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SEMI-ANNUAL O&M REPORT
REMEDIAL WORK ELEMENTS I, II AND IV
REPORTING PERIOD JULY 1, 2004, THROUGH DECEMBER 23, 2004

Malta Rocket Fuel Area Site
Malta, New York

February 17, 2005

Submitted to:

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Corporate Environmental Programs
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CERTIFICATION: This document has been reviewed and is prepared in accordance with the contract documents.

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1.0 INTRODUCTION

This operations and maintenance (O&M) report documents on going O&M activities conducted at the Malta Rocket Fuel Area (MRFA) site, in the Town of Malta, New York. This report has been prepared in accordance with the following documents:

- *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, dated March 31, 1998 and prepared by ERM - Northeast, Inc.*
- *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, dated January 15, 2002, and prepared by IT Corporation, Inc., currently Shaw Environmental, Inc. (Shaw).*
- *Operations and Maintenance Manual, Remedial Work Element II, Groundwater, dated January 22, 1998 and prepared by ERM - Northeast, Inc.,* and *Addendum No. 1, January 31, 2005.*
- *Operation and Maintenance Manual, Remedial Work Element IV, Institutional Controls, dated September 9, 1999, revised September 27, 1999, prepared by IT Corporation, Inc., currently Shaw.*

This report covers all site activities performed at the site, as required in each of the previously referenced documents, for the period from July 1, 2004 through December 23, 2004.

2.0 O&M OF REMEDIAL WORK ELEMENT I (Drinking Water)

According to the provisions of the *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, IT Corporation, Inc., January 15, 2002*, six regularly scheduled monthly site visits were performed to inspect the groundwater treatment system (system) operation, record system operating conditions, and to determine system treatment effectiveness. The site visits took place on July 28, August 26, September 30, October 26, November 30, and December 23, 2004.

The groundwater treatment system is comprised of a packed tower air stripper. System influent and effluent samples were collected during the August 26, 2004 and October 26, 2004 site visits to document adherence to treatment system discharge objectives. Analytical results from these sample events, including validated analytical results and chain of custody forms are provided in **Appendix A**. The validation summary for samples is included in **Appendix D**.

During the reporting period, recovery wells RW-1D and RW-2D operated at instantaneous flow rates of approximately 6.0 and 5.8 gallons per minute (gpm), respectively, yielding a total instantaneous flow of approximately 11.8 gpm. However, recovery well RW-1D experienced occasional problems during the latter portion of the reporting period that prevented the recovery pump from operating. During those periods, RW-2D continued to operate and the total instantaneous system flow was approximately 5.8 gpm.

Review of the analytical results for influent and effluent treatment system samples collected in August 2004 and October 2004 confirm that during the reporting period, effluent water quality was well below the chemical specific effluent requirements presented in the O&M manual. Air stripper blower pressure readings as well as the effluent water quality data demonstrate that the air stripper packing material is not in need of cleaning or replacement. Additional discussions regarding air stripper flow, air stripper blower pressure readings and water quality sampling are presented below.

2.1 Remote Telemetry/Programmable Logic Controller

To ensure that the system operates continuously, system operating parameters are visually monitored during each of the monthly site visits and on a continual basis by a Remote Telemetry Unit (RTU). During the early portion of the reporting period, the RTU stopped reporting values for blower air velocity and blower back pressure. The problem was found to be a random

software issue that was identified and resolved on August 26, 2004. To ensure that the system was operating in accordance with O&M Manual specifications while the matter was being investigated, additional steps were taken during site inspections to manually monitor the system operating parameters. During the reporting period, the RTU notified key project personnel of alarm conditions via facsimile and voice messaging. The majority of alarm conditions received by the RTU that were not activated on-site during system O&M activities were identified as AC Power Failures. The AC power failure alarm conditions were apparently caused by short duration power failures which are typical at the MRFA site. The power failures result in brief interruptions in the delivery of electrical power to the system and are not known to cause significant disruption to the performance of the treatment system. With the exception of a settling tank high-level alarm that was received on December 2, 2004 and will be discussed in further detail in **Section 2.2**, no operator intervention at the Site was required to clear the alarm conditions identified during the reporting period. The alarm conditions identified by the RTU during the reporting period confirmed the proper operation of the system and the RTU's effectiveness in notifying project personnel of alarm conditions.

2.2 Visual System Inspection

Visual inspections were made of all accessible system components during monthly site visits in accordance with attached **Table 1, Maintenance Checklist**. Inspections were performed to check for signs of component wear, process piping leaks and each of the general maintenance requirements. **Table 2, Equipment Log, Air Stripper Maintenance** includes a summary of observations made during visual inspections.

Maintenance activities included regular inspection of the air stripper blower intake for obstructions, inspection of all process valves and piping to prevent leakage of untreated groundwater, and inspection of the air stripper sight tube for sediment buildup. In addition, the operation of the transfer sump pump and associated high level float was checked. The settling tank interior was also visually inspected for signs of sediment buildup or corrosion and the reservoir level was checked during each monthly visit.

The system was found to be in good working order during the reporting period; with the exception of intermittent operational problems with recovery well RW-1D that began on November 8, 2004 and a faulty contactor that caused the settling tank pump to stop functioning on December 2, 2004. Corrective measures have been implemented to address the RW-1D operational issues, including the replacement of the well pump, the installation of new wiring with a protective cover between the well pump and the well vault, and the replacement of fuses

located in the well vault panel and in the Building 15 panel. During the December 23, 2004 site visit, site conditions indicated that a problem might exist in the electrical wiring between the recovery well vault and Building 15, and the RW-1D recovery well pump was shut down to prevent the potential for damage to the recently replaced well pump. Diagnostic work will continue during the next reporting period to resolve the RW-1D operational problems. Recovery well RW-2D continued to operate as required to maintain the level of the 100,000 gallon reservoir during the reporting period. Total flow rates were within acceptable ranges during the reporting period. The morning of December 2, 2004, the RTU notified project personnel of an alarm condition concerning the settling tank high-level switch. Upon inspection later that same day, the problem was determined to be a faulty contact that controlled the settling tank pump operation. The system was restarted upon the replacement of the contact.

2.3 Operating Measurements

2.3.1 Water Flow Measurements

Water flow measurements for wells RW-1D and RW-2D collected during monthly site visits are presented in **Table 3, Process Operating Report**. The totalizer readings collected at the site demonstrate average recovery well water flow rates for the period of July 1, 2004 to December 23, 2004 are as follows:

Well RW-1D: 3.967 gpm
Well RW-2D: 4.477 gpm
System Avg: 8.444 gpm

Average daily water flow data as recorded by the on-site data logger are provided in **Appendix E**. Information obtained from the data logger indicates an average daily water flow rate of 8.418 gpm for the reporting period. The average water flow rate calculated from field observations (8.444) is very similar to the average daily water flow rate calculated from the data logger (8.418), confirming the data logger's accuracy and usefulness in verifying field observations.

The average daily water flow rates observed during the reporting period were greater than those observed during previous reporting period. Wright Malta and the New York State Energy Research and Development Authority (NYSERDA) were notified of the increase in water use within the distribution system.

2.3.2 Blower Air Pressure

Measurements of the air stripper blower back pressure were recorded on a weekly basis via RTU monitoring and during monthly O&M site visits. Readings collected during monthly O&M site visits from the pressure gauge installed to monitor the air stripper back pressure are provided in **Table 3**. Pressure readings ranged from 2.6 to 2.8 inches of water column during the current period. The pressure readings were well within the acceptable range of readings that are specified in the *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, IT Corporation, Inc., January 15, 2002*. Pressure readings will continue to be monitored in the future to ensure proper system performance.

2.4 Water Quality Data

2.4.1 Sample Collection

Samples of the drinking water system influent and effluent were collected on August 26 and October 26, 2004 and analyzed by Columbia Analytical Laboratories, Inc., Rochester, New York. Due to interferences observed in the August 26, 2004 system influent and effluent samples that were attributed to the presence of chlorine, the August 26, 2004 system samples were determined not to be representative of treatment system water quality and the system influent and effluent was re-sampled on September 9, 2004. The September 9, 2004 samples were analyzed by Severn Trent Laboratories, Inc., Amherst, NY. Influent and effluent samples were analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method Contract Laboratory Program (CLP) OLC-02, modified to include hexachlorobutadiene, 1,2,3-trichlorobenzene and trichlorofluoromethane as summarized in **Table 4**.

The validated analytical results and chain of custody forms for the September 9 and October 26, 2004 samples are provided in **Appendix A**. All validation was performed by Data Validation Services, Incorporated of North Creek, New York. Validation reports are included in **Appendix D**.

In accordance with a previous request from the USEPA and the NYSDOH, an air stripper influent sample was collected on August 26, 2004 and analyzed for ammonium perchlorate according to EPA Method 314.0.

2.4.2 VOC Analytical Results

The drinking water system effluent sampling results were non detectable for carbon tetrachloride for both monitoring events conducted during this reporting period. The system effluent sampling results were non detectable for trichloroethene (TCE) for the September monitoring event, however, TCE was detected at an estimated concentration of 0.19 µg/l during the October monitoring event. The October TCE result was qualified as estimated by the laboratory because the observed concentration was less than the method reporting limit. The influent concentrations for TCE and carbon tetrachloride observed during this reporting period were similar to the influent concentrations for these compounds observed during the previous reporting period. The drinking water system influent and effluent sample results for TCE and carbon tetrachloride are summarized in the table below.

Analyte	Date Sampled	Influent (µg/l)	Effluent (µg/l)	Performance Standard (µg/l)
Carbon Tetrachloride	September 9, 2004	12.0	< 1.0	5
	October 26, 2004	10.7	< 1.0	5
TCE	September 9, 2004	16.0	< 1.0	5
	October 26, 2004	14.4	0.19 J	5

The air stripper influent chloroform concentrations are similar to the chloroform air stripper influent concentrations observed during the previous reporting period. Chloroform was detected in the air stripper influent samples collected during the September 9, 2004 and October 26, 2004 sampling events at concentrations of 1.0 µg/l and 1.3 µg/l, respectively. Chloroform was below detection limits in the air stripper effluent samples collected on September 9, 2004 and October 26, 2004. Ammonium perchlorate was not detected in the August 26, 2004 drinking water system influent sample. The drinking water system influent and effluent sample results for chloroform and ammonium perchlorate are summarized below.

Analyte	Date Sampled	Influent (µg/l)	Effluent (µg/l)	Criteria (µg/l)
Chloroform	September 9, 2004	1.0	ND	70
	October 26, 2004	1.3	ND	70
Ammonium Perchlorate	August 26, 2004	ND	NA	4 to 18

Note: NA = not analyzed.
ND = not detected

Based upon analytical data collected during this reporting period, the drinking water system's removal efficiency was greater than 98% for all volatile organic analytes.

3.0 O&M OF REMEDIAL WORK ELEMENT II (Groundwater)

3.1 Sample Collection

Recent modifications to the EWMS monitoring program have been specified in *Addendum No. 1, Operations and Maintenance Manual, Remedial Work Element II- Groundwater, Malta Rocket Fuel Area Site, General Electric Company, January 31, 2005* (Addendum No. 1). In accordance with the *Operations and Maintenance Manual for Remedial Work Element II - Ground Water, ERM Northeast, Inc., January 22, 1998,* (O&M-GW) and Addendum No. 1, unfiltered groundwater samples were collected on November 9, 10, and 15, 2004 from the Early Warning Monitoring System (EWMS). Although the EWMS is typically sampled in October during the fall reporting period, the EWMS was sampled in November according to discussions between USEPA and General Electric Company (GE) regarding proposed changes to the sampling program. In accordance with the *Five-Year Review Report, Malta Rocket Fuel Area Superfund site, United States Environmental Protection Agency (EPA), September 24, 2004* (Five Year Review Report) including a table titled *"Proposed Modifications to Groundwater and Surface Water Sampling Regimes at the Malta Rocket Fuel Area Site"* and a letter from GE to the USEPA dated October 26, 2004, EWMS samples were collected from monitoring wells DGC-3S, DGC-4S, 4D, 11D, 13S, 13D, 14D, M-24D, M-25D, M-27S, M-27D, M-29D, M-33S, and M-33I. Surface water locations SW-A, SW-B, SW-D, SW-E, SW-F and SW-G were also sampled (**Figure 1**). Blind duplicate samples were collected from well M-27S for chromium and hexavalent chromium and from well 4D for volatile organic compounds. Trip and equipment blanks were also obtained and analyzed.

Samples from all designated monitoring well sampling locations and surface water sampling locations were analyzed for volatile organic compounds (VOCs) by USEPA Method OLC-02.1 by Columbia Analytical Services, Inc. in Rochester, New York. Samples from wells 13D and M-27S were analyzed for unfiltered total matrix chromium following CLP procedures and unfiltered hexavalent chromium by SW-846 Method 7196 (*Test Methods for Evaluating Solid Waste*, 3rd Edition, November 1986). Samples from monitoring well M-27D and surface water location SW-B were analyzed for VOCs, unfiltered total matrix chromium following CLP procedures and unfiltered hexavalent chromium. Samples collected from well 13S were analyzed only for unfiltered hexavalent chromium.

Results of the November 2004 semi-annual EWMS sampling event are summarized in **Table 5**.

The laboratory reports are presented in **Appendix B**. The data validation report is included in **Appendix D**. A summary of analytical results from 1987 through this reporting period for samples collected at locations currently included in the EWMS sampling program is provided in **Tables 6, 7, 8** and **9**.

In accordance with the O&M-GW, time vs. concentration plots for hexavalent chromium at monitoring well 13S and carbon tetrachloride at monitoring well M-27D are included as **Figure 2** and **Figure 3,** respectively. The plot for 13S will no longer be referred during future events, given its removal from the sampling program. **Figures 4, 5** and **6** include comparisons of simulated versus observed concentrations of carbon tetrachloride at monitoring well M-27D, TCE at monitoring well M-33S and TCE at monitoring well M-33I, respectively.

3.2 Chromium Analytical Results

Results of the unfiltered total chromium analyses collected at wells 13D, M-27S, M-27D and surface water location SW-B show concentrations of 4.5 µg/l, 2.6 µg/l, and 2.6 µg/l and an estimated concentration of 0.94 µg/l, respectively. All of the results were below the New York State Ground Water Standard (NYSGWS) of 50 µg/l.

With the exception of well 13S, analytical results showed no detectable concentrations of hexavalent chromium at the detection limit of 10 µg/l for all groundwater samples and surface water sample SW-B. Well 13S contained a hexavalent chromium concentration of 11.2 µg/l that was below the NYSGWS for hexavalent chromium of 50 µg/l. The attached time vs. concentration plot for unfiltered hexavalent chromium in well 13S is presented in **Figure 2.**

3.3 VOC Analytical Results

Carbon tetrachloride was detected in monitoring wells M-25D, M-27D, M-29D and 11D at concentrations of 86.8 µg/l, 22.1 µg/l, 10.8 µg/l and 4.6 µg/l, respectively. With the exception of samples from monitoring well M-24D, which indicated an estimated carbon tetrachloride concentration of 0.59 µg/l, all other monitoring well sample locations were non-detect for carbon tetrachloride during the reporting period. The result from M-24D was qualified by the laboratory and confirmed by the third party data validator as being estimated because the observed concentration was less than the method reporting limit. The time vs. concentration plot for carbon tetrachloride in well M-27D is presented in **Figure 3.**

Chloroform was detected in wells M-25D and M-29D at concentrations of 8.7 µg/l and 2.5 µg/l, respectively. Chloroform was not detected at the other sampling locations during this reporting period.

TCE was detected in monitoring wells M-27D, M-25D and M-29D at concentrations of 22.7 µg/l, 16.1 µg/l, and 6.0 µg/l respectively. TCE was also detected in monitoring well 11D and surface water location SW-B at estimated concentrations of 0.67 µg/l and 0.27 µg/l, respectively. Trichlorofluoromethane was detected in monitoring well M-27D at a concentration of 2.3 µg/l. TCE and trichlorofluoromethane were not detected at the remainder of the monitoring well locations during this reporting period.

No VOCs were detected in surface water samples SW-A, SW-D, SW-F and SW-G during the November 2004 sampling event. Carbon tetrachloride was detected in surface water sample SW-E at a concentration of 1.0 µg/l and in surface water sample SW-B at an estimated concentration of 0.43 µg/l. TCE was detected in sample SW-B at an estimated concentration of 0.27 µg/l. The estimated results from SW-B were qualified by the laboratory and confirmed by the third party data validator as being estimated because the observed concentrations were less than the method reporting limit. Chloroform was not detected in samples collected from the surface water sample locations.

3.4 Comparison of Observed VOC Concentrations to Simulation Results

Carbon tetrachloride and TCE concentrations detected during this monitoring period were compared to the results from the contaminant fate and transport modeling reported in Appendix A of the O&M-GW. The comparison was performed for carbon tetrachloride in monitoring well M-27D (**Figure 4**). As shown in **Figure 4**, the simulated carbon tetrachloride results are much higher than the observed concentrations. A comparison was also performed for TCE in monitoring well M-33S (**Figure 5**) and M-33I (**Figure 6**). As predicted by the simulations, there were no observed concentrations of TCE in monitoring wells M-33S and M-33I.

4.0 INSTITUTIONAL CONTROLS

O&M activities for remedial Work Element IV, Institutional Controls, are conducted on an annual basis in accordance with the *Operation and Maintenance Manual, Remedial Work Element IV, Institutional Controls, IT Corporation, Inc, September 9, 1999, revised September 27, 1999*.

Shaw conducted semi-annual visual inspections of the environmental restriction zone during groundwater sampling activities and conducted annual environmental easement restriction interviews with property owner representatives during the Fall 2004 semi-annual reporting period.

4.1 Sampling and Survey Results

On November 9 and 10, 2004, as part of the semi-annual EWMS sampling program, personnel completed an inspection of site conditions in the environmental restriction zone to determine if any changes or property development occurred, specifically the installation of new groundwater wells. The inspection was conducted on the following areas of the site:

- Proximate to the surface water sampling locations and monitoring well locations, as well as along the access roads and wooded paths leading to these locations.
- Proximate to Building 15 at the MRFA site.

With the exception of tree removal activities in the vicinity of the access roads and wooded paths leading to each of the monitoring wells and surface water locations, the visual inspections did not reveal any signs of property development or well installation activities.

4.2 Interviews with Property Owners

Shaw personnel conducted telephone interviews with the following representatives:

- Hal Brodie representing New York State Energy Research and Development Authority (NYSERDA) was interviewed on November 22, 2004.
- Alexander Mackey representing Luther Forest Corporation was interviewed on November 2, 2004.

- Raymond Kazyaka, Jr. representing Wright-Malta Corporation was interviewed on November 16, 2004.

Interview logs documenting the conversations with each of the property representatives are included in **Appendix F**. All three representatives stated that they were not aware of any new groundwater usage, or other actions, within the environmental restriction zone, that would impact any condition of the Environmental Restriction Easements and the Declaration of Restrictive Covenants. However, Raymond Kazyaka, Jr. and Alexander Mackey made references to the proposed land use changes associated with the Luther Forest Technology Campus and the Saratoga Technology Campus.

5.0 SUMMARY

5.1 Drinking Water

With the exception of operational issues associated with the pump within recovery well RW-1D, that are anticipated to be resolved early in the next reporting period, the drinking water treatment system is operating effectively. The treatment equipment will continue to be monitored as necessary to ensure continued operation of all components and to maintain a reliable source of water for the Test Station. All of the effluent samples collected for performance monitoring and analyzed during the current period revealed concentrations below project discharge objectives.

5.2 EWMS

Based on the review of the analytical results from water samples collected during this reporting period, groundwater from the MRFA Site is not impacting the Luther Forest well field or the water supply wells located to the north of the Site. The analytical results from this reporting period are summarized as follows:

- Total chromium was detected at monitoring wells 13D, M-27S and M-27D, and surface water location SW-B. Each of the total chromium detections were below the NYSGWS of 50 µg/l.
- With the exception of monitoring well 13S, hexavalent chromium was not detected at the monitoring wells or surface water locations. The detection of 11.2 µg/l at 13S was below the NYSGWS of 50 µg/l.
- Carbon tetrachloride was detected in monitoring wells M-25D, M-27D, M-29D, 11D and M-24D at concentrations of 86.8 µg/l, 22.1 µg/l, 10.8 µg/l, 4.6 µg/l, and 0.59 µg/l (estimated), respectively. Carbon tetrachloride was also detected in surface water sample locations SW-E and SW-B at concentrations of 1.0 µg/l and 0.43 µg/l (estimated), respectively. All other water sample locations were non-detect for carbon tetrachloride during the reporting period. The carbon tetrachloride detections at wells M-25D, M-27D and M-29D were above the NYSGWS of 5 µg/l. With the exception of monitoring well M-25D, carbon tetrachloride concentrations observed from this monitoring event were similar or lower than concentrations observed during the remedial investigation.
- Chloroform was not detected at any of the wells or surface water locations with the exception of detections at wells M-25D and M-29D at concentrations of 8.7 µg/l and 2.5 µg/l, respectively.

- TCE was not detected at any of the wells or surface water locations, with the exception of wells M-27D, M-25D and M-29D at concentrations of 22.7 µg/l, 16.1 µg/l, and 6.0 µg/l respectively, and monitoring well 11D and surface water location SW-B at estimated concentrations of 0.67 µg/l and 0.27 µg/l, respectively. TCE concentrations observed from this monitoring event were similar or lower than concentrations observed during the remedial investigation. Trichlorofluoromethane was not detected at any of the wells or surface water locations with the exception of well M-27D with a concentration of 2.3 µg/l. The NYSGWS for both TCE and trichlorofluoromethane is 5 µg/l.
- As shown in **Figures 4, 5** and **6**, simulated concentrations of carbon tetrachloride and TCE are much higher than the observed concentrations.

TABLES

TABLE 1
MAINTENANCE CHECKLIST
OPERATION AND MAINTENANCE PLAN
TEST STATION WATER SUPPLY AND TREATMENT SYSTEM
MALTA ROCKET FUEL AREA SITE

Equipment Name	Item	Action	Frequency	Comments
Well Pump 1D	Pump bowls	Check for signs of iron fouling & impeller wear	Annually	More frequently as problems occur
Well Pump 2D	Pump bowls	Check for signs of iron fouling & impeller wear	Annually	More frequently as problems occur
Control Valves	Miscellaneous	Inspect for leaks	Monthly	Exercise valves annually
Air Stripper Sight Tube		Inspect for siltation and biofouling	Monthly	Adjust frequency depending on operating experience
Air Stripper Spray Nozzle		Inspect for fouling	Annually	No required routine maintenance
Air Stripper Blower	Intake	Inspect and clean	Monthly	Adjust frequency depending on operating experience
Air Stripper Blower	Motor & bearings	Check and lubricate	Annually	More frequently as problems occur
Air Stripper Unit	Packing	Clean or replace	Every 5 years	Adjust frequency depending on operating experience

TABLE 1
MAINTENANCE CHECKLIST
OPERATION AND MAINTENANCE PLAN
TEST STATION WATER SUPPLY AND TREATMENT SYSTEM
MALTA ROCKET FUEL AREA SITE

Equipment Name	Item	Action	Frequency	Comments
Mist Eliminator	Mesh screen	Clean or replace	Annually	Adjust frequency depending on operating experience
Settling Tank		Inspect for siltation	Monthly	Adjust frequency depending on operating experience
Settling Tank High Level Float Switch		Check operation	Monthly	Replace float switch every 5 years
100K Gallon Reservoir		Inspect for siltation, debris, etc.	Annually	Adjust frequency depending on operating experience
Level Sensor	Probe	Manually check start-up/shutdown. Check probe float for free range of motion. Remove and inspect for buildup of minerals if resistance is detected.	Monthly	Adjust frequency depending on operating experience
Misc. Guys, Hardware etc.		Inspect	Annually	Adjust frequency depending on operating experience
System Interlocks	Settling Tank High Level Blower Low Pressure Blower Low Amps Building Low Temperature	Check for proper operation. System should alarm after pre-set delay period.	Monthly	Adjust frequency depending on operating experience

TABLE 2
EQUIPMENT LOG,
AIR STRIPPER MAINTENANCE
MALTA ROCKET FUEL AREA SITE

Date	Operator	Operational Status of System	Work Performed
7/16/2004	Robert Hyde	OK	Performed confined space entry to install conduit over loose wiring in RW-1D and RW-2D well vaults, Replaced blower air velocity transmitter & probe.
7/28/2004	John Skaarup	OK	System operational upon arrival. Inspected all system process lines and tested operation of all system alarms and interlocks - all are operating properly. Collected coliform samples at Bldg. 14 per NYSDOH requirements.
8/26/2004	John Skaarup & Robert Hyde	OK	Performed confined space entry in RW-1D well vault to install well seal to prevent water infiltration from vault into well casing. Shortened pump drop tube by 31" to run wiring through split well seal. Performed monthly system inspection and quarterly performance sampling. Also collected system influent sample for ammonium perchlorate analysis. System process piping and alarm interlock testing performed.
8/27/2004	John Skaarup & Robert Hyde	OK	Performed confined space entry in RW-2D well vault to install well seal to prevent water infiltration from vault into well casing. Also corrected telemetry unit software issue regarding the reporting of blower air velocity readings and installed lid seal, drop cable seal and a lock at the 100,000 gallon reservoir lid.
9/8/2004	John Skaarup	OK	Began to plumb a new system effluent sample port. Will return tomorrow with remainder of parts to complete task.
9/9/2004	John Skaarup	OK	Removed Wright-Malta chlorine feed line from air stripper effluent piping. Wright-Malta to install chorine feed line into settling tank side wall. Completed installation of new system effluent sample port. New piping/valve placed in same location as old piping/valve. After 35 minute delay from system restart, collected full set of VOC samples from system.
9/10/2004	John Skaarup	Arrival – OK Departure – Not operational	Shut down system, first well pumps, then air stripper blower after all water has flown through air stripper. Will restart system pending laboratory results from 9/9/04 samples. Photographed old and new effluent port piping and old chlorine feed location at system effluent sample port.
9/13/04	John Skaarup	Arrival – Not operational Departure – OK	Site visit to restart system. Checked operation upon restart. Chlorinator operational and has been plumbed into settling tank side wall.

TABLE 2
EQUIPMENT LOG,
AIR STRIPPER MAINTENANCE
MALTA ROCKET FUEL AREA SITE

Date	Operator	Operational Status of System	Work Performed
9/30/2004	John Skaarup, Brian Neumann & David Stahl	OK	Monthly system inspection. System operational upon arrival. Inspected system process piping and valves. Adjusted RW-1D flow from 6.8 to 6.0 gpm. Tested system interlocks – all OK.
10/26/2004	John Skaarup	OK	System operational upon arrival. Conducted monthly system inspection. Checked system interlocks – all OK. Blower intake free of obstructions. Collected quarterly system performance samples per O&M Manual, collected periodic coliform samples and semi-annual lead/copper samples from system, Wright-Malta Bldg 14 and NYSERDA Building per NYSDOH requirements. Air stripper system now cycling on/off approximately 6 to 8 times per hour instead of operating continuously.
11/10/04	Robert Hyde & John Skaarup	OK except RW-1D pump not operational	Inspected system due to RW-1D pump not operating as of 11/8/04. System operational upon arrival. Reservoir at approx. 12.60 feet. All RW-1D fuses in Bldg. 15 panel look good. RW-1D panel in well vault is in "off" position upon arrival. Will return later to inspect in vault. Replaced settling tank high-level switch per O&M Manual requirements. Tested new switch for proper operation.
11/18/2004	Robert Hyde & Scott Agan (electrical subcontractor)	OK except RW-1D pump not operational	Performed confined space entry in RW-1D well vault due to RW-1D pump operational issue. Fuse in well vault panel was blown. Replaced fuse and restarted RW-1D pump. Monitored pump flow, voltage and amperage for 45 minutes – all OK upon departure.
11/30/2004	John Skaarup, Brian Neumann & Scott Agan (electrical subcontractor)	OK except RW-1D pump not operational	System operational upon arrival. Monthly system inspection visit and RW-1D pump inspection to determine cause of RW-1D pump operational issue. Fuse on same power leg as last time, inside well vault panel, has blown. Replaced fuse. Restarted pump, fuses on both power legs blew within 5 minutes. Removed and inspected pump and wiring. Wiring from vault to pump has burnt out approximately 20 feet above pump. Removed burnt wiring and spliced wiring together. Remainder of wiring looks OK upon inspection. Replaced fuses and restarted RW-1D pump – is operating at nameplate voltage and amperage. Inspected system process piping and valves. Tested operation of all system alarms and interlocks - all are operating properly. Adjusted gate valve in RW-1D well vault and white flow control valve in Bldg. 15 to regulate RW-1D flow to approximately 6.0 gpm. System operational upon departure, but RW-1D pump was shut down at Bldg. 15 panel due to decreasing flow without adjustments to flow control valves.

TABLE 2
EQUIPMENT LOG,
AIR STRIPPER MAINTENANCE
MALTA ROCKET FUEL AREA SITE

Date	Operator	Operational Status of System	Work Performed
12/1/2004	John Skaarup & Scott Agan (electrical subcontractor)	OK except RW-1D pump not operational	System operational upon arrival. Replaced RW-1D well pump due to pump shut down approximately 3 hours upon departure on 11/30/04. Restarted RW-1D well pump and adjusted flow to 6.3 gpm prior to departure from site. System operational upon departure.
12/2/2004	John Skaarup & Scott Agan (electrical subcontractor)	Not operational	System not operational upon arrival. Returned to site to address settling tank high-level alarm condition. Contact that controls settling tank pump not operating properly. Installed replacement contact inside old contact housing. System operating normally upon restart.
12/23/2004	John Skaarup & Scott Agan (electrical subcontractor)	OK except RW-1D pump not operational	System operational upon arrival. Monthly system inspection and diagnosis of RW-1D pump operation issue. Fuse in Bldg. 15 breaker panel has blown. Replaced fuse and checked incoming voltage and amperage. All are OK. System restarted upon replacement of fuse. Although RW-1D wiring from vault to pump is not the cause of the blown fuse in Bldg. 15, replaced the wiring and installed a protective cover over new wiring. Left RW-1D pump beaker in off position pending further research into cause of problem. Tested operation of all system alarms and interlocks – all are operating properly. RW-2D pump operating at 6.0 gpm. Informed Wright-Malta of RW-1D pump status. System operational upon departure.

TABLE 3
PROCESS OPERATING REPORT
WATER TREATMENT SYSTEM
MALTA ROCKET FUEL AREA SITE

1	2	3					4					5
DATE	TIME	WATER FLOW –LINE 1D					WATER FLOW –LINE 2D					PROBLEMS OR COMMENTS
		1D LINE FLOW METER RDG(GPM)	1D LINE TOTALIZER RDG(GAL)	ELAPSED TIME (DAYS)	TOTAL FLOW THIS PERIOD (GAL)	AVG FLOW THIS PERIOD (GPM)	2D LINE FLOW METER RDG(GPM)	2D LINE TOTALIZER RDG(GAL)	ELAPSED TIME (DAYS)	TOTAL FLOW THIS PERIOD (GAL)	AVG FLOW THIS PERIOD (GPM)	
7/28/2004	14:20	6.1	2758400	28	247,900	6.15	5.3	2,658,800	28	207,700	5.15	
8/26/2004	15:00	5.6	2,985,900	29	227,500	5.45	5.4	2,851,300	29	192,500	4.61	
9/30/2004	9:40	6	3,251,300	35	265,400	5.27	6	3,084,800	35	233,500	4.63	
10/26/2004	8:20	6.2	3,411,400	26	160,100	4.28	5.9	3,239,200	26	154,400	4.12	
11/30/2004	9:45	0.0	3,479,400	35	68,000	1.35	6.1	3,466,900	35	227,700	4.52	
12/1/2004	13:40	6.3	3,480,900	1	1,500	1.04	6.0	3,475,100	1	8,200	5.69	
12/2/2004	13:20	6.3	3,484,400	1	3,500	2.43	6.0	3,478,200	1	3,100	2.15	
12/23/2004	13:40	0.0	3,515,900	21	31,500	1.04	6.0	3,585,900	21	107,700	3.56	
Summary				176	1,005,400	3.9670			176	1,134,800	4.4776	

NR = Not Recorded

NA = Not Applicable

TABLE 3
PROCESS OPERATING REPORT
WATER TREATMENT SYSTEM
MALTA ROCKET FUEL AREA SITE

1	2	3			4	5
DATE	TIME	STANDPIPE LEVEL (FT)	LEVEL PROBE OK ?	SAMPLES TAKEN ?	AIR BLOWER PRESSURE OK?	PROBLEMS OR COMMENTS
7/28/2004	14:20	11.10	Yes	No	Yes-2.80	Monthly visit with coliform sampling at W-M Bldg. 14.
8/26/2004	15:00	12.25	Yes	Yes	Yes-2.60	Monthly visit with performance sampling , ammonium perchlorate sampling and coliform sampling at W-M Bldg.
9/30/2004	9:40	12.00	Yes	No	Yes-2.65	Monthly visit. System OK.
10/26/2004	8:20	12.75	Yes	Yes	Yes-2.65	Monthly visit with performance sampling, coliform and lead/copper sampling at W-M Bldg. 14 and NYSERDA Bldg.
11/30/2004	9:45	12.70	Yes	No	Yes-2.60	Monthly visit with RW-1D pump diagnostics and third party review of system.
12/1/2004	13:40	12.75	Yes	No	Yes-2.65	Visit to replace RW-1D pump. System OK upon departure.
12/2/2004	13:20	12.5	Yes	No	Yes-2.61	Visit to troubleshoot settling tank high-level alarm condition. Bad contactor was replaced prior to departure.
12/23/2004	13:40	12.7	Yes	No	Yes-2.65	Monthly visit with replacement of wiring between vault and pump in RW-1D. Installed protective cover over wiring.

TABLE 4
SUMMARY OF DRINKING WATER SAMPLING PROGRAM, PRESERVATIVES, HOLDING TIMES AND CONTAINERS
MALTA ROCKET FUEL AREA SITE

Sample	Sampling Frequency	Sample Matrix	Analytical Parameters	Analytical Method Reference[1]	Sample Preservation	Holding Times[2]	Containers
Influent	1 per quarter	Water	CLP OLC VOCs	USEPA CLP OLCO2	Hcl, Cool, <4°C	14 days	3 - 40 ml glass vials with teflon septa and plastic screw caps
Effluent	1 per quarter	Water	CLP OLC VOCs	USEPA CLP OLCO2	Hcl, Cool, <4°C	14 days	3 - 40 ml glass vials with teflon septa and plastic screw caps

Notes:

1. *USEPA CLP OLCO2 analysis modified to include hexachlorobutadiene, 1,2,3 trichlorobenzene and trichlorofluoromethane to match the EWMS ground water analyses.*
2. *Holding times begin at the time of sample collection.*

TABLE 5
NOVEMBER 2004 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Compound	Remedial Action Objective	DGC-3S	DGC-4S	4D	11D	13S	13D	14 D	M-24D	M-25D	M-27S	DUPA (4D)
Acetone	50	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	NA	NA	5.0 UJ	5.0 UJ	5.0 UJ	NA	5.0 UJ
Carbon Disulfide	None*	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U
Carbon Tetrachloride	5	1.0 U	1.0 U	1.0 U	4.6	NA	NA	1.0 U	0.59 J	86.8 D	NA	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.2 U	NA	NA	1.0 U	1.0 U	8.7	NA	1.0 U
2-Butanone	5	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	NA	NA	5.0 UJ	5.0 UJ	5.0 U	NA	5.0 UJ
Trichloroethene	5	1.0 U	1.0 U	1.0 U	0.67 J	NA	NA	1.0 U	1.0 U	16.1	NA	1.0 U
Trichlorofluoromethane	5*	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	1.0 U	1.0 U	1.0 U	NA	1.0 U
Chromium	50*	NA	NA	NA	NA	NA	4.5 B	NA	NA	NA	2.6 B	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	11.2	10 U	NA	NA	NA	10 U	NA
Field Parameters												
pH	-	6.95	7.77	NM	7.6	7.71	7.99	7.84	7.85	7.69	7.9	NM
Temperature (celsius)	-	10.33	10.06	NM	9.53	8.84	9.9	8.71	9.29	9.76	8.44	NM
Conductivity (umhos/cm)	-	0.159	0.507	NM	0.43	0.36	0.305	0.29	0.319	0.443	0.26	NM
Dissolved Oxygen	-	3.22	7.43	NM	9.33	18.79	1.3	18.27	11.92	10.55	13.52	NM
Turbidity (NTUs)	-	30.3	53.4	NM	16.4	13.5	4.7	8.4	9	4	11.4	NM
Depth To Water (feet)	-	14.80	6.39	35.00	31.14	32.95	33.48	44.78	33.7	30.95	40.45	-
Ground Water Elevation (feet)	-	191.00	199.41	292.55	288.54	296.31	295.79	296.59	286.87	283.51	282.65	-

Notes:

1. All analytical concentrations are in µg/l (micrograms per liter (ppb)).
2. Only compounds detected at one or more sampling points are listed.
3. NA - not analyzed for.
4. U - analyte was not detected, and value shown is the detection limit.
5. J - estimated value due to data validation requirements or concentration less than CRQL (organics only).
6. B - The reported value is less than the CRDL but greater than the IDL (inorganics only).

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

7. D - Indentifies all compounds analyzed at a secondary dilution factor.
8. NM - Not measured due to equipment malfunction.

TABLE 5
NOVEMBER 2004 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Compound	DUP A (M-27S)	M-27D	M-29D	M-33S	M-33I	Trip Blank 1	Trip Blank 2	Trip Blank 3	Equipment Blank 1	Equipment Blank 2	Equipment Blank 3
Acetone	NA	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Carbon Disulfide	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	NA	22.1	10.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	NA	2.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	NA	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Trichloroethene	NA	22.7	6.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NA	2.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	2.2 B	2.6 B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	10 U	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Parameters											
pH	7.9	7.81	7.69	8.18	10.54	-	-	-	-	-	-
Temperature (celsius)	8.44	8.53	10.09	8.32	8.63	-	-	-	-	-	-
Conductivity (umhos/cm)	0.26	0.358	0.561	0.189	0.177	-	-	-	-	-	-
Dissolved Oxygen	13.52	11.72	14.12	7.58	8.78	-	-	-	-	-	-
Turbidity (NTUs)	11.4	1.6	21.7	2.4	13.8	-	-	-	-	-	-
Depth To Water (feet)	-	39.62	46.54	16.62	30.94	-	-	-	-	-	-
Ground Water Elevation (feet)	-	264.65	288.12	287.65	272.75	-	-	-	-	-	-

Notes:

1. All analytical concentrations are in µg/l (micrograms per liter (ppb)).
2. Only compounds detected at one or more sampling points are listed.
3. NA - not analyzed for.
4. U - analyte was not detected, and value shown is the detection limit.
5. J - estimated value due to data validation requirements or concentration less than CRQL (organics only).
6. B - The reported value is less than the CRDL but greater than the IDL (inorganics only).

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

7. D - Indentifies all compounds analyzed at a secondary dilution factor.
8. NM - Not measured due to equipment malfunction.

TABLE 5
NOVEMBER 2004 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Parameter	Remedial Action Objective	SW-A	SW-B	SW-D	SW-E	SW-F	SW-G
Acetone	50	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Carbon Disulfide	None*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	0.43 J	1.0 U	1.0	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
2-Butanone	5	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Trichloroethene	5	1.0 U	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	50*	NA	0.94 B	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	10 U	NA	NA	NA	NA
Field Parameters							
pH	-	8.03	7.92	8.16	7.1	8.03	NM
Temperature (celsius)	-	7.13	6.24	6.65	6.55	5.62	NM
Conductivity (umhos/cm)	-	0.256	0.302	0.402	0.45	0.238	NM
Dissolved Oxygen	-	12.44	13.57	13.32	13.38	13.66	NM
Turbidity (NTUs)	-	3.8	3.70	13.0	5.1	6.4	NM
Depth To Water (feet)	-	-	-	-	-	-	NM
Ground Water Elevation (feet)	-	-	-	-	-	-	NM

Notes:

1. All analytical concentrations are in µg/l (micrograms per liter (ppb)).
2. Only parameters detected in one or more sampling points are listed.
3. NA - not analyzed for.
4. U - analyte was not detected, and value shown was the detection limit.
5. J - estimated value due to data validation requirements or concentration less than CRQL (organics only).
6. B - The reported value is less than the CRDL but greater than the IDL (inorganics only).

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

7. NM - Not measured due to equipment malfunction.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/29-7/1/1987	7/31/87	11/5/87	1/19-1/20/1988	4/18-4/19/1988	7/20-7/21/1988	10/11-10/12/88	1/19-1/20/89
DGC-3S									
Benzene	0.7*	ND	NA	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA
Aluminum	100*	0.48	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	<0.005 mg/L	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	no data	no data	no data	no data	no data	no data	no data	no data
DGC-4S									
Carbon Disulfide	None*	- -	- -	- -	- -	- -	- -	- -	- -
Chromium	50*	- -	- -	- -	- -	- -	- -	- -	- -
13S									
Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
13D									
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

See RI report for additional data.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	4/10/89	7/12/89	8/15/1989	11/30/1989	5/30/90	8/28/90	12/6/90	4/8-4/10/1991
DGC-3S									
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	NA	8 V / 7 Vdp
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	no data	no data	no data	no data	NA	NA	NA	NA
DGC-4S									
Carbon Disulfide	None*	- -	- -	- -	- -	- -	- -	- -	ND/0.5Vdp
Chromium	50*	- -	- -	- -	- -	- -	- -	- -	NA
13S									
Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	2
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	60 D
Carbon Tetrachloride	5	NA	NA	NA	NA	18/16 dp	6.4	4.4	8
Chloroform	7	NA	NA	NA	NA	ND	ND	ND	ND
Trichloroethene	5	NA	NA	NA	NA	ND	ND	ND	ND
Trichlorofluoromethane	5*	NA	NA	NA	NA	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	336 V
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
13D									
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

See RI report for additional data.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/12-6/13/1991	9/23-9/24/1991	12/26-12/27/91	2/10-2/11/92	6/1-6/2/1992	9/28-9/29/1992	11/18-11/19/1992	3/17-3/18/1993
DGC-3S									
Benzene	0.7*	ND	0.2 J	ND	ND/NDdp	ND	ND	ND	ND
Carbon Disulfide	None*	4	ND	ND	ND/NDdp	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	6.1	62.2E/70.3Edp	16.2/ND*, 14.6/ND*dp	25.2/ND*	ND	33.6/ND*	18.5
Hexavalent Chromium	50*	NA	NA	NA	ND/4*/ND dp	NA	NA	NA	NA
DGC-4S									
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND/ND dp	4 V	ND
Chromium	50*	NA	15.9	11.9 E	ND/ND*	ND/ND*	ND/ND dp	8.6 B	48.1/ND*
13S									
Benzene	0.7*	0.7/0.6 Jdp	1	ND	ND	ND	ND	0.4 JV	ND
Carbon Disulfide	None*	0.6	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	24 J/24 Jdp	8	12	9	6 J	9	16 V	15
Chloroform	7	0.8/0.9 Jdp	ND	0.4 J	0.3 J	ND	ND	0.6 V	0.6
Trichloroethene	5	ND	0.4 J	0.9	0.6	ND	0.6	1 V	2
Trichlorofluoromethane	5*	ND	ND	ND	ND	ND	0.5	0.9 V	2
Chromium	50*	NA	269/261**	316 E/562 E**	282/498**	504/512**	179/172**	585/576**	746/614**
Hexavalent Chromium	50*	NA	280	486/302**	260/310**	NA	287	493	663
13D									
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

See RI report for additional data.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	5/25-5/26/1993	8/24-8/25/1993	11/8-11/9/1993	2/22-2/23/1994	5/18-5/19/1994	8/24-8/25/1994	11/15-11/16/1994	5/23/1995
DGC-3S									
Benzene	0.7*	ND	ND	ND	ND	ND V	ND	ND	ND
Carbon Disulfide	None*	ND	0.8	ND	ND	ND V	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	4.3 B	4.7B	19.4	23.9	4.5 B	9.9 B	11.1	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
DGC-4S									
Carbon Disulfide	None*	0.3 J	0.2J	ND	ND	ND V/ND V dp	ND	ND	ND
Chromium	50*	ND	3.3B	ND	31.2/ND*	ND/ND dp	5.6 B	ND	NA
13S									
Benzene	0.7*	ND	ND	ND	ND/ND dp	ND	ND	ND	NA
Carbon Disulfide	None*	ND	ND	ND	ND/ND dp	ND	ND	ND	NA
Carbon Tetrachloride	5	10	17	18	20/9 dp	9	9	9	NA
Chloroform	7	0.4 J	0.6	0.7	ND/ND dp	0.4 J	0.3 J	ND	NA
Trichloroethene	5	0.6	ND	2	2/1 dp	0.8	1	0.9	NA
Trichlorofluoromethane	5*	0.5	ND	2	2/1 dp	0.9	1	ND	NA
Chromium	50*	198/609**	787/716**	572/610**	580/357** 567/357** dp	406/434**	133 V/157 V**	44.2 V/95.8 V**	140 J
Hexavalent Chromium	50*	460	800	560	530/540 dp	340	101	36	150
13D									
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration; due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990.

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** = Filtered Sample.

See RI report for additional data.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	10/17/1995	5/14/1996	10/23/1996	6/2/1997	10/14/1997	5/28/1998	10/29/1998	5/11/1999
DGC-3S									
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
DGC-4S									
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA
13S									
Benzene	0.7*	NA	NA	NA	1U	1U	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	1U	1U	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	1U	8	NA	NA	NA
Chloroform	7	NA	NA	NA	1U	1U	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	52.7 J	44.8	46.4	90.7/90.9**	71.4	71.2	98.6 J	72.4
Hexavalent Chromium	50*	48	47	47	97	67	51	54.0 J	71.0
13D									
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled; well installed in December, 1990.

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** = Filtered Sample.

See RI report for additional data.

TABLE 6
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS DGC-3S, DGC-4S, 13S, 13D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	10/26/1999	5/22/2000	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003	5/25/2004	11/2004
DGC-3S												
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DGC-4S												
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13S												
Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	169	249	29.9	136	45.3	13.4	34.8	52.2	49.4	20.1	NA
Hexavalent Chromium	50*	178	262	41	12.3	43.6 J	18	3.59	45	51.5	11	11.2
13D												
Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.5 B
Hexavalent Chromium	50*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10 U

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration; due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration; due to variance to quality control limits.

- - = Not sampled; well installed in December, 1990.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

See RI report for additional data.

TABLE 7
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS M-27S, M-27D, M-33S, M-33I
JUNE 1992 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

M-27S	Remedial Action Objective	6/5/1992	11/11/1992	3/14/1994	5/23/1995	10/17/1995	5/14/1996	10/23/1996	6/2/1997	10/14/1997	5/28/1998	10/29/1998	5/11/1999
Carbon Disulfide	None*	ND	ND	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	0.85 J
Chloromethane	5	40	ND	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	8.4 B/ND**	57.4/ND**	not sampled	ND	ND	ND	ND	ND	ND	ND	3.2 BJ	0.98B
Hexavalent Chromium	50*	NA	NA	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-27D													
Carbon Tetrachloride	5	75/62 dp	23	not sampled	33/42 dp	56	31	28	26	22	27	26 / 27 dp	20.3 / 20.1 dp
Chloroform	7	ND	3	not sampled	4/4 dp	5	3	3	3	2	3	2 / 2 dp	1.8 / 1.8 dp
Chloromethane	5	4 J/2S dp	ND	not sampled	ND/ND dp	ND	ND	ND	ND	ND	ND	ND / ND	ND / ND dp
Trichloroethene	5											ND/ND dp	4.1/4.1 dp
Trichlorofluoromethane	5*	no data	no data	not sampled	no data	no data	no data	no data	no data	no data	no data	0.3 J / 0.3 J dp	0.92J / 0.99J dp
Chromium	50*	2.0 B/ND** 2.0 B/ND** dp	19.8/ND**	not sampled	ND/ND dp	ND	ND	ND	ND	1.2B	ND	4.6 BJ / 4.8 BJ dp	1.4 B / 1.3 B dp
Hexavalent Chromium	50*	NA	NA	not sampled	ND/ND dp	ND	ND	ND	ND	ND	ND	ND / ND dp	ND / ND dp
M-33S													
VOCs	-	not sampled	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-33I													
VOCs	-	not sampled	not sampled	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Units are ug/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

J = Estimated concentration.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

** = Filtered Sample.

TABLE 7
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS M-27S, M-27D, M-33S, M-33I
JUNE 1992 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

M-27S	Remedial Action Objective	10/26/1999	5/22/2000	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/15/2003	10/9/2003	5/25/2004	11/2004
Carbon Disulfide	None*	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND J / ND J dp	ND	ND / 0.11 J dp	ND	NA
Chloromethane	5	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND J / ND J dp	ND	ND / ND dp	ND	NA
Chromium	50*	0.85B/0.90b dp	1.1B	1.2B	ND / ND dp	ND / ND dp	ND / ND dp	1.2 B	8.5 B	1.0 B / 1.8 B dp	83.1	2.6 B / 2.2 B dp
Hexavalent Chromium	50*	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND / ND dp	ND UJ	ND U / ND dp	ND	ND
M-27D												
Carbon Tetrachloride	5	22.3	26.7D/28.9D dp	19.2/19.8 dp	13.8	16.2	14.5	24.2 DJ	5.1 / 4.5 dp	16.6	3 / 2.7 dp	22.1
Chloroform	7	1.8	ND / ND dp	1.7J /1.3 dp	1.1	1.1	0.94J	2.4	ND / ND dp	1.0	0.53 JB / 0.55 JB dp	2.0 U
Chloromethane	5	ND	ND / ND dp	ND / ND dp	ND	ND	ND	ND	ND ND dp	ND	ND ND dp	ND
Trichloroethene	5	10.7	12.8 / 12.1 dp	26.4 /26.5D dp	19.4	27 D	22.7	14	2.4 / 2.2 dp	21.8 D	3.2 / 2.9 dp	22.7
Trichlorofluoromethane	5*	1.4	1.9 / 1.8 dp	2.9 / 2.9 dp	2.0	2.2	1.5	0.96 J	0.21J / 0.18J dp	2.3	0.27 J / 0.29 J dp	2.3
Chromium	50*	0.81B	2B/1.8B dp	1.2B/1.2B dp	ND	1.5 B	2 B	1.5 B	5.9B / 6.1B dp	1.2 B	22.6 / 21.3 dp	2.6 B
Hexavalent Chromium	50*	ND	ND/ND dp	ND/ND dp	ND	ND	ND	ND	ND / ND dp	ND	ND / ND dp	ND
M-33S												
VOCs	-	ND	ND	ND	8.0 J	ND	ND	ND	ND	ND	ND	ND
M-33I												
VOCs	-	ND	ND	ND	4.1 J	ND	ND	ND	ND	ND	ND	ND

Notes:

Units are ug/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

J = Estimated concentration.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

D = Indentifies compound analyzed at a secondary dilution factor.

* Based on NYSDEC Final Combined Regulatory Impact and Environmental Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified for comparison purposes only.

"" = Filtered Sample.

TABLE 8
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
SURFACE WATER
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup	6/29-			1/19-	4/18-	7/20-	10/11-	1/19-					
SW-A	Standard	7/1/1987	7/31/87	11/5/87	1/20/1988	4/19/1988	7/21/1988	10/12/88	1/20/89	4/10/89	7/12/89	8/15/1989	11/30/1989	12/27/1989
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Aluminum	100*	0.12 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	no data
Lead	25*	NA	NA	NA	NA	0.02 mg/L	NA	NA	NA	NA	NA	NA	NA	no data
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-B														
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	ND	NA	ND	ND	ND	ND	ND	1,1/1.1dp	ND	ND	ND	0.9	NA
Chloroform	7	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Aluminum	100*	0.21 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	no data
Lead	25*	NA	NA	NA	NA	<0.01 mg/L	NA	NA	NA	NA	NA	NA	NA	no data
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-D														
Acetone	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Bromochloromethane	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7, ND dp	no data
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethane	0.6*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Methylene Chloride	5*	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2,3-Trichlorobenzene	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Aluminum	100*	0.50 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	no data
Lead	25*	NA	NA	NA	NA	<0.005 mg/L	NA	NA	NA	NA	NA	NA	NA	no data
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-E (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-F (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-G (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not Sampled.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

D = Concentration determined from a sample dilution.

E = Estimated concentration : due to interference.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

R = Rejected during data validation.

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TABLE 8
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
SURFACE WATER
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup					4/8-	6/12-	9/23-	12/26-	2/10-	6/1-	9/28-	11/18-	3/17-
SW-A	Standard	2/22/1990	5/30/90	8/28/90	12/6/90	4/10/1991	6/13/1991	9/24/1991	12/27/91	2/11/92	6/2/1992	9/29/1992	11/19/1992	3/18/1993
Carbon Disulfide	None*	NA	NA	NA	NA	0.5 V	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	NA	NA	NA	NA	NA	NA	6.6	ND	ND	ND	ND	ND	6.1 B
SW-B														
Carbon Disulfide	None*	NA	NA	NA	NA	ND	0.2 J	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	0.8S	ND	ND	1	0.4 J	0.6 J	0.4 J	0.8	0.8	0.7	0.3 J	0.6 V	ND
Chloroform	7	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	0.2 J	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	0.3 J	ND	0.2 J	ND	0.3 J	ND	ND	ND
Trichlorofluoromethane	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND	2
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
SW-D														
Acetone	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Bromochloromethane	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	no data	no data	no data
1,2-Dichloroethane	0.6*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND	ND
Methylene Chloride	5*	NA	NA	NA	NA	NA	NA	ND	6.3 BE	ND	ND	no data	no data	no data
1,2,3-Trichlorobenzene	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	NA	NA	NA	NA	ND	2	ND	ND	ND	ND	ND	ND	ND
SW-E (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-F (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-G (See O&M Manual Addendum No. 1														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not Sampled.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

D = Concentration determined from a sample dilution.

E = Estimated concentration : due to interference.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

R = Rejected during data validation.

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** = Filtered Sample.

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TABLE 8
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
SURFACE WATER
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup	5/25-	8/24-	11/8-	2/22-	5/18-	8/24-	11/15-						
SW-A	Standard	5/26/1993	8/25/1993	11/9/1993	2/23/1994	5/19/1994	8/25/1994	11/16/1994	5/23/1995	10/17/1995	5/14/1996	10/23/1996	6/2/1997	10/14/1997
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	ND	3.2B	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
SW-B														
Carbon Disulfide	None*	ND	ND	ND	ND/ND dp	ND	ND	ND	ND	ND/ND dp	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	0.3 J	0.7	0.4 J/0.4 J dp	0.4 J	0.2 JV	ND	ND	0.7 J/0.6 J dp	ND	0.6J	ND	ND
Chloroform	7	ND	ND	0.3 J	ND/ND dp	ND	ND	ND	ND	ND/ND dp	ND	ND	ND	ND
Trichloroethene	5	ND	ND	0.2 J	ND/ND dp	ND	ND	ND	ND	ND/ND dp	ND	ND	ND	ND
Trichlorofluoromethane	5*	ND	ND	ND	ND/ND dp	ND	ND V	ND	ND	ND/ND dp	ND	ND	ND	ND
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	ND	ND	ND	ND/ND dp	ND	ND	ND	ND	ND/ND dp	ND	ND	NA	ND
SW-D														
Acetone	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Bromochloromethane	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND	no data	no data
1,2-Dichloroethane	0.6*	ND	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND
Methylene Chloride	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND	no data	no data
1,2,3-Trichlorobenzene	5*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
SW-E (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-F (See O&M Manual Addendum No. 1)														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW-G (See O&M Manual Addendum No. 1														
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not Sampled.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

D = Concentration determined from a sample dilution.

E = Estimated concentration : due to interference.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

R = Rejected during data validation.

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** = Filtered Sample.

See RI report for additional data.

TABLE 8
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
SURFACE WATER
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup Standard	5/28/1998	10/29/1998	5/11/1999	10/26/1999	5/22/2000	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003	5/25/2004	11/2004
SW-A															
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND J	ND	ND	ND	ND
Aluminum	100*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-B															
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	0.3J	ND	ND	ND	ND	0.54J	ND	ND	ND	0.18 J	0.34 J	0.27 J	0.38 J	0.43 J
Chloroform	7	0.1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20 J	ND
Trichloroethene	5	0.2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20 J	0.19 J	0.28 J	0.27 J
Trichlorofluoromethane	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	ND	3.1 BJ	0.44 B	ND	0.9B	0.75B	ND	ND	1.5 B	0.93 B	1 B	0.75 B	2.1 B	0.94 B
SW-D															
Acetone	5*	43 J	R	ND	ND	ND	ND	ND	ND	ND	3.1 J	ND	ND	ND	ND
Bromochloromethane	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	0.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5*	0.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Na
Lead	25*	no data	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-E (See O&M Manual Addendum No. 1)															
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.0
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
SW-F (See O&M Manual Addendum No. 1)															
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
SW-G (See O&M Manual Addendum No. 1															
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

NS = Not Sampled.

dp = Duplicate sample.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

D = Concentration determined from a sample dilution.

E = Estimated concentration : due to interference.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

R = Rejected during data validation.

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** = Filtered Sample.

See RI report for additional data.

TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/29-7/1/1987	7/31/87	11/5/87	1/19-1/20/1988	4/18-4/19/1988	7/20-7/21/1988	10/11-10/12/88	1/19-1/20/89
4D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
11D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-24D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-25D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-29D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

See Remedial Investigation report for additional data.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration; due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration; due to variance to quality control limits.

- - = Not sampled; well installed in December, 1990.

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TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	4/10/89	7/12/89	8/15/1989	11/30/1989	5/30/90	8/28/90	12/6/90	4/8-4/10/1991
4D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
11D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-24D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-25D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-29D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

See Remedial Investigation report for additional data.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration; due to interference.

D = Concentration determined from a sample dilution

J = Estimated concentration.

V = Estimated concentration due to variance to quality control limits

- - = Not sampled: well installed in December, 1990.

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TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	6/12-6/13/1991	9/23-9/24/1991	12/26-12/27/91	2/10-2/11/92	6/1-6/2/1992	9/28-9/29/1992	11/18-11/19/1992	3/17-3/18/1993
4D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
11D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-24D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-25D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-29D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

See Remedial Investigation report for additional data.

NA = Not analyzed.

ND = Not detected.

NS = Not sampled.

B = The reported value is less than the CRQL/CRDL but greater than the IDL.

dp = Duplicate sample.

E = Estimated concentration: due to interference.

D = Concentration determined from a sample dilution.

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990.

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TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	5/25-5/26/1993	8/24-8/25/1993	11/8-11/9/1993	2/22-2/23/1994	5/18-5/19/1994	8/24-8/25/1994	11/15-11/16/1994	5/23/1995
4D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
11D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-24D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-25D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS
M-29D									
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated.

Only detected compounds are listed.

See Remedial Investigation report for additional data.

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TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	10/17/1995	5/14/1996	10/23/1996	6/2/1997	10/14/1997	5/28/1998	10/29/1998	5/11/1999	10/26/1999
4D										
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NA	NA
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NA	NA
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NA	NA
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NA	NA
11D										
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NA	NA
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NA	NA
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NA	NA
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NA	NA
M-24D										
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS
M-25D										
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS
M-29D										
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Units are µg/l (ppb) unless otherwise stated

Only detected compounds are listed.

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NA = Not analyzed.

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dp = Duplicate sample.

E = Estimated concentration: due to interference

D = Concentration determined from a sample dilution

J = Estimated concentration.

V = Estimated concentration: due to variance to quality control limits.

- - = Not sampled: well installed in December, 1990.

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TABLE 9
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
MONITORING WELLS 4D, 11D, M-24D, M-25D, M-29D
JUNE 1987 - NOVEMBER 2004
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action Objective	5/22/2000	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003	5/25/2004	11/2004
4D											
Acetone	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
11D											
Acetone	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.6
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
M-24D											
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.59 J
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
M-25D											
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	86.8 D
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.7
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	16.1
M-29D											
Acetone	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Carbon Tetrachloride	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.8
Chloroform	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.0

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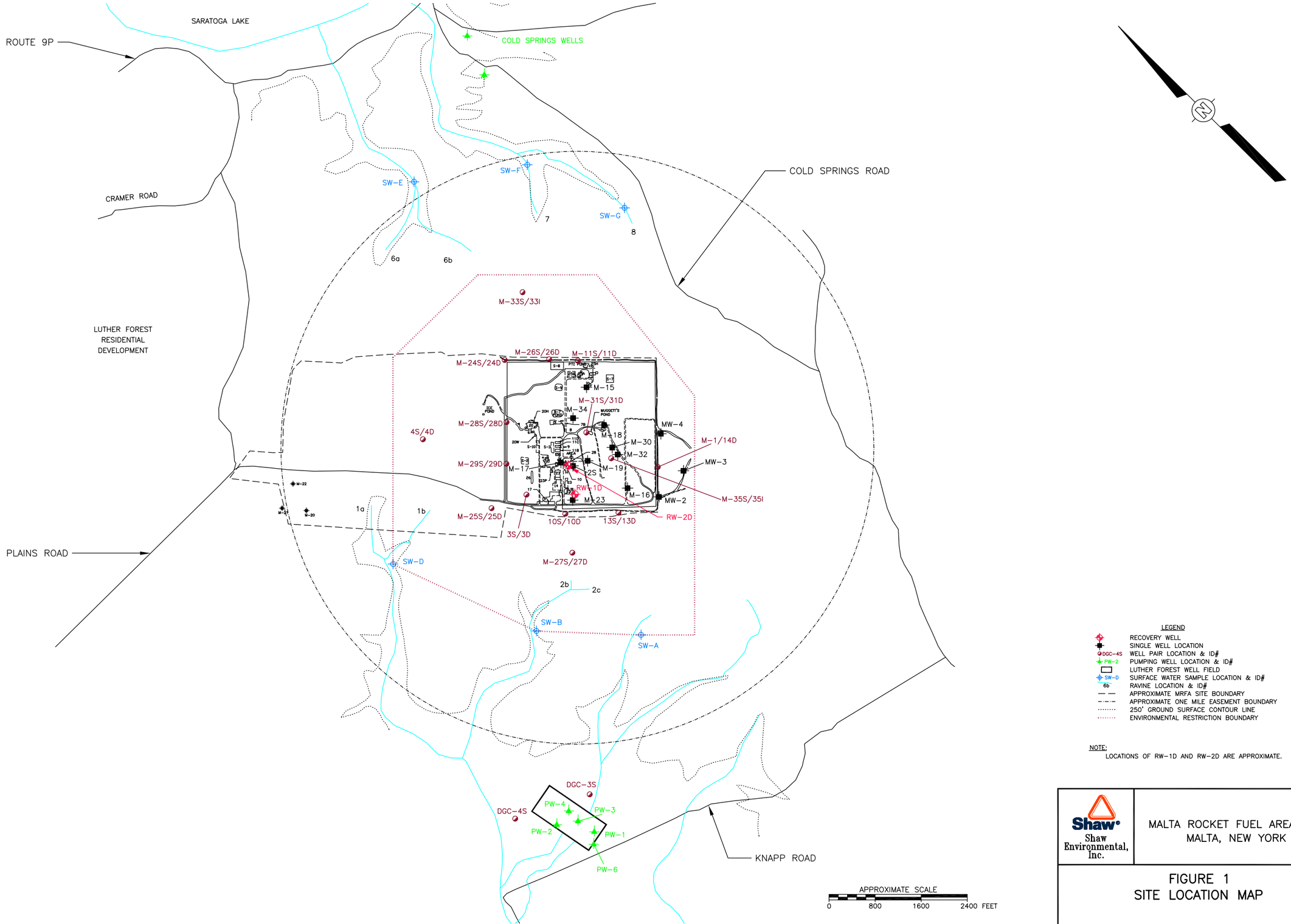
FIGURES

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHKOLNIK 01-04-05			810066D1



LEGEND

- RECOVERY WELL
- SINGLE WELL LOCATION
- DGC-4S WELL PAIR LOCATION & ID#
- PW-2 PUMPING WELL LOCATION & ID#
- LUTHER FOREST WELL FIELD
- SW-D SURFACE WATER SAMPLE LOCATION & ID#
- 6b RAVINE LOCATION & ID#
- APPROXIMATE MRFA SITE BOUNDARY
- APPROXIMATE ONE MILE EASEMENT BOUNDARY
- 250' GROUND SURFACE CONTOUR LINE
- ENVIRONMENTAL RESTRICTION BOUNDARY

NOTE:
LOCATIONS OF RW-1D AND RW-2D ARE APPROXIMATE.

REFERENCE:
BASE MAP SOURCE: ERM-NORTHEAST
ENVIRONMENTAL RESOURCES MANAGEMENT

Shaw
Shaw Environmental, Inc.

MALTA ROCKET FUEL AREA SITE
MALTA, NEW YORK

FIGURE 1
SITE LOCATION MAP

L:\project\MRFA\B10066D1.dwg
Plot Date/Time: 01/05/05 02:00pm
Format Revised: 11/23/99
Image: .
Xref: .

FIGURE 2
WELL 13S HEXAVALENT CHROMIUM CONCENTRATIONS

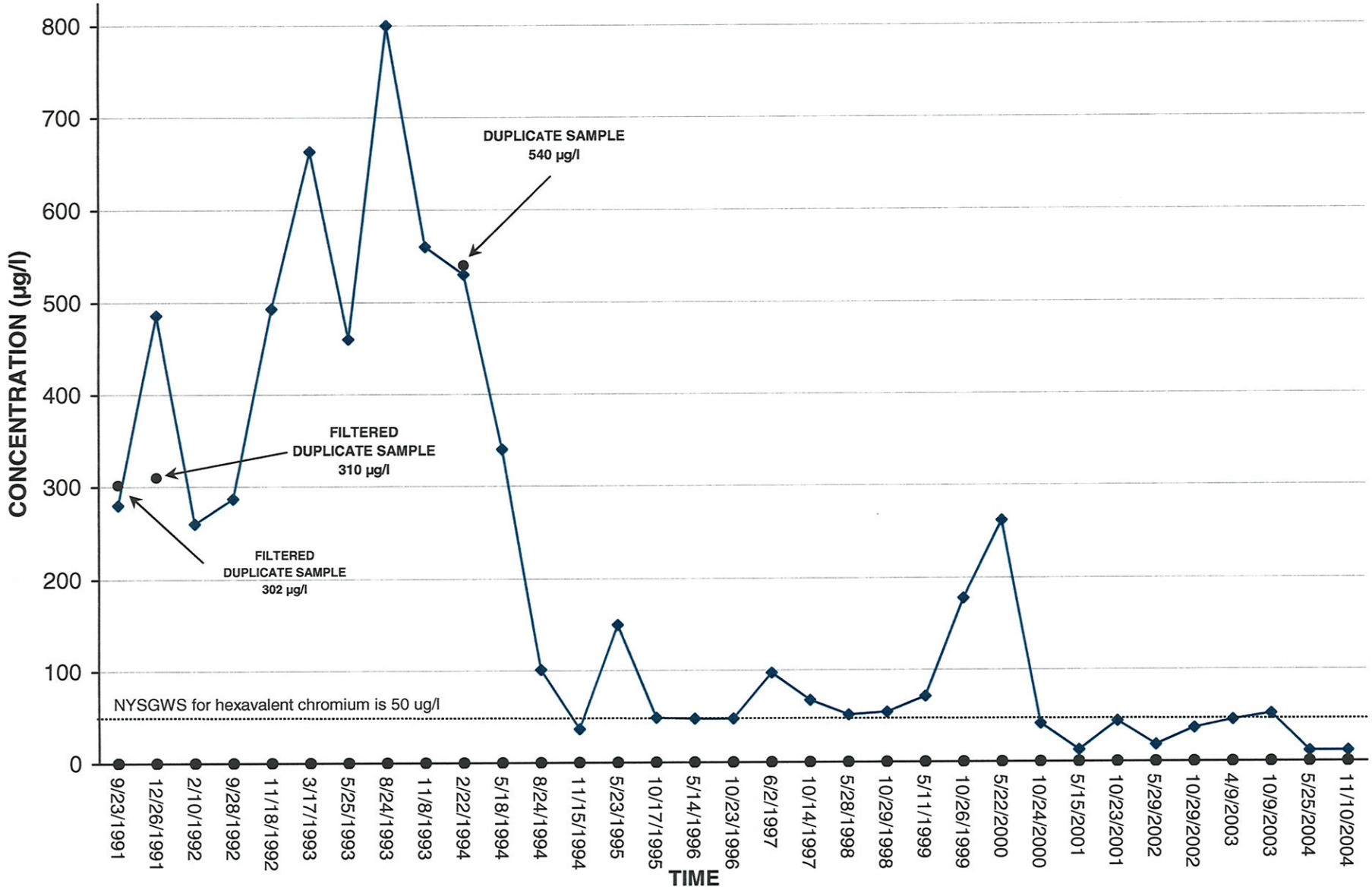


FIGURE 3
WELL M-27D CARBON TETRACHLORIDE CONCENTRATIONS

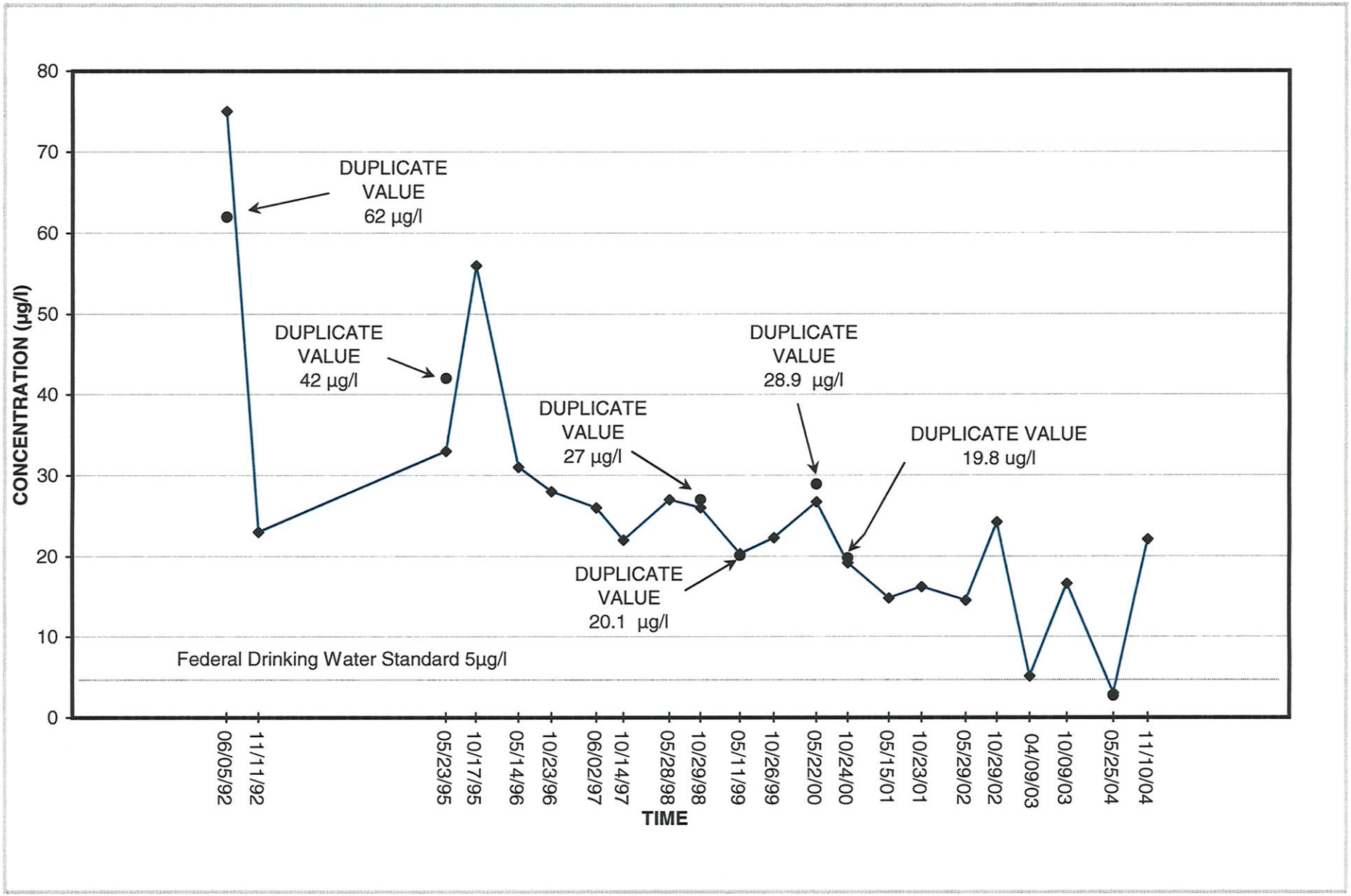


FIGURE 4
SIMULATED VERSUS OBSERVED (NOVEMBER 2004)
CARBON TETRACHLORIDE CONCENTRATIONS
AT WELL M-27D

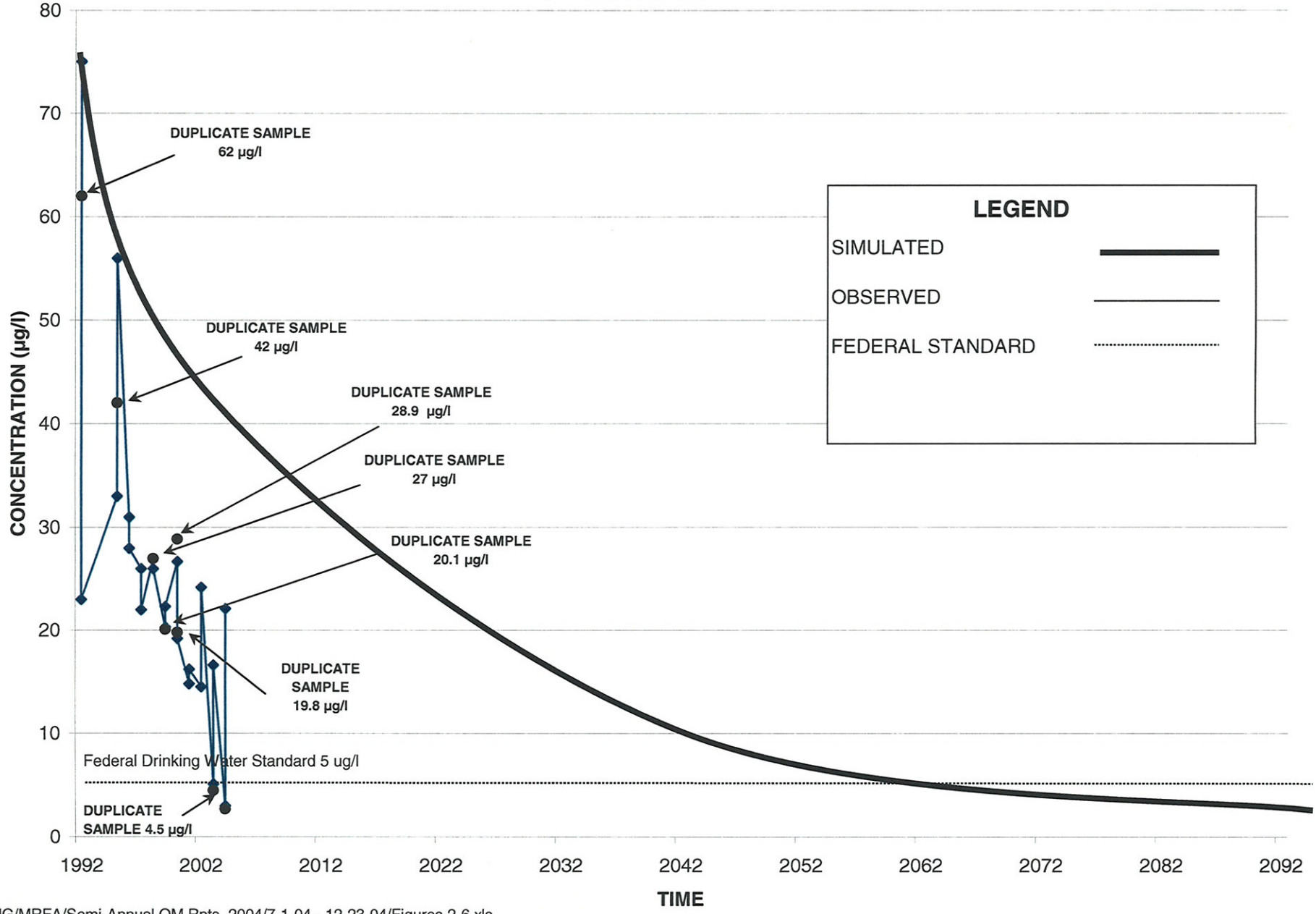


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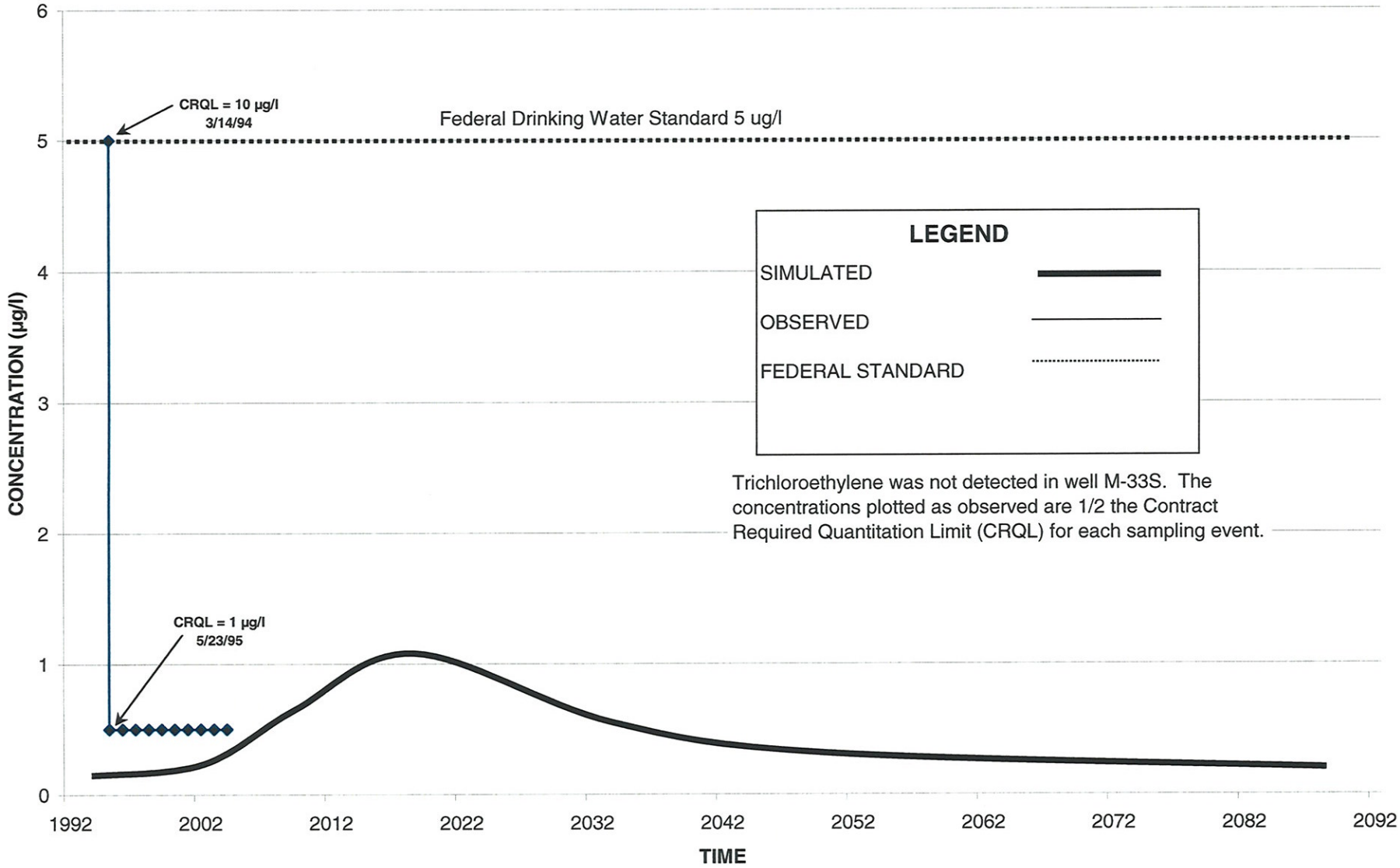
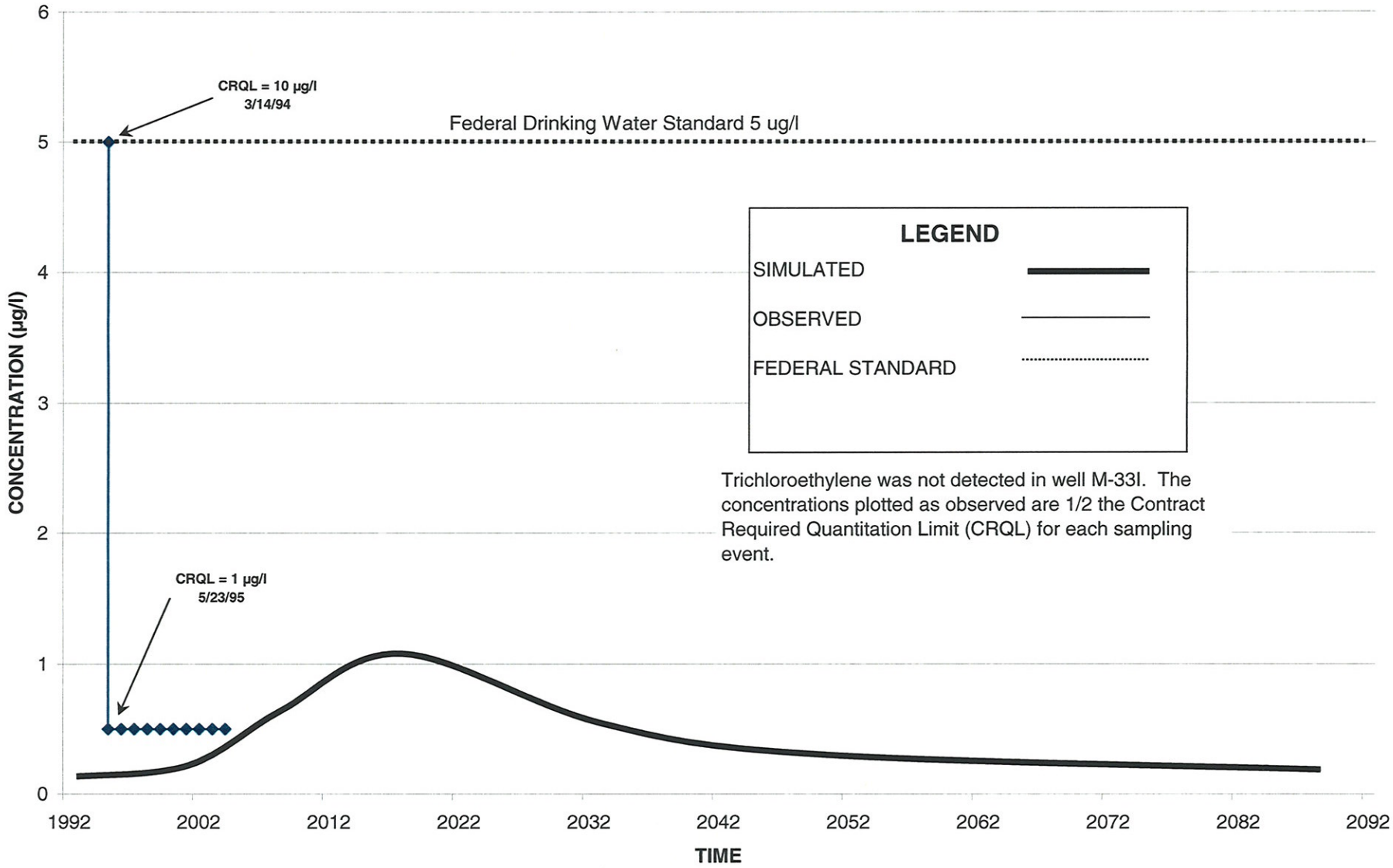
FIGURE 5
SIMULATED VERSUS OBSERVED (NOVEMBER 2004)
TRICHLOROETHYLENE CONCENTRATIONS
AT WELL M-33S



X:/MG/MRFA/Semi-Annual OM Rpts_2004/7-1-04 - 12-23-04/Figures 2-6.xls

FIGURE 6
SIMULATED VERSUS OBSERVED (NOVEMBER 2004) TRICHLOROETHYLENE CONCENTRATIONS AT WELL M-33I



X:/MG/MRFA/Semi-Annual OM Rpts_2004/7-1-04 - 12-23-04/Figures 2-6.xls

APPENDIX A

LABORATORY DATA, INFLUENT/EFFLUENT WATER SAMPLES

SEPTEMBER 9, 2004
AND
OCTOBER 26, 2004

LABORATORY SAMPLE IDs AND CASE NARRATIVES

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
DUP A	A4868703	CLP395	-	-	-	-	-	-
EFFLUENT	A4868702	CLP395	-	-	-	-	-	-
INFLUENT	A4868701	CLP395	-	-	-	-	-	-

NON-CONFORMANCE SUMMARY

Job#: A04-8687

STL Project#: NY3A9090
Site Name:

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A04-8687
Sample Cooler(s) were received at the following temperature(s); 4.6 °C
All samples were received in good condition.

GC/MS Volatile Data

The analyte Methylene Chloride was detected in the Method Blank A4B1585002 (VBLK82) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

The spike recovery of the analyte Vinyl Chloride in the Matrix Spike Duplicate of sample INFLUENT slightly exceeded quality control limits. The Matrix Spike Blank recoveries were compliant, so no corrective action is required.

All samples were preserved to a PH less than 2.

****

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

ORGANIC

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

U - **The analyte was analyzed for, but was not detected above the reported sample quantitation limit.**

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

N - **The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."**

NJ - **The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.**

UJ - **The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.**

R - **The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.**

SEVERN TRENT SERVICES

WASTE MANAGEMENT
CHAIN OF CUSTODY

Internal Use Only

Sampler Name: (Print)	Signature:
John A Skaarup	
Site Name: MRFA	Spec Request: AC 24HR TAT Req'd
Site Location: Malta, NY	Event Name:

SCI Sample No.	Client Sample ID	Sample Date	Sample Time	MATRIX	COMP / GRAB	8260VOA	T-METALS	D-METALS	CHLORIDE/SULFATE/NITRATE	ALK/CARB/BICARB	HARDNESS	NH_3/TOC/COD	624 8260 VOCs							Additional Analysis/Remarks
				INDICATE PRESERVATIVE BY USING KEY BELOW (OPTIONAL)																
				INDICATE CONTAINERS USING KEY BELOW																
	Influent	9/8/04	10:10										X							See comments below
	Influent MS		10:10										X							Fax/mail
	Influent MSD		10:10										X							* Report to:
	Effluent*		10:05										X							Brian Neumann
	DUPA												X							13 British American Blvd
	Trip Blank												X							Latham NY 12110
																				Fax: 518-783-8397
																				Phone: 518-783-1996

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
John A Skaarup	Shaw Environmental	9/8/04	15:00		TL	09/10/04	0945
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water/Groundwater
S = Solid
Sl = Sludge
MS = Miscellaneous Solids
Ol = Oil
A = Air
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservation Key
1. HCl, Cool to 4°
2. H_2SO_4, Cool to 4°
3. HNO_3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
* Include these parameters:
hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane

Courier: Federal Express
Bill of Lading: Fed
4.6°C

37154

STL-8219 (0700)

QUALIFIED REPORT FORMS

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

DUP A

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868703

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8350.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U J
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
75-09-2	Methylene chloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Total Xylenes	3	U

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

DUP A

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868703

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8350.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	2	U
87-61-6	1,2,3-Trichlorobenzene	3	U

USEPA CLP OLC02.1
TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

DUP A

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868703

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8350.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

EFFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868702

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8348.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U J
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
75-09-2	Methylene chloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Total Xylenes	3	U

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

EFFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868702

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8348.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	2	U
87-61-6	1,2,3-Trichlorobenzene	3	U

USEPA CLP OLC02.1
TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

EFFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868702

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8348.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

INFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868701

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8349.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	UJ
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
75-09-2	Methylene chloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	12	
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	16	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Total Xylenes	3	U

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

INFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868701

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8349.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	2	U
87-61-6	1,2,3-Trichlorobenzene	3	U

USEPA CLP OLC02.1
TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

INFLUENT

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868701

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8349.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868704

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8347.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U J
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
75-09-2	Methylene chloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Total Xylenes	3	U

USEPA CLP OLC02.1
ANALYSIS DATA SHEET

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868704

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8347.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	2	U
87-61-6	1,2,3-Trichlorobenzene	3	U

USEPA CLP OLC02.1
TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4868704

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L8347.RR

Level: (low/med) LOW Date Samp/Recv: 09/09/2004 09/10/2004

% Moisture: not dec. _____ Date Analyzed: 09/10/2004

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	Compound Name	RT	Est. Conc.	Q

1 Mustard Street, Suite 250 Rochester, NY 14609-6925 (585) 288-5380 (585) 288-8475 fax

Columbia Analytical Services INC.
An Employee - Owned Company

November 23, 2004

Mr. Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

Re: MRFA Project #810066
Submission # R2423670
SDG # EFFLUENT

Dear Mr. Neumann:

Enclosed is the analytical data report for the above referenced facility. A total of four samples were received by our laboratory on ~~August~~ October 27, 2004. JM 1-26-05

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. The data package and summary package have been mailed to Judy Harry and the summary package only has been mailed to your attention and to Steve Meier. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Judy Harry
Data Validation Services
Cobble Creek Road
North Creek, NY 12853

cc: Mr. Steve Meier
GE Corporate Environmental Programs
320 Great Oaks Blvd.
Suite 323
Albany, NY 12203

Columbia Analytical Services, Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Shaw Environmental
Project Reference: MRFA PROJECT #810066
Lab Submission # : R2423670
Project Manager : Janice Jaeger
Reported : 11/24/04

Report Contains a total of 37 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

CASE NARRATIVE

COMPANY: Shaw Environmental
MRFA Project #810066
SUBMISSION #: R2423670

Shaw water samples were collected on 10/26/04 and received at CAS on 10/27/04 in good condition at a cooler temperature of 2 C.

VOLATILE ORGANICS

Three water samples, one cooler blank and one trip blank were analyzed for a Site Specific List of Volatiles by method OLC 2.1.

All Tuning criteria for BFB were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within limits.

All surrogate standard recoveries were within limits.

All samples were analyzed within required holding times.

Site specific QC was performed on Influent. All MS/MSD recoveries were within limits. All Blank Spike recoveries were within limits. All RPD's were within limits except Trichloroethene and has been flagged with an "*".

The Trip Blank and Cooler blank contained a low level hit for Methylene Chloride and the Trip Blank also contained a low level hit for Acetone.

The Laboratory Blanks associated with these samples were free of contamination except VBLK01 contained a low level hit for Methylene Chloride. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy package has been authorized by the Laboratory Manager or his designee, as verified by the following signature; Michael K. Perry

SDG #: EFFLUENT
SUBMISSION R2423670
CLIENT: Shaw Environmental
CLIENT REP: Janice Jaeger
PROJECT: MRFA PROJECT #810066

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y__X_ N____
DATE: 11/03/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 11/24/04
PROTOCOL: CLP
SHIPPING No.:
SUMMARY PKG: Y___X_ N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS SAMPLE CONDITION
770320	EFFLUENT	WATER	OLC2.1VOA	10/26/04	10/27/04			
770321QC	INFLUENT	WATER	OLC2.1VOA	10/26/04	10/27/04			
770322	DUP A	WATER	OLC2.1VOA	10/26/04	10/27/04			
770323	TRIP BLANK	WATER	OLC2.1VOA	10/26/04	10/27/04			
770324	COOLER BLANK	WATER	OLC2.1VOA	10/26/04	10/27/04			

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

ORGANIC QUALIFIERS

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

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www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 1

CAS Contact MP

Project Name: MRFA	Project Number: 81006
Project Manager: Brian Neumann	Report CC: Judy Harry, Data Validation
Company/Address: Shaw Environmental, Inc. 13 British American Blvd. Latham NY 12110-1405	
Phone #: 518-783-1996	FAX#: 518-783-8397
Sampler's Signature:	Sampler's Printed Name: John A. Skaarup

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 8 8

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA CL CO2 VOCs	Total Coliform	Lead + Copper (200.8)	REMARKS/ ALTERNATE DESCRIPTION
Effluent	770320	10/26/04	0820	H20	3								X	X		
Influent	21		0830		3								X			
Influent MS	↓		0830		3								X			
Influent MSD			0830		3								X			
Dup A	22	↓	—		3								X			
Trip Blank	23	—	—		3								X			
Ladies Room Left Sink		10/26/04	0755		2									X	X	coliform@13:45
Mens Room Circular Sink			0752		1										X	
AEC Lab			0732		1										X	
Break Room		↓	0730	↓	2									X	X	coliform@13:56

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other Ice

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Analyze VOC samples for:
Hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Steven Meier
GE CEP
Albany, NY
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: John A. Skaarup	Printed Name: C McKuthen	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Env. Inc.	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 10/26/04 - 1600	Date/Time: 10/27/04 0930	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-1102-08

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

Cooler Receipt And Preservation Check Form

Project/Client Shaw Submission Number R2423670

Cooler received on 10/27/04 by: CMK COURIER: CAS (UPS) FEDEX CD&L CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant air bubbles?	YES	(NO)	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	CAS/ROC, CLIENT				
7.	Temperature of cooler(s) upon receipt:	2°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10/27/04 1015

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 10/27/04 by: CMK

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated	(N/A)	

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9**	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH_____

**If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770320

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7294

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	chloromethane	1.0	U	
75-01-4	vinyl chloride	1.0	U	
74-83-9	bromomethane	1.0	U	J
75-00-3	chloroethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
75-35-4	1,1-dichloroethene	1.0	U	
67-64-1	acetone	5.0	~~1.6~~ J	UJ
75-15-0	carbon disulfide	1.0	U	
75-34-3	1,1-dichloroethane	1.0	U	
75-09-2	methylene chloride	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
156-60-5	trans-1,2-dichloroethene	1.0	U	
67-66-3	chloroform	1.0	U	
78-93-3	2-butanone	5.0	U	J
74-97-5	bromochloromethane	1.0	U	
71-55-6	1,1,1-trichloroethane	1.0	U	
56-23-5	carbontetrachloride	1.0	U	
71-43-2	benzene	1.0	U	
107-06-2	1,2-dichloroethane	1.0	U	
79-01-6	trichloroethene	0.19	J	
78-87-5	1,2-dichloropropane	1.0	U	
75-27-4	bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-dichloropropene	1.0	U	
108-10-1	4-methyl-2-pentanone	5.0	U	
108-88-3	toluene	1.0	U	
10061-02-6	trans-1,3-dichloropropene	1.0	U	
79-00-5	1,1,2-trichloroethane	1.0	U	
127-18-4	tetrachloroethene	1.0	U	
591-78-6	2-hexanone	5.0	U	J
124-48-1	dibromochloromethane	1.0	U	
106-93-4	1,2-Dibromoethane	1.0	U	
108-90-7	chlorobenzene	1.0	U	
100-41-4	ethylbenzene	1.0	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770320

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7294

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770320

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7294

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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7.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7291

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~4.3~~	~~J~~ UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.3	
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	10.7	
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	14.4	
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	0.18	J
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7291

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7291

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770322

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7292

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~1.6~~	J UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	0.18	J
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770322

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7292

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770322

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7292

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770323

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7293

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	3.2	J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.21	JB
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770323

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7293

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770323

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7293

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770324

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7297

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.24	J B
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770324

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7297

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770324

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7297

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

	EPA SAMPLE NO.	SMC1 (BFB) #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	VBLK01	94				0
02	VBLK01MS	110				0
03	INFLUENT	102				0
04	DUP A	98				0
05	TRIP BLANK	98				0
06	EFFLUENT	100				0
07	INFLUENT MS	108				0
08	INFLUENT MSD	110				0
09	COOLER BLANK	98				0
10						
11						
12						
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29						
30						

QC LIMITS

SMC1 (BFB) = bromofluorobenzene (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUEN

Matrix Spike - EPA Sample No.: VBLK01

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC. LIMITS REC.
vinyl chloride	5.0	0.00	5.2	104	60-140
carbontetrachloride	5.0	0.00	5.0	100	60-140
benzene	5.0	0.00	5.0	100	60-140
1,2-dichloroethane	5.0	0.00	5.0	100	60-140
trichloroethene	5.0	0.00	5.0	100	60-140
1,2-dichloropropane	5.0	0.00	5.2	104	60-140
cis-1,3-dichloropropene	5.0	0.00	4.8	96	60-140
1,1,2-trichloroethane	5.0	0.00	5.3	106	60-140
tetrachloroethene	5.0	0.00	5.0	100	60-140
1,2-Dibromoethane	5.0	0.00	5.2	104	60-140
bromoform	5.0	0.00	5.2	104	60-140
1,4-Dichlorobenzene	5.0	0.00	5.0	100	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

_____

FORM III VOA-1

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: VBLK01MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7289

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	5.2	
75-01-4	vinyl chloride	5.2	
74-83-9	bromomethane	4.6	
75-00-3	chloroethane	5.1	
75-69-4	Trichlorofluoromethane	5.1	
75-35-4	1,1-dichloroethene	5.5	
67-64-1	acetone	5.0	U
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	5.1	
75-09-2	methylene chloride	5.5	
156-59-2	cis-1,2-Dichloroethene	5.0	
156-60-5	trans-1,2-dichloroethene	5.0	
67-66-3	chloroform	5.3	
78-93-3	2-butanone	5.0	U
74-97-5	bromochloromethane	5.1	
71-55-6	1,1,1-trichloroethane	5.0	
56-23-5	carbontetrachloride	5.0	
71-43-2	benzene	5.0	
107-06-2	1,2-dichloroethane	5.0	
79-01-6	trichloroethene	5.0	
78-87-5	1,2-dichloropropane	5.2	
75-27-4	bromodichloromethane	5.3	
10061-01-5	cis-1,3-dichloropropene	4.8	
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	4.9	
10061-02-6	trans-1,3-dichloropropene	5.0	
79-00-5	1,1,2-trichloroethane	5.3	
127-18-4	tetrachloroethene	5.0	
591-78-6	2-hexanone	5.0	U
124-48-1	dibromochloromethane	5.1	
106-93-4	1,2-Dibromoethane	5.2	
108-90-7	chlorobenzene	5.2	
100-41-4	ethylbenzene	5.1	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: VBLK01MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7289

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	10.0	
1330-20-7	o-xylene	5.0	
100-42-5	styrene	5.0	
75-25-2	bromoform	5.2	
79-34-5	1,1,2,2-tetrachloroethane	5.1	
541-73-1	1,3-Dichlorobenzene	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	
96-12-8	1,2-dibromo-3-chloropropane	5.4	
120-82-1	1,2,4-Trichlorobenzene	5.0	
87-68-3	Hexachlorobutadiene	5.1	
87-61-6	1,2,3-Trichlorobenzene	5.2	

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix Spike - EPA Sample No.: INFLUENT

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC. LIMITS REC.	
vinyl chloride	5.0	0.00	5.1	102	60-140	
carbontetrachloride	5.0	10.7	15.5	96	60-140	
benzene	5.0	0.00	5.1	102	60-140	
1,2-dichloroethane	5.0	0.00	5.0	100	60-140	
trichloroethene	5.0	14.4	19.4	~~10*~~	60-140	100% R 11/18
1,2-dichloropropane	5.0	0.00	5.2	104	60-140	
cis-1,3-dichloropropene	5.0	0.00	4.8	96	60-140	
1,1,2-trichloroethane	5.0	0.00	5.2	104	60-140	
tetrachloroethene	5.0	0.18	5.2	100	60-140	
1,2-Dibromoethane	5.0	0.00	5.1	102	60-140	
bromoform	5.0	0.00	5.0	100	60-140	
1,4-Dichlorobenzene	5.0	0.00	5.0	100	60-140	

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENTRATION (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	
vinyl chloride	5.0	5.2	104	2	20	60-140	
carbontetrachloride	5.0	14.9	84	13	20	60-140	
benzene	5.0	4.9	98	4	20	60-140	
1,2-dichloroethane	5.0	5.2	104	4	20	60-140	
trichloroethene	5.0	18.4	80	~~156*~~	20	60-140	22% R 11/1
1,2-dichloropropane	5.0	5.1	102	2	20	60-140	
cis-1,3-dichloropropene	5.0	4.8	96	0	20	60-140	
1,1,2-trichloroethane	5.0	5.3	106	2	20	60-140	
tetrachloroethene	5.0	5.1	98	2	20	60-140	
1,2-Dibromoethane	5.0	5.2	104	2	20	60-140	
bromoform	5.0	5.1	102	2	20	60-140	
1,4-Dichlorobenzene	5.0	5.2	104	4	20	60-140	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: ~~1~~ 0 R 11/16 out of 12 outside limits

Spike Recovery: ~~1~~ 0 R 11/16 out of 24 outside limits

COMMENTS: 1 RPD for trichloroethene is still out after correcting for incorrect calculation of MS % Recovery. note that 20% RPD is only an advisory limit for this analysis

FORM III VOA-1

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7295

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	5.1	
75-01-4	vinyl chloride	5.1	
74-83-9	bromomethane	5.0	
75-00-3	chloroethane	5.3	
75-69-4	Trichlorofluoromethane	5.3	
75-35-4	1,1-dichloroethene	5.6	
67-64-1	acetone	2.3	J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	5.1	
75-09-2	methylene chloride	5.4	
156-59-2	cis-1,2-Dichloroethene	4.9	
156-60-5	trans-1,2-dichloroethene	4.9	
67-66-3	chloroform	6.6	
78-93-3	2-butanone	5.0	U
74-97-5	bromochloromethane	5.0	
71-55-6	1,1,1-trichloroethane	4.9	
56-23-5	carbontetrachloride	15.5	
71-43-2	benzene	5.1	
107-06-2	1,2-dichloroethane	5.0	
79-01-6	trichloroethene	19.4	
78-87-5	1,2-dichloropropane	5.2	
75-27-4	bromodichloromethane	5.2	
10061-01-5	cis-1,3-dichloropropene	4.8	
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	4.9	
10061-02-6	trans-1,3-dichloropropene	5.1	
79-00-5	1,1,2-trichloroethane	5.2	
127-18-4	tetrachloroethene	5.2	
591-78-6	2-hexanone	5.0	U
124-48-1	dibromochloromethane	5.2	
106-93-4	1,2-Dibromoethane	5.1	
108-90-7	chlorobenzene	5.2	
100-41-4	ethylbenzene	5.1	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7295

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	10.1	
1330-20-7	o-xylene	5.1	
100-42-5	styrene	5.2	
75-25-2	bromoform	5.0	
79-34-5	1,1,2,2-tetrachloroethane	5.2	
541-73-1	1,3-Dichlorobenzene	5.0	
106-46-7	1,4-Dichlorobenzene	5.0	
95-50-1	1,2-Dichlorobenzene	5.0	
96-12-8	1,2-dibromo-3-chloropropane	4.7	
120-82-1	1,2,4-Trichlorobenzene	5.1	
87-68-3	Hexachlorobutadiene	4.9	
87-61-6	1,2,3-Trichlorobenzene	5.1	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT MSD

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321MSD

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7296

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	5.3	
75-01-4	vinyl chloride	5.2	
74-83-9	bromomethane	5.2	
75-00-3	chloroethane	5.2	
75-69-4	Trichlorofluoromethane	5.3	
75-35-4	1,1-dichloroethene	5.5	
67-64-1	acetone	5.0	
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	5.0	
75-09-2	methylene chloride	5.4	
156-59-2	cis-1,2-Dichloroethene	4.9	
156-60-5	trans-1,2-dichloroethene	4.9	
67-66-3	chloroform	6.6	
78-93-3	2-butanone	5.0	U
74-97-5	bromochloromethane	5.0	
71-55-6	1,1,1-trichloroethane	4.9	
56-23-5	carbontetrachloride	14.9	
71-43-2	benzene	4.9	
107-06-2	1,2-dichloroethane	5.2	
79-01-6	trichloroethene	18.4	
78-87-5	1,2-dichloropropane	5.1	
75-27-4	bromodichloromethane	5.3	
10061-01-5	cis-1,3-dichloropropene	4.8	
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	4.9	
10061-02-6	trans-1,3-dichloropropene	5.0	
79-00-5	1,1,2-trichloroethane	5.3	
127-18-4	tetrachloroethene	5.1	
591-78-6	2-hexanone	5.0	U
124-48-1	dibromochloromethane	5.1	
106-93-4	1,2-Dibromoethane	5.2	
108-90-7	chlorobenzene	5.2	
100-41-4	ethylbenzene	5.0	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

INFLUENT MSD

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 770321MSD

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7296

Level: (low/med) LOW Date Received: 10/27/04

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	9.9	
1330-20-7	o-xylene	5.0	
100-42-5	styrene	5.1	
75-25-2	bromoform	5.1	
79-34-5	1,1,2,2-tetrachloroethane	4.9	
541-73-1	1,3-Dichlorobenzene	5.2	
106-46-7	1,4-Dichlorobenzene	5.2	
95-50-1	1,2-Dichlorobenzene	5.1	
96-12-8	1,2-dibromo-3-chloropropane	4.7	
120-82-1	1,2,4-Trichlorobenzene	5.2	
87-68-3	Hexachlorobutadiene	5.3	
87-61-6	1,2,3-Trichlorobenzene	5.4	

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Lab File ID: R7288 Lab Sample ID: VBLK01

Date Analyzed: 11/01/04 Time Analyzed: 1055

GC Column: ZB-624-30MID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: MS6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK01MS	VBLK01MS	R7289	1139
02	INFLUENT	770321	R7291	1317
03	DUP A	770322	R7292	1354
04	TRIP BLANK	770323	R7293	1431
05	EFFLUENT	770320	R7294	1458
06	INFLUENT MS	770321MS	R7295	1536
07	INFLUENT MSD	770321MSD	R7296	1612
08	COOLER BLANK	770324	R7297	1718
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30				

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7288

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.20	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7288

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7288

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/01/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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27.					
28.					
29.					
30.					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Lab File ID: R7222 BFB Injection Date: 10/29/04

Instrument ID: MS6 BFB Injection Time: 1114

GC Column: ZB-624-30M ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	15.8
75	30.0 - 66.0% of mass 95	47.1
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	0.4 (0.4)1
174	50.0 - 120.0% of mass 95	97.1
175	4.0 - 9.0% of mass 174	6.9 (7.1)1
176	93.0 - 101.0% of mass 174	97.4 (100.3)1
177	5.0 - 9.0% of mass 176	6.5 (6.7)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	VSTD001/005	VSTD001/005	R7224	10/29/04	1306
02	VSTD002/010	VSTD002/010	R7225	10/29/04	1342
03	VSTD005/025	VSTD005/025	R7226	10/29/04	1425
04	VSTD010/050	VSTD010/050	R7227	10/29/04	1506
05	VSTD025/125	VSTD025/125	R7228	10/29/04	1551
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Lab File ID: R7286 BFB Injection Date: 11/01/04

Instrument ID: MS6 BFB Injection Time: 0917

GC Column: ZB-624-30M ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	14.4
75	30.0 - 66.0% of mass 95	44.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.9 (0.9)1
174	50.0 - 120.0% of mass 95	103.6
175	4.0 - 9.0% of mass 174	8.1 (7.8)1
176	93.0 - 101.0% of mass 174	102.3 (98.7)1
177	5.0 - 9.0% of mass 176	6.3 (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	VSTD005/025	VSTD005/025	R7287	11/01/04	0952
02	VBLK01	VBLK01	R7288	11/01/04	1055
03	VBLK01MS	VBLK01MS	R7289	11/01/04	1139
04	INFLUENT	770321	R7291	11/01/04	1317
05	DUP A	770322	R7292	11/01/04	1354
06	TRIP BLANK	770323	R7293	11/01/04	1431
07	EFFLUENT	770320	R7294	11/01/04	1458
08	INFLUENT MS	770321MS	R7295	11/01/04	1536
09	INFLUENT MSD	770321MSD	R7296	11/01/04	1612
10	COOLER BLANK	770324	R7297	11/01/04	1718
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23670 SAS No.: SDG No.: EFFLUENT

Lab File ID (Standard): R7287 Date Analyzed: 11/01/04

Instrument ID: MS6 Time Analyzed: 0952

GC Column: ZB-624-30M ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 (DCB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DFB) AREA #	RT #
	12 HOUR STD	171685	11.33	301641	9.76	388662	7.09
	UPPER LIMIT	343370	11.83	603282	10.26	777324	7.59
	LOWER LIMIT	85843	10.83	150821	9.26	194331	6.59
	EPA SAMPLE NO.						
01	VBLK01	144097	11.33	288384	9.76	343498	7.09
02	VBLK01MS	173885	11.32	293979	9.76	367801	7.09
03	INFLUENT	146930	11.32	283022	9.76	335365	7.09
04	DUP A	144511	11.32	278171	9.76	336455	7.09
05	TRIP BLANK	135103	11.32	275690	9.76	321054	7.09
06	EFFLUENT	137647	11.32	272688	9.76	327974	7.09
07	INFLUENT MS	179467	11.32	298205	9.76	376113	7.09
08	INFLUENT MSD	178517	11.32	315138	9.76	392518	7.09
09	COOLER BLANK	143053	11.32	288701	9.76	347459	7.09
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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 used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

APPENDIX B

LABORATORY DATA, GROUNDWATER SAMPLES AND SURFACE WATER SAMPLES

NOVEMBER 9, 10, and 15, 2004

1 Mustard Street, Suite 250 Rochester, NY 14609-6925 (585) 288-5380 (585) 288-8475 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 27, 2004

Mr. Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

Re: MRFA
Submission # R2423837
SDG # MP-11

Dear Mr. Neumann:

Enclosed is the analytical data report for the above referenced facility. A total of thirty two samples were received by our laboratory on November 10-16, 2004.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. The data package and summary package have been mailed to Judy Harry and the summary package only has been mailed to your attention and to Steve Meier. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Amy Hentschke for
Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Judy Harry
Data Validation Services
Cobble Creek Road
North Creek, NY 12853

cc: Mr. Steve Meier
GE Corporate Environmental Programs
320 Great Oaks Blvd.
Suite 323
Albany, NY 12203

Columbia Analytical Services, Inc.
1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Shaw Environmental
Project Reference: MRFA
Lab Submission # : R2423837
Project Manager : Janice Jaeger
Reported : 12/27/04

Report Contains a total of 137 pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. Michael F. Penny

CASE NARRATIVE

COMPANY: Shaw Environmental
MRFA Project #810066
SUBMISSION #: R2423837

Shaw water samples were collected on 11/09-11/15/04 and received at CAS on 11/10-11/16/04 in good condition at cooler temperatures of 2-6 C.

INORGANICS

Six water samples were analyzed for Hexavalent Chromium and Chromium.

Site specific QC was performed on M-27D. All MS recoveries were within limits. All Blank Spike recoveries were within limits. All RPD's were within limits.

No analytical or QC problems were encountered.

VOLATILE ORGANICS

Twenty one water samples, four trip blanks, three equipment blanks, and one cooler blank were analyzed for a Site Specific List of Volatiles by method OLC 2.1.

Sample 774314 (M-25D) had a hit for carbontetrachloride which exceeded the calibration range for the instrument. It is marked with an E flag and the sample was rerun at a dilution.

All Tuning criteria for BFB were within limits.

The initial and continuing calibration criteria were met for all analytes except Bromomethane which exceeded the 30% RPD criteria and the 40% exception criteria. A 1.0 ppb IDL standard was analyzed and there was ample response for Bromomethane, therefore the data was accepted.

All internal standard areas were within limits.

All surrogate standard recoveries were within limits.

All samples were analyzed within required holding times.

Site specific QC was performed on M-27D. All MS/MSD recoveries were within limits. All Blank Spike recoveries were within limits. All RPD's were within limits.

The Cooler blank contained a low level hit of Chloroform.

The 11/19/04 Equipment blank contained low level hits of Methylene Chloride, Toluene, Ethylbenzene, Xylenes, and Styrene. The 11/15/04 Equipment blank contained low level hits of Toluene, Ethylbenzene, Xylenes, and Styrene

The 11/09/04 Trip blank contained low level hits of Methylene Chloride, Toluene, Ethylbenzene, and Xylene. The 11/12/04 Trip blank contained low level hits of Methylene Chloride, Benzene, Toluene, Ethylbenzene, Xylenes, and Styrene. The 11/15/04 Trip blank contained low level hits of Toluene, Ethylbenzene, Xylenes, and Styrene.

The Laboratory Blanks associated with these samples were free of contamination, except Acetone for the 11/18/04 blank. M-25D DL (774314) was analyzed the same run and had a hit of acetone which is flagged with a B. Acetone was not detected in the original run on 11/17/04.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy package has been authorized by the Laboratory Manager or his designee, as verified by the following signature;

CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG#: MP-11 CASE No.:
SUBMISSION R2423837
CLIENT: Shaw Environmental
CLIENT REP: Janice Jaeger
PROJECT: MRFA

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y_X__ N____
DATE: 11/15/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED: 11/16/04
DATE DUE 12/14/04
PROTOCOL: OLC2.1
SHIPPING No.:
SUMMARY PKG: Y_X___ N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS AMPLE CONDITIO
773853	M-11P	WATER	OLC2.1VOA	11/9/04	11/10/04			
773854	M-24D	WATER	OLC2.1VOA	11/9/04	11/10/04			
773855	M-33S	WATER	OLC2.1VOA	11/9/04	11/10/04			
773856	M-33I	WATER	OLC2.1VOA	11/9/04	11/10/04			
773857	SW-F	WATER	OLC2.1VOA	11/9/04	11/10/04			
773858	SW-E	WATER	OLC2.1VOA	11/9/04	11/10/04			
773859	DGC-3S	WATER	OLC2.1VOA	11/9/04	11/10/04			
773860	DGC-4S	WATER	OLC2.1VOA	11/9/04	11/10/04			
773861	DGC-4D	WATER	OLC2.1VOA	11/9/04	11/10/04			
773862	SW-D	WATER	OLC2.1VOA	11/9/04	11/10/04			
773863	SW-A	WATER	OLC2.1VOA	11/9/04	11/10/04			
773864	SW-B	WATER	OLC2.1VOA, CR, CR+6	11/9/04	11/10/04			
773865	M27-S	WATER	CR, CR+6	11/9/04	11/10/04			
773866	EQUIPMENT BLANK	WATER	OLC2.1VOA	11/9/04	11/10/04			
773867	TRIP BLANK	WATER	OLC2.1VOA	11/9/04	11/10/04			
773868	DUP-A	WATER	CR, CR+6	11/9/04	11/10/04			
774314	M-25D	WATER	OLC2.1VOA	11/10/04	11/11/04			
774315	M-29D	WATER	OLC2.1VOA	11/10/04	11/11/04			
774317	M-14D	WATER	OLC2.1VOA	11/10/04	11/11/04			
774321	M-27D	WATER	OLC2.1VOA, CR, CR+6 MS/MSD	11/10/04	11/11/04			
774324	M-13S	WATER	CR+6	11/10/04	11/11/04			
774325	M-13D	WATER	CR, CR+6	11/10/04	11/11/04			
774326	EQUIPMENT BLANK	WATER	OLC2.1VOA	11/10/04	11/11/04			
774327	TRIP BLANK	WATER	OLC2.1VOA	11/10/04	11/11/04			
774448	COOLER BLANK	WATER	OLC2.1VOA	11/11/04	11/11/04			
775152	SW-E	WATER	OLC2.1VOA	11/12/04	11/13/04			
775153	SW-G	WATER	OLC2.1VOA	11/12/04	11/13/04			
775154	SW-F	WATER	OLC2.1VOA	11/12/04	11/13/04			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
775156	TRIP BLANK 11/12/04	WATER	OLC2.1VOA	11/12/04	11/13/04			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

SDG#: MP-11 CASE No.:
SUBMISSION R2423837

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y_X__ N____

DATE REVISED: 11/16/04
DATE DUE: 12/14/04

CAS ASP/CLP BATCHING FORM / LOGIN SHEET

CLIENT: Shaw Environmental
CLIENT REP: Janice Jaeger
PROJECT: MRFA

DATE: 11/15/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

PROTOCOL: OLC2.1
SHIPPING No.:

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS AMPLE CONDITIO
775678	4D	WATER	OLC2.1VOA	11/15/04	11/16/04			
775679	DUPE A	WATER	OLC2.1VOA	11/15/04	11/16/04			
775680	EQUIPMENT BLANK	WATER	OLC2.1VOA	11/15/04	11/16/04			
775681	TRIP BLANK 11/15/04	WATER	OLC2.1VOA	11/15/04	11/16/04			

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Ethics Service Quality ACIL 2004 SEAL OF EXCELLENCE PROGRAM Environmental

ORGANIC QUALIFIERS

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds, or when the data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit and greater than the MDL.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The concentration is reported on the Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

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INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- D - Spike was diluted out
- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- * - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 2

SR #

CAS Contact

Project Name: MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Harry, Steve Meier
Company/Address: Shaw Env., Inc. 13 British American Blvd. Latham NY 12110	
Phone #: 518-783-1996	FAX#: 518-783-8397
Sampler's Signature:	Sampler's Printed Name: John A. Shaarup

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 0 2

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	MADEP(02) VOCs	Cr 6+	Cl					REMARKS/ ALTERNATE DESCRIPTION
M-11D		11/9/04	0730	H2O	3								X							
M-24D			0815		3								X							
M-33S			0925		3								X							
M-33I			1045		3								X							
SW-F			0955		3								X							
SW-E			1100		3								X							
DGC-3S			1206		3								X							
DGC-4S			1315		3								X							
~~SW-B~~ DGC-4D			1316		3								X							
SW-AD			1410		3								X							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals
Analyze VOC samples for:
Hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane
See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Steve Meier GE CEP
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature	Signature	Signature	Signature	Signature
Printed Name: John A. Shaarup	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Env., Inc.	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/9/04 1715	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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PAGE 2 OF 2

SR #
CAS Contact

Project Name: MRFA
Project Number: 810066
Project Manager: Brian Neumann
Report CC: Judy Harry, Steve Meier
Company/Address: Shaw Env. Inc.
13 British American Blvd
Latham NY 12110
Phone #: 518-783-1996
FAX#: 518-783-8397
Sampler's Signature: [signature]
Sampler's Printed Name: John Skaarup

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA 8(0)2 VOCs	C6	C						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE													1	0	2						
SW-A		11/9/04	1445	H2O	3	3 vas							X								
SW-B		↓	1515		5	5 vas							X	X	X						
M275			1625		5								⊗	X	X						
Equipment Blank			~~1445~~		3								X								
Trip Blank			—		3					not analyzed			X								
Temp Blank			—		1								—								
DUPA		↓	—	↓	5								⊗	X	X						M 275
													not analyzed								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals
Analyze VOC samples for:
hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE
______
REQUESTED REPORT DATE
______

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: Steve Meier
GE CEP

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

SUBMISSION #:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature	Signature	Signature	Signature	Signature
Printed Name: John A. Skaarup	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Env. Inc.	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/9/04 1715	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

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SR #:

CAS Contact: MRFA

Project Name: MRFA
Project Number: 810066
Project Manager: Brian Neumann
Report CC: Judy Harry, Steve Meier
Company/Address: Shaw Env. Inc.
13 BAB
Latham NY 12110
Phone #: 518-783-1996
FAX#: 518-783-8797
Sampler's Signature: [signature]
Sampler's Printed Name: John A. Shaarup

ANALYSIS REQUESTED (Include Method Number and Container Preservative) 8A

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA OLC02 VOC	Cr 6+	Cr						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE													1	0	2						
M-25D		11/10/04	0712	H2O	3								X								
M-29D		↓	0805	↓	3								X								
M-14D			0910		3								X								
M-27D			1245		5								X	X	X						
M-27D MS/MSD			1245		10								X	X	X						
M-13S			1340		2									X	X						
M-13D			1420		2									X	X						
Equipment Blank					3								X								
Trip Blank			1430		3								X								
Temp Blank		↓	—	↓	1																

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals
Analyze VOC samples for:
Hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane
See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
✓ STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
____ I. Results Only
✓ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
✓ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#:
BILL TO: Steve Meier
GE CEP

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]					
Printed Name	John A. Shaarup					
Firm	Shaw Env. Inc.					
Date/Time	11/10/04 1800					

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

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SR#: MRFA
CAS Contact: SA

Project Name: MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Hairr, Steve Meier
Company/Address: Shaw Environmental, Inc. 13 British American Blvd Latham NY 12110	
Phone #: 518-783-1996	FAX#: 518-783-8397
Sampler's Signature:	Sampler's Printed Name: John A Skaaning

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	EPA 502.2 VOCs							REMARKS/ ALTERNATE DESCRIPTION
SW-E		11/2/04	1500	H_2O	3								X							
SW-G			1620		3								X							
SW-F			1645		3								X							
M-4D			1755		3								X							
Trip Blank			1730		3								X							
Equipment Blank			1725		3								X							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals
Also analyze VOC samples for:
Hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane
See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 24 hr _____ 48 hr _____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO#
BILL TO: Steve Meier
GECP

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: John A. Skaaning	Signature	Signature	Signature	Signature	Signature
Printed Name: Shaw Environmental Inc.	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 11/2/04 1930	Firm	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

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SR #

CAS Contact MARK A

Project Name: MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Harry, Steve Meier
Company/Address: Shaw Environmental, Inc. 13 British American Blvd. Latham NY 12110	
Phone #: 518-783-1996	FAX#: 518-783-8397
Sampler's Signature:	Sampler's Printed Name: John A. Skaalrup

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

NUMBER OF CONTAINERS

GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP
GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
GC VOA's ☐ 8021 ☐ 601/602
PESTICIDES ☐ 8081 ☐ 608 ☐ CLP
PCB's ☐ 8082 ☐ 608 ☐ CLP
METALS, TOTAL (List in comments below)
METALS, DISSOLVED (List in comments below)
EPA OLC02 VOCs

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	EPA OLC02 VOCs	REMARKS/ ALTERNATE DESCRIPTION
4D		11/15/09	19:00	H_2O	3	X	
Dupe A		11/15/09		H_2O	3	X	4D
Equipment Blank		11/15/09	18:45	H_2O	2	X	
Trip Blank		11/15/09	18:50	H_2O	2	X	
Temperature Blank					1		

SPECIAL INSTRUCTIONS/COMMENTS
Metals Also analyze VOC samples for:
Hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: Steve Meier
GECP
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: John A. Skaalrup	Signature	Signature	Signature	Signature	Signature
Printed Name: Shaw Env. Inc.	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 11/15/09 1955	Firm	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-11P 11D (537) 1/28/05

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773853

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7594

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~2.9~~	J UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.2	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	4.6	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	0.67	J
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-11P
11D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

1/28/05

Matrix: (soil/water) WATER Lab Sample ID: 773853

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7594

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
1330-20-7	m,p-xylenes	2.0	U	
1330-20-7	o-xylene	1.0	U	
100-42-5	styrene	1.0	U	
75-25-2	bromoform	1.0	U	
79-34-5	1,1,2,2-tetrachloroethane	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	
106-46-7	1,4-Dichlorobenzene	1.0	U	
95-50-1	1,2-Dichlorobenzene	1.0	U	
96-12-8	1,2-dibromo-3-chloropropane	1.0	U	J
120-82-1	1,2,4-Trichlorobenzene	1.0	U	
87-68-3	Hexachlorobutadiene	1.0	U	
87-61-6	1,2,3-Trichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

~~M-11P~~ 11D (130)

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11 1/28/05

Matrix: (soil/water) WATER Lab Sample ID: 773853

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7594

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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FORM I VOA-TIC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-24D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773854

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7595

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.3	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	0.59	J
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-24D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773854

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7595

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-24D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773854

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7595

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773855

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7596

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773855

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7596

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773855

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7596

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773856

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7576

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~4.0~~	JUJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	UJ
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773856

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7576

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	UJ
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773856

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7576

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	115-11-7	1-PROPENE, 2-METHYL-	1.21	0.51	NJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773859

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7597

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773859

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7597

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U J 1/24/05
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773859

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7597

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773860

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7598

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773860

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7598

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773860

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7598

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773862

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7577

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~3.8~~ J U J	
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773862

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7577

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SW-D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773862

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7577

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773863

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7578

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	chloromethane		1.0	U
75-01-4	vinyl chloride		1.0	U
74-83-9	bromomethane		1.0	UJ
75-00-3	chloroethane		1.0	U
75-69-4	Trichlorofluoromethane		1.0	U
75-35-4	1,1-dichloroethene		1.0	U
67-64-1	acetone	5.0	~~3.3~~ J	UJ
75-15-0	carbon disulfide		1.0	U
75-34-3	1,1-dichloroethane		1.0	U
75-09-2	methylene chloride		1.0	U
156-59-2	cis-1,2-Dichloroethene		1.0	U
156-60-5	trans-1,2-dichloroethene		1.0	U
67-66-3	chloroform		1.0	U
78-93-3	2-butanone		5.0	UJ
74-97-5	bromochloromethane		1.0	U
71-55-6	1,1,1-trichloroethane		1.0	U
56-23-5	carbontetrachloride		1.0	U
71-43-2	benzene		1.0	U
107-06-2	1,2-dichloroethane		1.0	U
79-01-6	trichloroethene		1.0	U
78-87-5	1,2-dichloropropane		1.0	U
75-27-4	bromodichloromethane		1.0	U
10061-01-5	cis-1,3-dichloropropene		1.0	U
108-10-1	4-methyl-2-pentanone		5.0	U
108-88-3	toluene		1.0	U
10061-02-6	trans-1,3-dichloropropene		1.0	U
79-00-5	1,1,2-trichloroethane		1.0	U
127-18-4	tetrachloroethene		1.0	U
591-78-6	2-hexanone		5.0	UJ
124-48-1	dibromochloromethane		1.0	U
106-93-4	1,2-Dibromoethane		1.0	U
108-90-7	chlorobenzene		1.0	U
100-41-4	ethylbenzene		1.0	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773863

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7578

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SW-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773863

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7578

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773864

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7579

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	chloromethane		1.0	U
75-01-4	vinyl chloride		1.0	U
74-83-9	bromomethane		1.0	U J
75-00-3	chloroethane		1.0	U
75-69-4	Trichlorofluoromethane		1.0	U
75-35-4	1,1-dichloroethene		1.0	U
67-64-1	acetone	5.0	~~4.0~~	~~J~~ UJ
75-15-0	carbon disulfide		1.0	U
75-34-3	1,1-dichloroethane		1.0	U
75-09-2	methylene chloride		1.0	U
156-59-2	cis-1,2-Dichloroethene		1.0	U
156-60-5	trans-1,2-dichloroethene		1.0	U
67-66-3	chloroform		1.0	U
78-93-3	2-butanone		5.0	U J
74-97-5	bromochloromethane		1.0	U
71-55-6	1,1,1-trichloroethane		1.0	U
56-23-5	carbontetrachloride		0.43	J
71-43-2	benzene		1.0	U
107-06-2	1,2-dichloroethane		1.0	U
79-01-6	trichloroethene		0.27	J
78-87-5	1,2-dichloropropane		1.0	U
75-27-4	bromodichloromethane		1.0	U
10061-01-5	cis-1,3-dichloropropene		1.0	U
108-10-1	4-methyl-2-pentanone		5.0	U
108-88-3	toluene		1.0	U
10061-02-6	trans-1,3-dichloropropene		1.0	U
79-00-5	1,1,2-trichloroethane		1.0	U
127-18-4	tetrachloroethene		1.0	U
591-78-6	2-hexanone		5.0	U J
124-48-1	dibromochloromethane		1.0	U
106-93-4	1,2-Dibromoethane		1.0	U
108-90-7	chlorobenzene		1.0	U
100-41-4	ethylbenzene		1.0	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773864

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7579

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SW-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773864

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7579

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773866

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7580

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.24	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.32	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.14	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773866

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7580

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.46	J
1330-20-7	o-xylene	0.23	J
100-42-5	styrene	0.99	J
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EQUIPMENT BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773866

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7580

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	622-96-8	BENZENE, 1-ETHYL-4-METHYL-	10.80	0.84	NJ
2.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	11.10	0.83	NJ
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773867

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7581

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.26	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.33	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.16	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773867

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7581

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.49	J
1330-20-7	o-xylene	0.25	J
100-42-5	styrene	1.0	
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	UJ
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 773867

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7581

Level: (low/med) LOW Date Received: 11/10/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	622-96-8	BENZENE, 1-ETHYL-4-METHYL-	10.81	0.93	NJ
2.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	11.10	0.90	NJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-25D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7600

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	chloromethane	1.0	U	
75-01-4	vinyl chloride	1.0	U	
74-83-9	bromomethane	1.0	U J	
75-00-3	chloroethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
75-35-4	1,1-dichloroethene	1.0	U	
67-64-1	acetone	5.0	U J	
75-15-0	carbon disulfide	1.0	U	
75-34-3	1,1-dichloroethane	1.0	U	
75-09-2	methylene chloride	1.0	U	
156-59-2	cis-1,2-Dichloroethene	0.58	J	
156-60-5	trans-1,2-dichloroethene	1.0	U	
67-66-3	chloroform	8.7	~~U~~	1-27-05
78-93-3	2-butanone	5.0	U	
74-97-5	bromochloromethane	1.0	U	
71-55-6	1,1,1-trichloroethane	1.0	U	
56-23-5	carbontetrachloride	~~88.4~~	~~E~~	86.8
71-43-2	benzene	1.0	U	
107-06-2	1,2-dichloroethane	1.0	U	
79-01-6	trichloroethene	16.1		
78-87-5	1,2-dichloropropane	1.0	U	
75-27-4	bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-dichloropropene	1.0	U	
108-10-1	4-methyl-2-pentanone	5.0	U	
108-88-3	toluene	1.0	U	
10061-02-6	trans-1,3-dichloropropene	1.0	U	
79-00-5	1,1,2-trichloroethane	1.0	U	
127-18-4	tetrachloroethene	1.0	U	
591-78-6	2-hexanone	5.0	U J	
124-48-1	dibromochloromethane	1.0	U	
106-93-4	1,2-Dibromoethane	1.0	U	
108-90-7	chlorobenzene	1.0	U	
100-41-4	ethylbenzene	1.0	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-25D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7600

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-25D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7600

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-25D DL

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7619

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 5.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	5.0	U
75-01-4	vinyl chloride	5.0	U
74-83-9	bromomethane	5.0	U
75-00-3	chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-dichloroethene	5.0	U
67-64-1	acetone	14.7	DJB
75-15-0	carbon disulfide	5.0	U
75-34-3	1,1-dichloroethane	5.0	U
75-09-2	methylene chloride	1.4	DJ
156-59-2	cis-1,2-Dichloroethene	5.0	U
156-60-5	trans-1,2-dichloroethene	5.0	U
67-66-3	chloroform	8.2	D
78-93-3	2-butanone	25.0	U
74-97-5	bromochloromethane	5.0	U
71-55-6	1,1,1-trichloroethane	5.0	U
56-23-5	carbontetrachloride	86.8	D
71-43-2	benzene	5.0	U
107-06-2	1,2-dichloroethane	5.0	U
79-01-6	trichloroethene	15.2	D
78-87-5	1,2-dichloropropane	5.0	U
75-27-4	bromodichloromethane	5.0	U
10061-01-5	cis-1,3-dichloropropene	5.0	U
108-10-1	4-methyl-2-pentanone	25.0	U
108-88-3	toluene	5.0	U
10061-02-6	trans-1,3-dichloropropene	5.0	U
79-00-5	1,1,2-trichloroethane	5.0	U
127-18-4	tetrachloroethene	5.0	U
591-78-6	2-hexanone	25.0	U
124-48-1	dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	chlorobenzene	5.0	U
100-41-4	ethylbenzene	5.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-25D DL

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7619

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 5.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	10.0	U
1330-20-7	o-xylene	5.0	U
100-42-5	styrene	5.0	U
75-25-2	bromoform	5.0	U
79-34-5	1,1,2,2-tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-25D DL

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774314

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7619

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 5.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-29D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774315

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7601

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~4.4~~	~~J~~ UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	LO ~~0.38~~	~~J~~ U
156-59-2	cis-1,2-Dichloroethene	0.24	J
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	2.5	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	10.8	
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	6.0	
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-29D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774315

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7601

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M-29D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774315

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7601

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

~~M-14D~~ MN 1/28/05

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774317

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7602

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0 ~~4.2~~ J	UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0 ~~0.15~~ J	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-14D ~~M~~ MN 1/28/05

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774317

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7602

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. ________ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MP-14D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11 1/28/05

Matrix: (soil/water) WATER Lab Sample ID: 774317

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7602

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-27D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7599

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	2.3	
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	2.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	22.1	
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	22.7	
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-27D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7599

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

M-27D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774321

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7599

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/17/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774326

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7618

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	~~0.24~~	~~J~~ U 0.24 J
156-59-2	cis-1,2-Dichloroethene	1.0	U 11-24-05
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.33	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.15	J

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774326

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7618

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.46	J
1330-20-7	o-xylene	0.24	J
100-42-5	styrene	0.77	J
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	UJ
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774326

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7618

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	622-96-8	BENZENE, 1-ETHYL-4-METHYL-	10.81	0.88	NJ
2.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	11.11	0.85	NJ
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774327

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7582

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.24	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.34	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.15	J

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774327

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7582

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.49	J
1330-20-7	o-xylene	0.25	J
100-42-5	styrene	1.1	
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774327

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7582

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/16/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	622-96-8	BENZENE, 1-ETHYL-4-METHYL-	10.80	0.95	NJ
2.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	11.10	0.87	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774448

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7628

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	~~0.18~~	~~J~~ 1.0 U @ 12/21
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U LT MDL
67-66-3	chloroform	0.18	J
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774448

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7628

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 774448

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7628

Level: (low/med) LOW Date Received: 11/11/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-E

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775152

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7624

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	chloromethane		1.0	U
75-01-4	vinyl chloride		1.0	U
74-83-9	bromomethane		1.0	UJ
75-00-3	chloroethane		1.0	U
75-69-4	Trichlorofluoromethane		1.0	U
75-35-4	1,1-dichloroethene		1.0	U
67-64-1	acetone		~~1.6~~	~~JB~~
75-15-0	carbon disulfide		1.0	U
75-34-3	1,1-dichloroethane		1.0	U
75-09-2	methylene chloride		1.0	U
156-59-2	cis-1,2-Dichloroethene		1.0	U
156-60-5	trans-1,2-dichloroethene		1.0	U
67-66-3	chloroform	1.0	~~0.16~~	~~J~~ U
78-93-3	2-butanone		~~0.10~~	~~J~~
74-97-5	bromochloromethane		1.0	U
71-55-6	1,1,1-trichloroethane		1.0	U
56-23-5	carbontetrachloride		1.0	
71-43-2	benzene		1.0	U
107-06-2	1,2-dichloroethane		1.0	U
79-01-6	trichloroethene		1.0	U
78-87-5	1,2-dichloropropane		1.0	U
75-27-4	bromodichloromethane		1.0	U
10061-01-5	cis-1,3-dichloropropene		1.0	U
108-10-1	4-methyl-2-pentanone		5.0	U
108-88-3	toluene		1.0	U
10061-02-6	trans-1,3-dichloropropene		1.0	U
79-00-5	1,1,2-trichloroethane		1.0	U
127-18-4	tetrachloroethene		1.0	U
591-78-6	2-hexanone		5.0	U J
124-48-1	dibromochloromethane		1.0	U
106-93-4	1,2-Dibromoethane		1.0	U
108-90-7	chlorobenzene		1.0	U
100-41-4	ethylbenzene		1.0	U

J 5.00 @ 1 12/2

Targets less than MDL

J 5.00 @ 1 12/2

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-E

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775152

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7624

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
1330-20-7	m,p-xylenes	2.0	U	
1330-20-7	o-xylene	1.0	U	
100-42-5	styrene	1.0	U	
75-25-2	bromoform	~~0.14~~	~~J~~	1.0U @ 12/21
79-34-5	1,1,2,2-tetrachloroethane	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	
106-46-7	1,4-Dichlorobenzene	1.0	U	Less than MDL
95-50-1	1,2-Dichlorobenzene	1.0	U	
96-12-8	1,2-dibromo-3-chloropropane	1.0	U	J
120-82-1	1,2,4-Trichlorobenzene	1.0	U	
87-68-3	Hexachlorobutadiene	1.0	U	
87-61-6	1,2,3-Trichlorobenzene	1.0	U	

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SW-E

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775152

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7624

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-G

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775153

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7625

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-G

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775153

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7625

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SW-G

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775153

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7625

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-F

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775154

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7626

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-F

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775154

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7626

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SW-F

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775154

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7626

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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9.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLAN
K 11/12/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775156

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7627

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.22	J
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	0.17	J
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.61	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.14	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLAN
K 11/12/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775156

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7627

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.47	J
1330-20-7	o-xylene	0.25	J
100-42-5	styrene	0.82	J
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLAN
K 11/12/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775156

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7627

Level: (low/med) LOW Date Received: 11/13/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	622-96-8	BENZENE, 1-ETHYL-4-METHYL-	10.81	0.74	NJ
2.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	11.11	0.66	NJ
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

4D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775678

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7620

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

4D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775678

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7620

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM I VOA

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

4D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775678

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7620

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUPE A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775679

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7621

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	UJ
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	UJ
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	1.0	U
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	UJ
591-78-6	2-hexanone	5.0	UJ
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUPE A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775679

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7621

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	2.0	U
1330-20-7	o-xylene	1.0	U
100-42-5	styrene	1.0	U
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DUPE A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775679

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7621

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	10.73	0.55	J
2.		UNKNOWN	12.56	6.4	J
3.					
4.					
5.					
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FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775680

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7622

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	UJ
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	UJ
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	UJ
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.38	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	UJ
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.19	J

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775680

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7622

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.25	J
1330-20-7	o-xylene	0.14	J
100-42-5	styrene	0.15	J
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EQUIPMENT BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775680

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7622

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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17.					
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19.					
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28.					
29.					
30.					

FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLAN
K 11/15/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775681

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7623

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	1.0	U
75-01-4	vinyl chloride	1.0	U
74-83-9	bromomethane	1.0	U J
75-00-3	chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-dichloroethene	1.0	U
67-64-1	acetone	5.0	U J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-dichloroethene	1.0	U
67-66-3	chloroform	1.0	U
78-93-3	2-butanone	5.0	U J
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	1.0	U
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	1.0	U
78-87-5	1,2-dichloropropane	1.0	U
75-27-4	bromodichloromethane	1.0	U
10061-01-5	cis-1,3-dichloropropene	1.0	U
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	0.47	J
10061-02-6	trans-1,3-dichloropropene	1.0	U
79-00-5	1,1,2-trichloroethane	1.0	U
127-18-4	tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.0	U J
124-48-1	dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	chlorobenzene	1.0	U
100-41-4	ethylbenzene	0.10	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLAN
K 11/15/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775681

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7623

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	0.31	J
1330-20-7	o-xylene	0.19	J
100-42-5	styrene	0.19	J
75-25-2	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-dibromo-3-chloropropane	1.0	U J
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLAN
K 11/15/04

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: 775681

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7623

Level: (low/med) LOW Date Received: 11/16/04

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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30.					

METALS
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Contract: R2423837 SDG No.: MP-11P

Lab Code: Case No.: SAS No.:

SOW No.: CLP ILM4.1 Client: Shaw Environmental

Sample No.	Lab Sample ID.
SW-B	773864
M27-S	773865
DUP-A	773868
M-27D	774321
M-27DD	774321D
M-27DS	774321S
M-13D	774325

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: See Attached Case Narrative

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Michael K. Perry Name: Michael K. Perry

Date: 12/28/04 Title: Laboratory Manager

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

DUP-A

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Lab Sample ID: 773868

Level (low/med): LOW Date Received: 11/10/04

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	2.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-13D

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Lab Sample ID: 774325

Level (low/med): LOW Date Received: 11/11/04

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	4.5	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-27D

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Lab Sample ID: 774321

Level (low/med): LOW Date Received: 11/11/04

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	2.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M27-S

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Lab Sample ID: 773865

Level (low/med): LOW Date Received: 11/10/04

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	2.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SW-B

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Lab Sample ID: 773864

Level (low/med): LOW Date Received: 11/10/04

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	0.94	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : SW-B

Date Sampled : 11/09/04 15:15 Order #: 773864 Sample Matrix: WATER
Date Received: 11/10/04 Submission #: R2423837

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	11/10/04	11:24	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : M27-S

Date Sampled : 11/09/04 16:25 Order #: 773865 Sample Matrix: WATER
Date Received: 11/10/04 Submission #: R2423837

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	11/10/04	11:24	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : DUP-A

Date Sampled : 11/09/04 Order #: 773868 Sample Matrix: WATER
Date Received: 11/10/04 Submission #: R2423837

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	11/10/04	11:24	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : M-27D

Date Sampled : 11/10/04 12:45 Order #: 774321 Sample Matrix: WATER
Date Received: 11/11/04 Submission #: R2423837

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	11/11/04	11:23	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : M-13S

Date Sampled : 11/10/04 13:40 **Order #: 774324** **Sample Matrix: WATER**
Date Received: 11/11/04 **Submission #: R2423837**

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0112	MG/L	11/11/04	11:23	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/27/04

Shaw Environmental
Project Reference: MRFA
Client Sample ID : M-13D

Date Sampled : 11/10/04 14:20 **Order #:** 774325 **Sample Matrix:** WATER
Date Received: 11/11/04 **Submission #:** R2423837

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	11/11/04	11:23	1.0

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

	EPA SAMPLE NO.	SMC1 (BFB) #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	VBLK01	102				0
02	VBLK01MS	106				0
03	M-33I	98				0
04	SW-D	104				0
05	SW-A	102				0
06	SW-B	104				0
07	EQUIPMENT BL	108				0
08	TRIP BLANK	110				0
09	TRIP BLANK	108				0
10	VBLK02	98				0
11	VBLK02MS	106				0
12	M-11P	98				0
13	M-24D	100				0
14	M-33S	100				0
15	DGC-3S	100				0
16	DGC-4S	100				0
17	M-27D	96				0
18	M-25D	100				0
19	M-29D	96				0
20	M-14D	100				0
21	M-27DMS	108				0
22	M-27D MSD	106				0
23	VBLK03	96				0
24	VBLK03MS	104				0
25	EQUIPMENT BL	102				0
26	M-25D DL	96				0
27	4D	96				0
28	DUPE A	96				0
29	EQUIPMENT BL	98				0
30	TRIP BLANK 1	102				0

SMC1 (BFB) = bromofluorobenzene QC LIMITS (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

	EPA SAMPLE NO.	SMC1 (BFB) #	SMC2 #	SMC3 #	OTHER	TOT OUT
01	SW-E	94				0
02	SW-G	94				0
03	SW-F	96				0
04	TRIP BLANK 1	110				0
05	COOLER BLANK	94				0
06						
07						
08						
09						
10						
11						
12						
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20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 (BFB) = bromofluorobenzene (80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix Spike - EPA Sample No.: M-27D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC. LIMITS REC.
vinyl chloride	5.0	0.00	5.5	110	60-140
carbontetrachloride	5.0	22.1	26.7	92	60-140
benzene	5.0	0.00	5.1	102	60-140
1,2-dichloroethane	5.0	0.00	4.7	94	60-140
trichloroethene	5.0	22.7	26.4	74	60-140
1,2-dichloropropane	5.0	0.00	5.3	106	60-140
cis-1,3-dichloropropene	5.0	0.00	5.0	100	60-140
1,1,2-trichloroethane	5.0	0.00	5.6	112	60-140
tetrachloroethene	5.0	0.00	5.2	104	60-140
1,2-Dibromoethane	5.0	0.00	5.4	108	60-140
bromoform	5.0	0.00	4.6	92	60-140
1,4-Dichlorobenzene	5.0	0.00	5.1	102	60-140

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENTRATION (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
vinyl chloride	5.0	5.5	110	0	20	60-140
carbontetrachloride	5.0	26.2	82	11	20	60-140
benzene	5.0	5.1	102	0	20	60-140
1,2-dichloroethane	5.0	5.1	102	8	20	60-140
trichloroethene	5.0	26.3	72	3	20	60-140
1,2-dichloropropane	5.0	5.2	104	2	20	60-140
cis-1,3-dichloropropene	5.0	4.8	96	4	20	60-140
1,1,2-trichloroethane	5.0	5.5	110	2	20	60-140
tetrachloroethene	5.0	5.0	100	4	20	60-140
1,2-Dibromoethane	5.0	5.3	106	2	20	60-140
bromoform	5.0	4.4	88	4	20	60-140
1,4-Dichlorobenzene	5.0	5.0	100	2	20	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 12 outside limits
Spike Recovery: 0 out of 24 outside limits

COMMENTS: _____

_____

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix Spike - EPA Sample No.: VBLK01

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC. LIMITS REC.
vinyl chloride	5.0	0.00	5.0	100	60-140
carbontetrachloride	5.0	0.00	5.0	100	60-140
benzene	5.0	0.00	5.0	100	60-140
1,2-dichloroethane	5.0	0.00	5.2	104	60-140
trichloroethene	5.0	0.00	5.3	106	60-140
1,2-dichloropropane	5.0	0.00	5.2	104	60-140
cis-1,3-dichloropropene	5.0	0.00	5.2	104	60-140
1,1,2-trichloroethane	5.0	0.00	5.5	110	60-140
tetrachloroethene	5.0	0.00	5.0	100	60-140
1,2-Dibromoethane	5.0	0.00	5.1	102	60-140
bromoform	5.0	0.00	5.5	110	60-140
1,4-Dichlorobenzene	5.0	0.00	5.2	104	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix Spike - EPA Sample No.: VBLK03

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC. LIMITS REC.
vinyl chloride	5.0	0.00	5.2	104	60-140
carbontetrachloride	5.0	0.00	5.4	108	60-140
benzene	5.0	0.00	5.3	106	60-140
1,2-dichloroethane	5.0	0.00	5.2	104	60-140
trichloroethene	5.0	0.00	5.2	104	60-140
1,2-dichloropropane	5.0	0.00	5.3	106	60-140
cis-1,3-dichloropropene	5.0	0.00	4.9	98	60-140
1,1,2-trichloroethane	5.0	0.00	5.2	104	60-140
tetrachloroethene	5.0	0.00	5.2	104	60-140
1,2-Dibromoethane	5.0	0.00	5.4	108	60-140
bromoform	5.0	0.00	5.5	110	60-140
1,4-Dichlorobenzene	5.0	0.00	5.2	104	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

_____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK03MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: VBLK03MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7616

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	chloromethane	5.3	
75-01-4	vinyl chloride	5.2	
74-83-9	bromomethane	4.4	
75-00-3	chloroethane	5.4	
75-69-4	Trichlorofluoromethane	5.2	
75-35-4	1,1-dichloroethene	5.7	
67-64-1	acetone	5.0	U
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	5.1	
75-09-2	methylene chloride	5.3	
156-59-2	cis-1,2-Dichloroethene	5.1	
156-60-5	trans-1,2-dichloroethene	5.1	
67-66-3	chloroform	5.3	
78-93-3	2-butanone	5.0	U
74-97-5	bromochloromethane	5.2	
71-55-6	1,1,1-trichloroethane	5.2	
56-23-5	carbontetrachloride	5.4	
71-43-2	benzene	5.3	
107-06-2	1,2-dichloroethane	5.2	
79-01-6	trichloroethene	5.2	
78-87-5	1,2-dichloropropane	5.3	
75-27-4	bromodichloromethane	5.4	
10061-01-5	cis-1,3-dichloropropene	4.9	
108-10-1	4-methyl-2-pentanone	5.0	U
108-88-3	toluene	5.2	
10061-02-6	trans-1,3-dichloropropene	5.3	
79-00-5	1,1,2-trichloroethane	5.2	
127-18-4	tetrachloroethene	5.2	
591-78-6	2-hexanone	5.0	U
124-48-1	dibromochloromethane	5.3	
106-93-4	1,2-Dibromoethane	5.4	
108-90-7	chlorobenzene	5.4	
100-41-4	ethylbenzene	5.3	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK03MS

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Matrix: (soil/water) WATER Lab Sample ID: VBLK03MS

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: R7616

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/18/04

GC Column: ZB-624-30M ID: 0.18 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	m,p-xylenes	10.3	
1330-20-7	o-xylene	5.3	
100-42-5	styrene	5.2	
75-25-2	bromoform	5.5	
79-34-5	1,1,2,2-tetrachloroethane	5.4	
541-73-1	1,3-Dichlorobenzene	5.1	
106-46-7	1,4-Dichlorobenzene	5.2	
95-50-1	1,2-Dichlorobenzene	5.2	
96-12-8	1,2-dibromo-3-chloropropane	5.1	
120-82-1	1,2,4-Trichlorobenzene	5.3	
87-68-3	Hexachlorobutadiene	5.3	
87-61-6	1,2,3-Trichlorobenzene	5.2	

METALS

-6-

DUPLICATES

SAMPLE NO.

M-27DD

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate:

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Chromium		2.6148	B	2.4445	B	6.7		P

METALS
-5A-
SPIKE SAMPLE RECOVERY

SAMPLE NO.

M-27DS

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Chromium	75 - 125	197.8789		2.6148	B	200.00	97.6		P

Comments:

METALS
-5B-
POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: M-27DA

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Chromium		195.20		2.61	B	200.0	96.3		P

Comments:

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 12/27/04
CAS Order # : 774321 - M-27D
Client : Shaw Environmental
MRFA
Reported Units: MG/L
Run # : 110468

	PRECISION			ACCURACY			
	ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
HEXAVALENT CHROMIUM	0.0100 U	0.0100 U	NC	0.108	0.100	108	85 - 115

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: R2423837
Client: Shaw Environmental
MRFA

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
HEXAVALENT CHROMIUM	0.0100 U	0.103	0.100	103	90 - 109	110468	MG/L
HEXAVALENT CHROMIUM	0.0100 U	0.0980	0.100	98	90 - 109	110492	MG/L

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Lab File ID (Standard): R7568 Date Analyzed: 11/16/04

Instrument ID: MS6 Time Analyzed: 1131

GC Column: ZB-624-30M ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 (DCB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DFB) AREA #	RT #
	12 HOUR STD	197308	11.32	377498	9.76	472282	7.09
	UPPER LIMIT	394616	11.82	754996	10.26	944564	7.59
	LOWER LIMIT	98654	10.82	188749	9.26	236141	6.59
	EPA SAMPLE NO.						
01	VBLK01	187179	11.32	358837	9.76	437542	7.09
02	VBLK01MS	201997	11.32	373766	9.76	470294	7.09
03	M-33I	169573	11.32	339322	9.76	409570	7.09
04	SW-D	182435	11.32	357893	9.76	425089	7.09
05	SW-A	175316	11.32	342222	9.75	409201	7.09
06	SW-B	182419	11.32	358864	9.76	425461	7.09
07	EQUIPMENT BL	193072	11.32	356392	9.76	426371	7.09
08	TRIP BLANK	191220	11.32	360390	9.76	415542	7.09
09	TRIP BLANK	192259	11.32	353397	9.76	425203	7.09
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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 used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Lab File ID (Standard): R7586 Date Analyzed: 11/17/04

Instrument ID: MS6 Time Analyzed: 1018

GC Column: ZB-624-30M ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 (DCB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DFB) AREA #	RT #
	12 HOUR STD	198521	11.32	364838	9.76	455543	7.09
	UPPER LIMIT	397042	11.82	729676	10.26	911086	7.59
	LOWER LIMIT	99261	10.82	182419	9.26	227772	6.59
	EPA SAMPLE NO.						
01	VBLK02	183506	11.32	360033	9.76	437510	7.09
02	VBLK02MS	201240	11.32	358768	9.76	445601	7.09
03	M-11P	180290	11.32	343432	9.76	412690	7.09
04	M-24D	174200	11.32	342460	9.76	397680	7.09
05	M-33S	174108	11.32	338754	9.76	392004	7.09
06	DGC-3S	171283	11.32	332534	9.76	386397	7.09
07	DGC-4S	173314	11.32	339125	9.76	401293	7.09
08	M-27D	162910	11.32	317442	9.76	377231	7.09
09	M-25D	177337	11.32	342156	9.76	400996	7.09
10	M-29D	170451	11.32	332980	9.76	396015	7.09
11	M-14D	166876	11.33	326623	9.76	376127	7.09
12	M-27DMS	199833	11.32	338780	9.76	424589	7.09
13	M-27D MSD	205389	11.32	350518	9.76	438214	7.09
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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 used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R24-23837 SAS No.: SDG No.: MP-11

Lab File ID (Standard): R7614 Date Analyzed: 11/18/04

Instrument ID: MS6 Time Analyzed: 1356

GC Column: ZB-624-30M ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(DCB) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DFB) AREA #	RT #
	12 HOUR STD	207714	11.32	374829	9.76	466940	7.09
	UPPER LIMIT	415428	11.82	749658	10.26	933880	7.59
	LOWER LIMIT	103857	10.82	187415	9.26	233470	6.59
	EPA SAMPLE NO.						
01	VBLK03	173220	11.33	344984	9.76	417329	7.09
02	VBLK03MS	199674	11.32	358187	9.76	451204	7.09
03	EQUIPMENT BL	181948	11.32	341706	9.76	404984	7.09
04	M-25D DL	171631	11.32	348279	9.76	409143	7.09
05	4D	177146	11.33	349923	9.76	413351	7.09
06	DUPE A	171980	11.32	342262	9.76	403529	7.10
07	EQUIPMENT BL	183495	11.32	350681	9.76	412535	7.09
08	TRIP BLANK 1	182184	11.32	349986	9.76	408461	7.09
09	SW-E	174369	11.33	344765	9.76	399319	7.09
10	SW-G	173697	11.32	346241	9.76	401094	7.09
11	SW-F	170484	11.32	348489	9.76	396614	7.09
12	TRIP BLANK 1	180686	11.32	346380	9.76	386784	7.09
13	COOLER BLANK	167039	11.32	328058	9.76	390112	7.09
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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 used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

METALS

-3-

BLANKS

Contract: R2423837

Lab Code: Case No.: SAS No.: SDG NO.: MP-11P

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Chromium	0.6	U	0.6	U	1.1	B	0.7	B	0.550	U	P

APPENDIX C

LABORATORY DATA, PERCHLORATE RESULTS PACKAGE,

AMMONIUM PERCHLORATE INFLUENT WATER SAMPLE

AUGUST 26, 2004

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

September 14, 2004 Service Request No: K2406561

Janice Jeager
Columbia Analytical Services, Inc.
1 Mustard Street, Suite 250
Rochester, NY 14609

RE: R2422765 / GE MRFA

Dear Janice:

Enclosed are the results of the sample(s) submitted to our laboratory on August 27, 2004. For your reference, these analyses have been assigned our service request number K2406561.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental and Infrastructure	**Service Request No.:**	K2406561
Project:	GE MRFA	**Date Received:**	8/27/2004
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One water sample was received for analysis at Columbia Analytical Services on 8/27/2004. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 9/14/04

Chain of Custody Documentation

Columbia Analytical Services, INC.
An Employee - Owned Company
www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 1

SR # K2406561
CAS Contact

Project Name: MRFA	Project Number: B100dd
Project Manager: Janice Jaeger	Report CC:
Company/Address: Columbia Analytical Services 1 Mustard St Suite 250 ~~Columbia~~ Rochester NY 14609	
Phone #: (585) 288-5380	FAX#: (585) 288-8475
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Perchlorate	REMARKS/ ALTERNATE DESCRIPTION
INFLUENT	754789	8/26/04	1515	water	1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
✓ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
☒ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) once electronic
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# R24ZZ605
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Heather Lavejoy	Signature: A. Jurell	Signature:	Signature:	Signature:	Signature:
Printed Name: Heather Lavejoy	Printed Name: CAS	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: CAS	Firm: 8/31/04 1000	Firm:	Firm:	Firm:	Firm:
Date/Time: 8/30/04 1700	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR #

CAS Contact

Project Name: MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Harry, Steve Meier
Company/Address: Shaw Environmental, 13 British American Blvd., Latham NY 12110	
Phone #: 518-783-1996	FAX#: 518-783-8397
Sampler's Signature: [signature]	Sampler's Printed Name: John A. Skaary

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)* Jar

Preservative Key: 0. NONE 1. HCL 2. HNO_3 3. H_2SO_4 4. NaOH 5. Zn. Acetate 6. MeOH 7. $NaHSO_4$ (8) Other ICE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	~~CLP OLC VO level~~	USEPA CLP OLC02	Ammonium Perchlorate (314.0)	Coliform			REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE														1	8	8	8		
Influent		8/26/04	15:15											X	X				
Influent MS		↓	15:15											X					
Influent MSD		↓	15:15											X					
Effluent		↓	15:05											X					
DUPA		↓	—											X					
Trip Blank		↓	—											X					
Ladies Room Left Sink		↓	15:40													X			

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Include in VOC analysis:
hexachlorobutadiene
1,2,3-trichlorobenzene
trichlorofluoromethane

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
X STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Steve Meier, GE CEP, Albany, NY
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: John A. Skaary	Printed Name: Gregory O. Esmerian	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Env., Inc.	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 8/26/04 17:45	Date/Time: 8-27-04 9:40	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Columbia Analytical Services Inc. PC_____
Cooler Receipt and Preservation Form

Project/Client CAS Work Order K240_____

Cooler received on 8/31/04 and opened on 8/31/04 by _____

1.	Were custody seals on outside of coolers?				(Y)	N
	If yes, how many and where? 1F 1B					
2.	Were custody seals intact?				(Y)	N
3.	Were signature and date present on the custody seals?				Y	(N)
4.	Is the shipper's airbill available and filed? If no, record airbill number: 1217W4380146689532				Y	N
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	0.5				
	Temperature Blank: (°C)	N/P				
	Were samples hand delivered on the same day as collection?				~~Y~~	N
6.	Were custody papers properly filled out (ink, signed, etc.)?				(Y)	N
7.	Type of packing material present Bubble					
8.	**Did all bottles arrive in good condition (unbroken)?**				(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				(Y)	N
10.	Did all bottle labels and tags agree with custody papers?				(Y)	N
11.	**Were the correct types of bottles used for the tests indicated?**				(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
14.	Did the bottles originate from CAS/K or a branch laboratory?				(Y)	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				~~Y~~	~~N~~
16.	Was C12/Res negative?				~~Y~~	~~N~~

Explain any discrepancies:_____

RESOLUTION:_____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

00008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental and Infrastructure	**Service Request:**	K2406561
Project:	GE MRFA	**Date Collected:**	08/26/04
Sample Matrix:	Water	**Date Received:**	08/27/04

Perchlorate

Prep Method:	NONE	Units:	ug/L (ppb)
Analysis Method:	314.0	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Influent	K2406561-001	2.0	1.0	2	NA	09/07/04	ND	
Method Blank	K2406561-MB	2.0	1.0	1	NA	09/07/04	ND	

Approved By: _____ Date: 9/13/04

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental and Infrastructure
Project: GE MRFA
Sample Matrix: Water

Service Request: K2406561
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 09/07/04

Duplicate Summary
Inorganic Parameters

Sample Name: Batch QC
Lab Code: K2406539-001DUP
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Perchlorate	NONE	314.0	2.0	ND	ND	ND	-	

Approved By: _____ Date: 9/13/04

DUP/020597p
06561WET.AYI - DUP 09/10/04

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Shaw Environmental and Infrastructure	**Service Request:**	K2406561
Project:	GE MRFA	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	09/07/04

Matrix Spike Summary
Inorganic Parameters

Sample Name:	Batch QC	Units:	ug/L (ppb)
Lab Code:	K2406539-001MS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Perchlorate	NONE	314.0	2.0	80.0	ND	71.9	90	80-120	

Approved By: _____ Date: 9/13/04

MS/020597p
06561WET.AY1 - MS 09/10/04

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental and Infrastructure
Project: GE MRFA
LCS Matrix: Water

Service Request: K2406561
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 09/07/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name: Lab Control Sample
Lab Code: K2406561-LCS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Perchlorate	NONE	314.0	500	469	94	85-115	

Approved By: _____ Date: 9/13/04

LCS/020597p
06561WET.AY1 - LCS 09/10/04

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental and Infrastructure
Project: GE MRFA

Service Request: K2406561
Date Collected: NA
Date Received: NA
Date Analyzed: 09/07/04

Perchlorate
EPA Method 314.0
Units: ug/L (ppb)

INITIAL CALIBRATION CHECK STANDARD (ICCS)

	True Value	Measured Value	Percent Recovery
ICCS Result	2.0	1.7	85

CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	25.0	22.8	91
CCV 2 Result	25.0	23.3	93

ENDING CALIBRATION VERIFICATION (ECCV)

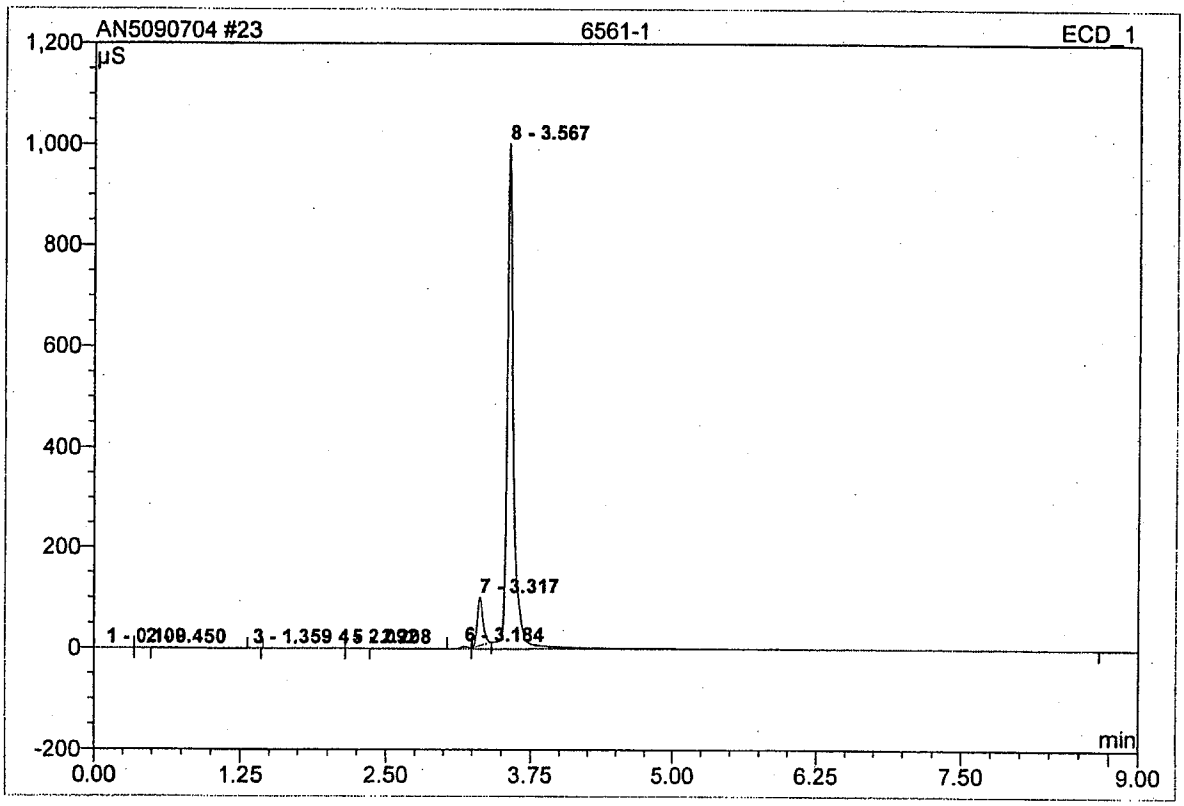
	True Value	Measured Value	Percent Recovery
ECCV Result	100	98.8	99

Approved By: _____ Date: 9/13/04

COMBOQCD/042695

23 6561-1

Sample Name:	**6561-1**	*Injection Volume:*	**1000.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**2.0000**
Recording Time:	**9/7/2004 14:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



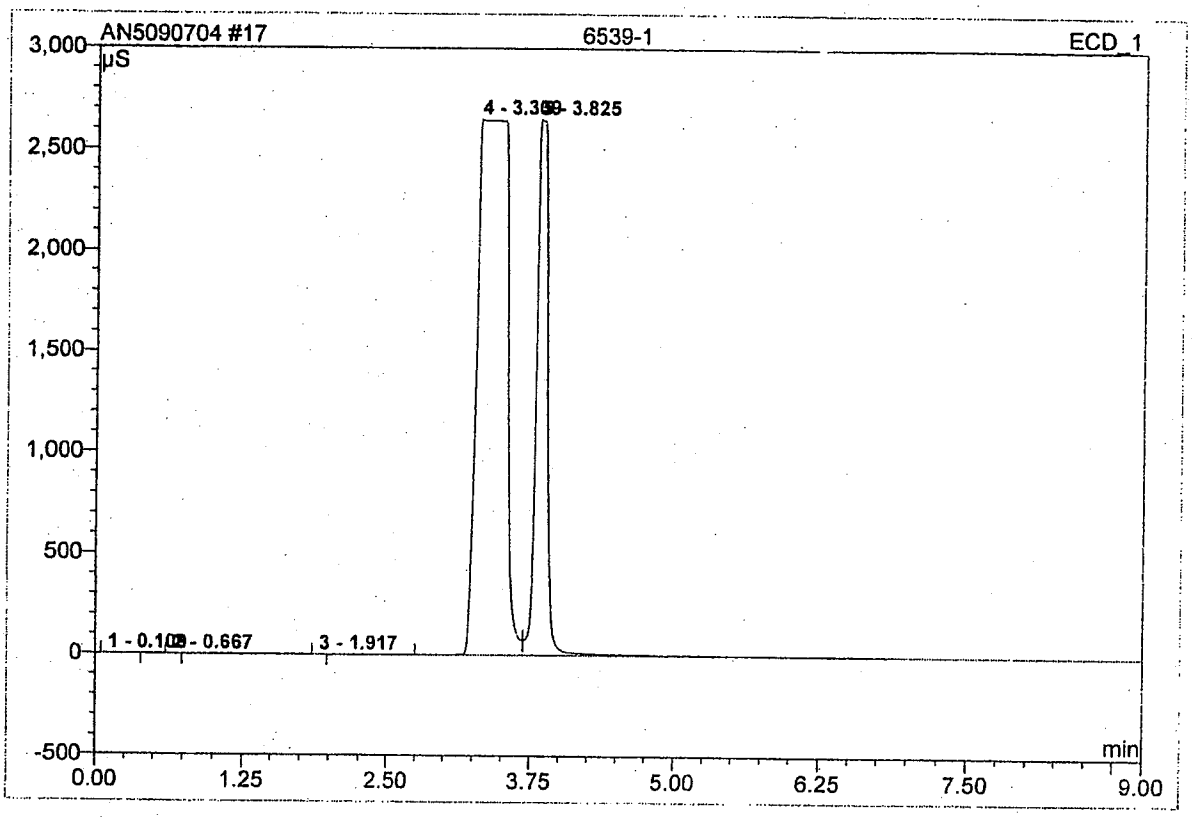
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.135	0.009	0.01	n.a.	BM
2	0.45	n.a.	0.005	0.001	0.00	n.a.	MB
3	1.36	n.a.	0.004	0.000	0.00	n.a.	BMB
4	2.09	n.a.	0.298	0.115	0.15	n.a.	BM
5	2.21	n.a.	0.348	0.049	0.07	n.a.	MB
6	3.18	n.a.	5.023	0.399	0.54	n.a.	BM
7	3.32	n.a.	94.647	5.532	7.42	n.a.	Ru
8	3.57	n.a.	1002.210	68.421	91.81	n.a.	MB
Total:			1102.671	74.526	100.00	0.000	

BMB/MB

perchlorate < 2.0

17 6539-1

Sample Name:	**6539-1**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**2.0000**
Recording Time:	**9/7/2004 13:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



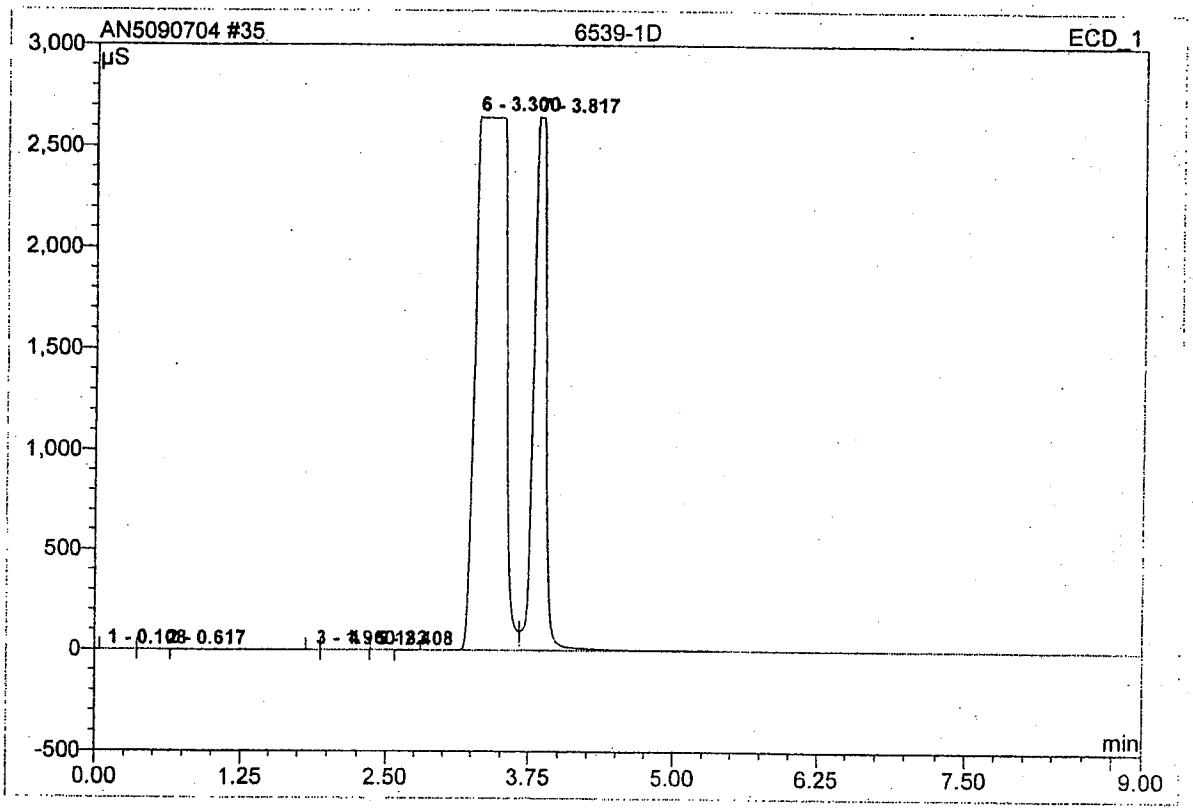
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.160	0.010	0.00	n.a.	BMB
2	0.67	n.a.	0.003	0.000	0.00	n.a.	BMB
3	1.92	n.a.	0.004	0.000	0.00	n.a.	BMB
4	3.31	n.a.	2651.712	794.956	71.63	n.a.	BM
5	3.83	n.a.	2651.291	314.838	28.37	n.a.	MB
Total:			5303.170	1109.805	100.00	0.000	

SM 9/7/10-j

perchlorate < 2.0 ✗ : N.D. RM-

35 6539-1D

Sample Name:	**6539-1D**	*Injection Volume:*	**1000.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**2.0000**
Recording Time:	**9/7/2004 16:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

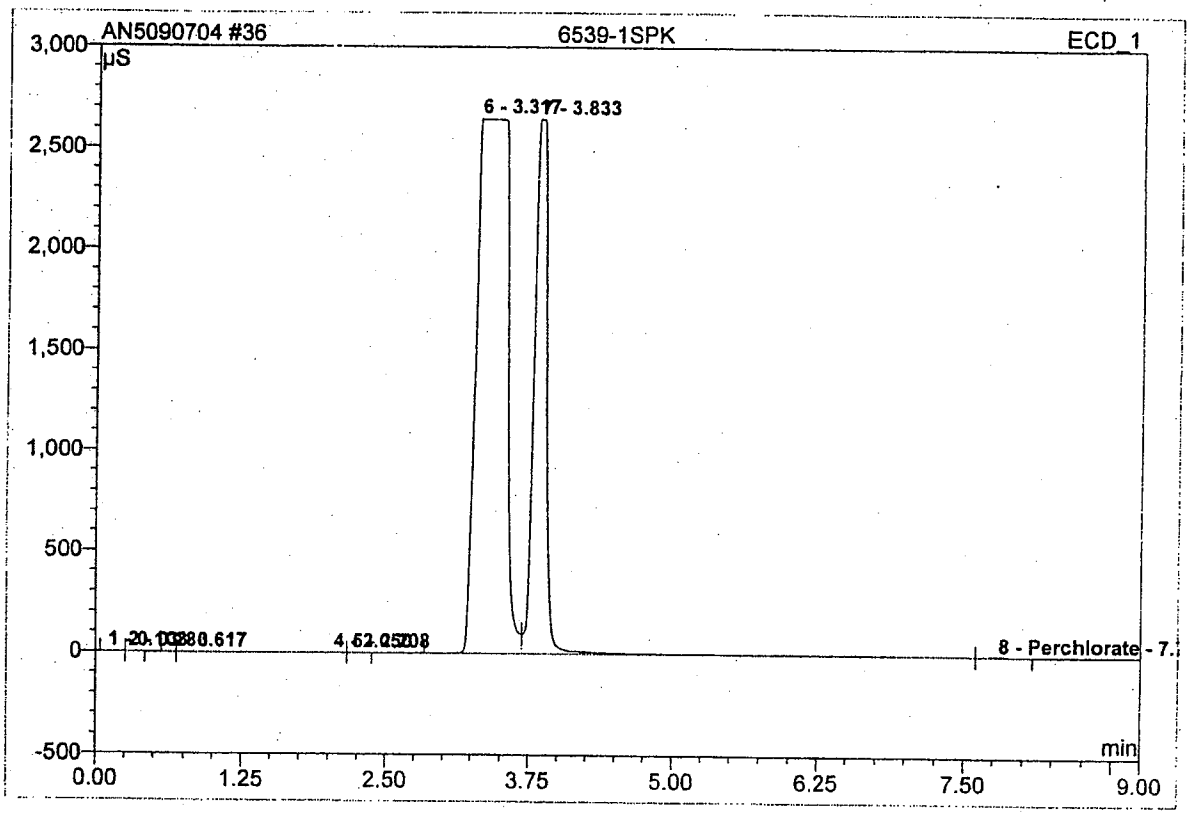


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.125	0.010	0.00	n.a.	BM
2	0.62	n.a.	0.003	0.001	0.00	n.a.	MB
3	1.90	n.a.	0.003	0.000	0.00	n.a.	BMb
4	2.18	n.a.	0.272	0.067	0.01	n.a.	bMB
5	2.41	n.a.	0.049	0.006	0.00	n.a.	BMB
6	3.30	n.a.	2651.757	792.809	69.81	n.a.	BM
7	3.82	n.a.	2647.310	342.852	30.19	n.a.	MB
Total:			5299.518	1135.744	100.00	0.000	

perchlorate <2.0

36 6539-1SPK

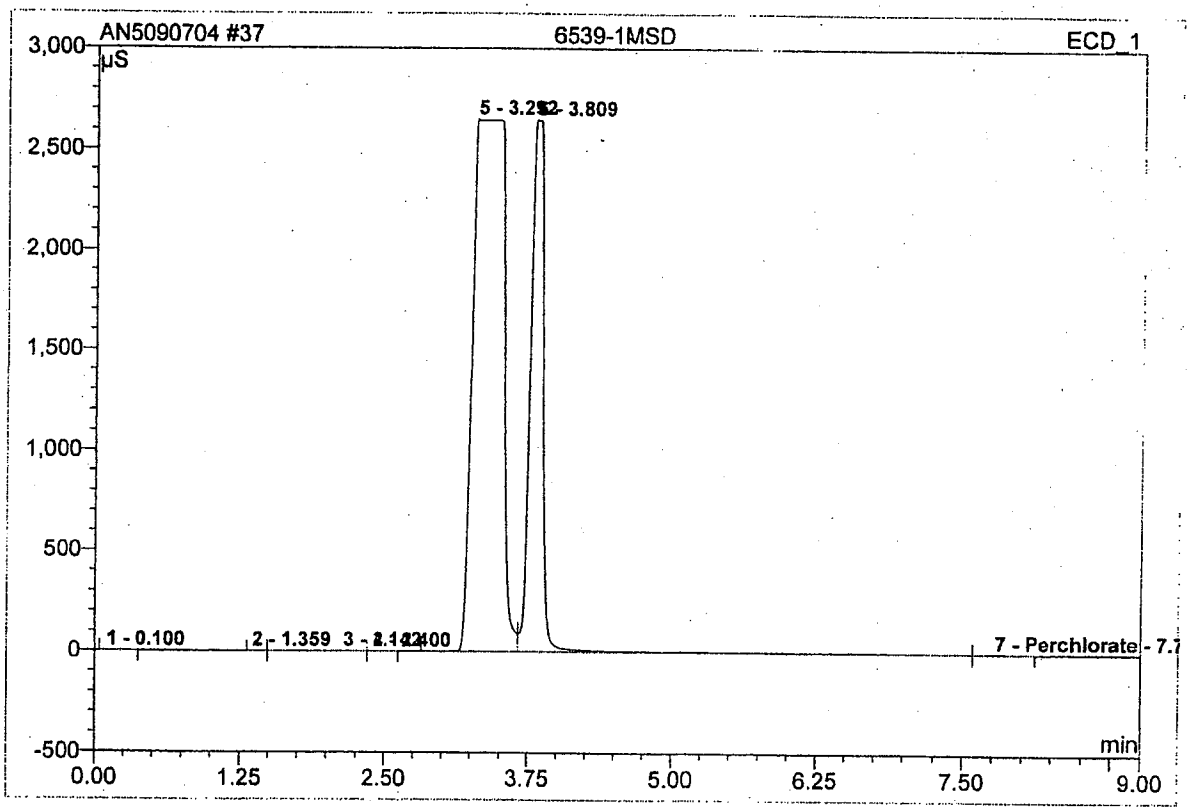
Sample Name:	**6539-1SPK**	*Injection Volume:*	**1000.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**2.0000**
Recording Time:	**9/7/2004 16:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.104	0.007	0.00	n.a.	BM
2	0.28	n.a.	0.010	0.001	0.00	n.a.	MB
3	0.62	n.a.	0.004	0.000	0.00	n.a.	BMb
4	2.05	n.a.	0.321	0.256	0.02	n.a.	bM
5	2.21	n.a.	0.358	0.052	0.00	n.a.	MB
6	3.32	n.a.	2649.696	804.220	69.54	n.a.	BM
7	3.83	n.a.	2646.061	351.807	30.42	n.a.	Mb
8	7.79	Perchlorate	0.520	0.092	0.01	71.900	bMB
Total:			5297.074	1156.435	100.00	71.900	

37 6539-1MSD

Sample Name:	**6539-1MSD**	*Injection Volume:*	**1000.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**2.0000**
Recording Time:	**9/7/2004 16:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.10	n.a.	0.096	0.008	0.00	n.a.	BMB
2	1.36	n.a.	0.004	0.001	0.00	n.a.	BMb
3	2.14	n.a.	0.287	0.137	0.01	n.a.	bMB
4	2.40	n.a.	0.099	0.011	0.00	n.a.	bMB
5	3.29	n.a.	2649.843	802.483	69.43	n.a.	BM
6	3.81	n.a.	2646.873	353.095	30.55	n.a.	Mb
7	7.78	Perchlorate	0.518	0.092	0.01	72.348	bMB
Total:			5297.719	1155.826	100.00	72.348	

spk - 80
srl 9/7/04

Rec: 90 -

Ion Chromatography Data Quality Report
Perchlorate
Inorganics

1. Holding times met for all samples analyzed? yes/no/NA (yes circled)
2. Are all chromatograms signed and dated? yes/no/NA (yes circled)
3. Are dilutions within upper limits of the curve? yes/no/NA (yes circled)
4. Are analysis/extraction stickers included on report? yes/no/NA (yes circled)
5. Are detection limits reported correctly? yes/no/NA (yes circled)
6. Are all quality control criteria met? yes/no/NA (yes circled)
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? yes/no/NA (yes circled)
   b. Are CCV's and CCB's all within acceptance limits? yes/no/NA (yes circled)
   c. Are results for Method Blanks all ND? yes/no/NA (yes circled)
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) yes/no/NA (yes circled)
   e. Are all exceptions explained? yes/no/NA (NA circled)

8. Are all samples labelled correctly? yes/no/NA (yes circled)

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
D MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis. 0619/1/07

IPC
Perchlorate True Value = 25 ppb CAS ID# = AN3-73-R Expires 9/8/04 ± 5%: 7.29 - 8.05

ICCS
Perchlorate True Value = ~~5.0 ppb~~ 2.0 ppb CAS ID# = AN3-73-V Expires 9/8/04

CCV
Perchlorate True Value = 25.0 ppb CAS ID # = AN3-73-0 Expires 9/8/04

Spike
Perchlorate True Value = 1000 ppb CAS ID# = AN3-73-Q Expires 9/8/04

ECCV
Perchlorate True Value = 100 ppb CAS ID# = AN3-73-P Expires 9/8/04
LCS True Value = 500 ppb CAS ID#: R-IONOLMS Expires 3/1/05
40.0 ppb X dilution factor

Analyst: B. Hetland **Date:** 9/7/04
First Review: B. Hetland **Date:** 9/7/04
Final Review: [signature] **Date:** 9/8/04

Sequence: AN5090704
Operator: acqwet10
Printed: 9/7/2004 5:35:57 PM

Title:
Datasource: ACQWET10_local
Location:
Timebase: ICS2500
#Samples: 40

Created: 9/7/2004 9:58:31 AM by acqwet10
Last Update: 9/7/2004 3:53:14 PM by acqwet10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	STD1/LVL1	Standard	1	1000.0	PERCHLORATE	PERCHLORATE	Finished
2	STD1/LVL1	Standard	2	1000.0	PERCHLORATE	PERCHLORATE	Finished
3	STD2/LVL2	Standard	3	1000.0	PERCHLORATE	PERCHLORATE	Finished
4	STD3/LVL3	Standard	4	1000.0	PERCHLORATE	PERCHLORATE	Finished
5	STD4/LVL4	Standard	5	1000.0	PERCHLORATE	PERCHLORATE	Finished
6	STD5/LVL5	Standard	6	1000.0	PERCHLORATE	PERCHLORATE	Finished
7	STD6/LVL6	Standard	7	1000.0	PERCHLORATE	PERCHLORATE	Finished
8	STD7/LVL7	Standard	8	1000.0	PERCHLORATE	PERCHLORATE	Finished
9	STD8/LVL8	Standard	9	1000.0	PERCHLORATE	PERCHLORATE	Finished
10	IPC	Unknown	10	1000.0	PERCHLORATE	PERCHLORATE	Finished
11	IPC	Unknown	13	1000.0	PERCHLORATE	PERCHLORATE	Finished
12	MB	Unknown	14	1000.0	PERCHLORATE	PERCHLORATE	Finished
13	ICCS	Unknown	12	1000.0	PERCHLORATE	PERCHLORATE	Finished
14	R-ION06145 LCS	Unknown	13	1000.0	PERCHLORATE	PERCHLORATE	Finished
15	ICCS	Unknown	14	1000.0	PERCHLORATE	PERCHLORATE	Finished
16	LFB/CCV1	Unknown	15	1000.0	PERCHLORATE	PERCHLORATE	Finished
17	6539-1	Unknown	15	1000.0	PERCHLORATE	PERCHLORATE	Finished
18	6539-2F	Unknown	16	1000.0	PERCHLORATE	PERCHLORATE	Finished
19	6714-1	Unknown	17	1000.0	PERCHLORATE	PERCHLORATE	Finished
20	6714-2F	Unknown	18	1000.0	PERCHLORATE	PERCHLORATE	Finished
21	6714-3F	Unknown	19	1000.0	PERCHLORATE	PERCHLORATE	Finished
22	6714-4	Unknown	20	1000.0	PERCHLORATE	PERCHLORATE	Finished
23	6561-1	Unknown	21	1000.0	PERCHLORATE	PERCHLORATE	Finished
24	6576-1	Unknown	22	1000.0	PERCHLORATE	PERCHLORATE	Finished
25	6576-2	Unknown	23	1000.0	PERCHLORATE	PERCHLORATE	Finished
26	RB	Unknown	24	1000.0	PERCHLORATE	PERCHLORATE	Finished
27	CCV2	Unknown	25	1000.0	PERCHLORATE	PERCHLORATE	Finished
28	6576-3F	Unknown	26	1000.0	PERCHLORATE	PERCHLORATE	Finished
29	6576-4F	Unknown	27	1000.0	PERCHLORATE	PERCHLORATE	Finished
30	6576-5	Unknown	28	1000.0	PERCHLORATE	PERCHLORATE	Finished
31	6575-1	Unknown	29	1000.0	PERCHLORATE	PERCHLORATE	Finished
32	6575-2	Unknown	30	1000.0	PERCHLORATE	PERCHLORATE	Finished
33	6575-3	Unknown	31	1000.0	PERCHLORATE	PERCHLORATE	Finished
34	6575-4	Unknown	32	1000.0	PERCHLORATE	PERCHLORATE	Finished
35	6539-1D	Unknown	33	1000.0	PERCHLORATE	PERCHLORATE	Finished
36	6539-1SPK	Unknown	34	1000.0	PERCHLORATE	PERCHLORATE	Finished
37	6539-1MSD	Unknown	35	1000.0	PERCHLORATE	PERCHLORATE	Finished
38	6714-1	Unknown	36	1000.0	PERCHLORATE	PERCHLORATE	Finished
39	6714-4	Unknown	37	1000.0	PERCHLORATE	PERCHLORATE	Finished
40	ECCV	Unknown	38	1000.0	PERCHLORATE	PERCHLORATE	Finished

Sequence: AN5090704
Operator: acqwet10
Printed: 9/7/2004 5:35:58 PM

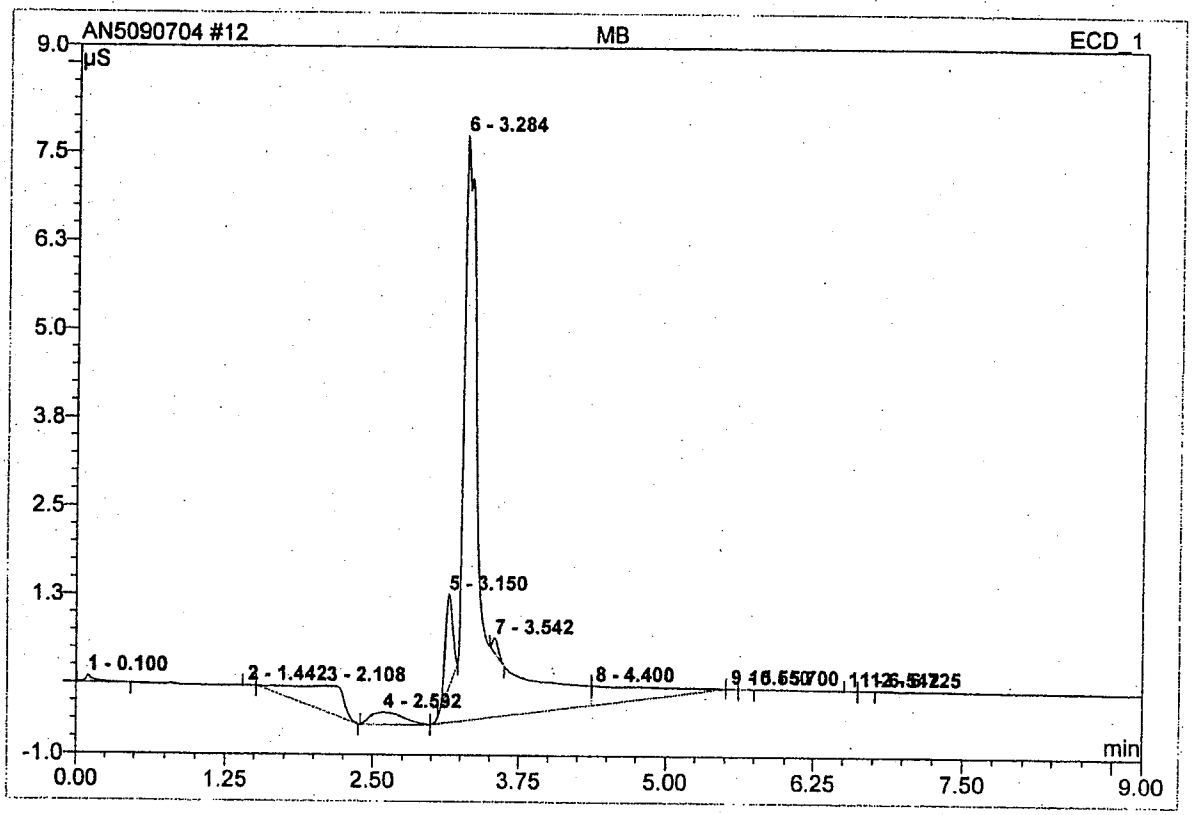
Title:
Datasource: ACQWET10_local
Location:
Timebase: ICS2500
#Samples: 40

Created: 9/7/2004 9:58:31 AM by acqwet10
Last Update: 9/7/2004 3:53:14 PM by acqwet10

No.	Name	Inj. Date/Time	Weight	Dil. Factor	ISTD Amount	Sample ID	Replicate ID	Comment
1	STD1/LVL1	5/5/2004 9:26:21 AM	1.0000	1.0000	1.0000		01	
2	STD1/LVL1	5/5/2004 9:38:17 AM	1.0000	1.0000	1.0000		02	
3	STD2/LVL2	5/5/2004 9:50:12 AM	1.0000	1.0000	1.0000		03	
4	STD3/LVL3	5/5/2004 10:02:08 AM	1.0000	1.0000	1.0000		04	
5	STD4/LVL4	5/5/2004 10:13:33 AM	1.0000	1.0000	1.0000		05	
6	STD5/LVL5	5/5/2004 10:24:59 AM	1.0000	1.0000	1.0000		06	
7	STD6/LVL6	5/5/2004 10:36:24 AM	1.0000	1.0000	1.0000		07	
8	STD7/LVL7	5/5/2004 10:47:49 AM	1.0000	1.0000	1.0000		08	
9	STD8/LVL8	5/5/2004 10:59:14 AM	1.0000	1.0000	1.0000		09	
10	IPC	9/7/2004 11:18:29 AM	1.0000	1.0000	1.0000		09	
11	IPC	9/7/2004 11:41:17 AM	1.0000	1.0000	1.0000		09	
12	MB	9/7/2004 11:52:44 AM	1.0000	1.0000	1.0000		09	
13	ICCS	9/7/2004 12:04:23 PM	1.0000	1.0000	1.0000		09	
14	R-ION06145 LCS	9/7/2004 12:15:20 PM	1.0000	10.0000	1.0000		09	
15	ICCS	9/7/2004 12:39:01 PM	1.0000	1.0000	1.0000		09	
16	LFB/CCV1	9/7/2004 12:49:55 PM	1.0000	1.0000	1.0000		09	
17	6539-1	9/7/2004 1:01:05 PM	1.0000	2.0000	1.0000		09	
18	6539-2F	9/7/2004 1:13:12 PM	1.0000	2.0000	1.0000		09	
19	6714-1	9/7/2004 1:24:43 PM	1.0000	10.0000	1.0000		09	
20	6714-2F	9/7/2004 1:36:10 PM	1.0000	10.0000	1.0000		09	
21	6714-3F	9/7/2004 1:46:50 PM	1.0000	10.0000	1.0000		09	
22	6714-4	9/7/2004 1:58:27 PM	1.0000	2.0000	1.0000		09	
23	6561-1	9/7/2004 2:10:02 PM	1.0000	2.0000	1.0000		09	
24	6576-1	9/7/2004 2:21:26 PM	1.0000	2.0000	1.0000		09	
25	6576-2	9/7/2004 2:32:51 PM	1.0000	2.0000	1.0000		09	
26	RB	9/7/2004 2:44:17 PM	1.0000	1.0000	1.0000		09	
27	CCV2	9/7/2004 2:55:43 PM	1.0000	1.0000	1.0000		09	
28	6576-3F	9/7/2004 3:07:08 PM	1.0000	2.0000	1.0000		09	
29	6576-4F	9/7/2004 3:18:33 PM	1.0000	2.0000	1.0000		09	
30	6576-5	9/7/2004 3:29:59 PM	1.0000	2.0000	1.0000		09	
31	6575-1	9/7/2004 3:41:24 PM	1.0000	2.0000	1.0000		09	
32	6575-2	9/7/2004 3:52:50 PM	1.0000	2.0000	1.0000		09	
33	6575-3	9/7/2004 4:04:15 PM	1.0000	2.0000	1.0000		09	
34	6575-4	9/7/2004 4:15:41 PM	1.0000	2.0000	1.0000		09	
35	6539-1D	9/7/2004 4:27:06 PM	1.0000	2.0000	1.0000		09	
36	6539-1SPK	9/7/2004 4:38:31 PM	1.0000	2.0000	1.0000		09	
37	6539-1MSD	9/7/2004 4:49:56 PM	1.0000	2.0000	1.0000		09	
38	6714-1	9/7/2004 5:01:21 PM	1.0000	2.0000	1.0000		09	
39	6714-4	9/7/2004 5:12:47 PM	1.0000	10.0000	1.0000		09	
40	ECCV	9/7/2004 5:24:12 PM	1.0000	1.0000	1.0000		09	

12 MB

Sample Name:	**MB**	*Injection Volume:*	**1000.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 11:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

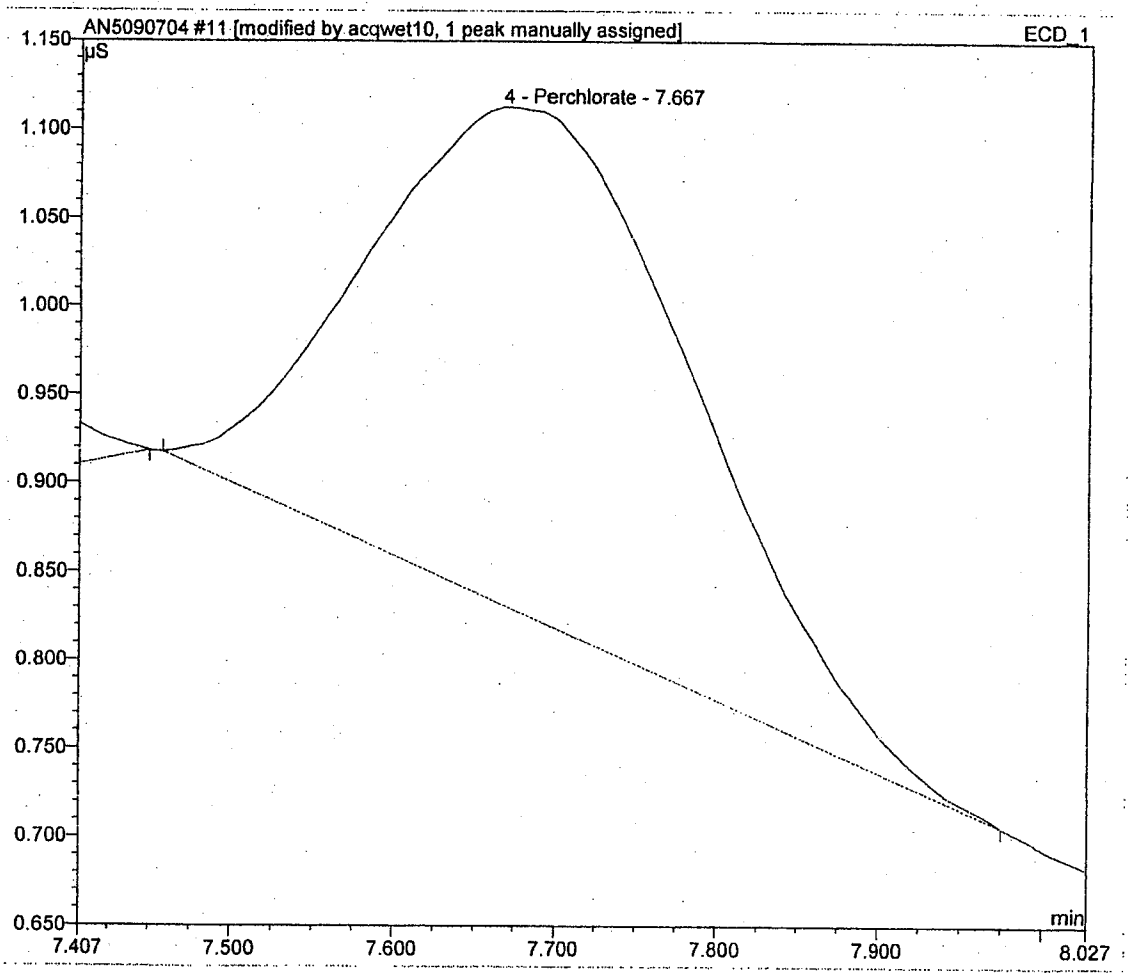


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.10	n.a.	0.101	0.010	0.47	n.a.	BMB
2	1.44	n.a.	0.005	0.000	0.01	n.a.	BMB
3	2.11	n.a.	0.369	0.170	8.31	n.a.	bMB
4	2.59	n.a.	0.174	0.055	2.70	n.a.	BMb
5	3.15	n.a.	1.322	0.093	4.55	n.a.	Ru
6	3.28	n.a.	8.267	1.550	75.71	n.a.	bM
7	3.54	n.a.	0.211	0.012	0.59	n.a.	Rd
8	4.40	n.a.	0.268	0.155	7.59	n.a.	Mb
9	5.55	n.a.	0.005	0.000	0.01	n.a.	bMb
10	5.70	n.a.	0.007	0.000	0.02	n.a.	bMB
11	6.54	n.a.	0.003	0.000	0.01	n.a.	BMb

12	6.73	n.a.	0.004	0.000	0.02	n.a.	bMB
Total:			10.735	2.047	100.00	0.000	

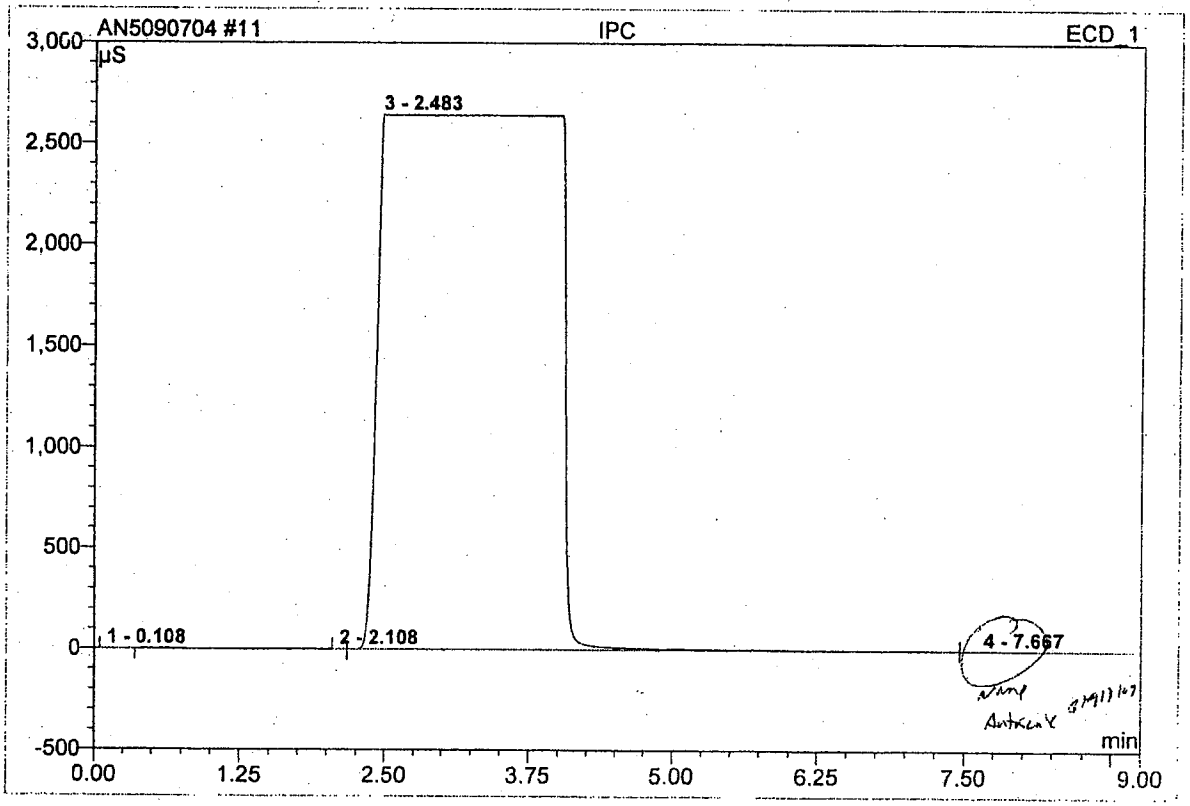
Sample Name:	**IPC**	*Inj. Vol.:*	**1000.0**
Sample Type:	**unknown**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**07.09.04 11:41**	*Run Time:*	**9.00**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
4	7.67	Perchlorate	BMB*^	0.068	0.281	26.4770
		TOTAL:		0.07	0.28	26.48



11 IPC

Sample Name:	**IPC**	*Injection Volume:*	**1000.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 11:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.090	0.007	0.00	n.a.	BMB
2	2.11	n.a.	0.003	0.000	0.00	n.a.	BMb
3	2.48	n.a.	2645.316	4381.024	99.99	n.a.	bM
4	7.67	n.a.	0.739	0.428	0.01	n.a.	MB
Total:			2646.148	4381.459	100.00	0.000	

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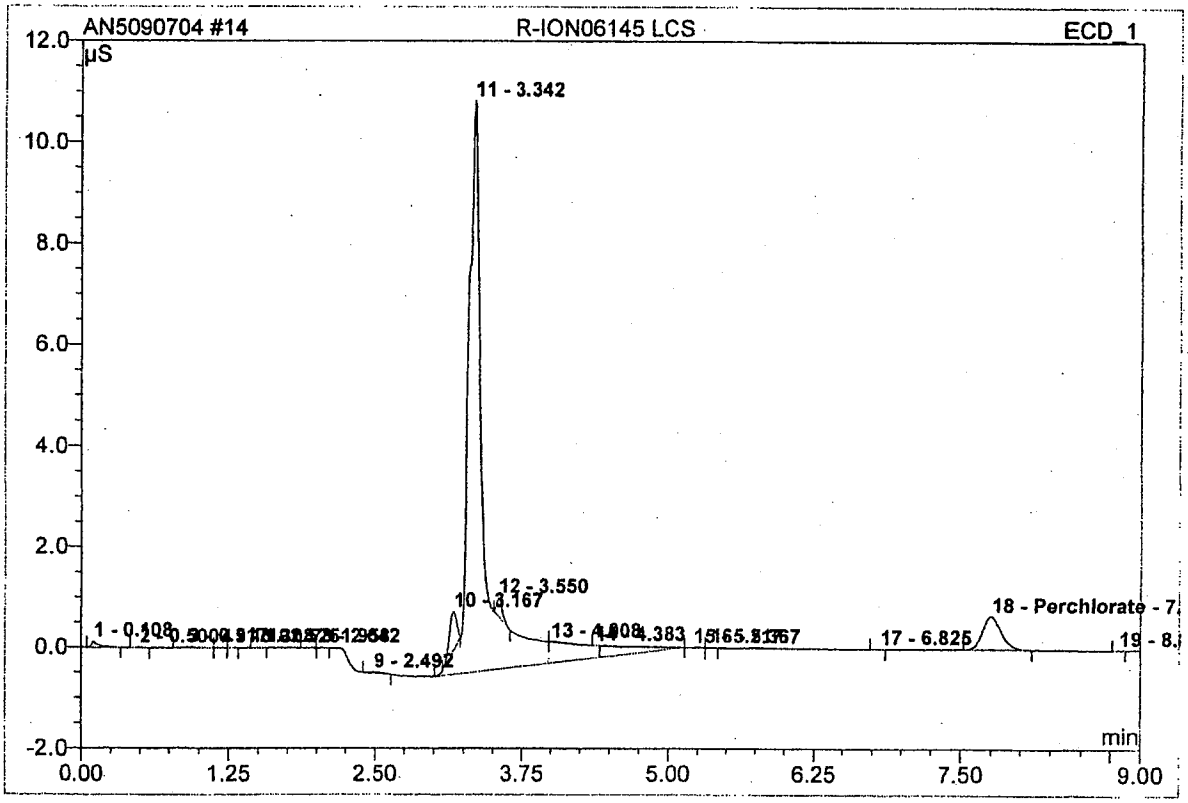
14 R-ION06145 LCS

Sample Name:	**R-ION06145 LCS**	*Injection Volume:*	**1000.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**10.0000**
Recording Time:	**9/7/2004 12:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



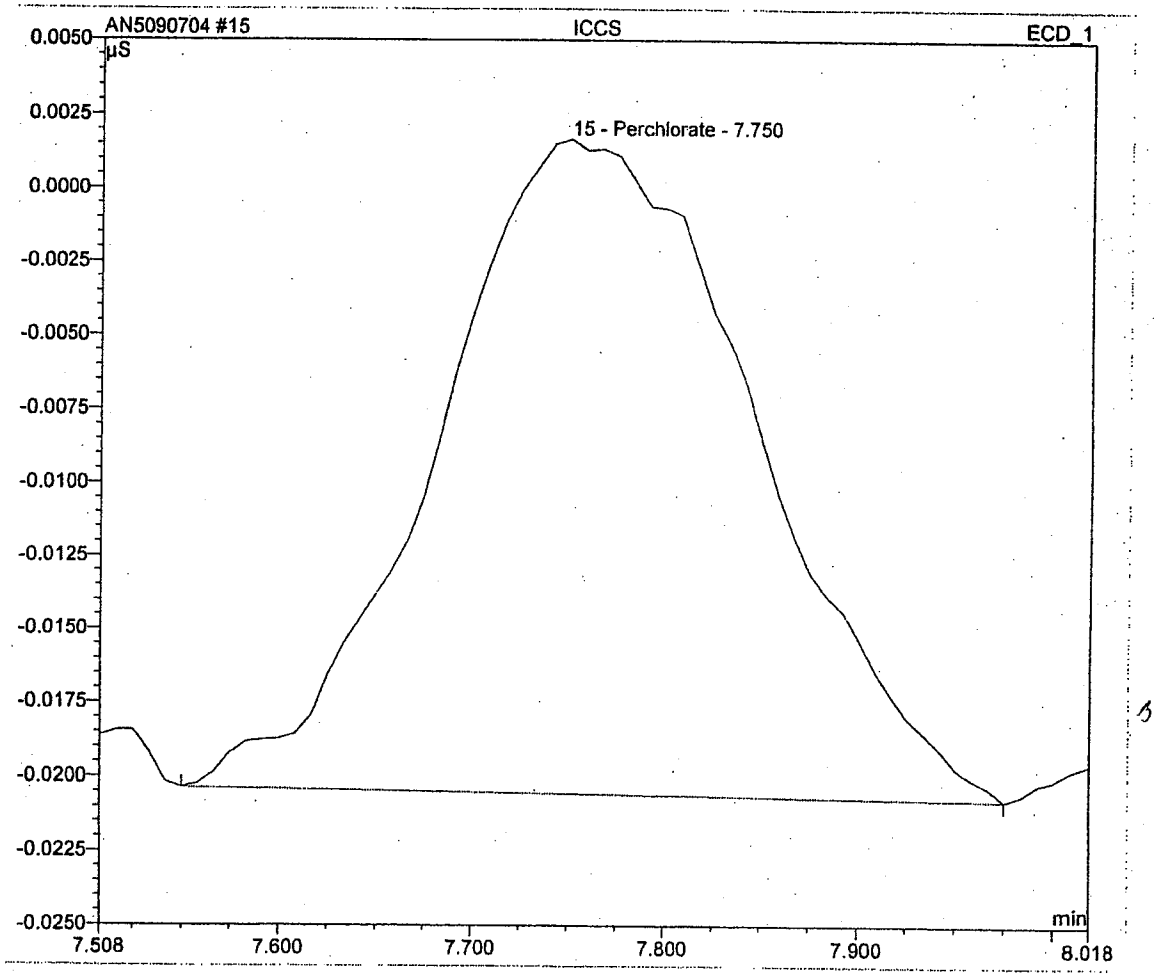
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.114	0.008	0.39	n.a.	BMB
2	0.50	n.a.	0.005	0.000	0.02	n.a.	BMB
3	0.92	n.a.	0.016	0.003	0.14	n.a.	BM
4	1.19	n.a.	0.005	0.000	0.02	n.a.	M
5	1.31	n.a.	0.005	0.000	0.01	n.a.	MB
6	1.53	n.a.	0.004	0.000	0.01	n.a.	BMB
7	1.96	n.a.	0.006	0.000	0.02	n.a.	BM
8	2.04	n.a.	0.006	0.000	0.02	n.a.	MB
9	2.49	n.a.	0.028	0.004	0.18	n.a.	BMB
10	3.17	n.a.	0.765	0.055	2.60	n.a.	Ru
11	3.34	n.a.	11.312	1.694	79.37	n.a.	BM

12	3.55	n.a.	0.384	0.023	1.05	n.a.	Rd
13	4.01	n.a.	0.417	0.224	10.50	n.a.	MB
14	4.38	n.a.	0.003	0.000	0.00	n.a.	Rd
15	5.22	n.a.	0.006	0.001	0.02	n.a.	bMb
16	5.37	n.a.	0.005	0.000	0.01	n.a.	bMB
17	6.83	n.a.	0.005	0.000	0.01	n.a.	BMB
18	7.76	Perchlorate	0.656	0.120	5.61	468.862	BMB
19	8.83	n.a.	0.005	0.000	0.01	n.a.	BMB
Total:			13.748	2.134	100.00	468.862	

9/7/04

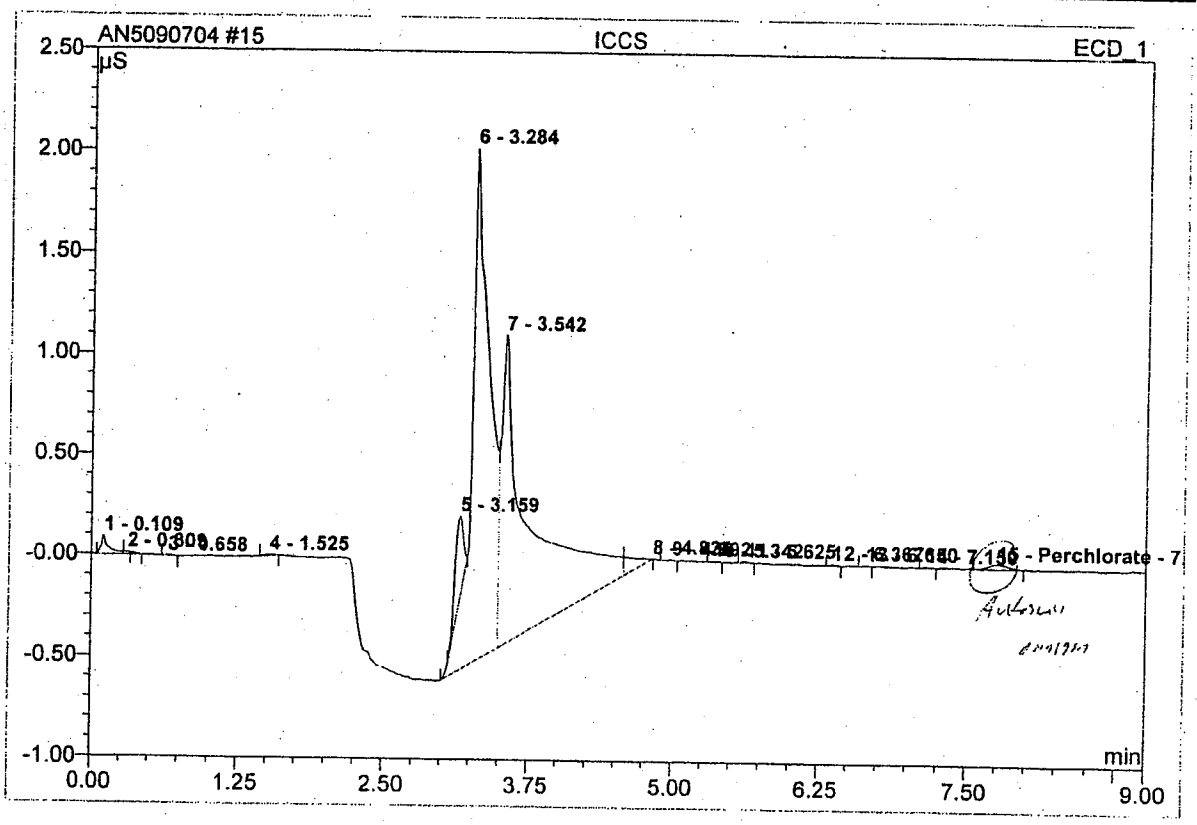
Sample Name:	ICCS	*Inj. Vol.:*	1000.0
Sample Type:	unknown	*Dilution Factor:*	1.0000
Program:	PERCHLORATE	*Operator:*	n.a.
Inj. Date/Time:	07.09.04 12:39	*Run Time:*	9.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
15	7.75	Perchlorate	BMB	0.004	0.022	1.6602
		TOTAL:		0.00	0.02	1.66



15 ICCS

Sample Name:	**ICCS**	*Injection Volume:*	**1000.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 12:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.091	0.008	0.78	n.a.	BMB
2	0.31	n.a.	0.003	0.000	0.01	n.a.	Rd
3	0.66	n.a.	0.004	0.000	0.03	n.a.	BMB
4	1.53	n.a.	0.006	0.001	0.06	n.a.	BMB
5	3.16	n.a.	0.420	0.033	3.42	n.a.	Ru
6	3.28	n.a.	2.539	0.450	46.89	n.a.	BM
7	3.54	n.a.	1.536	0.451	47.01	n.a.	M
8	4.83	n.a.	0.000	0.011	1.16	n.a.	MB
9	4.99	n.a.	0.005	0.000	0.04	n.a.	BMB
10	5.34	n.a.	0.004	0.000	0.03	n.a.	BMB
11	5.63	n.a.	0.005	0.000	0.04	n.a.	BMB

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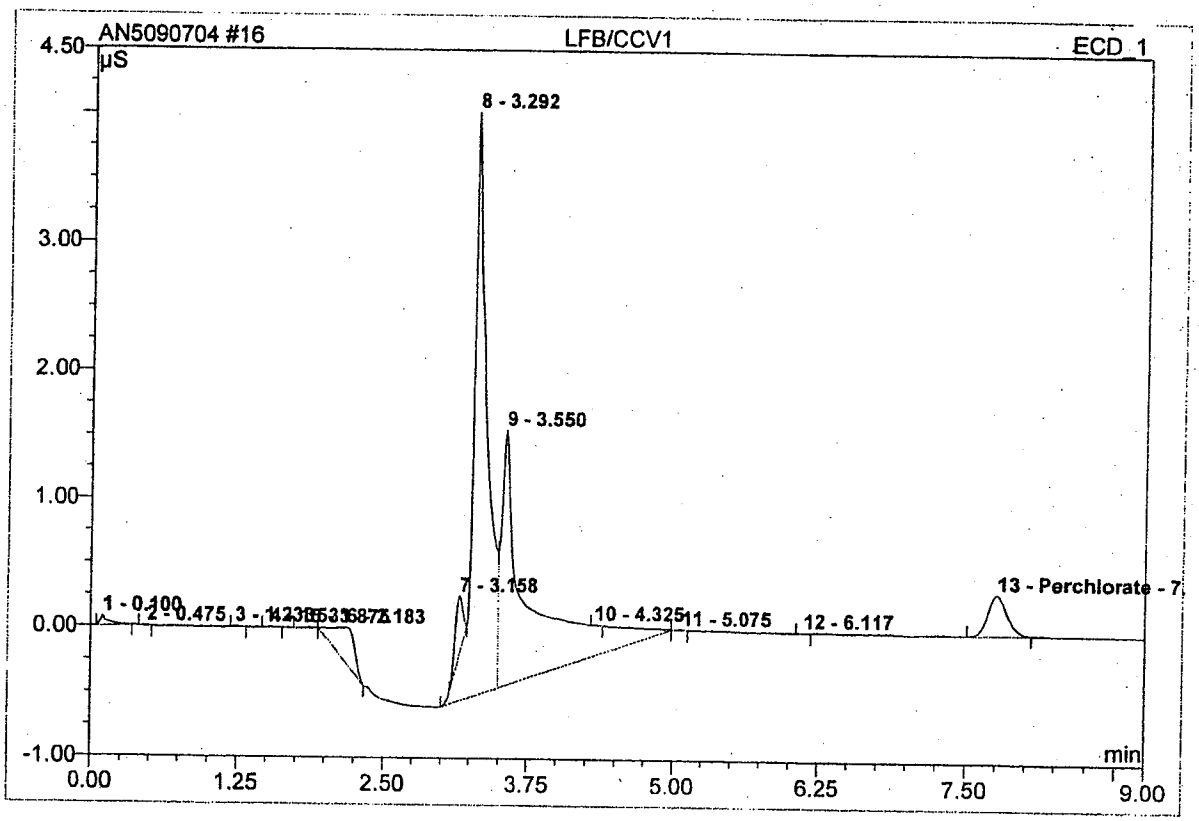
12	6.37	n.a.	0.005	0.000	0.03	n.a.	BMB
13	6.65	n.a.	0.004	0.000	0.02	n.a.	BMB
14	7.15	n.a.	0.004	0.000	0.04	n.a.	BMB
15	7.75	Perchlorate	0.022	0.004	0.44	1.660	BMB
Total:			4.649	0.960	100.00	1.660	

16 LFB/CCV1

Sample Name:	**LFB/CCV1**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 12:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

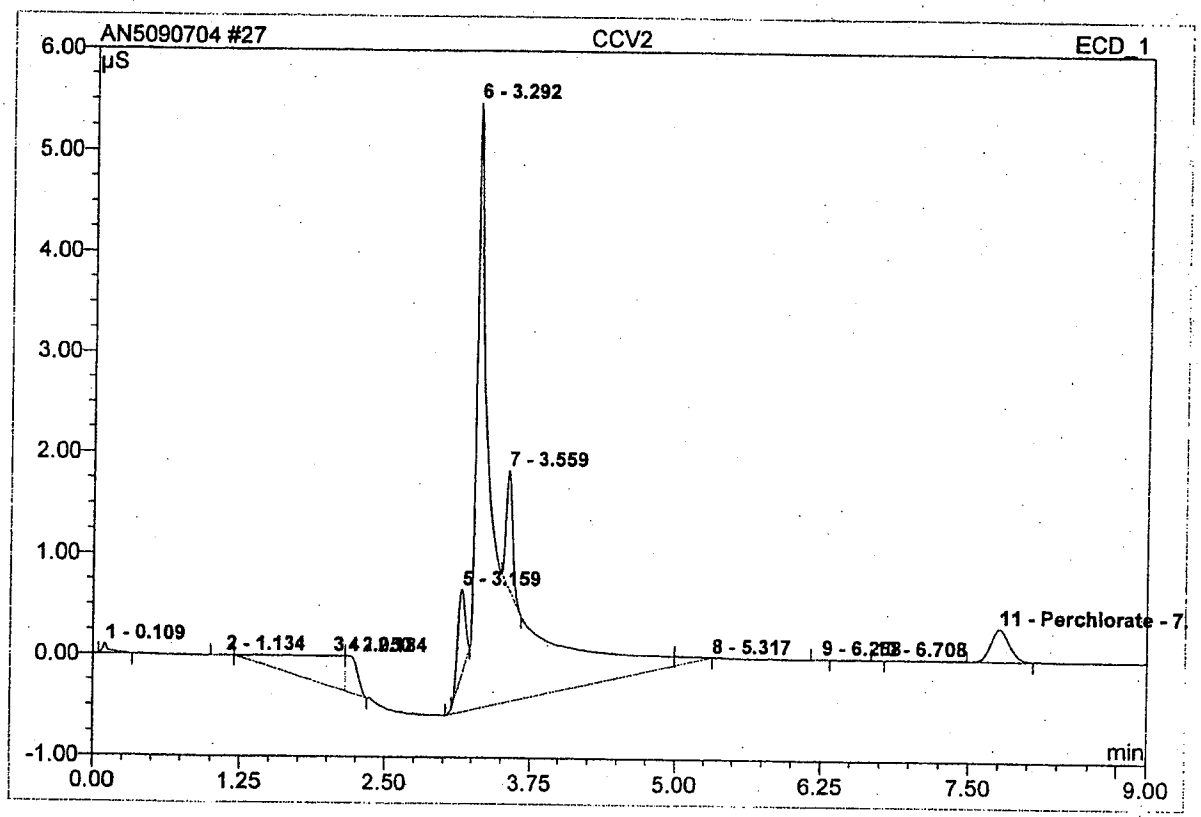


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.10	n.a.	0.075	0.006	0.43	n.a.	BMB
2	0.48	n.a.	0.004	0.000	0.02	n.a.	BMB
3	1.23	n.a.	0.007	0.000	0.03	n.a.	BMB
4	1.53	n.a.	0.003	0.000	0.03	n.a.	BMB
5	1.88	n.a.	0.004	0.001	0.04	n.a.	BMB
6	2.18	n.a.	0.278	0.058	4.33	n.a.	bMB
7	3.16	n.a.	0.454	0.035	2.59	n.a.	Ru
8	3.29	n.a.	4.535	0.624	46.61	n.a.	BM
9	3.55	n.a.	1.985	0.556	41.53	n.a.	Mb
10	4.33	n.a.	0.005	0.000	0.01	n.a.	Rd
11	5.08	n.a.	0.004	0.000	0.02	n.a.	bMB

12	6.12	n.a.	0.004	0.000	0.02	n.a.	BMB
13	7.76	Perchlorate	0.317	0.058	4.35	22.806	BMB
Total:			7.675	1.339	100.00	22.806	

27 CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**1000.0**
Vial Number:	**25**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 14:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

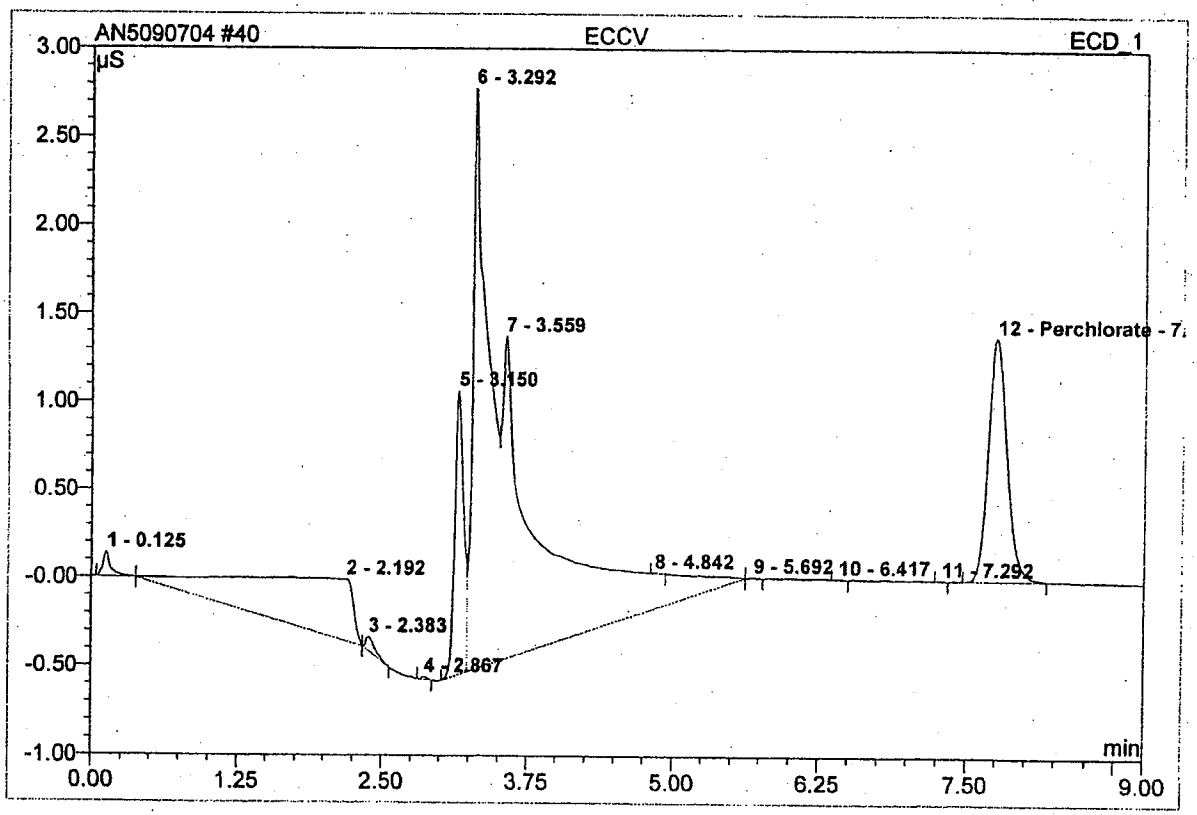


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.11	n.a.	0.096	0.006	0.36	n.a.	BMB
2	1.13	n.a.	0.004	0.000	0.02	n.a.	BMB
3	2.05	n.a.	0.310	0.164	9.13	n.a.	bM
4	2.18	n.a.	0.358	0.044	2.44	n.a.	MB
5	3.16	n.a.	0.844	0.061	3.40	n.a.	Ru
6	3.29	n.a.	6.002	1.371	76.34	n.a.	BM
7	3.56	n.a.	1.157	0.074	4.13	n.a.	Rd
8	5.32	n.a.	0.000	0.015	0.83	n.a.	MB
9	6.26	n.a.	0.005	0.000	0.02	n.a.	BMB
10	6.71	n.a.	0.003	0.000	0.01	n.a.	BMB
11	7.76	Perchlorate	0.325	0.060	3.31	23.308	BMB

Total:		9.104	1.797	100.00	23.308

40 ECCV

Sample Name:	**ECCV**	*Injection Volume:*	**1000.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**PERCHLORATE**	*Bandwidth:*	**n.a.**
Quantif. Method:	**PERCHLORATE**	*Dilution Factor:*	**1.0000**
Recording Time:	**9/7/2004 17:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppb	Type
1	0.13	n.a.	0.139	0.011	0.52	n.a.	BMb
2	2.19	n.a.	0.348	0.346	16.88	n.a.	bMB
3	2.38	n.a.	0.079	0.007	0.34	n.a.	bMB
4	2.87	n.a.	0.015	0.001	0.04	n.a.	BMB
5	3.15	n.a.	1.613	0.145	7.07	n.a.	BM
6	3.29	n.a.	3.293	0.512	24.97	n.a.	M
7	3.56	n.a.	1.834	0.775	37.81	n.a.	Mb
8	4.84	n.a.	0.003	0.000	0.01	n.a.	Rd
9	5.69	n.a.	0.005	0.000	0.02	n.a.	bMB
10	6.42	n.a.	0.003	0.000	0.01	n.a.	BMB
11	7.29	n.a.	0.004	0.000	0.01	n.a.	BMB

12	7.75	Perchlorate	1.384	0.252	12.31	98.849	BMB	99
Total:			8.720	2.051	100.00	98.849		

SP9/7/04

COLUMBIA ANALYTICAL SERVICE, INC.

Service Request #: 6714 6539 6576 6575 6561 Method: EPA 120.1

Analysis For: Conductivity (specific conductance, µmhos/cm at 25°C) Matrix: Water

Standardization: Low Range 1.413 µmhos/cm
High Range 50,000 µmhos/cm

Cell Constant = True Value / Meter Value = 1413/1411 = 1.00

Sample Name	MB	1413	LCS	6714-1	6714-1D	6714-2	6714-3	6714-4	6539-1	6539-2
u/m Range	u	u	u	u	u	u	u	u	u	m
Reading	0.39	1417	1317	5605	5606	2260	2068	471	1648	2.14
Conductivity	<2	1420	1320	5605	5606	226	208	471	1650	2140

Sample Name	6576-1	6576-2	6576-3	6576-4	MB	1413	6576-5	6575-1	6575-2	6575-3
u/m Range	u	~~m~~ u	u	u	u	u	u	u	u	u
Reading	1431	1543	1432	1503	0.54	1426	1334	779	822	808
Conductivity	1430	1540	1430	1500	<2	1430	1330	779	822	808

Sample Name	6575-4	6576-4	MB	1413						
u/m Range	u	u	u	u						
Reading	807	284	0.87	1434						
Conductivity	807	284	<2	1430						

Sample Name										
u/m Range										
Reading										
Conductivity										

LCS = APG 4053 Lot #: 32092-3 ID #: Cond/1-5-1D T.V. = 1300 % REC = 102

Conductivity = **u=Reading x 1, m=Reading x 1,000**

1413 STD ID #: Cond/1-13-1

50,000 STD ID #:

Comments: DSP 9/3/04

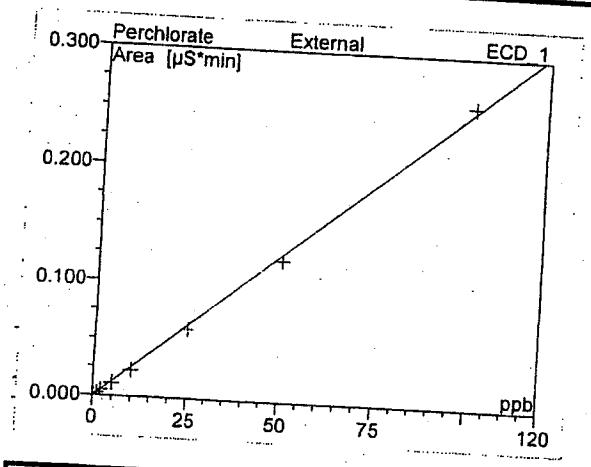
	T	RPD
6714-1+1D	5606	4

Analyzed By: SR	Date: 9/3/04	Time: 1315	
Reviewed By:	Date: 9/8/04		

COND

00037

Sequence:	**AN5050504**	*Inj. Vol.:*	**1000.0**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05/05/04 10:24**	*Run Time:*	**9.00**

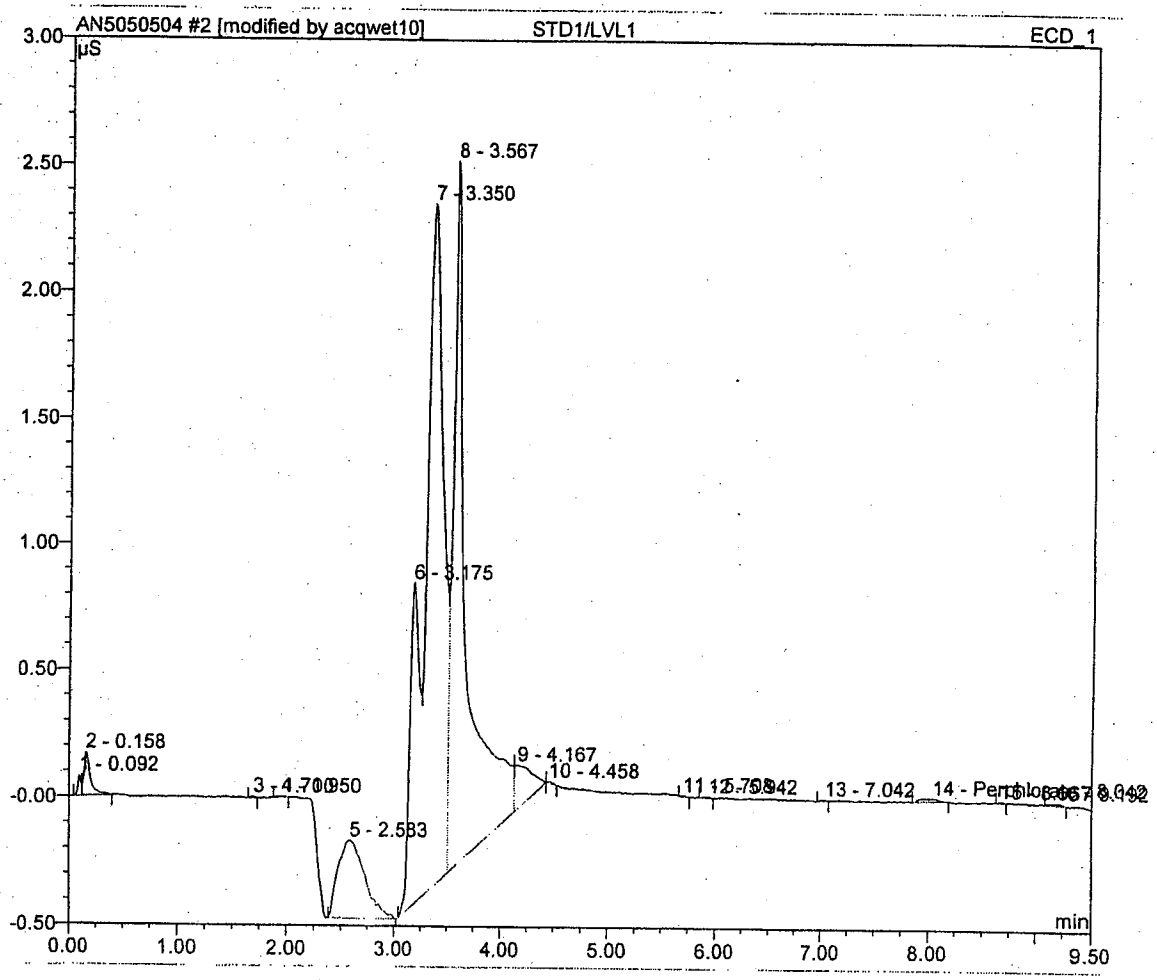


No.	Ret.Time min	Peak Name	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Corr.Coeff. %
14	7.99	Perchlorate	Lin	8	0.000	0.003	0.000	99.957
		AVERAGE:			0.0000	0.0025	0.0000	99.9569

Sample Name:	**STD1/LVL1**	*Inj. Vol.:*	**1000.0**
Sample Type:	**standard**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05.05.04 09:38**	*Run Time:*	**9.50**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
14	8.04	Perchlorate	BMB*	0.002	0.012	0.9259
		TOTAL:		0.00	0.01	0.93

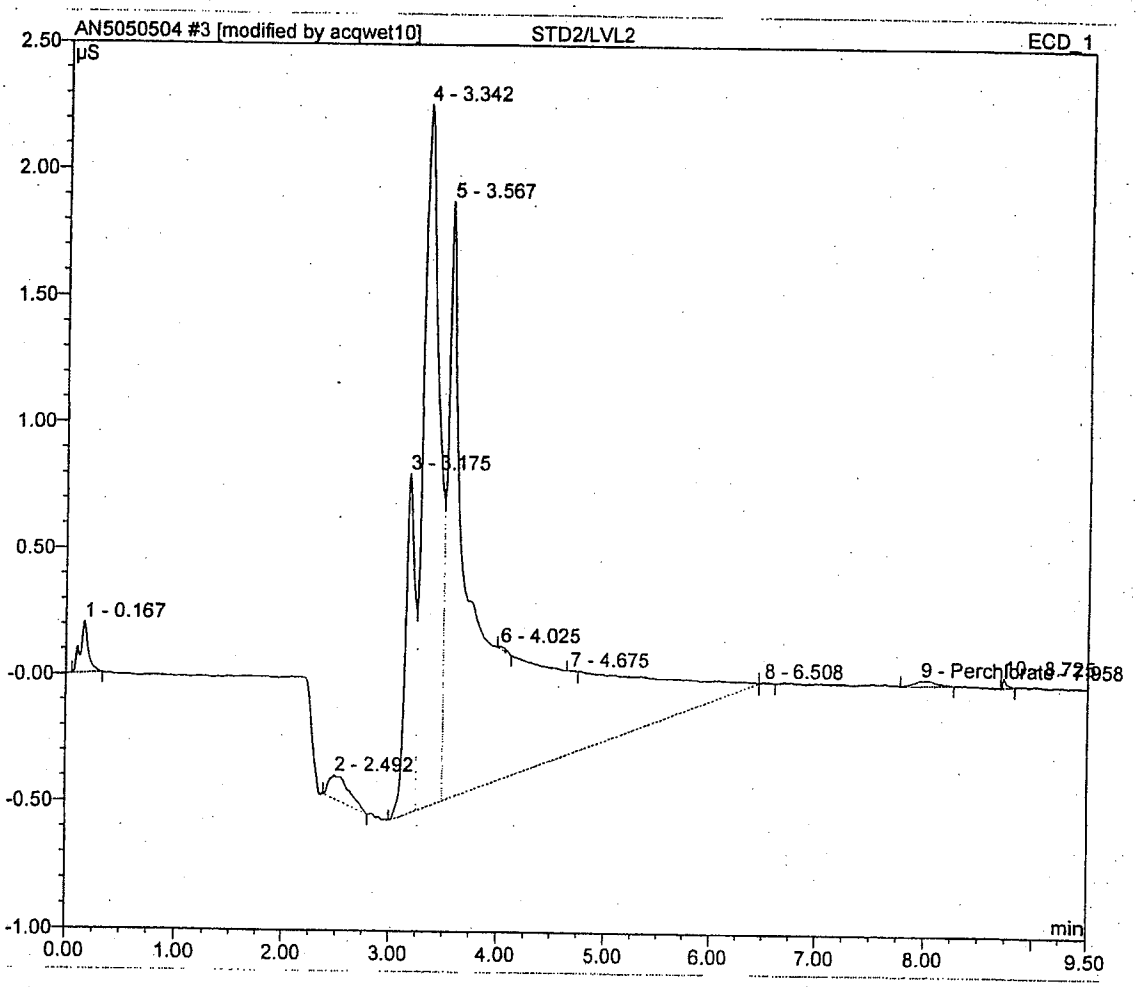
True Value
1.0 ppb



Sample Name:	**STD2/LVL2**	*Inj. Vol.:*	**1000.0**
Sample Type:	**standard**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05.05.04 09:50**	*Run Time:*	**9.50**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
9	7.96	Perchlorate	BMB*	0.005	0.021	2.0081
		TOTAL:		0.01	0.02	2.01

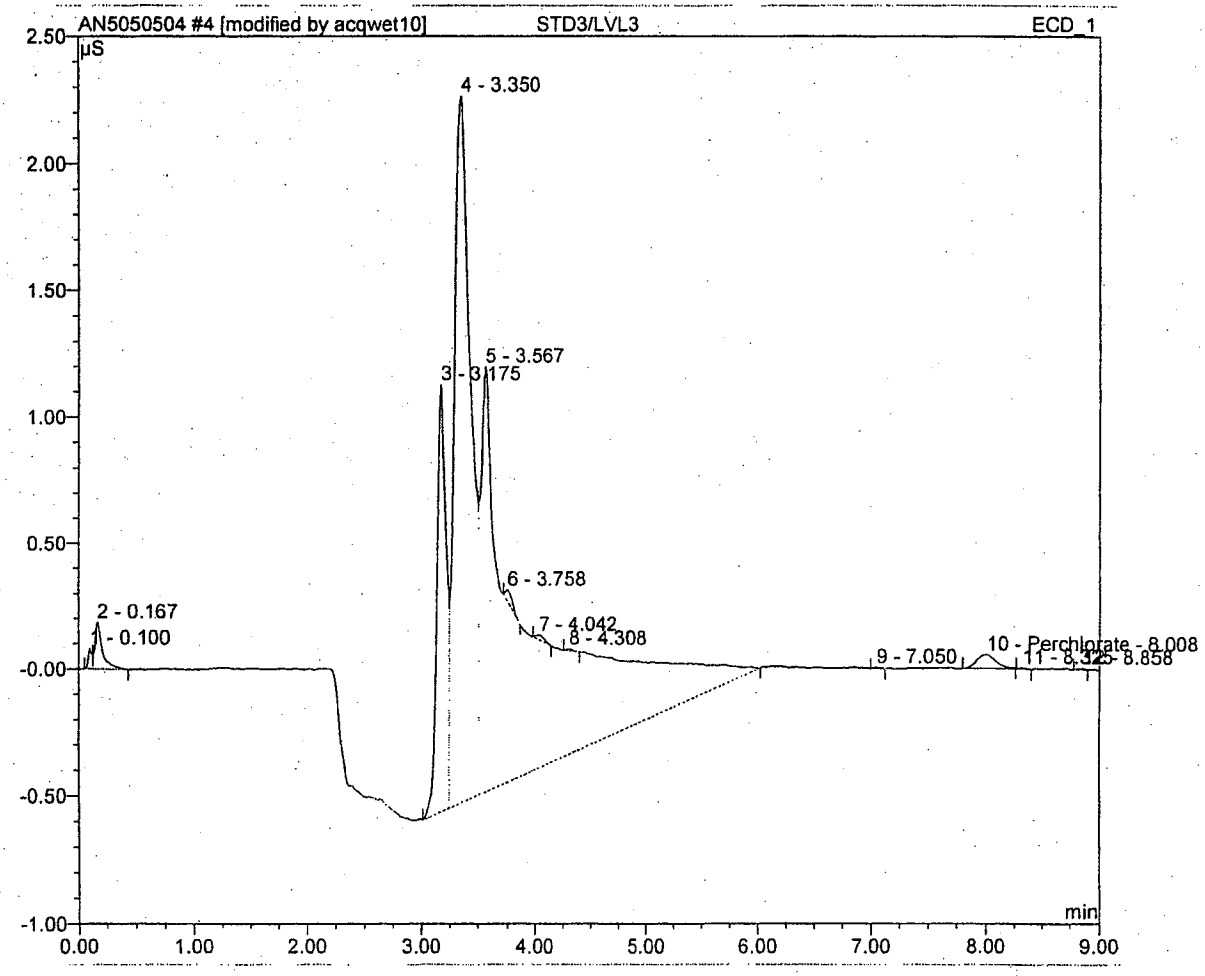
True value 2.0 ppb



Sample Name:	**STD3/LVL3**	*Inj. Vol.:*	**1000.0**
Sample Type:	**standard**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05.05.04 10:02**	*Run Time:*	**9.00**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
10	8.01	Perchlorate	BMB*	0.011	0.056	4.2837
		TOTAL:		0.01	0.06	4.28

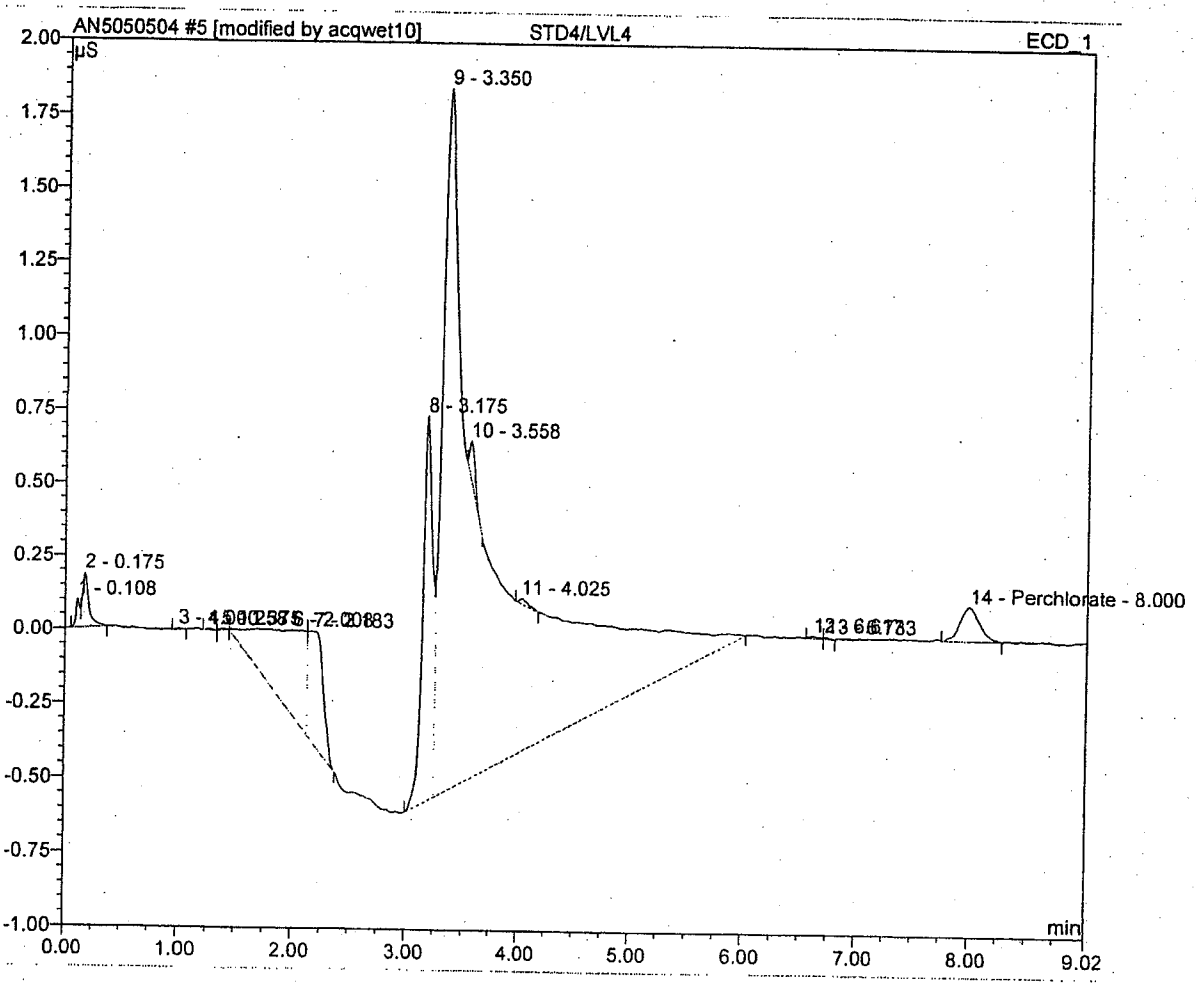
True Value 5.0 ppb



Sample Name:	STD4/LVL4	*Inj. Vol.:*	1000.0
Sample Type:	standard	*Dilution Factor:*	1.0000
Program:	PERCHLORATE	*Operator:*	n.a.
Inj. Date/Time:	05.05.04 10:13	*Run Time:*	9.02

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
14	8.00	Perchlorate	BMB*	0.023	0.116	8.8678
		TOTAL:		0.02	0.12	8.87

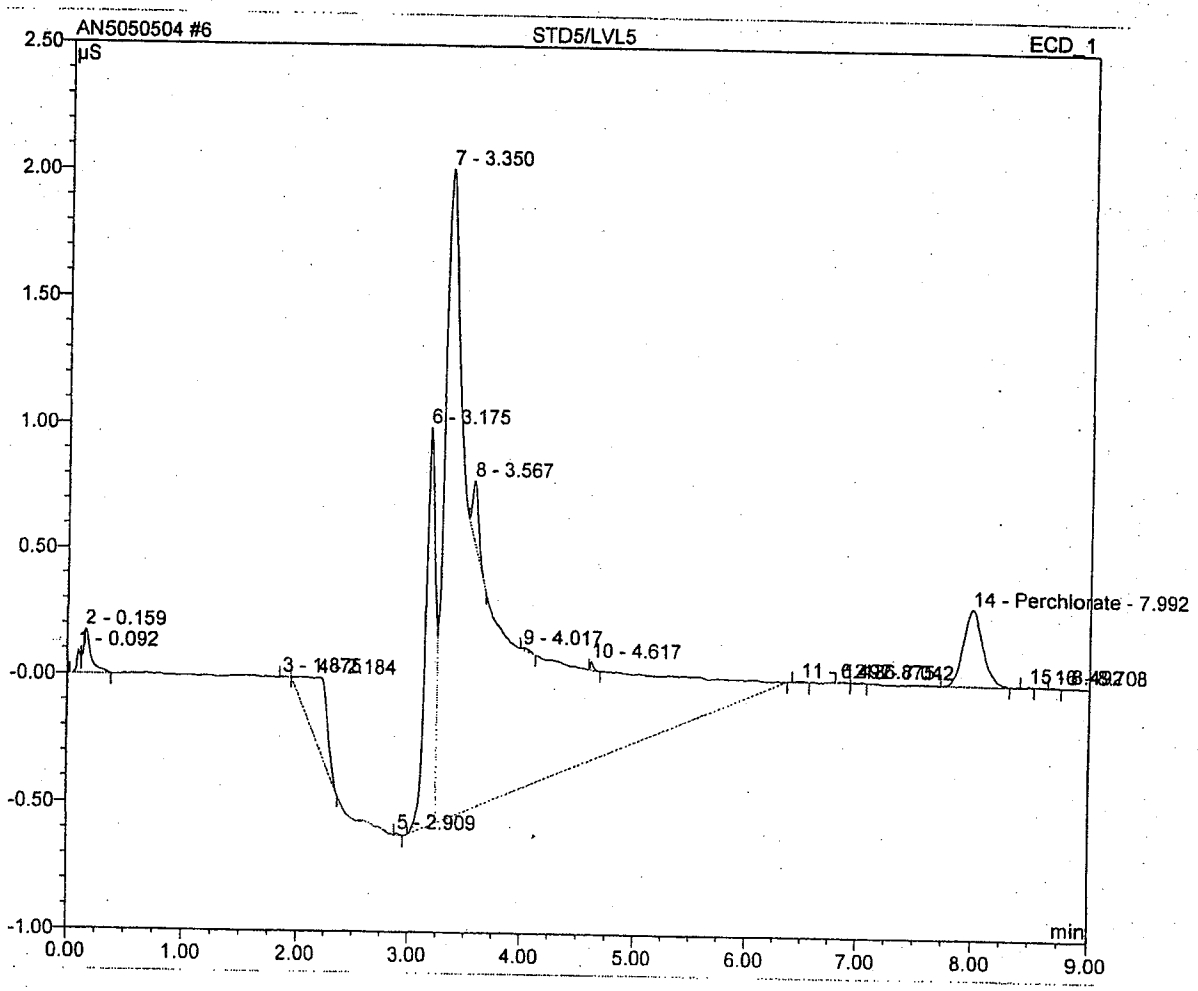
True Value
10.0 ppb



Sample Name:	STD5/LVL5	*Inj. Vol.:*	1000.0
Sample Type:	standard	*Dilution Factor:*	1.0000
Program:	PERCHLORATE	*Operator:*	n.a.
Inj. Date/Time:	05.05.04 10:24	*Run Time:*	9.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
14	7.99	Perchlorate	BMB	0.059	0.305	23.3757
		TOTAL:		0.06	0.30	23.38

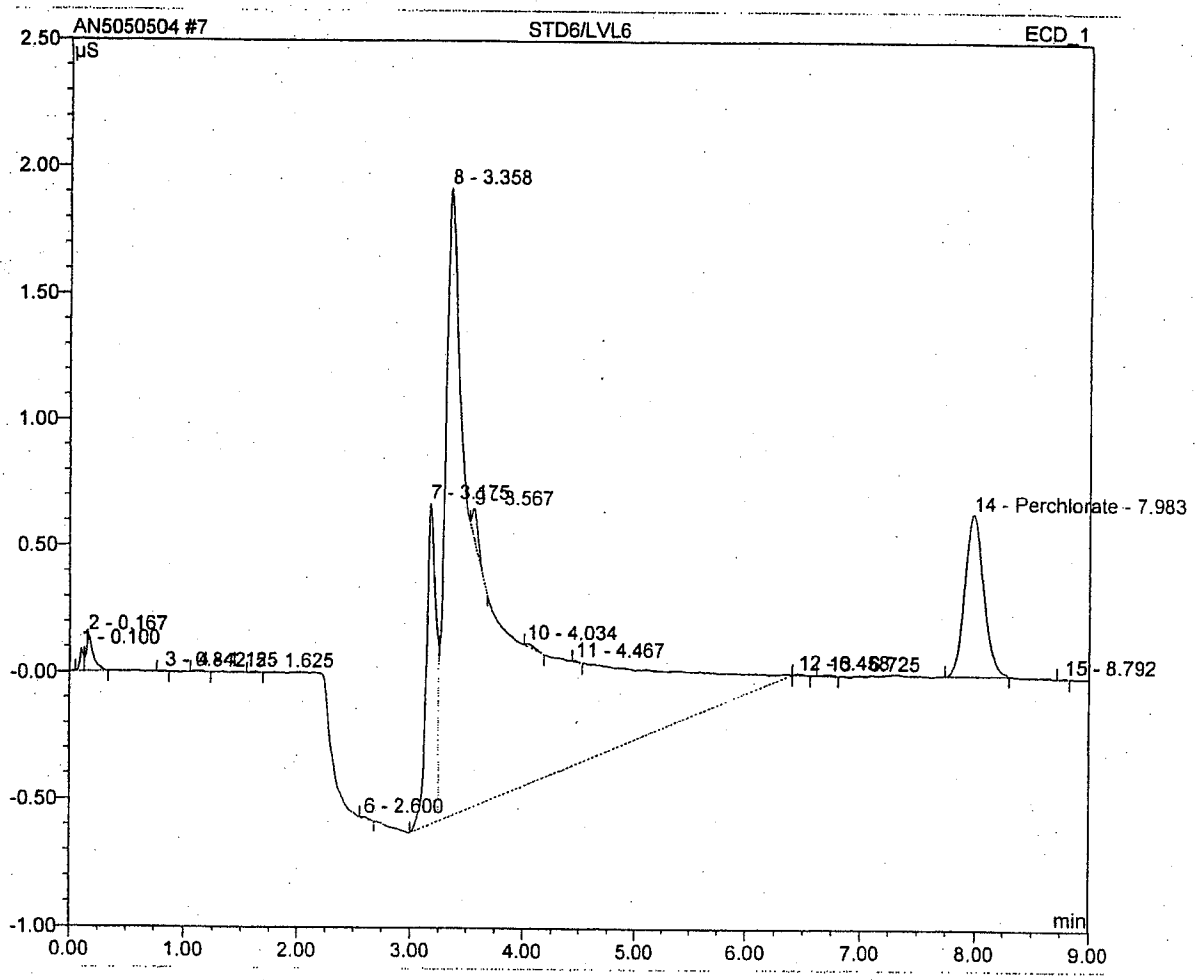
True Value
25.0 ppb



Sample Name:	**STD6/LVL6**	*Inj. Vol.:*	**1000.0**
Sample Type:	**standard**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05.05.04 10:36**	*Run Time:*	**9.00**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
14	7.98	Perchlorate	BMB	0.122	0.637	47.8996
		TOTAL:		0.12	0.64	47.90

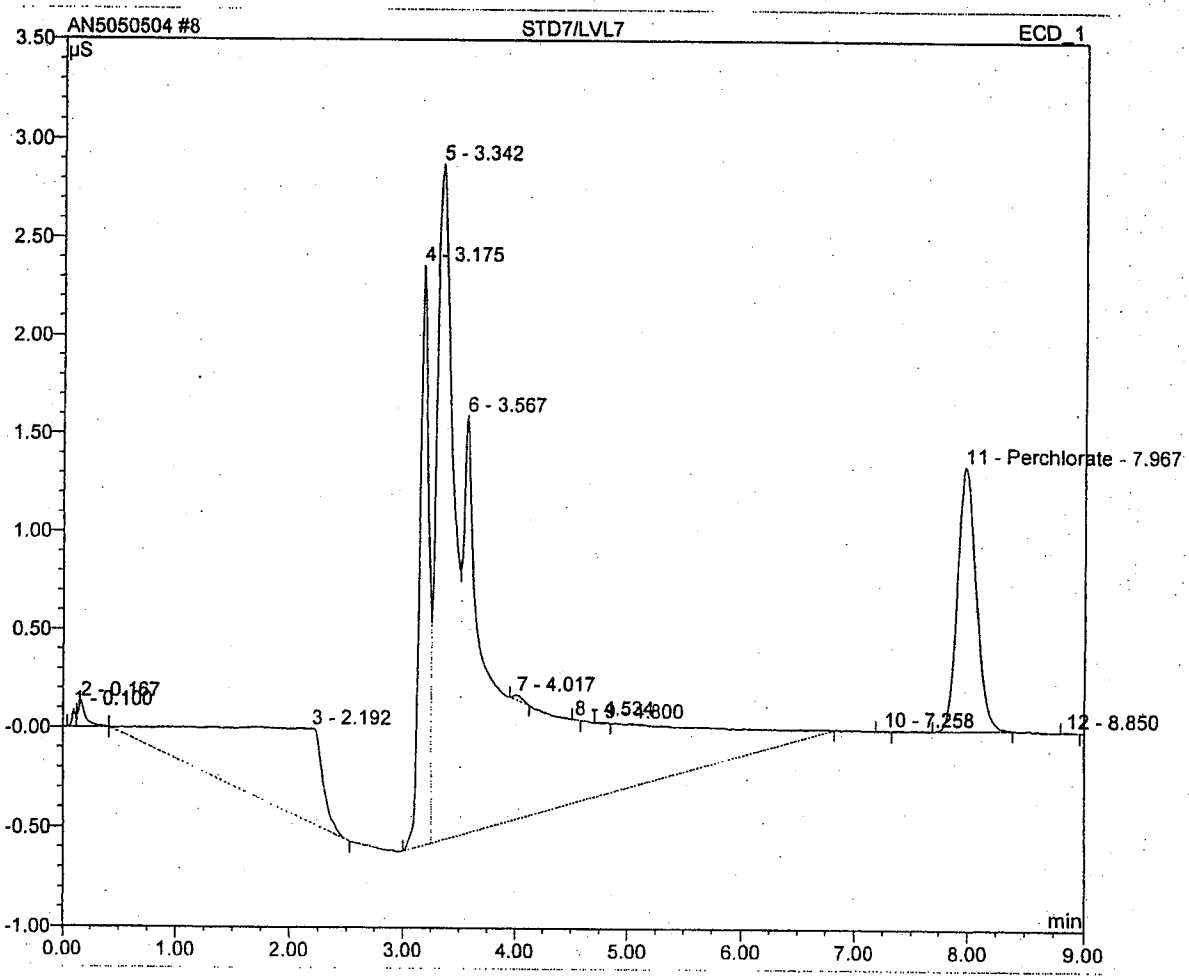
True Value
50.0 ppb



Sample Name:	STD7/LVL7	*Inj. Vol.:*	1000.0
Sample Type:	standard	*Dilution Factor:*	1.0000
Program:	PERCHLORATE	*Operator:*	n.a.
Inj. Date/Time:	05.05.04 10:47	*Run Time:*	9.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
11	7.97	Perchlorate	BMB	0.258	1.346	101.6140
		TOTAL:		0.26	1.35	101.61

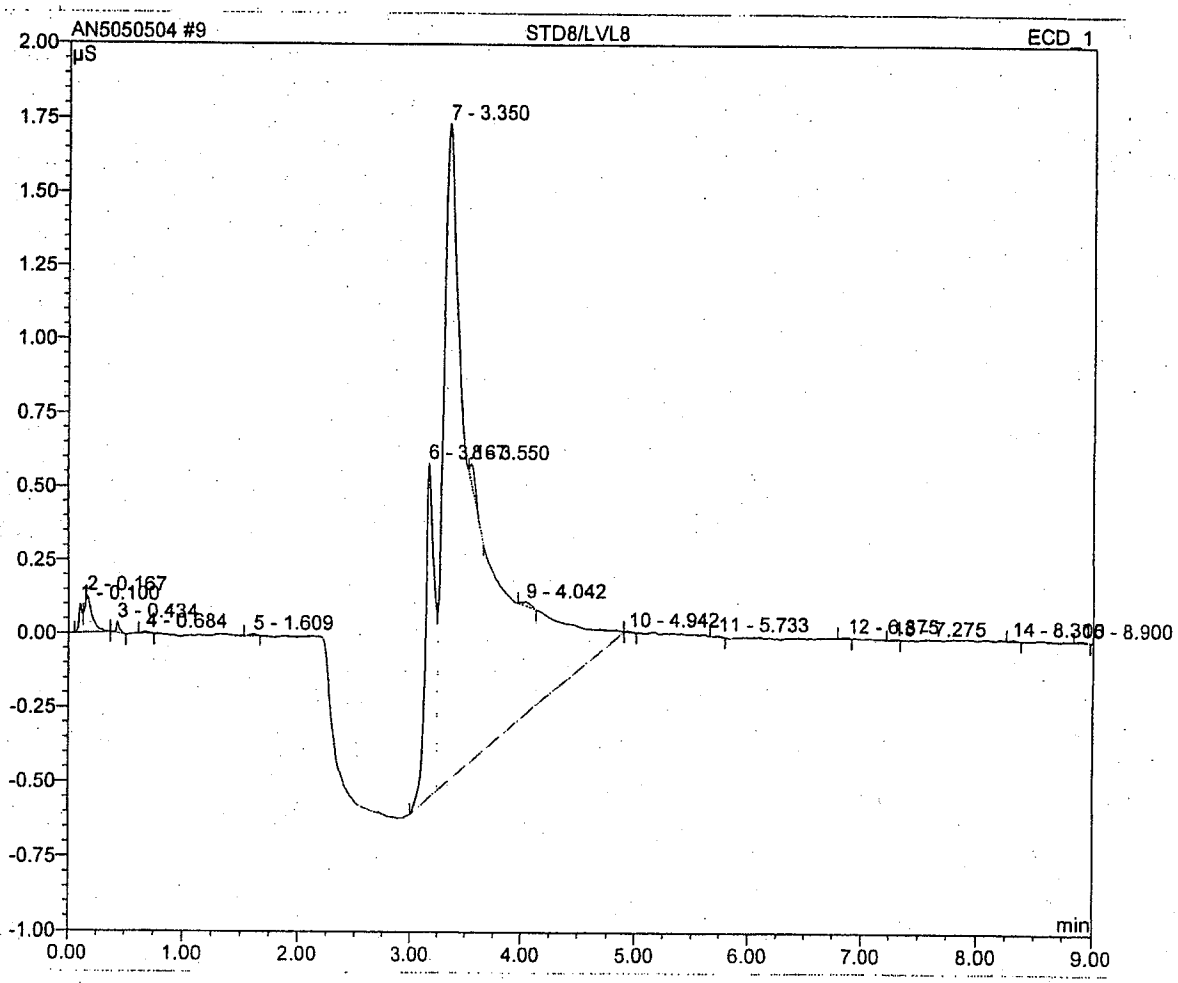
True Value
100.0 ppb



Sample Name:	**STD8/LVL8**	*Inj. Vol.:*	**1000.0**
Sample Type:	**standard**	*Dilution Factor:*	**1.0000**
Program:	**PERCHLORATE**	*Operator:*	**n.a.**
Inj. Date/Time:	**05.05.04 10:59**	*Run Time:*	**9.00**

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount ppb
		TOTAL:		0.00	0.00	0.00

True value 0.0 ppb



APPENDIX D

DATA VALIDATION REPORTS

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

September 20, 2004

Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

RE: Validation of MRFA Malta Site Data Packages
STL-Buffalo SDG Nos. A04-8687

Dear Mr. Neumann:

Review has been completed for the data packages generated by STL-Buffalo, pertaining to samples collected 9/09/04 at the MRFA Malta Site. Three aqueous samples were processed for site-specific low level volatiles. Methodologies utilized are those of the USEPA OLC02.1. A trip blank and sample matrix spikes were also processed.

Data validation was performed with guidance from the most current editions of the USEPA Region 2 Validation SOPs HW-6, as applied to the methodology. The following items were reviewed:

* Data Completeness
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs
* Method Compliance
* Sample Result Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with protocol requirements.

In summary, sample processing was conducted with compliance to protocol requirements and with adherence to quality criteria. Sample results are usable as reported, with the exception of the results for one compound qualified as estimated.

A copy of laboratory case narrative is attached to this report, and should be reviewed in conjunction with this text. The data report forms are also submitted with qualifiers applied in red ink.

Data Completeness

The case narrative does not include the required "verbatim" statement.

Low Level Volatile Analyses by OLC02.1

Holding times were met, and blanks show no contamination. Instrument tunes were acceptable.

Matrix spikes of Influent show acceptable accuracy and precision, with the exception of the elevated recoveries for vinyl chloride (137% and 141%, above 140%); sample results are unaffected. Field duplicate correlation between Effluent and DUP-A was acceptable.

Due to the low relative response factors (RRFs) in the calibration standards, the reporting limit for acetone in the project samples should be considered estimated ("UJ" qualifier), possibly biased low. There are no analytical method RRF criteria for acetone in low level aqueous analyses. The data for acetone are considered usable based upon calibration standard and LCS responses.

The laboratory Form 8A shows incorrect acceptance limits for internal standard responses. The samples met the protocol requirement.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

January 27, 2005

Brian Neumann
Shaw Environmental
13 British American Blvd.
Latham, NY 12110

RE: Validation of MRFA Malta Site Data Packages
CAS Sub Nos. R2423670 and R2423837

Dear Mr. Neumann:

Review has been completed for the data packages generated by Columbia Analytical Services (CAS), pertaining to aqueous samples collected 10/26/04 through 11/15/04 at the MRFA Malta Site. Twenty-two samples (including two field duplicates) and equipment, cooler, and trip blanks were processed by CAS for site specific low level volatiles. Two of these and three additional samples (including a field duplicate) were also analyzed for total and hexavalent chromium. One additional sample was processed only for hexavalent chromium. Methodologies utilized are those of the USEPA OLC02.1, EPA CLP ILM and SW846 7196.

Data validation was performed with guidance from the most current editions of the USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review and the USEPA SOPs HW-2 and HW-6, with consideration for the specific methodologies. The following items were reviewed:

* Data Completeness
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration/CRI Standards
* Instrument IDLs
* ICP Serial Dilutions
* Method Compliance
* Sample Result Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with protocol requirements.

In summary, sample processing was conducted primarily with compliance to protocol requirements and with adherence to quality criteria. Sample results are usable as reported, or with minor qualification of some volatile results as estimated or with edit to nondetection. These are discussed in the following analytical sections.

Copies of laboratory case narratives are attached to this narrative, and should be reviewed in conjunction with this narrative. Data summary packages are also submitted with qualifiers applied in red ink to report forms.

Data Completeness

Data packages were complete as received, and no resubmissions were required.

Low Level Volatile Analyses

The results for analyte carbon tetrachloride in M-25D, initially flagged as "E" by the laboratory, is to be derived from the dilution analysis of the sample.

Due to presence in the associated equipment, trip, cooler blanks, and/or method blanks, the detections of acetone and methylene chloride in the samples are considered external contamination, and edited to nondetection at the CRDL.

Additionally, due to the low level detection of chloroform in the associated cooler blank, the detection of that compound in all of the samples collected in November except M-25D are similarly considered and qualified.

The project equipment and trip blanks from November consistently show low level contamination of aromatics. The associated samples do not show detected concentrations of these compounds, with the exception of toluene in MW-14D, the result for which is considered to reflect external contamination and edited to nondetection.

The following analytes exhibited low relative response factors (RRFs) in the calibration standards that are inherent with the methodology. The usability of those data are evidenced by spike recoveries and standard areas, but their reporting limits in all of the project samples should be considered estimated ("UJ" qualifier), possibly biased low: acetone, 2-butanone, 2-hexanone, and 1,2-dibromo-3-chloropropane.

Bromomethane results in the samples are qualified as estimated for consistent low responses (29%D to 42%D) in the associated continuing calibration standards.

Matrix spikes of Influent and M-27D show acceptable accuracy and precision, with the exception of one duplicate correlation in the former that is 2 percentage points above the recommended limit. Recoveries of that analyte were acceptable, and no qualification is made.

APPENDIX E

AIR STRIPPER FLOW DATA

Date		Well #2 Flow (gal)	Well #1 Flow (gal)	Well #2 Average (gpm)	Well #1 Average (gpm)	Total Daily Average Flow (gpm)
7/1/2004	Total	7,460	8,950	5.18	6.22	11.40
7/2/2004	Total	7,420	8,940	5.15	6.21	11.36
7/3/2004	Total	7,430	8,940	5.16	6.21	11.37
7/4/2004	Total	7,430	8,930	5.16	6.20	11.36
7/5/2004	Total	7,420	8,920	5.15	6.19	11.35
7/6/2004	Total	7,190	8,640	4.99	6.00	10.99
7/7/2004	Total	7,430	8,930	5.16	6.20	11.36
7/8/2004	Total	7,430	8,920	5.16	6.19	11.35
7/9/2004	Total	7,430	8,920	5.16	6.19	11.35
7/10/2004	Total	7,430	8,920	5.16	6.19	11.35
7/11/2004	Total	7,440	8,920	5.17	6.19	11.36
7/12/2004	Total	7,440	8,900	5.17	6.18	11.35
7/13/2004	Total	7,440	8,900	5.17	6.18	11.35
7/14/2004	Total	7,440	8,890	5.17	6.17	11.34
7/15/2004	Total	6,980	7,930	4.85	5.51	10.35
7/16/2004	Total	6,680	7,990	4.64	5.55	10.19
7/17/2004	Total	7,430	8,890	5.16	6.17	11.33
7/18/2004	Total	7,450	8,880	5.17	6.17	11.34
7/19/2004	Total	7,460	8,870	5.18	6.16	11.34
7/20/2004	Total	7,450	8,880	5.17	6.17	11.34
7/21/2004	Total	7,460	8,880	5.18	6.17	11.35
7/22/2004	Total	7,460	8,860	5.18	6.15	11.33
7/23/2004	Total	7,450	8,860	5.17	6.15	11.33
7/24/2004	Total	7,450	8,860	5.17	6.15	11.33
7/25/2004	Total	7,450	8,840	5.17	6.14	11.31
7/26/2004	Total	7,450	8,850	5.17	6.15	11.32
7/27/2004	Total	7,440	8,870	5.17	6.16	11.33
7/28/2004	Total	7,440	8,870	5.17	6.16	11.33
7/29/2004	Total	7,460	8,880	5.18	6.17	11.35
7/30/2004	Total	7,470	8,880	5.19	6.17	11.35
7/31/2004	Total	7,460	8,870	5.18	6.16	11.34
8/1/2004	Total	7,470	8,880	5.19	6.17	11.35
8/2/2004	Total	7,450	8,850	5.17	6.15	11.32
8/3/2004	Total	7,470	8,870	5.19	6.16	11.35
8/4/2004	Total	7,470	8,870	5.19	6.16	11.35
8/5/2004	Total	7,470	8,860	5.19	6.15	11.34
8/6/2004	Total	7,470	8,850	5.19	6.15	11.33
8/7/2004	Total	7,470	8,840	5.19	6.14	11.33
8/8/2004	Total	5,100	6,050	3.54	4.20	7.74
8/9/2004	Total	5,410	6,470	3.76	4.49	8.25
8/10/2004	Total	7,470	8,940	5.19	6.21	11.40
8/11/2004	Total	7,450	8,900	5.17	6.18	11.35
8/12/2004	Total	7,480	8,940	5.19	6.21	11.40
8/13/2004	Total	5,800	6,930	4.03	4.81	8.84
8/14/2004	Total	1,200	1,420	0.83	0.99	1.82
8/15/2004	Total	4,330	5,200	3.01	3.61	6.62
8/16/2004	Total	6,170	7,420	4.28	5.15	9.44
8/17/2004	Total	6,540	7,860	4.54	5.46	10.00
8/18/2004	Total	6,820	8,200	4.74	5.69	10.43
8/19/2004	Total	7,490	9,000	5.20	6.25	11.45
8/20/2004	Total	7,490	8,970	5.20	6.23	11.43

Date		Well #2 Flow (gal)	Well #1 Flow (gal)	Well #2 Average (gpm)	Well #1 Average (gpm)	Total Daily Average Flow (gpm)
8/21/2004	Total	6,220	7,450	4.32	5.17	9.49
8/22/2004	Total	5,940	7,130	4.13	4.95	9.08
8/23/2004	Total	7,030	8,450	4.88	5.87	10.75
8/24/2004	Total	6,310	7,560	4.38	5.25	9.63
8/25/2004	Total	6,480	7,780	4.50	5.40	9.90
8/26/2004	Total	6,770	5,420	4.70	3.76	8.47
8/27/2004	Total	5,910	7,820	4.10	5.43	9.53
8/28/2004	Total	7,260	7,410	5.04	5.15	10.19
8/29/2004	Total	5,690	6,110	3.95	4.24	8.19
8/30/2004	Total	6,360	7,020	4.42	4.88	9.29
8/31/2004	Total	6,590	7,350	4.58	5.10	9.68
9/1/2004	Total	6,580	7,300	4.57	5.07	9.64
9/2/2004	Total	6,660	7,400	4.63	5.14	9.76
9/3/2004	Total	6,360	7,120	4.42	4.94	9.36
9/4/2004	Total	5,710	6,470	3.97	4.49	8.46
9/5/2004	Total	5,490	6,350	3.81	4.41	8.22
9/6/2004	Total	5,340	6,230	3.71	4.33	8.03
9/7/2004	Total	6,350	7,410	4.41	5.15	9.56
9/8/2004	Total	6,710	7,870	4.66	5.47	10.13
9/9/2004	Total	6,620	7,760	4.60	5.39	9.99
9/10/2004	Total	3,610	4,220	2.51	2.93	5.44
9/11/2004	Total	0.00	0.00	0.00	0.00	0.00
9/12/2004	Total	0.00	0.00	0.00	0.00	0.00
9/13/2004	Total	3,010	3,370	2.09	2.34	4.43
9/14/2004	Total	8,310	9,430	5.77	6.55	12.32
9/15/2004	Total	8,310	9,440	5.77	6.56	12.33
9/16/2004	Total	8,330	9,450	5.78	6.56	12.35
9/17/2004	Total	8,340	9,460	5.79	6.57	12.36
9/18/2004	Total	8,330	9,470	5.78	6.58	12.36
9/19/2004	Total	8,330	9,460	5.78	6.57	12.35
9/20/2004	Total	8,340	9,460	5.79	6.57	12.36
9/21/2004	Total	8,330	9,480	5.78	6.58	12.37
9/22/2004	Total	8,330	9,500	5.78	6.60	12.38
9/23/2004	Total	8,340	9,490	5.79	6.59	12.38
9/24/2004	Total	8,330	9,510	5.78	6.60	12.39
9/25/2004	Total	7,830	9,500	5.44	6.60	12.03
9/26/2004	Total	8,340	9,500	5.79	6.60	12.39
9/27/2004	Total	8,340	9,500	5.79	6.60	12.39
9/28/2004	Total	8,340	9,510	5.79	6.60	12.40
9/29/2004	Total	8,340	9,500	5.79	6.60	12.39
9/30/2004	Total	8,360	8,840	5.81	6.14	11.94
10/1/2004	Total	7,250	7,310	5.03	5.08	10.11
10/2/2004	Total	5,120	5,260	3.56	3.65	7.21
10/3/2004	Total	4,860	4,990	3.38	3.47	6.84
10/4/2004	Total	6,960	7,170	4.83	4.98	9.81
10/5/2004	Total	7,660	7,890	5.32	5.48	10.80
10/6/2004	Total	6,460	6,650	4.49	4.62	9.10
10/7/2004	Total	6,340	6,550	4.40	4.55	8.95
10/8/2004	Total	6,950	7,200	4.83	5.00	9.83
10/9/2004	Total	5,660	5,860	3.93	4.07	8.00
10/10/2004	Total	5,290	5,510	3.67	3.83	7.50

Date		Well #2 Flow (gal)	Well #1 Flow (gal)	Well #2 Average (gpm)	Well #1 Average (gpm)	Total Daily Average Flow (gpm)
10/11/2004	Total	6,160	6,420	4.28	4.46	8.74
10/12/2004	Total	6,240	6,490	4.33	4.51	8.84
10/13/2004	Total	5,930	6,200	4.12	4.31	8.42
10/14/2004	Total	5,970	6,250	4.15	4.34	8.49
10/15/2004	Total	6,210	6,490	4.31	4.51	8.82
10/16/2004	Total	5,560	5,820	3.86	4.04	7.90
10/17/2004	Total	5,040	5,260	3.50	3.65	7.15
10/18/2004	Total	6,150	6,430	4.27	4.47	8.74
10/19/2004	Total	6,040	6,320	4.19	4.39	8.58
10/20/2004	Total	5,540	5,790	3.85	4.02	7.87
10/21/2004	Total	5,580	5,830	3.88	4.05	7.92
10/22/2004	Total	5,690	5,940	3.95	4.13	8.08
10/23/2004	Total	4,820	5,050	3.35	3.51	6.85
10/24/2004	Total	4,680	4,890	3.25	3.40	6.65
10/25/2004	Total	5,320	5,570	3.69	3.87	7.56
10/26/2004	Total	5,460	5,710	3.79	3.97	7.76
10/27/2004	Total	5,660	5,930	3.93	4.12	8.05
10/28/2004	Total	5,240	5,480	3.64	3.81	7.44
10/29/2004	Total	5,590	5,850	3.88	4.06	7.94
10/30/2004	Total	5,480	5,740	3.81	3.99	7.79
10/31/2004	Total	4,540	4,750	3.15	3.30	6.45
11/1/2004	Total	4,920	5,150	3.42	3.58	6.99
11/2/2004	Total	4,710	4,930	3.27	3.42	6.69
11/3/2004	Total	4,750	4,960	3.30	3.44	6.74
11/4/2004	Total	4,780	5,000	3.32	3.47	6.79
11/5/2004	Total	4,730	4,940	3.28	3.43	6.72
11/6/2004	Total	4,360	4,550	3.03	3.16	6.19
11/7/2004	Total	4,250	4,450	2.95	3.09	6.04
11/8/2004	Total	6,880	1,710	4.78	1.19	5.97
11/9/2004	Total	8,670	0.00	6.02	0.00	6.02
11/10/2004	Total	8,420	0.00	5.85	0.00	5.85
11/11/2004	Total	8,680	0.00	6.03	0.00	6.03
11/12/2004	Total	8,680	0.00	6.03	0.00	6.03
11/13/2004	Total	8,010	0.00	5.56	0.00	5.56
11/14/2004	Total	6,400	0.00	4.44	0.00	4.44
11/15/2004	Total	7,470	0.00	5.19	0.00	5.19
11/16/2004	Total	7,800	0.00	5.42	0.00	5.42
11/17/2004	Total	8,700	0.00	6.04	0.00	6.04
11/18/2004	Total	8,710	500	6.05	0.35	6.40
11/19/2004	Total	7,800	0.00	5.42	0.00	5.42
11/20/2004	Total	6,620	0.00	4.60	0.00	4.60
11/21/2004	Total	5,960	0.00	4.14	0.00	4.14
11/22/2004	Total	6,790	0.00	4.72	0.00	4.72
11/23/2004	Total	7,160	0.00	4.97	0.00	4.97
11/24/2004	Total	6,520	0.00	4.53	0.00	4.53
11/25/2004	Total	6,200	0.00	4.31	0.00	4.31
11/26/2004	Total	6,210	0.00	4.31	0.00	4.31
11/27/2004	Total	6,200	0.00	4.31	0.00	4.31
11/28/2004	Total	6,560	0.00	4.56	0.00	4.56
11/29/2004	Total	7,720	0.00	5.36	0.00	5.36
11/30/2004	Total	7,090	560	4.92	0.39	5.31

Date		Well #2 Flow (gal)	Well #1 Flow (gal)	Well #2 Average (gpm)	Well #1 Average (gpm)	Total Daily Average Flow (gpm)
12/1/2004	Total	5,210	2,500	3.62	1.74	5.35
12/2/2004	Total	3,330	3,710	2.31	2.58	4.89
12/3/2004	Total	3,210	3,570	2.23	2.48	4.71
12/4/2004	Total	2,990	3,430	2.08	2.38	4.46
12/5/2004	Total	2,450	2,880	1.70	2.00	3.70
12/6/2004	Total	2,990	3,560	2.08	2.47	4.55
12/7/2004	Total	3,090	3,760	2.15	2.61	4.76
12/8/2004	Total	3,380	4,130	2.35	2.87	5.22
12/9/2004	Total	3,420	4,220	2.38	2.93	5.31
12/10/2004	Total	3,240	3,670	2.25	2.55	4.80
12/11/2004	Total	5,620	0.00	3.90	0.00	3.90
12/12/2004	Total	5,310	0.00	3.69	0.00	3.69
12/13/2004	Total	6,170	0.00	4.28	0.00	4.28
12/14/2004	Total	6,250	0.00	4.34	0.00	4.34
12/15/2004	Total	7,090	0.00	4.92	0.00	4.92
12/16/2004	Total	7,120	0.00	4.94	0.00	4.94
12/17/2004	Total	6,040	0.00	4.19	0.00	4.19
12/18/2004	Total	5,220	0.00	3.63	0.00	3.63
12/19/2004	Total	5,010	0.00	3.48	0.00	3.48
12/20/2004	Total	7,070	0.00	4.91	0.00	4.91
12/21/2004	Total	8,770	0.00	6.09	0.00	6.09
12/22/2004	Total	7,740	0.00	5.38	0.00	5.38
12/23/2004	Total	6,450	480	4.48	0.33	4.81
Grand Total		**1,132,830**	**1,000,660**	**4.470**	**3.948**	**8.418**

APPENDIX F

TELEPHONE INTERVIEW LOGS

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Indicate Property Owner Interviewed: Mr. Hal Brodie 518-862-1090, ext. 3280	X	**New York State Energy Research and Developmental Authority**
		Wright-Malta Corporation
		Luther Forest Corporation
Date of Interview: 11/22/04 3:30PM	**Property Owner Representative:** Mr. Hal Brodie	
Interview Questions:	**Representative Response:**	
Do you have any knowledge of current or proposed future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No. but have signed a ground lease for part of the property outside zone (100,000 s.f. building across the street from existing building. No planned use of groundwater.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	No.	
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes.	
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	No.	
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No.	
Interview completed by: John A. Skarup	Interviewer signature: John A Skarup Date: 11/22/04	

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Indicate Property Owner Interviewed: Mr. Raymond (RP) Kazyaka 518-899-2227		**New York State Energy Research and Developmental Authority**
	X	**Wright-Malta Corporation**
		Luther Forest Corporation
Date of Interview: 11/16/04	**Property Owner Representative:** Mr. Raymond Kazyaka	
Interview Questions:	**Representative Response:**	
Do you have any knowledge of current or proposed future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	No - other than SEDC ownership of property and proposed technology park.	
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes.	
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	No.	
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No.	
Interview completed by: John A. Skaarup	Interviewer signature: John A. Skaarup Date: 11/16/04	

Annual Telephone Interview Log
Remedial Work Element IV - Institutional Controls
Malta Rocket Fuel Area Site
Malta and Stillwater, New York

Indicate Property Owner Interviewed: Mr. Alex Mackey 518-899-6001		**New York State Energy Research and Developmental Authority**
		Wright-Malta Corporation
	X	**Luther Forest Corporation**
Date of Interview: 11/2/04	**Property Owner Representative:** Mr. Alex Mackey	
Interview Questions:	**Representative Response:**	
Do you have any knowledge of current or proposed future use of groundwater within the area of the Environmental Restriction Zone? Do not include activities associated with Remedial Work Element II, Malta Test Station Drinking Water System.	No.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	Yes - proposed technology park.	
Are you aware of the notice requirements associated with the Environmental Restriction Easement and Declaration of Restrictive Covenants?	Yes.	
Have you provided any interested parties with a notice of Environmental Restriction Easement and Declaration of Restrictive Covenants in any instrument (document) conveying an interest in any part of the affected property? If so, please provide a date of execution and recording reference number, as provided by the Office of the Clerk of Saratoga County, New York.	Yes - not recorded yet. Party has option to buy; option still open.	
Are you aware of any other conditions or actions within the Environmental Restriction Zone that would impact any condition of the Environmental Restriction Easement and Declaration of Restrictive Covenants?	No.	
Interview completed by: John A. Skarupa	Interviewer signature: John A. Skarupa Date: 11/2/04	