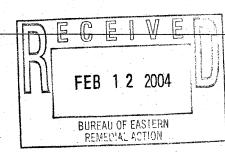


Steven R. Meier Remedial Project Manager



Corporate Environmental Programs Company General Electric 320 Great Oaks Boulevard - Suite 323 Albany, NY 12203 Phone: (518) 862-2711; Fax: (518) 862-2702

February 11, 2004

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:	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

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

Re:

Subject:

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

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

File on eDOCs? <u>Y</u> Yes No	7
DILE Name KULKET TESTSITE GMAIT	4
Sile # _ 546022	["
County SARATOGA	
Town MALTA	
Foilable Yes No	
Please Write The eDOC File	
Name Description	
report. hw 546022.2003-12.00f	•

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

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 Re: DJ # (90-11-6-57) (1 copy)

CC:

Hal Brodie, Esq., NYSERDA (1 copy) Raymond Kazyaka, Wright Malta (1 copy) James Maher, Esq., Curtiss-Wright (1 copy) Lorraine Miller, Olin Corporation (1 copy) Steven Balser, Power Technologies (1 copy) Cynthia Scheuer, Mechanical Technology (1 copy) Brian Neumann, Shaw E&I, (w/o enclosure)



13 British American Boulevard Latham, NY 12110-1405 518.783.1996 Fax 518.783.8397

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

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

Min Muun

Brian Neumann, PG, CPG Project Manager/Secondary Operator

plu O. Maang

John Skaarup, EIT Project Engineer/Primary Operator

ii February 9, 2004

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- Appendix B Laboratory Data, Groundwater Samples and Surface Water Samples October 2003
- Appendix C Laboratory Data, Perchlorate Results Package, Ammonium Perchlorate Effluent Water Sample (October 9, 2003)
- Appendix D Data Validation Reports
- Appendix E Air Stripper Flow Data
- Appendix F Telephone Interview Logs

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

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:

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

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 <u>Operation and Maintenance Manual, Remedial Work Element</u> <u>I, Drinking Water, IT Corporation, Inc., January 15, 2002</u>, 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. 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

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(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	Date Sampled Influent (ppb)		Performance Standard (ppb)
Carbon	August 28, 2003	10.7	< 1.0	5
Tetrachloride	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.

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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.

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

3.1 Sample Collection

In accordance with the provisions of the <u>Operations and Maintenance Manual, Remedial Work</u> <u>Element II - Ground Water, ERM Northeast, Inc. December 11, 1997</u>, (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.

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.

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4.0 INSTITUTIONAL CONTROLS

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

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.

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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

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

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Equipment Name	ltem	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

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

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Equipment Name	nent 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	Check for proper operation. System should alarm after pre-set delay period.	Monthly	Adjust frequency depending on operating experience
	Blower Low Pressure			
	Blower Low Amps			
	Building Low Temperature			

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TABLE 2EQUIPMENT LOGAIR STRIPPER MAINTENANCEMALTA ROCKET FUEL AREA SITE

Date	Operator	Operational Status of System	Work Performed
7/29/2003	John Skaarup	ОК	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	ОК	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	ОК	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	ОК	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	ОК	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	ОК	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.

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

1	2	3			- -		4		•			5
DATE	TIME		WATER FI	LOW -LINE 1			WATER FLOW LINE 2D				PROBLEMS	
		1D LINE	1D LINE	ELAPSED	TOTAL	AVG FLOW	2D LINE	2D LINE	ELAPSED	TOTAL	AVG FLOW	OR
		FLOW	TOTALIZER	TIME	FLOW	THIS	FLOW	TOTALIZER	TIME	FLOW	THIS	COMMENTS
		METER	RDG(GAL)	(DAYS)	THIS	PERIOD	METER	RDG(GAL)	(DAYS)	THIS	PERIOD	
		RDG(GPM)			PERIOD	(GPM)	RDG(GPM)			PERIOD	(GPM)	
					(GAL)					(GAL)		
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

 $\dot{\mathbf{r}} \in [\mathbf{r}]$ ($\dot{\mathbf{r}}$) (\mathbf{r}) (\mathbf{r}) (\mathbf{r}) (\mathbf{r}) (

1	2	3			4	5
DATE	TIME	STANDPIPE	LEVEL	SAMPLES	AIR	PROBLEMS OR COMMENTS
		LEVEL	PROBE	TAKEN ?	BLOWER	
		(FT)	OK?		PRESSURE	
		· · · ·			OK?	
7/29/2003	9:55	12.75	Yes	No	3.00	
						Collected system samples including Influent, Effluent,
						Duplicate, Matrix Spike, Matrix Spike Duplicate and Trip
8/28/2003	9:15	12.75	Yes	Yes	2.70	Blank.
9/23/2003	8:25	12.75	Yes	No	2.90	
						Collected system samples including Influent and
10 /0 /0000	9:55	12.75	Yes	Yes	3.00	Effluent, also collected ammonium perchlorate effluent
10/9/2003	9:55	12.75	Ies	Tes	5.00	sample.
11/25/2003	10:30	12.75	Yes	No	3.20	
				-		
12/18/2003	13:00	12.75	Yes	No	3.20	

Page 2 of 2

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:

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

2.

TABLE 5 OCTOBER 2003 WATER QUALITY ANALYTICAL RESULTS SEMI-ANNUAL SAMPLING

	Remedial										
	Action					DUPA				Тпр	Trip
Compound	Objective	DGC-3S	DGC-4S	138	M-27S	(27S)	M-27D	M-33S	M-33I	Blank 1	Blank 2
Acetone	50	5.0 U	5.0 U	ŇA	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	ŇA	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

A TOTO I ALAMADODIN											
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

	Action			
Parameter	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 $\mu g/l$ (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.

	Remedial								
Wells / Compounds	Action	6/29-			1/19-	4/18-	7/20-	10/11-	1/19-
DGC-3S	Objective	7/1/1987	7/31/87	11/5/87	1/20/1988	4/19/1988	7/21/1988	10/12/88	1/20/89
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*								
138									
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.

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NA = Not analyzed. ND = Not detected.

ND - Not delected.

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.

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	Remedial								
Wells / Compounds	Action								4/8-
DGC-3S	Objective	4/10/89	7/12/89	8/15/1989	11/30/1989	5/30/90	8/28/90	12/6/90	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
DCC-4S									
Chromium	50*	••						••	NA
135									
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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* Based on NYSDEC Final Combined Regulatory Impact and Environmental

Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified

for comparison purposes only.

	Remedial								
Wells / Compounds	Action	6/12-	9/23-	12/26-	2/10-	6/1-	9/28-	11/18-	3/17-
DGC-3S	Objective	6/13/1991	9/24/1991	12/27/91	2/11/92	6/2/1992	9/29/1992	11/19/1992	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*
				•	· · · · · · · · · · · · · · · · · · ·				
138									
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.

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

	Remedial								
Wells / Compounds DGC-3S	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
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
135									
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.

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

	Remedial								
Wells / Compounds	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
						· · · · · · · · · · · · · · · · · · ·			
135									
Benzene	0.7*	NA	NA	NA	10	1U	NA	NA	NA
Carbon Disulfide	None*	NA	NA	NA	10	10	NA	NA	NA
Carbon Tetrachloride	5	NA	NA	NA	าบ	8	NA	NA	NA
Chloroform	7	NA	NA	NA	ານ	10	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:

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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.

	Remedial									
Wells / Compounds	Action				1					
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						· · · · · · · · · · · · · · · · · · ·	1.1			
Carbon Disulfide	None*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50*	NA	NA	NA	NA	NA	NA	NA	NA	NA
135	-		-	· · · · · · · · · · · · · · · · · · ·			*: <u>··</u>	· · · · · · · · · · · · · · · · · · ·		
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
Frichloroethylene	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
frichlorofluoromethane	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
lexavalent 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.

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

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

Remedial
A 44

ere nom									
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
None*	ND	ND	not sampled	ND	ND	ND	ND	ND	ND
5	40	ND	not sampled	ND	ND	ND	ND	ND	ND
50*	8.4 B/ND**	57.4/ND**	not sampled	ND	ND	ND	ND	ND	ND
50*	NA.	NA	not sampled	ND	ND	ND	ND	ND	ND
	Objective None* 5 50*	Objective 6/5/1992 None* ND 5 40 50* 8.4 B/ND**	Objective 6/5/1992 11/11/1992 None* ND ND 5 40 ND 50* 8:4 B/ND** 57.4/ND**	Objective 6/5/1992 11/11/1992 3/14/1994 None* ND ND not sampled 5 40 ND not sampled 50* 8.4 B/ND** 57.4/ND** not sampled	Objective 6/5/1992 11/11/1992 3/14/1994 5/23/1995 None* ND ND not sampled ND 5 40 ND not sampled ND 50* 8.4 B/ND** 57.4/ND** not sampled ND	Objective 6/5/1992 11/11/1992 3/14/1994 5/23/1995 10/17/1995 None* ND ND not sampled ND ND 5 40 ND not sampled ND ND 50* 8.4 B/ND** 57.4/ND** not sampled ND ND	Objective 6/5/1992 11/11/1992 3/14/1994 5/23/1995 10/17/1995 5/14/1996 None* ND ND not sampled ND ND ND 5 40 ND not sampled ND ND ND 50* 8.4 B/ND** 57.4/ND** not sampled ND ND ND	Objective 6/5/1992 11/11/1992 3/14/1994 5/23/1995 10/17/1995 5/14/1996 10/23/1996 None* ND ND not sampled ND ND ND 5 40 ND not sampled ND ND ND ND 50* 8.4 B/ND** 57.4/ND** not sampled ND ND ND ND	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 None* ND ND not sampled 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-338

VOCs	-	not sampled	not sampled	ND						
M-33I VOCs	-	not sampled	not sampled	ND						

Notes:	
Units are ug/l (ppb) unless otherwise stated.	* Based on NYSDEC Final Combined Regulatory Impact and Environmental
Only detected compounds are listed.	Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified
NA=Not analyzed.	for comparison purposes only.
ND = Not detected.	** = Filtered Sample.
J = Estimated concentration.	
dp = Duplicate sample.	

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

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

	Remedial Action												
M-278	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 dr
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 d
Hexavalent Chromium	50*	ND	ND	ND	ND / ND dp	ND	ND	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	2/2dp	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	2B	1.5 B	5.9B / 6.1B dp	1.2B
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-338													
VOCs	•	ND	ND	ND	ND	ND	ND	8.0 J	ND	ND	ND	ND	ND
M-33I													
VOCs	-	ND	ND	ND	ND	ND	ND	4.1J	ND	ND	ND	ND	ND
		Notes:											

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

Only detected compounds are listed.

* 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.

J = Estimated concentration.

dp = Duplicate sample.

NA = Not analyzed.

ND = Not detected.

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

D = Indentifies compound analyzed at a secondary dilution factor.

X:\Reps\197\MRFA\OM Reps\Feb04\Tables 5-8

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 $\mu g/l$ (ppb) unless otherwise stated.	E=Estimated concentration :
Only detected compounds are listed.	J = Estimated concentration.
NA = Not analyzed.	V = Estimated concentration: d
ND = Not detected.	control limits.
dp = Duplicate sample.	R = Rejected during data valida
B = The reported value is less than the CRQL/CRDL but	* Based on NYSDEC Final Co
greater than the IDL.	Impact Statement (Title 6, Cl
D = Concentration determined from a sample dilution.	for comparison purposes on

due to interference.

due to variance to quality

lation.

Combined Regulatory Impact and Environmental Chapter X, Parts 700-706, 1998), identified nly.

** = Filtered Sample.

Surface Water Points /																
Compounds	Cleanup								4/8	6/12-	9/23-	12/26-	2/10-	6/1-	9/28-	11/18-
SW-A	Standard	8/15/1989	11/30/1989	12/27/1989	2/22/1990	5/30/90	8/28/90	12/6/90	4/10/1991	6/13/1991	9/24/1991	12/27/91	2/11/92	6/2/1992	9/29/1992	11/19/1992
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
		•				L	1		<u> </u>	1			J	.	l	I
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

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.

Notes:

- 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 dilution

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							
Aluminum	100**	no data							
Lead	25*	no data							
Chromium.	50*	6.1 B	ND	3.2B	ND	ND	ND	ND	ND ·

SW-B

5-1-D									
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

SW-D									
Acetone	5*	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.

 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.

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Surface Water Points /							7					
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	ne 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*	ŇA	NA	NA	NA	NA	NA	NA	- NA	NA	NA	NA

Notes:

Units are µg/1 (ppb) unless otherwise stated.	E=Estimated concentration : due to interference,
Only detected compounds are listed.	J = Estimated concentration.
NA = Not analyzed.	V = Estimated concentration: due to variance to quality
ND = Not detected.	control limits.
dp = Duplicate sample.	R = Rejected during data validation.
B = The reported value is less than the CRQL/CRDL but	* Based on NYSDEC Final Combined Regulatory Impact and Environmental
greater than the IDL.	Impact Statement (Title 6, Chapter X, Parts 700-706, 1998), identified
D = Concentration determined from a sample dilution.	for comparison purposes only.

** = Filtered Sample.

Surface Water Points /

Compounds	Cleanup							
SW-A	Standard	10/24/2000	5/15/2001	10/23/2001	5/29/2002	10/29/2002	4/9/2003	10/9/2003
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
h		·						

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	1B	0.75 B

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:

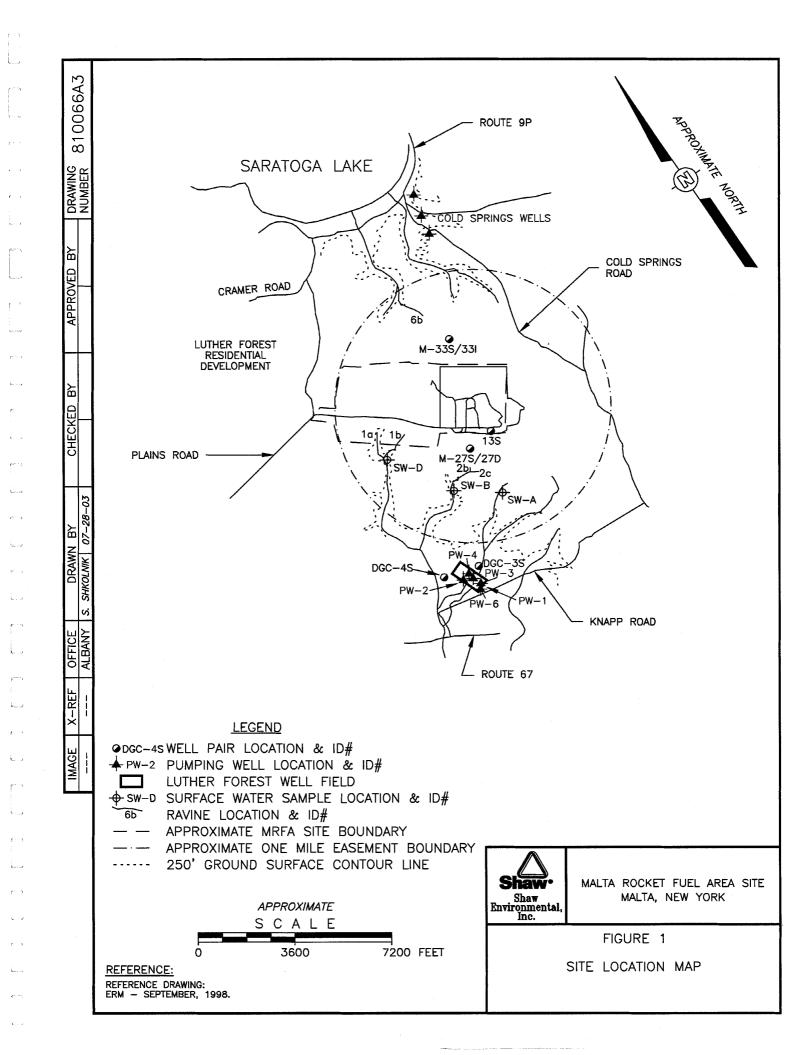
- Units are µgA (ppb) unless otherwise stated. Only detected compounds are listed. NA = Not analyzed. ND = Not detected. dp = Duplicate sample.
- B = The reported value is less than the CRQL/CRDL but
- greater than the IDL.
- D = Concentration determined from a sample dilution.

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



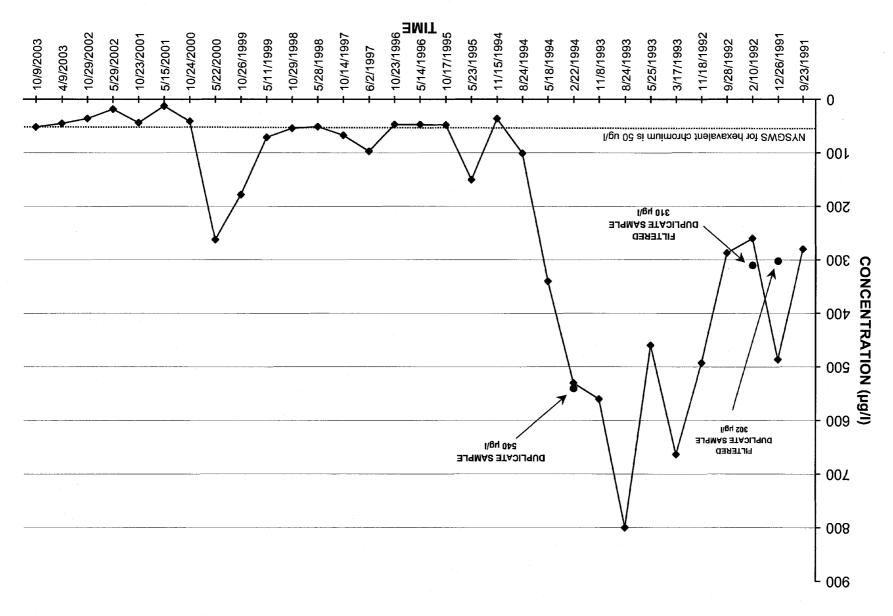


FIGURE 2 WELL 13S HEXAVALENT CHROMIUM CONCENTRATIONS

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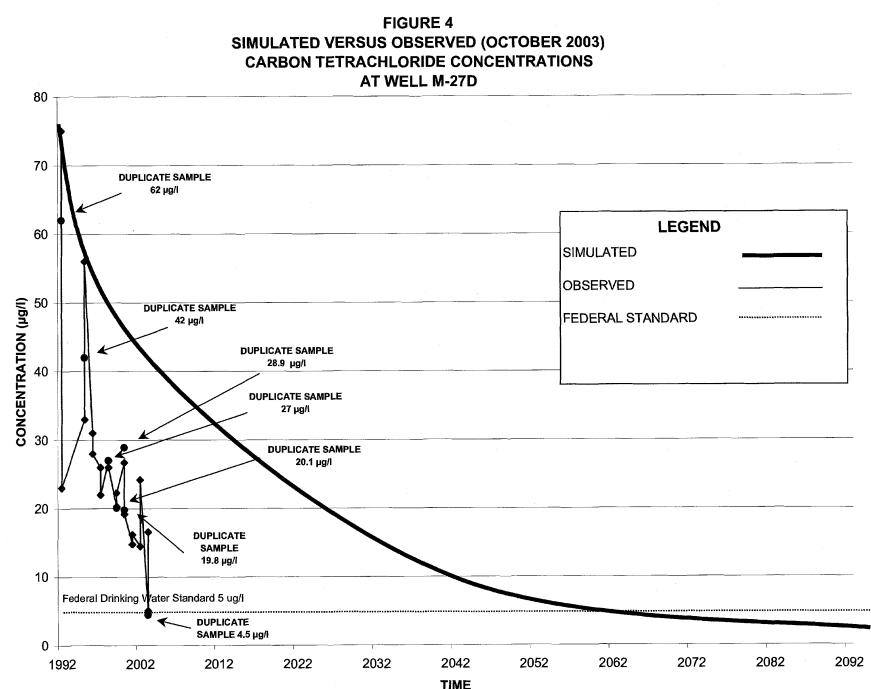
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10/09/03 04/09/03 DUPLICATE VALUE 10/29/02 19.8 ug/l 05/29/02 WELL M-27D CARBON TETRACHLORIDE CONCENTRATIONS 10/23/01 05/15/01 10/24/00 05/22/00 DUPLICATE VALUE 28.9 µg/l 10/26/99 05/11/99 FIGURE 3 10/29/98 05/28/98 **H** DUPLICATE VALUE 20.1 µg/l DUPLICATE VALUE 27 µg/l ~ 10/14/97 06/02/97 10/23/96 Federal Drinking Water Standard 5µg/I 05/14/96 10/17/95 05/23/95 . 1 DUPLICATE VALUE 62 µg/l DUPLICATE VALUE 42 µg/l 11/11/92 06/05/92 70 -90 80 ຊີ ė ò



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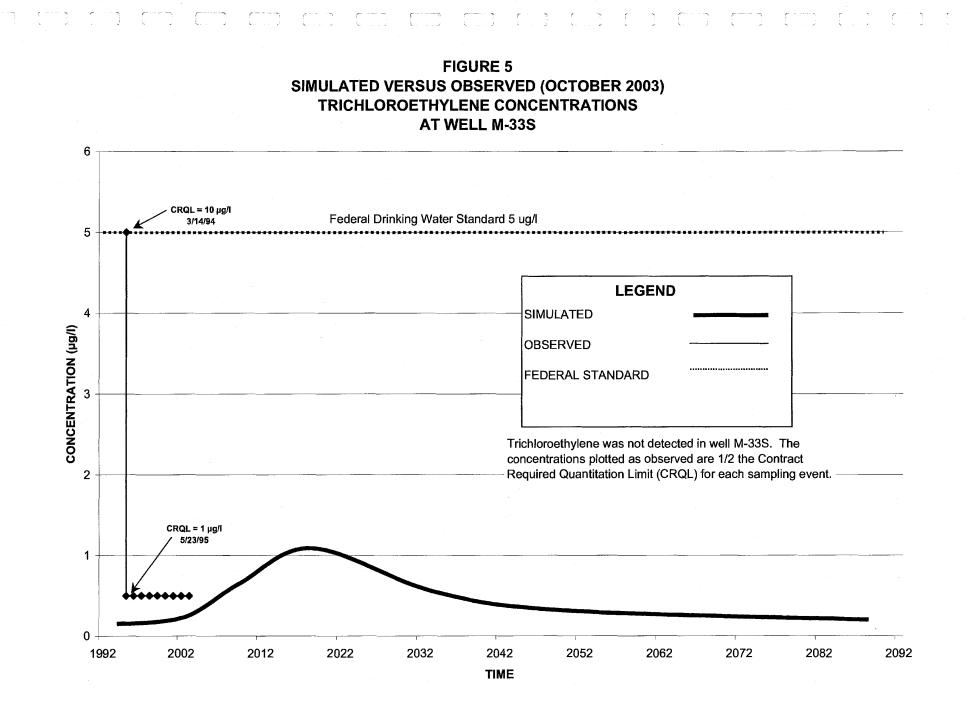
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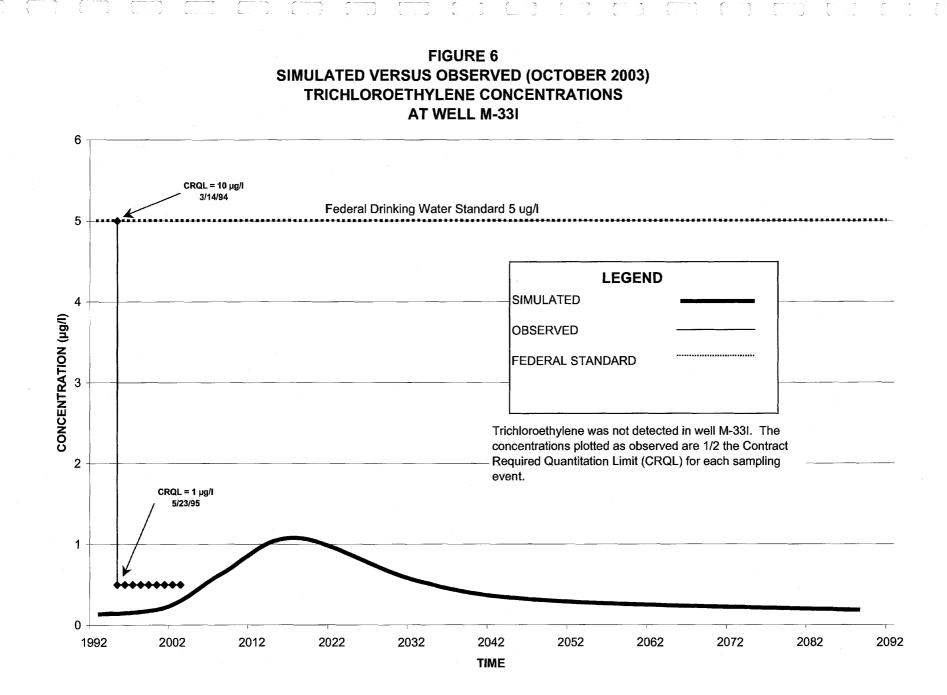
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TIME





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APPENDIX A

LABORATORY DATA, INFLUENT/EFFLUENT WATER SAMPLES AUGUST 28, 2003 AND OCTOBER 9, 2003

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Chambia Analytical Services "Employee - Owned Company Wewcesleb.com	N OF CUSTOR						•	•	ES' 		OR	M -		SR # CAS	Contact			
SE MRFA	Project Number 8/0066				ANA	LYSIS F	REQUE	STED (Includ	e Meth	od Nu	mber a	ind Co	ontaine	er Prese	rvstive)		
Projectivanager Brian Neumann	Report CC Lewis Stree	tr, Judy Harry	PRE	SERVATIVE	1					-	1							
Shaw Environmentel, I. 13. British American Lathan, NY 12110 518-783-1996	n C. B/Vd. FAX8 5-18-783 Sampler's Printed Name Schn Ar Ska	-8397 970/ MPLING TIME MATRIX	W W W W NUMBER OF CONTAINERS	CONS VONS CONS VONS CONS CONS	CONS CON	PESTICIDES Dependences Ported Dates	0868 001P	METALO METALO	XXXXX THIS THE PARTIE	ALL STAND						ALTERI	Preservativ 0. NONE 1. HCL 2. HNOg 3. HoSOd 4. NãOH 5. Zn. Acc 6. MeOH 7. NaHSC 8. Other REMARKS/ NATE DESCRII	atate D4
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Temperture Black										· ·					•			
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anilyce Volsemples for: hemachloroburn 1,2,3-trickloro	benzene, and				24 hr	48 hr NRD X DATE	•	5 day		_ 11. Resu (LCS, I _ 111. Res _ 111. Res Summ _ IV. Dal	ulta + QQ DUP, MS ults + Q arlea a Validal	C Summa /MSD as C and Ca ion Repo Forms / C	required dibration rt with R	aw Data	\Box	ewis.	Streek EP Y, NY	
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Signature Signature Pricing Name + H. Skodryg Signature		Signature Printed Name		Signal	ure Name	·		•	Signa		<u>.</u>	•.		•	Signatu Printed			
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Fing 28/03 11/00 Firm Data/Tine Data/Time		Dats/Time		Date/	lime			· · ·		Time				<u>.</u>	Date/Th	mə		

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

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SCOC-1102-08

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALY	YSIS DATA SHEET
	INFLUENT
Lab Name: CAS-ROC	Contract: SHAW
Lab Code: 10145 Case No.: R23-3	18214 SAS NO.: SDG NO.: EFFLUENT
Matrix: (soil/water) WATER	Lab Sample ID: 668002
Sample wt/vol: 25.00 (g/ml) M	ML Lab File ID: Z1183
Level: (low/med) LOW	Date Received: 08/29/03
<pre>% Moisture: not dec</pre>	Date Analyzed: 09/08/03
GC Column: ZB-624-30M ID: 0.32 (mm	m) Dilution Factor: 1.0
Soil Extract Volume:(uL)	Soil Aliquot Volume:(uI
CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q
74-87-3chloromethan 75-01-4vinyl chlor 74-83-9vinyl chlor 74-83-9vinyl chlor 74-83-9vinyl chlor 75-00-3vinyl chlor 75-00-3vinyl chlor 75-69-4chloroethane 75-35-4chloroethane 75-35-4chloroethane 75-35-4	ide 1.0 U e 1.0 U uoromethane 1.0 U bethene 1.0 U lfide 1.0 U bethene 1.0 U lfide 1.0 U bethane 1.0 U nloride 1.0 U nloroethene 1.0 U ichloroethene 1.0 U ichloroethene 1.0 U ichloroethene 1.0 U nethane 1.0 U loroethane 1.0 U bethane 1.0 U loroethane 1.0 U loroethane 1.0 U loroethane 1.0 U bethane 1.0 U chloride 10.7 i.0 U 1.0 U pothane 1.0 U i.0 U 1.0 U i.0 U 1.0 U i.0 U 1.0 U i.0 U 1.0 U

FORM I VOA

108-10-1-----4-methyl-2-pentanone

79-00-5-----1,1,2-trichloroethane_

124-48-1-----dibromochloromethane

127-18-4-----tetrachloroethene

106-93-4-----1,2-Dibromoethane

108-90-7----chlorobenzene

100-41-4----ethylbenzene

10061-02-6----trans-1,3-dichloropropene

108-88-3-----toluene

591-78-6----2-hexanone

5.0 U

1.0 U

1.0 U

1.0 U

1.0 U

5.0 U

1.0 U

1.0 0

1.0 U

1.0 0

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA	SHEET
Lab Name: CAS-ROC Contrac	INFLUENT
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)
	CENTRATION UNITS: /Lorug/Kg)UG/L Q
1330-20-7m.p-xvlenes	2.0 U

	and the second	
1330-20-7m,p-xylenes	2.0	υ
1330-20-7o-xylene	1.0	U
100-42-5styrene	1.0	U .
75-25-2bromoform	1.0	υ
79-34-51,1,2,2-tetrachloroethane	1.0	U
541-73-11,3-Dichlorobenzene	1.0	U
106-46-71,4-Dichlorobenzene	1.0	U
95-50-11,2-Dichlorobenzene	1.0	U
96-12-81,2-dibromo-3-chloropropane	1.0	U
120-82-11,2,4-Trichlorobenzene	1.0	-
87-68-3Hexachlorobutadiene	1.0	U
87-61-61,2,3-Trichlorobenzene	1.0	U

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1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		Soute	TRUST DUSKIN
Lab Name: CAS-ROC	Contra	ct: SHAW	
Lab Code: 10145	Case No.: R23-18214 SAS	No.: S	DG 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	1: 08/29/03
% Moisture: not dec.		Date Analyzed	1: 09/08/03
GC Column: ZB-624-30	M ID: 0.32 (mm)	Dilution Fac	tor: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:(uL)
	CONT	ייניאדיזים איייראיז זאזדייים	· -

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1 2		7.26	0.94	 J
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16 17				
18.			······	
19 20				
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2J.		······································		
24				
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28.		······		
29 30				-
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FORM I VOA-TIC

EPA SAMPLE NO.

	EFFLUENT
Lab Name: CAS-ROC Co	ntract: 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

74-87-3chloromethane	1.0	υ
75-01-4vinyl chloride	1.0	υ
74-83-9bromomethane	1.0	υ
75-00-3chloroethane	1.0	U
75-69-4Trichlorofluoromethane	1.0	υ
75-35-41,1-dichloroethene	1.0	υ
67-64-1acetone	5.0	
75-15-0carbon disulfide	1.0	ប
75-34-31,1-dichloroethane	1.0	ប
75-09-2methylene chloride	1.0	U
156-59-2cis-1,2-Dichloroethene	1.0	U
156-60-5trans-1,2-dichloroethene	1.0	ប
67-66-3chloroform	1.0	U _
78-93-32-butanone	5.0	υJ
74-97-5bromochloromethane	1.0	U
71-55-61,1,1-trichloroethane	1.0	U
56-23-5carbontetrachloride	1.0	U
71-43-2benzene	1.0	U
107-06-21,2-dichloroethane	1.0	ប
79-01-6trichloroethene	0.61	J.
78-87-51,2-dichloropropane	1.0	ប
75-27-4bromodichloromethane	1.0	U
10061-01-5cis-1,3-dichloropropene	1.0	
108-10-14-methyl-2-pentanone	5.0	υ
108-88-3toluene .	1.0	ប
10061-02-6trans-1,3-dichloropropene		υ
79-00-51,1,2-trichloroethane	1	U
127-18-4tetrachloroethene		U
591-78-62-hexanone		υ
124-48-1dibromochloromethane	1.0	•
106-93-41,2-Dibromoethane	1.0	-
108-90-7chlorobenzene	1.0	_
100-41-4ethylbenzene	1.0	υ

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FORM I VOA

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EFFLUENT Lab Name: CAS-ROC Contract: SHAW Case No.: R23-18214 SAS No.: SDG No.: EFFLUENT Lab Code: 10145 Matrix: (soil/water) WATER Lab Sample ID: 668004 Sample wt/vol: 25.00 (g/ml) ML Lab File ID: Z1184 Level: (low/med) Date Received: 08/29/03 LOW Date Analyzed: 09/08/03 % Moisture: not dec. GC Column: ZB-624-30M ID: 0.32 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL) CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

1330-20-7m,p-xylenes	2.0	ប
1330-20-7o-xylene	1.0	ប
100-42-5styrene	1.0	ប
75-25-2bromoform	1.0	υ
79-34-51,1,2,2-tetrachloroethane	1.0	υ
541-73-11,3-Dichlorobenzene	1.0	ប
106-46-71,4-Dichlorobenzene	1.0	ប
95-50-11,2-Dichlorobenzene	1.0	ប
96-12-81,2-dibromo-3-chloropropane	1.0	U
120-82-11,2,4-Trichlorobenzene	1.0	ប
87-68-3Hexachlorobutadiene	1.0	ប
87-61-61,2,3-Trichlorobenzene	1.0	U U

EPA SAMPLE NO.

1**E** VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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	E ORGANICS ANALYSIS DATA FATIVELY IDENTIFIED COMP			
Lab Name: CAS-ROC	Contra	act: SHAW	EFFLUENT	
Lab Code: 10145	Case No.: R23-18214 SAS	5 No.: S	DG 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-624-30	OM ID: 0.32 (mm)	Dilution Fac	tor: 1.0	
Soil Extract Volume	:(uL)	Soil Aliquot	Volume:(uL)	I

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSI	IS DATA SHEET	
Tab Nama (BC DOC		DUP A
Lab Name: CAS-ROC	Contract: SHAW	
Lab Code: 10145 Case No.: R23-182	214 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 Receive	ed: 08/29/03
% Moisture: not dec.	Date Analyze	ed: 09/08/03
GC Column: ZB-624-30M ID: 0.32 (mm)	Dilution Fa	actor: 1.0
Soil Extract Volume:(uL)	Soil Aliquot	Volume:(uL)
CAS NO. COMPOUND	CONCENTRATION UNIT (ug/L or ug/Kg) UC	
74-87-3chloromethane 75-01-4vinyl chloride 74-83-9vinyl chloride 74-83-9vinyl chloride 74-83-9vinyl chloride 74-83-9vinyl chloride 75-00-3vinyl chloroethane 75-09-4chloroethane 75-35-4chloroethane 75-35-4chloroethane 75-35-4	comethane hene de hane oride hane loroethene loroethene oride hane oothane ooth	1.0 U 1.0 U

FORM I VOA

108-88-3----toluene

591-78-6----2-hexanone

10061-02-6----trans-1,3-dichloropropene

79-00-5-----1,1,2-trichloroethane

124-48-1-----dibromochloromethane 106-93-4-----1,2-Dibromoethane 108-90-7-----chlorobenzene 100-41-4-----ethylbenzene

127-18-4-----tetrachloroethene

13

1.0 U

1.0 U

1.0 U

1.0 U

5.0 U

1.0 U 1.0 U 1.0 U 1.0 U 1.0 U

c: 1

EPA SAMPLE NO.

Lab Name: CAS-ROC		DUP A	
Lab Name: CAS-ROC	Contract: SHAW	J	ł
Lab Code: 10145 Case No.: R23-18	214 SAS No.: SI	OG No.: EFFLU	ENT
Matrix: (soil/water) WATER	Lab Sample ID	: 668006	
Sample wt/vol: 25.00 (g/ml) MI	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 Fact	or: 1.0	
Soil Extract Volume:(uL)	Soil Aliquot	/olume:	(uL)
CAS NO. COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/I	-	
1330-20-7m,p-xylenes 1330-20-7o-xylene 100-42-5styrene 75-25-2bromoform 79-34-51,1,2,2-tetra 541-73-11,3-Dichlorob 106-46-71,4-Dichlorob 95-50-11,2-Dichlorob 96-12-81,2-dibromo-3 120-82-11,2,4-Trichlo 87-68-3Hexachlorobut 87-61-61,2,3-Trichlo	chloroethane enzene enzene enzene -chloropropane probenzene adiene	2.0 U 1.0 U	

EPA SAMPLE NO.

TENTATIVELY IDEN	VTIFIED COMPOUNDS	
Lab Name: CAS-ROC	Contract: SHAW	
Lab Code: 10145 Case No.: R2	23-18214 SAS No.: SDG No.: EFFLU	ENT
Matrix: (soil/water) WATER	Lab Sample ID: 668006	
Sample wt/vol: 25.00 (g/ml	L) 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)
	CONCENTRATION UNITIES.	

Number TICs found: 0

(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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20.				
42.				
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FORM I VOA-TIC

EPA SAMPLE NO.

		1	1
Lab Name: CAS-ROC Contrac	ct: SHAW	TRIP BLAN	ĸ
Lab Code: 10145 Case No.: R23-18214 SAS	No.: SI	DG No.: EFFL	UENT
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		
GC Column: ZB-624-30M ID: 0.32 (mm)	Dilution Fact	tor: 1.0	
Soil Extract Volume:(uL)	Soil Aliquot V	Volume:	(uL)
	CENTRATION UNITS /L or ug/Kg) UG/1		
74-87-3vinyl chloride $75-01-4vinyl$ chloride $74-83-9vinyl$ chloride $74-83-9vinyl$ chloride $75-00-3vinyl$ chloroethane $75-00-3chloroethane$ $75-35-4chloroethane$ $75-35-4$		1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	
127-18-4tetrachloroethene 591-78-62-hexanone 124-48-1dibromochloromethane 106-93-41,2-Dibromoethane		1.0 U 5.0 U 1.0 U	

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FORM I VOA

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EPA SAMPLE NO.

			TRIP	BLANK	
Lab Name: CAS-ROC	Contract:	: Shaw		I	
Lab Code: 10145 Case	No.: R23-18214 SAS No	SI SI	G No.:	EFFLUENT	
Matrix: (soil/water) WATE	R	Lab Sample ID:	66800	B	
Sample wt/vol: 25.0	0 (g/ml) ML	Lab File ID:	Z1188		
Level: (low/med) LOW		Date Received:	08/29,	/03	
<pre>% Moisture: not dec</pre>		Date Analyzed:	09/08,	/03	
GC Column: ZB-624-30M ID:	0.32 (mm)	Dilution Fact	or: 1.0)	
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:	{u	L)
CAS NO. CO		NTRATION UNITS: or ug/Kg) UG/I		Q	
541-73-11, 106-46-71, 95-50-11, 96-12-81, 120-82-11, 87-68-3He	xylene yrene omoform 1,2,2-tetrachloroetha 3-Dichlorobenzene 4-Dichlorobenzene 2-Dichlorobenzene 2-dibromo-3-chloropro 2,4-Trichlorobenzene		2.0 T 1.0 T 1.0 T 1.0 T 1.0 T 1.0 T 1.0 T 1.0 T 1.0 T	1 1 1 1 1 1 1 1 1 1 1 1	

FORM I VOA

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TENTATIVELY IDENTIFIED (COMPOUNDS TRIP BLANK
Lab Name: CAS-ROC Cor	ntract: 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)
	CONCENTRATION UNITS:

Number TICs found: 0

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

CAS NUMBER EST. CONC. COMPOUND NAME \mathbf{RT} Q =================== ============ ------1._ 2. 3. 4. 5.] 6. 7. 8._ 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.

FORM I VOA-TIC

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA	SHEET
Lab Name: CAS-ROC Contra	cc: 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)
CON	CENTRATION UNITS:
	/Lorug/Kg) UG/L Q
74-87-3chloromethane	1.0 U
75-01-4vinyl chloride	1.0 U
74-83-9bromomethane	1.0 U
75-00-3chloroethane	1.0 U
75-69-4Trichlorofluoromethan	ne 1.0 U
75-35-41,1-dichloroethene	1.0 U
67-64-1acetone	5.0 00
75-15-0carbon disulfide	1.0 U
75-34-31,1-dichloroethane	1.0 U
75-09-2methylene chloride	1.0 U
156-59-2cis-1,2-Dichloroether	
156-60-5trans-1,2-dichloroet 67-66-3chloroform	
78-93-32-butanone	
74-97-5bromochloromethane	1.0 U
71-55-61,1,1-trichloroethan	e 1.0 U
56-23-5carbontetrachloride	1.0 U
71-43-2benzene	1.0 U
107-06-21,2-dichloroethane	1.0 U
79-01-6trichloroethene	1.0 U
78-87-51,2-dichloropropane	1.0 U
75-27-4bromodichloromethane	1.0 U
10061-01-5cis-1,3-dichloroprop	ene1.0 U
108-10-14-methyl-2-pentanone	
108-88-3toluene	1.0 U
10061-02-6trans-1,3-dichloropro	
79-00-51,1,2-trichloroethane	
591-78-62-hexanone	
124-48-1dibromochloromethane	3.0 U
106-93-41,2-Dibromoethane	1.0 U
108-90-7chlorobenzene	1.0 U
100-41-4ethylbenzene	1.0 U

FORM I VOA

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EPA SAMPLE NO.

Lab Name: CAS-ROC	Contract: SHAW	COOLER BLANK
Lab Code: 10145 Case No.:)	R23-18214 SAS No.:	SDG NO.: EFFLUENT
Matrix: (soil/water) WATER	Lab Sampl	e ID: 668009
Sample wt/vol: 25.00 (g/m	ml) ML Lab File	ID: Z1189
Level: (low/med) LOW	Date Rece	ived: 08/29/03
% Moisture: not dec.	Date Anal	yzed: 09/08/03
GC Column: ZB-624-30M ID: 0.32	(mm) Dilution	Factor: 1.0
Soil Extract Volume:(u	L) Soil Alig	uot Volume:(uL)
CAS NO. COMPOUN	D CONCENTRATION U (ug/L or ug/Kg)	
1330-20-7m,p-xyle 1330-20-7m,p-xyle 100-42-5styrene 75-25-2bromofo 79-34-51,1,2,2 541-73-11,3-Dic 106-46-71,4-Dic 95-50-11,2-Dic 96-12-81,2-dib 120-82-11,2,4-T 87-68-3Hexachle 87-61-61,2,3-T	e rm hlorobenzene hlorobenzene hlorobenzene romo-3-chloropropane richlorobenzene orobutadiene	2.0 U 1.0 U

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1E 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/1

CAS NUMBER COMPOUND NAME RT EST. CONC. Q ============= ===== 1. 2._ з. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22._ 23._ 24._ 25._ 26._ 27._ 28. 29._ 30._

FORM I VOA-TIC

EPA SAMPLE NO.

SR # CAS Contect	oomau Ier Preservalive)		Preservative Key 0. NONE 1. HCL	4 3 6	100 1	8		ALTERNATE DESCRIPTION											INVOICE INFORMATION		*00d	Lew Sherter	GE. CEP	Album, NY	SUBMISSION #	RECEIVED BY	Signature	Printed Name	Him	Data/Time
FORMed	Number and Con	120	A	Don	24	Ø.	5					, X			XXX	XX			REPORT REQUIREMENTS		IL FRANKER + CO SUMMARINES (LCS, DUP, MS/MSD as required)	III. Results + QC and Calibration Summaries	IV. Date Validation Report with Raw Dela	V. Spelcalized Forms / Custom Report	Edala Yes No	RELINQUISHED BY	Signature	Printed Name	Fian	Date/Time
ABORATORY ANALYSIS REQUEST		VATIVE			05 05	0 803 0 60 109 60 109				· · · · · · · · · · · · · · · · · · ·											UNDARID"	REQUESTED FAX DATE	REQUESTED REPORT DATE			RECEIVED BY	i Signature	Printed Name	Fim	DaterTime
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	Project Name Company Circle Project Name	Project Manager Bridin Neuwonn	Shaw. ENVIONMENTAL	13 British American	Lathen NY 12/10	519-783-1996		CLIENT SAMPLE D	M-335	M-331	AS Inflent .	AS ERLOHT	5W-0	9-1-A	A-M	×11-135	I Cill Black	Tema Blerk	SPEČIAL INSTRUCTIONS/COMMENTS Matala	A adding (Whit Counding C		Mercal ularo bu tadiene	1)3-4richlorobenzene	See ONP I LICLAR Fline welling	SAMPLE RECEIPT: CONDITION	RELINQUISHED BY	Signature OCh	Pristed Name		Delarijare.

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Project Marager Sompanythelines Columbated +	Y Hapon CC		- <u>R</u>	11	+	11		+ +	7	1	Preservative Key 0. NONE 1. HCL 2. HNO3 3. H9SO4 4. NSOH	07:50
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Special Instructions/Comments Motais					URCHARGES / 46 hr		I, Results (I). Recuts (LCS, DUF		madas as regin	sd}	P23-18-114 FOF	
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Smy Gryw Collon	Signature O BEach	Printed Name		Printed Name			Printed Name				Printed Name	
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In CAS	Frm 10/14/03/600	Data/Tune		Dale/Time			Defe/Time				Date/Time SCOC-111	12.7
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALY	SIS DATA SHEET
Lab Name: CAS-ROC	Contract: SHAW
Lab Code: 10145 Case No.: R23-1	1 <u></u>
Matrix: (soil/water) WATER	Lab Sample ID: 678646
Sample wt/vol: 25.00 (g/ml) M	L 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)	
Soil Extract Volume:(uL)	Soil Aliquot Volume:(uL)
CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q
74-87-3	ide 1.0 U ioromethane 1.0 U ioromethane 1.0 U ioromethane 1.0 U bethene 1.0 U ifide 1.0 U bethane 1.0 U ifide 1.0 U bethane 1.0 U aloroethene 1.0 U ichloroethene 1.0 U ichloroethene 1.0 U ichloroethane 1.0 U oprotethane 1.0 U ichloroethane 1.0 U oprotethane 1.0 U opropane 1.0 U romethane 1.0 U hene 1.0 U ichloropropene 1.0 U pentanone 5.0 U ichloropropene 1.0 U ichloropropene 1.0 U ichloropropene 1.0 U ichloropropene 1.0 U <tr< td=""></tr<>

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i ka EPA SAMPLE NO.

			AS INFLUENT	
Lab Name: CAS-ROC	Cor	stract: SHAW		_
Lab Code: 10145 Cas	e No.: R23-18714	SAS No.: S	DG No.: M-33S	
Matrix: (soil/water) WA	ATER	Lab Sample II); 678646	
Sample wt/vol: 25	5.00 (g/ml) ML	Lab File ID:	J0810	
Level: (low/med) LO	W	Date Received	i: 10/10/03	
% Moisture: not dec.		Date Analyzed	1: 10/18/03	
GC Column: RTX502.2 ID): 0.53 (mm)	Dilution Fact	or: 1.0	
Soil Extract Volume:	(UL)	Soil Aliquot	Volume:	_(uI
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG,		

1330-20-7m,p-xylenes	2.0	υ
1330-20-7o-xylene	1.0	υ
100-42-5styrene	1.0	υ
75-25-2bromoform	1.0	ប
79-34-51,1,2,2-tetrachloroethane	1.0	U
541-73-11,3-Dichlorobenzene	1.0	ប
106-46-71,4-Dichlorobenzene	1.0	U
95-50-11,2-Dichlorobenzene	1.0	ד ד
96-12-81,2-dibromo-3-chloropropane_	1.0	ប
120-82-11,2,4-Trichlorobenzene	1.0	-
87-68-3Hexachlorobutadiene	1.0	
87-61-61,2,3-Trichlorobenzene	1.0	υ

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EPA SAMPLE NO.

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1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

			AS INFLUENT	
Lab Name: CAS-ROC	Contract:	SHAW		
Lab Code: 10145	Case No.: R23-18714 SAS No).: SD	G 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 Facto	or: 1.0	
Soil Extract Volume:	(uL)	Soil Aliquot V	701ume:(u	正)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT ========	EST. CONC.	Q ======
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30			-	

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1A VOLATILE ORGANICS ANALYSIS DATA S		EPA SAMPLE NO.
Lab Name: CAS-ROC Contract	: SHAW	AS EFFLUENT
Lab Code: 10145 Case No.: R23-18714 SAS N	No.: SDG	S No.: M-335
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	r: 1.0
Soil Extract Volume:(uL)	Soil Aliquot Vo	olume:(uL)
	ENTRATION UNITS: L or ug/Kg) UG/L	Q
74-87-3	e	1.0 U 1.0 U

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: CAS-ROC Contract: SHAW	AS EFFLUENT
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 Receiv	red: 10/10/03
* Moisture: not dec Date Analyz	ed: 10/18/03
GC Column: RTX502.2 ID: 0.53 (mm) Dilution Fa	actor: 1.0
Soil Extract Volume:(uL) Soil Alique	ot Volume:(uL)
CAS NO. COMPOUND CONCENTRATION UNI (ug/L or ug/Kg) U	

1330-20-7	m,p-xylenes	2.0	υ
	o-xylene	1.0	ប
100-42-5	styrene	1.0	ប
	bromoform	1.0	U
79-34-5	1,1,2,2-tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	ប
106-46-7	1,4-Dichlorobenzene	1.0	1
95-50-1	1,2-Dichlorobenzene	1.0	1 -
96-12-8	1,2-dibromo-3-chloropropane_	1.0	1 -
	1,2,4-Trichlorobenzene	1.0	-
	Hexachlorobutadiene	1.0	
87-61-6	1,2,3-Trichlorobenzene	1.0	U
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FORM I VOA

EPA SAMPLE NO.

			AS EFFLUENT
Lab Name: CAS-ROC	Contract	SHAW	
Lab Code: 10145	Case No.: R23-18714 SAS No	s.: SI	G 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
<pre>% Moisture: not dec.</pre>	<u></u>	Date Analyzed:	10/18/03
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	/olume:(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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APPENDIX B

LABORATORY DATA, GROUNDWATER SAMPLES AND SURFACE WATER SAMPLES

OCTOBER 2003

n Employee Owned Company One MUSIAID St	, Suite 250 • Rochester, N	(14609-0859 • (585) (, 288-5380 • 8	•		1AL'				1.			X /	CA	S Contac	ct		
roject Nama GEMRFA	Project Number		•	İ.			ALYSIS RI			nclude	Method	Numb	er and i	Contair	ier Pres	ervative)	• <u>•</u> ••••	
Brian Neumann	, Report CaC ,	ON CHARLES		PRE	SERVATIVE				- T)	1=	20			<u> </u>		<u></u>
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CLIENT SAMPLE ID	LAB ID				/ଡିମ୍ପି			28/		<u> </u>	YM	\square			/		ALTER	REMARKS	S/ CRIPTION
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etals: Am/ = 100	al A	,			_		(SURCH/				I. Resul								
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1,2,3- trichlorobenz	ene + trichlor	flum	mall.	•		QUESTED P							and Cal	ibration		BILL TO	FC	EP	
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e CAPP MPLE RECEIPT: CONDITION/COOLER T	EMP:		JSTODY SEA	18 Y		•	·	. <u> </u>		-	Eclata		Yes			SUBMI	SSION #:	<u> </u>	•
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EPA SAMPLE NO.

VOLATILE ORGANICS AN	NALYSIS DATA SHEET
Lab Name: CAS-ROC	M-33S Contract: SHAW
Lab Code: 10145 Case No.: R2	23-18714 SAS No.: SDG No.: M-33S
Matrix: (soil/water) WATER	Lab Sample ID: 678644
Sample wt/vol: 25.00 (g/m]	l) 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:(1
CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q
$74-87-3-\cdots$ chloromet $75-01-4-\cdots$ vinyl $74-83-9-\cdots$ bromomet $75-00-3-\cdots$ chloroet $75-00-3-\cdots$ chloroet $75-69-4-\cdots$ Trichloro $75-35-4-\cdots$ 1.1-dich $67-64-1-\cdots$ acetone $75-34-3-\cdots$ 1.1-dich $75-34-3-\cdots$ nethylen $156-59-2-\cdots$ rans-1, $75-09-2-\cdots$ methylen $156-60-5-\cdots$ rans-1, $75-60-3-\cdots$ rans-1, $74-97-5-\cdots$ bromochlen $74-97-5-\cdots$ bromochlen $74-97-5-\cdots$ bromochlen $74-97-5-\cdots$ bromochlen $74-97-5-\cdots$ bromochlen $7-6-2-5-\cdots$ chlorohen $107-06-2-\cdots$ chlorohen <td>1loride 1.0 U thane 1.0 U thane 1.0 U cofluoromethane 1.0 U hloroethene 1.0 U disulfide 1.0 U dicoroethane 1.0 U -Dichloroethene 1.0 U 2-dichloroethene 1.0 U orm 1.0 U corm 1.0 U ore 1.0 U core 1.0 U core 1.0 U dicromethane 1.0 U nloroethane 1.0 U hloroptopane 1.0 U chloromethane 1.0 U -dichloropropene 1.0 U .3-dichloropropene 1.0 U .3-dichloropropene 1.0 U .3-dichloropropene 1.0 U chloromethane 1.0 U chloromethane 1.0 U one 5.0 U</td>	1loride 1.0 U thane 1.0 U thane 1.0 U cofluoromethane 1.0 U hloroethene 1.0 U disulfide 1.0 U dicoroethane 1.0 U -Dichloroethene 1.0 U 2-dichloroethene 1.0 U orm 1.0 U corm 1.0 U ore 1.0 U core 1.0 U core 1.0 U dicromethane 1.0 U nloroethane 1.0 U hloroptopane 1.0 U chloromethane 1.0 U -dichloropropene 1.0 U .3-dichloropropene 1.0 U .3-dichloropropene 1.0 U .3-dichloropropene 1.0 U chloromethane 1.0 U chloromethane 1.0 U one 5.0 U

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EPA SAMPLE NO.

	•		M-33S
Lab Name: CAS-ROC	Con	tract: SHAW	
Lab Code: 10145	Case No.: R23-18714	SAS No.: SI	G 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 Facto	or: 1.0
Soil Extract Volume:	(սL)	Soil Aliquot	Volume:(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/1	

1330-20-7m,p-xylenes	2.0	ប
1330-20-7o-xylene	1.0	ΰ
100-42-5styrene	1.0	υ
75-25-2bromoform	1.0	U
79-34-51,1,2,2-tetrachloroethane	1.0	U
541-73-11, 3-Dichlorobenzene	1.0	U
106-46-71,4-Dichlorobenzene	1.0	ប
95-50-11, 2-Dichlorobenzene	1.0	U
96-12-81,2-dibromo-3-chloropropane	1.0	U
120-82-11,2,4-Trichlorobenzene	1.0	υ
87-68-3Hexachlorobutadiene	1.0	ប
87-61-61,2,3-Trichlorobenzene	1.0	ש

EPA SAMPLE NO.

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TENTA	ATIVELY IDENTIFIED COMPOU	NDS	M-33S
Lab Name: CAS-ROC	Contract	: SHAW	M-338
Lab Code: 10145	Case No.: R23-18714 SAS N	o.: SDG	3 No.: M-335
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	r: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot Vo	olume:(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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14 15				
16 17 18				
18 19 20		•	· · · · · · · · · · · · · · · · · · ·	
22.		-		
23		-		
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EPA SAMPLE NO.

VOLATI	LE ORGANICS ANALYS	SIS DATA SHEET	l 	
Lab Name: CAS-ROC		Contract: SHAW	м	1-33I
			I	
Lab Code: 10145	Case No.: R23-18	3714 SAS No.:	SDG No.:	: M-33S
Matrix: (soil/wate	r) WATER	Lab Sam	ole ID: 67864	15
Sample wt/vol:	25.00 (g/ml) MI	Lab File	E ID: J0809	9
Level: (low/med)	LOW	Date Rec	ceived: 10/10	0/03
* Moisture: not de	×c	Date Ana	alyzed: 10/10	8/03
GC Column: RIX502.	2 ID: 0.53 (nm)	Dilution	1 Factor: 1.	0
Soil Extract Volum	ae:(uL)	Soil Al:	iquot Volume	:(u
CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/K	UNITS: g) UG/L	Q
75-01-4 74-83-9 75-00-3 75-69-4	chloromethane bromomethane chloroethane Trichlorofluc	oromethane	1.0 1.0 1.0 1.0 1.0 1.0	ប ប ប ប
67-64-1 75-15-0 75-34-3 75-09-2 156-59-2	acetone carbon disult 1,1-dichloro methylene ch cis-1,2-Dich	fide ethane loride loroethene	5.0 1.0 1.0 1.0 1.0 1.0 1.0	บ บ บ บ บ บ
67-66-3 78-93-3 74-97-5 71-55-6	chloroform 2-butanone bromochlorom 1,1,1-trichl	ethane oroethane	1.0	U U U U U U U U U
71-43-2 107-06-2 79-01-6 78-87-5	benzene 1,2-dichloro trichloroeth 1,2-dichloro	ethane	1.0 1.0 1.0	
10061-01-5 108-10-1 108-88-3	bromodichlor cis-1,3-dich 4-methyl-2-p toluene trans-1,3-di	loropropene pentanone	1.(5.(1.(
79-00-5	1,1,2-trichl	oroethane		ŬŬ

FORM I VOA

127-18-4-----tetrachloroethene

124-48-1----dibromochloromethane 106-93-4-----1,2-Dibromoethane 108-90-7----chlorobenzene 100-41-4----ethylbenzene

591-78-6----2-hexanone

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1.0 U

5.0 U 1.0 U 1.0 U 1.0 U 1.0 U

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EPA SAMPLE NO.

		M-33I	
Lab Name: CAS-ROC	Conta	ract: SHAW	_1
Lab Code: 10145	Case No.: R23-18714 SA	AS 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.	-	ONCENTRATION UNITS: ug/L or ug/Kg) UG/L Q	

1330-20-7m,p-xylenes	2.0	υ
1330-20-7o-xylene	1.0	U
100-42-5styrene	1.0	U
75-25-2bromoform	1.0	ប
79-34-51,1,2,2-tetrachloroethane	1.0	υ
541-73-11, 3-Dichlorobenzene	1.0	υ
106-46-71,4-Dichlorobenzene	1.0	υ
95-50-11,2-Dichlorobenzene	1.0	ប
96-12-81,2-dibromo-3-chloropropane_	1.0	
120-82-11,2,4-Trichlorobenzene	1.0	1 - 1
87-68-3Hexachlorobutadiene	1.0	
87-61-61,2,3-Trichlorobenzene	1.0	ש
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FORM I VOA

EPA SAMPLE NO.

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		ADD	N OOT
Lab Name: CAS-ROC	Contract	: SHAW	M-33I
Lab Code: 10145	Case No.: R23-18714 SAS N	0.: SD	G 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 Facto	pr: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	/olume:(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1 11				
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43.				
1 24.	· · · · · · · · · · · · · · · · · · ·			<u></u>
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EPA SAMPLE NO.

VOLATILE ORGANICS ANAL	YSIS DATA SHEET
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	ide 1.0 U e 1.0 U e 1.0 U uoromethane 1.0 U oethene 1.0 U oethene 1.0 U lfide 1.0 U oethane 1.0 U lfide 1.0 U oethane 1.0 U hloride 1.0 U hloroethene 1.0 U ichloroethene 1.0 U ichloroethane 1.0 U ichloropropane 1.0 U ichloropropene 1.0 U ichloropropene 1.0 U ichloropropene 1.0 U ichloropropene 1.0 U ichloroethane 1.0 U ichloropropene 1.0 U

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EPA SAMPLE NO.

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Lab Name: CAS-ROC	Cor	tract: SHAW	SW-D	
Lab Code: 10145	Case No.: R23-18714	SAS No.: SI	DG 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 Fact	or: 1.0	
Soil Extract Volume	:(uL)	Soil Aliquot	Volume:	_(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/		
1330-20-7 100-42-5 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1 96-12-8 120-82-1 87-68-3	m,p-xylenes o-xylene styrene bromoform 1,1,2,2-tetrachlo 1,3-Dichlorobenzo 1,2-Dichlorobenzo 1,2-dibromo-3-chl 1,2,4-Trichlorobe Hexachlorobutadio 1,2,3-Trichlorobe	oroethane ene ene loropropane_ enzene ene	2.0 U 1.0 U	

EPA SAMPLE NO.

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Lab Name: CAS-ROC	Cont	ract: SHAW	SW-D
Lab Code: 10145	Case No.: R23-18714 S	BAS No.: SD	G 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 Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DA	ATA SHEET		
Lab Name: CAS-ROC Cont	cract: SHAW	SW-A	
Lab Code: 10145 Case No.: R23-18714 S	SAS No.: SD	G 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:		
% Moisture: not dec.	Date Analyzed:	10/18/03	
GC Column: RTX502.2 ID: 0.53 (mm)	Dilution Facto	x: 1.0	
Soil Extract Volume:(uL)	Soil Aliquot V	olume:	(uL)
	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/I		
74-87-3	e	1.0 U 1.0 U U 1.0 U U U 1.0 U U 1.0 U U U 1.0 U U U 1.0 U U U 1.0 U U U 1.0 U U 1.0 U U U 1.0 U U 1.0 U U 1.0 U U	

FORM I VOA

541-73-1-----1,3-Dichlorobenzene106-46-7-----1,4-Dichlorobenzene95-50-1-----1,2-Dichlorobenzene96-12-8-----1,2-dibromo-3-chloropropane120-82-1-----1,2,4-Trichlorobenzene87-68-3-----Hexachlorobutadiene87-61-6-----1,2,3-Trichlorobenzene

EPA SAMPLE NO.

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1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U

	SW-A
Lab Name: CAS-ROC Cor	ntract: 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
1330-20-7m,p-xylenes 1330-20-7o-xylene 100-42-5styrene 75-25-2bromoform 79-34-51,1,2,2-tetrachlo 541-73-11,3-Dichlorobenzo	

FORM I VOA

EPA SAMPLE NO.

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			SW-A	1
Lab Name: CAS-ROC	Cont	ract: SHAW	5w-A	_
Lab Code: 10145	Case No.: R23-18714 S	SAS No.: SI	DG 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 Facto	or: 1.0	
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:	_(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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22		-		
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26.	······································			
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	1A		EPA SAMPLE NO.
VOLATILE	ORGANICS ANALYSIS DA	ATA SHEET	
Lab Name: CAS-ROC	Cont	tract: SHAW	SW-B
Lab Code: 10145	Case No.: R23-18714 \$	SAS No.:	SDG No.: M-33S
Matrix: (soil/water)	WATER	Lab Sample II	D: 678650
Sample wt/vol:	25.00 (g/ml) ML	Lab File ID:	J0804
Level: (low/med)		Date Received	d: 10/10/03
% Moisture: not dec.		Date Analyzed	
GC Column: RTX502.2		Dilution Fact	
	• · · •		
Soil Extract Volume:	· · · · · · · · · · · · · · · · · · ·		Volume:
CAS NO.		CONCENTRATION UNITS (ug/L or ug/Kg) UG,	
$\begin{array}{c} 75-01-4\\ 74-83-9\\ 75-00-3\\ 75-00-3\\ 75-35-4\\ 75-35-4\\ 75-35-4\\ 75-15-0\\ 75-15-0\\ 75-09-2\\ 75-09-2\\ 156-60-5\\ 156-60-5\\ 67-66-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 78-93-3\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 108-88-3\\ 108-88-3\\ 124-48-1\\ 106-93-4\\ 108-90-7\\ \end{array}$	carbon disulfide 1,1-dichloroethan methylene chlorid cis-1,2-Dichloroe trans-1,2-dichlor chloroform 2-butanone bromochloromethan 1,1,1-trichloroethan trichloroethan trichloroethan trichloroethan 1,2-dichloropropa bromodichlorometh cis-1,3-dichlorop	e	1.0 U 1.0 U

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EPA SAMPLE NO.

Lab Name: CAS-ROC	Cox	ntract: SHAW	SW-B
Lab Code: 10145	Case No.: R23-18714	SAS No.: S	DG 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.	ана стана 1997 — Прила Салана 1997 — Прила Салана	Date Analyzed	: 10/18/03
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Fact	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:(u
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/	
1330-20-7 100-42-5 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1 96-12-8 120-82-1 87-68-3	styrene	oroethane ene ene ene loropropane enzene ene	2.0 U 1.0 U

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Number TICs found: 1

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Lab Name: CAS-ROC	Contract	: Shaw	SW-B
Lab Code: 10145	Case No.: R23-18714 SAS 1	No.: SI	G No.: M-335
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 Facto	pr: 1.0
Soil Extract Volume:	(UL)	Soil Aliquot N	Volume:(uL)

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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15 16				
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21. 22. 23			·	
23 24 25		·	-	
27.		•		
28		-		
30				

EPA SAMPLE NO.

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Lab Name: CAS-ROC	Contract	: SHAW	TRIP BLANK
Lab Code: 10145	Case No.: R23-18714 SAS N	o.: Si	DG 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 (nm)	Dilution Fact	or: 1.0
Soil Extract Volume:	(III)	Soil Aliquot	Volume:(ui
CAS NO.		NTRATION UNITS or ug/Kg) UG/	
1330-20-7 100-42-5 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1 96-12-8 120-82-1 87-68-3	m,p-xylenes o-xylene styrene styrene 1,1,2,2-tetrachloroeth 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,2-dibromo-3-chloroph 1,2,4-Trichlorobenzene Hexachlorobutadiene 1,2,3-Trichlorobenzene	ropane	2.0 U 1.0 U

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			TRIP BLANK
Lab Name: CAS-ROC	Contract	: SHAW	
Lab Code: 10145	Case No.: R23-18714 SAS N	io.: SD	G 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
<pre>% Moisture: not dec.</pre>		Date Analyzed:	10/18/03
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Facto	r: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	Volume:(uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
1. \230-57. 9 2 3	BTHANE, 1,2-DICHLORO-1-FLUOR	6.75	0.75	
5 6 7 8 9.				
10 11 12 13 14				
16 17 18 19.				
21				
24 25 26 27 28				
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DAT	CA SHEET
ab Name: CAS-ROC Contr	COOLER BLK
ab Code: 10145 Case No.: R23-18714 SA	AS No.: SDG No.: M-33S
atrix: (soil/water) WATER	Lab Sample ID: 678653
ample wt/vol: 25.00 (g/ml) ML	Lab File ID: J0858
evel: (low/med) LOW	Date Received: 10/10/03
Moisture: not dec.	
	Date Analyzed: 10/22/03
C Column: RTX502.2 ID: 0.53 (mm)	Dilution Factor: 1.0
oil Extract Volume:(uL)	Soil Aliquot Volume:
	ONCENTRATION UNITS: ug/L or ug/Kg) UG/L Q
74-87-3chloromethane 75-01-4vinyl chloride 74-83-9bromomethane 75-00-3chloroethane 75-69-4chloroethane 75-35-4l, 1-dichloroethane 67-64-1acetone 75-15-0carbon disulfide 75-34-3l, 1-dichloroethane 75-15-0carbon disulfide 75-34-3l, 1-dichloroethane 75-9-2carbon disulfide 75-9-2	1.0 U 5.0 U 1.0 U

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Lab Name: CAS-ROC	Con	tract: SHAW	COOLER BLK
Lab Code: 10145	Case No.: R23-18714	SAS No.: SI	DG 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 Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/:	•
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1330-20-7m,p-xylenes	2.0	U
1330-20-7o-xylene	1.0	ΰ
100-42-5styrene	1.0	U
75-25-2bromoform	1.0	U
79-34-51,1,2,2-tetrachloroethane	1.0	ប
541-73-11,3-Dichlorobenzene	1.0	ט ט
106-46-71,4-Dichlorobenzene	1.0	U
95-50-11,2-Dichlorobenzene	1.0	υ
96-12-81,2-dibromo-3-chloropropane	1.0	ប
120-82-11,2,4-Trichlorobenzene	1.0	υ
87-68-3Hexachlorobutadiene	1.0	υ
87-61-61,2,3-Trichlorobenzene	1.0	υ

EPA SAMPLE NO.

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TENT	ATIVELY IDENTIFIED COMP	OUNDS		
Lab Name: CAS-ROC	Contract: SHAW		COOLER BLK	
Lab Code: 10145	Case No.: R23-18714 SAS	No.: SI	DG 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 Facto	or: 1.0	
Soil Extract Volume:	(บL)	Soil Aliquot	Volume:	(uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2	UNKNOWN	22.96	0.70	J
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7 8 9				
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22 23 24				
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27 28 29.				
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EPA SAMPLE NO.

	VOLATIL	E ORGANICS ANALYSIS DA	TA SHEET	·
o M≊	ame: CAS-ROC	Cont	ract: SHAW	DGC-4S
				l l
o Co	ode: 10145	Case No.: R23-18714 S	AS No.:	SDG No.: M-33S
riz	k: (soil/water) WATER	Lab Sample	ID: 679933
nple	e wt/vol:	25.00 (g/ml) ML	Lab File II): J0815
vel:	: (low/med)	LOW	Date Receiv	ved: 10/16/03
Mois	sture: not dec	•	Date Analyz	zed: 10/18/03
Col	lumn: RTX502.2	ID: 0.53 (mm)	Dilution Fa	actor: 1.0
il P	Extract Volume	:(uL)	Soil Alique	ot Volume:(
			CONCENTRATION UNI	
	CAS NO.	COMPOUND	(ug/L or ug/Kg) (JG/L Q
	74-87-3	chloromethane	· · · · · · · · · · · · · · · · · · ·	1.0 U
	75-01-4	vinyl chloride		1.0 U
	74-83-9	bromomethane	······································	1.0 Ŭ
		chloroethane		1.0 U
		Trichlorofluoromet	hane	1.0 U
	75-35-4	1,1-dichloroethene	3	1.0 U
	67-64-1			5.005
		carbon disulfide		1.0 U
		1,1-dichloroethand	2	1.0 U
	75-09-2	methylene chloride	9	1.0 U
	156-59-2	cis-1,2-Dichloroe	thene	1.0 U
	156-60-5	trans-1,2-dichlore	oethene	1.0 U
		chloroform		1.0 U
		2-butanone		5.0 UJ
		bromochloromethan		1.0 U
		1,1,1-trichloroet		1.0 U
		carbontetrachlori	ae	1.0 U
	71-43-2			1.0 U
		1,2-dichloroethan	e	1.0 U
		trichloroethene		
	75-07-4	1,2-dichloropropa	ano	1.0 U 1.0 U
		cis-1,3-dichlorop		1.0 U
		4-methyl-2-pentan		5.0 U
		toluene		1.0 U
		trans-1,3-dichlor	opropene	1.0 U
	79-00-5	1,1,2-trichloroet	hane	1.0 U
	127-18-4	tetrachloroethene		1.0 U
		2-hexanone	·	5.0 0
		dibromochlorometh	ane	1.0 0
		1,2-Dibromoethane		1.0 U
		chlorobenzene		1.0 U
		ethylbenzene		1.0 U

FORM I VOA

79-34-5-----1,1,2,2-tetrachloroethane

 79-34-5------1,1,2,2-tetrachioroethane_____

 541-73-1-----1,3-Dichlorobenzene_____

 106-46-7-----1,4-Dichlorobenzene_____

 95-50-1-----1,2-Dichlorobenzene_____

 96-12-8-----1,2-dibromo-3-chloropropane__

 120-82-1-----1,2,4-Trichlorobenzene_____

 87-68-3------Hexachlorobutadiene_____

 87-61-6------1,2,3-Trichlorobenzene_____

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EPA SAMPLE NO.

1.0 U

1.0 U 1.0 U 1.0 0 1.0 U 1.0 0 1.0 0 1.0 0

			DGC-4S
Lab Name: CAS-ROC	Coi	ntract: SHAW	
Lab Code: 10145	Case No.: R23-18714	SAS No.: SI	DG No.: M-338
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 Fact	or: 1.0
Soil Extract Volume	:(uL)	Soil Aliquot	Volume:(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/	•
1330-20-7			2.0 U 1.0 U 1.0 U 1.0 U 1.0 U

EPA SAMPLE NO.

TENTAT	IVELY IDENTIFIED COMPO	UNDS	DGC-4S	
Lab Name: CAS-ROC	Contrac	t: SHAW	DGC-43	
Lab Code: 10145 Ca	use No.: R23-18714 SAS	No.: SD	G No.: M-33S	
Matrix: (soil/water) W	ATER	Lab Sample ID:	679933	
Sample wt/vol: 2	25.00 (g/ml) ML	Lab File ID:	J0815	
Level: (low/med) I	WO	Date Received:	10/16/03	
<pre>% Moisture: not dec</pre>		Date Analyzed:	10/18/03	
GC Column: RTX502.2 1	(mm)	Dilution Facto	or: 1.0	
Soil Extract Volume:	(UL)	Soil Aliquot V	Volume:	(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q ======
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12. 13. 14				
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EPA SAMPLE NO.

	VOLATILI	E ORGANICS ANALYSIS	DATA SHEET	(· · · · · · · · · · · · · · · · · · ·
b Na	me: CAS-ROC	Cc	ntract: SHAW	DGC	-38
		Case No.: R23-18714		SDG No.;	M-22G
	06: 10145	Case NO.; KZJ-10/14	SAS NO.:	and no	m-222
trix	: (soil/water)) WATER	Lab Sam	ple ID: 679934	i -
mple	wt/vol:	25.00 (g/ml) ML	Lab Fil	e ID: J0816	
vel:	: (low/med)	LOW	Date Re	ceived: 10/16/	03
Mois	sture: not dec	•	Date An	alyzed: 10/18/	'03
Co]	Lumn: RTX502.2	ID: 0.53 (mm)	Dilutic	n Factor: 1.0	
il E	Extract Volume	: (uL)	Soil Al	iquot Volume:	(u
				-	
	CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/K		Q
	74-87-3	chloromethane		1.0 0	J
	75-01-4	vinyl chloride		1.0 1	J
	74-83-9	bromomethane		1.0 1	
	75-00-3	chloroethane		1.0	
	75-69-4	Trichlorofluoron	nethane	1.0 1	
	67-64-1	1,1-dichloroethe	ane	1.01	
		carbon disulfide		5.0	
	75-34-3	1,1-dichloroetha	ne	1.0	ă I
	75-09-2	methylene chlor:	ide	1.0	
	156-59-2	cis-1,2-Dichloro	oethene	1.01	σ I
		trans-1,2-dichlo		1.0	
	67-66-3	chloroform		1.0	
	78-93-3	2-butanone		5.0	
		bromochlorometha		1.0	
		1, 1, 1-trichloroe		1.0	
	56-23-5	carbontetrachlo:	ride	1.0	
	71-43-2			1.0	
		1,2-dichloroetha		1.0	
		trichloroethene		1.0	• I
	75-07-4	1,2-dichloropro	pane	1.0	
		cis-1,3-dichlor		1.0	
		4-methyl-2-pent		5.0	
	108-88-3			1.0	
		trans-1,3-dichl	oropropene	1.0	
	79-00-5	1,1,2-trichloro	ethane	1.0	
		tetrachloroethe		1.0	
		2-hexanone		5.0	U
		dibromochlorome		1.0	υ
		1,2-Dibromoetha	ne	1.0	
		chlorobenzene		1.0	
	1 100-41-4	ethylbenzene		1.0	111 1

FORM I VOA

EPA SAMPLE NO.

Lab Name: CAS-ROC	Contract	: SHAW	DGC-3S	
	se No.: R23-18714 SAS No	b.: SD	G No.: M-33S	
Matrix: (soil/water) W	ATER	Lab Sample ID:	679934	
Sample wt/vol: 2	5.00 (g/ml) ML	Lab File ID:	J0816	
Level: (low/med) L	W	Date Received:	10/16/03	
% Moisture: not dec	· · · ·	Date Analyzed:	10/18/03	
GC Column: RTX502.2 I	D: 0.53 (mm)	Dilution Facto	r: 1.0	
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:	(uL)
CAS NO.		NTRATION UNITS: or ug/Kg) UG/L	Q Q	
541-73-1 106-46-7 95-50-1 96-12-8 120-82-1 87-68-3	-o-xylene	opane_	2.0 U 1.0 U	

EPA SAMPLE NO.

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Lab Name: CAS-ROC	Contract	: Shaw	DGC-3S
Lab Code: 10145	Case No.: R23-18714 SAS N	No.: SD	G 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 Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	volume:(uL)
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Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILI	la E organics analysi:	s data sheet	EPA SAMPLE NO.
Lab Name: CAS-ROC		Contract: SHAW	M-27S
Lab Code: 10145	Case No.: R23-187	14 SAS No.: S	DG 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)	TOM	Date Received	: 10/16/03
* Moisture: not dec	•	Date Analyzed	: 10/21/03
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Fact	or: 1.0
Soil Extract Volume	:(uL)	Soil Aliquot	Volume:(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/	
$\begin{array}{c} 75-01-4\\ 74-83-9\\ 75-00-3\\ 75-00-3\\ 75-35-4\\ 75-35-4\\ 75-35-4\\ 75-15-0\\ 75-09-2\\ 156-59-2\\ 156-59-2\\ 156-60-5\\ 67-66-3\\ 78-93-3\\ 78-93-3\\ 74-97-5\\ 74-97-5\\ 71-55-6\\ 78-93-3\\ 71-43-2\\ 71-43-2\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-6\\ 79-01-5\\ 108-88-3\\ 108-88-3\\ 106-93-4\\ 108-90-7\\ \end{array}$	carbon disulfi 1,1-dichloroet methylene chlc cis-1,2-Dichlc trans-1,2-dich chloroform 2-butanone bromochloromet 1,1,1-trichlor carbontetrachl benzene 1,2-dichloroether 1,2-dichloropt bromodichlorom cis-1,3-dichlo	comethane chene .de .hane oride oroethene loroethene loropane nethane oropropene ntanone	1.0 U 1.0 U

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FORM I VOA

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EPA SAMPLE NO.

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			M-27S	
Lab Name: CAS-ROC	Cor	ntract: SHAW		_
Lab Code: 10145	Case No.: R23-18714	SAS No.: S	DG No.: M-33S	
Matrix: (soil/water)	WATER	Lab Sample II	: 679935	
Sample wt/vol:	25.00 (g/ml) ML	Lab File ID:	J0854	
Level: (low/med)	LOW	Date Received	l: 10/16/03	
% Moisture: not dec.		Date Analyzed	1: 10/21/03	
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Fact	or: 1.0	
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:	_(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/		
1330-20-7	m,p-xylenes		2.0 U	

1				
	1330-20-7m,p-xylenes	2.0	υ	
	1330-20-7o-xylene	1.0	U	
	100-42-5styrene	1.0	υ	
	75-25-2bromoform	1.0	υ	
	79-34-51,1,2,2-tetrachloroethane	1.0	U U	
	541-73-11,3-Dichlorobenzene	1.0	υ	
	106-46-71,4-Dichlorobenzene	1.0	ប	
	95-50-11,2-Dichlorobenzene	1.0	U U	
	96-12-81,2-dibromo-3-chloropropane	1.0	U U	
	120-82-11,2,4-Trichlorobenzene	1.0	υ	
	87-68-3Hexachlorobutadiene	1.0	υ	l
	87-61-61,2,3-Trichlorobenzene	1.0	U 1	
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EPA SAMPLE NO.

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			N. 070
Lab Name: CAS-ROC	Cont	ract: SHAW	M-27S
Lab Code: 10145	Case No.: R23-18714 S	AS NO.: SD	G 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 Facto	r: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:(uL)

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

CAS NUMBER	COMPOUND NAME	RT =======	EST. CONC.	Q =====
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EPA SAMPLE NO.

Lab Name: CAS-ROC Con	ntract: SHAW	M-27D
Lab Code: 10145 Case No.: R23-18714	SAS No.: SDG No	D.: M-33S
Matrix: (soil/water) WATER	Lab Sample ID: 67	9936
Sample wt/vol: 25.00 (g/ml) ML	Lab File ID: J0	817
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 Volu	me:(uL)
CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3chloromethane 75-01-4vinyl chloride 74-83-9bromomethane 75-00-3bromomethane 75-69-4Trichlorofluorom 75-35-41,1-dichloroethe 67-64-1acetone 75-15-0carbon disulfide	1 1 1 1 1 1 1 2 2 2 2 2 2 2 1 2 2 1	.0 U .0 U .0 U .0 U .3 .0 U .0 U .0 U

67-64-1acetone	5.0 00
75-15-0carbon disulfide	1.0 U
75-34-31,1-dichloroethane	1.0 U
75-09-2methylene chloride	1.0 U
156-59-2cis-1,2-Dichloroethene	1.0 U
156-60-5trans-1,2-dichloroethene	1.00
67-66-3chloroform	1.0
78-93-32-butanone	5.0 00
74-97-5bromochloromethane	1.0 U
71-55-61,1,1-trichloroethane	1.0 U
56-23-5carbontetrachloride	16.6
71-43-2benzene	1.0 U
107-06-21,2-dichloroethane	1.0 U
79-01-6trichloroethene	21.8 25.5 E
78-87-51,2-dichloropropane	1.0 U
75-27-4bromodichloromethane	1.0 U
10061-01-5cis-1,3-dichloropropene	1.0 U
108-10-14-methyl-2-pentanone	5.0 U
108-88-3toluene	1.0 U
10061-02-6trans-1,3-dichloropropene	1.0 U
79-00-51,1,2-trichloroethane	1.0 U
127-18-4tetrachloroethene	1.0 0
591-78-62-hexanone	5.0 U
124-48-1dibromochloromethane	1.0 U
106-93-41,2-Dibromoethane	1.0 U
108-90-7chlorobenzene	1.0 U
100-41-4ethylbenzene	1.0 U
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FORM I VOA

EPA SAMPLE NO.

Lab Name: CAS-ROC	Contract	: SHAW	M-27D	
Lab Code: 10145 Case No	o.: R23-18714 SAS N	io.: Si	DG 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	
<pre>% Moisture: not dec</pre>		Date Analyzed	: 10/18/03	
GC Column: RTX502.2 ID: 0	.53 (mm)	Dilution Fact	or: 1.0	• • • • • • •
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:	(uL)
CAS NO. COM		INTRATION UNITS or ug/Kg) UG/	-	
1330-20-7m,p 1330-20-7m,p 1330-20-7o-x 100-42-5	ylene rene moform ,2,2-tetrachloroeth -Dichlorobenzene -Dichlorobenzene -dibromo-3-chloroph ,4-Trichlorobenzene achlorobutadiene	ropane	2.0 U 1.0 U	

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EPA SAMPLE NO.

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			M-27D
Lab Name: CAS-ROC	Contract	: SHAW	
Lab Code: 10145	Case No.: R23-18714 SAS No	o.: SDO	G 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	r: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	olume:(uL)

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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/1

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	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

			DUPLICATE
Lab Name: CAS-ROC	Cont	ract: SHAW	
Lab Code: 10145	Case No.: R23-18714 S	AS NO.: SI	G No.: M-335
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 Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:(uL)
CAS NO.		CONCENTRATION UNITS (ug/L or ug/Kg) UG/	-

$\begin{array}{cccccccccccccccccccccccccccccccccccc$			·
$74-83-9-\dots$ -bromomethane 1.0 U $75-00-3-\dots$ -chloroethane 1.0 U $75-69-4-\dots$ -Trichlorofluoromethane 1.0 U $75-35-4-\dots$ -1, 1-dichloroethane 1.0 U $75-35-4-\dots$ -1, 1-dichloroethane 1.0 U $75-35-4-\dots$ -1, 1-dichloroethane 1.0 U $75-35-4-\dots$ -carbon disulfide 1.0 U $75-34-3-\dots$ -1, 1-dichloroethane 1.0 U $75-9-2-\dots$ -carbon disulfide 1.0 U $75-69-2-\dots$ -carbon disulfide 1.0 U $75-69-2-\dots$ -cis-1, 2-Dichloroethane 1.0 U $156-59-2-\dots$ -trans-1, 2-dichloroethane 1.0 U $166-63-\dots$ -chloroform 1.0 U $74-97-5-\dots$ -bromochloromethane 1.0 U $74-97-5-\dots$ -bromodichloromethane 1.0 U $75-62-\dots$ -fichloropropene 1.0 U $106-92-\dots$ -trans-1, 3-dichloropropene		1.0	U
$75-00-3-\cdots$ 1.0 U $75-69-4-\cdots$ Trichlorofluoromethane 1.0 U $75-35-4-\cdots$ 1.1 dichloroethene 1.0 U $67-64-1-\cdots$ acetone 5.0 U $75-15-0-\cdots$ carbon disulfide 1.0 U $75-34-3-\cdots$ 1.1 dichloroethane 1.0 U $75-34-3-\cdots$ 1.1 dichloroethane 1.0 U $75-09-2-\cdots$ methylene chloride 1.0 U $156-69-2-\cdots$ response 1.0 U $156-60-5-\cdots$ response 1.0 U $78-93-3-\cdots$ response 1.0 U $78-93-3-\cdots$ response 1.0 U $74-97-5-\cdots$ response 1.0 U $71-43-2-\cdots$ response 1.0 U $71-43-2-\cdots$ response 1.0 U $107-06-2-\cdots$ response 1.0 U $106-10-5-\cdots$ response 1.0 U $10661-01-5-\cdots$ response 1.0	75-01-4vinyl chloride	1.0	υ
75-69-4Trichlorofluoromethane 1.0 U 75-35-4		1.0	U.
75-35-41, 1-dichloroethene 1.0 U $67-64-1acetone$ 5.0 U $75-15-0carbon$ 1.0 U $75-34-3carbon$ 1.0 U $75-34-3carbon$ 1.0 U $75-34-3carbon$ 1.0 U $75-34-3carbon$ 1.0 U $75-9-2$	75-00-3chloroethane	1.0	U
67-64-1acetone 5.0 U $75-15-0carbon disulfide$ 1.0 U $75-34-3carbon disulfide$ 1.0 U $75-09-2carbon disulfide$ 1.0 U $75-09-2aceton disulfide$ 1.0 U $156-69-2cis-1, 2-Dichloroethene$ 1.0 U $156-60-5trans-1, 2-dichloroethene$ 1.0 U $156-60-5chloroform$ 1.0 U $74-97-5chloroform$ 1.0 U $74-97-5chloroethane$ 1.0 U $74-97-5$	75-69-4Trichlorofluoromethane	1.0	U
$75-15-0-\cdots-carbon disulfide$ 1.0 U $75-34-3-\cdots-1, 1-dichloroethane$ 1.0 U $75-09-2-\cdots-methylene chloride$ 1.0 U $156-59-2-\cdots-cis-1, 2-Dichloroethene$ 1.0 U $156-60-5-\cdots-trans-1, 2-dichloroethene$ 1.0 U $156-60-5-\cdots-trans-1, 2-dichloroethene$ 1.0 U $74-97-5-\cdots-chloroform$ 1.0 U $74-97-5-\cdots-bromochloromethane$ 1.0 U $71-43-2-\cdots-bromodichloromethane$ 1.0 U $107-06-2-\cdots-1, 2-dichloropropane$ 1.0 U $75-27-4-\cdots-bromodichloromethane$ 1.0 U $106-101-5-\cdots-cis-1, 3-dichloropropene$ 1.0 U $106-102-6-\cdots-trans-1, 3-dichloropropene$ 1.0 U $10061-02-6-\cdots-trans-1, 3-dichloropropene$	75-35-41,1-dichloroethene	1.0	U
$75-34-31, 1-dichloroethane$ 1.0U $75-09-2methylene chloride$ 1.0U $156-59-2cis-1, 2-Dichloroethene$ 1.0U $156-60-5trans-1, 2-dichloroethene$ 1.0U $07-66-3chloroform$ 1.0U $74-97-5chloroform_5.0U74-97-5bromochloromethane1.0U74-97-5bromochloromethane1.0U71-43-2benzene1.0U107-06-2carbontetrachloride_1.0U75-27-4benzene1.0U10061-01-5cis-1, 3-dichloropropane1.0U75-27-4bromodichloromethane1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10061-02-6trans-1, 3-dichloropropene_1.0U10001-02-6trans-1, 3-dichloropropene_1.0U10001-02-6$	67-64-1acetone	5.0	UU
75-09-2methylene chloride1.0U $156-59-2cis-1, 2-Dichloroethene$ 1.0U $156-60-5cis-1, 2-dichloroethene$ 1.0U $07-66-3chloroform$ 1.0U $74-97-5chloroform$ 1.0U $74-97-5chloromethane$ 1.0U $74-97-5chloromethane$ 1.0U $74-97-5chloromethane$ 1.0U $74-97-5$	75-15-0carbon disulfide	1.0	U
156-59-2cis-1, 2-Dichloroethene 1.0 U $156-60-5trans-1, 2-dichloroethene$ 1.0 U $67-66-3chloroform$ 1.0 U $78-93-3chloroform$ 5.0 U $74-97-5bromochloromethane$ 1.0 U $71-55-6bromochloromethane$ 1.0 U $56-23-5bromochloromethane$ 1.0 U $71-43-2bromochloromethane$ 1.0 U $107-06-2bromodichloromethane$ 1.0 U $107-06-2$	75-34-31,1-dichloroethane	1.0	U
156-59-2cis-1, 2-Dichloroethene 1.0 U $156-60-5trans-1, 2-dichloroethene$ 1.0 U $67-66-3chloroform$ 1.0 U $78-93-3chloroform$ 5.0 U $74-97-5bromochloromethane$ 1.0 U $71-55-6bromochloromethane$ 1.0 U $56-23-5bromochloromethane$ 1.0 U $71-43-2bromochloromethane$ 1.0 U $107-06-2bromodichloromethane$ 1.0 U $107-06-2$	75-09-2methylene chloride	1.0	U
67-66-3chloroform1.0U $78-93-32-butanone$ 5.0 U $74-97-5bromochloromethane$ 1.0 U $71-55-61, 1, 1-trichloroethane$ 1.0 U $56-23-5carbontetrachloride$ 0.11 J $71-43-2benzene$ 1.0 U $107-06-21, 2-dichloroethane$ 1.0 U $79-01-6trichloroethene$ 1.0 U $75-27-4bromodichloromethane$ 1.0 U $1061-01-5cis-1, 3-dichloropropane$ 1.0 U $108-88-3toluene$ 1.0 U $10061-02-6trans-1, 3-dichloropropene$ 1.0 U $10061-02-6trans-1, 3-dichloropropene$ 1.0 U $10061-02-6trans-1, 3-dichloropropene$ 1.0 U $10061-02-6trans-1, 3-dichloropropene1.0U10051-02-6trans-1, 3-dichloropropene1.0U10051-02-6trans-1, 3-dichloropropene1.0U10061-02-6trans-1, 3-dichloropropene1.0U10051-02-6trans-1, 3-dichloropropene1.0U100127-18-4tetrachloroethene1.0U1027-18-4$	156-59-2cis-1,2-Dichloroethene	1.0	υ
78-93-32-butanone 5.0 UC 74-97-5bromochloromethane 1.0 U 71-55-6bromochloromethane 1.0 U 56-23-5carbontetrachloride 0.11 J 71-43-2benzene 1.0 U 107-06-2benzene 1.0 U 107-06-2benzene 1.0 U 107-06-2	156-60-5trans-1,2-dichloroethene	1.0	υ
74-97-5bromochloromethane 1.0 U 71-55-61,1,1-trichloroethane 1.0 U 56-23-5carbontetrachloride 0.11 J 71-43-2benzene 1.0 U 107-06-21,2-dichloroethane 1.0 U 79-01-6trichloroethene 1.0 U 78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6tetrachloroethene 1.0 U 127-18-4tetrachloroethene 1.0 U 124-48-1	67-66-3chloroform		
71-55-61,1,1-trichloroethane 1.0 U 56-23-5carbontetrachloride 0.11 J 71-43-2benzene 1.0 U 107-06-21,2-dichloroethane 1.0 U 79-01-6trichloroethene 1.0 U 78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-10-1	78-93-32-butanone	5.0	UJ
56-23-5carbontetrachloride 0.11 J 71-43-2benzene 1.0 U 107-06-21,2-dichloroethane 1.0 U 79-01-6trichloroethene 1.0 U 78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6tetrachloroethane 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1tetrachloroethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7		1.0	υ
56-23-5carbontetrachloride 0.11 J 71-43-2benzene 1.0 U 107-06-21,2-dichloroethane 1.0 U 79-01-6trichloroethene 1.0 U 78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6tetrachloroethane 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1tetrachloroethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7	71-55-61,1,1,1-trichloroethane		
107-06-21, 2-dichloroethane 1.0 U 79-01-6trichloroethene 1.0 U 78-87-51, 2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1, 3-dichloropropene 1.0 U 108-10-1	56-23-5carbontetrachloride	0.11	J
79-01-6trichloroethene 1.0 U 78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-10-14-methyl-2-pentanone 5.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7		1.0	υ
78-87-51,2-dichloropropane 1.0 U 75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-10-1d-methyl-2-pentanone 1.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1dibromochloromethane 5.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7		1.0	U
75-27-4bromodichloromethane 1.0 U 10061-01-5cis-1,3-dichloropropene 1.0 U 108-10-14-methyl-2-pentanone 5.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 127-18-4tetrachloroethane 1.0 U 127-18-4tetrachloroethene 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U		1.0	U
10061-01-5cis-1,3-dichloropropene 1.0 U 108-10-14-methyl-2-pentanone 5.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 127-18-4tetrachloroethane 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U		1.0	U
108-10-14-methyl-2-pentanone 5.0 U 108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 10061-02-6trans-1,1,2-trichloroethane 1.0 U 127-18-4tetrachloroethane 1.0 U 124-48-1tetrachloromethane 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U		1.0	U
108-88-3toluene 1.0 U 10061-02-6trans-1,3-dichloropropene 1.0 U 79-00-5tetrachloroethane 1.0 U 127-18-4tetrachloroethane 1.0 U 591-78-62-hexanone 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U		1.0	U
10061-02-6trans-1,3-dichloropropene 1.0 79-00-51,1,2-trichloroethane 1.0 127-18-4tetrachloroethene 1.0 591-78-62-hexanone 5.0 124-48-1dibromochloromethane 1.0 106-93-41,2-Dibromoethane 1.0 108-90-7chlorobenzene 1.0	108-10-14-methyl-2-pentanone	5.0	U
79-00-51,1,2-trichloroethane 1.0 U 127-18-4tetrachloroethene 1.0 U 591-78-62-hexanone 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U			
127-18-4tetrachloroethene 1.0 U 591-78-62-hexanone 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U	10061-02-6trans-1,3-dichloropropene	1.0	υ
591-78-62-hexanone 5.0 U 124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U	79-00-51,1,2-trichloroethane		-
124-48-1dibromochloromethane 1.0 U 106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U	127-18-4tetrachloroethene	1.0	UU
106-93-41,2-Dibromoethane 1.0 U 108-90-7chlorobenzene 1.0 U		5.0	UU
108-90-7chlorobenzene 1.0 U			
			-
100-41-4ethylbenzene 1.0 U			
	100-41-4ethylbenzene	1.0	סוֹט
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FORM I VOA

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

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EPA SAMPLE NO.

			DUPLICATE	
Lab Name: CAS-ROC	Contrac	t: SHAW		
Lab Code: 10145	Case No.: R23-18714 SAS	No.: S	DG No.: M-335	}
Matrix: (soil/water)	WATER	Lab Sample ID	: 679937	
Sample wt/vol:	25.00 (g/ml) ML	Lab File ID:	J0831	
Level: (low/med)	TOM	Date Received	: 10/16/03	
% Moisture: not dec.	· · · · · · · · · · · · · · · · · · ·	Date Analyzed	: 10/20/03	
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Fact	or: 1.0	
Soil Extract Volume:	(uL)	Soil Aliquot	Volume:	(uL)
CAS NO.		CENTRATION UNITS /L or ug/Kg) UG/	-	
1330-20-7	m,p-xylenes		2.0 U	

		T
1330-20-7m,p-xylenes	2.0	υ
1330-20-7o-xylene	1.0	υ
100-42-5styrene	1.0	υ
75-25-2bromoform	1.0	υ
79-34-51,1,2,2-tetrachloroethane	1.0	υ
541-73-11, 3-Dichlorobenzene	1.0	υ
106-46-71,4-Dichlorobenzene	1.0	υ
95-50-11,2-Dichlorobenzene	1.0	υ
96-12-81,2-dibromo-3-chloropropane	1.0	U
120-82-11,2,4-Trichlorobenzene	1.0	ע
87-68-3Hexachlorobutadiene	1.0	ប
87-61-61,2,3-Trichlorobenzene	1.0	υ
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1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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			DUPLICATE
Lab Name: CAS-ROC	Cont	ract: SHAW	
Lab Code: 10145	Case No.: R23-18714 S	AS NO.: SI	G No.: M-338
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 Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot	/olume:(uL)
		ONCERTING ANT ON THITES	

Number TICs found: 2

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Sec. 16

Sec. 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3	UNKNOWN UNKNOWN UNKNOWN	17.62 - 23.00	0.63	J
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13 14 15		 autoritation and a second secon		· · · · · · · · · · · · · · · · · · ·
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26. 27. 28.				
29 30				-

FORM I VOA-TIC

1A VOLATTLE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

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1.0 U 5.0 U 0.39 J

1.0 U 1.0 U 1.0 U 5.0 U

1.0 U

1.0 U 1.0 U

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) manufacture and a second
Lab Name: CAS-ROC	Contract: SHAW	TRIP BLANK
		1
Lab Code: 10145 Case No.: R2	3-18714 SAS No.:	SDG No.: M-33S
Matrix: (soil/water) WATER	Lab Samp	le ID: 679938
Sample wt/vol: 25.00 (g/ml) ML Lab File	ID: J0834
Level: (low/med) LOW	Date Rec	eived: 10/16/03
% Moisture: not dec.	Date Ana	lyzed: 10/20/03
GC Column: RTX502.2 ID: 0.53 (mm) Dilution	Factor: 1.0
Soil Extract Volume:(uL)	Soil Ali	quot Volume:
CAS NO. COMPOUND	CONCENTRATION (ug/L or ug/Kg	
74-87-3	oride ane ane fluoromethane oroethene sulfide oroethane chloride dichloroethene m de chloroethene m de chloroethane	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.8 J 1.0 U 1.0 U
71-43-2benzene 107-06-21,2-dich		1.0 U 1.0 U
1 T0/-00-2T'5-01CU	oroechane	T'0(0

FORM I VOA

79-01-6-----trichloroethene

108-88-3-----toluene

591-78-6----2-hexanone

78-87-5-----1,2-dichloropropane

75-27-4----bromodichloromethane

108-10-1-----4-methyl-2-pentanone

79-00-5-----1,1,2-trichloroethane 127-18-4-----tetrachloroethene

124-48-1-----dibromochloromethane

106-93-4-----1,2-Dibromoethane_ 108-90-7-----chlorobenzene____

100-41-4----ethylbenzene

10061-01-5----cis-1,3-dichloropropene

10061-02-6----trans-1,3-dichloropropene

1A VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

				1 .
Lab Name: CAS-ROC	Cor	ntract: SHAW	TRIP BLANK	
Lab Code: 10145	Case No.: R23-18714	SAS No.:	SDG No.: M-33S	
Matrix: (soil/water)	WATER	Lab Sample II	0: 679938	
Sample wt/vol:	25.00 (g/ml) ML	Lab File ID:	J0834	
Level: (low/med)	LOW	Date Received	d: 10/16/03	
% Moisture: not dec	•	Date Analyzed	đ: 10/20/03	
GC Column: RTX502.2	ID: 0.53 (mm)	Dilution Fac	tor: 1.0	
Soil Extract Volume	:(uL)	Soil Aliquot	Volume:	(uL)
CAS NO.	COMPOUND	CONCENTRATION UNIT (ug/L or ug/Kg) UG		
1330-20-7 100-42-5 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1 96-12-8 120-82-1 87-68-3	m,p-xylenes o-xylene styrene bromoform 1,1,2,2-tetrachlo 1,3-Dichlorobenzo 1,4-Dichlorobenzo 1,2-Dichlorobenzo 1,2-dibromo-3-ch 1,2,4-Trichlorob Hexachlorobutadio 1,2,3-Trichlorob	ene ene loropropane enzene ene	2.0 U 1.0 U	

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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Lab Name: CAS-ROC Contra	act: SHAW
Lab Code: 10145 Case No.: R23-18714 SA	S 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

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nin E Kas CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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b.				
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INORGANIC ANALYSIS DATA SHEET

	INORGANIC ANALISIS DA		SAMPLE NO.
Contract:	R2318714		DUPLICATE
Concrace:	RZJ10/14	······································	
Lab Code:	Case No.:	SAS No.:	SDG NO.: M-335
Matrix (soi	l/water): WATER	Lab Sample I	D: 679937
Level (low/	med): LOW	Date Receive	d: <u>10/16/03</u>

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

C	AS No.	Analyte	Concentration	С	Q	м
74	40-47-3	Chromium	1.8	в		P

Color Before: CLEARTexture:Color After: YELLOWClarity After: CLEARArtifacts:Comments:Comments:Clarity After: CLEARClarity After: CLEAR

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

	MOKG	morganic anal 1918 data sheli			
Contract: R2318714				M-135	
Lab Code:	Case No.:	SAS No.:	SD	G NO.: M-335	_
Matrix (soil/water)	: WATER	Lab Sau	mple ID: 67865	1	
Level (low/med):	LOW	Date Re	eceived: 10/10	/03	

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

CAS No.	Analyte	Concentration	С	Q	м
7440-47-3	Chromium	49.4			l P

Color Before: COLORLESS	Clarity Before:	CLEAR	Texture:
Color After: YELLOW	Clarity After:	CLEAR	Artifacts:
Comments:			

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METALS

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INORGANIC ANALYSIS DATA SHEET

	nond			SAMPLE NO.	
				M-27D	
Contract: R231871	4				
Lab Code:	Case No.:	SAS No.:	SDG N	0.: <u>M-335</u>	
Matrix (soil/wate:	c): WATER	Lab Sample ID:	679936		
Level (low/med):	LOW	Date Received: 1	0/16/03		

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

CAS No.	Analyte	Concentration	С	Q	M
7440-47-3	Chromium	1.2	В		P

Color Before: CLEARTexture:Color After: YELLOWClarity After: CLEARArtifacts:Comments:Comments:Comments:

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METALS

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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): L(WC	Date Received	: 10/16/03

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

CAS No.	Analyte	Concentration	С	Q	м
7440-47-3	Chromium	1.0	в		P

Color Before:	COLORLESS	Clarity	Before:	CLEAR	Texture:
Color After:	YELLOW	Clarity	After:	CLEAR	Artifacts:
Comments:					

METALS -1-

INORGANIC ANALYSIS DATA SHEET

	nioko		SAMPLE NO.
			SW-B
Contract: R2318714	· · · · · · · · · · · · · · · · · · ·		
Lab Code:	Case No.:	SAS No.:	SDG NO.: M-33S
Matrix (soil/water):	WATER	Lab Sample ID: 6	578650
Level (low/med): 1	WO	Date Received: 1	0/10/03
	· · · · · · · · · · · · · · · · · · ·		

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

CAS No.	Analyte	Concentration	C	Q	м
7440-47-3	Chromium	0.75	В		P

Color Before: COLORLESSClarity Before: CLEARTexture:Color After: YELLOWClarity After: CLEARArtifacts:Comments:Comments:Clarity After: CLEARClarity After: CLEAR

HEXAVALENT CHROMIUM

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Reported: 11/17/03

10/10/03 11:19

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

7196A

0.0100

Date Sampled : Date Received:			#: 678650 #: R2318714		Sample Matrix: WATER	L
				· · ·		
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE TIME ANALYZED ANALYZED	DILUTION

0.0100 U

MG/L

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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	
			DATE TIME

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

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Reported: 11/17/03

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

Date Sampled : 10/15/0 Date Received: 10/16/0			#: 679935 #: R2318714	Sample Matrix: WATER					
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE TII ANALYZED ANAL				
HEXAVALENT CHROMIUM	7196A	0.0100	0.0100 U	MG/L	10/16/03 11:	37 1.0			

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Reported: 11/17/03

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

Date Sampled : 1 Date Received: 1				#: 679936 #: R2318714	Sample Matrix: WATER					
ANALYTE		METHOD	PQL	RESULT	UNITS	DATE TIME ANALYZED ANALYZED DILUTION				
HEXAVALENT CHRON	MIUM	7196Å	0.0100	0.0100 U	MG/L	10/16/03 11:37 1.0				

Reported: 11/17/03

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

Date Sampled : 10/1 Date Received: 10/1			: #: 679937 1 #: R2318714		Sample Matrix: WATER						
ANALYTE	METHO	D PQL	RESULT	UNITS	DATE TIME ANALYZED ANALYZEJ	D DILUTION					
HEXAVALENT CHROMIUM	I 7196 <i>1</i>	A 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

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OCTOBER 9, 2003

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



December 4, 2003

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

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

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Finale	
File Corte:	

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, Was

Kelso, Washington 98626 (36

(360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services ^{NC}.

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.

Rynde Huckon

Lynda Huckestein Client Services Manager

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Page 1 of $\frac{34}{2}$

Case Narrative

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Client: Project: Sample Matrix: Shaw Environmental and Infrastructure GE MRFA Water Service Request No.: Date Received: K2308058 10/10/2003

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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.

Lina

Date

Perchlorate by EPA Method 314

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

Approved by

Chain of Custody Documentation

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	Project Number			0-695-7222 x11 • FAX (585) 288-8475 PAGEOF CAS Contact														
Project Name MRFA	Report CC	8714	-	PRESE								 						
Janie Jacon	er		_			<u> </u>				<u> </u>	P		+	+ +	-+	<u> </u>	/ Preserv	ative Key
Company/Address	Smallytical			s	/							/ /				11		· ·
Mustand	St. Sul	te 25	\mathcal{O}	AINEH							1 - 2	/				.	2. HN 2. HN 3. H ₂ S 4. NãC 5. Zn.	SO4 DH Acetate
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Phone #	380 385-2	88-84	15	EHO	1	ઙૻૺૹ૾	โล้ มีผู้				Д	/		'		/	8. Oth	ər 16
Sampler's Signature	Sampler's Printed Name			NUMB	120	8 20 20 20 20 20 20 20 20 20 20 20 20 20			2100	s/_9			/	1		/	_	
CLIENT SAMPLE ID	FOR OFFICE USE ONLY	SAMPLING DATE TIME	MATRIX		GCMS VOA'S GCMS VOA'S GCM: DB2A	DET SVONS GC VON EGA	PEST DEDIED	PCB1 0 608 0 01 P	Liter ALS, TOTAL METALS, TOTAL METALS, TOTAL		/ /	_/_		/	[]	/ ALTER	REMARKS	y Sription
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SPECIAL INSTRUCTIONS/COMMENTS			L	ج ــــ ــــــــــــــــــــــــــــــــ		TURNAF	OUND R	EQUIREN	MENTS		REPOR	T REQUI	REMENT	rs		INVOICE	INFORM	TION
Metals							· · ·	ARGES AP			I. Results (•			R	23-1	871	<u>Ľ</u>
						$X_{\text{stab}}^{24 \text{ hr}}$	48 (DARD	hr	_ 5 day		II. Results (LCS, DUE			ed)	PO#			
					REC	•	FAX DATE				ili, Results		Galibratio	n	ВІШТ	0:		
										$1 \vee$	Summarie NV. D <i>e</i> ta Va		need with t	Qoou Chata				
					REC	WESTED	REPORT (DATE		1	V. Data va V. Speicali							·
											•	Yes			SUBM	ISSION #:		
SAMPLE RECEIPT: CONDITION/COC	DLER TEMP: RECEIVED BY		TODY SEAL		N 1		RECEIV	ED BY				INQUISH		<u> </u>	+	AF	CEIVED B	7
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(15-) \	Date/Time	D Date/Time	· · · · · · · · · · · · · · · · · · ·			/Time				Dale/T	ime	·			Date/T	ime		
TO13103 1 100							SCOC-1102-08											

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

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Columbia Analytical Services Inc. Cooler Receipt And Preservation Form

Project/Clie	
Cooler rece	ived on $10.14.03$ and opened on $10.44.03$ by 00.0
1.	Were custody seals on outside of cooler? If yes, how many and where?
2.	Were seals intact and signature & date correct? $12 - 17\omega^{-1}$
3.	Is the shipper's airbill available and filed? If no, record airbill number: <u>438-01 4637-5111</u> N
4.	COC #
	Temperature of cooler(s) upon receipt: 4.0
	Temperature Blank:
5.	Were custody papers properly filled out (ink, signed, etc.)?
6.	Type of packing material present ICE, bubble wrap
7.	Did all bottles arrive in good condition (unbroken)?
8.	Were all bottle labels complete (i.e. analysis, preservation, etc.)?
9.	Did all bottle labels and tags agree with custody papers?
10.	Were the correct types of bottles used for the tests indicated? (X) N
11.	Were all of the preserved bottles received at the lab with the appropriate pH?
12.	Were VOA vials checked for absence of air bubbles, and if present, noted below?
13.	Did the bottles originate from CAS/K or a branch laboratory?
14.	Are CWA Microbiology samples received with > $\frac{1}{2}$ the 24 hr. hold time remaining from collection? $\frac{1}{Y-N}$
15.	Was Cl2/Res negative? Y N
Explain any	discrepancies:

RESOLUTION:

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CRFREV.DOC3/5/2003

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Analytical Report

Client: Project: Sample Matrix:		ronmental and Infrastru /R23-18714	eture				Date C	Request: Collected: Received:	
			Р	erchlorat	te				
Prep Method: Analysis Method: Test Notes:	NONE 314.0								ug/L (ppb) As Received
Sample Name		Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
As Effluent Method Blank		K2308058-001 K2308058-MB	2.0 2.0	0.5 0.5	1 1	NA NA	11/05/03 11/05/03	ND 0.6	3

Approved By:

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Page No.,

Date: 11/6/08

08058WET.MF1 - Sample 11/06/03

QA/QC Report

Client: • Project: Sample Matrix:	Shaw Environmenta GE MRFA/R23-187 Water		tructure				Dat Da Dat	te Request: te Collected: te Received: e Extracted: te Analyzed:	10/09/03 10/10/03 NA
					Summary Parameters				
Sample Name: Lab Code: Test Notes:	As Effluent K2308058-001DUP								ug/L (ppb) As Received
Analyte		Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Resu Not
Perchlorate		NONE	314.0	2.0	ND	1.5	NC	NC	J

Approved By: DUP/020597p

08058WET.MFI - DUP 11/06/03-

Date: 11/6/03

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Page No.:

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

Result

Notes

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QA/QC Report

Client: Shaw Environmental and Infrastructure Service Request: K2308058 Date Collected: 10/09/03 Project: GE MRFA/R23-18714 Sample Matrix: Date Received: 10/10/03 Water Date Extracted: NA Date Analyzed: 11/05/03 Matrix Spike Summary **Inorganic Parameters** Sample Name: Units: ug/L (ppb) As Effluent Lab Code: K2308058-001MS Basis: As Received Test Notes: CAS Percent Spiked Recovery Sample Prep Analysis Spike Sample Percent Acceptance Result Analyte Method Method MRL Level Result Result Recovery Limits Notes NONE 314.0 2.0 40.0 ND 41.3 103 80-120

Approved By: MS/020597p

08058WET,MF1 - MS 11/06/03

MM SA

Date: 11/6/03

000009 Page No.:

Perchlorate

QA/QC Report

Client: Project: LCS Matrix:	Shaw Environmental a GE MRFA/R23-18714 Water		Jre			Da Da	vice Request: ate Collected: ate Received:	NA NA
							te Extracted: ite Analyzed:	
		La	boratory Conti	rol Sample	Summary		ne Analyzeu.	11/05/05
			•	c Paramete	-			
Sample Name:	Lab Control Sample		U				Units:	mg/L (ppm)
Lab Code:	K2308058-LCS						Basis:	NA
Test Notes:								
							C 10	
							CAS Percent	
							Recovery	
		Prep	Analysis	True		Percent	Acceptance	Result
Analyte		Method	Method	Value	Result	Recovery	Limits	Notes
Perchlorate	•	NONE	314.0	500	529	106	85-115	

MI FM

Approved By: LCS/020597p

08058WET.MF1 - LCS 11/06/03

080010

Date: 11/6/03

Page No.:

QA/QC Report

Client:Shaw Environmental and InfrastructureProject:GE MRFA/R23-18714

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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	Measured	Percent
	Value	Value	Recovery
ICCS Result	2.0	1.8	90

CONTINUING CALIBRATION VERIFICATION (CCV)

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

ENDING CALIBRATION VERIFICATION (ECCV)

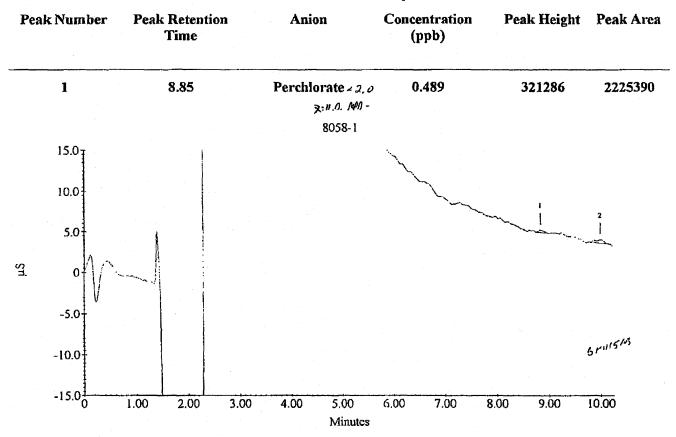
	True Value	Measured Value	Percent Recovery	
ECCV Result	100	105	105	

Approved By: COMBOQCD/042695

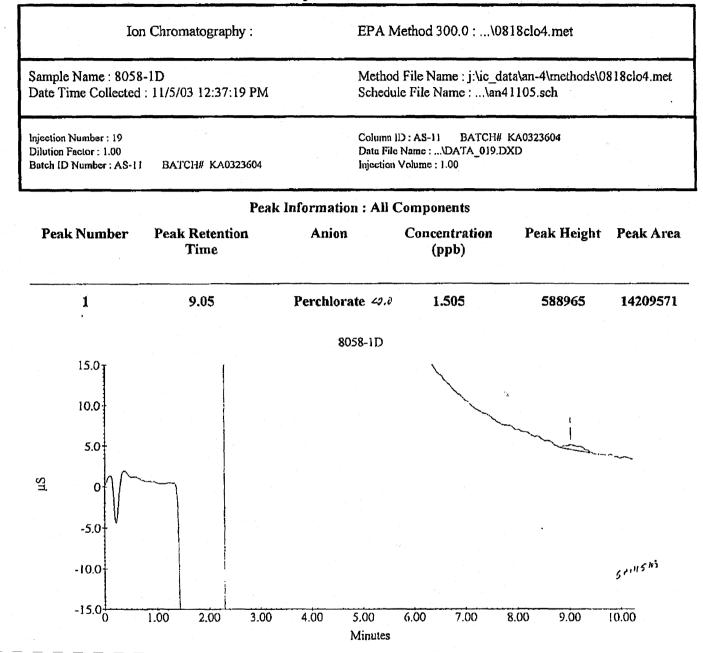
Date: 11/6/03 000011 NIFI

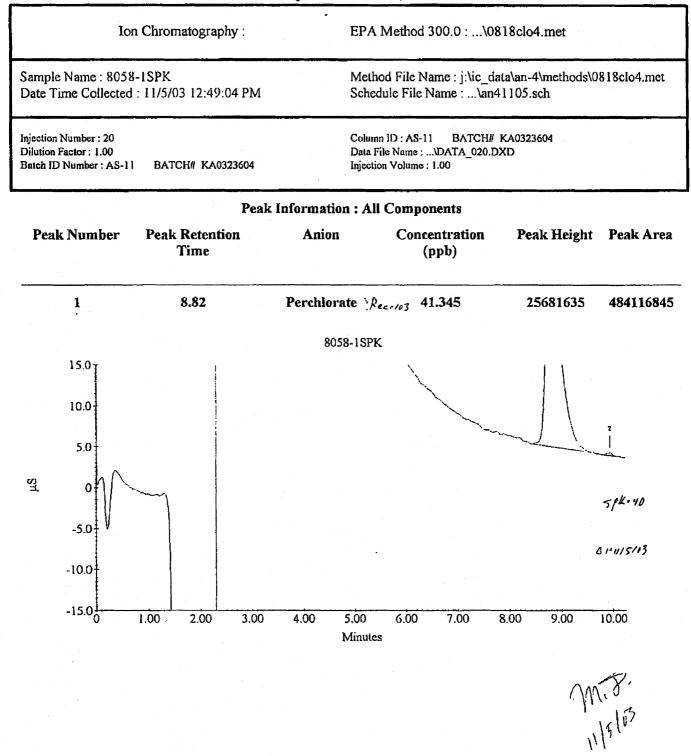
Ion Chromatography :	EPA Method 300.0 :\0818clo4.met		
Sample Name : 8058-1 Date Time Collected : 11/5/03 11:09:43 AM	Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name :\an41105.sch		
Injection Number : 16	Column ID : AS-11 BATCH# KA0323604		

Peak Information : All Components

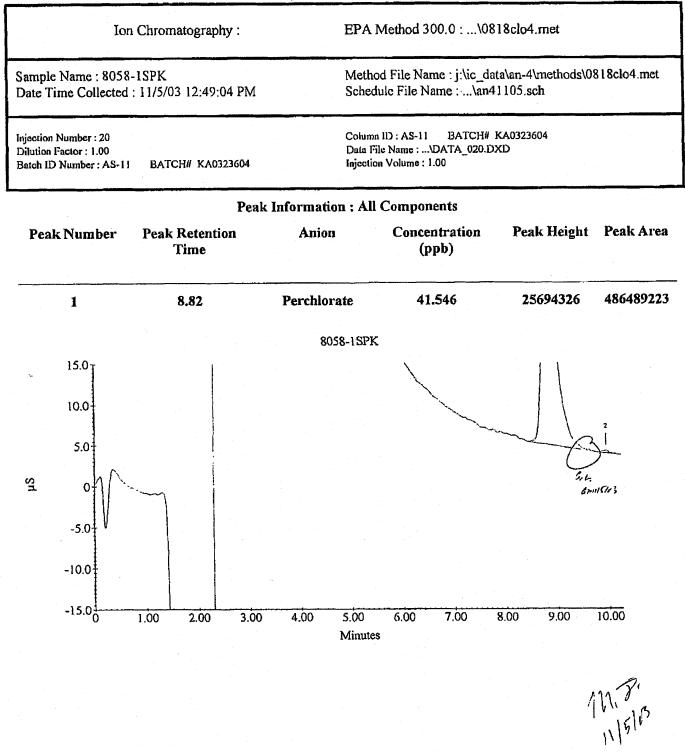


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Ion Chromatography Data Quality Report Perchlorate Inorganics

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?	ves/ho/NA
4. Are analysis/extraction stickers included on report?	ves/no/NA
5. Are detection limits reported correctly?	yes/no/NA
6. Are all quality control criteria met?	ves/no/NA
 a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? b. Are CCV's and CCB's all within acceptance limits? c. Are results for Method Blanks all ND? d. Are all QC samples within acceptance criterin? (LCS% rec, MS% rec, Duplicate RPD's, etc.) e. Are all exceptions explained? 	ves/no/NA ves/no/NA ves/no/NA ves/no/NA
8. Are all samples labelled correctly?	ves/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. OBH1115103 F Sample filtered primary to analysis. IPC Perchlorate nires 1112/13 + 5: 8,66 - 9,58 True Value = 25 nmb CAS ID# = AN3-1.7.X **C**.,

I CICILIVIAIC	The value - 25 ppo	Cho 10#~ 1/15 07 2	Explices 1/10/19 5 5 51000 115	
ICCS Perchlorate	2,0 True Value = \$: 0 ppb	CAS ID# = $AN3 - 67 - 7^{-1}$	Expires 11/13/43	
CCV Perchlorate	True Value = 25.0 ppb	cas id # = <u>AN3 -67 - U</u>	Expires 11/12/03	
Spike Perchlorate	True Value = 1000 ppb	CAS 10# - AN3-69-W	Expires_11/12/03	
ECCV Perchlorate レムら 40.0 ppb X diluti	True Value = 100 ppb True Value - 501 مالم مراح on lactor	CAS ID# = <u>AN3-67-V</u> RI 0N06145	Expires 11/12/83 Explices 515184	
	B HITL 1		- 11/5/03	

Analyst:	D. Alland	Date:	11/5/03
First Review:	B. Hetland	Date:_	11/5/05
Final Review:	MAFH	Date:_	11/5/05

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

ine	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
0	IPC	Sample		0818cio4.met	data_010.dxd	1	1
1	MB	Sample		0818clo4.met	data_011.dxd	1	1
2	ICCS/ICV	Sample		0818clo4.met	data_012.dxd	1	1
3	RION06145 LCS	Sample		0818clo4.met	data_013.dxd	1	10
4	ICCS/ICV	Sample		0818clo4.met	data_014.dxd	1	1
15	LFB/CCV1	Sample		0818clo4.met	data_015.dxd	1	1
6	8058-1	Sample		0818clo4.met	data_016.dxd	1	1
17	8588-3	Sample		0818clo4.met	data_017.dxd	1	1 .
8	8588-4	Sample		0818clo4.met	data_018.dxd	1	1
9	8058-1D	Sample	Analytical K 4 0222	0818clo4.met	data_019.dxd	1	1
20	8058-1SPK	Sample	nalytical Ba	0818clo4.met	data_020.dxd	1	1
21	8588-3	Sample 🔓	2 m	0818clo4.met	data_021.dxd	1	1
22	8588-3D	Sample	Batch	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

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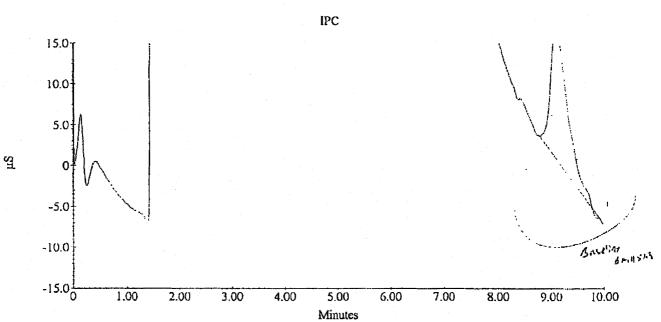
11/5/03 2:12:24 PM

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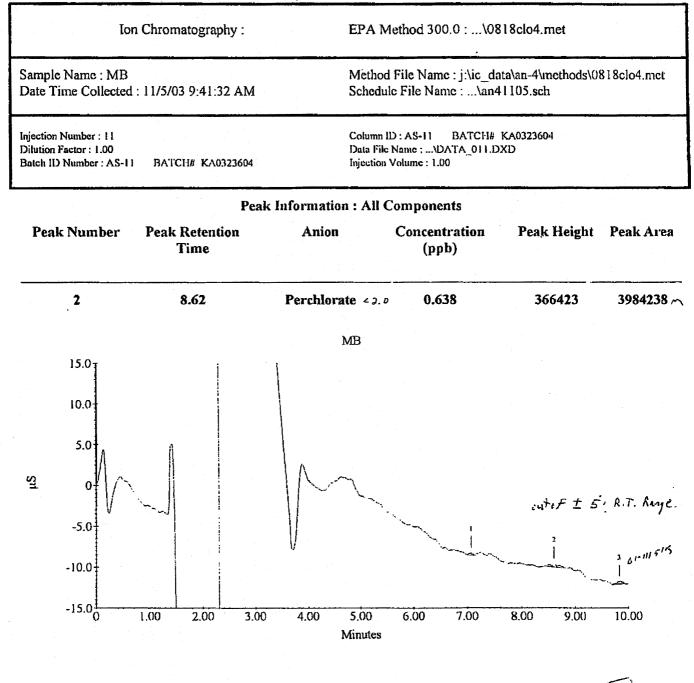
	Ion	Chromatography :	EPA	Method 300.0 :\08	318clo4.met	
	e Name : IPC Time Collected	: 11/5/03 9:28:53 AM		nod File Name : j:\ic_da dulc File Name :\an4		818clo4.mct
Dilution	1 Number : 10 Factor : 1.00 D Number : AS-11	ватсн# кл0323604	Data I	an ID : AS-11 BATCH# File Name :\DATA_010.D on Volume : 1.00	KA0323604 XD	
		Peal	(Information : Al	I Components		
Pea	k Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
• <u></u>	1	9.12	Perchlorate	10, 27.365	16049887	319220481,
			IPC			
	15.0					
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	0	1.00 2.00 3.00	4.00 5.00 Minute		8.00 9.00	10.00
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Ior	Chromatography :	EPA	EPA Method 300.0 :\0818clo4.met						
Sample Name : IPC Date Time Collected	: 11/5/03 9:28:53 AM		nod File Name : j:\ic_da dule File Name :\an4		818clo4.mct				
Injection Number : 10 Dilution Factor : 1.00 Batch ID Number : AS-11	ВАТСН# КЛ0323604	Data	nn ID : AS-11 BATCH# File Name : UATA_010.D ion Volume : 1.00	KA0323604 XD					
· · · · · · · · · · · · · · · · · · ·	Peak	Information : Al	l Components	· · · · · · · · · · · · · · · · · · ·					
Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area				
1	9.12	Perchlorate	30.489	16517194	356070676				
		IPC							
15.0				\backslash $ $					



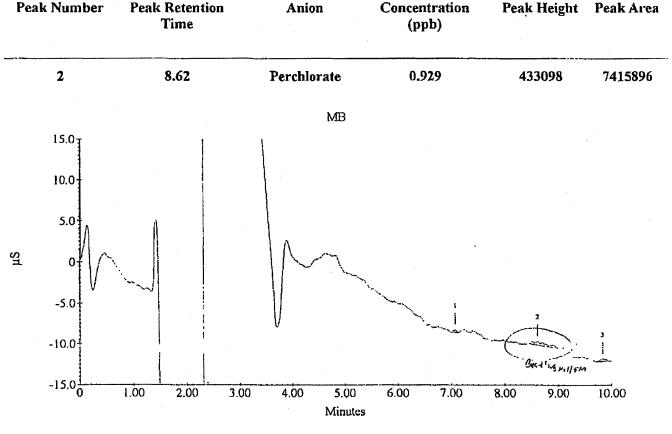
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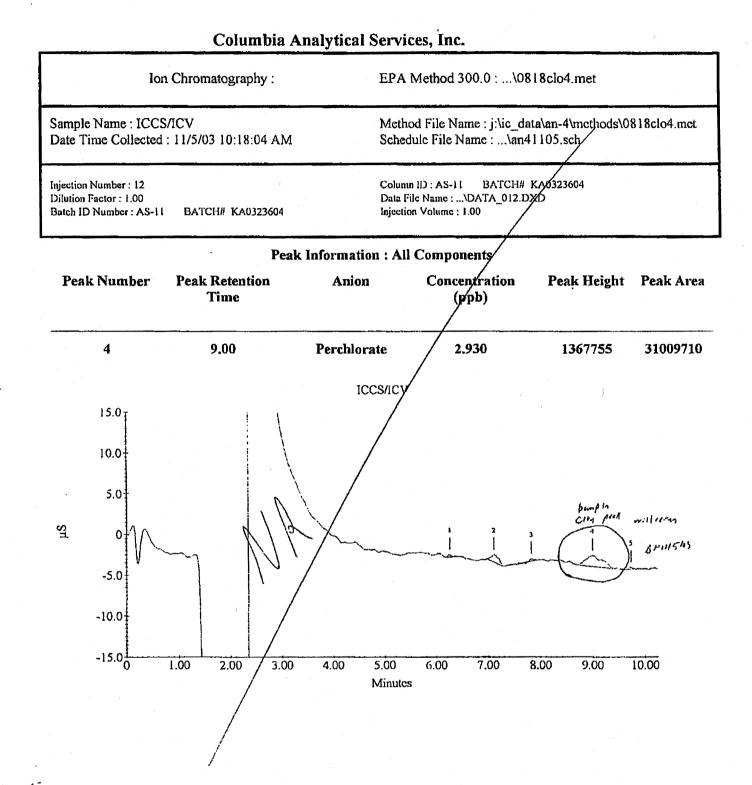


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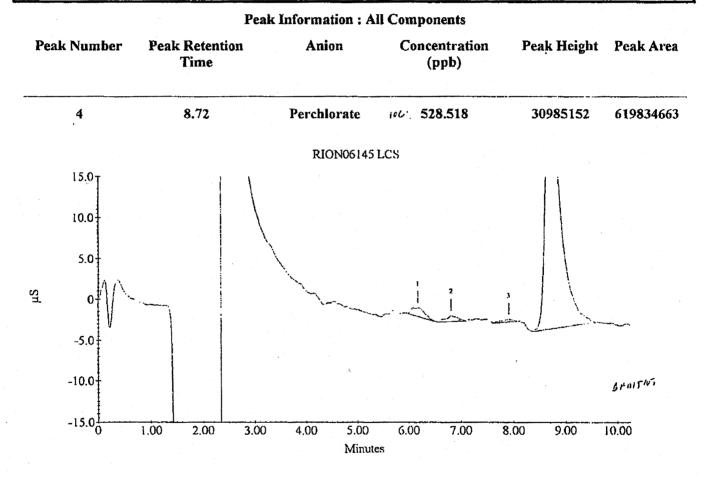
Columbia Analytical Services, Inc. Ion Chromatography : EPA Method 300.0 : ...\0818clo4.met Sample Name : MB Method File Name : j:\ic_data\an-4\methods\0818clo4.met Date Time Collected : 11/5/03 9:41:32 AM Schedule File Name : ...\an41105.sch BATCH# KA0323604 Injection Number : 11 Column ID : AS-11 **Dilution Factor: 1.00** Data File Name : ...\DATA_011.DXD Batch ID Number : AS-11 BATCH# KA0323604 Injection Volume : 1.00 **Peak Information : All Components** Peak Number **Peak Retention** Anion Concentration



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Columbia Analytical Services, Inc. Ion Chromatography : EPA Method 300.0 : ...\0818clo4.met Sample Name : RION06145 LCS Method File Name : j:\ic_data\an-4\methods\0818clo4.met Date Time Collected : 11/5/03 10:29:46 AM Method File Name : j:\ic_data\an-4\methods\0818clo4.met Injection Number : 13 Column ID : A8-11 BATCH# KA0323604 Dilution Factor : 10.00 Data File Name : ...\DATA_013.DXD Injection Volume : 1.00



Ion	Chromatography :	EPA	Method 300.0 :\08	18clo4.met	
Sample Name : ICCS Date Time Collected	/ICV : 11/5/03 10:45:44 AM		od File Name : j:\ic_da ule File Name :\an4		818clo4.met
Injection Number : 14 Dilution Factor : 1.00 Batch ID Number : AS-11	BATCI:1# KA0323604	Data Fi	a IID : AS-11 BATCH# 1 le Name :NDATA_014.D2 n Volume : 1.00	кл 032 3604 XD	
	Peal	Information : All	Components		
Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
2	8.95	Perchlorate	10; 1 .84 0	1102981	18156416 A
		ICCS/ICV			
15.0				•	
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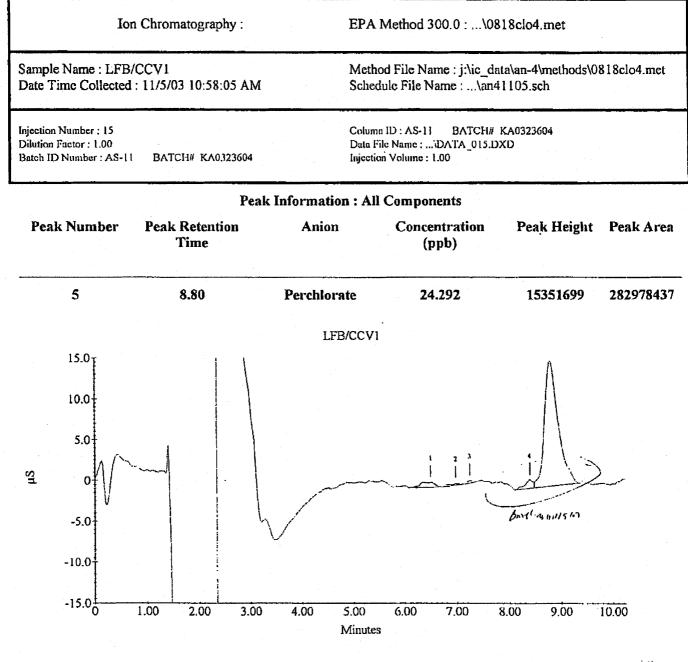
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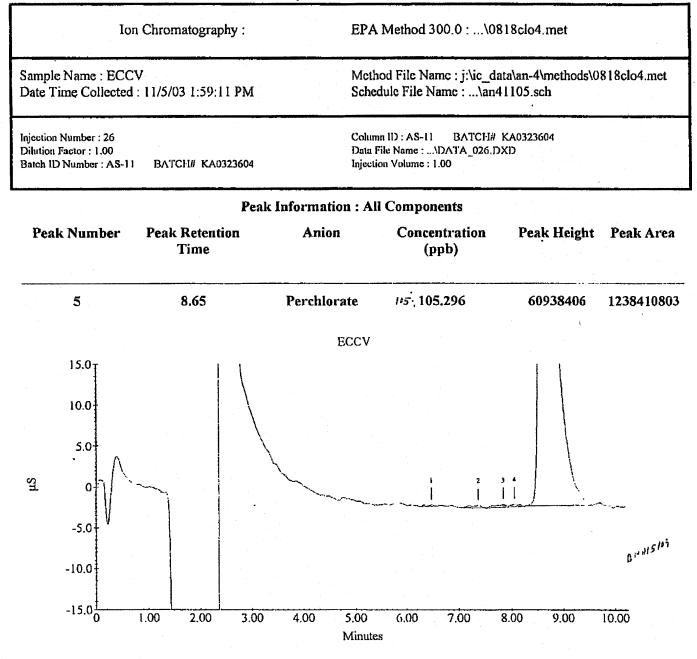
lon	Chromatography :	EPA	Method 300.0 :\08	l 8clo4.met				
Sample Name : ICCS/ Date Time Collected :			Method File Name : j:\ic_data\an-4\methods\0818clo4.met Schedule File Name :\an41105.sch					
Injection Number : 14 Dilution Factor : 1.00 Batch ID Number : AS-11	ВАТСН# КЛ0323604	Data F	n ID : AS-11 BATCH# ile Name :\DATA_014.D on Volume : 1.00	KA0323604 XD				
<u> </u>	Pea	ak Information : All	Components					
Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Pcak Height	Peak Area			
3	8.95	Perchlorate	5.817	1939245	65064074			
		ICCS/ICV						
15.0 10.0 5.0 -5.0 -10.0 -15.0 0	1.00 2.00 3.00			Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac Bareliac	s 10.00			
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Ιο	n Chromatography :	EPA	Method 300.0 :\0	0818clo4.met	
Sample Name : LFB Date Time Collected	6/CCV1 1 : 11/5/03 10:58:05 AM		nod File Name : j:\ic_e dule File Name :\ar		818clo4.met
Injection Number : 15 Dilution Factor : 1.00 Batch ID Number : AS-11	1 BATCH# КЛ0323604	Data	un ID : AS-11 BATCH File Name :\DATA_015. ion Volume : 1.00	# KA0323604 DXD	<u> </u>
	Pea	k Information : Al	I Components	-	
Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
4	8.80	Perchlorate	11: 22.689	14873646	264064899
		LFB/CCV	1		
15.0 10.0 5.0 -5.0 -10.0 -15.0					61× 111 5 % ;
-15.00	1,00 2.00 3.00) 4.00 5.00 Minute	6.00 7.00 ss	8.00 9.00	10.00
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Ion	Chromatography :	EPA	Method 300.0 :\0	8 I 8 Clo4. met	
Sample Name : ECC Date Time Collected :	/ 11/5/03 1:59:11 PM		od File Name : j:\ic_d dulc File Name :\an-		l 8clo4.met
njection Number : 26 Dilution Factor : 1.00 Batch ID Number : AS-11	ВАТСН# КЛ0323604	Data F	in ID : AS-11 BATCH# ile Name :DATA_026.E on Volume : 1.00	KA0323604 DXD	
<u> </u>	Peal	Information : Al	Components		
Peak Number	Peak Retention Time	Anion	Concentration (ppb)	Peak Height	Peak Area
1	6.48		0.000	166141	1988476
		ECCV			
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5.0-					
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COLUMBIA ANALYTICAL SERVICE, INC.

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Service Request #:	8588	8058 3	8536		• .		Method :		EPA 1201	
Analysis For :	Condu	ectivity (spee	ific conductar	ice, µmhos/o			Matrix.		Water	****
Standardization: 1.	ow Range 1,4 High Range	-13 μmhos/cn 50,000 μmh			Cel	l Constant =	<u>True Value</u> ~ Meter Value	1413/141	1=1.00	
Sample Name	MB	1413	50K	LUS	8588-3	8588-30	8588-4	8058-1	\$5301	8531:2
u/m Range	M	M	m	м	11	M	M	M	m	m
Reading	0.77	1411	503	955	150.2	150.0	147.3	253	4.86	35.0
Conductivity	12	1411	50300	955	150	150	147	253	4560	35000
n	1.	1			- <u>1</u>	1			T	·····
Sample Name		8536-4	\$536-5	MB	1413	50K				\geq
u/m Range	M	M	m	м	M	M				<u> </u>
Reading	48.4	11-78	47.5	0.79	1410	50.3		[
Conductivity	48400	11800	41500	12	1410	50300				
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Sample Name						Ţ				2
u/m Range	<u> </u>					ļ				
Reading						ļ				
Conductivity	<u> </u>			<u> </u>	1		<u> </u>			
ſ <u></u>	1	·	I						1	T
Sample Name		ļ		Į					<u></u>	
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Reading				<u> </u>						<u> </u>
Conductivity	12			<u> </u>				1	1	
LCS = APG 4053 Lo	1 #:	ID #: <u>Co</u>	nd/1-5-B	T.V. = 1	18 % REC =	=96				
Conductivity = 1413 STD ID #:	u=Reading Cond/1-13-	x I, m=Read N	ing x 1,000							
50,000 STD 1D #: Comments:	(ond/1-	21-7.	-							
				X		RPD			· · · · · · · · · · · · · · · · · · ·	
	8588	-3+11	D	150	D	41				
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Analyzed By: St					Date: 11/				Time: 2!	uopm
Reviewed By:	1.2	15			Date:	11/5/0	<u> </u>			
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Method Report - 0818clo4

Method Information : Select Module(s) System Name : DX-100 System Number : 1

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

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

Relay 1 Open				TTL4 Low	Collect	Comment	
Closed	•	-		Low	Begin		

UI20 Detector Parameters

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

Current Time: 4:47:12 PM

Page 1 of 3

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 Perchlorate	Retention 8.57 min	Tolerance 5.00 %	Reference							
Current Time : 4	4:47:12 PW	Page 2 of 3	Current Date : 8/18/03							

Component	Retention	Lov	v Limit	High Limit	
Perchlorate	8.57 min	0		0	
	UI20 Com	nponent Ca	libration	Table	······································
Component	Retention Curve Time Fit	Origin	Cal. by	Response Component	Relative Factor
Perchlorate	8.57 min Linear	Include	Area		0.00
Retention Time Amount units : Replicate unit ty Number of level Number of repli	: 8.57 min ppb ype : Area ls : 7				
Amount units : Replicate unit ty Number of level	: 8.57 min ppb ype : Area ls : 7				
Amount units : Replicate unit ty Number of level Number of repli	: 8.57 min ppb ype : Area ls : 7 cates : 1			Replicate 1 1.32024e+006	
Amount units : Replicate unit ty Number of leve Number of repli Level	: 8.57 min ppb ype : Area ls : 7 cates : 1 Amoun			Replicate 1	
Amount units : Replicate unit ty Number of leve Number of repli Level 1	: 8.57 min ppb ype : Area ls : 7 cates : 1 Amount 0.00			Replicate 1 1.32024e+006	
Amount units : Replicate unit ty Number of level Number of repli Level 1 2	: 8.57 min ppb ype : Area is : 7 cates : 1 Amount 0.00 2.00			Replicate 1 1.32024e+006 2.87091e+007	
Amount units : Replicate unit ty Number of level Number of repli Level 1 2 3	: 8.57 min ppb ype : Area ls : 7 cates : 1 Amount 0.00 2.00 5.00 10.00 25.00			Replicate 1 1.32024e+006 2.87091e+007 5.20462e+007 1.23068e+008 2.80041e+008	
Amount units : Replicate unit ty Number of level Number of repli Level 1 2 3 4	: 8.57 min ppb ype : Area ls : 7 cates : 1 Amoun 0.00 2.00 5.00 10.00			Replicate 1 1.32024e+006 2.87091e+007 5.20462e+007 1.23068e+008	

Page 3 of 3

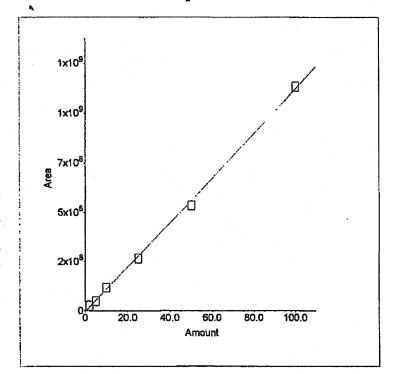
Current Date : 8/18/03

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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<sup>2</sup>=0.999100
Amt=8.478e-008*Resp+0.3004
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APPENDIX D

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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 OLCO2.1, 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.

pg. 3/3

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

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SDG #: EFFL		BAICHC	COMPLETE:yes E REQUESTED: Y NX	•	DATE REV			
SUBMISSION		DISKETT	E REQUESTED: YN_X		DATE DUE			
CLIENT:	Shaw Environmental	DATE: 08			PROTOCO			
CLIENT REP	Janice Jaeger		Y SEAL: PRESENT/ABSENT:		SHIPPING			
	GE MRFA PROJECT #810066		F CUSTODY: PRESENT/ABSEN		SUMMARY		<u>X</u> N	
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE	DATE	рН	%	REMARKS
				SAMPLED	RECEIVED	(SOLIDS)	SOLIDS	AMPLE CONDITIO
668002QC		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			
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SDG #: M-33S		BATCH C	OMPLETE:yes		DATE REV	ISED:		
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	Shaw Environmental	DATE: 10			PROTOCO	L: CLP		
CLIENT REP:		CUSTOD	Y SEAL: PRESENT/ABSENT:		SHIPPING			
PROJECT:	GE MRFA PROJECT #810066	CHAIN OF	F CUSTODY: PRESENT/ABSENT	Г:	SUMMARY	' PKG: Y	<u>X</u> N	
	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE	DATE	pН	%	REMARKS
				SAMPLED	RECEIVED	(SOLIDS)	SOLIDS	AMPLE CONDITIO
678644	M-33S	WATER	OLC2.1 VOA	10/9/03	10/10/03			
	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	l		
	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		<u></u>		
679934	DGC-3S	WATER	OLC2.1 VOA		10/16/03		ļ	
	M-27S	WATER	OLC2.1 VOA,CR,CR6		10/16/03			
679936	M-27D	WATER	OLC2.1 VOA,CR,CR6		10/16/03	<u> </u>		
679937	DUPLICATE	WATER	OLC2.1 VOA,CR,CR6		10/16/03		L	<u> </u>
679938	TRIP BLANK	WATER	OLC2.1 VOA	10/15/03	10/16/03		·	
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			*perchlorate sub to	<u> </u>			<u> </u>	
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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 autionized by the Laboratory Manager or his designee, as verified by the following signature;

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COLUMBIA ANALYTICAL SERVICES, INC.

Client: Project: Sample Matrix: Shaw Environmental and Infrastructure GE MRFA Water

Service Request No.: Date Received: K2308058 10/10/2003

000003

10/03

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.

LANA

Date

Perchlorate by EPA Method 314

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

Approved by___

APPENDIX E

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AIR STRIPPER FLOW DATA

Air Stripper Flow Data

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6/27/03Total $2,290$ $2,450$ 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 $2,590$ $2,770$ 1.80 1.92 3.72 $7/2/03$ Total $2,590$ $2,770$ 1.80 1.92 3.72 $7/3/03$ Total $2,910$ $3,120$ 2.02 2.17 4.19 $7/5/03$ Total $2,900$ $3,120$ 2.02 2.17 4.19 $7/6/03$ Total $2,900$ $3,120$ 2.01 2.17 4.18 $7/7/03$ Total $2,900$ $3,110$ 2.01 2.17 4.18 $7/7/03$ Total $2,900$ $3,110$ 2.01 2.17 4.18 $7/7/03$ Total $2,020$ $2,240$ 1.40 1.56 2.96 $7/10/03$ 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 $1,060$ $1,130$ 0.74 0.78 1.52 $7/14/03$ Total $1,260$ 2.830 1.83 1.97 3.80 $7/14/03$ Total $2,680$ 2.24 2.40 4.64 $7/12/03$ Total $1,640$ <td< th=""><th>Date</th><th></th><th>Flow</th><th>Flow</th><th>Average</th><th>Average</th><th>Average Flow</th></td<>	Date		Flow	Flow	Average	Average	Average Flow
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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	and the second process of the second s						
8/9/2003 Total 1,160 1,240 0.81 0.86 1.67							

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Page 1 of 4

Air Stripper Flow Data

		Well #2	Well #1	Well #2	Well #1	Total Daily
Date		Flow	Flow	Average	Average	Average Flow
		(gal)	(gal)	(gpm)	(gpm)	(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 9/10/03	Total	2,370	2,540	1.65	1.76 1.28	3.41 2.48
9/10/03	Total	1,720	1,850	1.19	1.20	2.34
9/12/03	Total	<u>1,630</u> 1,470	1,740 1,570			2.34
9/12/03	Total Total	950	1,020	1.02 0.66	1.09 0.71	1.37
9/14/03		830	880	0.58	0.61	
9/14/03	Total Total	2,300	2,470	1.60	1.72	<u> </u>
9/16/03	Total	1,940	2,470	1.35	1.45	2.80
9/17/03	Total	1,590	1,700	1.35	1.18	2.28
9/18/03	Total	1,730	1,850	1.10	1.18	2.49
9/19/03	Total	1,630	1,750	1.13	1.20	2.35
9/20/03	Total	1,140	1,230	0.79	0.85	1.65
9/21/03	Total	1,000	1,230	0.69	0.03	1.44
9/22/03	the second s		and the second se		a contraction of the second	
9/22/03	Total	1,580	1,690	1.10	1.17	2.27

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Air Stripper Flow Data

-		Well #2	Well #1	Well #2	Well #1	Total Daily
Date		Flow	Flow	Average	Average	Average Flow
		(gal)	(gal)	(gpm)	(gpm)	(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 10/4/03	Total Total	1,340 790	1,440 850	0.93	1.00 0.59	1.93
10/4/03	Total	790	770	0.55		1.14
10/5/03	Total	1,600	1,720	0.50	0.53 1.19	2.31
10/7/03	Total	1,620	1,730	1.13	1.19	2.33
10/8/03	Total	1,930	2,070	1.13	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 Total	1,400 1,070	1,500	0.97	1.04	2.01 1.54
10/30/03	Total Total	1,860	1,150 1,990	0.74	0.80 1.38	2.67
11/1/03	Total	1,000	1,990	0.76	0.81	1.57
11/2/03	Total	1,090	1,170	0.76	0.81	1.46
11/3/03	Total	1,540	1,640	1.07	1.14	2.21
11/4/03	Total	2,110	2,260	1.07	1.57	3.03
11/5/03	Total	1,200	1,280	0.83	0.89	1.72

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Air Stripper Flow Data

[Well #2	Well #1	Well #2	Well #1	Total Daily
Date		Flow	Flow	Average	Average	Average Flow
		(gal)	(gal)	(gpm)	(gpm)	(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, <u>13</u> 0	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 11/19/03	Total Total	2,370	2,550	1.65	1.77	3.42
11/20/03	Total	1,860	2,000 2,050	1.29 1.33	1.39 1.42	2.68
11/20/03	Total Total	1,920 1,340	1,440	0.93	1.42	<u>2.76</u> 1.93
11/22/03	Total	1,000	1,070	0.93	0.74	1.44
11/23/03	Total	980	1,070	0.68	0.74	1.44
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 12/16/03	Total	1,810	1,940	1.26	1.35	2.60
12/16/03	Total	1,610 1,320	1,730	1.12	1.20	2.32
12/17/03	Total Total	1,520	1,420 1,640	0.92	0.99 1.14	1.90 2.19
Grand	A COLUMN THE OWNER OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.	293,110	313,780	1.06 1.163	1.14 1.245	2.19
Granu	i Utai	293,110	513,780	1.103	1.245	<u> </u>

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APPENDIX F

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TELEPHONE INTERVIEW LOGS

Annual Telephone Interview Log Remedial Work Element IV - Institutional Controls Malta Rocket Fuel Area Site Malta and Stillwater, New York

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	X New York State Energy Research and Developmental Authority					
Indicate Property Owner Interviewed:	Wright-Malta Corporation					
Mr. Hal Brodie 518-862-1090, ext. 3280	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 tachology leneupy parts.					
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 & Shaang Date: 10/03					

Annual Telephone Interview Log Remedial Work Element IV - Institutional Controls Malta Rocket Fuel Area Site Malta and Stillwater, New York

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	New York State Energy Research and Developmental Authority					
Indicate Property Owner Interviewed:	X Wright-Malta Corporation					
Mr. Raymond (RP) Kazyaka 518-899-2227	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, Maita 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 Skaarue	Interviewer signature: flux & Slusamp Date: 9/15/03					

Annual Telephone Interview Log Remedial Work Element IV - Institutional Controls Malta Rocket Fuel Area Site Malta and Stillwater, New York

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	New York State Energy Research and Developmental Authority					
Indicate Property Owner interviewed:	Wright-Maita Corporation					
Mr. Alex Mackey 518-899-6001	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.	Hes. Source No.					
Are you aware of any current or proposed changes in land use within the area of the Environmental Restriction Zone?	Yes, Technology park (propared).					
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; continuent upon afformal, same status at 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 Skaaruf	Interviewer signature: flexible Coard					

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