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February 11, 2004

Chief, Central New York Remediation Section
Emergency and Remedial Response Division
United States EPA - Region II
290 Broadway - 20th Floor
New York, New York 10007

Attention: Patricia Simmons Pierre (RPM) (2 copies)
Malta Rocket Fuel Area Site

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044

Re: DOJ # (90-11-3-1575) (1 copy)

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States EPA - Region II
290 Broadway - 17th Floor
New York, New York 10007

Attention: Site Attorney (1 copy)
Malta Rocket Fuel Area Site

Subject: **Semi-Annual O&M Report, Remedial Work Elements I, II, and IV,**
Malta Rocket Fuel Area Site
Malta, New York

Dear Sir or Madam:

Enclosed please find the Semi-Annual Operation & Maintenance Report summarizing recent activities at the referenced site. This Report discusses remedial work elements I, II and IV and covers the period of June 27, 2003 through December 18, 2003.

Feel free to contact me if you have any questions regarding this project.

Sincerely,

Steven R. Meier
Remedial Project Manager

Enclosure: Semi-Annual O&M Report, July 29, 2003

cc: Director, Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233
Attention: Mr. John Strang
Project Manager (1 copy)
Malta Rocket Fuel Area Site

Chief, Environmental Defense Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986
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Steven Balser, Power Technologies (1 copy)
Cynthia Scheuer, Mechanical Technology (1 copy)
Brian Neumann, Shaw E&I, (w/o enclosure)

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SEMI-ANNUAL O&M REPORT
REMEDIAL WORK ELEMENTS I, II AND IV

Reporting period June 27, 2003, through December 18, 2003

Malta Rocket Fuel Area Site
Malta, New York

Prepared for:

General Electric Company
Corporate Environmental Programs
320 Great Oaks Boulevard, Suite 323
Albany, New York 12203

February 9, 2004

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

Brian Neumann, PG, CPG
Project Manager/Secondary Operator

John Skaarup, EIT
Project Engineer/Primary Operator

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1.0 INTRODUCTION

This Operations and Maintenance (O&M) Report documents ongoing O&M activities conducted at the Malta Rocket Fuel Area (MRFA) site, in the Town of Malta, New York. The report has been prepared in accordance with the following documents:

- *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, ERM - Northeast, Inc., March 31, 1998.*
- *Operation and Maintenance Manual, Remedial Work Element I, Drinking Water, IT Corporation, Inc., January 15, 2002.*
- *Operations and Maintenance Manual, Remedial Work Element II, Groundwater, ERM - Northeast, Inc., December 11, 1997.*
- *Operation and Maintenance Manual, Remedial Work Element IV, Institutional Controls, IT Corporation, Inc, September 9, 1999, revised September 27, 1999.*

The report covers all activities performed at the site from June 27, 2003 through December 18, 2003 as required in each of the previously referenced documents.

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 monthly site visits were performed to check the groundwater water treatment system (system) operation, record system operating conditions, and to determine system effectiveness. The site visits took place on July 29, August 28, September 23, October 9, November 25, and December 18, 2003. System effectiveness was evaluated by collecting and analyzing water samples before (influent), and after (effluent), the groundwater treatment system that is comprised of a packed tower air stripper. System influent and effluent samples were collected during the August 28 and October 9 site visits to document adherence to treatment system discharge objectives. Analytical results from these sampling 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 15 and 14 gallons per minute (gpm), respectively, yielding a total instantaneous flow of approximately 28 to 29 gpm. Prior to June 2003, total instantaneous flow rates were recorded at approximately 12 gpm. The increased total instantaneous flow rate was attributable to an inadvertent adjustment made to the gate valves in RW-1D and RW-2D during the annual inspection. Total instantaneous flow rates have since been returned to approximately 12 gpm.

Review of the analytical results for influent and effluent treatment system samples collected in August 2003 and October 2003 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 insure 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 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 were identified as AC Power Failures. Short duration power failures appear to be common occurrences in the Malta area, resulting in brief interruptions in the delivery of electrical power to the system. On December 14, 2003, an alarm condition was received by the RTU that identified a low blower pressure and low blower amp condition. Subsequent remote monitoring demonstrated that the system was performing normally. As a precautionary measure, an electrical inspection of the air stripper blower was performed by a licensed electrician on December 18, 2003. The electrical inspection confirmed that the blower was in good condition and operating normally. RTU performance will be evaluated over the next monitoring period to insure proper system operation.

2.2 Visual System Inspection

Visual inspections were made of all accessible system components during monthly site visits in accordance with **Table 1, Maintenance Checklist**. Inspections were performed to check for signs of remedial system component wear, process piping leaks and general maintenance requirements.

The system was determined to be in good working condition during each of the monthly site visits. Maintenance activities included regular inspection of the air stripper blower intake for obstructions, inspection of all process valves and piping, 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.

2.3 Operating Measurements

2.3.1 Water Flow Measurements

Water flow measurements for recovery 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 June 27, 2003 to December 18, 2003 as follows:

Well RW-1D:	1.249 gpm
Well RW-2D:	1.168 gpm
System Average:	2.418 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 2.408 gpm for the reporting period. This is a slight decrease from the average daily water flow rate of 3.097 gpm for the reporting period ending June 26, 2003. The average water flow rate calculated from field observations (2.418) is very similar to the average daily water flow rate calculated from the data logger (2.408) confirming the data logger's accuracy and usefulness in verifying field observations.

2.3.2 Blower Air Pressure

Measurements of the air stripper blower back pressure were recorded during monthly O&M site visits and on a weekly basis via RTU monitoring. 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 2.7 to 3.2 inches of water column during the current period demonstrating that the air stripping system is operating effectively. Pressure readings will be monitored in the future to insure proper system performance.

2.4 Water Quality Data

Samples of the drinking water system influent and effluent were collected on August 28 and October 9, 2003 and analyzed by Columbia Analytical Laboratories, Inc., Rochester, NY. Influent and effluent samples were analyzed for volatile organic compounds (VOCs) according to United States Environmental Protection Agency (EPA) Method Contract Laboratory Program

(CLP) OLC-02, (modified to include hexachlorobutadiene, 1,2,3 trichlorobenzene and trichlorofluoromethane) as summarized in **Table 4.**

In accordance with a request from the EPA and the New York State Department of Health (NYSDOH), the October 9, 2003 air stripper effluent sample was also analyzed for ammonium perchlorate according to EPA Method 314.0. The effluent sample was collected prior to receiving the EPA / NYSDOH request for collection of influent system samples. Influent system samples will be collected and analyzed for ammonium perchlorate during the remaining two sampling events that are currently scheduled for May and August 2004.

The validated analytical results and chain of custody forms for the August 28 and October 9, 2003 samples are provided in **Appendix A.** All data validation was performed by Data Validation Services, Inc., North Creek, NY. Validation reports are included in **Appendix D.**

The August 28, 2003 and the October 9, 2003 system influent and effluent analytical results demonstrate that all analyzed compounds including carbon tetrachloride and trichloroethylene (TCE) were reduced to below the analytical method reporting limit of 1 part per billion (ppb) by the system. The October 9, 2003 ammonium perchlorate sampling results were not detectable.

Analyte	Date Sampled	Influent (ppb)	Effluent (ppb)	Performance Standard (ppb)
Carbon Tetrachloride	August 28, 2003	10.7	< 1.0	5
	October 9, 2003	10.6	0.23J	5
TCE	August 28, 2003	15.3	0.61J	5
	October 9, 2003	12.3	0.56J	5

The influent concentrations for carbon tetrachloride and TCE observed during this reporting period were slightly lower than the influent concentrations for these compounds observed during the previous reporting period. The effluent sampling results show trace concentrations of TCE above the method detection limits for both monitoring events and a trace concentration of carbon tetrachloride above the method detection limits for the October 9, 2003 monitoring event. However, each effluent concentration was qualified by the laboratory as being estimated because the results were less than the method reporting limit.

The removal efficiency for TCE and carbon tetrachloride was approximately 95% and 98%, respectively. The effluent values were 85% less than the performance standard.

Chloroform was not detected during the August 28, 2003 sampling event but was detected at an estimated concentration of 0.95 ppb in the air stripper influent sample collected during the October 9, 2003 sampling event. The October 9, 2003 influent chloroform concentration is slightly lower than the influent chloroform concentrations observed during the previous reporting period. Chloroform was below detection limits in the effluent samples collected on both August 28, 2003 and October 9, 2003.

Effluent concentrations for VOCs and ammonium perchlorate demonstrate that the treated water meets the performance standards established for the site for use as a potable water supply.

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

3.1 Sample Collection

In accordance with the provisions of the *Operations and Maintenance Manual, Remedial Work Element II - Ground Water, ERM Northeast, Inc. December 11, 1997*, (O&M-GW) unfiltered groundwater samples were collected on October 9 and October 15, 2003 from the Early Warning Monitoring System (EWMS) monitoring wells DGC-3S, DGC-4S, 13S, M-27S, M-27D, M-33S, and M-33I and surface water sampling locations SW-A, SW-B, and SW-D (**Figure 1**). One blind duplicate sample (DUPA) from well M-27S and two trip blanks were also obtained and analyzed.

With the exception of monitoring well 13S, samples from all monitoring wells and all surface water locations were analyzed for volatile organic compounds (VOCs) by USEPA Method OLC-02 by Columbia Analytical Services, Inc. in Rochester, New York. Samples from wells 13S, M-27S, and M-27D, and surface water location SW-B 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).

Results of the October 2003 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**, and **8.**

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. **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 13S, M-27S, M-27D, and surface water location SW-B show concentrations of 49.4 ug/l, 1.0 ug/l, 1.2 ug/l and 0.75 ug/l, respectively, which are all below the "New York State Ground Water Standard" (NYSGWS) for total chromium (50 ug/l).

With the exception of well 13S, the unfiltered hexavalent chromium analytical results showed no detectable concentrations of hexavalent chromium at the detection limit of 10 ug/l for all groundwater samples and surface water sample SW-B. Well 13S contained an estimated concentration of hexavalent chromium at 51.5 ug/l. The NYSGWS for hexavalent chromium is 50 ug/l. It is not possible for hexavalent chromium concentrations (a component of total chromium) to exceed the concentration of total chromium. Although a qualification was not noted by the data validator (**Appendix D**), results for the hexavalent chromium appear to include a matrix interference contribution. The attached time vs. concentration plot for unfiltered hexavalent chromium in well 13S (**Figure 2**) demonstrates an overall decrease in concentrations after August 1993.

3.3 VOC Analytical Results

A review of the carbon tetrachloride results demonstrate that carbon tetrachloride was detected in well M-27D at a concentration of 16.6 ug/l. All other wells were non-detect for carbon tetrachloride during the reporting period. The attached time vs. concentration plot for carbon tetrachloride in well M-27D (**Figure 3**) demonstrates an overall decrease in carbon tetrachloride concentrations with time.

A review of the chloroform results indicate that chloroform was detected in well M-27D at 1 ppb. Chloroform was not detected at the other sampling locations during this reporting period.

TCE and trichlorofluoromethane were detected in well M-27D at concentrations of 21.8 ug/l and 2.3 ug/l, respectively. TCE was 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-B and SW-D during the October 2003 sampling event, with the exception of carbon tetrachloride and TCE in sample SW-B that contained estimated concentrations of 0.27 ug/l and 0.19 ug/l, respectively. These results are similar to the concentrations observed during the previous reporting period.

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 trichloro-ethylene 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

Shaw completed O&M activities for remedial Work Element IV, Institutional Controls, in accordance with the *Operation and Maintenance Manual, Remedial Work Element IV, Institutional Controls, IT Corporation, Inc, September 9, 1999, revised September 27, 1999*.

OK JMS 3/8/04

4.1 Sampling and Survey Results

On October 9, 2003, 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 to monitoring wells M-33I, M-33S and M-13S, 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 October 6, 2003.
- Alexander Mackey representing Luther Forest Corporation was interviewed on September 10, 2003.

- Raymond Kazyaka, Jr. representing Wright-Malta Corporation was interviewed on September 15, 2003.

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, each representative 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

The groundwater treatment system is meeting the performance standards for the MRFA site. All effluent samples collected and analyzed during the current period revealed concentrations below project discharge objectives. Treatment equipment continues to operate satisfactorily, and will continue to be monitored as necessary to ensure continued operation of all components and to maintain a reliable source of potable water for the Test Station.

5.2 EWMS

In summary, only well M-27D had detectable concentrations of carbon tetrachloride above federal drinking water standards. Carbon tetrachloride was not detected in the monitoring wells adjacent to the Luther Forest Well Field. Based on the review of the analytical results, groundwater from the MRFA Site is not impacting the Luther Forest Well Field or the water supply wells north of the site.

In monitoring well 13S, chromium was detected at a concentration of 49.4 ug/l, and hexavalent chromium was detected at a concentration of 51.5 ug/l . Although a qualification was not noted by the data validator, it is believed that the hexavalent chromium results are the result of a matrix interference.

Comparison of the observed carbon tetrachloride concentrations to simulated carbon tetrachloride concentrations at selected EWMS monitoring well locations shows that the simulated concentrations are higher than the actual concentrations. The simulated TCE concentrations in M-27S and M-27D are also higher than the actual TCE concentrations. TCE was not detected in M-33S or M-33I. Future comparisons will be performed to assess the natural attenuation and degradation of VOCs in groundwater at the MRFA Site.

5.3 Institutional Controls

The visual inspections completed during the October 9 and 15 site visits revealed the removal of trees near the access roads to M-33I, M-33S and M-13S and no other property development or well installation activities. Inspections were conducted on areas of the environmental restriction zone proximate to the Wright-Malta Test Station, Building 15, the surface water sampling locations and the groundwater monitoring wells that were sampled.

Additionally, representatives of NYSERDA, Luther Forest Corporation and Wright-Malta Corporation were interviewed (**Appendix F**). All three representatives said 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 Declarations of Restrictive Covenants. However, each representative referenced the proposed land use changes associated with the Luther Forest Technology Campus and the Saratoga Technology Campus. These proposals are still pending approval by the Towns of Malta, NY and Stillwater, NY.

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 (Continued)
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
7/29/2003	John Skaarup	OK	System operational upon arrival. Checked settling tank high level float, reservoir level probe and inspected all system process lines. Observed moderate sweating on pipes due to humidity but no leaks were observed. Tested operation of all system alarms and interlocks - all are operating properly. No problems were noted.
8/28/2003	John Skaarup	OK	System operational upon arrival. Inspected system process piping and valves. Observed moderate sweating on pipes due to humidity but no leaks were observed. Tested operation of all system alarms and interlocks - all are operating properly. Collected quarterly influent and effluent performance samples from the air stripper.
9/23/2003	John Skaarup	OK	System operational upon arrival. Inspected system process piping and valves. Observed moderate water leakage down exterior of AS column from roof due to heavy rain. Roof seal needs minor maintenance. Tested system interlocks – all OK.
10/9/2003	John Skaarup & Brian Neumann	OK	System not operational upon arrival. Reservoir at normal level. Control valves and piping in good visual condition. Checked system interlocks – all OK. Checked air stripper blower intake. Cycled system and took water flow readings. Collected quarterly influent and effluent performance samples and ammonium perchlorate effluent sample from the air stripper.
11/25/2003	John Skaarup	OK	System operational upon arrival. Inspected system process piping and valves. Tested operation of all system alarms and interlocks - all are operating properly.
12/18/2003	John Skaarup	OK	System operational upon arrival. Checked settling tank high level float, reservoir level probe and inspected all system process lines - no leaks were observed. Tested operation of all system alarms and interlocks - all are operating properly. Electrical contractor inspected AS blower. No problems were noted in regard to AS blower or system in general.

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)	
7/29/2003	9:55	15	1805900	33	81,000	1.70	14	1,777,800	33	75,700	1.59	
8/28/2003	9:15	15	1,868,800	30	62,900	1.46	14	1,836,800	30	59,000	1.37	
9/23/2003	8:25	15	1,911,100	26	42,300	1.13	14	1,876,200	26	39,400	1.05	
10/9/2003	9:55	15.0	1,936,300	16	25,200	1.09	14.0	1,899,700	16	23,500	1.02	
11/25/2003	10:30	15.0	2,005,400	47	69,100	1.02	14.0	1,964,300	47	64,600	0.95	
12/18/2003	13:00	15.0	2,039,700	23	34,300	1.04	14.0	1,996,300	23	32,000	0.97	
Summary				175	314,800	1.2492			175	294,200	1.1675	

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
7/29/2003	9:55	12.75	Yes	No	3.00	
8/28/2003	9:15	12.75	Yes	Yes	2.70	Collected system samples including Influent, Effluent, Duplicate, Matrix Spike, Matrix Spike Duplicate and Trip Blank.
9/23/2003	8:25	12.75	Yes	No	2.90	
10/9/2003	9:55	12.75	Yes	Yes	3.00	Collected system samples including Influent and Effluent, also collected ammonium perchlorate effluent sample.
11/25/2003	10:30	12.75	Yes	No	3.20	
12/18/2003	13:00	12.75	Yes	No	3.20	

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
OCTOBER 2003 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Compound	Remedial Action Objective	DGC-3S	DGC-4S	13S	M-27S	DUPA (27S)	M-27D	M-33S	M-33I	Trip Blank 1	Trip Blank 2
Acetone	50	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	None*	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	1.0 U	NA	1.0 U	0.11 J	16.6	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	NA	1.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	5	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethylene	5	1.0 U	1.0 U	NA	1.0 U	1.0 U	21.8 D	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5*	1.0 U	1.0 U	NA	1.0 U	1.0 U	2.3	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	50*	NA	NA	49.4	1.0 B	1.8 B	1.2 B	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	51.5	10 U	10 U	10 U	NA	NA	NA	NA

Field Parameters											
pH	-	6.41	7.72	7.73	7.87	7.87	7.75	7.99	10.83	-	-
Temperature (celsius)	-	10.86	10.14	9.82	8.73	8.73	9.03	8.58	8.73	-	-
Conductivity (umhos/cm)	-	0.109	0.351	0.409	0.248	0.248	0.234	0.163	0.197	-	-
Dissolved Oxygen	-	4.34	1.1	10.87	10.76	10.76	8.09	7.62	6.88	-	-
Turbidity (NTUs)	-	27	1604.8	0.6	0	0	0	0	0	-	-
Depth To Water (feet)	-	-	7.43	34.37	41.88	41.88	-	18.32	32.18	-	-
Ground Water Elevation (feet)	-	-	198.37	294.54	281.22	281.22	-	285.95	271.51	-	-

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 (Continued)
OCTOBER 2003 WATER QUALITY ANALYTICAL RESULTS
SEMI-ANNUAL SAMPLING

Parameter	Remedial Action Objective	SW-A	SW-B	SW-D
Acetone	50	5.0 U	5.0 U	5.0 U
Carbon Disulfide	None*	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	0.27J	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U
2-Butanone	5	5.0 U	5.0 U	5.0 U
Trichloroethylene	5	1.0 U	0.19 J	1.0 U
Chromium	50*	NA	0.75 B	NA
Hexavalent Chromium	50*	NA	10 U	NA
Field Parameters				
pH	-	8.10	8.04	8.02
Temperature (celsius)	-	11.77	12.22	13.75
Conductivity (umhos/cm)	-	0.288	0.342	0.502
Dissolved Oxygen	-	10.44	10.5	9.62
Turbidity (NTUs)	-	0	1.10	6.3
Depth To Water (feet)	-	-	-	-
Ground Water Elevation (feet)	-	-	-	-

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 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
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
Trichloroethylene	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

Notes:

Units are µg/l (ppb) unless otherwise stated.
Only detected compounds are listed.
NA = Not analyzed.
ND = Not detected.
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.

TABLE 6 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Wells / Compounds DGC-3S	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
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
Trichloroethylene	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

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

TABLE 6 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Wells / Compounds DGC-3S	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
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
Trichloroethylene	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

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

TABLE 6 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
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
Trichloroethylene	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

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

TABLE 6 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action								
DGC-3S	**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**
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
Trichloroethylene	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

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

TABLE 6 (MONITORING WELLS DGC-3S, DGC-4S, 13S)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Wells / Compounds	Remedial Action									
DGC-3S	**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**
Benzene	0.7*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA
DGC-4S										
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA
13S										
Benzene	0.7*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	169	249	29.9	136	43.3	13.4	34.8	52.2	49.4
Hexavalent Chromium	50*	178	262	41	12.3	43.6 J	18	3.59	45	51.5

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

TABLE 7 (MONITORING WELLS M-27, M-27D, M-33S, M-33I)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1992 - OCTOBER 2003
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
Carbon Disulfide	None*	ND	ND	not sampled	ND	ND	ND	ND	ND	ND
Chloromethane	5	40	ND	not sampled	ND	ND	ND	ND	ND	ND
Chromium	50*	8.4 B/ND**	57.4/ND**	not sampled	ND	ND	ND	ND	ND	ND
Hexavalent Chromium	50*	NA	NA	not sampled	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
Chloroform	7	ND	3	not sampled	4/4 dp	5	3	3	3	2
Chloromethane	5	4 J/28 dp	ND	not sampled	ND/ND dp	ND	ND	ND	ND	ND
Trichloroethylene	5									
Trichlorofluoromethane	5*	no data	no data	not sampled	no data	no data	no data	no data	no data	no data
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
Hexavalent Chromium	50*	NA	NA	not sampled	ND/ND dp	ND	ND	ND	ND	ND
M-33S										
VOCs	-	not sampled	not sampled	ND	ND	ND	ND	ND	ND	ND
M-33I										
VOCs	-	not sampled	not sampled	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.

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** = Filtered Sample.

TABLE 7 (MONITORING WELLS M-27, M-27D, M-33S, M-33I)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1992 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

M-27S	Remedial Action Objective	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	4/15/2003	10/9/2003
Carbon Disulfide	None**	ND	ND	0.85 J	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
Chloromethane	5	ND	ND	ND	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND J / ND J dp	ND	ND / ND dp
Chromium	50*	ND	3.2 BJ	0.98B	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
Hexavalent Chromium	50*	ND	ND	ND	ND / ND dp	ND	ND	ND / ND dp	ND / ND dp	ND / ND dp	ND / ND dp	ND UJ	ND U / ND dp
M-27D													
Carbon Tetrachloride	5	27	26 / 27 dp	20.3 / 20.1 dp	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
Chloroform	7	3	2 / 2 dp	1.8 / 1.8 dp	1.8	ND / ND dp	1.7J /1.3 dp	1.1	1.1	0.94J	2.4	ND / ND dp	1.0
Chloromethane	5	ND	ND / ND	ND / ND dp	ND	ND / ND dp	ND / ND dp	ND	ND	ND	ND	ND ND dp	ND
Trichloroethylene	5		ND/ND dp	4.1/4.1 dp	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
Trichlorofluoromethane	5*	no data	0.3 J / 0.3 J dp	0.92J / 0.99J dp	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
Chromium	50*	ND	4.6 BJ / 4.8 BJ dp	1.4 B / 1.3 B dp	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
Hexavalent Chromium	50*	ND	ND / ND dp	ND / ND dp	ND	ND/ND dp	ND/ND dp	ND	ND	ND	ND	ND / ND dp	ND
M-33S													
VOCs	-	ND	ND	ND	ND	ND	ND	8.0 J	ND	ND	ND	ND	ND
M-33I													
VOCs	-	ND	ND	ND	ND	ND	ND	4.1 J	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 (SURFACE WATER)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
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
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	NA	NA
Aluminum	100*	0.12 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	0.02 mg/L	NA	NA	NA	NA	NA
Chromium	50*	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
Carbon Tetrachloride	5	ND	NA	ND	ND	ND	ND	ND	1.1/1.1dp	ND	ND
Chloroform	7	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	ND	NA	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
Aluminum	100*	0.21 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	<0.01 mg/L	NA	NA	NA	NA	NA
Chromium	50*	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
Bromochloromethane	5*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	NA	ND	ND	ND	ND	ND	NA	NA	NA
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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
Methylene Chloride	5*	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND
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
Aluminum	100*	0.50 mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	<0.005 mg/L	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

* 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 (SURFACE WATER)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup Standard	8/15/1989	11/30/1989	12/27/1989	2/22/1990	5/30/90	8/28/90	12/6/90	4/8-4/10/1991	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
SW-A																
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	0.5 V	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	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*	NA	NA	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	NA	NA	NA	6.6	ND	ND	ND	ND	ND
SW-B																
Carbon Disulfide	None*	NA	NA	NA	NA	NA	NA	NA	ND	0.2 J	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	0.9	NA	0.88	ND	ND	1	0.4 J	0.6 J	0.4 J	0.8	0.8	0.7	0.3 J	0.6 V
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	0.2 J	ND	ND
Trichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	0.3 J	ND	0.2 J	ND	0.3 J	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	ND	ND
Aluminum	100*	NA	NA	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*	NA	NA	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	NA	NA	NA	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	no data	no data
Bromochloromethane	5*	ND	1.7, ND dp	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	ND	ND
Carbon Disulfide	None*	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	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	no data	no data	no data	ND	ND
Methylene Chloride	5*	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	6.3 BE	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	no data	no data
Aluminum	100*	NA	NA	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*	NA	NA	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	NA	ND	2	ND	ND	ND	ND	ND	ND

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

* 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.

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

dp = Duplicate sample.

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

D = Concentration determined from a sample dilutio

TABLE 8 (SURFACE WATER)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup	3/17-	5/25-	8/24-	11/8-	2/22-	5/18-	8/24-	11/15-
SW-A	**Standard**	**3/18/1993**	**5/26/1993**	**8/25/1993**	**11/9/1993**	**2/23/1994**	**5/19/1994**	**8/25/1994**	**11/16/1994**
Carbon Disulfide	None*	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
Lead	25*	no data	no data	no data	no data	no data	no data	no data	no data
Chromium	50*	6.1 B	ND	3.2B	ND	ND	ND	ND	ND
SW-B									
Carbon Disulfide	None*	ND	ND	ND	ND	ND/ND dp	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	0.3 J	0.7	0.4 J/0.4 J dp	0.4 J	0.2 JV	ND
Chloroform	7	ND	ND	ND	0.3 J	ND/ND dp	ND	ND	ND
Trichloroethylene	5	ND	ND	ND	0.2 J	ND/ND dp	ND	ND	ND
Trichlorofluoromethane	5*	2	ND	ND	ND	ND/ND dp	ND	ND V	ND
Aluminum	100**	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
Chromium	50**	ND	ND	ND	ND	ND/ND dp	ND	ND	ND
SW-D									
Acetone	5*	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
Carbon Disulfide	None*	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
1,2-Dichloroethane	0.6*	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5*	no data	no data	no data	no data	no data	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
Aluminum	100**	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
Chromium	50**	ND	ND	ND	ND	ND	ND	ND	ND

E = Estimated concentration : due to interference.

J = Estimated concentration.

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

R = Rejected during data validation.

, but

on.

* 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 (SURFACE WATER)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup											
SW-A	**Standard**	**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**	**10/26/1999**	**5/22/2000**
Carbon Disulfide	None*	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	NA	NA	NA	NA
Lead	25*	no data	no data	no data	no data	no data	no data	no data	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-B												
Carbon Disulfide	None*	ND	ND/ND dp	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	0.7 J/0.6 J dp	ND	0.6J	ND	ND	0.3J	ND	ND	ND	ND
Chloroform	7	ND	ND/ND dp	ND	ND	ND	ND	0.1J	ND	ND	ND	ND
Trichloroethylene	5	ND	ND/ND dp	ND	ND	ND	ND	0.2J	ND	ND	ND	ND
Trichlorofluoromethane	5*	ND	ND/ND dp	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	NA	NA	NA	NA
Lead	25*	no data	no data	no data	no data	no data	no data	no data	NA	NA	NA	NA
Chromium	50*	ND	ND/ND dp	ND	ND	NA	ND	ND	3.1 BJ	0.44 B	ND	0.9B
SW-D												
Acetone	5*	no data	no data	no data	no data	no data	no data	43 J	R	ND	ND	ND
Bromochloromethane	5*	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
Carbon Tetrachloride	5	no data	no data	ND	ND	no data	no data	ND	0.2 J	ND	ND	ND
1,2-Dichloroethane	0.6*	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5*	no data	no data	ND	ND	no data	no data	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5*	no data	no data	no data	no data	no data	no data	0.1 J	ND	ND	ND	ND
Aluminum	100*	no data	no data	no data	no data	no data	no data	no data	NA	NA	NA	NA
Lead	25*	no data	no data	no data	no data	no data	no data	no data	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

* 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 (SURFACE WATER)
SUMMARY OF WATER QUALITY ANALYTICAL RESULTS
JUNE 1987 - OCTOBER 2003
SEMI-ANNUAL SAMPLING

Surface Water Points / Compounds	Cleanup Standard	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003
SW-A								
Carbon Disulfide	None*	ND	ND	ND	ND	ND J	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA
SW-B								
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	0.54J	ND	ND	ND	0.18 J	0.34 J	0.27 J
Chloroform	7	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	ND	ND	ND	ND	ND	0.20 J	0.19 J
Trichlorofluoromethane	5*	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	0.75B	ND	ND	1.5 B	0.93 B	1 B	0.75 B
SW-D								
Acetone	5*	ND	ND	ND	ND	3.1 J	ND	ND
Bromochloromethane	5*	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6*	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5*	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5*	ND	ND	ND	ND	ND	ND	ND
Aluminum	100*	NA	NA	NA	NA	NA	NA	NA
Lead	25*	NA	NA	NA	NA	NA	NA	NA
Chromium	50*	NA	NA	NA	NA	NA	NA	NA

Notes:

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

Only detected compounds are listed.

NA = Not analyzed.

ND = Not detected.

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.

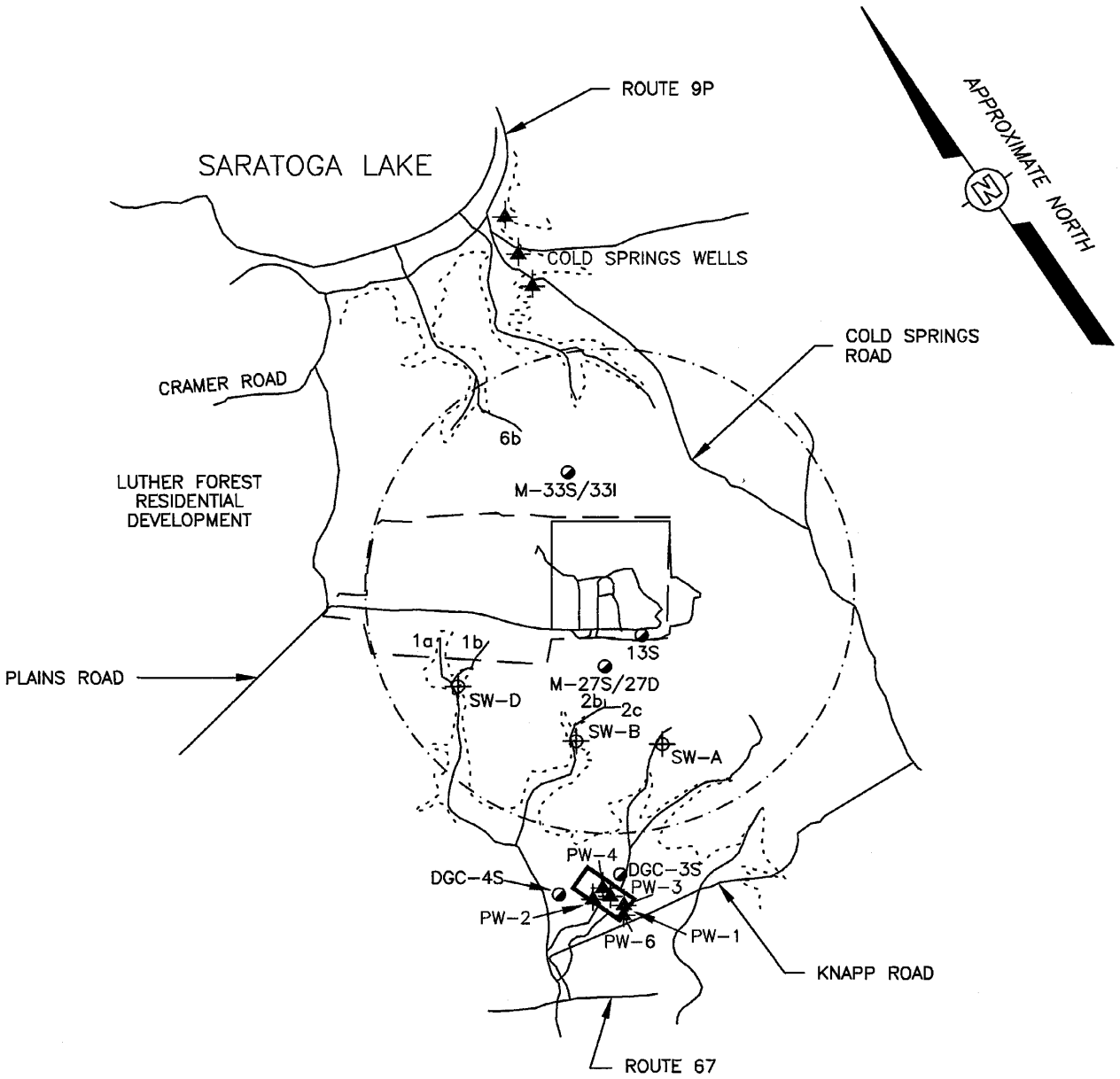
R = Rejected during data validation.

* 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.

FIGURES

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	ALBANY	S. SHKOLNIK 07-28-03			810066A3



LEGEND

- 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

APPROXIMATE

SCALE

0 3600 7200 FEET

REFERENCE:

REFERENCE DRAWING:
ERM – SEPTEMBER, 1998.

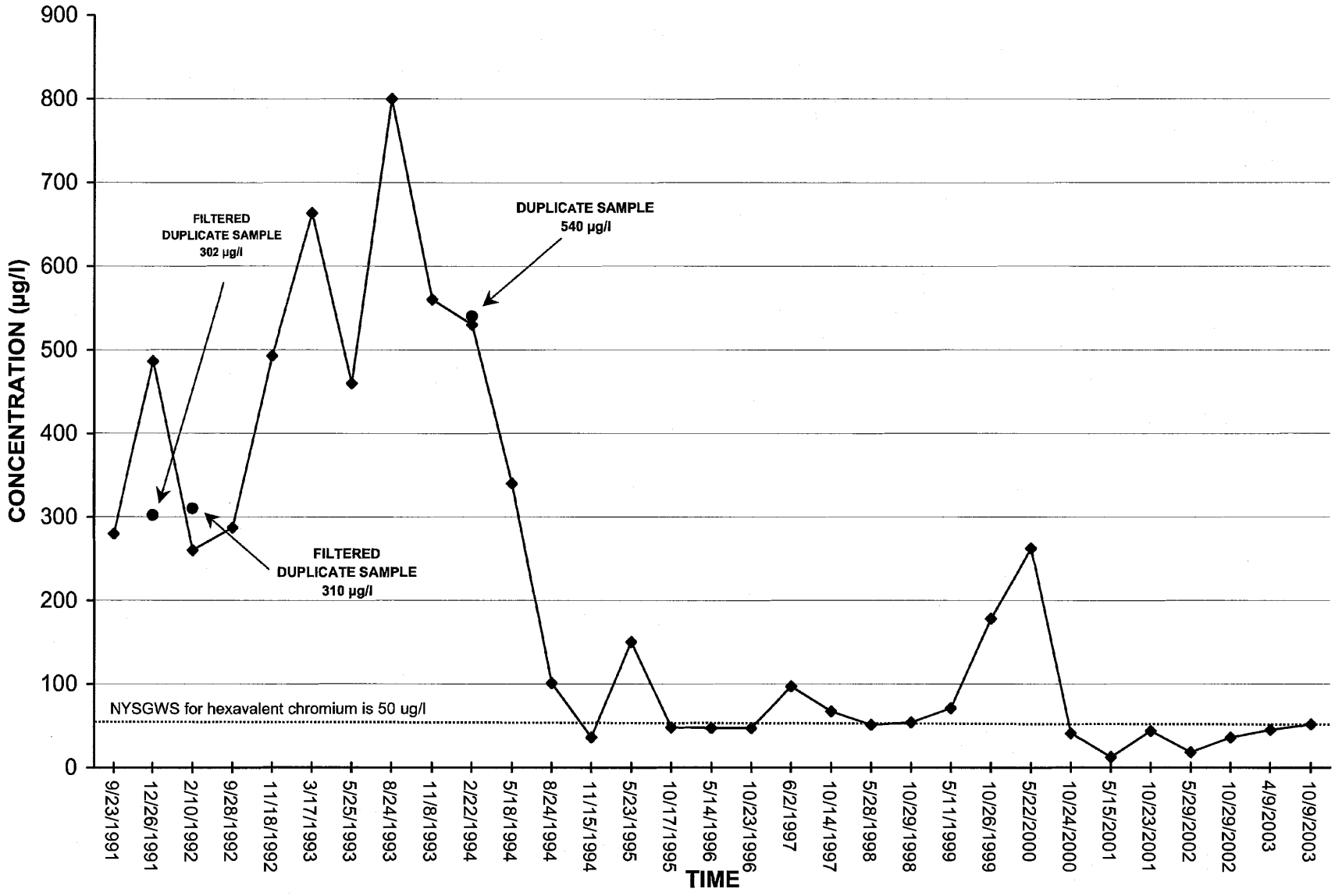
Shaw Environmental, Inc.

MALTA ROCKET FUEL AREA SITE
MALTA, NEW YORK

FIGURE 1

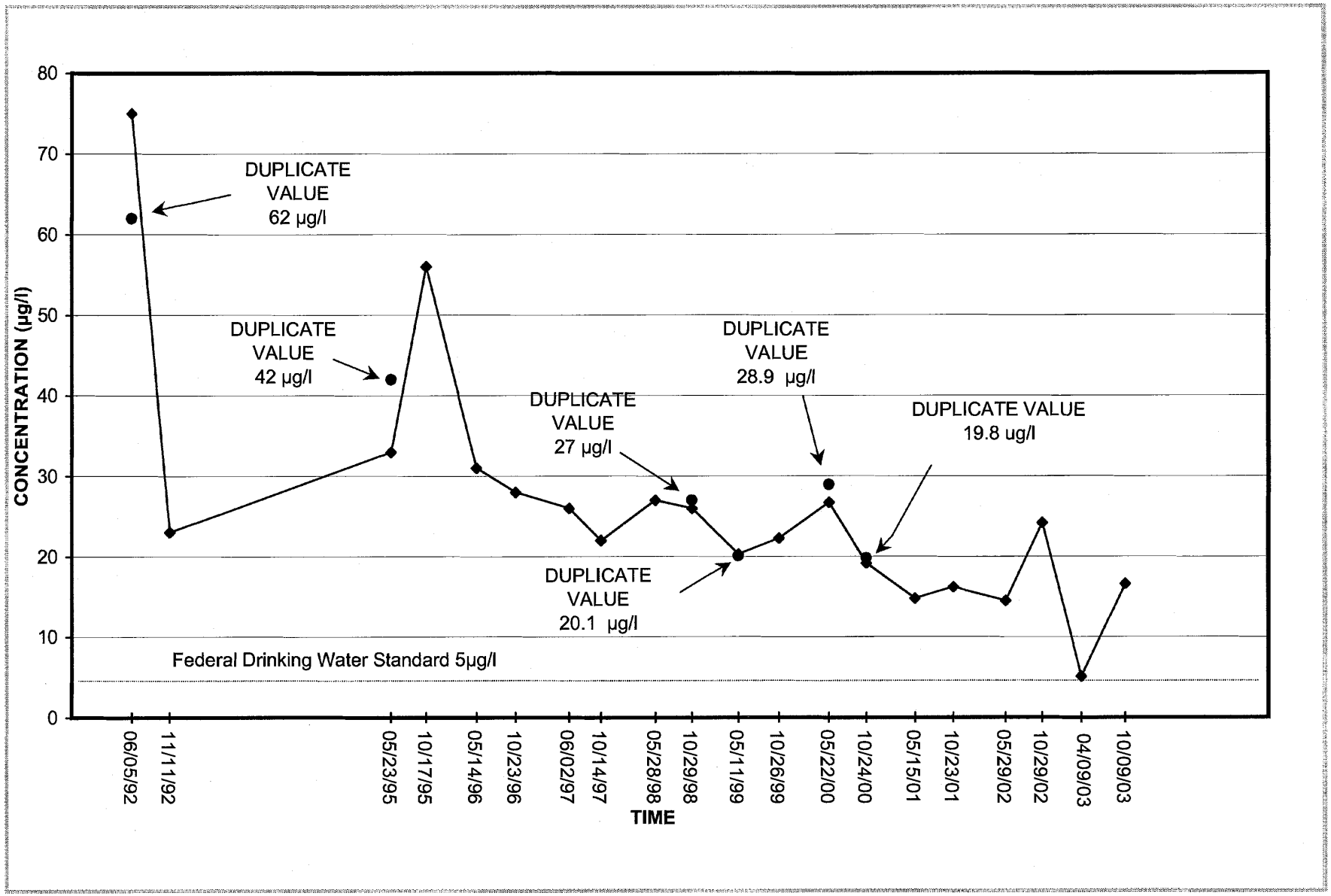
SITE LOCATION MAP

FIGURE 2
WELL 13S HEXAVALENT CHROMIUM CONCENTRATIONS



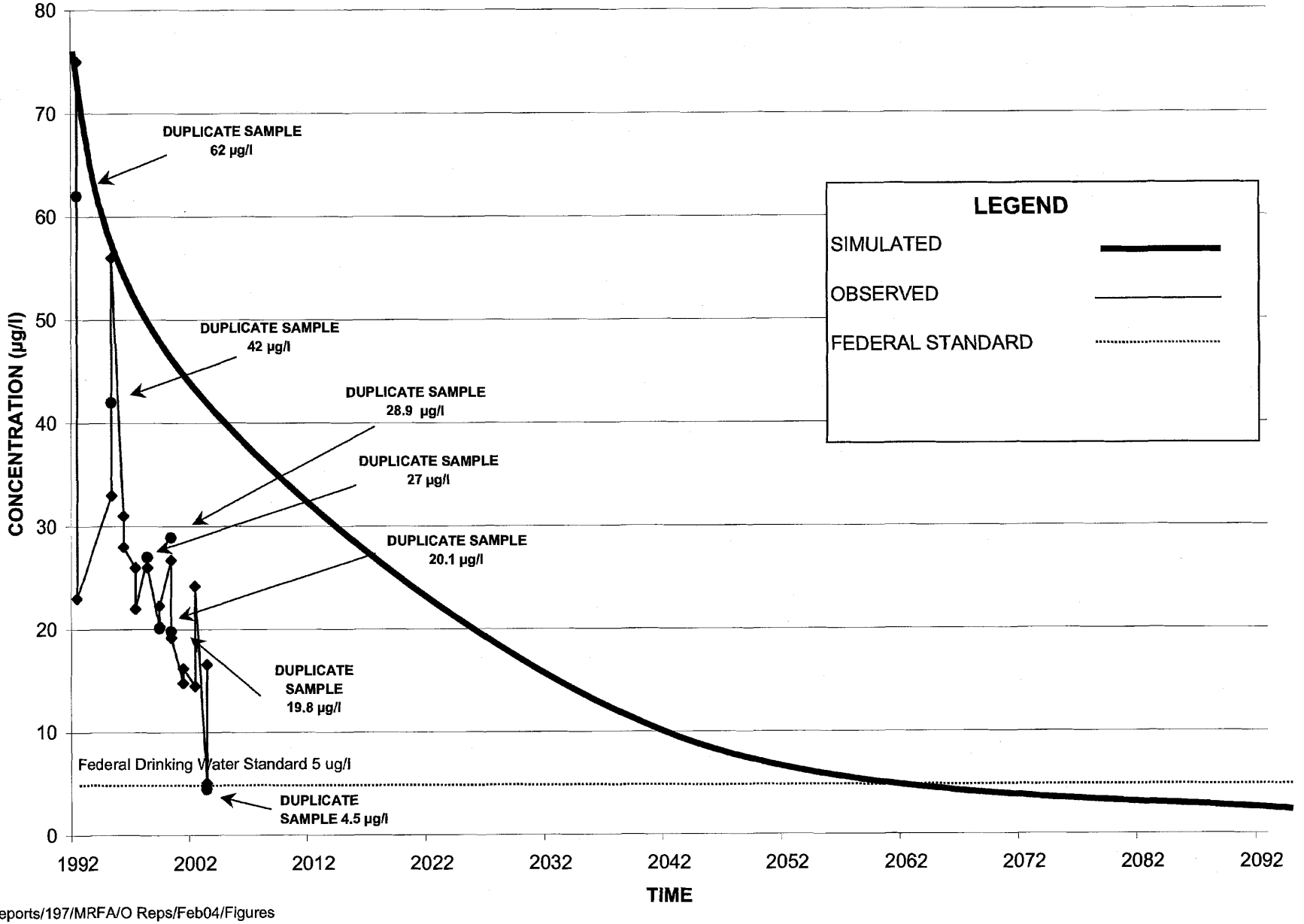
X:/Reports/197/MRFA/O Reps/Feb04/Figures

FIGURE 3
WELL M-27D CARBON TETRACHLORIDE CONCENTRATIONS



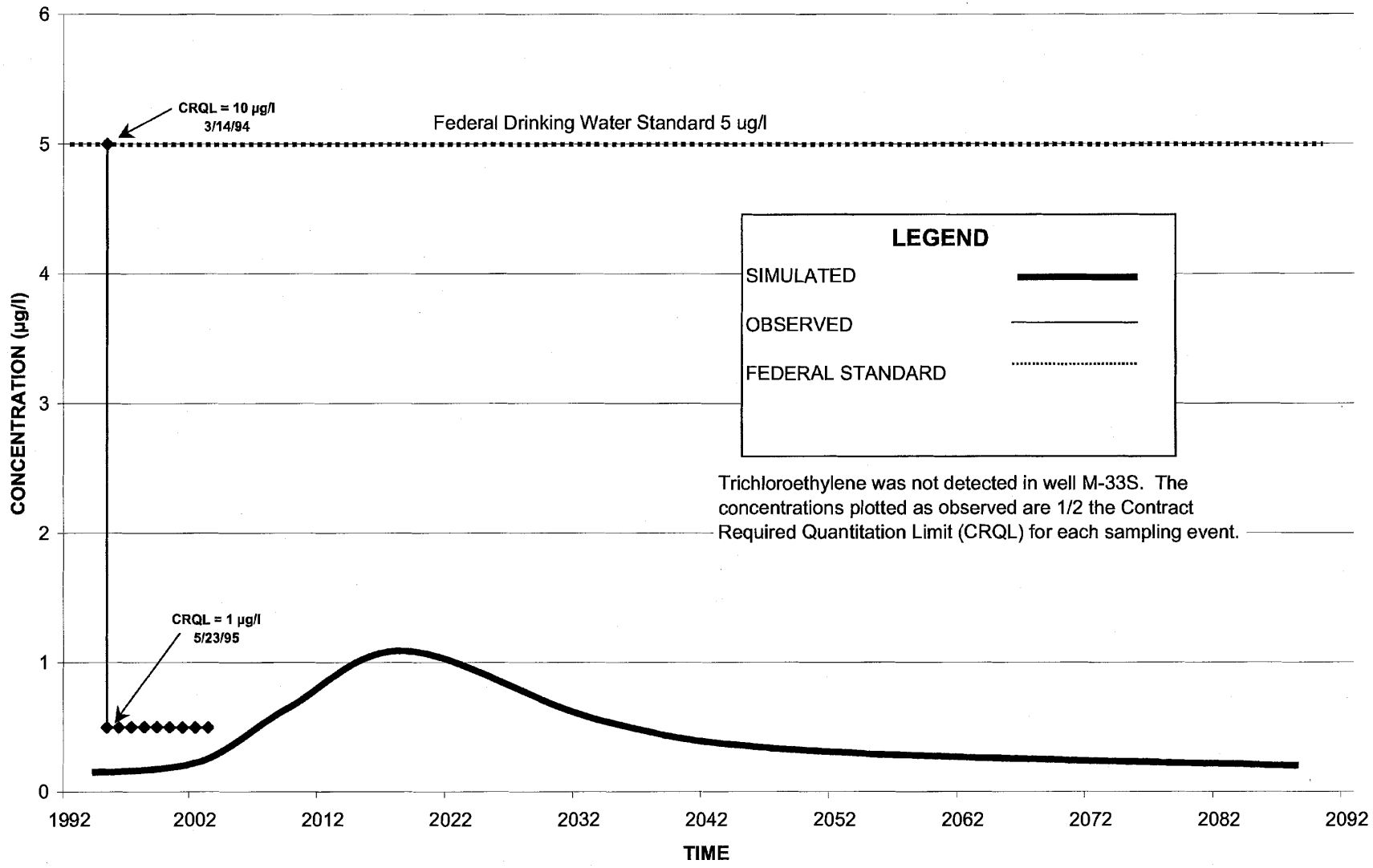
X:/Reports/197/MRFA/O Reps/Feb04/Figures

FIGURE 4
SIMULATED VERSUS OBSERVED (OCTOBER 2003)
CARBON TETRACHLORIDE CONCENTRATIONS
AT WELL M-27D



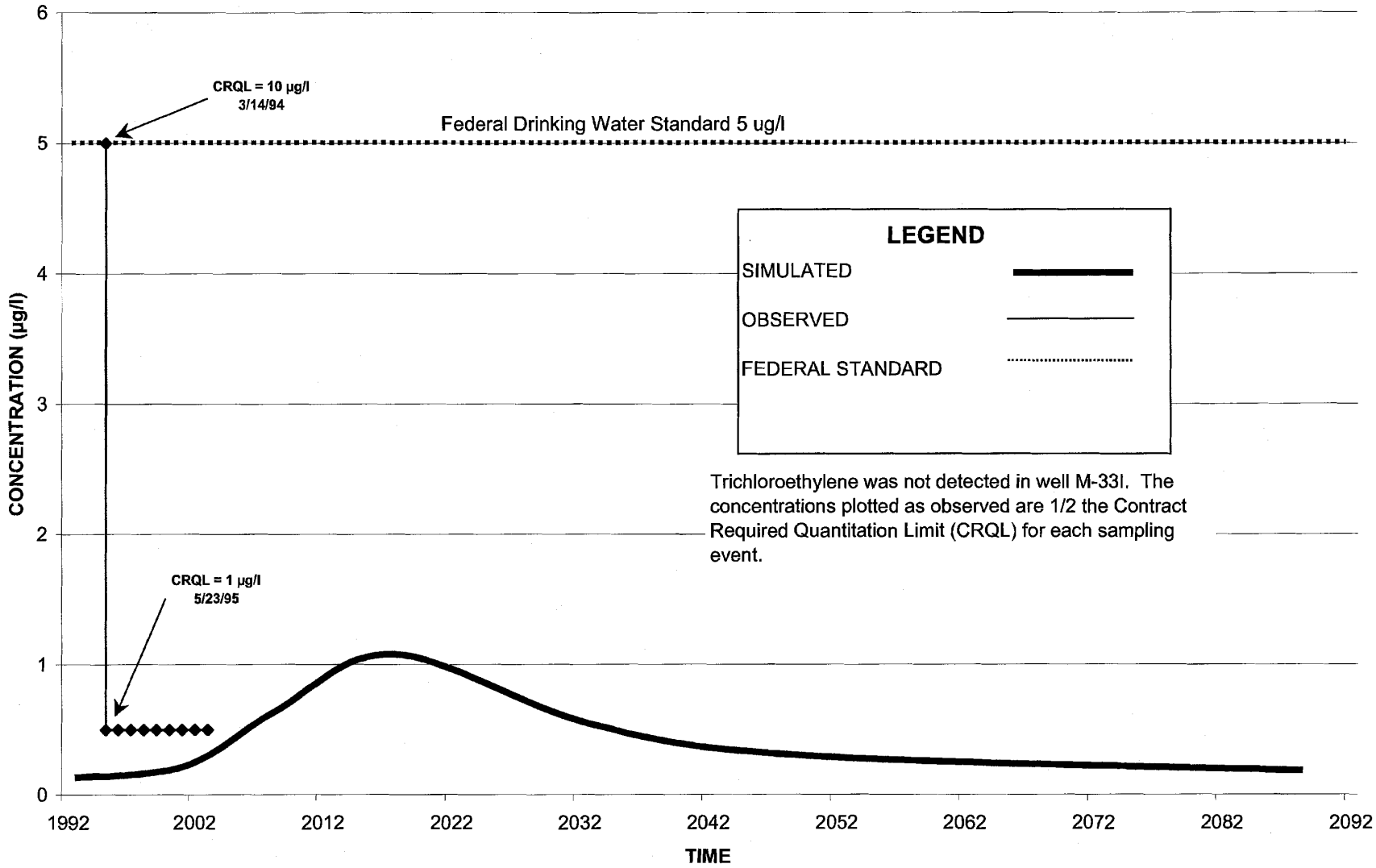
X:/Reports/197/MRFA/O Reps/Feb04/Figures

FIGURE 5
SIMULATED VERSUS OBSERVED (OCTOBER 2003)
TRICHLOROETHYLENE CONCENTRATIONS
AT WELL M-33S



X:/Reports/197/MRFA/O Reps/Feb04/Figures

FIGURE 6
SIMULATED VERSUS OBSERVED (OCTOBER 2003)
TRICHLOROETHYLENE CONCENTRATIONS
AT WELL M-33I



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APPENDIX A

LABORATORY DATA, INFLUENT/EFFLUENT WATER SAMPLES

AUGUST 28, 2003 AND OCTOBER 9, 2003

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Columbia Analytical Services, Inc.
An Employee - Owned Company
www.caslab.com

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 #

CAS Contact

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

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1

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)	QC 2,1 VOA							REMARKS/ ALTERNATE DESCRIPTION
Influent	[redacted]	8/28/03	10:15	H2O	3								X							
Influent MS	[redacted]		10:15		3								X							
Influent MSD	[redacted]		10:15		3								X							
Effluent	[redacted]		10:00		3								X							
Dup A	[redacted]		—		3								X							
[redacted] Blank	[redacted]		—		3								X							
Temperature Blank	[redacted]		—		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, and 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. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: Lewis Streeter, 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: Glen A. Skaarup	Signature	Signature	Signature	Signature	Signature
Printed Name: John A. Skaarup	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Environmental, Inc.	Firm	Firm	Firm	Firm	Firm
Date/Time: 8/28/03 11:00	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.

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668002

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1183

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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 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	10.7	
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	15.3	
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.

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668002

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1183

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668002

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1183

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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.	76-13-1	ETHANE, 1,1,2-TRICHLORO-1,2,	7.26	0.94	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668004

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1184

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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 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	0.61	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
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.

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668004

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1184

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668004

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1184

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668006

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1185

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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 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	0.52	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
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.

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668006

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1185

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DUP A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668006

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1185

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668008

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1188

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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 J
75-15-0	carbon disulfide	1.0	U
75-34-3	1,1-dichloroethane	1.0	U
75-09-2	methylene chloride	0.39	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	0.30	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
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.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668008

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1188

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668008

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1188

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668009

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1189

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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	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	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.

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668009

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1189

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

COOLER BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT

Matrix: (soil/water) WATER Lab Sample ID: 668009

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1189

Level: (low/med) LOW Date Received: 08/29/03

% Moisture: not dec. _____ Date Analyzed: 09/08/03

GC Column: ZB-624-30M ID: 0.32 (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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30.					

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PAGE 1 OF 21

SR #

CAS Contact

Project Name: GE MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Hasty
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: Brian Neumann

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

PRESERVATIVE: 1 2 0

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 624 GC/MS VOC	Total Chrome	CR+6	EPA 314.0 Ammonium Perchlorate	REMARKS/ ALTERNATE DESCRIPTION
M-33S		10/4/03	07:43	H2O	3								X				
M-33I			08:14		3								X				
AS Influent			10:35		3								X				
AS Effluent			10:40		4								X		X		
SW-D			11:05		3								X				
SW-A			11:40		3								X				
SW-B			12:20		5								X	X	X		
M-13S			14:10		2									X	X		
Trip Blank		9/24/03	09:30		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
See QAPP ☐ trichlorofluoromethane

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: Lew Streeter
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 LAB	Printed Name Brian Neumann	Printed Name BRIAN NEUMANN	Printed Name	Printed Name	Printed Name
Firm	Firm Shaw	Firm SHAW	Firm	Firm	Firm
Date/Time	Date/Time 10/6/03 1100	Date/Time 10/8/03 0830	Date/Time	Date/Time	Date/Time

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CAS Contact: K2308058

Project Name: GE MRFA	Project Number: R23-18714
Project Manager: Jane Jaeger	Report CC:
Company/Address: Columbia Analytical, 1 Mustard St., Suite 250, 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: 0

NUMBER OF CONTAINERS

GCMS VOA's ☐ 8260 ☐ 624 ☐ CLP
GCMS 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)
Reanalysis

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	Reanalysis	REMARKS/ ALTERNATE DESCRIPTION
As Effluent	678647	10/9	1040	H_2O	X	

SPECIAL INSTRUCTIONS/COMMENTS
Metals

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)
____ III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
R23-18714
PO#:
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:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: CAS	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 10/13/03 1700	Date/Time: 10/14/03 1600	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678646

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0810

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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	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	0.95	J
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	10.6	
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	12.3	
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
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.

AS INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678646

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0810

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

AS INFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678646

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0810

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678647

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0811

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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	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
74-97-5	bromochloromethane	1.0	U
71-55-6	1,1,1-trichloroethane	1.0	U
56-23-5	carbontetrachloride	0.23	J
71-43-2	benzene	1.0	U
107-06-2	1,2-dichloroethane	1.0	U
79-01-6	trichloroethene	0.56	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
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.

AS EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678647

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0811

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

AS EFFLUENT

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678647

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0811

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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FORM I VOA-TIC

APPENDIX B

LABORATORY DATA, GROUNDWATER SAMPLES AND SURFACE WATER SAMPLES

OCTOBER 2003

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR #

CAS Contact

Project Name: GE MRFA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Henry
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: Brian Neumann

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

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	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 624 & CO2 VOC	Total Chrome	CR+6	EPA 314.0 Ammonium Perchlorate			REMARKS/ ALTERNATE DESCRIPTION
MW-33S		10/9/03	07:43	H2O	3								X						
MW-33I			08:14		3								X						
AS Influent			10:35		3								X						
AS Effluent			10:40		4								X		X				
SW-D			11:05		3								X						
SW-A			11:40		3								X						
SW-B			12:20		5								X	X	X				
MW-13S			14:10		2									X	X				
Trip Blank		10/6/03	09:30		3								X						
Temp Blank					1														

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

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: Lew Streeter
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 BRIAN NEUMANN	Signature	Signature	Signature
Printed Name LAB	Printed Name Brian Neumann	Printed Name SHAW	Printed Name	Printed Name	Printed Name
Firm	Firm SHAW	Firm	Firm	Firm	Firm
Date/Time	Date/Time 10/6/03 1100	Date/Time 10/8/03 0630	Date/Time	Date/Time	Date/Time

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

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PAGE 1 OF 1

SR #

CAS Contact

Project Name: GEMRPA	Project Number: 810066
Project Manager: Brian Neumann	Report CC: Judy Harry, Data Validation
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: Brian Neumann

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's 8260 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 VOC	Total Chrome	CR+6	REMARKS/ ALTERNATE DESCRIPTION
OGC-45		10/15/03	10:30	H2O	3							X	X			
OGC-35			11:08		3							X	X			
M-275			12:38		5							X	X	X		
M-275 MS/MSD			12:38		8							X	X	X		
M-270			13:10		5							X	X	X		
Duplicate			—		5							X	X	X		
Trip Blank		10/15/03	—		3							X				
Temp Blank		10/15/03	—		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
X 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: GE CEP
Attn: Lewis Streeter
SUBMISSION #:

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: LAB	Signature: Brian Neumann	Signature:	Signature:	Signature:	Signature:
Printed Name:	Printed Name: Shaw Env.	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm:	Firm: 10/15/03 16:00	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-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678644

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0808

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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 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
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-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678644

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0808

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

M-33S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678644

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0808

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678645

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0809

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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 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
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-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678645

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0809

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

M-33I

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678645

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0809

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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-D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678648

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0812

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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 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
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.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678648

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0812

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SW-D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678648

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0812

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

SW-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678649

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0813

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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 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
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-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678649

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0813

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SW-A

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678649

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0813

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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5.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678650

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0804

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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	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	0.27	J
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
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-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678650

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0804

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

SW-B

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678650

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0804

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.		~~UNKNOWN~~	~~23.05~~	~~0.59~~	~~J P~~
2.					
3.					
4.					
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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.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678652

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0814

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678652

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0814

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

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.	~~430-57-9~~	~~ETHANE, 1,2-DICHLORO-1-FLUOR~~ Unknown	6.75	0.75	NJ
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678653

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0858

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

% Moisture: not dec. _____ Date Analyzed: 10/22/03

GC Column: RTX502.2 ID: 0.53 (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 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
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.

COOLER BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678653

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0858

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

% Moisture: not dec. _____ Date Analyzed: 10/22/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

COOLER BLK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 678653

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0858

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

% Moisture: not dec. _____ Date Analyzed: 10/22/03

GC Column: RTX502.2 ID: 0.53 (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.		UNKNOWN	22.96	0.70	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679933

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0815

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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	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	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.

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679933

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0815

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DGC-4S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679933

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0815

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679934

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0816

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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	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	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.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679934

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0816

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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.

DGC-3S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679934

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0816

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-27S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679935

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0854

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/21/03

GC Column: RTX502.2 ID: 0.53 (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	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	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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-27S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679935

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0854

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/21/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

M-27S

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679935

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0854

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/21/03

GC Column: RTX502.2 ID: 0.53 (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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

M-27D

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679936

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0817

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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		2.3	
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	
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		16.6	
71-43-2	benzene		1.0	U
107-06-2	1,2-dichloroethane		1.0	U
79-01-6	trichloroethene	21.8	~~25.5~~	E
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

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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.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679936

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0817

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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

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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.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679936

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0817

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX502.2 ID: 0.53 (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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUPLICATE

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679937

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0831

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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	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	0.11	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
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.

DUPLICATE

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679937

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0831

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DUPLICATE

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679937

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0831

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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	17.62	0.63	J
2.		~~UNKNOWN~~	~~23.00~~	~~0.70~~	~~J~~ R
3.					
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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.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679938

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0834

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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	2.8	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	0.39	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
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.

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679938

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0834

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK

Lab Name: CAS-ROC Contract: SHAW

Lab Code: 10145 Case No.: R23-18714 SAS No.: SDG No.: M-33S

Matrix: (soil/water) WATER Lab Sample ID: 679938

Sample wt/vol: 25.00 (g/ml) ML Lab File ID: J0834

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: RTX502.2 ID: 0.53 (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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METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

DUPLICATE

Contract: R2318714

Lab Code: Case No.: SAS No.: SDG NO.: M-338

Matrix (soil/water): WATER Lab Sample ID: 679937

Level (low/med): LOW Date Received: 10/16/03

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	1.8	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-13S

Contract: R2318714

Lab Code: Case No.: SAS No.: SDG NO.: M-33S

Matrix (soil/water): WATER Lab Sample ID: 678651

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

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	49.4			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
M-27D

Contract: R2318714

Lab Code: Case No.: SAS No.: SDG NO.: M-33S

Matrix (soil/water): WATER Lab Sample ID: 679936

Level (low/med): LOW Date Received: 10/16/03

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	1.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

M-27S

Contract: R2318714

Lab Code: Case No.: SAS No.: SDG NO.: M-33S

Matrix (soil/water): WATER Lab Sample ID: 679935

Level (low/med): LOW Date Received: 10/16/03

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	1.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
SW-B

Contract: R2318714

Lab Code: Case No.: SAS No.: SDG NO.: M-33S

Matrix (soil/water): WATER Lab Sample ID: 678650

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

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	0.75	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 11/17/03

Shaw Environmental
Project Reference: GE MRFA PROJECT #810066
Client Sample ID : SW-B

Date Sampled : 10/09/03 12:20 Order #: 678650 Sample Matrix: WATER
Date Received: 10/10/03 Submission #: R2318714

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	10/10/03	11:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 11/17/03

Shaw Environmental
Project Reference: GE MRFA PROJECT #810066
Client Sample ID : M-13S

Date Sampled : 10/09/03 14:10 Order #: 678651 Sample Matrix: WATER
Date Received: 10/10/03 Submission #: R2318714

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0515	MG/L	10/10/03	11:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 11/17/03

Shaw Environmental
Project Reference: GE MRFA PROJECT #810066
Client Sample ID : M-27S

Date Sampled : 10/15/03 12:38 Order #: 679935 Sample Matrix: WATER
Date Received: 10/16/03 Submission #: R2318714

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	10/16/03	11:37	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 11/17/03

Shaw Environmental
Project Reference: GE MRFA PROJECT #810066
Client Sample ID : M-27D

Date Sampled : 10/15/03 13:10 Order #: 679936 Sample Matrix: WATER
Date Received: 10/16/03 Submission #: R2318714

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	10/16/03	11:37	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 11/17/03

Shaw Environmental
Project Reference: GE MRFA PROJECT #810066
Client Sample ID : DUPLICATE

Date Sampled : 10/15/03 Order #: 679937 Sample Matrix: WATER
Date Received: 10/16/03 Submission #: R2318714

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	10/16/03	11:37	1.0

APPENDIX C

LABORATORY DATA, PERCHLORATE RESULTS

PACKAGE, AMMONIUM PERCHLORATE EFFLUENT WATER SAMPLE

OCTOBER 9, 2003

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 4, 2003

RECEIVED
Route To:
DEC 03
Proj:
File Code:

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

Re: GE MRFA
Submission # R2318714
SDG # M-33S

Dear Mr. Neumann:

Enclosed is the perchlorate data for the above referenced facility that was inadvertently left out of the original package. 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.

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

November 10, 2003 Service Request No: K2308058

Janice Jaeger
Columbia Analytical Services, Inc.
1 Mustard Street, Suite 250
Rochester, NY 14609

RE: R2318714 / GE MRFA / R23-18714

Dear Janice:

Enclosed are the results of the sample(s) submitted to our laboratory on October 10, 2003. For your reference, these analyses have been assigned our service request number K2308058.

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

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental and Infrastructure	**Service Request No.:**	K2308058
Project:	GE MRFA	**Date Received:**	10/10/2003
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 Kelso, WA laboratory on 10/14/2003. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Perchlorate by EPA Method 314

No anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 10/10/03

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 # K2308058
CAS Contact

Project Name: GE MRFA	Project Number: R23-18714
Project Manager: Jane Jaeger	Report CC:
Company/Address: Columbia Analytical, 1 Mustard St., Suite 250, 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: 0

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	PCBs ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Perchlorate	REMARKS/ ALTERNATE DESCRIPTION
As Effluent	078647	10/9	1040	H2O									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
X 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
X IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
R23-18714
PO#
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:	Signature: Tracy Black	Signature:	Signature:	Signature:	Signature:
Printed Name:	Printed Name: T Black CAS	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: CAS	Firm: 10/14/03 1600	Firm:	Firm:	Firm:	Firm:
Date/Time: 10/13/03 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

UPS

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client CAS (Rochester) Work Order K23 0805 8

Cooler received on 10-14-03 and opened on 10-14-03 by BW

1.	Were custody seals on outside of cooler? If yes, how many and where?		(Y) N
2.	Were seals intact and signature & date correct?	12-MW-	(Y) N
3.	Is the shipper's airbill available and filed? If no, record airbill number:	438-01 4637-5111	(Y) N
4.	COC #		
	Temperature of cooler(s) upon receipt:	4.6	
	Temperature Blank:	N.P.	
5.	Were custody papers properly filled out (ink, signed, etc.)?		(Y) N
6.	Type of packing material present	ICE, bubble wrap	
7.	Did all bottles arrive in good condition (unbroken)?		(Y) N
8.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?		(Y) N
9.	Did all bottle labels and tags agree with custody papers?		(Y) N
10.	Were the correct types of bottles used for the tests indicated?		(Y) N
11.	Were all of the preserved bottles received at the lab with the appropriate pH?		Y N
12.	Were VOA vials checked for absence of air bubbles, and if present, noted below?		~~Y~~ ~~N~~
13.	Did the bottles originate from CAS/K or a branch laboratory?		(Y) N
14.	Are CWA Microbiology samples received with > ½ the 24 hr. hold time remaining from collection?		~~Y~~ ~~N~~
15.	Was Cl2/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

000006

CRFREV.DOC3/5/2003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental and Infrastructure	**Service Request:**	K2308058
Project:	GE MRFA/R23-18714	**Date Collected:**	10/09/03
Sample Matrix:	Water	**Date Received:**	10/10/03

Perchlorate

Prep Method:	NONE	Units:	ug/L (ppb)
Analysis Method:	314.0	Basis:	As Received
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
As Effluent	K2308058-001	2.0	0.5	1	NA	11/05/03	ND	
Method Blank	K2308058-MB	2.0	0.5	1	NA	11/05/03	0.6	J

Approved By: _____ Date: 11/6/03

1A/020597p

000007

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental and Infrastructure
Project: GE MRFA/R23-18714
Sample Matrix: Water

Service Request: K2308058
Date Collected: 10/09/03
Date Received: 10/10/03
Date Extracted: NA
Date Analyzed: 11/05/03

Duplicate Summary
Inorganic Parameters

Sample Name: As Effluent
Lab Code: K2308058-001DUP
Test Notes:

Units: ug/L (ppb)
Basis: As Received

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Perchlorate	NONE	314.0	2.0	ND	1.5	NC	NC	J

Approved By: _____ Date: 11/6/03

000008

DUP/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Shaw Environmental and Infrastructure	**Service Request:**	K2308058
Project:	GE MRFA/R23-18714	**Date Collected:**	10/09/03
Sample Matrix:	Water	**Date Received:**	10/10/03
		Date Extracted:	NA
		Date Analyzed:	11/05/03

Matrix Spike Summary
Inorganic Parameters

Sample Name:	As Effluent	Units:	ug/L (ppb)
Lab Code:	K2308058-001MS	Basis:	As Received
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	40.0	ND	41.3	103	80-120	

Approved By: _____ Date: 11/6/03

MS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Shaw Environmental and Infrastructure	**Service Request:**	K2308058
Project:	GE MRFA/R23-18714	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	11/05/03

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name:	Lab Control Sample	Units:	mg/L (ppm)
Lab Code:	K2308058-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Perchlorate	NONE	314.0	500	529	106	85-115	

Approved By: _____ Date: 11/6/03

LCS/020597p

000010

08058WET.MF1 - LCS 11/06/03

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental and Infrastructure
Project: GE MRFA/R23-18714

Service Request: K2308058
Date Collected: NA
Date Received: NA
Date Analyzed: 11/05/03

Perchlorate
EPA Method 314.0
Units: ug/L (ppb)

INITIAL CALIBRATION CHECK STANDARD (ICCS)

	True Value	Measured Value	Percent Recovery
ICCS Result	2.0	1.8	90

CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	25.0	22.7	91

ENDING CALIBRATION VERIFICATION (ECCV)

	True Value	Measured Value	Percent Recovery
ECCV Result	100	105	105

Approved By: _____ Date: 11/6/03

000011

COMBOQCD/042695

Columbia Analytical Services, Inc.

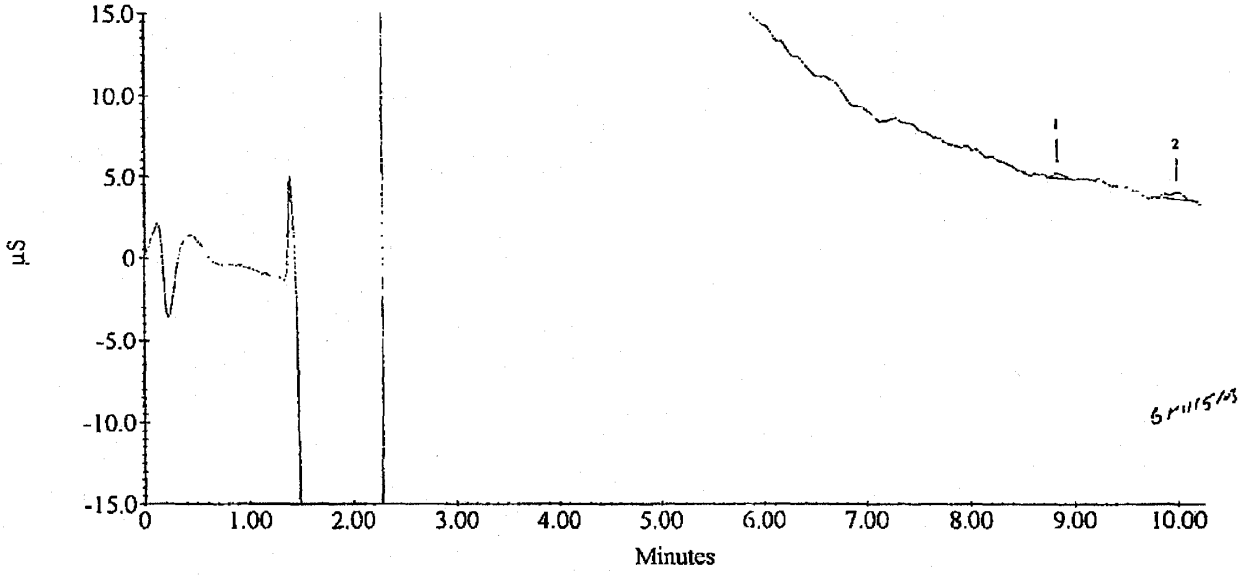
Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : 8058-1 Date Time Collected : 11/5/03 11:09:43 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 16 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_016.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	8.85	Perchlorate ~ 2.0	0.489	321286	2225390

R: N.D. MDL -

8058-1

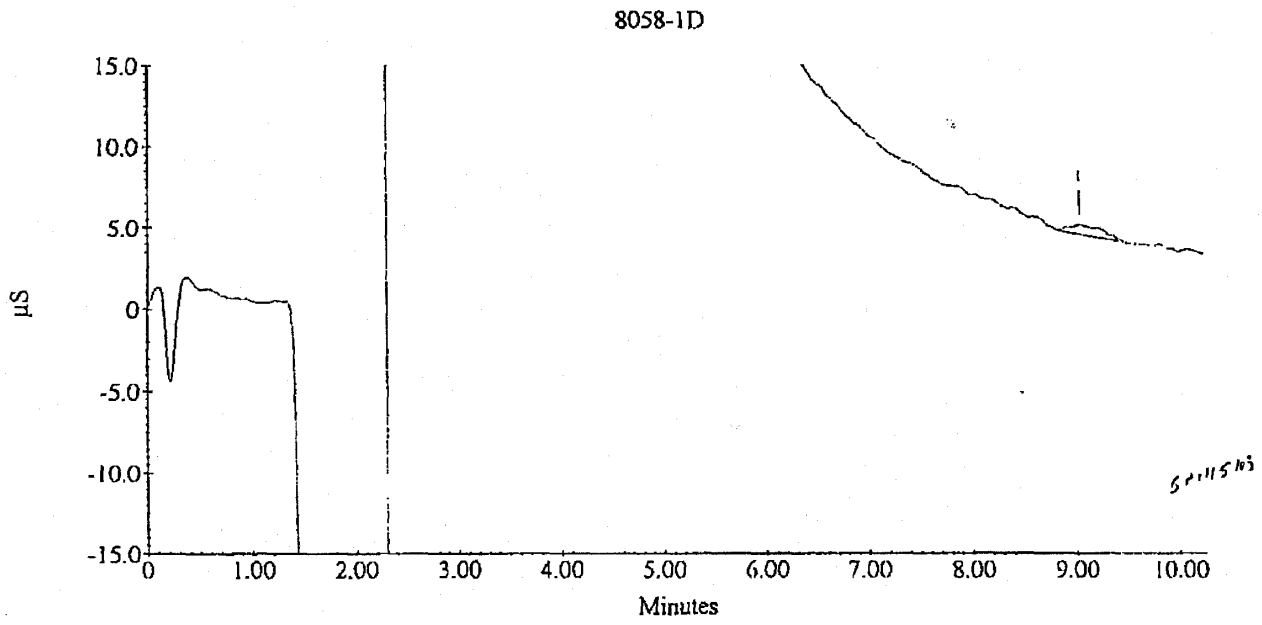


Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : 8058-1D Date Time Collected : 11/5/03 12:37:19 PM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 19 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_019.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	9.05	Perchlorate 49.0	1.505	588965	14209571



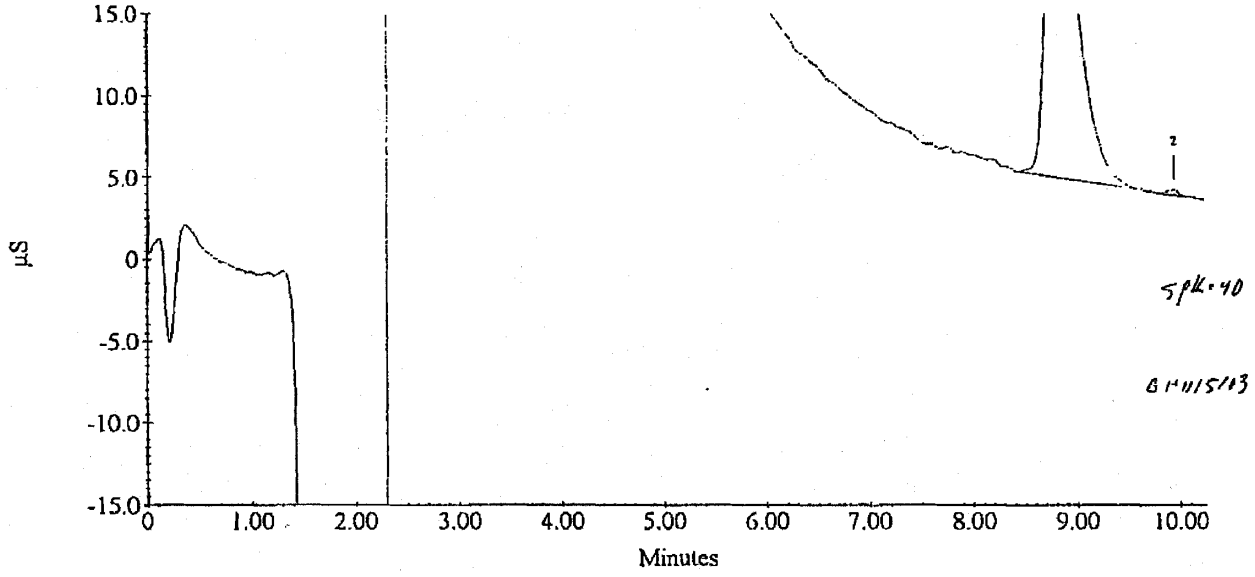
Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : 8058-1SPK Date Time Collected : 11/5/03 12:49:04 PM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 20 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_020.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	8.82	Perchlorate	41.345	25681635	484116845

8058-1SPK



11/5/03

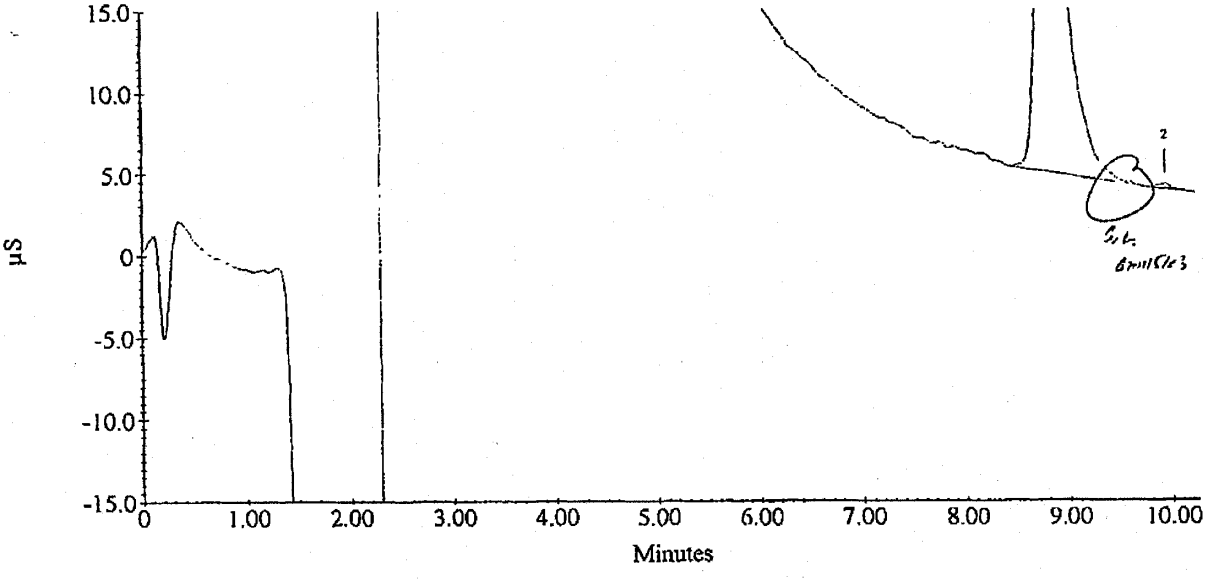
Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : 8058-1SPK Date Time Collected : 11/5/03 12:49:04 PM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 20 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_020.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	8.82	Perchlorate	41.546	25694326	486489223

8058-1SPK



11/5/03

Ion Chromatography Data Quality Report
Perchlorate
Inorganics

1. Holding times met for all samples analyzed? (yes/no/NA)
2. Are all chromatograms signed and dated? (yes/no/NA)
3. Are dilutions within upper limits of the curve? (yes/no/NA)
4. Are analysis/extraction stickers included on report? (yes/no/NA)
5. Are detection limits reported correctly? (yes/no/NA)
6. Are all quality control criteria met? (yes/no/NA)
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? (yes/no/NA)
   b. Are CCV's and CCB's all within acceptance limits? (yes/no/NA)
   c. Are results for Method Blanks all ND? (yes/no/NA)
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) (yes/no/NA)
   e. Are all exceptions explained? (yes/no/NA)
8. Are all samples labelled correctly? (yes/no/NA)

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.

OBH 11/5/03

IPC
Perchlorate True Value = 25 ppb CAS ID# = AN3-67-X Expires 11/12/03 ± 5: 8.66 - 9.58

ICCS
Perchlorate True Value = ~~5.0~~ 2.0 ppb CAS ID# = AN3-67-T Expires 11/12/03

CCV
Perchlorate True Value = 25.0 ppb CAS ID # = AN3-67-U Expires 11/12/03

Spike
Perchlorate True Value = 1000 ppb CAS ID# = AN3-67-W Expires 11/12/03

ECCV
Perchlorate True Value = 100 ppb CAS ID# = AN3-67-V Expires 11/12/03

LCS True Value = 500 ppb RI ON06145 Expires 5/5/04
40.0 ppb X dilution factor

Analyst: B. Hetland Date: 11/5/03

First Review: B. Hetland Date: 11/5/03

Final Review: [signature] Date: 11/5/03

Schedule File: J:\IC_DATA\An-4\Data\NOV03\AN41105\an41105.SCH

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	STD2 LEVEL2	Calibration St	2	0818clo4.met	data	1	1
2	STD2 LEVEL2	Calibration St	2	0818clo4.met	data	1	1
3	STD3 LEVEL3	Calibration St	3	0818clo4.met	data	1	1
4	STD4 LEVEL4	Calibration St	4	0818clo4.met	data	1	1
5	STD5 LEVEL5	Calibration St	5	0818clo4.met	data	1	1
6	STD6 LEVEL6	Calibration St	6	0818clo4.met	data	1	1
7	STD7 LEVEL7	Calibration St	7	0818clo4.met	data	1	1
8	STD1 LEVEL1	Calibration St	1	0818clo4.met	data	1	1
9	STD1 LEVEL1	Calibration St	1	0818clo4.met	data	1	1
10	IPC	Sample		0818clo4.met	data_010.dxd	1	1
11	MB	Sample		0818clo4.met	data_011.dxd	1	1
12	ICCS/ICV	Sample		0818clo4.met	data_012.dxd	1	1
13	RION06145 LCS	Sample		0818clo4.met	data_013.dxd	1	10
14	ICCS/ICV	Sample		0818clo4.met	data_014.dxd	1	1
15	LFB/CCV1	Sample		0818clo4.met	data_015.dxd	1	1
16	8058-1	Sample		0818clo4.met	data_016.dxd	1	1
17	8588-3	Sample		0818clo4.met	data_017.dxd	1	1
18	8588-4	Sample		0818clo4.met	data_018.dxd	1	1
19	8058-1D	Sample		0818clo4.met	data_019.dxd	1	1
20	8058-1SPK	Sample		0818clo4.met	data_020.dxd	1	1
21	8588-3	Sample		0818clo4.met	data_021.dxd	1	1
22	8588-3D	Sample		0818clo4.met	data_022.dxd	1	1
23	8588-3SPK	Sample		0818clo4.met	data_023.dxd	1	1
24	8588-4D	Sample		0818clo4.met	data_024.dxd	1	1
25	RB	Sample		0818clo4.met	data_025.dxd	1	1
26	ECCV	Sample		0818clo4.met	data_026.dxd	1	1

Analytical Batch KA0323604

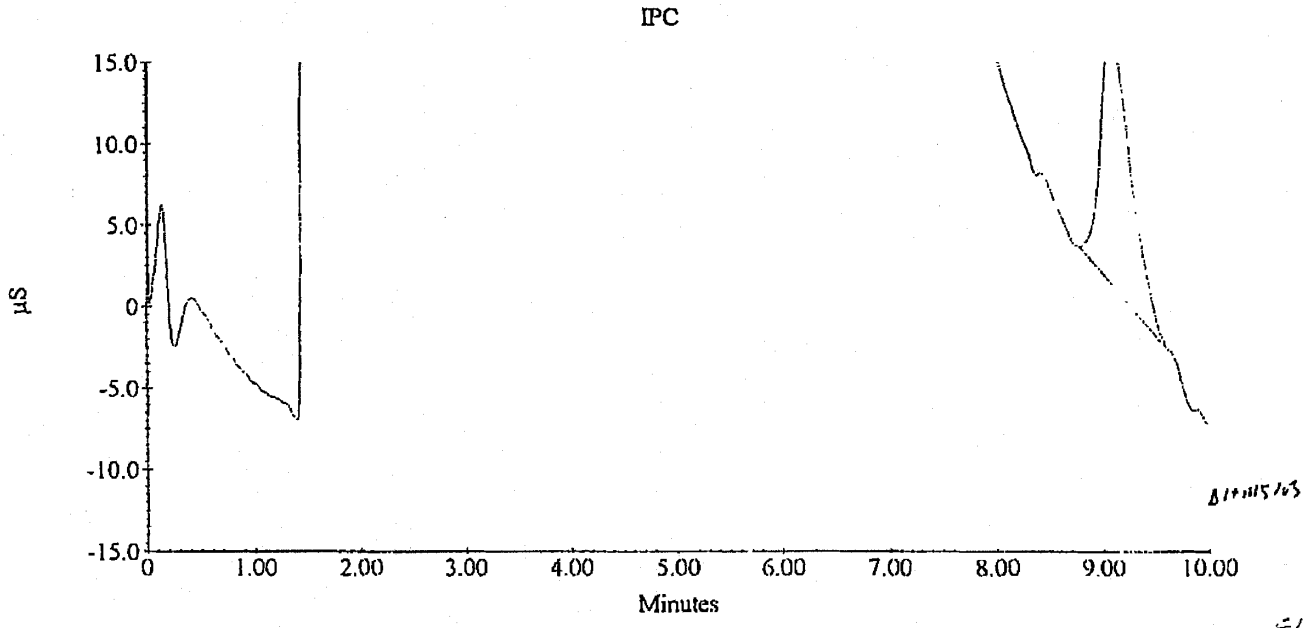
000017

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : IPC Date Time Collected : 11/5/03 9:28:53 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 10 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_010.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	9.12	Perchlorate	27.365	16049887	319220481



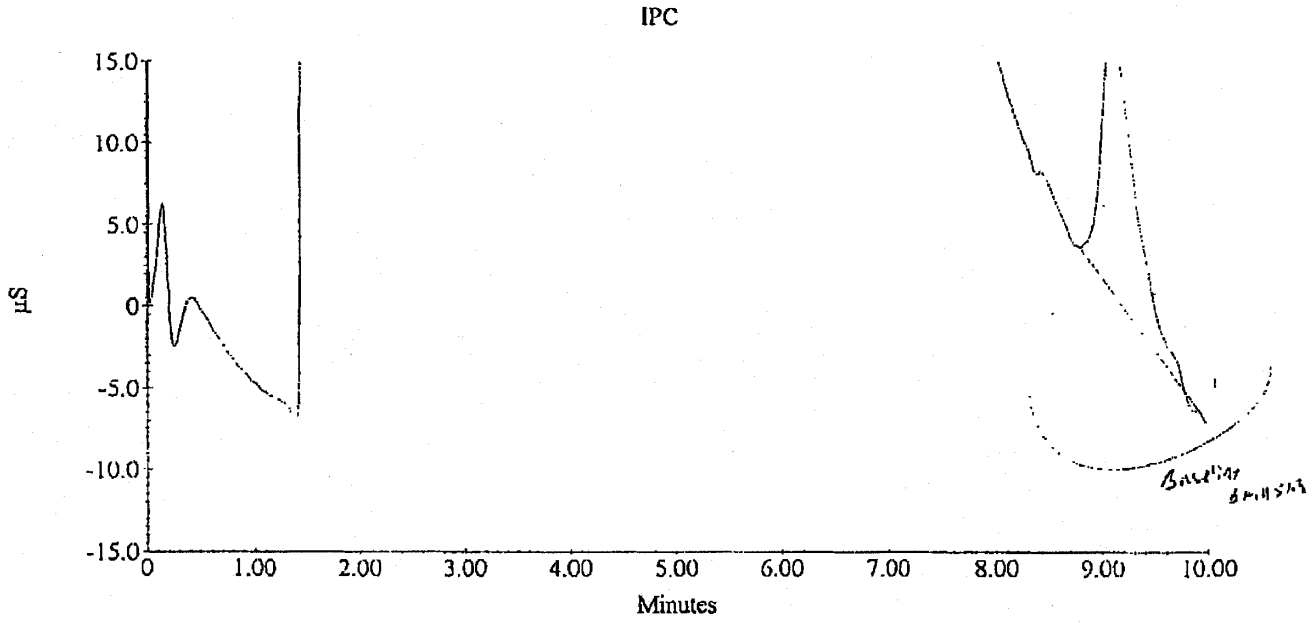
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : IPC Date Time Collected : 11/5/03 9:28:53 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 10 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_010.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	9.12	Perchlorate	30.489	16517194	356070676



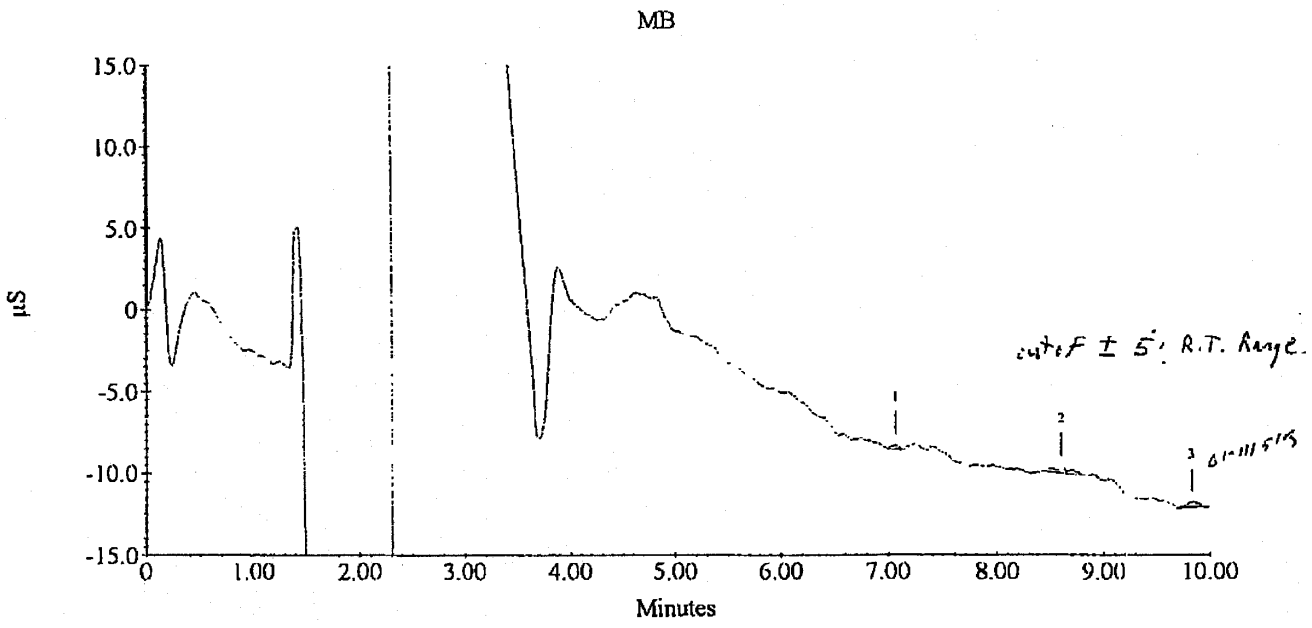
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : MB Date Time Collected : 11/5/03 9:41:32 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 11 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_011.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
2	8.62	Perchlorate < 2.0	0.638	366423	3984238



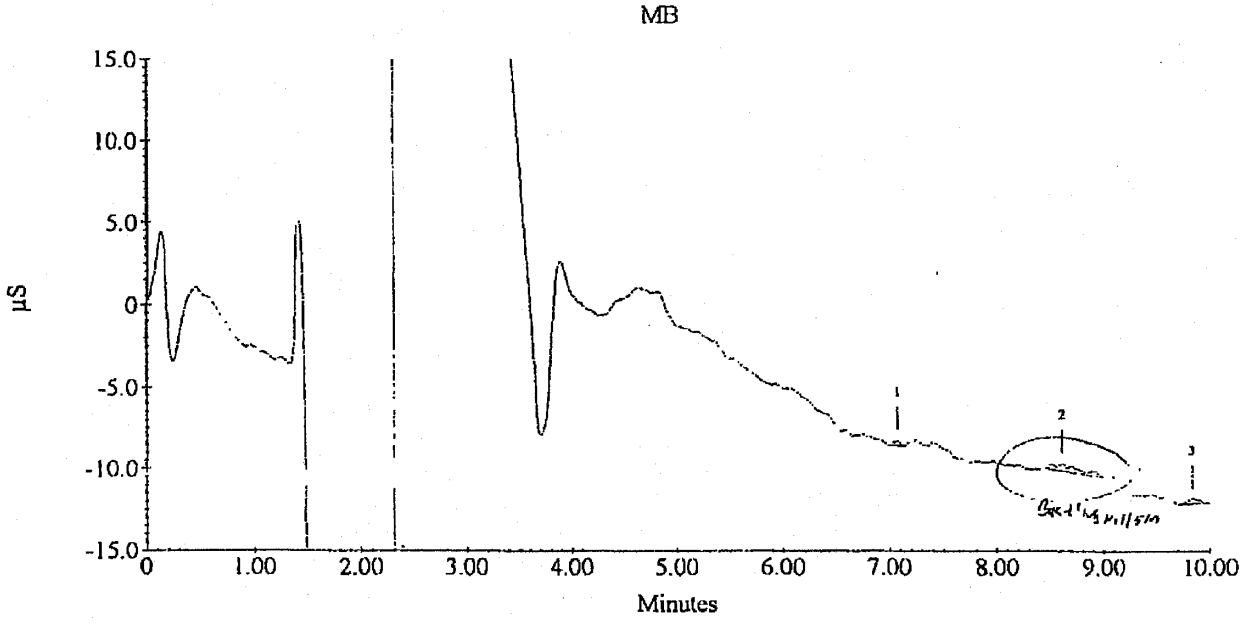
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : MB Date Time Collected : 11/5/03 9:41:32 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 11 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_011.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
2	8.62	Perchlorate	0.929	433098	7415896



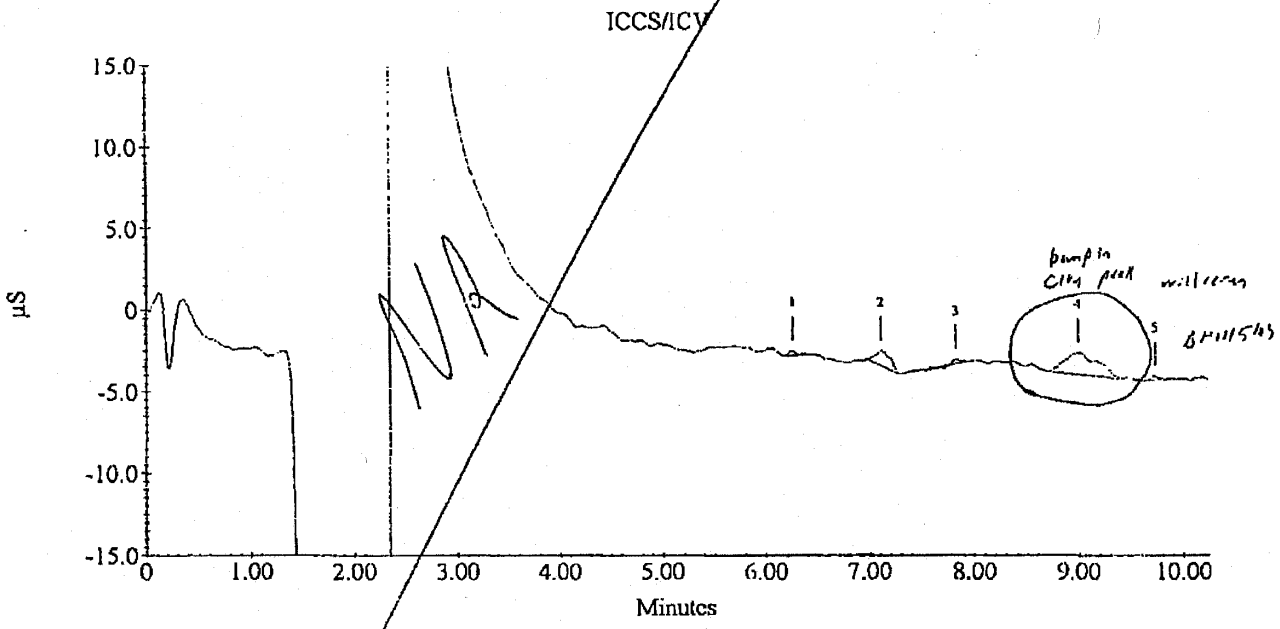
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : ICCS/ICV Date Time Collected : 11/5/03 10:18:04 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 12 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_012.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
4	9.00	Perchlorate	2.930	1367755	31009710

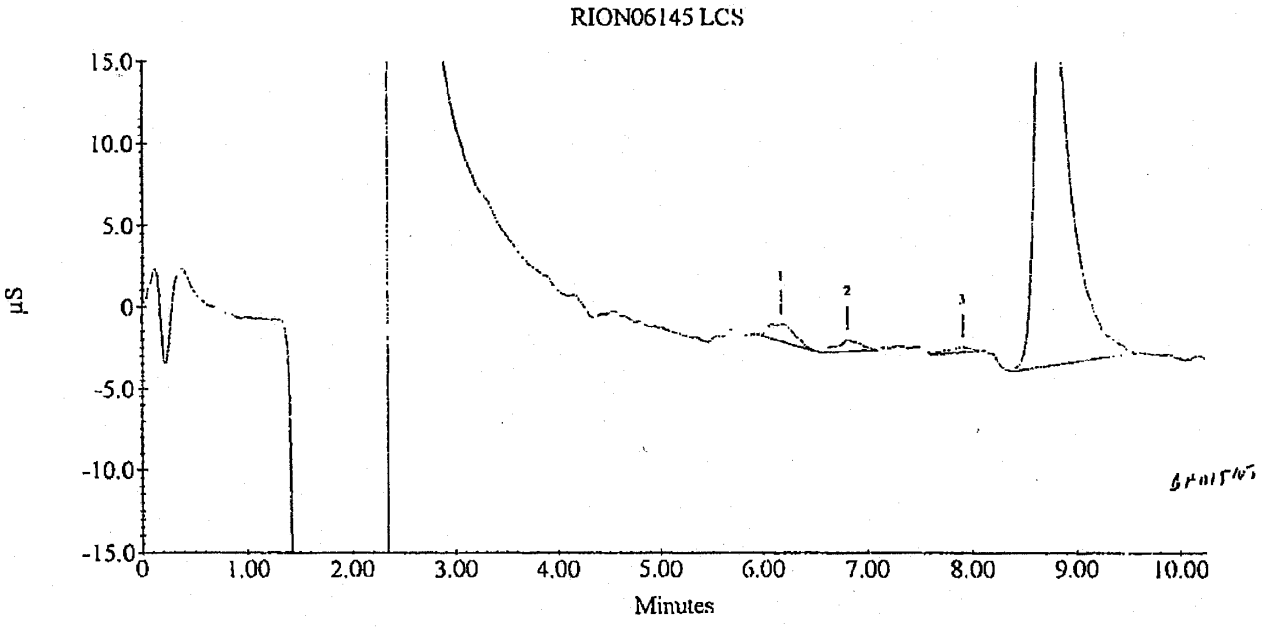


Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : RION06145 LCS Date Time Collected : 11/5/03 10:29:46 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 13 Dilution Factor : 10.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_013.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
4	8.72	Perchlorate	528.518	30985152	619834663

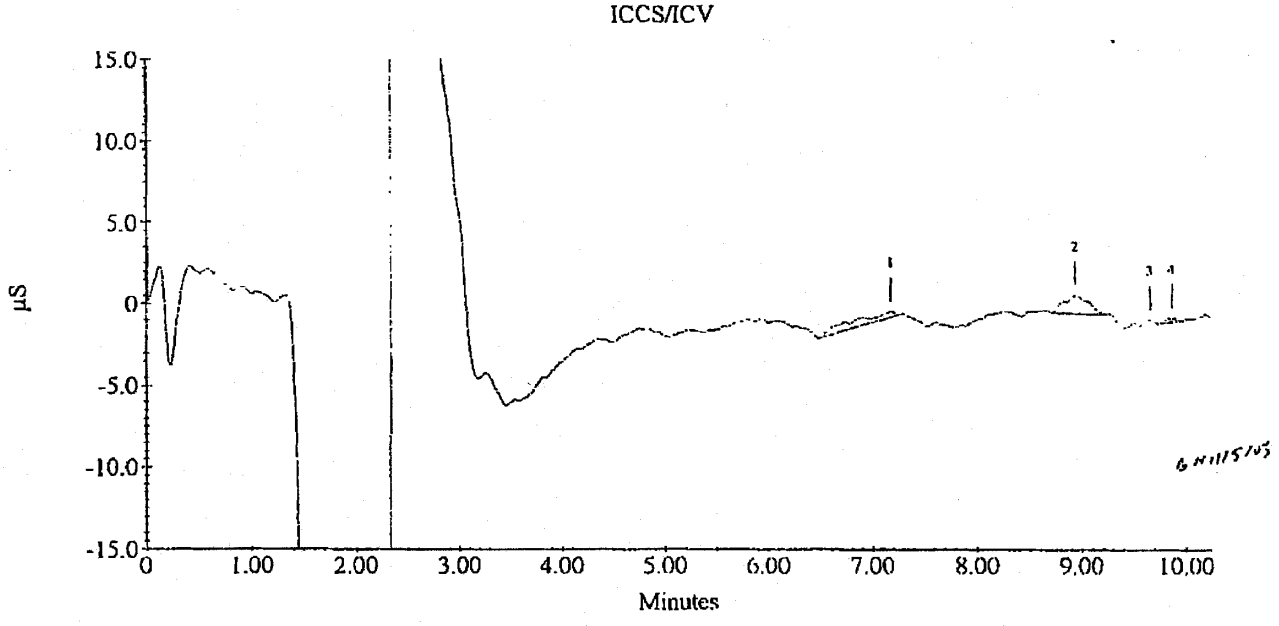


Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : ICCS/ICV Date Time Collected : 11/5/03 10:45:44 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 14 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_014.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
2	8.95	Perchlorate	1.840	1102981	18156416



M.P.
11/5/03

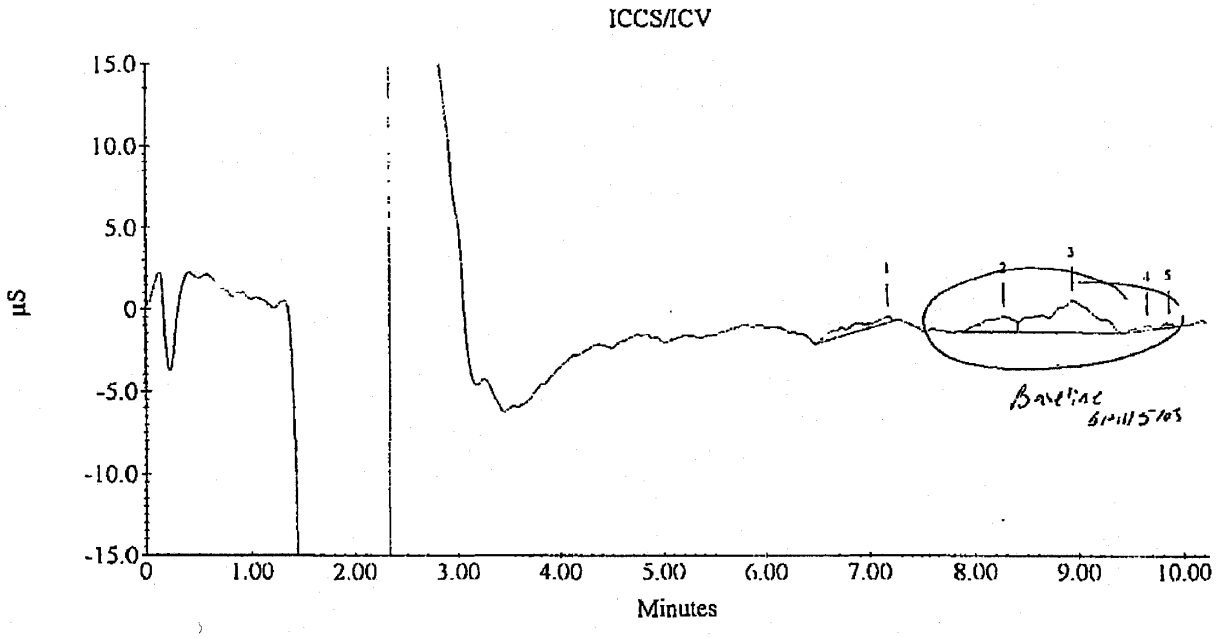
000024

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : ICCS/ICV Date Time Collected : 11/5/03 10:45:44 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 14 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_014.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
3	8.95	Perchlorate	5.817	1939245	65064074



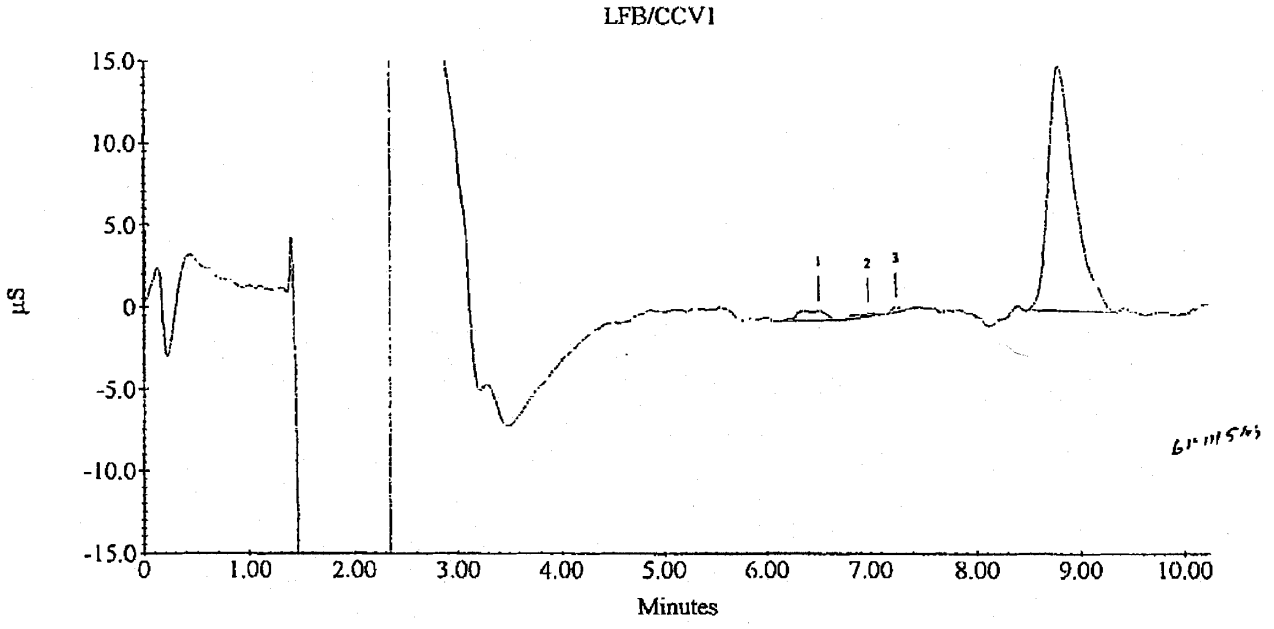
M.P. 11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : LFB/CCV1 Date Time Collected : 11/5/03 10:58:05 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 15 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_015.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
4	8.80	Perchlorate	22.689	14873646	264064899



M.P. 11/5/03

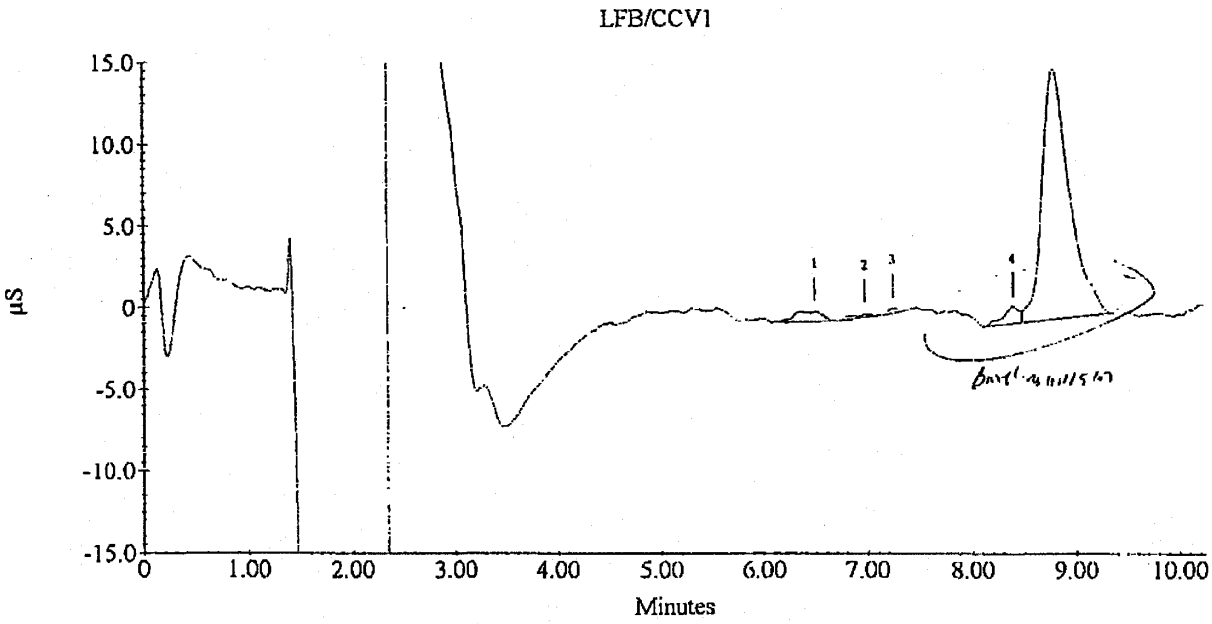
003026

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : LFB/CCV1 Date Time Collected : 11/5/03 10:58:05 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 15 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_015.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
5	8.80	Perchlorate	24.292	15351699	282978437



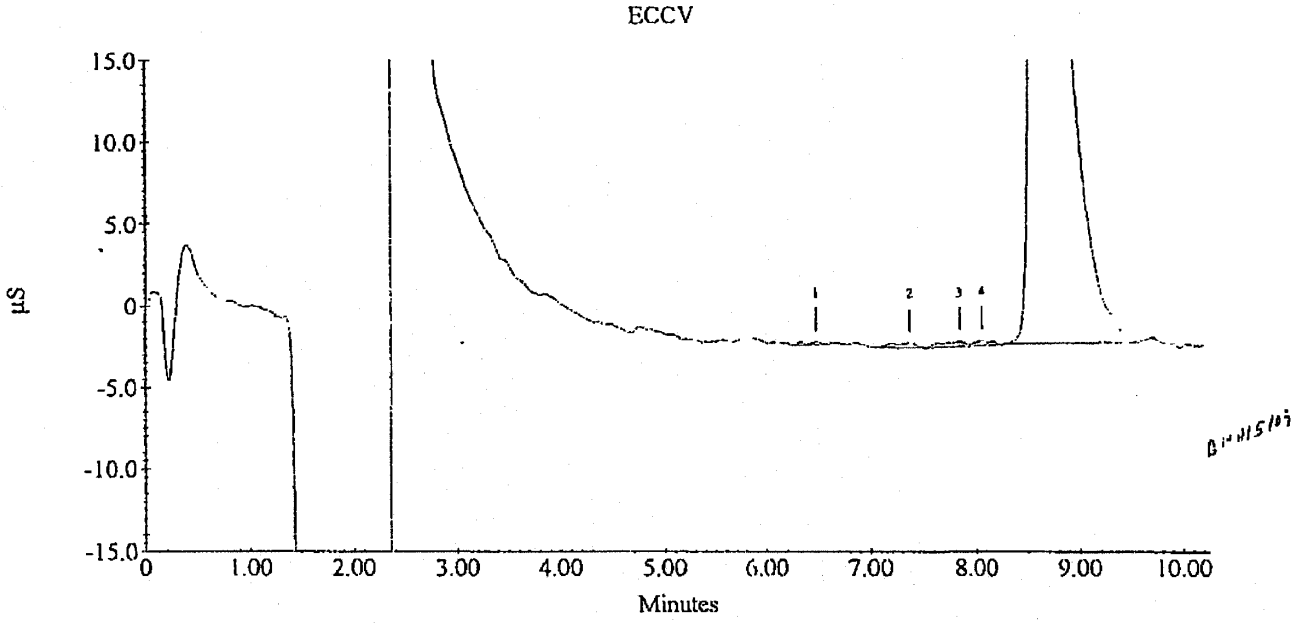
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : ECCV Date Time Collected : 11/5/03 1:59:11 PM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 26 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_026.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
5	8.65	Perchlorate	105.296	60938406	1238410803



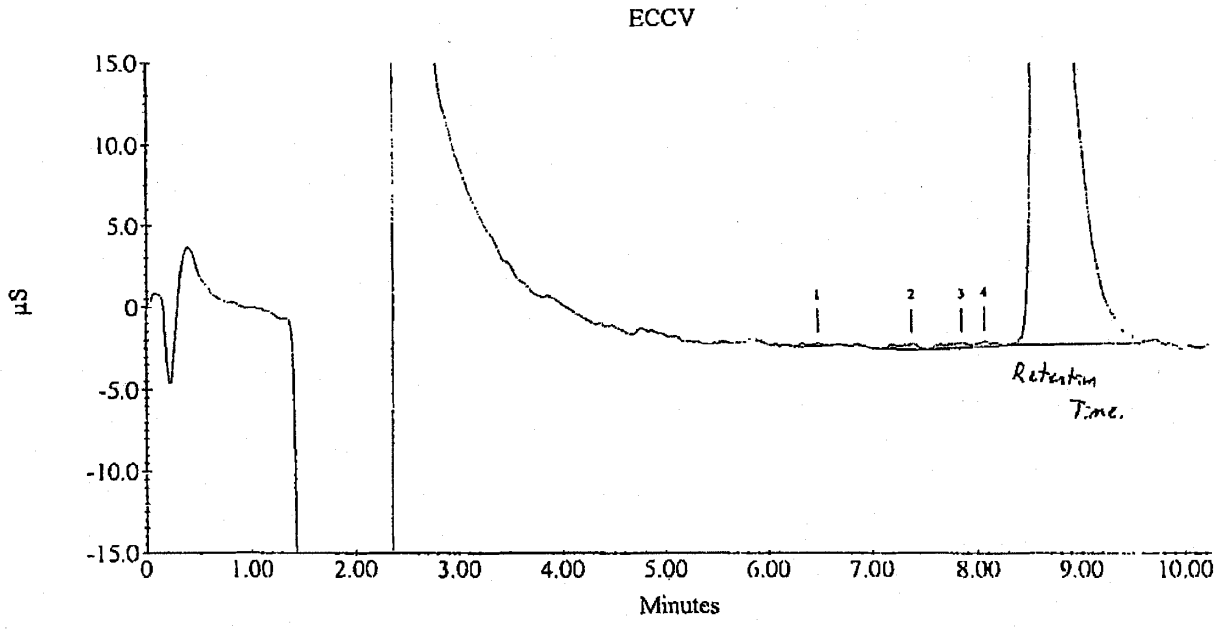
11/5/03

Columbia Analytical Services, Inc.

Ion Chromatography :	EPA Method 300.0 : ...\0818clo4.met
Sample Name : ECCV Date Time Collected : 11/5/03 1:59:11 PM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name : ...\an41105.sch
Injection Number : 26 Dilution Factor : 1.00 Batch ID Number : AS-11 BATCH# KA0323604	Column ID : AS-11 BATCH# KA0323604 Data File Name : ...\DATA_026.DXD Injection Volume : 1.00

Peak Information : All Components

Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	6.48		0.000	166141	1988476



11/5/03

COLUMBIA ANALYTICAL SERVICE, INC.

Service Request #: 8588 8058 8536 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	50K	LCS	8588-3	8588-3D	8588-4	8058-1	8536-1	8536-2
u/m Range	u	u	m	u	u	u	u	u	m	m
Reading	0.77	1411	50.3	955	150.2	150.0	147.3	253	4.86	35.0
Conductivity	L2	1411	50300	955	150	150	147	253	4860	35000

Sample Name	8536-3	8536-4	8536-5	MB	1413	50K				
u/m Range	m	m	m	u	u	u				
Reading	48.4	11.78	47.5	0.79	1410	50.3				
Conductivity	48400	11800	47500	L2	1410	50300				

Sample Name										
u/m Range										
Reading										
Conductivity										

Sample Name										
u/m Range										
Reading										
Conductivity										

LCS = APG 4053 Lot #: ID #: Cond/1-5-B T.V. = 918 % REC = 96

Conductivity = u=Reading x 1, m=Reading x 1,000

1413 STD ID #: Cond/1-13-N

50,000 STD ID #: Cond/1-21-X

Comments:

	X	RPD
8588-3+1D	150	41

030030

Analyzed By: SP	Date: 11/4/03	Time: 2:00pm
Reviewed By:	Date: 11/5/03	

COND

Method Report - 0818clo4

Method Information : Select Module(s)

System Name : DX-100
System Number : 1
Method Type : Ion Chromatography
Column : AS-11 BATCH# KA0318310
Analyst :
Comment :

UI20 Timed Events

Module Name :
Module Serial Number :
Configuration : Signal A & B
Full Scale Voltage : +/- 1000.00 mV
Relay 1 Label : Inject
Relay 2 Label : AutoOffset
TTL 1 Label : Pump Start
TTL 2 Label : Auto Sampler
TTL 3 Label : TTL 3
TTL 4 Label : TTL 4

TTL Input	Trigger Type
Wait	Normal Edge
Run	Normal Edge
End	Normal Edge
Abort	Normal Edge

Time	Relay1	Relay2	TTL1	TTL2	TTL3	TTL4	Collect	Comment
Init	Open	Open	High	High	Low	Low		
0.00	Closed	Closed	High	Low	Low	Low	Begin	

UI20 Detector Parameters

Detector Type : UI20:A
Data collection time (minutes) : 10.00
Data Collection Rate : 5.00
1000 mV equals (µS) : 100.000
Real time plot scale maximum (µS) : 15.000
Real time plot scale minimum (µS) : -15.000

UI20 Integration Parameters

Peak detection algorithm : Standard
Starting peak width (seconds) : 10.00
Peak threshold : 500.00
Peak area reject (area counts) : 10.00
Reference peak area reject (area counts) : 10.00

UI20 Smoothing Parameters

Filter Type : No filter

UI20 Report Data

Report Format File : T:\WET\IC_DATA\REPORTS\Casallp.rpt
Print Sample Analysis : Yes
Print Calibration Update : Yes
Print Check Standard : Yes
System Suitability Tests :
No system suitability tests selected.

UI20 Integration Data Events

Time	Description
0.00	Stop peak detection
6.00	Start peak detection

UI20 Calibration Parameters

External or internal calibration : EXTERNAL
Number of replicates for calibration : 1
Rejection : Manual
Level Weighting : Equal
Calibration standard volume : 1.00
Default sample volume : 1.00
Amount units : ppb
Replace retention time : Yes
Update response : Yes
Default dilution factor : 1.00
Default response factor for unknown peaks : 0.00
Calculate unknowns by area or height : Area

UI20 Component Identification Table

Component	Retention	Tolerance	Reference
Perchlorate	8.57 min	5.00 %	

UI20 Component Quantitation Table

Component	Retention	Low Limit	High Limit
Perchlorate	8.57 min	0	0

UI20 Component Calibration Table

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Perchlorate	8.57 min	Linear	Include	Area		0.00

UI20 Component = Perchlorate Levels Table

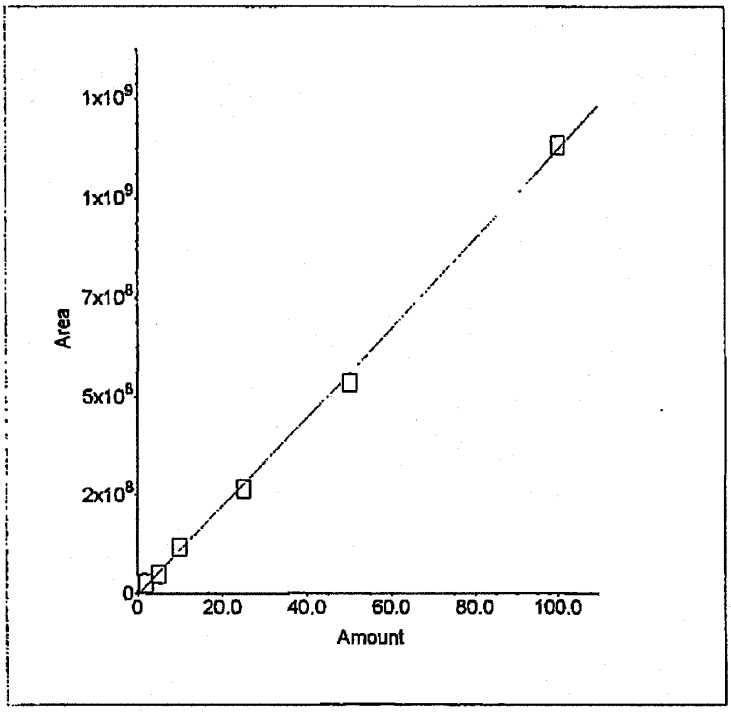
Retention Time : 8.57 min
Amount units : ppb
Replicate unit type : Area
Number of levels : 7
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	1.32024e+006
2	2.00	2.87091e+007
3	5.00	5.20462e+007
4	10.00	1.23068e+008
5	25.00	2.80041e+008
6	50.00	5.62008e+008
7	100.00	1.18907e+009

UI20 XY Data Parameters

Method:J:\IC_DATA\AN-4\METHODS\0818CLO4.MET Updated:8/18/03 4:43:36 PM Total:1

1. Component:Perchlorate
Standard:External Fit Type:Linear
Origin:Include Calibration:Area
r^2=0.999100
Amt=8.478e-008*Resp+0.3004



033034

APPENDIX D

DATA VALIDATION REPORTS

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429

December 11, 2003

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

RE: Validation of MRFA Malta Site Data Packages
CAS Sub Nos. R2318214 and R2318714

Dear Mr. Neumann:

Review has been completed for the data packages generated by Columbia Analytical Services (CAS), pertaining to samples collected 8/28/03 through 10/15/03 at the MRFA Malta Site. Sixteen aqueous samples, and cooler and trip blanks, were processed by CAS for site specific low level volatiles. Four of these and an additional sample were also analysed for total and hexavalent chromium. One additional sample was analyzed for perchlorate, subcontracted to the CAS-Kelso laboratory. Methodologies utilized are those of the USEPA OLC02.1, EPA CLP ILJM, SW846 7196A, and 314.0.

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 with compliance to protocol requirements and with adherence to quality criteria. Sample results are usable as reported, or with minor qualification/edit of two volatile analytes as estimated. 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

Due to presence in the associated trip blank, the low level detection of chloroform in the Influent collected in August is considered external contamination, and edited to nondetection at the CRDL.

The October 15, 2003 trip blank was prepared on September 24, 2003 and was therefore analyzed beyond a usable holding time for evaluation of vial contaminants. Evaluation of transport contamination is still possible. Outdated trip blanks should not be used.

Results for analytes with values initially reported with the "E" qualifier should be derived from the dilution ("-DL") analyses. All other analyte values can be used from the initial analyses.

Due to the low relative response factors (RRFs) in the calibration standards (inherent with the methodology), the reporting limits for acetone and 2-butanone in all of the project samples should be considered estimated ("UJ" qualifier), possibly biased low. Six analytes exhibited elevated responses (up to 40%D) in one of the continuing calibration standards. Associated samples show no detection of those analytes, and because the bias would be high, there is no effect on the reported results.

Matrix spikes of Influent, SW-B, and M-27S show acceptable accuracy and precision. Field duplicate correlations for Effluent/DUPA and MW-27S/Duplicate were also acceptable.

The Tentatively Identified Compound (TIC) eluting at 23.00' and 23.05', respectively, in Duplicate and SW-B is to be disregarded as a sample component ("R" qualifier), as it was also detected in the associated cooler blank.

The identification for the TIC with CAS No. 430-57-9 in the October cooler blank should be edited to be "Unknown" with no CAS number. The one reported is not a good match.

The laboratory Forms 8A show incorrect acceptance limits for internal standard responses. The samples met the protocol requirement.

Total Chromium Analyses

Accuracy and precision of MW-27S (as shown by matrix spike and duplicate evaluation) were acceptable. The ICP serial dilution evaluation was not applicable to these samples due to low detected concentrations. Field duplicate correlation for M-27S and Blind Dup was good.

Reported results are substantiated by the raw data, and generated in compliance with required protocols. Quality control parameter results meet validation requirements.

Hexavalent Chromium Analyses

Accuracy and precision of M-27S (as shown by matrix spike and duplicate evaluation), and the field duplicate correlation of M-27S and Blind Dup were acceptable.

Reported results are substantiated by the raw data, and generated in compliance with required protocols.

Perchlorate Analysis

Accuracy and precision of AS Effluent (as shown by matrix spike and duplicate evaluation) was acceptable.

Processing was compliant with protocol requirements, and raw data confirm reported results.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: EFFLUENT	BATCH COMPLETE: __yes_____	DATE REVISED:
SUBMISSION R2318214	DISKETTE REQUESTED: Y___ N__X__	DATE DUE: 09/26/03
CLIENT: Shaw Environmental	DATE: 08/29/03	PROTOCOL: OLC2.1
CLIENT REP: Janice Jaeger	CUSTODY SEAL: PRESENT/ABSENT:	SHIPPING No.:
PROJECT: GE MRFA PROJECT #810066	CHAIN OF CUSTODY: PRESENT/ABSENT:	SUMMARY PKG: Y___X__ N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS SAMPLE CONDITION
668002QC	INFLUENT	WATER	OLC2.1 VOA	8/28/03	8/29/03			
668004	EFFLUENT	WATER	OLC2.1 VOA	8/28/03	8/29/03			
668006	DUP A	WATER	OLC2.1 VOA	8/28/03	8/29/03			
668008	TRIP BLANK	WATER	OLC2.1 VOA	8/28/03	8/29/03			
668009	COOLER BLANK	WATER	OLC2.1 VOA	8/28/03	8/29/03			

CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: M-33S	BATCH COMPLETE: __yes_____	DATE REVISED:
SUBMISSION R2318714	DISKETTE REQUESTED: Y___ N__X__	DATE DUE: 11/13/03
CLIENT: Shaw Environmental	DATE: 10/16/03	PROTOCOL: CLP
CLIENT REP: Janice Jaeger	CUSTODY SEAL: PRESENT/ABSENT:	SHIPPING No.:
PROJECT: GE MRFA PROJECT #810066	CHAIN OF CUSTODY: PRESENT/ABSENT:	SUMMARY PKG: Y___X__ N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS AMPLE CONDITIOI
678644	M-33S	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678645	M-33I	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678646	AS INFLUENT	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678647	AS EFFLUENT	WATER	OLC2.1 VOA*	10/9/03	10/10/03			
678648	SW-D	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678649	SW-A	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678650	SW-B	WATER	OLC2.1 VOA,CR,CR6	10/9/03	10/10/03			
678651	M-13S	WATER	CR,CR6	10/9/03	10/10/03			
678652	TRIP BLANK	WATER	OLC2.1 VOA	10/9/03	10/10/03			
678653	COOLER BLANK	WATER	OLC2.1 VOA	10/9/03	10/10/03			
679933	DGC-4S	WATER	OLC2.1 VOA	10/15/03	10/16/03			
679934	DGC-3S	WATER	OLC2.1 VOA	10/15/03	10/16/03			
679935QC	M-27S	WATER	OLC2.1 VOA,CR,CR6	10/15/03	10/16/03			
679936	M-27D	WATER	OLC2.1 VOA,CR,CR6	10/15/03	10/16/03			
679937	DUPLICATE	WATER	OLC2.1 VOA,CR,CR6	10/15/03	10/16/03			
679938	TRIP BLANK	WATER	OLC2.1 VOA	10/15/03	10/16/03			
			*per Norale sub to K/LSO					

CASE NARRATIVE

COMPANY: Shaw Environmental
GE MRFA Project #810066
SUBMISSION #: R2318214

Shaw water samples were collected on 08/28/03 and received at CAS on 08/29/03 in good condition at a cooler temperature of 6°C.

VOLATILE ORGANICS

Three water samples, one cooler blank and one trip blank were analyzed for a Site Specific List of Volatiles by Low Level CLP.

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.

The Trip Blank contained low level hits Methylene Chloride and Chloroform.

The Laboratory Blanks associated with these samples was free of contamination.

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: _____

CASE NARRATIVE

COMPANY: Shaw Environmental
GE MRFA Project #810066
SUBMISSION #: R2318714

Shaw water samples were collected on 10/09-15/03 and received at CAS on 04/10-16/03 in good condition at a cooler temperature of 1-3 C.

INORGANICS

Five water samples were analyzed for Total Chromium by CLP methods and Hexavalent Chromium by 7196A.

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

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

Thirteen water samples, one cooler blank and two trip blanks were analyzed for a Site Specific List of Volatiles by Low Level CLP.

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 SW-B and M-27S. All MS/MSD recoveries were within limits. All Blank Spike recoveries were within limits. All RPD's were within limits.

Trichloroethene for M-27D has been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blanks associated with these samples was free of contamination.

The 10/15/03 trip blank had low level hits for Acetone and Toluene.

No other analytical or QC problems were encountered.

PERCHLORATE

Water samples were subcontacted to CAS-Kelso for Perchlorate analysis. Their complete data package follows.

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: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental and Infrastructure	**Service Request No.:**	K2308058
Project:	GE MRFA	**Date Received:**	10/10/2003
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 Kelso, WA laboratory on 10/14/2003. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Perchlorate by EPA Method 314

No anomalies associated with the analysis of these samples were observed.

Approved by _____ **Date** 11/10/03

000003

APPENDIX E

AIR STRIPPER FLOW DATA

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)
6/27/03	Total	2,290	2,450	1.59	1.70	3.29
6/28/03	Total	1,440	1,540	1.00	1.07	2.07
6/29/03	Total	1,070	1,140	0.74	0.79	1.53
6/30/03	Total	1,800	1,920	1.25	1.33	2.58
7/1/03	Total	1,680	1,800	1.17	1.25	2.42
7/2/03	Total	2,590	2,770	1.80	1.92	3.72
7/3/03	Total	3,360	3,600	2.33	2.50	4.83
7/4/03	Total	2,910	3,120	2.02	2.17	4.19
7/5/03	Total	2,920	3,130	2.03	2.17	4.20
7/6/03	Total	2,900	3,120	2.01	2.17	4.18
7/7/03	Total	2,900	3,110	2.01	2.16	4.17
7/8/03	Total	1,780	1,900	1.24	1.32	2.56
7/9/03	Total	2,020	2,240	1.40	1.56	2.96
7/10/03	Total	2,670	2,870	1.85	1.99	3.85
7/11/03	Total	3,100	3,320	2.15	2.31	4.46
7/12/03	Total	1,300	1,390	0.90	0.97	1.87
7/13/03	Total	1,060	1,130	0.74	0.78	1.52
7/14/03	Total	2,310	2,480	1.60	1.72	3.33
7/15/03	Total	2,640	2,830	1.83	1.97	3.80
7/16/03	Total	3,220	3,460	2.24	2.40	4.64
7/17/03	Total	2,080	2,220	1.44	1.54	2.99
7/18/03	Total	1,870	2,000	1.30	1.39	2.69
7/19/03	Total	1,530	1,640	1.06	1.14	2.20
7/20/03	Total	1,530	1,640	1.06	1.14	2.20
7/21/03	Total	2,620	2,800	1.82	1.94	3.76
7/22/03	Total	1,970	2,110	1.37	1.47	2.83
7/23/03	Total	2,210	2,370	1.53	1.65	3.18
7/24/03	Total	2,850	3,050	1.98	2.12	4.10
7/25/03	Total	2,790	2,990	1.94	2.08	4.01
7/26/03	Total	2,690	2,880	1.87	2.00	3.87
7/27/03	Total	2,670	2,860	1.85	1.99	3.84
7/28/03	Total	2,780	2,970	1.93	2.06	3.99
7/29/03	Total	2,340	2,510	1.63	1.74	3.37
7/30/03	Total	2,050	2,190	1.42	1.52	2.94
7/31/03	Total	2,300	2,480	1.60	1.72	3.32
8/1/03	Total	2,140	2,290	1.49	1.59	3.08
8/2/03	Total	1,370	1,460	0.95	1.01	1.97
8/3/03	Total	1,540	1,660	1.07	1.15	2.22
8/4/03	Total	2,550	2,750	1.77	1.91	3.68
8/5/2003	Total	2,560	2,740	1.78	1.90	3.68
8/6/2003	Total	2,050	2,190	1.42	1.52	2.94
8/7/2003	Total	1,840	1,970	1.28	1.37	2.65
8/8/2003	Total	1,390	1,490	0.97	1.03	2.00
8/9/2003	Total	1,160	1,240	0.81	0.86	1.67

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)
8/10/2003	Total	1,030	1,100	0.72	0.76	1.48
8/11/2003	Total	1,800	1,930	1.25	1.34	2.59
8/12/2003	Total	1,640	1,760	1.14	1.22	2.36
8/13/2003	Total	2,820	2,990	1.96	2.08	4.03
8/14/2003	Total	3,000	3,125	2.08	2.17	4.25
8/15/2003	Total	3,000	3,125	2.08	2.17	4.25
8/16/2003	Total	1,090	1,180	0.76	0.82	1.58
8/17/2003	Total	1,010	1,080	0.70	0.75	1.45
8/18/2003	Total	2,090	2,250	1.45	1.56	3.01
8/19/2003	Total	1,820	1,960	1.26	1.36	2.63
8/20/2003	Total	2,530	2,730	1.76	1.90	3.65
8/21/2003	Total	4,940	5,080	3.43	3.53	6.96
8/22/2003	Total	1,490	1,600	1.03	1.11	2.15
8/23/2003	Total	1,340	1,430	0.93	0.99	1.92
8/24/2003	Total	1,260	1,360	0.88	0.94	1.82
8/25/2003	Total	1,360	1,470	0.94	1.02	1.97
8/26/2003	Total	1,480	1,590	1.03	1.10	2.13
8/27/2003	Total	1,900	2,050	1.32	1.42	2.74
8/28/2003	Total	2,020	2,180	1.40	1.51	2.92
8/29/2003	Total	1,350	1,440	0.94	1.00	1.94
8/30/03	Total	1,220	1,300	0.85	0.90	1.75
8/31/03	Total	1,090	1,180	0.76	0.82	1.58
9/1/03	Total	1,090	1,170	0.76	0.81	1.57
9/2/03	Total	1,780	1,910	1.24	1.33	2.56
9/3/03	Total	1,280	1,370	0.89	0.95	1.84
9/4/03	Total	1,240	1,350	0.86	0.94	1.80
9/5/03	Total	1,570	1,680	1.09	1.17	2.26
9/6/03	Total	1,040	1,120	0.72	0.78	1.50
9/7/03	Total	930	1,000	0.65	0.69	1.34
9/8/03	Total	3,180	3,430	2.21	2.38	4.59
9/9/03	Total	2,370	2,540	1.65	1.76	3.41
9/10/03	Total	1,720	1,850	1.19	1.28	2.48
9/11/03	Total	1,630	1,740	1.13	1.21	2.34
9/12/03	Total	1,470	1,570	1.02	1.09	2.11
9/13/03	Total	950	1,020	0.66	0.71	1.37
9/14/03	Total	830	880	0.58	0.61	1.19
9/15/03	Total	2,300	2,470	1.60	1.72	3.31
9/16/03	Total	1,940	2,090	1.35	1.45	2.80
9/17/03	Total	1,590	1,700	1.10	1.18	2.28
9/18/03	Total	1,730	1,850	1.20	1.28	2.49
9/19/03	Total	1,630	1,750	1.13	1.22	2.35
9/20/03	Total	1,140	1,230	0.79	0.85	1.65
9/21/03	Total	1,000	1,070	0.69	0.74	1.44
9/22/03	Total	1,580	1,690	1.10	1.17	2.27

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)
9/23/03	Total	1,770	1,900	1.23	1.32	2.55
9/24/03	Total	3,210	3,460	2.23	2.40	4.63
9/25/03	Total	1,390	1,490	0.97	1.03	2.00
9/26/03	Total	1,670	1,790	1.16	1.24	2.40
9/27/03	Total	850	910	0.59	0.63	1.22
9/28/03	Total	940	1,010	0.65	0.70	1.35
9/29/03	Total	1,250	1,340	0.87	0.93	1.80
9/30/03	Total	1,610	1,730	1.12	1.20	2.32
10/1/03	Total	1,330	1,430	0.92	0.99	1.92
10/2/03	Total	1,300	1,380	0.90	0.96	1.86
10/3/03	Total	1,340	1,440	0.93	1.00	1.93
10/4/03	Total	790	850	0.55	0.59	1.14
10/5/03	Total	720	770	0.50	0.53	1.03
10/6/03	Total	1,600	1,720	1.11	1.19	2.31
10/7/03	Total	1,620	1,730	1.13	1.20	2.33
10/8/03	Total	1,930	2,070	1.34	1.44	2.78
10/9/03	Total	1,290	1,390	0.90	0.97	1.86
10/10/03	Total	880	930	0.61	0.65	1.26
10/11/03	Total	760	810	0.53	0.56	1.09
10/12/03	Total	710	760	0.49	0.53	1.02
10/13/03	Total	1,110	1,180	0.77	0.82	1.59
10/14/03	Total	2,110	2,270	1.47	1.58	3.04
10/15/03	Total	1,480	1,580	1.03	1.10	2.13
10/16/03	Total	1,450	1,540	1.01	1.07	2.08
10/17/03	Total	1,700	1,820	1.18	1.26	2.44
10/18/03	Total	930	990	0.65	0.69	1.33
10/19/03	Total	890	960	0.62	0.67	1.28
10/20/03	Total	960	1,020	0.67	0.71	1.38
10/21/03	Total	990	1,060	0.69	0.74	1.42
10/22/03	Total	1,050	1,120	0.73	0.78	1.51
10/23/03	Total	1,040	1,110	0.72	0.77	1.49
10/24/03	Total	1,560	1,660	1.08	1.15	2.24
10/25/03	Total	830	890	0.58	0.62	1.19
10/26/03	Total	850	900	0.59	0.63	1.22
10/27/03	Total	970	1,030	0.67	0.72	1.39
10/28/03	Total	1,490	1,590	1.03	1.10	2.14
10/29/03	Total	1,400	1,500	0.97	1.04	2.01
10/30/03	Total	1,070	1,150	0.74	0.80	1.54
10/31/03	Total	1,860	1,990	1.29	1.38	2.67
11/1/03	Total	1,090	1,170	0.76	0.81	1.57
11/2/03	Total	1,020	1,080	0.71	0.75	1.46
11/3/03	Total	1,540	1,640	1.07	1.14	2.21
11/4/03	Total	2,110	2,260	1.47	1.57	3.03
11/5/03	Total	1,200	1,280	0.83	0.89	1.72

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)
11/6/03	Total	2,790	2,970	1.94	2.06	4.00
11/7/03	Total	1,650	1,760	1.15	1.22	2.37
11/8/03	Total	1,130	1,210	0.78	0.84	1.63
11/9/03	Total	1,050	1,130	0.73	0.78	1.51
11/10/03	Total	1,570	1,680	1.09	1.17	2.26
11/11/03	Total	1,530	1,630	1.06	1.13	2.19
11/12/03	Total	1,770	1,900	1.23	1.32	2.55
11/13/03	Total	2,390	2,550	1.66	1.77	3.43
11/14/03	Total	1,680	1,810	1.17	1.26	2.42
11/15/03	Total	1,100	1,180	0.76	0.82	1.58
11/16/03	Total	1,090	1,160	0.76	0.81	1.56
11/17/03	Total	1,760	1,880	1.22	1.31	2.53
11/18/03	Total	2,370	2,550	1.65	1.77	3.42
11/19/03	Total	1,860	2,000	1.29	1.39	2.68
11/20/03	Total	1,920	2,050	1.33	1.42	2.76
11/21/03	Total	1,340	1,440	0.93	1.00	1.93
11/22/03	Total	1,000	1,070	0.69	0.74	1.44
11/23/03	Total	980	1,070	0.68	0.74	1.42
11/24/03	Total	1,250	1,330	0.87	0.92	1.79
11/25/03	Total	1,690	1,820	1.17	1.26	2.44
11/26/03	Total	1,370	1,470	0.95	1.02	1.97
11/27/03	Total	1,210	1,280	0.84	0.89	1.73
11/28/03	Total	1,170	1,260	0.81	0.88	1.69
11/29/03	Total	950	1,010	0.66	0.70	1.36
11/30/03	Total	890	960	0.62	0.67	1.28
12/1/03	Total	1,490	1,600	1.03	1.11	2.15
12/2/03	Total	1,720	1,830	1.19	1.27	2.47
12/3/03	Total	1,450	1,570	1.01	1.09	2.10
12/4/03	Total	1,230	1,310	0.85	0.91	1.76
12/5/03	Total	1,490	1,600	1.03	1.11	2.15
12/6/03	Total	950	1,020	0.66	0.71	1.37
12/7/03	Total	900	960	0.63	0.67	1.29
12/8/03	Total	1,380	1,480	0.96	1.03	1.99
12/9/03	Total	1,640	1,750	1.14	1.22	2.35
12/10/03	Total	1,710	1,830	1.19	1.27	2.46
12/11/03	Total	1,540	1,660	1.07	1.15	2.22
12/12/03	Total	1,690	1,810	1.17	1.26	2.43
12/13/03	Total	1,250	1,340	0.87	0.93	1.80
12/14/03	Total	1,130	1,210	0.78	0.84	1.63
12/15/03	Total	1,810	1,940	1.26	1.35	2.60
12/16/03	Total	1,610	1,730	1.12	1.20	2.32
12/17/03	Total	1,320	1,420	0.92	0.99	1.90
12/18/03	Total	1,520	1,640	1.06	1.14	2.19
Grand Total		**293,110**	**313,780**	**1.163**	**1.245**	**2.408**

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: 10/6/03	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.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	Yes - proposed technology / energy 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 Skaary	Interviewer signature: John A Skaary Date: 10/6/03	

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: 9/15/03	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?	None other than Tech Park, as previously noted.	
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 Skarup	Interviewer signature: John C Skarup Date: 9/15/03	

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: 9/10/03	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.	~~Yes. Same~~ No, as last year.	
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	Yes. Technology park (proposed).	
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 executed yet; contingent upon approval. Same status as last year.	
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 Skaarup	Interviewer signature: John Skaarup Date: 9/10/03	