LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUND-WATER AND ENVIRONMENTAL ENGINEERING SERVICES

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January 30, 2003

Mr. Jeffery Trad
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation, Construction Services
625 Broadway, 12th floor
Albany, NY 12233-7013

RE: December 2002 Status Report
Ground-Water Remedial Action
Rowe Industries Superfund Site
Sag Harbor, New York

Dear Mr. Trad:

The enclosed letter report details the operation status of the full-scale ground-water pump and treat system at the above referenced site. As discussed in our telephone conversation, LBG has enclosed an additional copy of the report to be forwarded to the Chief of the Operation Maintenance and Support Section.

Should you or the Operation Maintenance and Support Section have any questions, please feel free to contact myself or Al Kovalik at (203) 452-3100.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.

Paul Jobmann
Senior Environmental Engineer

PJ:mg
Enclosures
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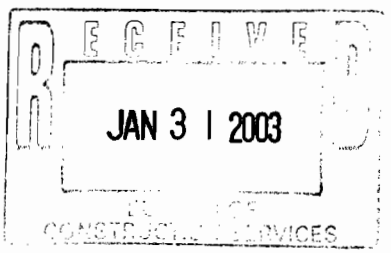

-DRAFT-

PROJECT STATUS MEMORANDUM NO. 03-01

TO: Pamela Tames, USEPA

FROM: Jennifer Bennesch, P.E., Alfred N. Kovalik, P.E.

DATE: January 29, 2003

PROJECT: Rowe Industries Superfund Site
Ground-Water Recovery and Treatment System
December 2002 Status Report
Sag Harbor, New York

Leggette, Brashears & Graham, Inc. (LBG) commenced operation of the ground-water remediation system at the above-referenced site on December 17, 2002. This status report presents a summary of the operation, maintenance and monitoring activities for the site from system start-up through the end of December 2002. The report includes a summary of system operational parameters, tasks completed during the reporting period, anticipated tasks for the following month, analytical results for ground-water and system effluent samples collected, air quality results and a summary of stream/estuary, wetland, and ground-water monitoring data.

SUMMARY OF SYSTEM OPERATION

(December 17, 2002 through December 31, 2002)

Reporting Period:	15 days
Total Flow During Period:	9,552,069 gallons
System Average Flow:	442 gallons per minute (gpm)
Mass of VOCs Recovered:	11.6 pounds
Hours of Operation:	316 hours during reporting period (88 percent) (based on number of hours registering flow from RW-1)
Alarm Conditions:	See Table 1 : Maintenance Log
Discharge Criteria:	Effluent Water and Air Quality Criteria Met

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SCHEDULE

Completed Tasks

During the December 2002 reporting period, LBG completed the following tasks:

- monitored system operations by completing routine inspections;
- performed ground-water recovery and treatment system troubleshooting and maintenance;
- collected ground-water samples from recovery wells (1/3/03);
- measured ground-water fluid levels;
- monitored select parameters in streams, estuary, wetlands, and ground water;
- completed air sampling events for carbon units; and
- completed project management administrative duties.

Upcoming Tasks

During the next reporting period, LBG anticipates completing the following tasks:

- monitor system operations by completing routine inspections;
- perform ground-water recovery and treatment system maintenance;
- collect ground-water samples from recovery wells;
- measure fluid levels and evaluate drawdown in aquifer;
- conduct monitoring of streams, estuary, wetlands, and ground water;
- complete air sampling events for carbon units;
- calculate contaminant recovery totals for the system;
- coordinate changes to system programming;
- prepare monthly project status report; and,
- complete project management administrative duties.

GROUND-WATER RECOVERY SYSTEM STATUS SUMMARY

The following table summarizes select recovery well parameters for the reporting period. Additional well operation information is included on the weekly operation reports, which are attached as Appendix I. A graph depicting the individual well flowrates over time is attached as Figure 1. The average flowrate for each well is less than design value because of system downtime due to maintenance activities and adjustments made to the operational flowrates.

Based on analytical results for samples collected from the influent to the air stripper and totalizer readings, approximately 12 pounds of volatile organic compounds (VOCs) were recovered by the system. The VOC recovery calculation is attached as Appendix II and is based on three sampling events. The VOC recovery totals in the following table are based on analytical data from samples collected on January 1, 2003. Laboratory analytical reports are attached as Appendix III.

Well	Volume Pumped (gal)	Average Flowrate (gpm)	Design Flowrate (gpm)	Total VOC Concentration (ug/L)	VOC Recovery (lbs)
RW-1	600,900	27.0	35	18.4	0.09
RW-2	810,000	37.6	45	46.8	0.32
RW-3	539,310	25.0	30	16.1	0.07
RW-4	1,053,050	48.9	50	201	1.8
RW-5	948,010	44.0	55	8.9	0.07
RW-6	822,360	38.2	50	111	0.76
RW-7	1,405,130	65.2	80	164	1.9
RW-8	1,368,630	63.5	90	69.7	0.80
RW-9	1,780,990	82.7	100	29.5	0.44

During the reporting period, troubleshooting and maintenance activities were conducted on seven of the recovery wells (see Table 1). Reoccurring fault conditions included low flow and overload fault conditions. Troubleshooting activities that were conducted to correct the fault conditions included adjusting well flowrates and alarm set points and cleaning flowmeters and strainers.

GROUND-WATER TREATMENT SYSTEM STATUS SUMMARY

System Operation

The two major components of the ground-water treatment system are the three multi-unit bag filter systems and the packed tower air stripper.

The filter units, with eight filter bags per unit, are located downstream of the equalization tank and upstream from the air stripper. The multi-bag filter units operate in parallel. The average flow from the equalization tank transfer pumps into the bag unit system was 522 gpm. The inlet, outlet and differential pressures for each filter unit are recorded on an hourly basis. Figure 2 illustrates the differential pressure readings over time across each of the three units. The differential pressure warning setpoint is 8 psi (pounds per square inch). An alarm condition occurs if the differential pressure reaches 10 psi. As indicated on this figure and as shown in the operations log, high differential pressure warnings were recorded and filter bag changeouts were conducted on almost a daily basis. In order to reduce the frequency of fault conditions, the influent flowrate to the bag units was varied and the bag filter sizing was changed from 25 micron to 50 micron. Additional troubleshooting activities will be conducted during the next reporting period to increase the lifespan of the filter bags and minimize system maintenance requirements.

The air stripper did not experience any fault conditions during the reporting period. The average air flowrate through the air stripper during the reporting period was 2,400 scfm (standard cubic feet per minute). A graph of the air stripper air flow and air pressure over time is attached as

Figure 3. The graph does not indicate that fouling of the air stripper packing has impacted the performance of the air stripper to date. The air flow and pressure readings have remained stable. Therefore, the acid backwash system was not utilized during the reporting period. The water discharge from the air stripper was sampled weekly. As shown on the attached Table 2, the treated ground water met the water-quality requirements set forth in the SPDES permit. Figure 4 illustrates that the daily system effluent flowrate in gallons per day (gpd) was below the SPDES permit limit of 1,023,000 gpd. A copy of the SPDES permit is attached as Appendix IV.

AIR TREATMENT AND EMISSIONS MONITORING

Air sampling was conducted during the reporting period to ensure that VOC emissions do not exceed limits and to monitor the granular activated carbon units for breakthrough. The air stripper off-gas is treated by two carbon units, which are currently being operated in series. During system start-up, photoionization detector (PID) readings and air samples for laboratory analysis were collected from the effluent from the stripper, carbon unit 1 and carbon unit 2 on a weekly basis. Table 3 summarizes the air quality results for the initial system testing phase and the first week of system operation. Air-quality results were not available from the laboratory for the last full week in December. As shown in the table, the PCE laden air from the air stripper was effectively treated by the carbon units; therefore, no carbon changeout activities were conducted during the reporting period. According to the calculation in Appendix V, the air emission rate from the carbon units based on the December 19th analytical data was 0.001 pound per hour. Tetrachloroethene, trichloroethene and chloroform were not detected in the effluent vapor stream from the carbon unit system; therefore, the allowable concentrations of these compounds corresponding to the AgC at the property line were not exceeded.

GROUND-WATER SAMPLING

Ground-water samples were collected from the nine recovery wells on January 3, 2003. The samples were collected to establish base concentrations for each of the recovery wells and estimate VOC mass recovery rates from each well. Table 4 summarizes the VOC analytical data for ground-water samples collected during the reporting period. The highest tetrachloroethene concentration for the most recent sampling round was 190 micrograms per liter in RW-4. Ground-water quality trends will be analyzed throughout the duration of the remedial action.

STREAM/ESTUARY SALINITY MONITORING

Salinity and temperature levels were collected at predetermined locations perpendicular to the flow of water in the Ligonee Creek. The locations selected are considered representative of the section of Sag Harbor Cove downgradient of the VOC plume being captured and potentially affected by the operation of the recovery wells. The salinity and temperature profiles are monitored at the surface and various depths. Measurements were collected at each location during, or close to, average daily high and low tide. Temperature and salinity graphs for the various monitoring points are attached as Appendix VI. During December 2002, the salinity and temperature data was collected prior to the start of the ground-water remediation system. Salinity and temperature data

collected during the next monthly monitoring event and throughout the duration of the ground-water remedial action will be evaluated against the historical monitoring data.

WATER-LEVEL MONITORING

Water-level monitoring is conducted in the Crooked, Whaler's Road, Lily and Round Ponds and the Ligonee Brook to assess the impacts of the ground-water recovery system on water levels. Ground-water levels and pond water levels are measured in the piezometers and staff gages to determine the difference between the potentiometric heads in the underlying aquifer and the pond water levels. During December 2002, the ground-water elevation data was collected prior to the start of the ground-water remediation system. The water-level measurements are shown on the hydrographs attached as Appendix VII. Water-level data collected during the next monthly monitoring event and throughout the duration of the ground-water remedial action will be evaluated against the baseline data.

Monitor well water-level measurements were not collected during this operational period. The collection of water level data from the monitor wells will coincide with the Greenbelt Pond water-level measurements on future O&M visits. Recovery well water-level measurements collected during this reporting period appear to be calculated incorrectly within the system computer. The computer references incorrect static ground-water measurements and depth of transducer settings. The drawdown data for this period will be reformatted and will be transmitted within the 1st Quarter 2003 Status Report.

cc: Paul Jobmann, Laura Zima-Project Team Members
Terry Gerrish, CH2M Hill
Mark Lucas, CH2M Hill
Phil McAndrew, Kraft Foods, N.A.
Jeff Trad, NYSDEC
Chief-Operation Maintenance and Support Section
(figure 1, table 2 and Appendices III and VII only)
Robert Schneck, RWE, R-1, NYSDEC
David Gilmartin, Jr., Esq., Town of Southampton

JAB:mg
Attachments
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FIGURES

FIGURE 1
GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

RECOVERY WELL AND DISCHARGE FLOW DATA
(December 17, 2002 through December 31, 2002)

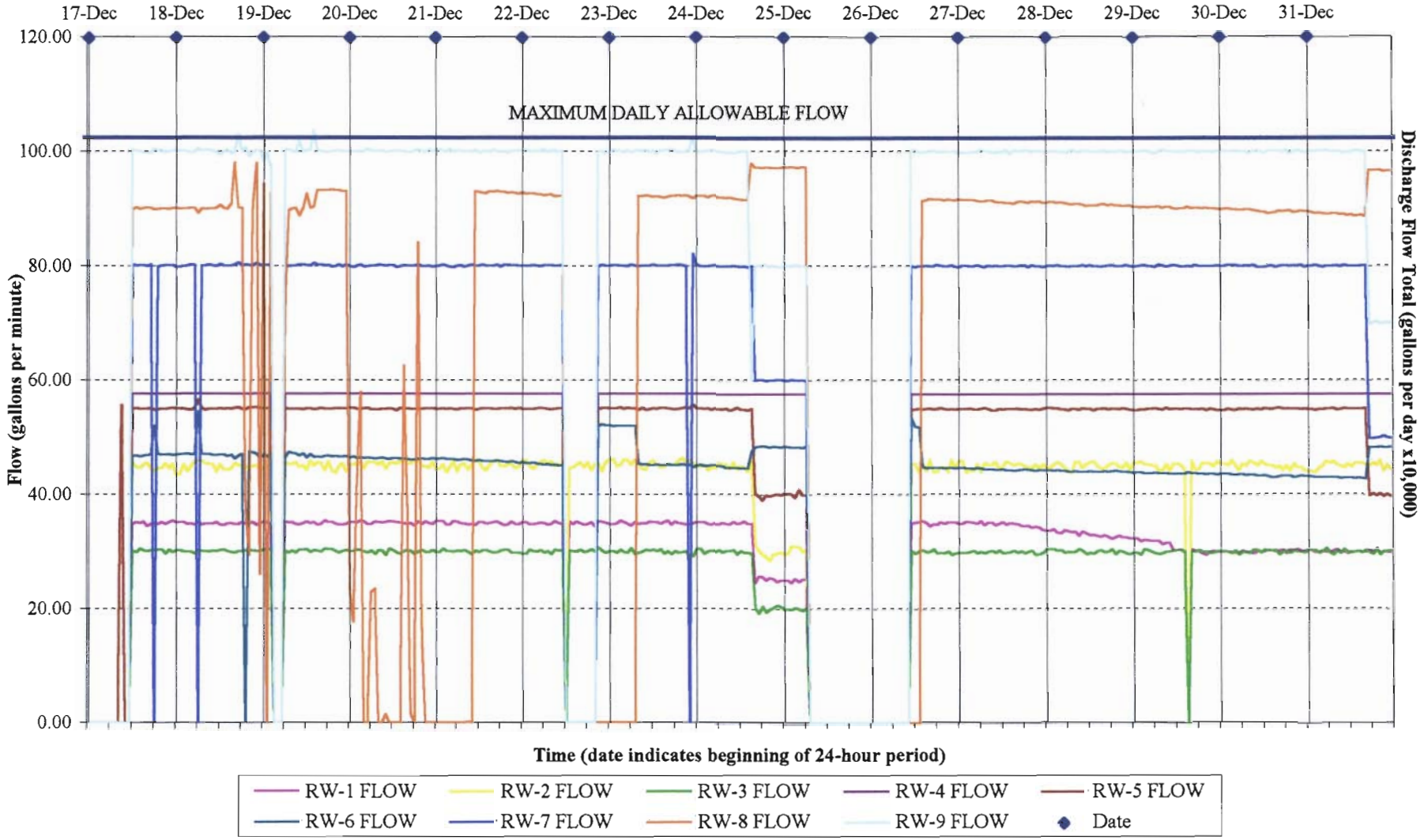
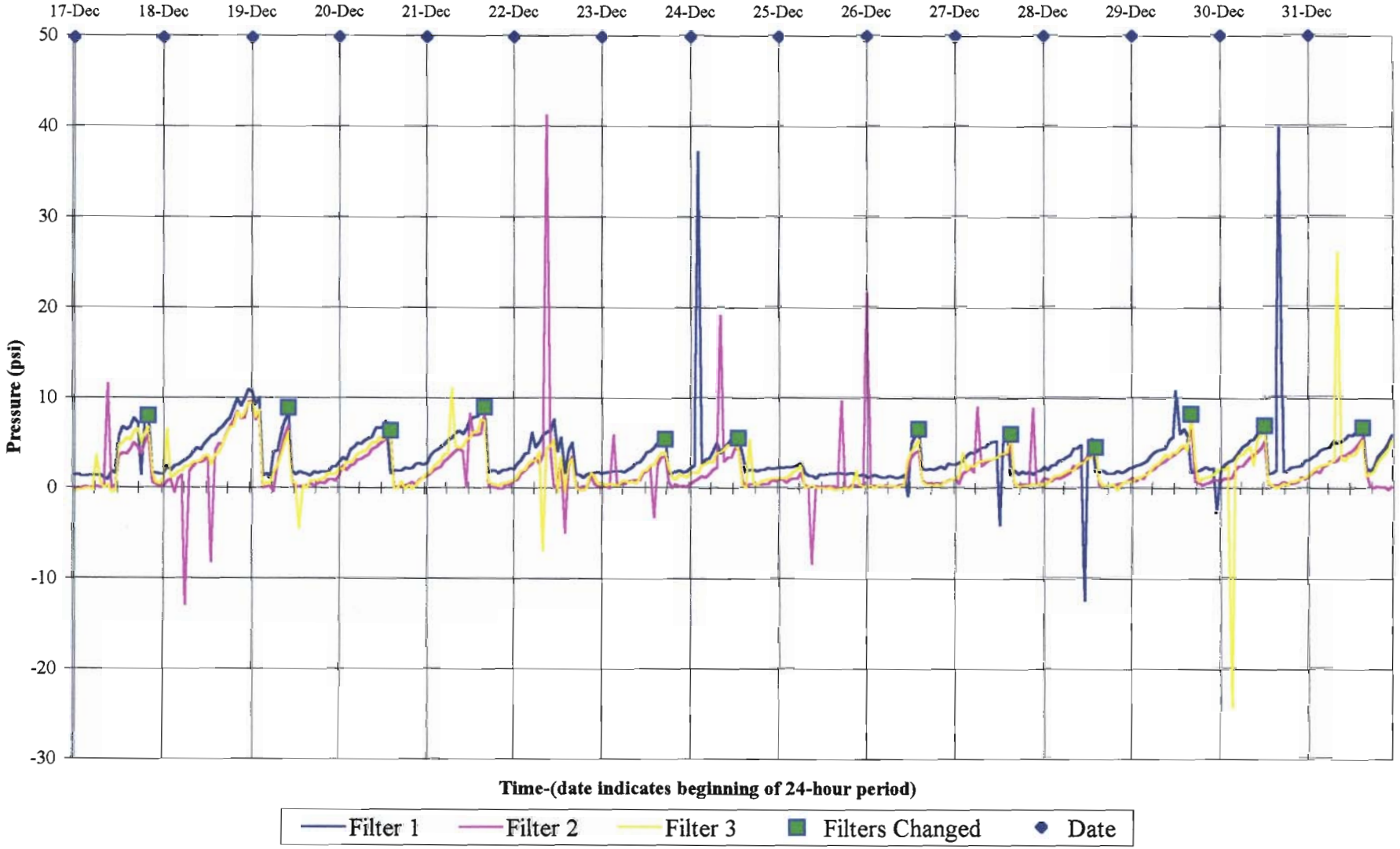


FIGURE 2
GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

MULTI-BAG FILTER DIFFERENTIAL PRESSURE
(December 17, 2002 through December 31, 2002)



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DP, 1/29/03

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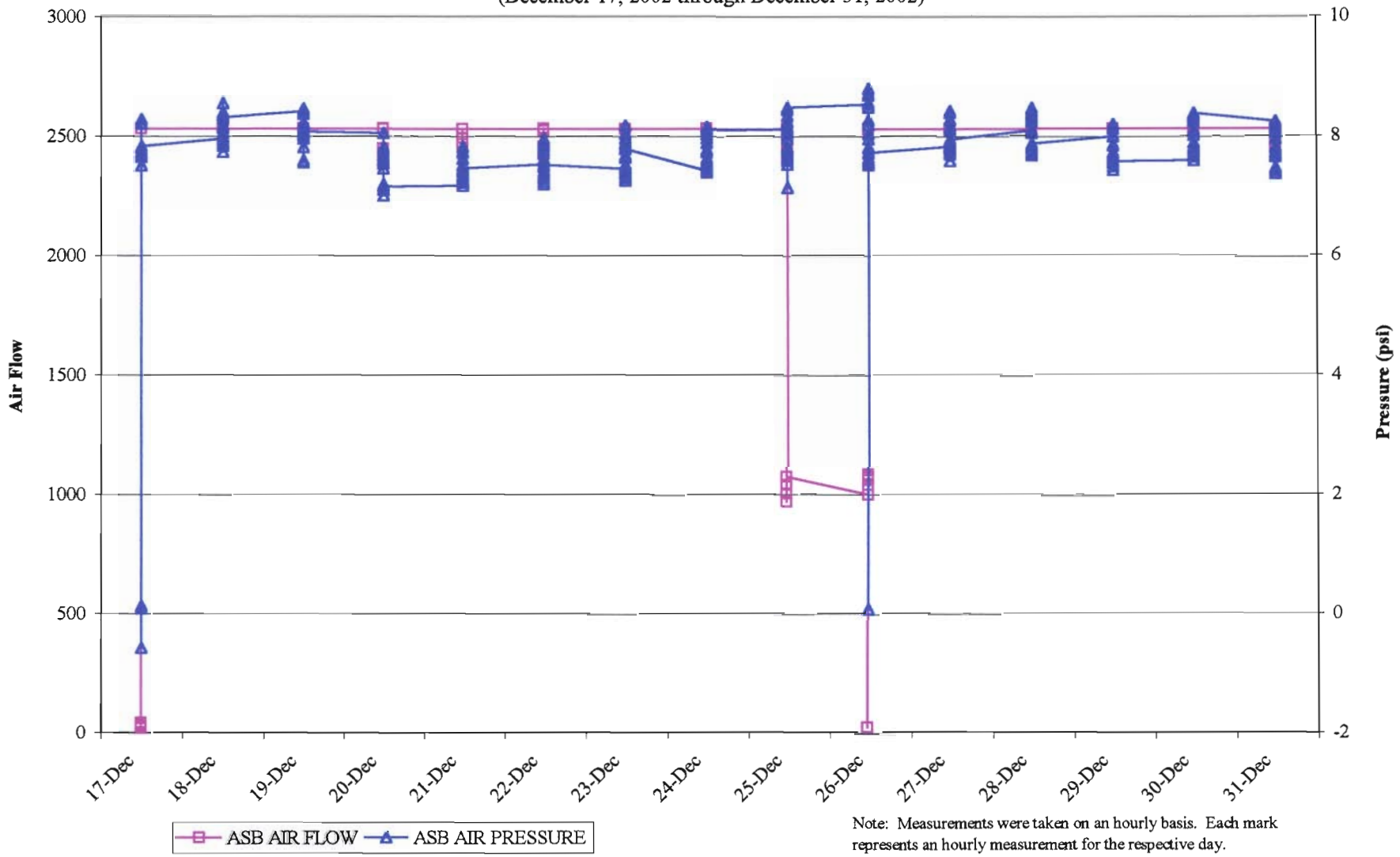
FIGURE 3
GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

AIR STRIPPER BLOWER: FLOW RATE AND PRESSURE
(December 17, 2002 through December 31, 2002)



Note: Measurements were taken on an hourly basis. Each mark represents an hourly measurement for the respective day.

J:\NABIS\PUMPOM\Data\air stripper log summary.xls
ASB Press and Flow, 1/29/03

LEGGETTE, BRASHEARS & GRAHAM, INC.

TABLES

TABLE 1
GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

MAINTENANCE LOG
(December 17, 2002 through December 31, 2002)

Date	Time	System Changes/Modifications	Personnel
12/17/02	12:09 PM	Running RW-6 bypassing drive due to ground fault. RW-4 24vdc power no good so corrected readings from well bypass flowmeter. Drive set for design flowrate	PJ
	9:14 PM	Changed multi bag filters (50μm)	TF
12/18/02	8:00 AM	Clean flowmeter for RW-8 due to low flow alarms on 12/17	PJ
	10:48 AM	Reset Transfer Pump 2 Full Load Amps (FLA) overload to 3.7 amps based on Grundfos manual	PJ
	10:48 AM	Set RW-7 FLA overload to 6.5 based on Grundfos manual, enabled overload fault. Retune drive up start/accel boost to 30 volts from 20 volts.	PJ
	3:30 PM	Reset RW-2 FLA overload back to 3.0 amps and RW-8 FLA to 8.0 amps based on Franklin pump O&M guide	PJ
	5:50 PM	Changed RW-8 set point to 15% differential after low flow alarm, set to 20% after additional alarm. Had trouble restarting pump, reset start/accel boost from 5 to 10 volts	PJ
12/19/02	6:30 AM	Change RW-8 direction from reversed to unipolar after pump failure "overvoltage."	PJ
	6:30 AM	Restarted system after high pressure alarms in multi bag filter units shut down system on 12/18 at 3:31 AM	PJ
	11:28 AM	Changed multi bag filters (50μm). Shut down RW pumps to change bank 3 alarms on 1 and 2 system. Restarted at 11:47.	PJ
	12:10 PM	RW-8 low flow alarm, changed alarm setpoint from 20 to 50% (potential problem with flowmeter).	PJ
	3:09 PM	RW-8 low flow alarm, change to preset speed in drive (58 hz ~ 90gpm based on past observations). Pump still producing ~90 gpm even though flowmeter indicates much less. Low flow alarm changed from 50 to 100%.	PJ
12/20/02	12:09 PM	Switch transfer lead/lag pumps 1 and 2 (pump A-lag, B-lead)	PJ
	3:00 PM	Changed multi-bag filters (50μm)	PJ
12/21/02	10:00 AM	Replaced RW-8 flowmeter disk assembly, still not working properly. Then replaced magnetic pickup sensor, meter reading properly.	TF
	4:40 PM	Changed multi-bag filters (50μm)	ASH

TABLE 1
GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

MAINTENANCE LOG
(December 17, 2002 through December 31, 2002)

Date	Time	System Changes/Modifications	Personnel
12/22/02		Off-site flow alarm: offsite flow meter not reading flow, opened up and cleaned motor & area of magnetic pickup, did not help. Changed manifold flow difference setpoint to 100% from 220%, still getting alarm on flow difference.	ASH
		Opened flow meter again and cleaned, found blockage in front of flow straightener, had to remove from line to clear piece of plastic that was getting caught in rotor. Worked fine after reassembly. (note: two blades broken in meter rotor during work, does not appear to impact operation of accuracy, but should be replaced).	ASH/DB
12/23/02	9:00 AM	Restart RW-8	ASH/DB
	12:00 PM	Changed multi-bag filters (50μm)	ASH
12/24/02	1:50 PM	Changed multi-bag filters (50μm)	ASH
	4:00 PM	Lowered pump rates to increase bag filter change times over holiday but left rates high enough so pumps don't cycle.	ASH
12/26/02		Reset RW-5 after low flow alarm at 9:00 AM	TF
		Changed RW-8 startup voltage from 20 to 25 after overvoltage alarm at 9:00 AM	TF
		Changed onsite and offsite flow differential to 100%	TF
	3:00 PM	Changed multi-bag filters (50μm)	TF
12/27/02	3:30 PM	Changed multi-bag filters (50μm)	LZ
12/28/02	12:30 PM	Sampled system influent and effluent	LZ
	3:00 PM	Changed multi-bag filters (50μm)	LZ
12/29/02	1:00 PM	Reset RW-1 after low flow alarm at 11:00 AM. Ran at 31.5 gpm at 100% speed, changed setpoint flow rate to 30 gpm-ran at 98% speed.	ASH
	1:00 PM	Reset low flow alarms to 20% for all wells set at 10%.	ASH
	4:00 PM	Shut off onsite pumps to clean out strainer for onsite wells. Restarted at 6:30 PM.	ASH
12/30/02	1:00 PM	Changed multi-bag filters (50μm)	TF
12/31/02	4:20 PM	Changed multi-bag filters (1 and 2 only due to shortage of filter socks)	
	6:30 PM	Reduced RW flows to increase filter run over holiday.	ASH

TABLE 2

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

DISCHARGE WATER QUALITY RESULTS[3,]

Date Sampled	pH [2,]	TDS (mg/L)	PCE (ug/L)	1,1,1-TCA (ug/L)	TCE (ug/L)	1,1-DCA (ug/L)	1,1-DCE (ug/L)	1,2-DCE (ug/L)	Xylene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Methylene Chloride (ug/L)	Freon 113 (ug/L)	Naph-thalene (ug/L)	Chloroform (ug/L)
SPDES Limits	**6.5 to 8.5**	**monitor**	**1**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**monitor**	**10**	**7**
19-Dec-02		see note 1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	see note 1	ND<1.0	ND<1.0
28-Dec-02		see note 1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	2.7	ND<1.0	ND<1.0	see note 1	ND<1.0	ND<1.0

SPDES: State Polluntant Discharge Elimination System
mg/L: Milligrams per liter
ug/L: Micrograms per liter

TDS: Total dissolved solids
PCE: Tetrachloroethylene
TCE: Trichloroethene
1,1-DCA: 1,1-Dichlorothane

1,1-DCE: 1,1-Dichloroethene
1,2-DCE: 1,2-Dichloroethene

Notes:
1. TDS & Freon 113 added to parameter analysis with January 2003 Samples.
2. pH measured in field using litmus paper.
3. "Discharge " samples were collected from sample port labeled NP2-10.

TABLE 3

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

CARBON UNIT SYSTEM AIR QUALITY RESULTS

Precarbon

Sample Name	Date	Time	Parameters (mg/m3) PCE	TCE	Toluene	Benzene	Chloroform	m&p-Xylenes	Methylene Chloride	o-Xylene	Chloromethane	Carbon Disulfide	Styrene
Precarbon (ITPP A)	10/8/2002	11:05	6.6	0.18	0.06	0.02	ND	ND	ND	ND	ND	ND	ND
Precarbon (ITPP B)	10/9/2002	12:31	5.6	0.18	0.04	0.06	ND	ND	ND	ND	ND	ND	ND
Precarbon 112002	11/20/2002	21:45	2.8	0.09	0.03	0.04	ND	ND	0.01	ND	0.54	ND	ND
Precarbon 112602	11/26/2002	20:10	6.8	0.18	0.06	ND	ND	ND	ND	ND	0.88	ND	ND
AQ1219022120NP4-1	12/19/2002	21:20	2.9	0.12	0.02	0.03	0.01	ND	ND	ND	ND	ND	ND

Midcarbon

Sample Name	Date	Time	Parameters (mg/m3) PCE	TCE	Toluene	Benzene	Chloroform	m&p-Xylenes	Methylene Chloride	o-Xylene	Chloromethane	Carbon Disulfide	Styrene
Midcarbon (ITPP A)	10/8/2002	11:07	0.004	ND	0.05	0.009	ND	0.008	ND	ND	ND	ND	ND
Midcarbon (ITPP B)	11/9/2002	12:30	0.002		0.038	0.003	ND	0.005	ND	ND	ND	ND	0.002
Midcarbon 112002	11/20/2002	21:50	ND	ND	0.22	0.06	ND	0.07	0.19	ND	0.77	ND	ND
Midcarbon 112602	11/26/2002	21:12	0.005	ND	0.015	0.004	ND	0.003	0.017	ND	0.07	ND	ND
AQ1219022120NP4-2	12/19/2002	21:20	0.04	ND	0.027	0.004	ND	0.006	0.03	ND	ND	ND	ND

Postcarbon

Sample Name	Date	Time	Parameters (mg/m3) PCE	TCE	Toluene	Benzene	Chloroform	m&p-Xylenes	Methylene Chloride	o-Xylene	Chloromethane	Carbon Disulfide	Styrene
Postcarbon (ITPP A)	10/8/2002	11:09	0.002	ND	0.048	0.003	ND	0.005	0.049	ND	ND	0.016	ND
Postcarbon (ITPP B)	10/9/2002	12:27	0.002	ND	0.04	0.006	ND	0.004	0.002	0.004	ND	0.021	0.002
Postcarbon 112002	11/20/2002	21:51	Sample lost due to lab error										
Postcarbon 112602	11/26/2002	20:13	ND	ND	0.012	0.004	ND	0.002	0.017	ND	0.087	ND	ND
AQ1219022120NP4-3	12/19/2002	21:20	ND	ND	0.045	0.006	0.001	0.006	0.022	0.002	ND	ND	ND

TABLE 4

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

RECOVERY WELL WATER QUALITY RESULTS
(September 5, 2002 to January 3, 2003)

Recovery Well	Date Sampled	PCE (ug/L)	TCE (ug/L)	TCA (ug/L)	Vinyl Acetate (ug/L)	Chloroform (ug/L)	MTBE (ug/L)	Total Iron (mg/L)	Dissolved Iron (mg/L)	Isopropyl-benzene (ug/L)	1,1-Dichloro-ethane (ug/L)	cis-1,2-Dichloro-ethene (ug/L)	Methylene Chloride (ug/L)
RW-1	5-Sep-02	ND<1	ND<1	ND<1	27	1.9	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-1	5-Sep-02	ND<1	ND<1	ND<1	ND<1	2.6	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-1	8-Oct-02	ND<1	ND<1	ND<1	ND<1	2.2	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-1	9-Oct-02	ND<1	ND<1	ND<1	ND<1	2.8	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-1	26-Nov-02	-	-	-	-	-	-	0.032	ND<0.02	-	-	-	-
RW-1	3-Jan-03	ND<1	ND<1	ND<1	ND<1	2.4	16	-	-	ND<1	ND<1	ND<1	ND<1
RW-2	5-Sep-02	190	2.9	ND<1	ND<1	ND<1	21	-	-	ND<1	ND<1	ND<1	ND<1
RW-2	5-Sep-02	120	1.4	ND<1	ND<1	ND<1	18	-	-	ND<1	ND<1	ND<1	ND<1
RW-2	8-Oct-02	140	2	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-2	9-Oct-02	110	1.9	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	6.6
RW-2	26-Nov-02	-	-	-	-	-	-	50.9	0.188	-	-	-	-
RW-2	3-Jan-03	38	1.3	ND<1	ND<1	ND<1	7.5	-	-	ND<1	ND<1	ND<1	ND<1
RW-3	5-Sep-02	23	1.6	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-3	5-Sep-02	30	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-3	8-Oct-02	18	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-3	9-Oct-02	19	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-3	26-Nov-02	-	-	-	-	-	-	2.23	2.34	-	-	-	-
RW-3	3-Jan-03	2.8	8.5	4.8	ND<1	ND<1	ND<1	-	-	ND<1	ND<1	ND<1	ND<1
RW-4	23-Sep-02	550	8.5	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-4	23-Sep-02	590	9.5	1.6	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-4	8-Oct-02	670	11	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-4	9-Oct-02	450	9.6	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-4	26-Nov-02	-	-	-	-	-	-	11	2.41	-	-	-	-
RW-4	3-Jan-03	190	3.8	7.1	ND<1	ND<1	ND<1	-	-	ND<1	ND<1	ND<1	ND<1
RW-5	12-Sep-02	ND<1	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-5	12-Sep-02	ND<1	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-5	8-Oct-02	ND<1	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-5	9-Oct-02	ND<1	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-5	26-Nov-02	-	-	-	-	-	-	ND<0.02	ND<0.02	-	-	-	-
RW-5	3-Jan-03	5.5	ND<1	ND<1	ND<1	1.9	1.5	-	-	ND<1	ND<1	ND<1	ND<1
RW-6	12-Sep-02	69	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-6	12-Sep-02	140	1.1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1

TABLE 4

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

RECOVERY WELL WATER QUALITY RESULTS
(September 5, 2002 to January 3, 2003)

Recovery Well	Date Sampled	PCE (ug/L)	TCE (ug/L)	TCA (ug/L)	Vinyl Acetate (ug/L)	Chloroform (ug/L)	MTBE (ug/L)	Total Iron (mg/L)	Dissolved Iron (mg/L)	Isopropyl-benzene (ug/L)	1,1-Dichloro-ethane (ug/L)	cis-1,2-Dichloro-ethene (ug/L)	Methylene Chloride (ug/L)
RW-6	8-Oct-02	**120**	**1.7**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-6	9-Oct-02	**130**	ND<1	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-6	26-Nov-02	-	-	-	-	-	-	**0.37**	ND<0.02	-	-	-	-
RW-6	3-Jan-03	**110**	**1.1**	ND<1	ND<1	ND<1	ND<1	-	-	ND<1	ND<1	ND<1	ND<1
RW-7	12-Sep-02	**270**	**4.1**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-7	12-Sep-02	**350**	**5.2**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-7	8-Oct-02	**360**	**4.7**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-7	9-Oct-02	**370**	**4.9**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-7	26-Nov-02	-	-	-	-	-	-	**0.075**	ND<0.02	-	-	-	-
RW-7	3-Jan-03	**160**	**2.5**	**1.3**	ND<1	ND<1	ND<1	-	-	ND<1	ND<1	ND<1	ND<1
RW-8	23-Sep-02	**130**	**7.1**	ND<1	ND<1	ND<1	-	-	-	**1.1**	ND<1	ND<1	ND<1
RW-8	23-Sep-02	**100**	**6.6**	ND<1	ND<1	ND<1	-	-	-	**1.4**	ND<1	ND<1	ND<1
RW-8	8-Oct-02	**100**	**7.5**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-8	9-Oct-02	**94**	**6.6**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-8	26-Nov-02	-	-	-	-	-	-	**12.1**	**1.43**	-	-	-	-
RW-8	3-Jan-03	**59**	**4.3**	**4**	ND<1	ND<1	ND<1	-	-	ND<1	**2.4**	ND<1	ND<1
RW-9	23-Sep-02	**12**	**2.9**	ND<1	ND<1	ND<1	-	-	-	ND<1	ND<1	ND<1	ND<1
RW-9	23-Sep-02	**11**	**3**	**3.5**	ND<1	ND<1	-	-	-	ND<1	**5.3**	ND<1	ND<1
RW-9	8-Oct-02	**9.2**	**2.5**	**3.5**	ND<1	ND<1	-	-	-	ND<1	**6**	**1.1**	ND<1
RW-9	9-Oct-02	**16**	**3.4**	**6.6**	ND<1	ND<1	-	-	-	ND<1	**5.2**	ND<1	ND<1
RW-9	26-Nov-02	-	-	-	-	-	-	**2.99**	**1.72**	-	-	-	-
RW-9	3-Jan-03	**17**	**2.5**	**6.9**	ND<1	ND<1	ND<1	-	-	ND<1	**3.1**	ND<1	ND<1

ND: Not detected
<#: Less than method dete
ug/L: Micrograms per liter
-: Not analyzed

PCE: Tetrachloroethylene
TCE: Trichloroethene
TCA: 1,1,1-Trichloroethane
1,1-DCA: 1,1-Dichlorothane

1,1-DCE: 1,1-Dichloroethene
1,2-DCE: 1,2-Dichloroethene
MTBE: Methyl Tertiary Butyl Ether

APPENDICES

Appendix I:
Weekly Operations Reports

Ground-Water Remedial Action
Ground-Water Pump and Treat
Rowe Industries Superfund Site
SAG HARBOR, NEW YORK

WEEKLY OPERATIONS REPORT

Report Generated Sunday - Date: 12/16/02 5:55 AM

Recovery Wells										
Process Value	Units	RW1	RW2	RW3	RW4	RW5	RW6	RW7	RW8	RW9
Well Status	Dilution/ Conc.	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution
Pump Control Mode	Hand/Off/Auto	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flow	gpm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor Speed	rpm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Speed	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor Current	amps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discharge Pressure	psi	0.00	0.26	6.50	1.86	3.62	0.18	0.18	0.10	0.10
Static Groundwater Elev.	ft - MSL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Groundwater Drawdown 1/	ft	-1.73	-1.62	-1.14	-27.45	-1.21	0.58	-2.85	0.92	1.32

Transfer Pumps					
Process Value	Units	TP 1A	TP 1B	TP 2A	TP2B
Pump Control Mode	Hand/Off/Auto	Off	Off	Off	Off
Pump Status	on/off	Off	Off	Off	Off
Run Time	hours	95	15	29	0
Motor Speed	rpm	0.00	0.00	0.00	0.00
Percent Speed	%	0.00	0.00	0.00	0.00
Motor Current	amps	0.00	0.00	0.00	0.00
Flow	gpm	0.00		0.00	
Discharge Pressure	psi				
Equalization Tank Level	inches	24.09			
Transfer Tank Level	inches			37.04	
Transfer Tank pH				6.22	
Transfer Tank Conductivity 2/	uS			-83.83	

Mukti - Bag Filters				
Process Value	Units	Filter 1	Filter 2	Filter 3
Inlet Pressure	psi	15.67	14.41	14.95
Outlet Pressure	psi	13.88	14.33	14.63
Differential Pressure 3/	psi	1.80	0.08	-0.31

Air Stripper Blowers			
Process Value	Units	AS Blower	Booster B
Blower Control Mode	Hand/Off/Auto	Off	Off
Air Flow	scfm	18.59	33.38
Discharge Pressure	in WC	0.14	1.71
Motor Current	amps	0.01	0.00
Valve EBV-1 Position	% open	Open	
Valve EBV-2 Position	% open	Open	

Recharge Basins			
Process Value	Units	Primary	Secondary
Basin Flow 4/	gpm	6.04	0.00
Basin Level 5/	inches	4.61	4.66
Static Groundwater Elev.	ft - MSL		
Groundwater Mounding 6/	ft	17.71	

Notes:
1/ Calculation for groundwater drawdown is incorrect. The drawdown should be zero since the system is not operational.
2/ Conductivity sensor is not calibrated resulting in an erroneous reading.
3/ Pressure sensors utilized for differential pressure reading residual pressure in bag filter housings.
4/ Basin flowmeter at low or no flow experiences small fluctuation of paddle wheel due to turbulance. Measured value should be zero.
5/ Basin level offset not included in basin level reading. Sensor is measuring standing water in stilling well.
6/ Reading is static groundwater level above top of transducer. System is not operating at this time of data collection.

Ground-Water Remedial Action
Ground-Water Pump and Treat
Rowe Industries Superfund Site
SAG HARBOR, NEW YORK

WEEKLY OPERATIONS REPORT

Report Generated Sunday - Date: 12/23/02 6:56 AM

Recovery Wells										
Process Value	Units	RW1	RW2	RW3	RW4	RW5	RW6 2/	RW7	RW8 3/	RW9
Well Status	Dilution/ Conc.	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution
Pump Control Mode	Hand/Off/Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Off	Auto
Flow	gpm	34.50	45.16	30.57	57.59	55.02	51.98	80.13	0.00	99.80
Motor Speed	rpm	1595.00	1595.00	1537.00	1305.00	1450.00	0.00	1479.00	0.00	1334.00
Percent Speed	%	91.63	91.63	88.30	74.97	83.30	0.00	84.97	0.00	76.64
Motor Current	amps	1.60	2.70	1.60	2.50	2.90	0.00	6.30	0.00	6.80
Discharge Pressure	psi	10.03	34.70	18.91	1.86	29.82	16.03	21.64	21.33	35.90
Static Groundwater Elev.	ft - MSL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Groundwater Drawdown 1/	ft	-0.55	8.11	0.23	-27.45	1.98	31.41	-1.85	1.59	2.80

Transfer Pumps					
Process Value	Units	TP 1A	TP 1B	TP 2A	TP2B
Pump Control Mode	Hand/Off/Auto	Auto	Auto	Auto	Auto
Pump Status	on/off	Off	On	Off	On
Run Time	hours	161	83	95	61
Motor Speed	rpm	0.00	1363.00	0.00	1131.00
Percent Speed	%	0.00	78.30	0.00	64.97
Motor Current	amps	0.00	17.10	0.00	16.50
Flow	gpm	454.68		446.95	
Discharge Pressure	psi				
Equalization Tank Level	inches	27.54			
Transfer Tank Level	inches			40.75	
Transfer Tank pH				6.26	
Transfer Tank Conductivity 4/	uS			-146.61	

Mukti - Bag Filters				
Process Value	Units	Filter 1	Filter 2	Filter 3
Inlet Pressure	psi	17.46	16.63	16.39
Outlet Pressure	psi	15.63	16.10	16.82
Differential Pressure	psi	1.83	0.53	0.43

Air Stripper Blowers			
Process Value	Units	AS. Blower	Booster B.
Blower Control Mode	Hand/Off/Auto	Auto	Auto
Air Flow	scfm	2531.56	3540.89
Discharge Pressure	in WC	7.46	24.97
Motor Current 5/	amps	8.26	0.00
Valve EBV-1 Position	% open	Open	
Valve EBV-2 Position	% open	Open	

Recharge Basins			
Process Value	Units	Primary	Secondary
Basin Flow	gpm	347.48	0.00
Basin Level 6/	inches	41.32	4.41
Static Groundwater Elev.	ft - MSL		
Groundwater Mounding 7/	ft	21.05	

Notes:

1/ Calculation for groundwater drawdown is incorrect. Drawdown calculated from incorrect reference point.
2/ Variable speed drive bypassed for operation. Motor speed, percent speed and motor current readings collected from inactive drive.
3/ RW-8 pump was not running at the time the report data was collected.
4/ Conductivity sensor is not calibrated resulting in an erroneous reading.
5/ Booster blower current sensor is not referenced correctly in report program.
6/ Basin level offset not included in basin level reading. Sensor is measuring from bottom of stilling well to water level.
7/ Value is the transducer measurement of the water column above the sensor. Groundwater mounding is approximately 3.34 ft based on previous measurements.

Ground-Water Remedial Action
Ground-Water Pump and Treat
Rowe Industries Superfund Site
SAG HARBOR, NEW YORK

WEEKLY OPERATIONS REPORT

Report Generated Sunday - Date: 12/30/02 6:56 AM

Recovery Wells										
Process Value	Units	RW1	RW2	RW3	RW4	RW5	RW6 [2]	RW7	RW8	RW9
Well Status	Dilution/ Conc.	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution	Dilution
Pump Control Mode	Hand/Off/Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto
Flow	gpm	30.14	45.38	30.03	57.59	54.97	43.53	79.97	89.83	99.96
Motor Speed	rpm	1450.00	1566.00	1450.00	1305.00	1566.00	0.00	1566.00	1682.00	1566.00
Percent Speed	%	83.30	89.96	83.30	74.97	89.96	0.00	89.96	96.63	89.96
Motor Current	amps	1.50	2.60	1.50	2.50	3.20	0.00	6.80	6.40	8.60
Discharge Pressure	psi	6.82	28.61	15.87	1.86	43.04	23.97	31.02	43.60	53.77
Static Groundwater Elev.	ft - MSL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Groundwater Drawdown [1/]	ft	-0.99	7.99	-0.03	-27.45	0.94	25.23	-2.48	2.29	-47.79

Transfer Pumps					
Process Value	Units	TP 1A	TP 1B	TP 2A	TP2B
Pump Control Mode	Hand/Off/Auto	Auto	Auto	Auto	Auto
Pump Status	on/off	Off	On	Off	On
Run Time	hours	161	222	95	201
Motor Speed	rpm	0.00	1508.00	0.00	1276.00
Percent Speed	%	0.00	86.63	0.00	73.30
Motor Current	amps	0.00	18.50	0.00	18.30
Flow	gpm	520.09		531.59	
Discharge Pressure	psi				
Equalization Tank Level	inches	45.65			
Transfer Tank Level	inches			42.74	
Transfer Tank pH				6.33	
Transfer Tank Conductivity	uS			120.22	

Mukti - Bag Filters				
Process Value	Units	Filter 1	Filter 2	Filter 3
Inlet Pressure	psi	20.25	19.17	16.56
Outlet Pressure	psi	15.79	16.83	20.19
Differential Pressure	psi	4.46	2.35	3.63

Air Stripper Blowers			
Process Value	Units	AS Blower	Booster B.
Blower Control Mode	Hand/Off/Auto	Auto	Auto
Air Flow	scfm	2532.64	3543.29
Discharge Pressure	in WC	7.78	25.53
Motor Current [3/]	amps	8.37	0.00
Valve EBV-1 Position	% open	Open	
Valve EBV-2 Position	% open	Open	

Recharge Basins			
Process Value	Units	Primary	Secondary
Basin Flow	gpm	393.62	0.00
Basin Level [4/]	inches	41.50	4.98
Static Groundwater Elev.	ft - MSL		
Groundwater Mounding [5/]	ft	21.29	

Notes:

1/ Calculation for groundwater drawdown is incorrect. Drawdown calculated from incorrect reference point.
2/ Variable speed drive bypassed for operation. Motor speed, percent speed and motor current readings collected from inactive drive.
3/ Booster blower current sensor is not referenced correctly in report program.
4/ Basin level offset not included in basin level reading. Sensor is measuring from bottom of stilling well to water level.
5/ Value is the transducer measurement of the water column above the sensor. Groundwater mounding is approximately 3.58 ft based on previous measurements.

Appendix II:
Calculation of VOC Recovery by Ground-Water System

APPENDIX II

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

CALCULATION OF VOC RECOVERY BY THE GROUND-WATER RECOVERY SYSTEM

Calculated by: Richard W. Stoor
Checked by: Kai S. Hansen

STATEMENT OF PROBLEM:

Calculate the quantity of VOCs recovered from the ground-water recovery system. VOC concentrations are from samples collected from system influent. Concentrations reported as below the method detection limit are shown as 0.

PROBLEM CONSTRAINTS:

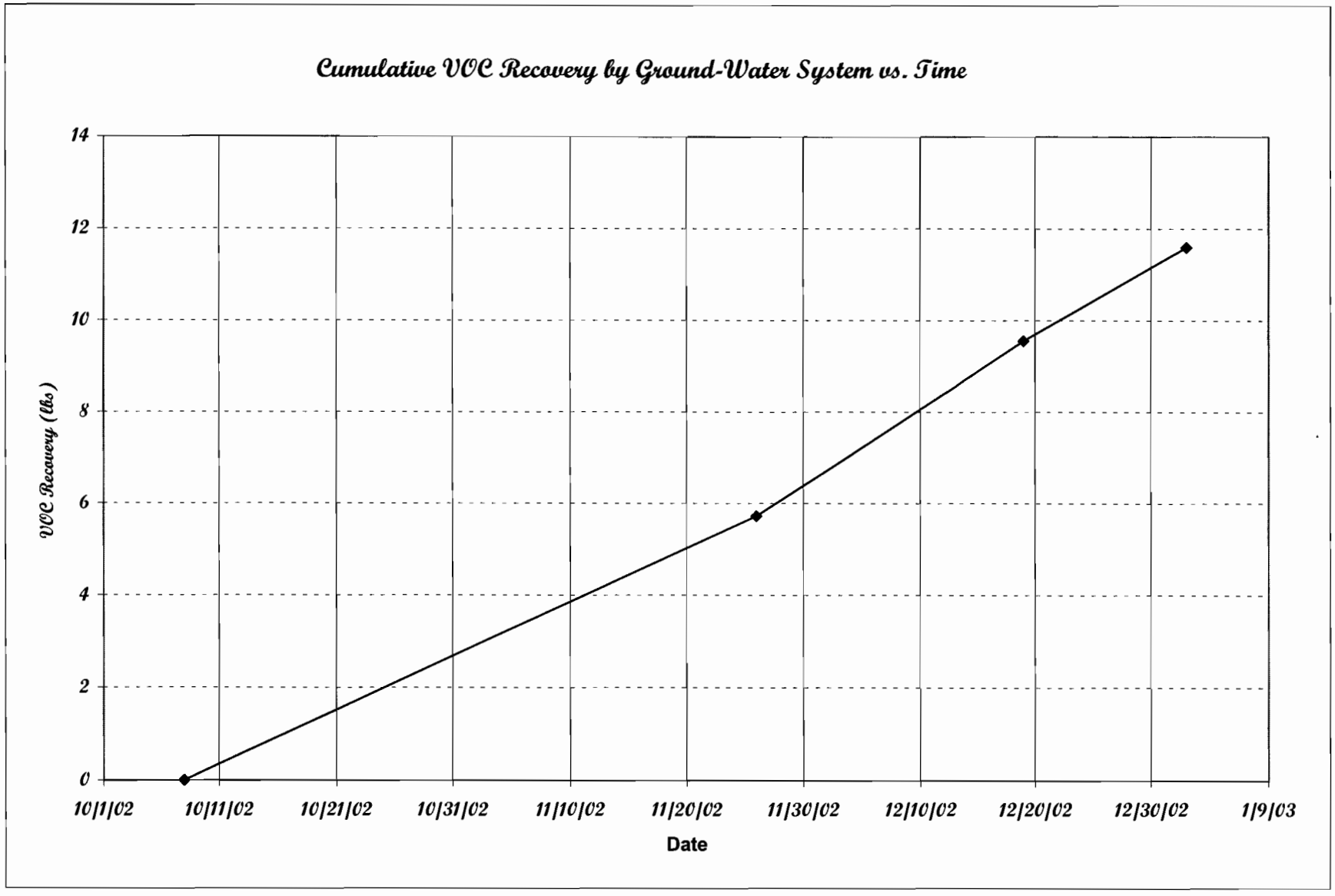
Date	PCE (ug/l)	TCE (ug/l)	TCA (ug/l)	cis-1,2-dichloroethene (ug/l)	Isopropyl benzene (ug/l)	Chloroform (ug/l)	Toluene (ug/l)
11/26/02	110	3.5	2.8	0.7	0	0.6	0
12/19/02	58	2.9	1.9	0	0	0	0
1/2/03	64	2.5	2.6	0	0	0	0

CALCULATION:

Recovery (lbs) = Concentration (ug/l) x Volume Pumped (gal) x 1 lb/453,590,000 ug x 3.785 l/gal

Date	Volume Pumped (gal)	PCE (lbs)	TCE (lbs)	TCA (lbs)	cis-1,2-dichloroethene (lbs)	Isopropyl benzene (lbs)	Chloroform (lbs)	Toluene (lbs)	Total Contaminants (lbs)	Cumulative VOC's (lbs)
10/8/02	0	0	0	0	0	0	0	0	0	0
11/26/02	5,830,342	5.352	0.170	0.136	0.034	0.000	0.029	0.000	5.721	5.721
12/19/02	7,318,438	3.542	0.177	0.116	0.000	0.000	0.000	0.000	3.835	9.557
1/2/03	3,539,670	1.890	0.074	0.077	0.000	0.000	0.000	0.000	2.041	11.598
Totals:	16,688,450	10.784	0.421	0.329	0.034	0.000	0.029	0.000	11.598	-

Note: Equalization tank totalizer meter reading recorded on 11/26/02 includes groundwater pumped during the Initial Testing Program.


Cumulative VOC Recovery by Ground-Water System vs. Time
VOC Recovery (lbs)
14
12
10
8
6
4
2
0
10/1/02
10/11/02
10/21/02
10/31/02
11/10/02
11/20/02
11/30/02
12/10/02
12/20/02
12/30/02
1/9/03
Date

Appendix III:
December 2002 Laboratory Analytical Reports

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-7
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-01A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
1,1,1,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1,1-Trichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1,2-Trichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,1-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2,3-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2,3-Trichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2,4-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2,4-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2-Dibromo-3-chloropropane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2-Dibromoethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,3,5-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,3-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,3-dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
1,4-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
2,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
2-Chloroethyl vinyl ether	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
2-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
4-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
4-Isopropyltoluene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Benzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Bromobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Bromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Bromodichloromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Bromoform	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Bromomethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Carbon disulfide	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Carbon tetrachloride	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Chlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Chloroethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Chloroform	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Chloromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
cis-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
cis-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Dibromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-7
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-01A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
Dibromomethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Dichlorodifluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Ethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Hexachlorobutadiene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Isopropylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
m,p-Xylene	< 2.0	2.0		µg/L	1	12/24/2002 5:39:00 AM
Methylene chloride	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Naphthalene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
n-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
n-Propylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
o-Xylene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
sec-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Styrene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
tert-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Tetrachloroethene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Toluene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
trans-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
trans-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Trichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Trichlorofluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Vinyl acetate	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM
Vinyl chloride	< 1.0	1.0		µg/L	1	12/24/2002 5:39:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-7
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-01B	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL IRON		**E200.7**				Analyst: **JP**
Iron	2.36	0.0200		mg/L	1	12/30/2002 12:59:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-7
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-01C	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED IRON		**E200.7**				Analyst: **JP**
Iron	0.194	0.0200		mg/L	1	12/30/2002 12:51:03 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-10
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-02A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
1,1,1,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1,1-Trichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1,2-Trichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,1-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2,3-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2,3-Trichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2,4-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2,4-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2-Dibromo-3-chloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2-Dibromoethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,3,5-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,3-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,3-dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
1,4-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
2,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
2-Chloroethyl vinyl ether	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
2-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
4-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
4-Isopropyltoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Benzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Bromobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Bromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Bromodichloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Bromoform	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Bromomethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Carbon disulfide	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Carbon tetrachloride	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Chlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Chloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Chloroform	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Chloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
cis-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
cis-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Dibromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-10
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-02A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
Dibromomethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Dichlorodifluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Ethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Hexachlorobutadiene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Isopropylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
m,p-Xylene	< 2.0	2.0		µg/L	1	12/24/2002 6:17:00 AM
Methylene chloride	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Naphthalene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
n-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
n-Propylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
o-Xylene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
sec-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Styrene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
tert-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Tetrachloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Toluene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
trans-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
trans-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Trichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Trichlorofluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Vinyl acetate	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM
Vinyl chloride	< 1.0	1.0		µg/L	1	12/24/2002 6:17:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-10
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-02B	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL IRON		**E200.7**				Analyst: **JP**
Iron	2.21	0.0200		mg/L	1	12/30/2002 1:04:39 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-10
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-02C	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED IRON		**E200.7**				Analyst: **JP**
Iron	0.271	0.0200		mg/L	1	12/30/2002 12:53:38 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-6
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-03A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
1,1,1,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1,1-Trichloroethane	1.9	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1,2-Trichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,1-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2,3-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2,3-Trichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2,4-Trichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2,4-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2-Dibromo-3-chloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2-Dibromoethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2-Dichloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,3,5-Trimethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,3-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,3-dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
1,4-Dichlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
2,2-Dichloropropane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
2-Chloroethyl vinyl ether	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
2-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
4-Chlorotoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
4-Isopropyltoluene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Benzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Bromobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Bromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Bromodichloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Bromoform	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Bromomethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Carbon disulfide	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Carbon tetrachloride	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Chlorobenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Chloroethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Chloroform	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Chloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
cis-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
cis-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Dibromochloromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-6
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-03A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 8021		**SW8021B**				Analyst: **LDS**
Dibromomethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Dichlorodifluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Ethylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Hexachlorobutadiene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Isopropylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
m,p-Xylene	< 2.0	2.0		µg/L	1	12/24/2002 6:55:00 AM
Methylene chloride	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Naphthalene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
n-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
n-Propylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
o-Xylene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
sec-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Styrene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
tert-Butylbenzene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Tetrachloroethene	58	1.0		µg/L	1	12/24/2002 6:55:00 AM
Toluene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
trans-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
trans-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Trichloroethene	2.9	1.0		µg/L	1	12/24/2002 6:55:00 AM
Trichlorofluoromethane	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Vinyl acetate	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM
Vinyl chloride	< 1.0	1.0		µg/L	1	12/24/2002 6:55:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-6
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-03B	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL IRON		**E200.7**				Analyst: **JP**
Iron	2.61	0.0200		mg/L	1	12/30/2002 1:07:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *30-Dec-02*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ1219021000NP2-6
Lab Order:	0212089	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/19/2002
Lab ID:	0212089-03C	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED IRON		**E200.7**				Analyst: **JP**
Iron	0.0520	0.0200		mg/L	1	12/30/2002 12:56:45 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-6
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-01A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL IRON		**E200.7**				Analyst: **JP**
Iron	1.07	0.0200		mg/L	1	1/9/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-6
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-01B	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED IRON		**E200.7**				Analyst: **JP**
Iron	0.190	0.0200		mg/L	1	1/9/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-7
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-02A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 METHOD 8021 PLUS MTBE		**SW8021B**				Analyst: **LDS**
1,1,1,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1,1-Trichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1,2-Trichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1-Dichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,1-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2,3-Trichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2,3-Trichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2,4-Trichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2,4-Trimethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2-Dibromo-3-chloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2-Dibromoethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2-Dichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,2-Dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,3,5-Trimethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,3-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,3-dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
1,4-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
2,2-Dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
2-Chloroethyl vinyl ether	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
2-Chlorotoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
4-Chlorotoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
4-Isopropyltoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Benzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Bromobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Bromochloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Bromodichloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Bromoform	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Bromomethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Carbon disulfide	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Carbon tetrachloride	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Chlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Chloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Chloroform	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Chloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
cis-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
cis-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Dibromochloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-7
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-02A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 METHOD 8021 PLUS MTBE		**SW8021B**				Analyst: **LDS**
Dibromomethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Dichlorodifluoromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Ethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Hexachlorobutadiene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Isopropylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
m,p-Xylene	< 2.0	2.0		µg/L	1	1/7/2003 5:04:00 PM
Methyl tert-butyl ether	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Methylene chloride	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Naphthalene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
n-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
n-Propylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
o-Xylene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
sec-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Styrene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
tert-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Tetrachloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Toluene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
trans-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
trans-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Trichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Trichlorofluoromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Vinyl acetate	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM
Vinyl chloride	< 1.0	1.0		µg/L	1	1/7/2003 5:04:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-7
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-02B	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL IRON		**E200.7**				Analyst: **JP**
Iron	1.44	0.0200		mg/L	1	1/9/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-7
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-02C	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED IRON		**E200.7**				Analyst: **JP**
Iron	0.411	0.0200		mg/L	1	1/9/2003

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-10
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-03A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 METHOD 8021 PLUS MTBE		**SW8021B**				Analyst: **LDS**
1,1,1,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1,1-Trichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1,2-Trichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1-Dichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,1-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2,3-Trichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2,3-Trichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2,4-Trichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2,4-Trimethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2-Dibromo-3-chloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2-Dibromoethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2-Dichloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,2-Dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,3,5-Trimethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,3-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,3-dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
1,4-Dichlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
2,2-Dichloropropane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
2-Chloroethyl vinyl ether	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
2-Chlorotoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
4-Chlorotoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
4-Isopropyltoluene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Benzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Bromobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Bromochloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Bromodichloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Bromoform	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Bromomethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Carbon disulfide	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Carbon tetrachloride	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Chlorobenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Chloroethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Chloroform	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Chloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
cis-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
cis-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Dibromochloromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

American Analytical Laboratories, Inc.

Date: *10-Jan-03*

CLIENT:	Legette Brashears & Graham Inc.	**Client Sample ID:**	WQ [122802] NP2-10
Lab Order:	0301034	**Tag Number:**	
Project:	Rowe Industries	**Collection Date:**	12/28/2002
Lab ID:	0301034-03A	**Matrix:**	LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES SW-846 METHOD 8021 PLUS MTBE		**SW8021B**				Analyst: **LDS**
Dibromomethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Dichlorodifluoromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Ethylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Hexachlorobutadiene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Isopropylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
m,p-Xylene	< 2.0	2.0		µg/L	1	1/7/2003 5:42:00 PM
Methyl tert-butyl ether	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Methylene chloride	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Naphthalene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
n-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
n-Propylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
o-Xylene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
sec-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Styrene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
tert-Butylbenzene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Tetrachloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Toluene	2.7	1.0		µg/L	1	1/7/2003 5:42:00 PM
trans-1,2-Dichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
trans-1,3-Dichloropropene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Trichloroethene	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Trichlorofluoromethane	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Vinyl acetate	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM
Vinyl chloride	< 1.0	1.0		µg/L	1	1/7/2003 5:42:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Form 1

STL Connecticut		Client Sample ID	**022124NP4-1**
Method: T01/T02		Lab Sample ID	202803-2
Sample Volume (L)	0.100	Date Sampled	12/20/2002
Temp (C)	25	Date Analyzed	12/31/2002

Compound	nL/L (ppbv/v)	Qualifier	RL	mg/M3	Qualifier	RL
Chloromethane	96.8	U	96.8	0.200	U	0.200
Vinyl Chloride	78.3	U	78.3	0.200	U	0.200
Bromomethane	51.5	U	51.5	0.200	U	0.200
Chloroethane	75.8	U	75.8	0.200	U	0.200
1,1-Dichloroethene	25.2	U	25.2	0.100	U	0.100
Carbon Disulfide	32.1	U	32.1	0.100	U	0.100
Methylene Chloride	28.8	U	28.8	0.100	U	0.100
trans-1,2-Dichloroethene	25.5	U	25.5	0.100	U	0.100
1,1-Dichloroethane	24.7	U	24.7	0.100	U	0.100
cis-1,2-Dichloroethene	25.5	U	25.5	0.100	U	0.100
Chloroform	2.1	J	20.5	0.010	J	0.100
1,1,1-Trichloroethane	18.4	U	18.4	0.100	U	0.100
Carbon Tetrachloride	15.9	U	15.9	0.100	U	0.100
Benzene	9.4	JB	31.3	0.030	JB	0.100
1,2-Dichloroethane	24.7	U	24.7	0.100	U	0.100
Trichloroethene	22.4		18.7	0.120		0.100
1,2-Dichloropropane	21.6	U	21.6	0.100	U	0.100
Bromodichloromethane	14.9	U	14.9	0.100	U	0.100
cis-1,3-Dichloropropene	22.0	U	22.0	0.100	U	0.100
Toluene	5.3	J	26.6	0.020	J	0.100
trans-1,3-Dichloropropene	22.0	U	22.0	0.100	U	0.100
1,1,2-Trichloroethane	18.4	U	18.4	0.100	U	0.100
Tetrachloroethene	427.2		14.7	2.900		0.100
Dibromochloromethane	11.8	U	11.8	0.100	U	0.100
Chlorobenzene	21.6	U	21.6	0.100	U	0.100
Ethylbenzene	23.1	U	23.1	0.100	U	0.100
m&p-Xylenes	23.1	U	23.1	0.100	U	0.100
o-Xylene	23.1	U	23.1	0.100	U	0.100
Styrene	23.5	U	23.5	0.100	U	0.100
Bromoform	9.7	U	9.7	0.100	U	0.100
1,1,2,2-Tetrachloroethane	14.6	U	14.6	0.100	U	0.100

Form 1

STL Connecticut		Client Sample ID	**AQ1219022120NP-4**
Method: T01/T02		Lab Sample ID	202803-1
Sample Volume (L)	1.000	Date Sampled	12/20/2002
Temp (C)	25	Date Analyzed	12/31/2002

Compound	nL/L (ppbv/v)	Qualifier	RL	mg/M3	Qualifier	RL
Chloromethane	9.7	U	9.7	0.020	U	0.020
Vinyl Chloride	7.8	U	7.8	0.020	U	0.020
Bromomethane	5.1	U	5.1	0.020	U	0.020
Chloroethane	7.6	U	7.6	0.020	U	0.020
1,1-Dichloroethene	2.5	U	2.5	0.010	U	0.010
Carbon Disulfide	3.2	U	3.2	0.010	U	0.010
Methylene Chloride	8.6		2.9	0.030		0.010
trans-1,2-Dichloroethene	2.5	U	2.5	0.010	U	0.010
1,1-Dichloroethane	2.5	U	2.5	0.010	U	0.010
cis-1,2-Dichloroethene	2.5	U	2.5	0.010	U	0.010
Chloroform	2.1	U	2.1	0.010	U	0.010
1,1,1-Trichloroethane	1.8	U	1.8	0.010	U	0.010
Carbon Tetrachloride	1.6	U	1.6	0.010	U	0.010
Benzene	1.3	JB	3.1	0.004	JB	0.010
1,2-Dichloroethane	2.5	U	2.5	0.010	U	0.010
Trichloroethene	1.9	U	1.9	0.010	U	0.010
1,2-Dichloropropane	2.2	U	2.2	0.010	U	0.010
Bromodichloromethane	1.5	U	1.5	0.010	U	0.010
cis-1,3-Dichloropropene	2.2	U	2.2	0.010	U	0.010
Toluene	7.2		2.7	0.027		0.010
trans-1,3-Dichloropropene	2.2	U	2.2	0.010	U	0.010
1,1,2-Trichloroethane	1.8	U	1.8	0.010	U	0.010
Tetrachloroethene	0.6	J	1.5	0.004	J	0.010
Dibromochloromethane	1.2	U	1.2	0.010	U	0.010
Chlorobenzene	2.2	U	2.2	0.010	U	0.010
Ethylbenzene	2.3	U	2.3	0.010	U	0.010
m&p-Xylenes	1.4	J	2.3	0.006	J	0.010
o-Xylene	2.3	U	2.3	0.010	U	0.010
Styrene	2.4	U	2.4	0.010	U	0.010
Bromoform	1.0	U	1.0	0.010	U	0.010
1,1,2,2-Tetrachloroethane	1.5	U	1.5	0.010	U	0.010

Form 1

STL Connecticut		Client Sample ID	022120NP4-3
Method: T01/T02		Lab Sample ID	202803-3
Sample Volume (L)	1.000	Date Sampled	12/20/2002
Temp (C)	25	Date Analyzed	12/31/2002

Compound	nL/L (ppbv/v)	Qualifier	RL	mg/M3	Qualifier	RL
Chloromethane	9.7	U	9.7	0.020	U	0.020
Vinyl Chloride	7.8	U	7.8	0.020	U	0.020
Bromomethane	5.1	U	5.1	0.020	U	0.020
Chloroethane	7.6	U	7.6	0.020	U	0.020
1,1-Dichloroethene	2.5	U	2.5	0.010	U	0.010
Carbon Disulfide	3.2	U	3.2	0.010	U	0.010
Methylene Chloride	6.3		2.9	0.022		0.010
trans-1,2-Dichloroethene	2.5	U	2.5	0.010	U	0.010
1,1-Dichloroethane	2.5	U	2.5	0.010	U	0.010
cis-1,2-Dichloroethene	2.5	U	2.5	0.010	U	0.010
Chloroform	0.2	J	2.1	0.001	J	0.010
1,1,1-Trichloroethane	1.8	U	1.8	0.010	U	0.010
Carbon Tetrachloride	1.6	U	1.6	0.010	U	0.010
Benzene	1.9	JB	3.1	0.006	JB	0.010
1,2-Dichloroethane	2.5	U	2.5	0.010	U	0.010
Trichloroethene	1.9	U	1.9	0.010	U	0.010
1,2-Dichloropropane	2.2	U	2.2	0.010	U	0.010
Bromodichloromethane	1.5	U	1.5	0.010	U	0.010
cis-1,3-Dichloropropene	2.2	U	2.2	0.010	U	0.010
Toluene	11.9		2.7	0.045		0.010
trans-1,3-Dichloropropene	2.2	U	2.2	0.010	U	0.010
1,1,2-Trichloroethane	1.8	U	1.8	0.010	U	0.010
Tetrachloroethene	1.5	U	1.5	0.010	U	0.010
Dibromochloromethane	1.2	U	1.2	0.010	U	0.010
Chlorobenzene	2.2	U	2.2	0.010	U	0.010
Ethylbenzene	2.3	U	2.3	0.010	U	0.010
m&p-Xylenes	1.4	J	2.3	0.006	J	0.010
o-Xylene	0.5	J	2.3	0.002	J	0.010
Styrene	2.4	U	2.4	0.010	U	0.010
Bromoform	1.0	U	1.0	0.010	U	0.010
1,1,2,2-Tetrachloroethane	1.5	U	1.5	0.010	U	0.010

Appendix IV:
Calculation of VOC Emissions from Carbon Units

APPENDIX IV

GROUND-WATER REMEDIAL ACTION
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

CALCULATION OF VOLATILE ORGANIC COMPOUNDS DISCHARGED FROM VAPOR-PHASE CARBON UNITS

Calculated by: Kai S. Hansen
Checked by: Richard W. Stoor

STATEMENT OF PROBLEM:

Calculate the quantity of VOCs discharged from the vapor-phase carbon units based on vapor concentrations and flow rates.

PROBLEM CONSTRAINTS:

Emission Limits: Total VOCs - 0.022 lb/hr
(Acceptable stack discharge concentrations for meeting AgC concentrations at property boundary are included in table below. Allowable concentrations determined in attached calculation).

Date	PCE (mg/m^3)	TCE (mg/m^3)	Toluene (mg/m^3)	Benzene (mg/m^3)	Chloroform (mg/m^3)	m&p-Xylenes (mg/m^3)
Allowable Conc.	0.0068	0.041	NE	NE	2.1	NE
12/19/2002	0	0	0.045	0.006	0.001	0.006

Date	Methylene Chloride (mg/m^3)	o-Xylene (mg/m^3)	Chloro-methane (mg/m^3)	Carbon Disulfide (mg/m^3)	Styrene (mg/m^3)	Total VOCs (mg/m^3)
Allowable Conc.	NE	NE	NE	NE	NE	NA
12/19/2002	0.022	0.002	0	0	0	0.082

NE : Not Established for Site
\- : Not Collected
0 : Less than the laboratory method detection limit.
NA : Not Applicable

CALCULATION:

$$VOC\ Emissions(lb/hr) = C \times Q \times \frac{60\ \text{min}}{hr} \times \frac{1\ m^3}{35.31\ ft^3} \times \frac{1\ lb}{453{,}600\ mg}$$

where, Q is the air flowrate in standard cubic feet per minute (scfm) and
C is the VOC concentration in mg/m^3

Date	Operating Time (hours)	Vapor Flow Rate (scfm)*	VOC Vapor Conc. (mg/m^3)	VOC Emissions (lb/hr)	Cumulative VOC Emissions (lb)
12/17/2002	---	---	---	---	---
12/19/2002	48	3,359	0.082	0.001	0.050
				Total	0.050

* : Average vapor flow rate used.

CONCLUSIONS:

Emissions from the carbon units were below the VOC emission limit of 0.022 lbs/hr. Concentrations of PCE,TCE and chloroform at the stack were also below the allowable emission rates of those compounds corresponding to the AgC at the property line.

Signed:_____ Checked:_____
Date:_____

GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

DETERMINE THE MAXIMUM ALLOWABLE EMISSION RATE

Calculated by: Paul Jobmann (revised by JAB for actual vapor flowrate)
Checked by: Alfred N. Kovalik

STATEMENT OF PROBLEM:

Determine the maximum allowable emission rate to meet the NYSDEC AgC at the property line. Compare allowable emission rates with air stripper emission rates to determine if vapor treatment is required.

ASSUMPTIONS:

Vapor flow, Q(cfm) = 3,359

EQUATIONS:

1. Convert AgC from annual average concentration to an hourly averaged concentration. (Ref 1)

$$C(x,y,z)_{t2}\left[\frac{mg}{m^3}\right] = C(x,y,z)_{t1}\left[\frac{mg}{m^3}\right]\cdot\left(\frac{t1[min]}{t2[min]}\right)^{0.165}$$

2. Using TSCREEN modeling software, alter model emission rate to meet the hourly averaged AgC at the property line. (model outputs located in Appendix CC)

3. Convert the allowable emission rate, Q, from grams/second to lbs/hr.

$$Q\left[\frac{lbs}{hr}\right] = Q\left[\frac{g}{s}\right]\cdot\frac{60\,\text{sec}}{\text{min}}\cdot\frac{60\,\text{min}}{hr}\cdot\frac{lb}{453.6\,g}$$

CALCULATION:

VOC	AgC (ug/m^3)	AgC averaged hourly (ug/m^3)	Allowable Emission Rate, (g/s)[1]	Allowable Emission Rate, (lb/hr)
Chloroform	23	102.86	3.32E-03	2.64E-02
1,2-Dichloroethene (total)	1900	8497.02	2.74E-01	2.2
1,1,1-Trichloroethane	1000	4472.12	1.45E-01	1.1
1,1-Dichloroethene	2.0E-02	8.9E-02	2.88E-06	2.28E-05
1,1-Dichloroethane	500	2236.06	7.22E-02	5.73E-01
Tetrachloroethene	7.5E-02	3.4E-01	1.08E-05	8.59E-05
Trichloroethene	4.5E-01	2.01	6.49E-05	5.15E-04

[1] Emission rate used in TSCREEN model to achieve the AgC at the plume centerline (63.22 ft above ground) measured at the property line (60 feet from tower base).

4: Determine the corresponding concentration at the stack for the modeled allowable emission rate in ug/m^3.

$$Cu\left(\frac{\mu g}{m^3}\right) = \frac{Emissions\left(\frac{lb}{hr}\right) \cdot 4.53592 \cdot 10^8 \frac{\mu g}{lb}}{Q\left(\frac{ft^3}{min}\right) \cdot 60\frac{min}{hr} \cdot 0.028317\frac{m^3}{ft^3}}$$

VOC	Allowable Emission Rate, (lb/hr)	Corresponding Cu (ug/m^3)
Chloroform	2.64E-02	2.1E+03
1,2-Dichloroethene (total)	2.2	1.7E+05
1,1,1-Trichloroethane	1.1	9.1E+04
1,1-Dichloroethene	2.28E-05	1.8
1,1-Dichloroethane	5.73E-01	4.6E+04
Tetrachloroethene	8.59E-05	6.8
Trichloroethene	5.15E-04	4.1E+01

5. Compare allowable emission rate to meet AgC guidelines to air stripper emission rate.

VOC	Allowable Emission Rate, (lb/hr)	Air Stripper Emission Rate, (lb/hr)[2]	Total % Removal Required
Chloroform	2.64E-02	1.92E-03	*
1,2-Dichloroethene (total)	2.2	4.16E-03	*
1,1,1-Trichloroethane	1.1	4.47E-02	*
1,1-Dichloroethene	2.28E-05	9.82E-03	99.7676%
1,1-Dichloroethane	5.73E-01	3.71E-03	*
Tetrachloroethene	8.59E-05	1.81E-01	99.9526%
Trichloroethene	5.15E-04	2.51E-02	97.9479%

* Vapor phase carbon treatment not required to meet AgC.

[2] See Calculation 20: Determine Contaminant Removal Rate from Air Stripper.

CONCLUSION:

The remediation system stack emission rates for several VOCs exceed the allowable emission rates corresponding to the AgC at the property line. Therefore, vapor treatment following the air stripper is required.

REFERENCES:

1 Hesketh, 1991, Air Pollution Control-Traditional and Hazardous Pollutants, pp 54

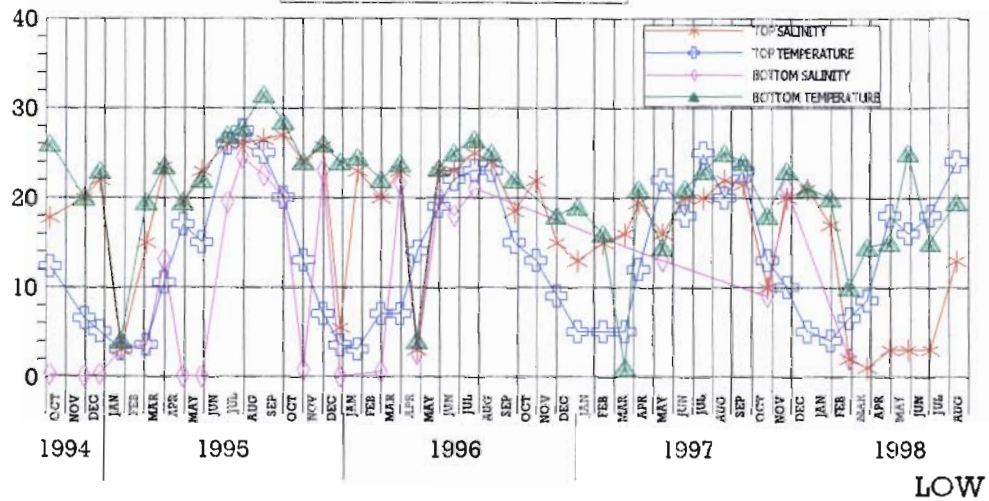
Appendix V:
Temperature and Salinity Graphs

GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

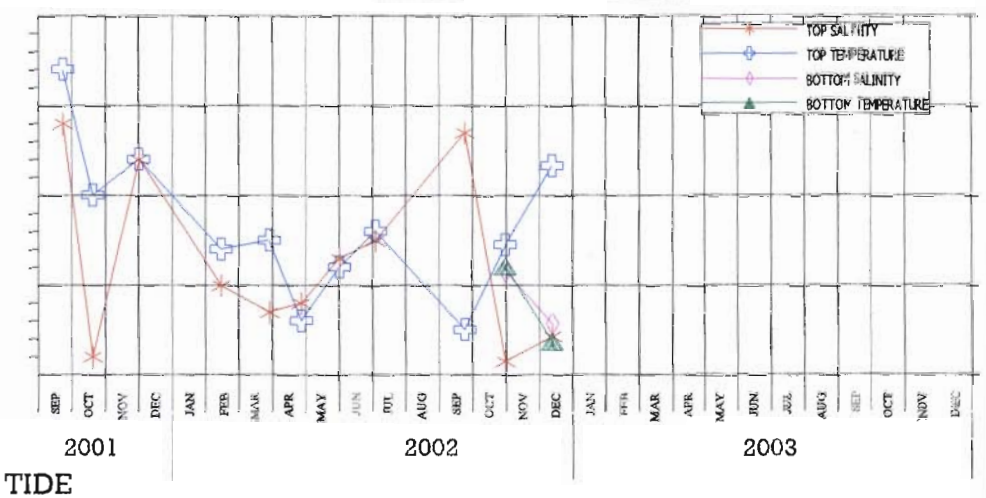
TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-1 DURING HIGH AND LOW TIDES

HIGH TIDE

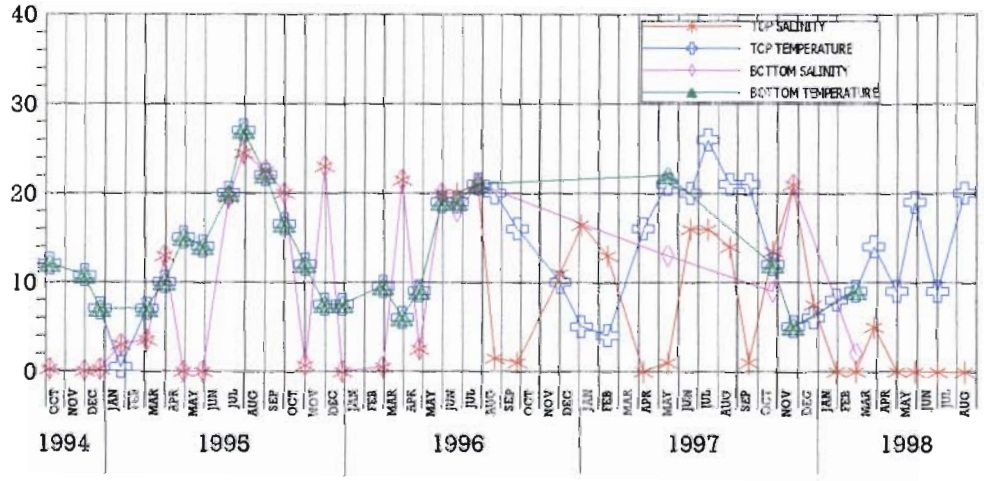
Historic Monitoring Data

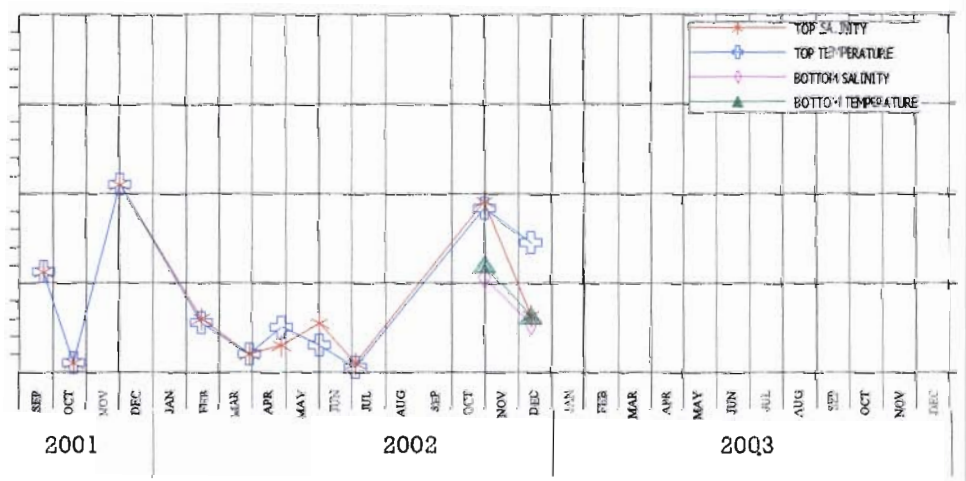


Current Monitoring Data



LOW TIDE





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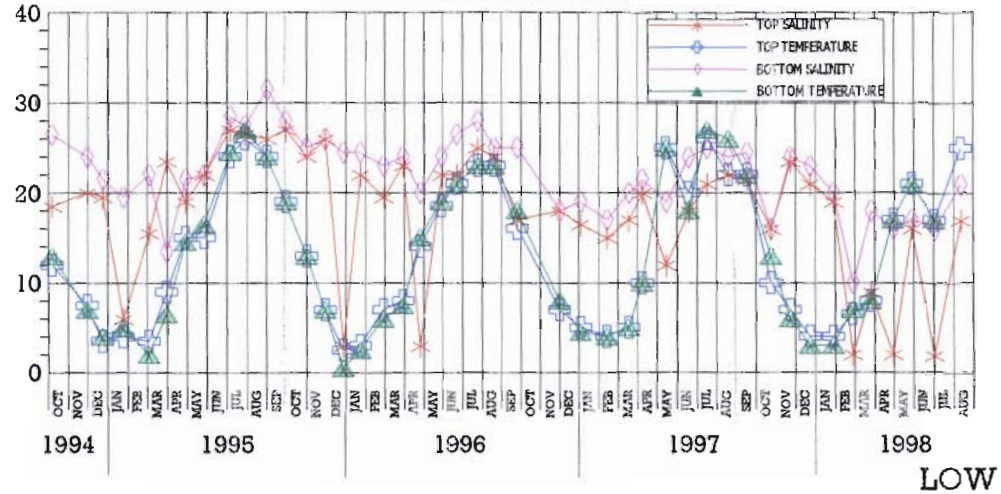
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-2 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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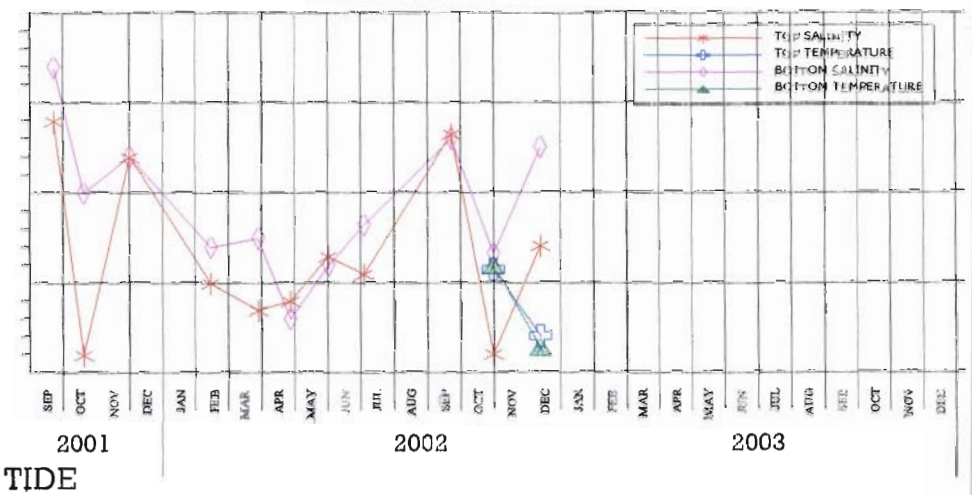

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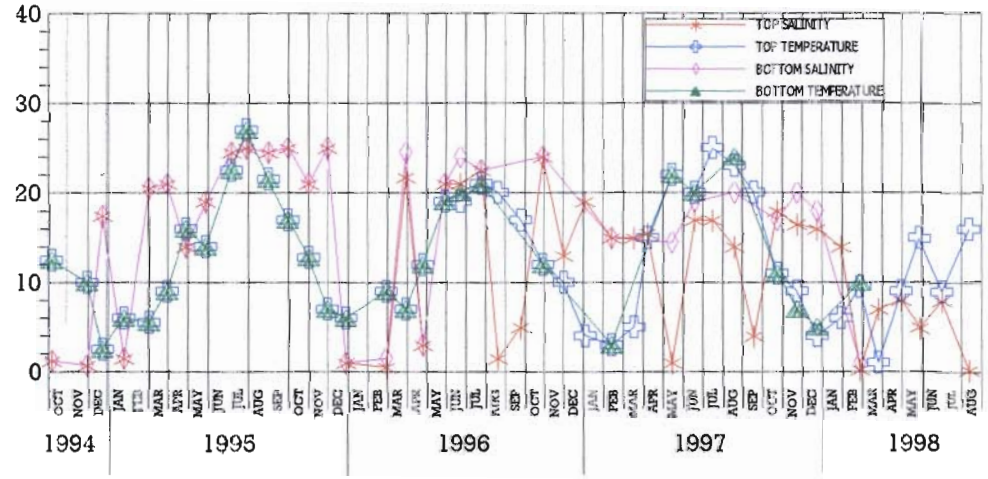

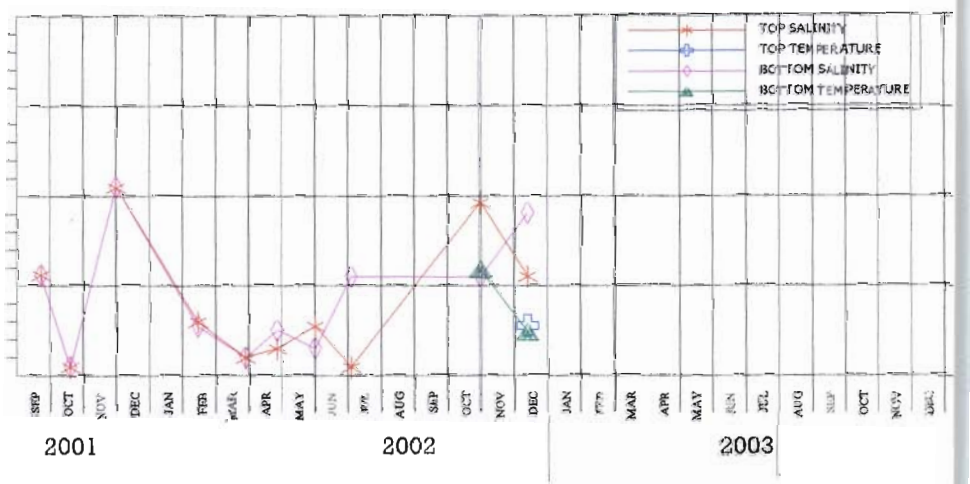

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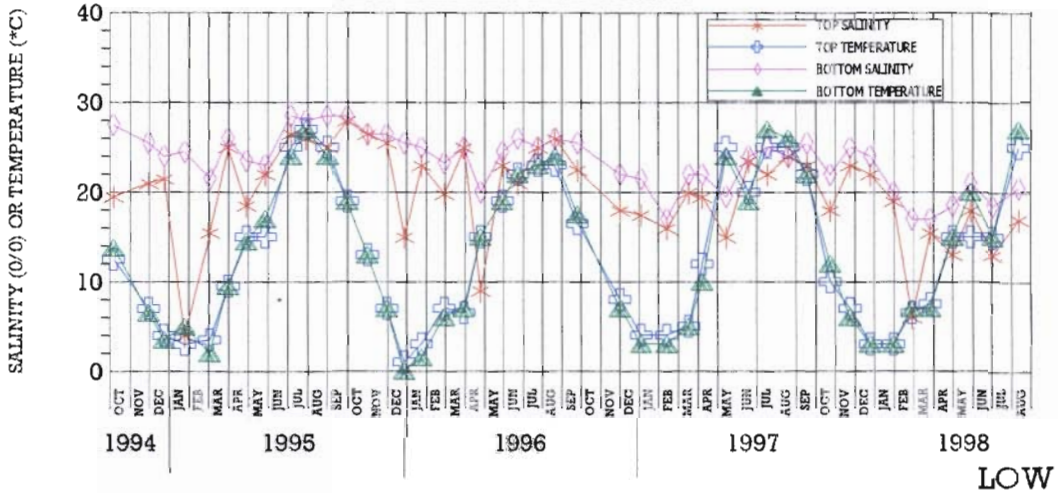
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-3 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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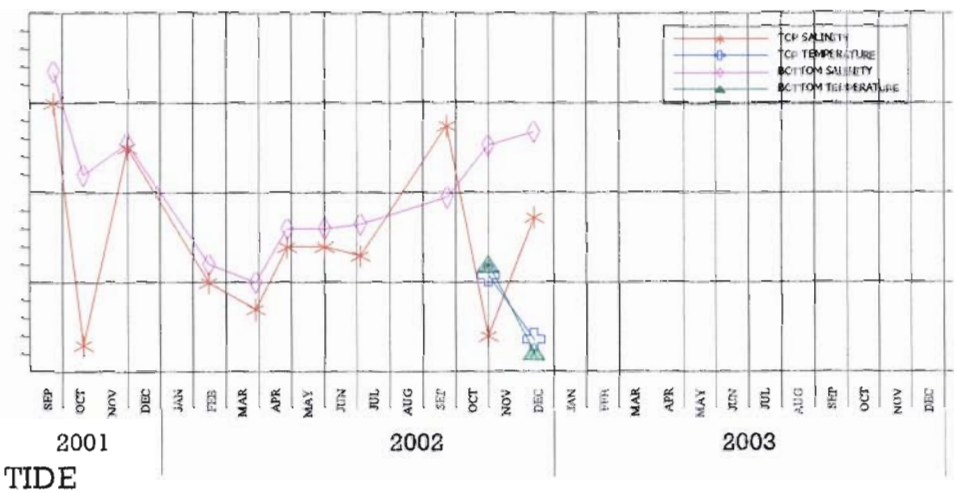

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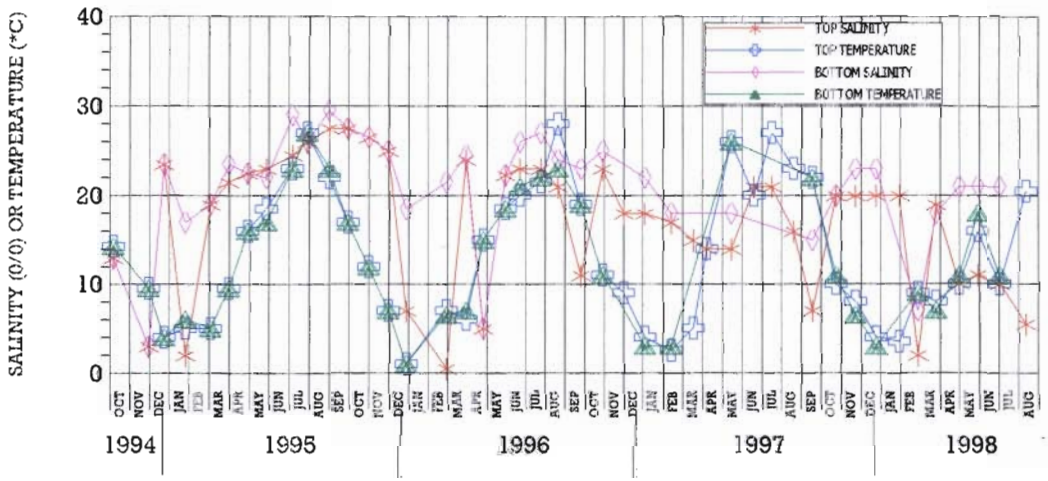

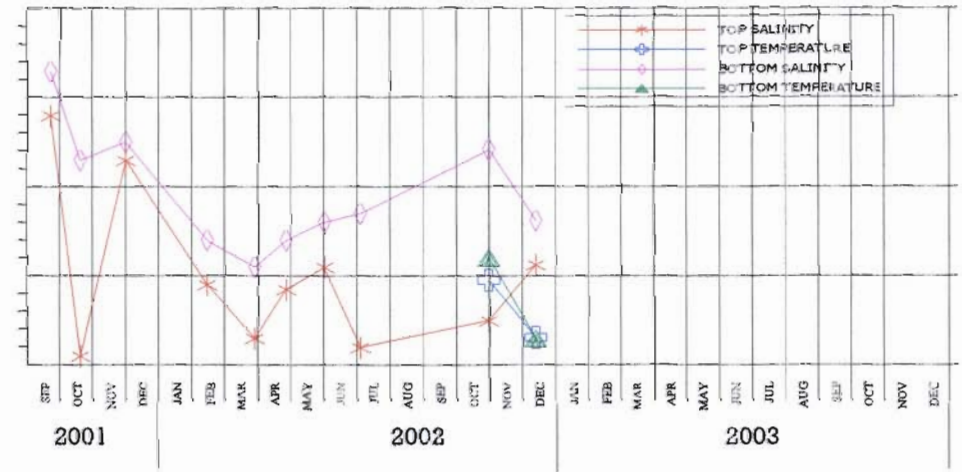

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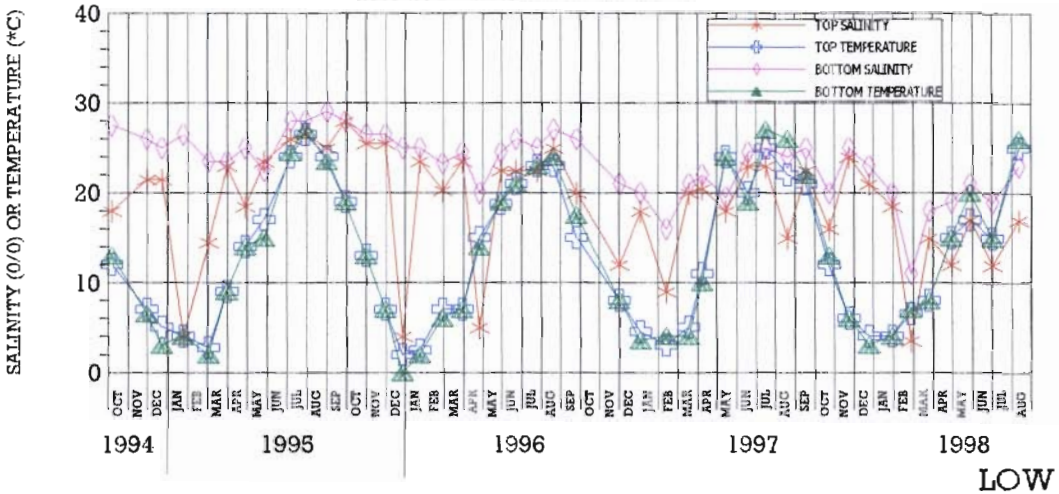
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-4 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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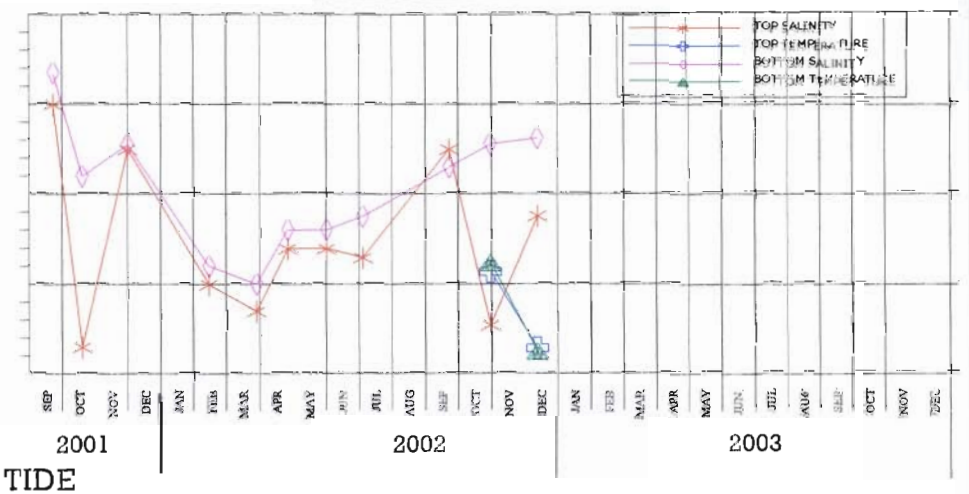

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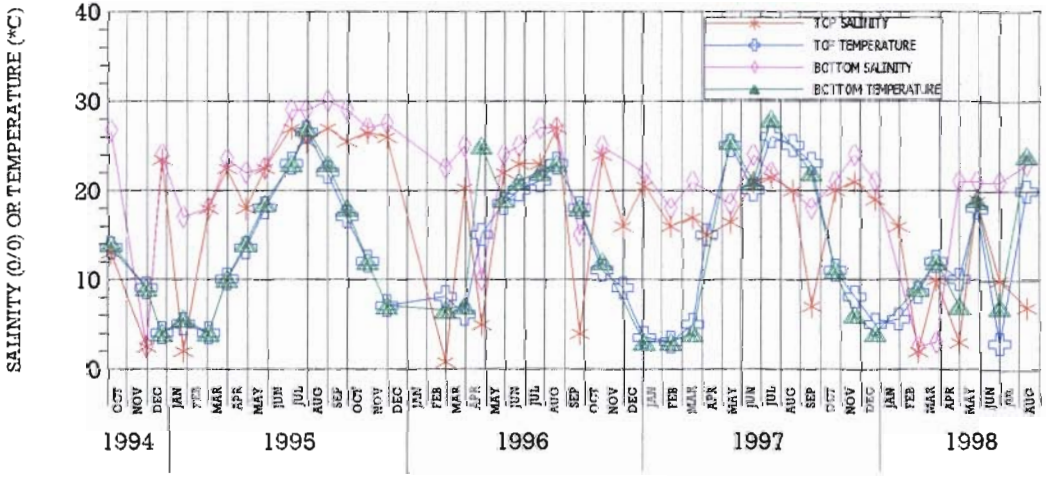

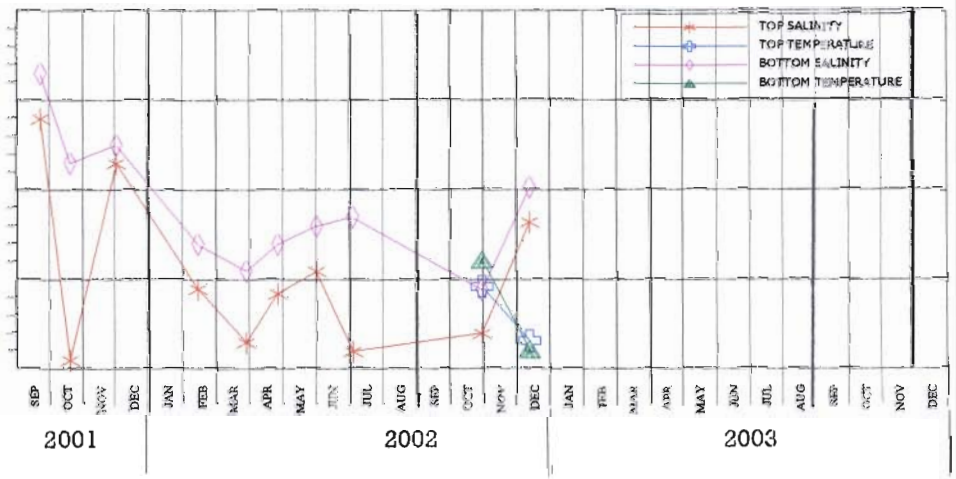

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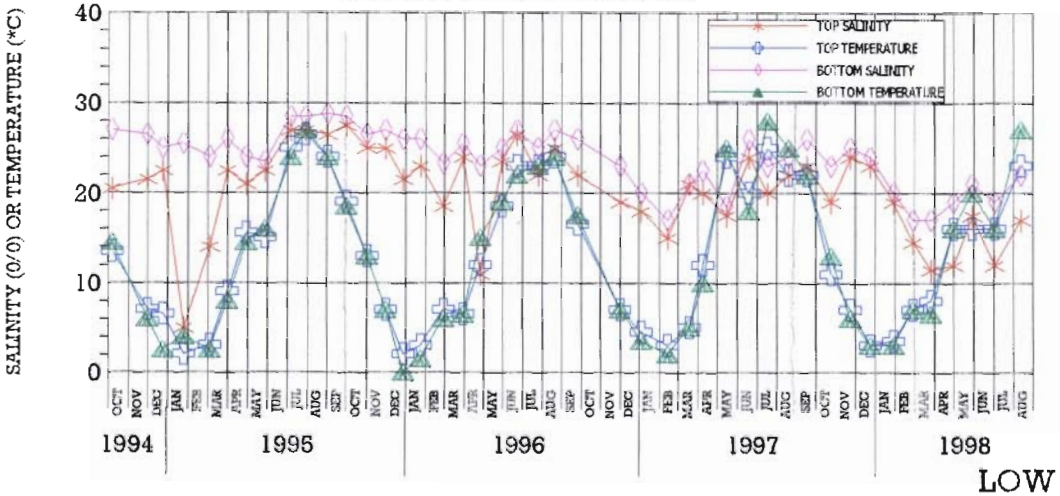
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-5 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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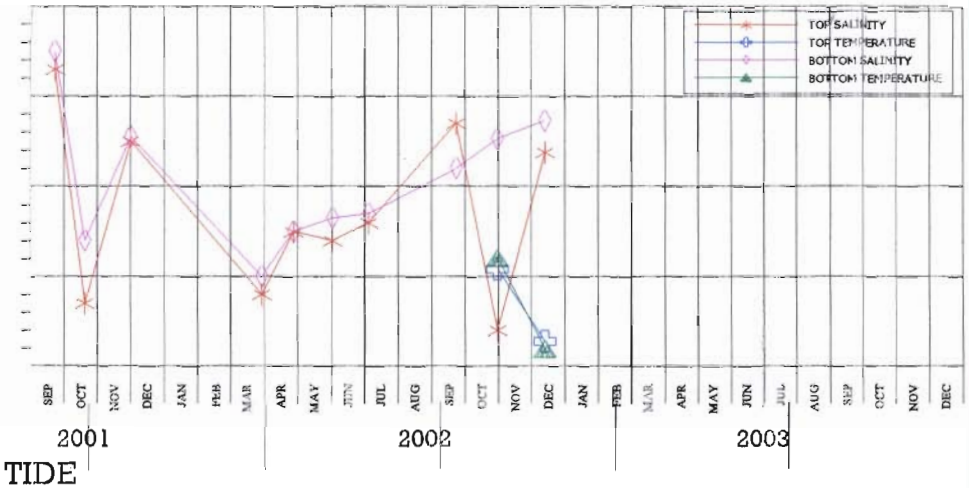
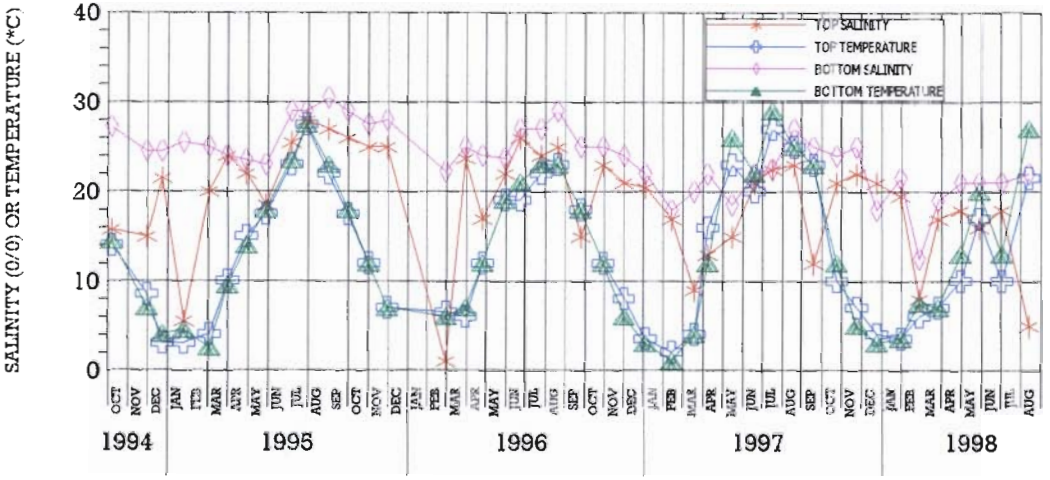
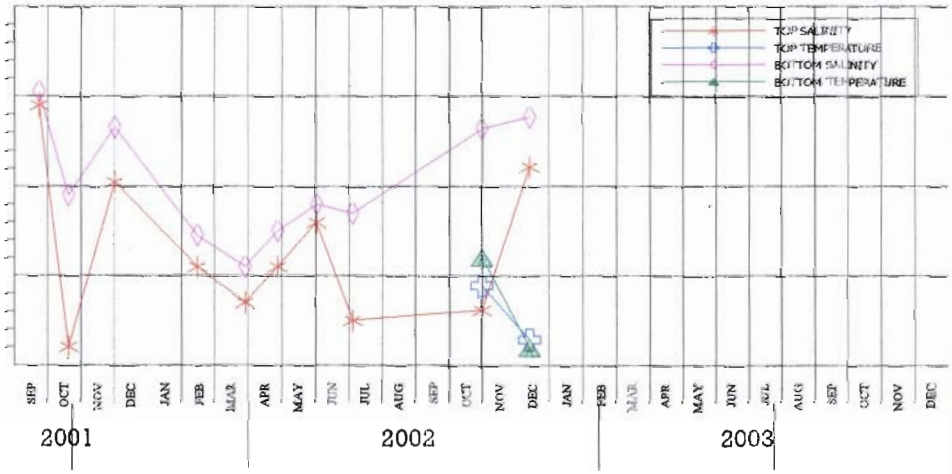


LOW TIDE





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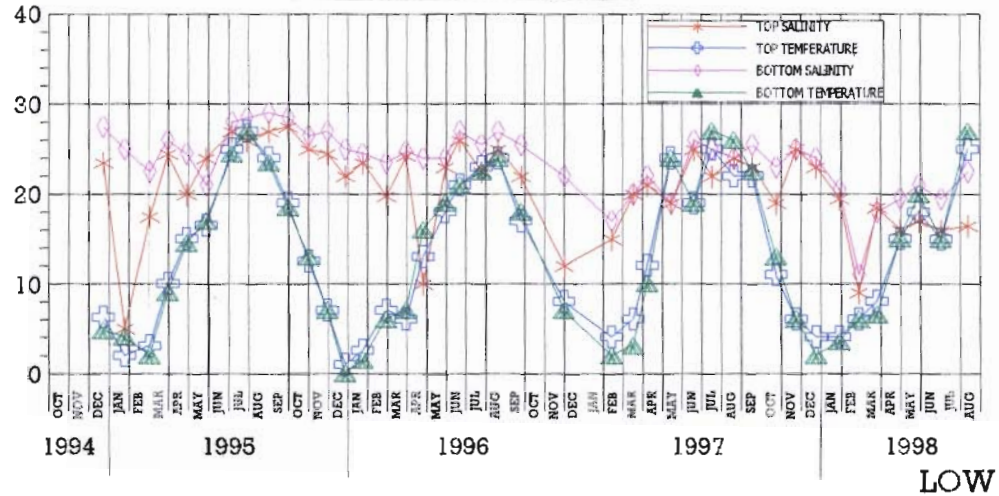
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-6 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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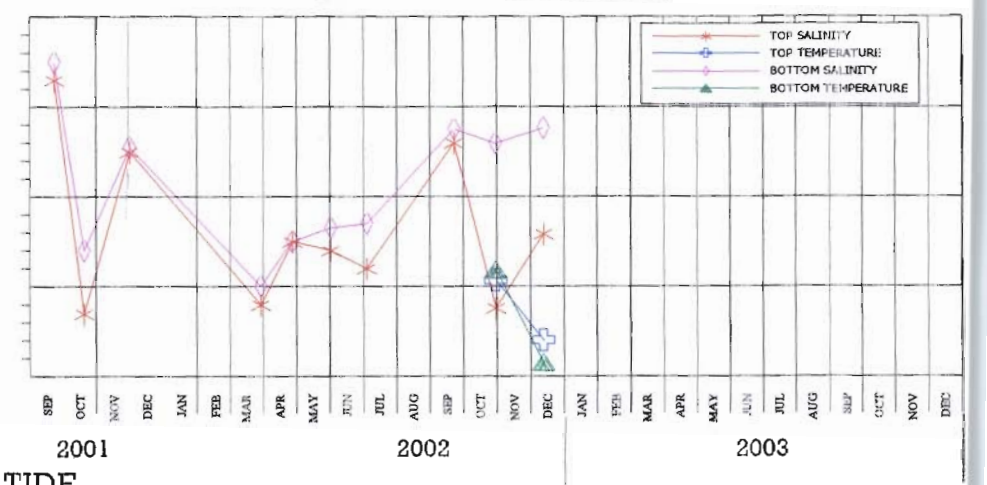

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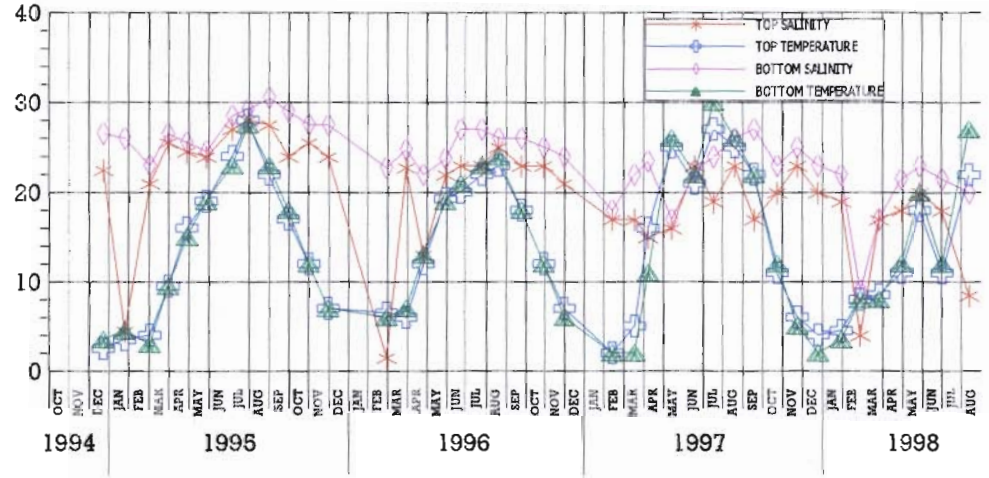

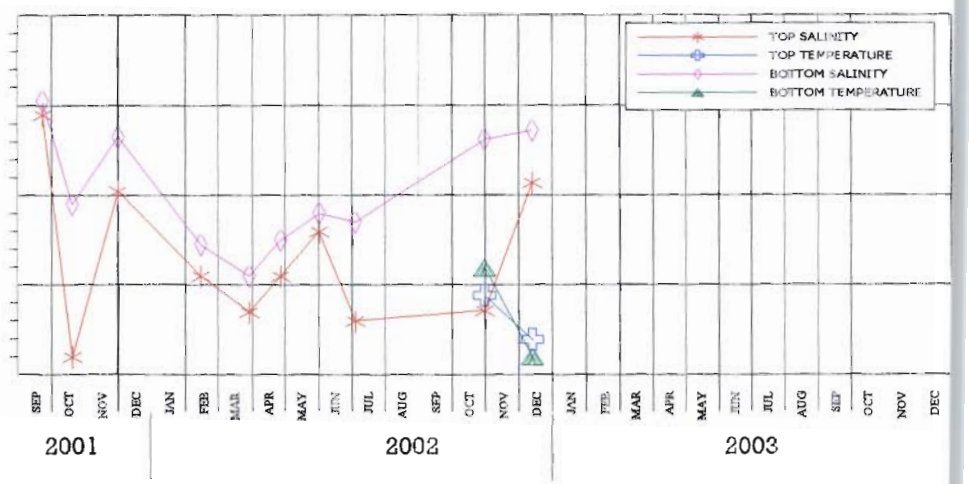

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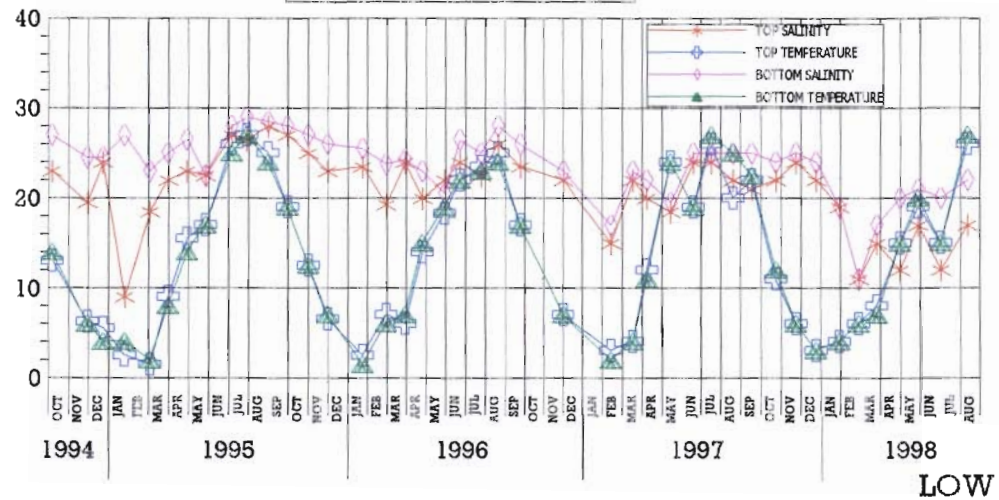
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-7 DURING HIGH AND LOW TIDES

HIGH TIDE

Historic Monitoring Data



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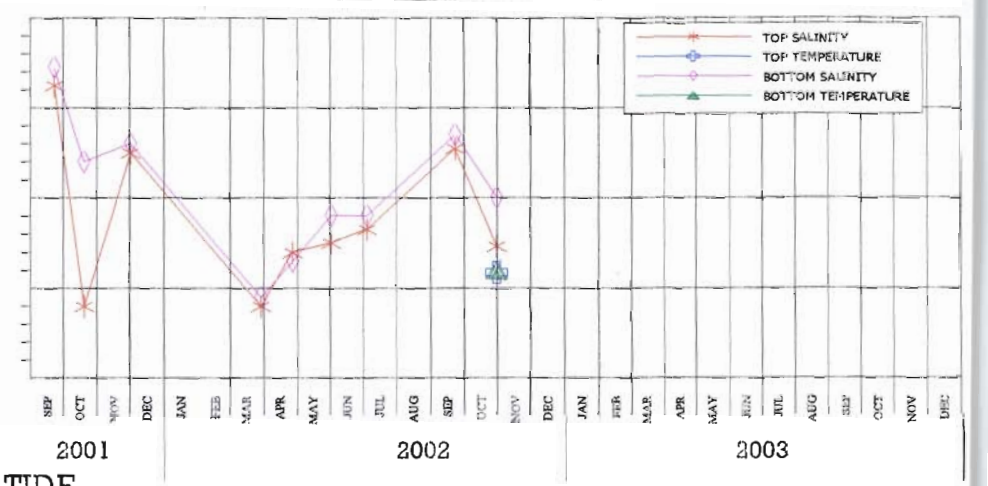

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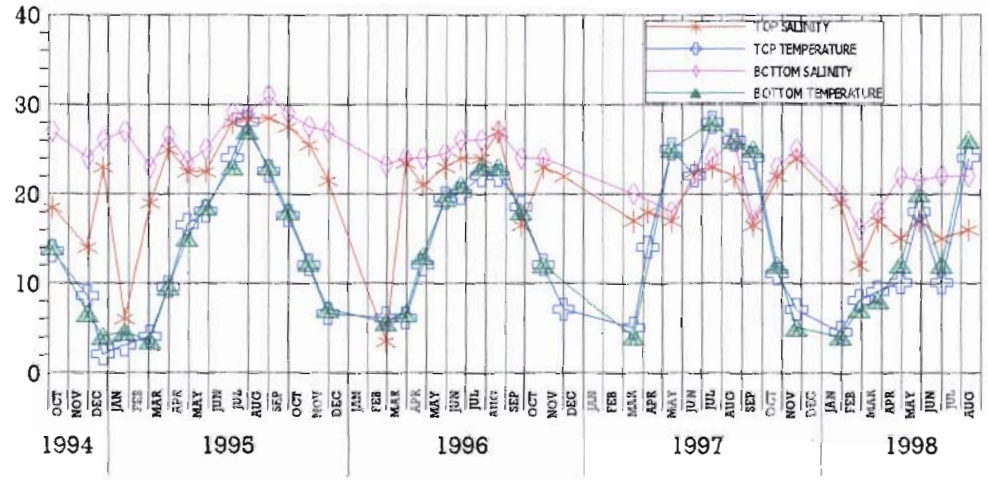

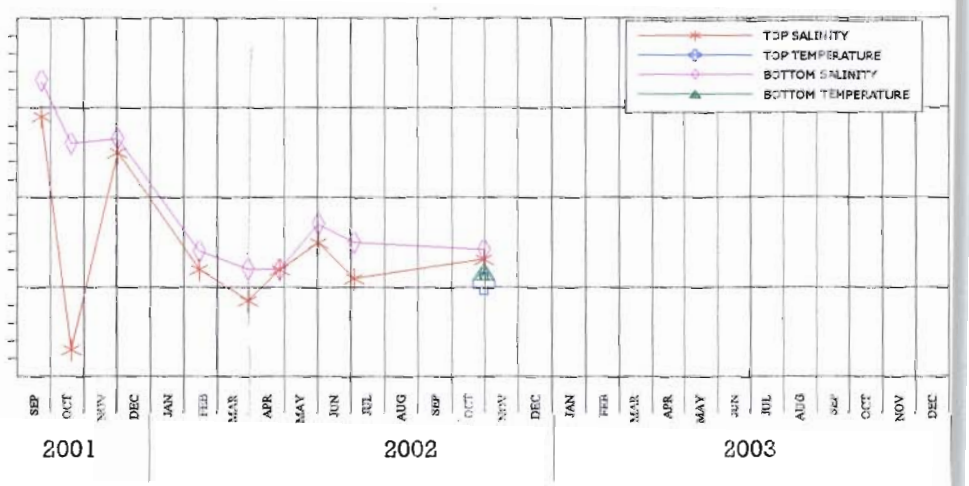

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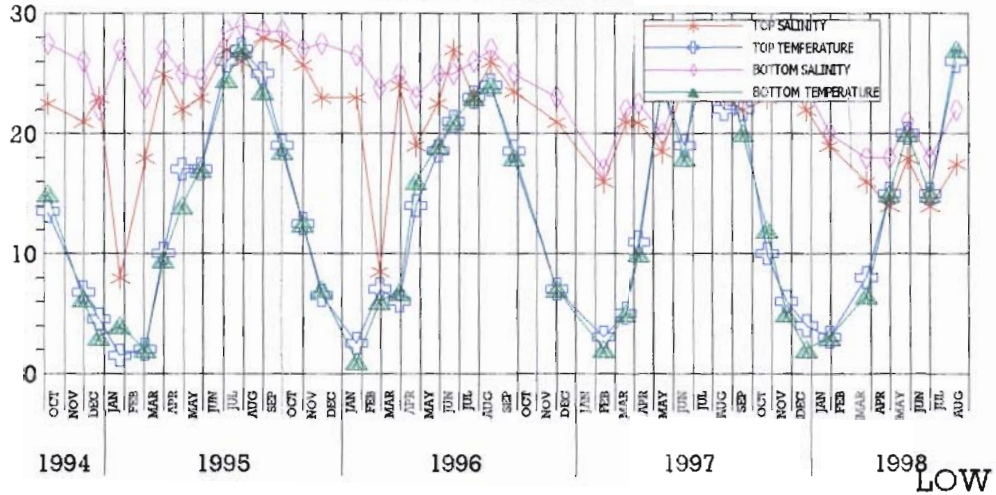
GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

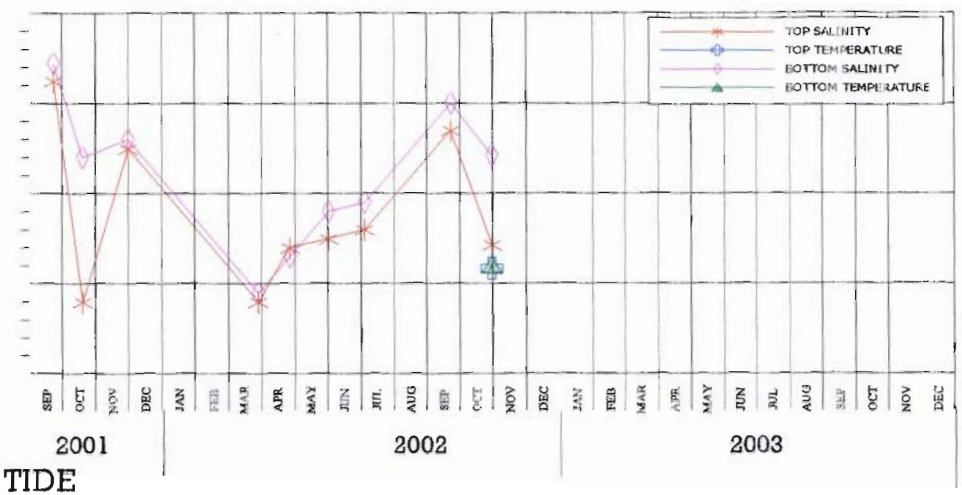
TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-8 DURING HIGH AND LOW TIDES

HIGH TIDE

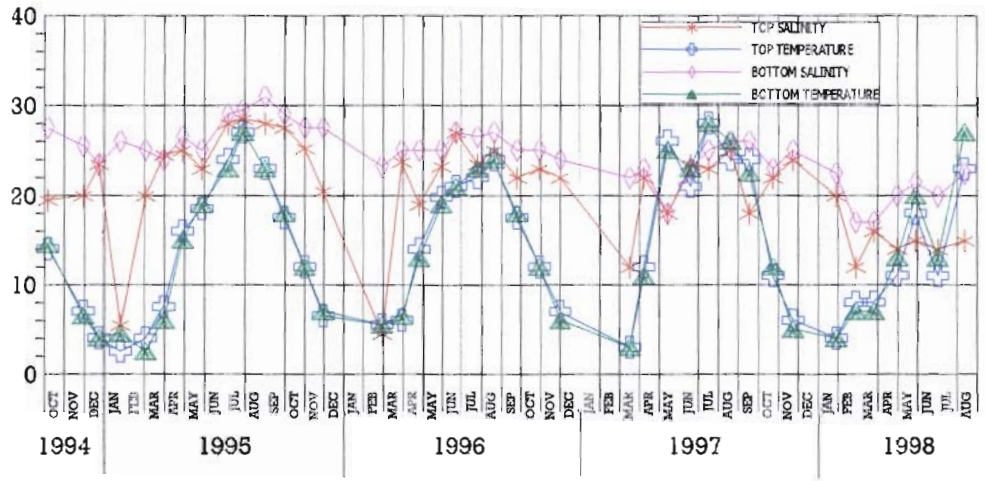
Historic Monitoring Data

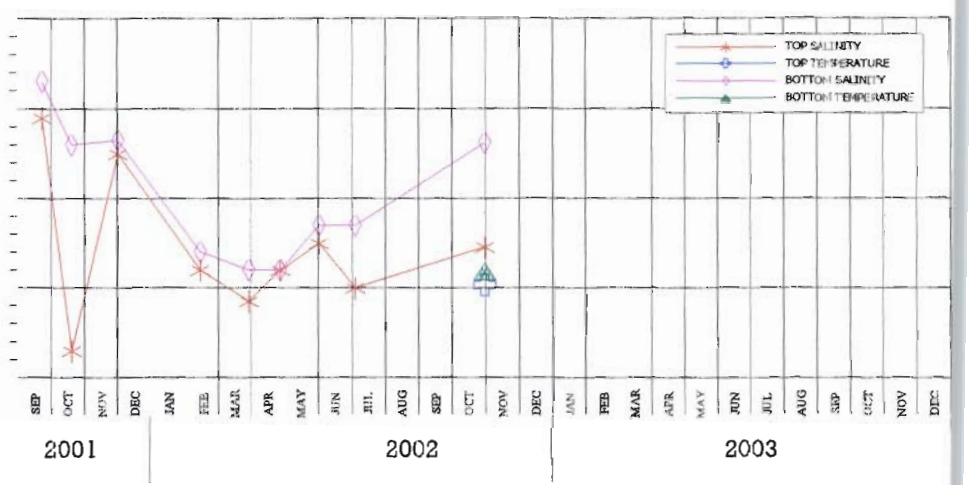


Current Monitoring Data



LOW TIDE

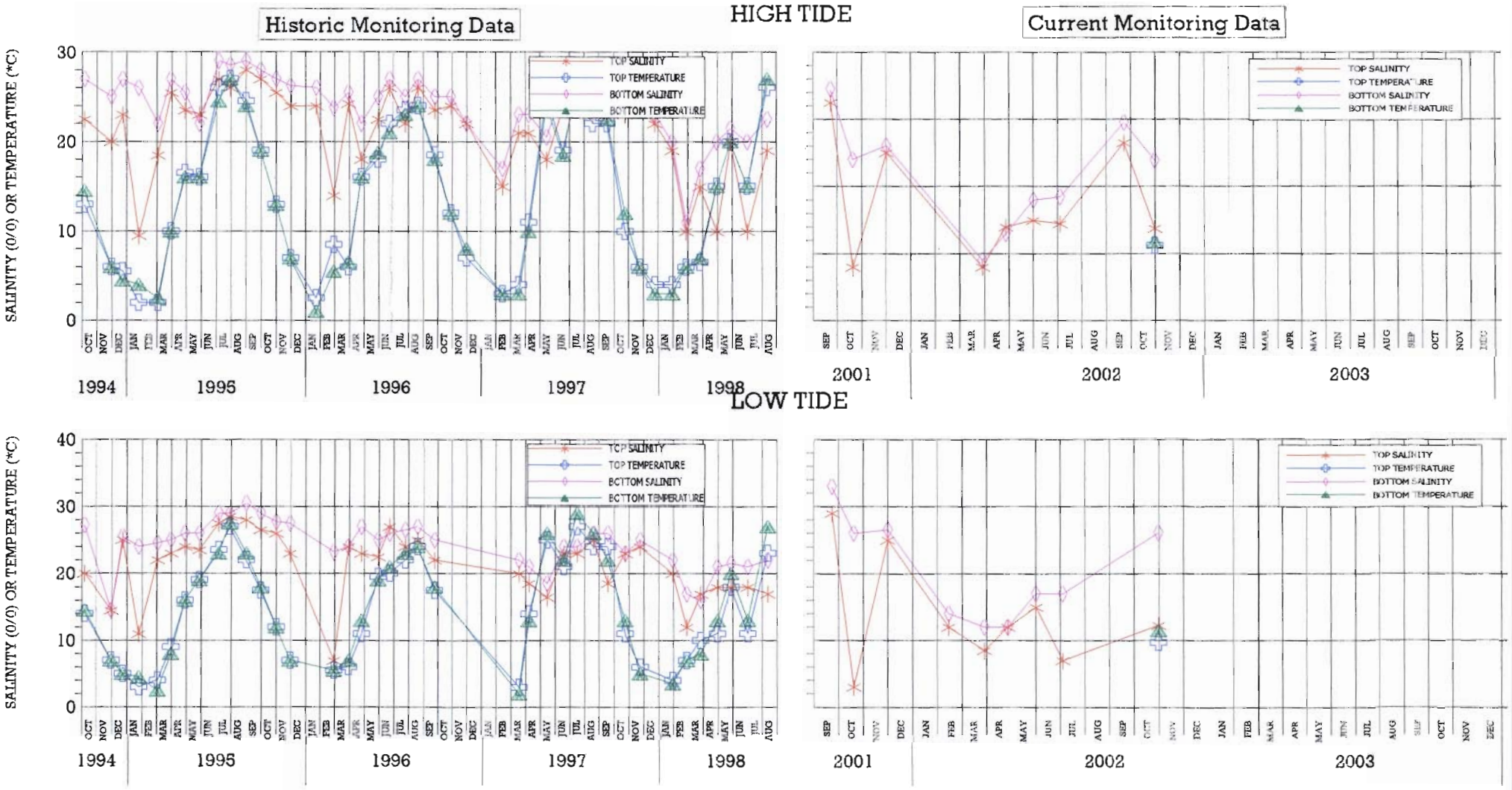




LBG ENGINEERING SERVICES, P.C.

GROUND-WATER REMEDIATION DESIGN
ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

TEMPERATURE AND SALINITY MEASUREMENTS FOR MONITORING POINT S-9 DURING HIGH AND LOW TIDES

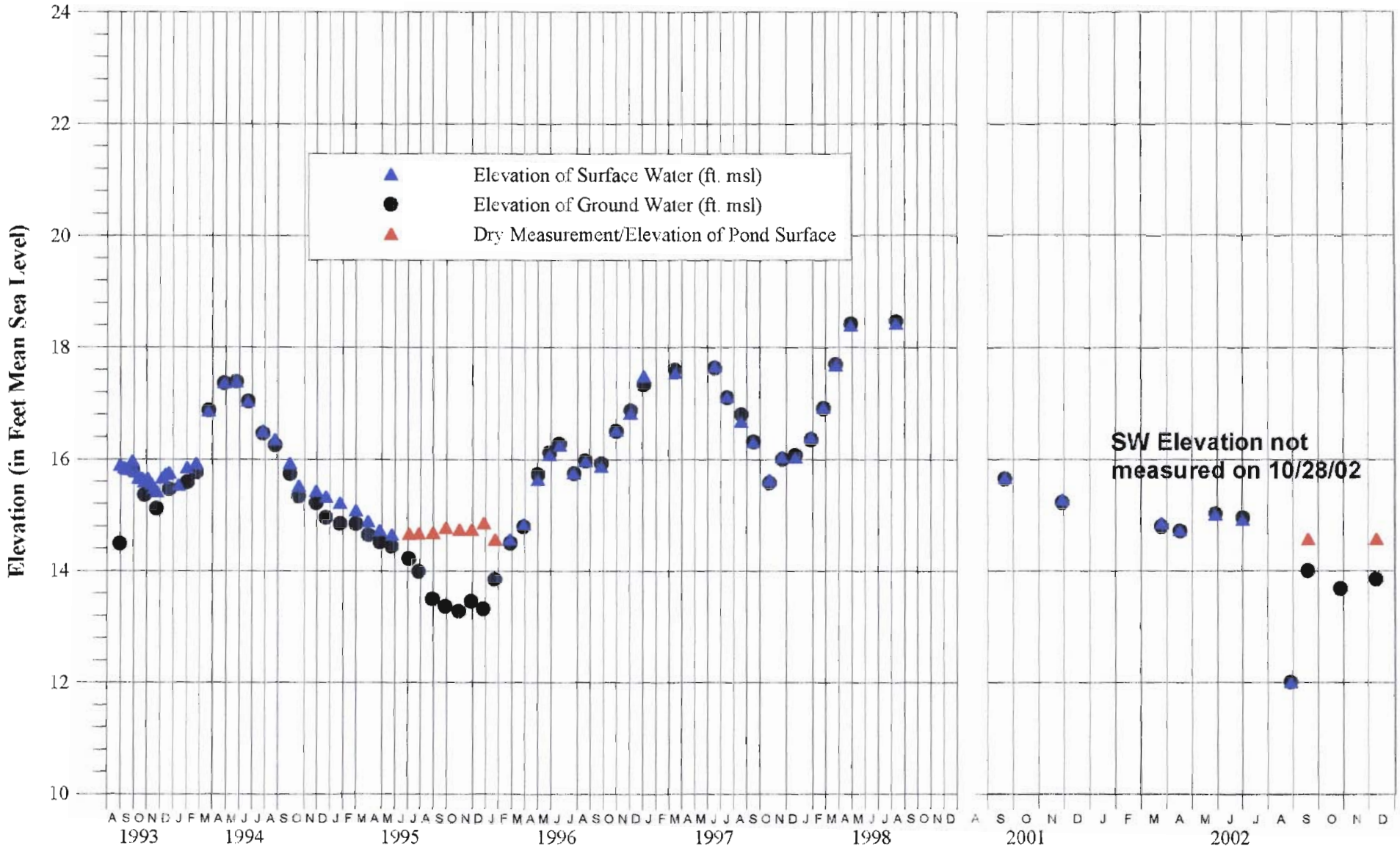


LBG ENGINEERING SERVICES, P.C.

Appendix VI:
Pond and Brook Hydrographs

ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

Hydrograph of Crooked Pond Piezometer

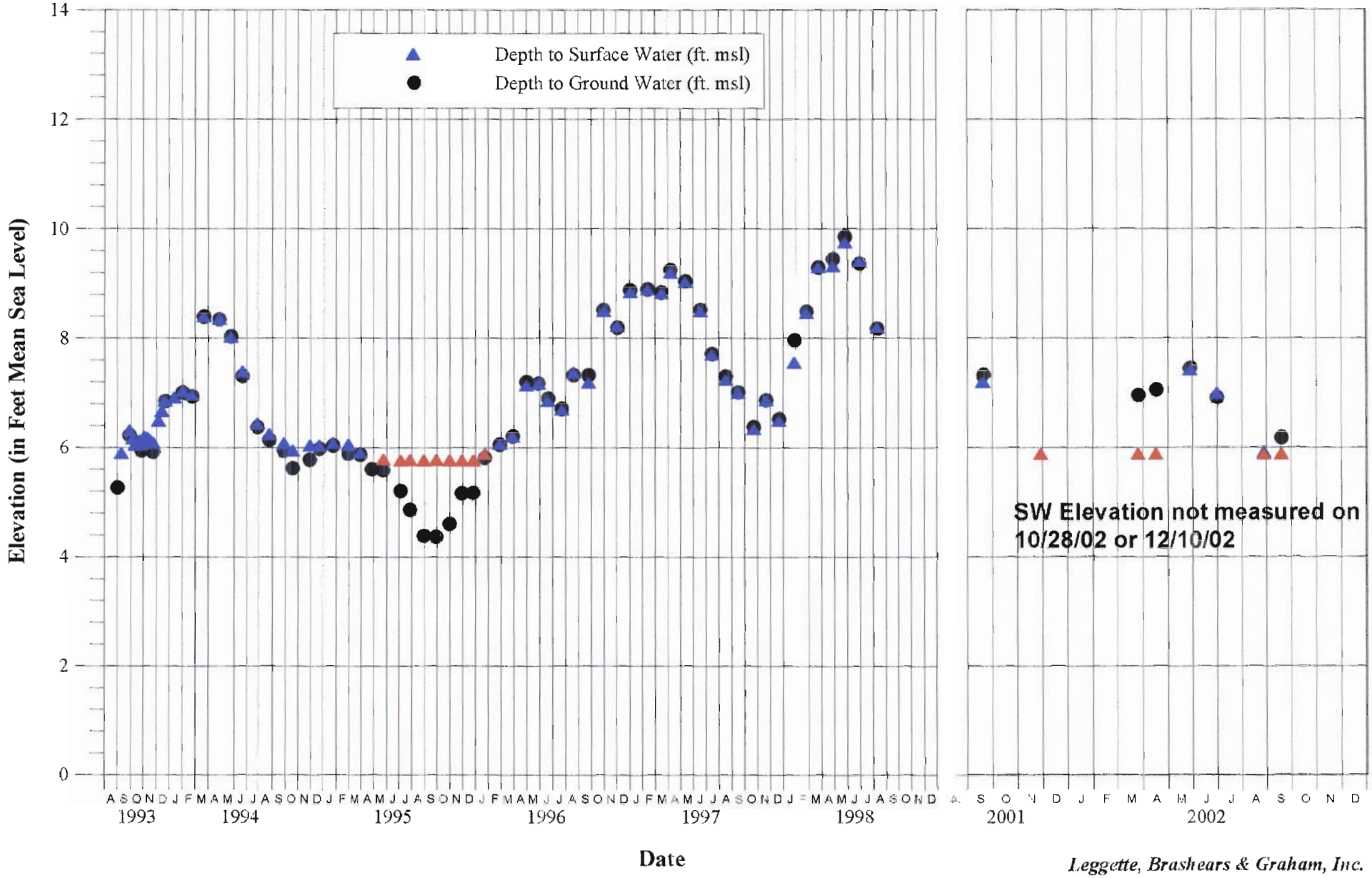


Leggette, Brashears & Graham, Inc.

H:\graphics\nabis\nabsag\pond_data\crooked.grf

ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

Hydrograph of Whaler's Pond Piezometer

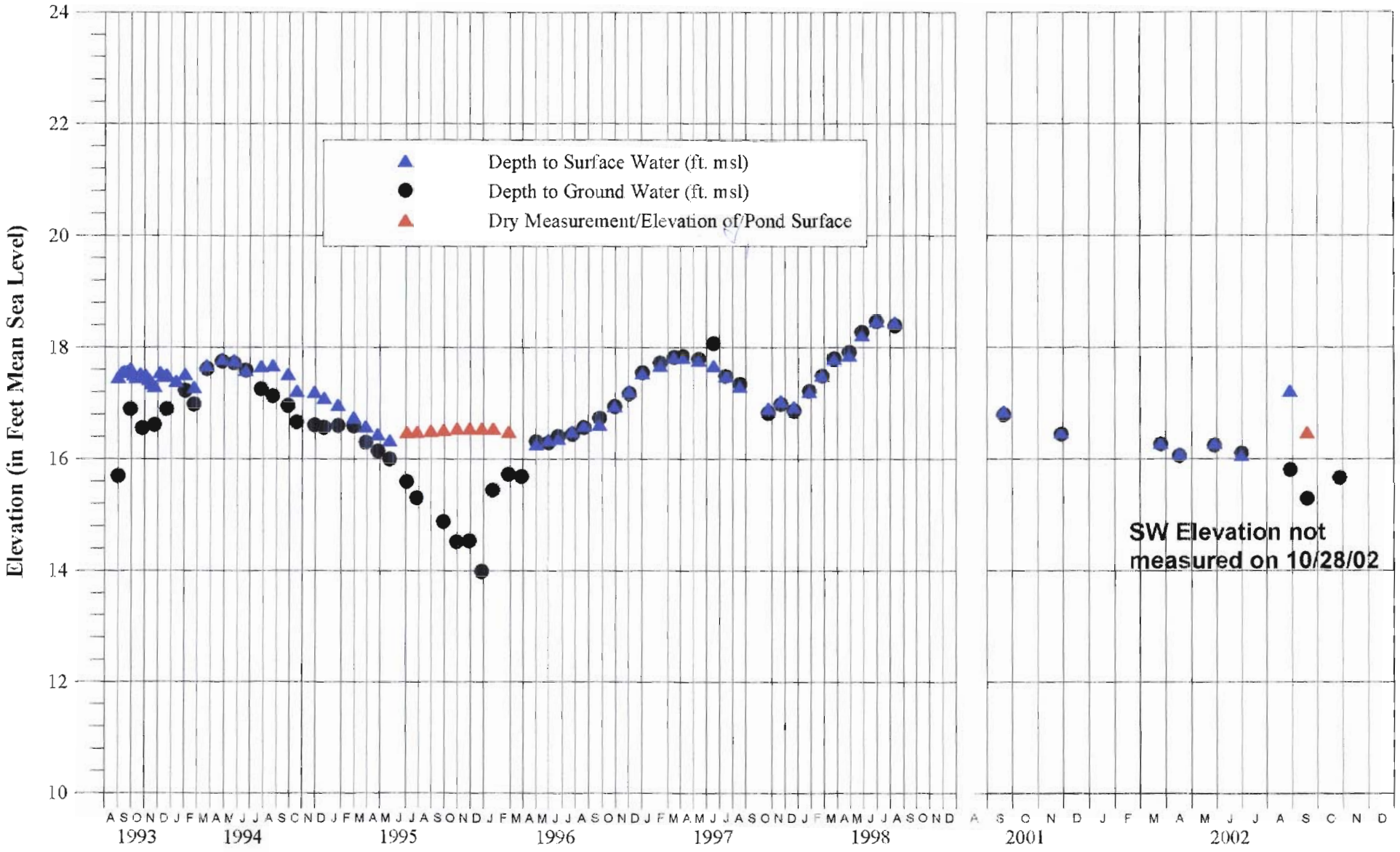


Leggette, Brashears & Graham, Inc.

H:\graphics\nabis\nabsag\pond_data\whalers.grf

ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

Hydrograph of Lily Pond Piezometer



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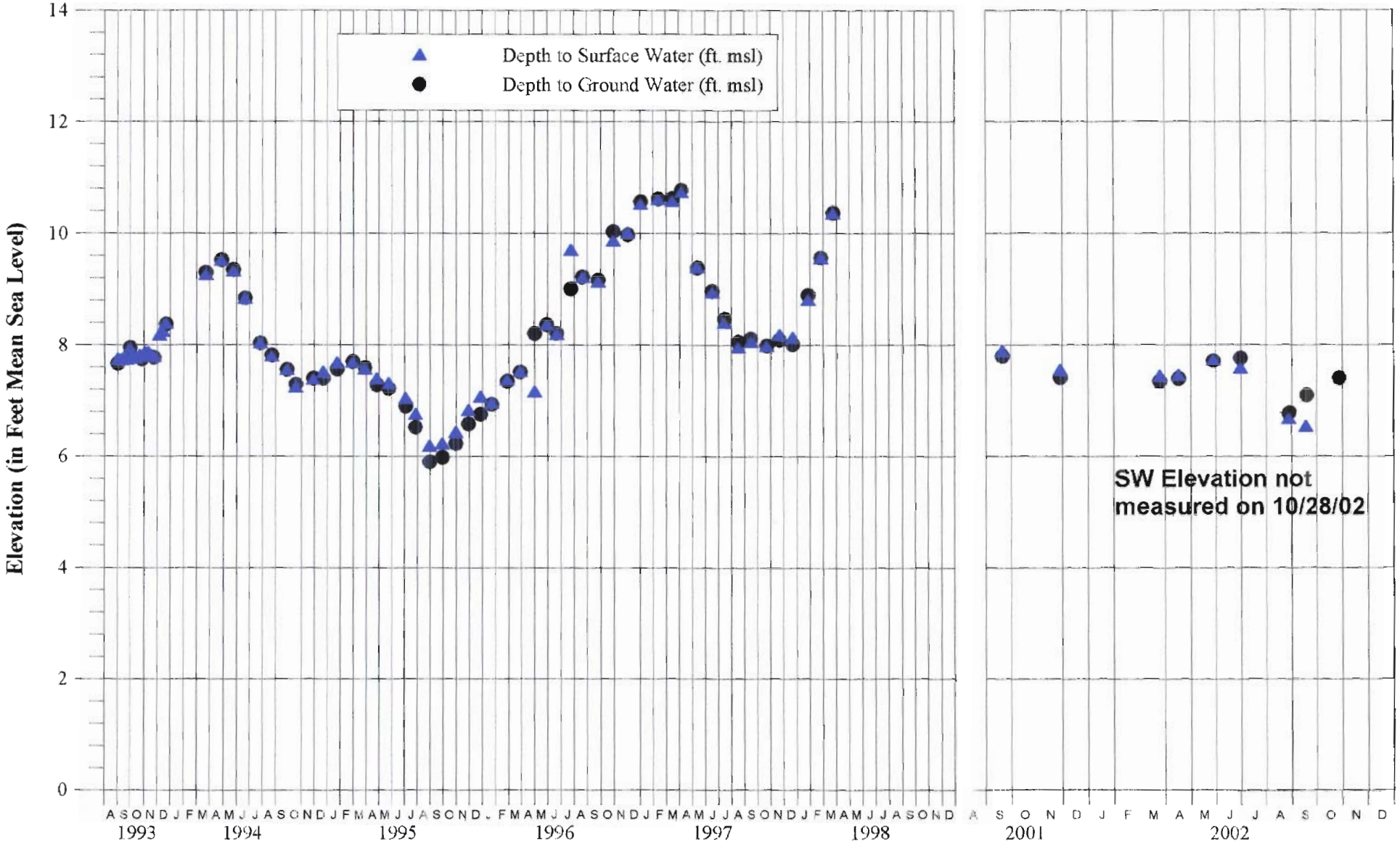
Leggette, Brashears & Graham, Inc.

ROWE INDUSTRIES SITE
SAG HARBOR, NEW YORK

Hydrograph of Round Pond Piezometer

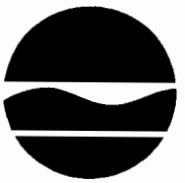


H:\graphics\nabis\nabsag\pond_data\round.grf

Leggette, Brashears & Graham, Inc.

Appendix VII:
NYSDEC SPDES Effluent Criteria

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Construction Services, 12th Floor
625 Broadway, Albany, New York 12233-7013
Phone: (518) 402-9814 • **FAX:** (518) 402-9819
Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

OCT 24 2001

Mr. Paul M. Jobmann
Leggette, Brashears & Graham, Inc.
126 Monroe Turnpike
Trumbull, Connecticut 06611

Dear Mr. Jobmann:

Re: Site No. 1-52-106
Rowe Industries Site
Groundwater Remedial System SPDES Permit

Please find enclosed the Groundwater Remedial System SPDES Permit for the Rowe Industries Site. Please note all additional conditions and submit all monitoring data, engineering submissions and modification requests to the Chief - Operation, Maintenance and Support Section, Division of Environmental Remediation with a copy sent to the Regional Water Engineer in Stony Brook.

If you have any questions regarding this permit, please call Mr. Jeffrey E. Trad, P.E., at (518) 402-9814.

Sincerely,

Robert C. Knizek

Robert C. Knizek, P.E.
Chief, Eastern Field Services Section
Bureau of Construction Services
Division of Environmental Remediation

Enclosure

cc: P. Tames - USEPA

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York, 12233-3505

John P. Cahill
Commissioner

MEMORANDUM

OCT

TO: Robert Knizek, Chief, EFSS, BCS, DER
FROM: Sudhir Mahatma, BWP, DOW SM
SUBJECT: Rowe industries Superfund Site #1-52-106
DRAINAGE BASIN: 17-01
DATE: October 11, 2001

In response to your request dated July 18,2001; August 30, 2001; and fax dated October 9, 2001to Angus Eaton, attached please find revised effluent criteria for the above noted groundwater remediation discharge.

The DOW does not have any regulatory authority over a discharge from a State, PRP, or Federal Superfund Site. DER will be responsible for ensuring compliance with the attached effluent criteria and approval of all engineering submissions. Footnote 1 identifies the Bureau of Site Control as the place to send all effluent results, engineering submissions and modification requests. The Regional Water Engineer should be kept appraised of the status of this discharge and, in accordance with the attached criteria, receive a copy of the effluent results for informational purposes.

If you have any questions, please call me at 2-8126.

Attachments (Effluent Criteria, General Conditions)

cc: Robert Schneck, Regional Water Engineer, R-1 (w/Effluent Criteria)
A. Eaton, DOW (w/Effluent Criteria)
A. Mirza, DOW (w/Effluent Criteria)

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning October 2001

and lasting until October 2006

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number and Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max		Measurement Frequency	Sample Type
Outfall 001 - Treated Groundwater Remediation Discharge:					
Flow	Monitor	1,023,000	GPD	Continuous	Meter
pH (range)	6.5 to 8.5		SU	Weekly	Grab
TDS	Monitor	Monitor	mg/l	Weekly	Grab
Tetrachloroethylene	Monitor	1	µg/l	Weekly	Grab
1,1,1 Trichloroethane	Monitor	5	µg/l	Weekly	Grab
Trichloroethene	Monitor	5	µg/l	Weekly	Grab
1,1 Dichloroethane	Monitor	5	µg/l	Weekly	Grab
1,1 Dichloroethene	Monitor	5	µg/l	Weekly	Grab
1,2 Dichloroethene	Monitor	5	µg/l	Weekly	Grab
Xylene	Monitor	5	µg/l	Weekly	Grab
Toluene	Monitor	5	µg/l	Weekly	Grab
Ethylbenzene	Monitor	5	µg/l	Weekly	Grab
Methylene Chloride	Monitor	5	µg/l	Weekly	Grab
Freon 113	Monitor	Monitor	µg/l	Weekly	Grab
Naphthalene	Monitor	10	µg/l	Weekly	Grab
Chloroform	Monitor	7	µg/l	Weekly	Grab

Additional Conditions:

(1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Chief - Operation Maintenance and Support Section
Bureau of Hazardous Site Control
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, N.Y. 12233-7014

With a copy sent to:

Robert Schneck, RWE, R-1
NYS Dept. Of En. Con.
Building 40 - SUNY @ Stony Brook
Stony Brook, NY 11790-2356
Ph: 516- 444- 0405

(2) Only site generated wastewater is authorized for treatment and discharge.

(3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.

(4) Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.

(5) Any use of corrosion/scale inhibitors or biocidal-type compounds used in the treatment process must be approved by the department prior to use.

(6) This discharge and adminstration of this discharge must comply with the attached General Conditions.

(7) **The recharge basin must be sized to accommodate the treatment plant effluent.**
The discharge to the onsite recharge basin is returning the treated groundwater back to the aquifer from where it was recovered.