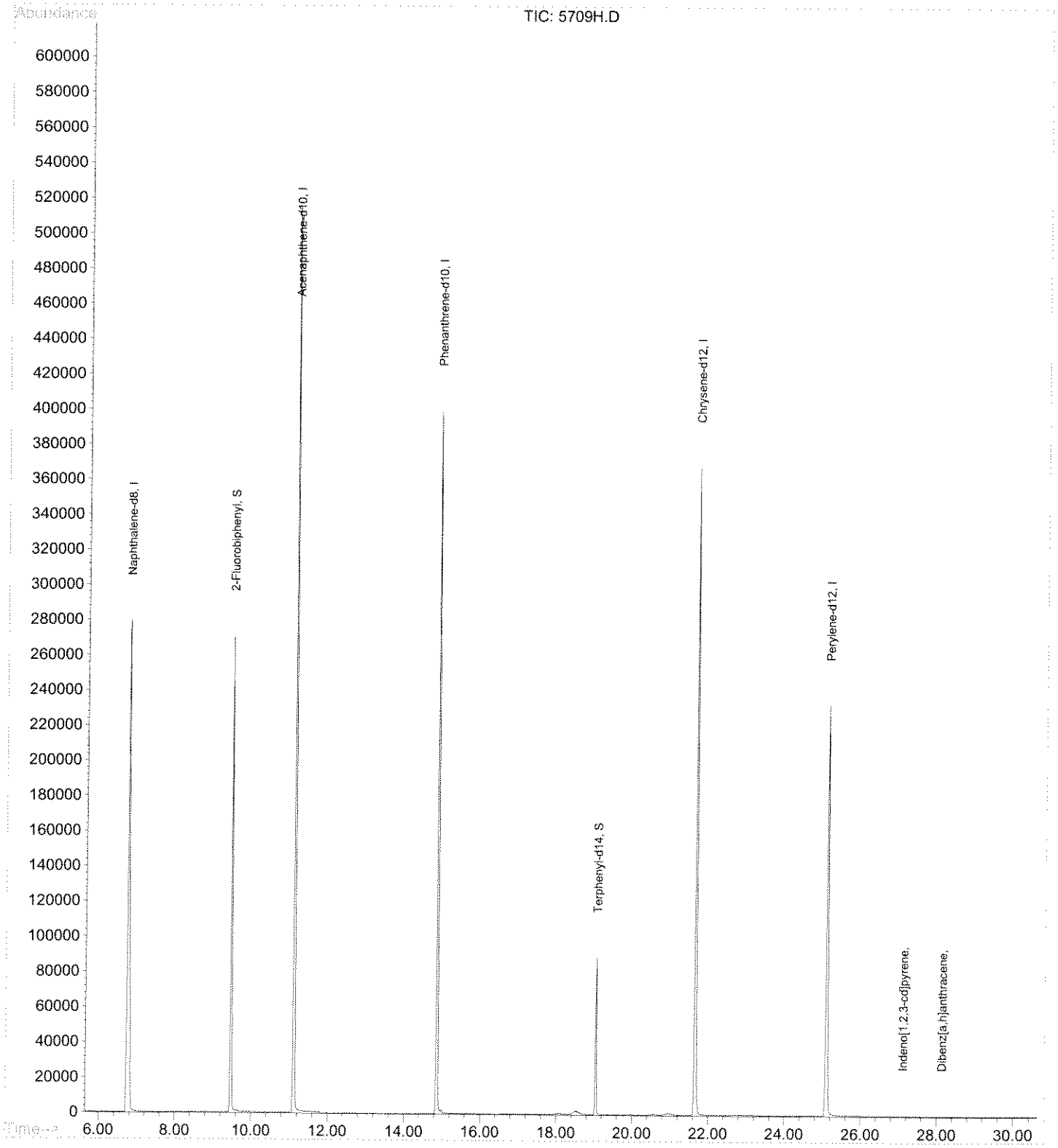
(#) = qualifier out of range (m) = manual integration
5709H.D SIMNEW.M Wed Nov 11 14:10:23 2009

Data File : X:\DATA\H111009\5709H.D
Acq On : 10 Nov 09 10:10 pm
Sample : A864536
Misc : 1000ML-1ML
MS Integration Params: rteint.p
Quant Time: Nov 11 15:05 19109

Vial: 8
Operator: JCM
Inst : GC/MS Ins
Multiplr: 1.00

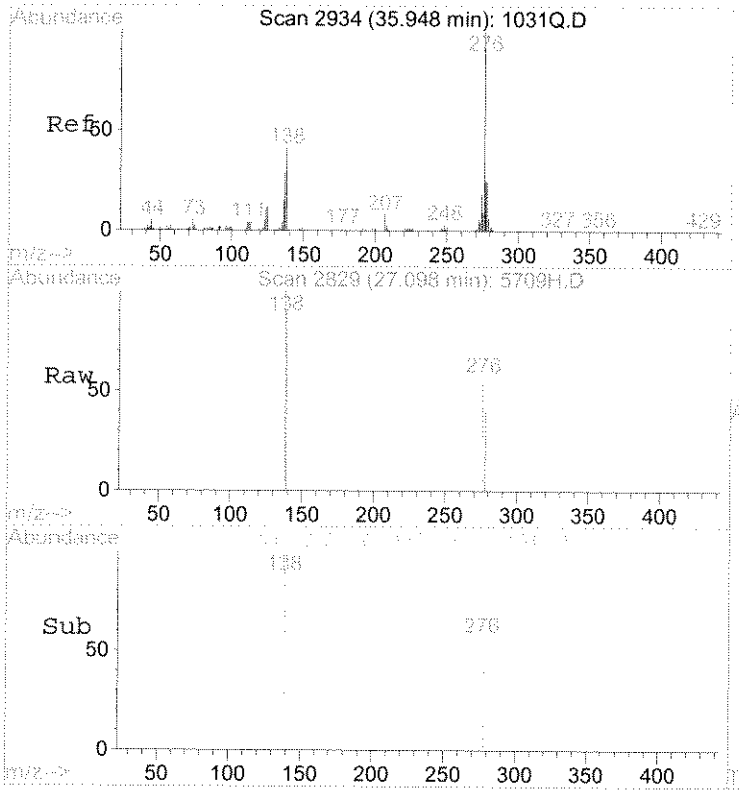
Quant Results File: SIMNEW.RES

Method : X:\1\METHODS\SIMNEW.M (RTE Integrator)
Title : CLP BNA Calibration
Last Update : Mon Nov 09 13:31:22 2009
Response via : Initial Calibration





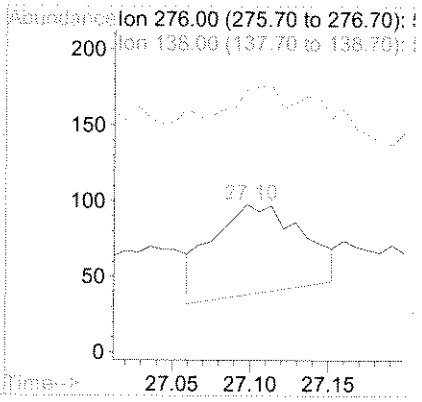

59169b




#23
Indeno[1,2,3-cd]pyrene
Concen: 0.21 ug/ml
RT: 27.10 min Scan# 2829
Delta R.T. -0.99 min
Lab File: 5709H.D
Acq: 10 Nov 09 10:10 pm

Tgt Ion:276 Resp: 238

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 276 | 100 | | |
| 138 | 33.2 | 26.1 | 39.1 |

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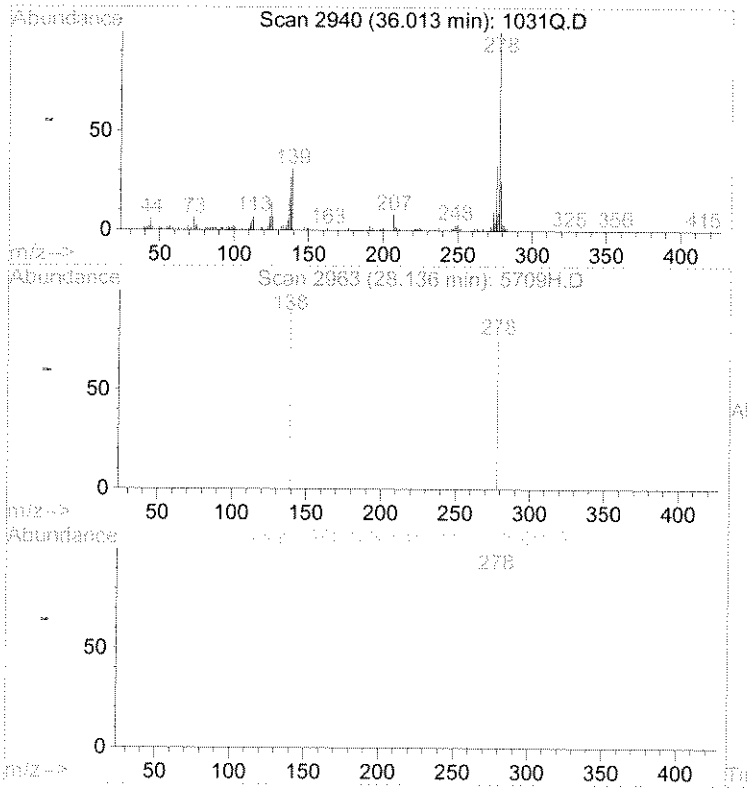
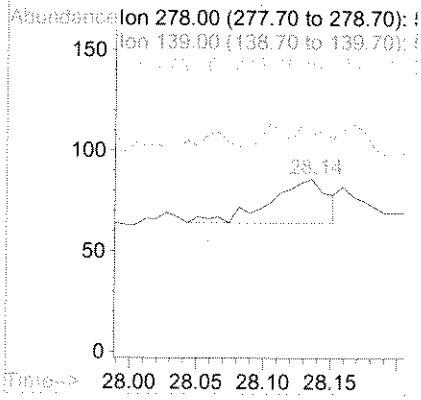



Arbyl Cal Anthracene




Bad