



# Dvirka and Bartilucci

CONSULTING ENGINEERS

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August 7, 2007

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Mr. Payson Long  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway, 12th Floor  
Albany, NY 12233-7013

Re: Franklin Cleaners Site (Site No. 1-30-050)  
D&B Work Assignment No. D004446-01  
Quarterly Report No. 10 (December 1, 2006 through February 28, 2007)  
D&B No. 2531-03

Dear Mr. Long:

The purpose of this letter is to summarize the performance monitoring of the groundwater extraction and treatment system, located approximately 1 mile south/ downgradient of the Franklin Cleaners Site (see Attachment A, Figure 1). This performance monitoring report covers the period from December 1, 2006 through February 28, 2007. Presented below is a summary of system operations during the quarter, as well as the results of analytical testing completed, in accordance with the work plan for the referenced work assignment.

### Groundwater Extraction and Treatment System Operations

During this period, extraction well EW-1 operated at an average pump rate of 39.4/gallons per minute. Extraction well EW-2 was not in operation for the duration of the quarter, due to an overload failure of variable frequency drive (VFD) No. 2. Under the new subcontract for maintenance services executed on November 12, 2006, Systematic Technologies diagnosed the problem with EW-2 on December 6, 2006 as a short circuit to the ground in the down-well/pump power cable assembly. After further review, a Scope of Work to pull the extraction well pump and replace it with a pump more suited for lower flow rates is currently being prepared to submit to the New York State Department of Environmental Conservation (NYSDEC) for review.

Approximately 5,391,739 gallons of treated groundwater, based on measurements recorded at the treatment system discharge flow meter, were discharged to the Nassau County Department of Public Works (NCDPW) storm sewer system. It is noted that this volume is in consistent with the influent flow meter which recorded approximate 4,944,154 gallons of groundwater entering the treatment system.

Mr. Payson Long  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
August 7, 2007

Page 2

During this period, the groundwater extraction and treatment system was inoperative for a total of approximately 192 hours due to system alarm conditions and routine system maintenance. The "down time" was not consecutive and occurred over the course of the reporting period involving two alarm episodes and three maintenance events. A summary of system downtime is presented in Attachment B. Copies of routine system maintenance reports, as prepared by EnviroTrac, are presented in Attachment C.

### **Groundwater Extraction and Treatment System Sampling**

Samples were collected from the EW-1 well influent line sample tap, as well as from the air stripper (liquid) discharge sample tap, at a frequency of twice per month during the months of this period. No samples were collected from extraction well EW-2 during the period as the extraction well was inoperable. Each sample was analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method OLMO4.2. The samples collected from the air stripper discharge sample tap were also analyzed for iron and manganese by USEPA Method 200.7 and for pH by USEPA Method 150.1.

Sample results are presented in Attachment D. The analytical results of samples collected from the system influent are compared to the NYSDEC Class GA groundwater standards and guidance values, and the analytical results of samples collected from the air stripper discharge are compared to the effluent limitations. As can be seen from the analytical results in Attachment D, extraction well EW-1 continues to extract tetrachloroethene (PCE) at concentrations ranging from a low of 13 micrograms per liter (ug/l) on February 23, 2007, to a high of 20 ug/l on December 28, 2006, which are both above the PCE Class GA groundwater standard of 5 ug/l. The discharge sample results for the period were all below the VOC effluent limitations and were also in compliance with the iron, manganese and pH effluent limitations.

Approximately 0.68 pounds of PCE were removed from the extracted groundwater by the low profile air stripper during the reporting period. The average PCE removal efficiency for this quarter was greater than 96 percent. Refer to Attachment E for a summary of the extraction and treatment system performance results since the system was placed in operation.

Vapor phase samples were collected from the two carbon adsorption unit influent and effluent sample taps at a frequency of once per week. Each sample was collected by filling a Tedlar bag directly from the sample taps and the samples were screened using a calibrated, handheld photoionization detector (PID). During the period, all PID readings collected at the carbon vessel outlets were 0.0 parts per million (ppm). Refer to Attachment D for results of vapor phase samples collected during the period.

### **Groundwater Quality Data**

The network of downgradient groundwater monitoring wells was sampled to evaluate the effectiveness of the groundwater extraction and treatment system. Samples were collected from ASMW-1 on February 7, 2007 and from ASMW-2, ASMW-3, ASMW-4, ASMW-5, ASMW-6 and ASMW-7 on February 2, 2007. Samples were analyzed for VOCs by USEPA Method OLMO 4.2. The locations of the monitoring wells are shown in Figure 2 in Attachment A.

Mr. Payson Long  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
August 7, 2007

Page 3

The results of the analyses of the samples collected from the monitoring wells are presented in Attachment D and summarized on Figure 2 in Attachment A. The results are compared to the NYSDEC Class GA Groundwater Standards and Guidance Values. The concentration of PCE detected in the sample from monitoring well ASMW-1 decreased from 7 ug/l (November 27, 2006) to 3ug/l (February 7, 2007) and was below the groundwater standard for the first time during the monitoring period. The concentration of PCE detected in the sample from monitoring well ASMW-2 increased from 17 ug/l (November 27, 2006) to 23 ug/l (February 2, 2007). The detected concentration of PCE in the sample from monitoring well ASMW-3 continues to be below the standard, however, the detected concentration of toluene (9 ug/l) was above the standard. VOCs were not detected at concentrations above the standards or guidance values in the samples collected from groundwater monitoring wells ASMW-1, ASMW-4, ASMW-5, ASMW-6 and ASMW-7 during this period. Please refer to the trend line graphs provided in Attachment E, which summarize PCE concentrations detected in samples collected from ASMW-1, ASMW-2 and ASMW-3 since June 2003.

### **Data Validation**

The biweekly system samples and groundwater samples have been analyzed for VOCs by Mitkem Corporation (Mitkem). The effluent sample (AS-1) was also analyzed for iron, manganese and pH. Mitkem is a New York State Department of Health Environmental Laboratory Approval Program-certified laboratory. The data packages submitted by Mitkem have been reviewed for completeness and compliance with the NYSDEC Analytical Services Protocol (ASP) Quality Assurance/Quality Control (QA/QC) requirements. All sample results have been deemed valid and usable for environmental assessment purposes as qualified below:

- All samples were analyzed within the method specified holding times and all QA/QC requirements (surrogate recoveries, calibrations, blanks, etc.) were met. No problems were noted with sample results and qualification of the data was not required.

### **Conclusions**

Based on the results of performance monitoring performed during the period, we offer the following conclusions:

- The analytical results of the system influent samples show that the extraction well EW-1 continues to capture VOC-contaminated groundwater.
- The analytical results of the liquid discharge samples show that the air stripper is effectively removing the captured VOCs and reducing concentrations to below the discharge criteria.
- The concentration of PCE detected in groundwater monitoring well ASMW-1 (3 ug/l) was below the standard for the first time during the historical monitoring period.

# Dvirka and Bartilucci

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Mr. Payson Long  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
August 7, 2007

Page 4

- Concentrations of PCE detected in groundwater monitoring well ASMW-2 increased from 17 ug/l (November 27, 2006) to 23 ug/l (February 2, 2007) but continue to constitute a decreasing trend from a high of 69 ug/l (November 11, 2005).

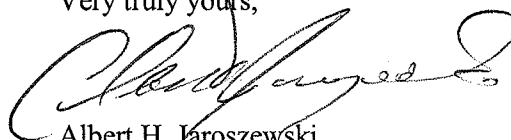
## Recommendations

Based on the results of performance monitoring conducted during the period, we offer the following recommendations:

- Continue operation of the groundwater extraction and treatment system to minimize downgradient migration of PCE, currently being captured by the system.
- Continue groundwater monitoring through the existing monitoring well network to determine contaminant concentration trends over time and to evaluate the continued effectiveness of the remediation system.
- Pull and replace extraction well EW-2 well pump. A scope of work to perform the work is currently being prepared to submit to the NYSDEC for review.

Please do not hesitate to contact me at (516) 364-9890 if you have any questions.

Very truly yours,



Albert H. Jaroszewski  
Project Manager

AHJ/CM/lb,jmy,tp

Attachments

cc: J. Trad (NYSDEC)  
J. Neri (H2M)  
R. Walka (D&B)  
P. Martorano (D&B)

♦2531\AHJ03287PL-LTR(R02)

**ATTACHMENT A**

**FIGURES**



SOURCE: USGS FREEPORT AND LYNBROOK QUADRANGLES

0 2000  
SCALE IN FEET

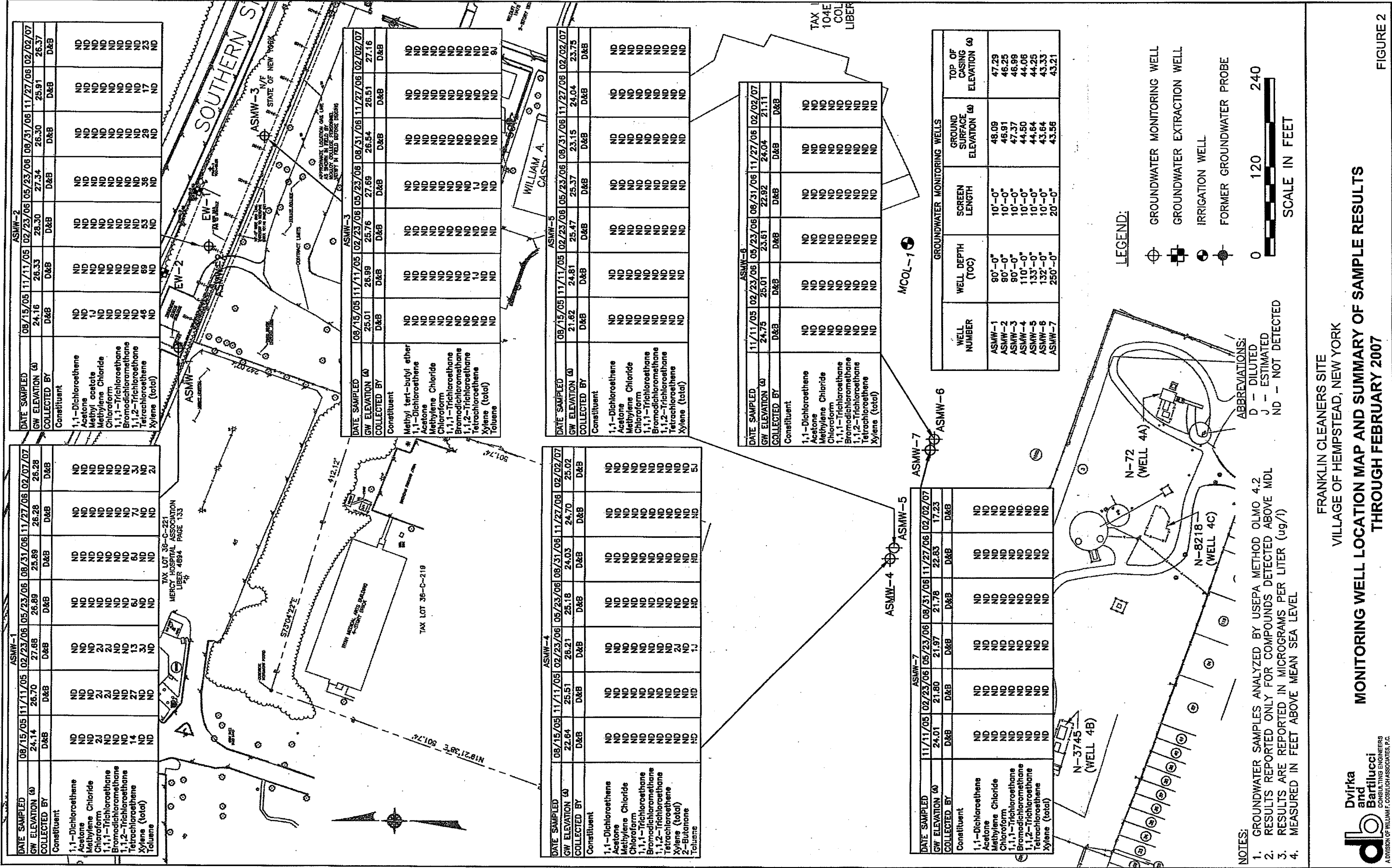
FRANKLIN CLEANERS SITE  
VILLAGE OF HEMPSTEAD, NEW YORK

**SITE LOCATION MAP**

**db** Dvirka and Bartilucci  
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A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FIGURE 1

F:\2531\DWG\Quarterly Reports\Quarter 9\FIGURE 1.dwg, Layout1, 1/12/2007 12:06:49 PM, d.b. Dvirka and Bartilucci



**ATTACHMENT B**

**DESCRIPTION OF SYSTEM ALARM CONDITIONS**



FRANKLIN CLEANERS SITE  
 NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050  
 SUMMARY OF SYSTEM DOWNTIME

SHUT-OFF DATE/TIME	RESTART DATE/TIME	CAUSE FOR SHUTDOWN
12/2/06 3:00 AM	12/2/06 5:10 PM	Alarm Condition No. 4 - High wet well light on - well is not high - water level very low, on & off and low level lights on. MiniCas #1 and #2 reset, breaker reset, lights still on. Fill up wet well above low floats. Switch pumps to auto.
12/6/06 1:50 PM	12/6/06 4:30 PM	(1)Blower Maintenance - Performed routine blower maintenance and restarted extraction well pump EW-1 once maintenance was completed.
12/19/06 9:15 AM	12/19/06 1:30 PM	(1)Submersible Wet Well Pump Maintenance - Performed annual wet well pump maintenance. Also adjusted heights of wet well floats. Restarted EW-1 once maintenance was completed.
2/13/07 2:17 PM	2/13/07 3:10 PM	(1)Blower Maintenance - Performed routine blower maintenance and restarted extraction well pump EW-1 once maintenance was completed.
2/14/07 4:45 PM	2/15/07 3:40 PM	Alarm Condition No. 3 - High high wet well. Turn sump pump breaker on/off. Purge wet well. Turn system on.

**NOTES:**

- Blower maintenance event performed by Systematic Technologies, Inc.

**ATTACHMENT C**

**SYSTEM MAINTENANCE REPORTS**

## MAINTENANCE AND INSPECTION REPORT

### FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 12/6/06				
Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
Luke Sorensen	President	1330	1630	3

Check off Items that were completed:

- Item 1: Snow Removal
- Item 2A: Pressure Blower Maintenance
- Item 2B: Pressure Blower Fan Wheel Replacement
- Item 3: Air Stripper Maintenance
- Item 4: Granular Activated Carbon Removal and Replacement
- Item 5: Submersible Wet Well Pump Maintenance and Inspection
- Item 6: Non-routine Maintenance

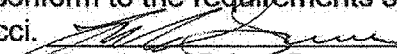
Description of Work:

1.) Pressure Blower Maintenance.

2.) Non-Routine Maintenance: Diagnosed electrical fault at EW-2. Found short circuits to Ground in down-well pump motor/power cable assembly. (1.5 hrs)

Name of Part / Supply / Material	Manufacturer	Model Number	Quantity Used
Grease	ExxonMobil	Mobilith SHC 100	1
Description of Waste Generated	Volume of Waste	Disposal Facility (Name & Address)	Waste Transporter (Name & Address)

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.   

 Luke Sorensen 12/15/06  
 Signature / Print / Date

## MAINTENANCE AND INSPECTION REPORT

### FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 12/19/06

Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
Luke Sorensen (STI)	President	0910	~ 1400 -1500	~ 5 hrs
Joseph Wood (GA Fleet)	Technician	0910	1230	3 hrs, 20 min

Check off Items that were completed:


- Item 1: Snow Removal
- Item 2A: Pressure Blower Maintenance
- Item 2B: Pressure Blower Fan Wheel Replacement
- Item 3: Air Stripper Maintenance
- Item 4: Granular Activated Carbon Removal and Replacement
- Item 5: Submersible Wet Well Pump Maintenance and Inspection
- Item 6: Non-routine Maintenance

Description of Work:

- 1.) Item 5: GA Fleet Pump, Inc. performed annual maintenance of Flygt wet well pump assembly. Did not change pump oil as required. A second visit will be scheduled for 1Q '06 to complete oil changes at no additional charge.
- 2.) Item 6: STI re-zeroed air stripper flow-meter (will not invoice).
- 3.) Item 6: STI adjusted settings of wet well level switches (will not invoice).

Name of Part / Supply / Material	Manufacturer	Model Number	Quantity Used
Description of Waste Generated	Volume of Waste	Disposal Facility (Name & Address)	Waste Transporter (Name & Address)

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

  
 Signature / Print / Date

## MAINTENANCE AND INSPECTION REPORT

### FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 2/13/07

Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
L. Sorensen	Technician	1400	1530	1.5

Check off Items that were completed:

- Item 1: Snow Removal
- Item 2A: Pressure Blower Maintenance
- Item 2B: Pressure Blower Fan Wheel Replacement
- Item 3: Air Stripper Maintenance
- Item 4: Granular Activated Carbon Removal and Replacement
- Item 5: Submersible Wet Well Pump Maintenance and Inspection
- Item 6: Non-routine Maintenance


Description of Work:

Performed Item 2A in accordance with section 3.3 of contract between engineer and contractor:

- 1.) Inspected fan wheel for wear, corrosion and buildup – None seen
- 2.) Inspected V-belt for alignment and tension – Both within spec
- 3.) Inspected fasteners for tightness – All okay
- 4.) Lubricated motor bearings (see below)

Name of Part / Supply / Material	Manufacturer	Model Number	Quantity Used
Bearing grease	Mobil	Mobilith SHC 100	Not measurable
Description of Waste Generated	Volume of Waste	Disposal Facility (Name & Address)	Waste Transporter (Name & Address)

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.


 Luke Sorensen 3/31/07  
 Signature / Print / Date

**ATTACHMENT D**

**ANALYTICAL RESULTS**

**FRANKLIN CLEANERS SITE  
NYSDEC CONTRACT No. D004264 / SITE No. 1-30-050  
RESULTS OF GROUNDWATER SAMPLING**

SAMPLE ID	ASMW-1		ASMW-2		ASMW-3		ASMW-4		ASMW-5		ASMW-6		ASMW-7		NYSDEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES (ug/L)
	WATER	D&B	WATER	D&B	WATER	D&B	WATER	D&B	WATER	D&B	WATER	D&B	WATER	D&B	
SAMPLE TYPE	2/7/2007	2/7/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	2/2/2007	
DATE OF COLLECTION															
COLLECTED BY															
UNITS	(ug/L)														
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	-
Vinyl chloride	U	U	U	U	U	U	U	U	U	U	U	U	U	U	2 ST
Bromomethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Acetone	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
Carbon disulfide	U	U	U	U	U	U	U	U	U	U	U	U	U	U	60 GV
Methyl acetate	U	U	U	U	U	U	U	U	U	U	U	U	U	U	-
Methylene chloride	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Methyl-tert butyl ether	U	U	U	U	U	U	U	U	U	U	U	U	U	U	10 GV
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
2-Butanone	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
Chloroform	U	U	U	U	U	U	U	U	U	U	U	U	U	U	7 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Cyclohexane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	-
Carbon tetrachloride	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Benzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1 ST
Trichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	0.6 ST
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	-
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1 ST
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	U	U	U	U	U	U	0.4 ST
Toluene	2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	-
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	0.4 ST
Tetrachloroethene	3 J	U	U	U	U	U	U	U	U	U	U	U	U	U	1 ST
2-Hexanone	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Xylene (total)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Styrene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
Bromoform	U	U	U	U	U	U	U	U	U	U	U	U	U	U	50 GV
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	U	U	U	U	U	U	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	U	5 ST

**NOTES:**                      Concentration exceeds NYSDEC Class GA Groundwater Standards or Guidance Values

**ABBREVIATIONS:**  
ug/L = Micrograms per liter  
--: Not established

**QUALIFIERS:**  
U: Compound analyzed for but not detected  
J: Compound found at a concentration below CRDL, value estimated

ST: Standard Value  
GV: Guidance Value

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004264 / SITE No. 1-30-050**  
**RESULTS OF ANALYSIS OF EW-1 INFLUENT**

SAMPLE ID	SYSTEM INFLUENT (EW-1)		SYSTEM INFLUENT (EW-1)		SYSTEM INFLUENT (EW-1)		SYSTEM INFLUENT (EW-1)		NYSDEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES (ug/L)
	WATER	D&B	WATER	D&B	WATER	D&B	WATER	D&B	
DATE OF COLLECTION	12/15/2006	12/28/2006	1/7/2007	1/22/2007	2/7/2007	2/23/2007			
COLLECTED BY									
UNITS	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<b>VOCs</b>									
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	U	U	--
Vinyl chloride	U	U	U	U	U	U	U	U	2 ST
Bromomethane	U	U	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	5 ST
Acetone	U	U	U	U	U	U	U	U	50 GV
Carbon disulfide	U	U	U	U	U	U	U	U	60 GV
Methyl acetate	U	U	U	U	U	U	U	U	--
Methylene chloride	U	U	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	U	U	5 ST
Methyl-tert butyl ether	U	U	U	U	U	U	U	U	10 GV
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5 ST
2-Butanone	U	U	U	U	U	U	U	U	50 GV
Chloroform	U	U	U	U	U	U	U	U	7 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5 ST
Cyclohexane	U	U	U	U	U	U	U	U	--
Carbon tetrachloride	U	U	U	U	U	U	U	U	5 ST
Benzene	U	U	U	U	U	U	U	U	5 ST
1,2-Dichloroethane	U	U	U	U	U	U	U	U	1 ST
Trichloroethene	U	U	U	U	U	U	U	U	0.6 ST
Methylcyclohexane	U	U	U	U	U	U	U	U	5 ST
1,2-Dichloropropane	U	U	U	U	U	U	U	U	--
Bromodichloromethane	U	U	U	U	U	U	U	U	1 ST
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	50 GV
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	0.4 ST
Toluene	U	U	U	U	U	U	U	U	--
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	0.4 ST
Tetrachloroethene	U	U	U	U	U	U	U	U	1 ST
2-Hexanone	U	U	U	U	U	U	U	U	5 ST
Dibromochloromethane	U	U	U	U	U	U	U	U	50 GV
1,2-Dibromoethane	U	U	U	U	U	U	U	U	50 GV
Chlorobenzene	U	U	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	U	U	5 ST
Xylene (total)	U	U	U	U	U	U	U	U	5 ST
Styrene	U	U	U	U	U	U	U	U	5 ST
Bromoform	U	U	U	U	U	U	U	U	50 GV
Isopropylbenzene	U	U	U	U	U	U	U	U	50 GV
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	50 GV
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5 ST

**NOTES:**  
 Concentration exceeds NYSDEC Class GA Groundwater Standards or Guidance Values  
 1. EW-1 turned off on 11/15/05 due to a high load on the pump. Pump scheduled to be pulled and cleaned at a future date.  
 Engwork: \HazWaste\2531 (NYSDEC - Franklin Cleaners Site)\Quarterly Reports\Quarter 9 (Sep 06 - Nov 06)\Quarter 10 Sampling Results

**ABBREVIATIONS:**  
 ug/L = Micrograms per liter  
 --: Not established

**QUALIFIERS:**  
 U: Compound analyzed for but not detected  
 J: Compound found at a concentration below CRDL, value estimated  
 B: Compound detected in method blank as well as



**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004264 / SITE No. 1-30-050**  
**RESULTS OF ANALYSIS OF AIR STRIPPER EFFLUENT FOR VOCs**

SAMPLE ID	SYSTEM EFFLUENT (AS-1) WATER		SYSTEM EFFLUENT (AS-1) WATER		SYSTEM EFFLUENT (AS-1) WATER		SYSTEM EFFLUENT (AS-1) WATER		SYSTEM EFFLUENT (AS-1) WATER		EFLUENT LIMITATIONS (ug/L)	NYSDEC CLASS GA STANDARDS AND GUIDANCE VALUES (ug/L)
	DATE OF COLLECTION	D&B (ug/L)	12/28/2006	D&B (ug/L)	1/10/2007	D&B (ug/L)	1/22/2007	D&B (ug/L)	2/23/2007	D&B (ug/L)		
Dichlorodifluoromethane		U	U	U	U	U	U	U	U	U	--	5 ST
Chloromethane		U	U	U	U	U	U	U	U	U	--	2 ST
Vinyl chloride		U	U	U	U	U	U	U	U	U	--	5 ST
Bromomethane		U	U	U	U	U	U	U	U	U	--	5 ST
Chloroethane		U	U	U	U	U	U	U	U	U	--	5 ST
Trichlorofluoromethane		U	U	U	U	U	U	U	U	U	--	5 ST
1,1-Dichloroethene		U	U	U	U	U	U	U	U	U	--	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane		U	U	U	U	U	U	U	U	U	--	50 GV
Acetone		U	U	U	U	U	U	U	U	U	--	60 GV
Carbon disulfide		U	U	U	U	U	U	U	U	U	--	--
Methyl acetate		U	U	U	U	U	U	U	U	U	--	5 ST
Methylene chloride		U	U	U	U	U	U	U	U	U	--	5 ST
trans 1,2-Dichloroethene		U	U	U	U	U	U	U	U	U	--	10 GV
Methyl-tert butyl ether		U	U	U	U	U	U	U	U	U	--	5 ST
1,1-Dichloroethane		U	U	U	U	U	U	U	U	U	10	5 ST
cis-1,2-Dichloroethane		U	U	U	U	U	U	U	U	U	10	5 ST
2-Butanone		U	U	U	U	U	U	U	U	U	--	50 GV
Chloroform		U	U	U	U	U	U	U	U	U	--	7 ST
1,1,1-Trichloroethane		U	U	U	U	U	U	U	U	U	10	5 ST
Cyclohexane		U	U	U	U	U	U	U	U	U	--	--
Carbon tetrachloride		U	U	U	U	U	U	U	U	U	--	5 ST
Benzene		U	U	U	U	U	U	U	U	U	--	1 ST
1,2-Dichloroethane		U	U	U	U	U	U	U	U	U	--	0.6 ST
Trichloroethene		U	U	U	U	U	U	U	U	U	10	5 ST
Methylcyclohexane		U	U	U	U	U	U	U	U	U	--	--
1,2-Dichloropropane		U	U	U	U	U	U	U	U	U	--	1 ST
Bromodichloromethane		U	U	U	U	U	U	U	U	U	--	50 GV
cis-1,3-Dichloropropene		U	U	U	U	U	U	U	U	U	--	0.4 ST
4-Methyl-2-pentanone		U	U	U	U	U	U	U	U	U	--	--
Toluene		U	U	U	U	U	U	U	U	U	--	5 ST
trans-1,3-Dichloropropene		U	U	U	U	U	U	U	U	U	--	0.4 ST
1,1,2-Trichloroethane		U	U	U	U	U	U	U	U	U	--	1 ST
Tetrachloroethene		U	U	U	U	U	U	U	U	U	5	5 ST
2-Hexanone		U	U	U	U	U	U	U	U	U	--	50 GV
Dibromochloromethane		U	U	U	U	U	U	U	U	U	--	50 GV
1,2-Dibromoethane		U	U	U	U	U	U	U	U	U	--	5 ST
Chlorobenzene		U	U	U	U	U	U	U	U	U	--	5 ST
Ethylbenzene		U	U	U	U	U	U	U	U	U	--	5 ST
Xylene (total)		U	U	U	U	U	U	U	U	U	--	5 ST
Styrene		U	U	U	U	U	U	U	U	U	--	5 ST
Bromoform		U	U	U	U	U	U	U	U	U	--	50 GV
Isopropylbenzene		U	U	U	U	U	U	U	U	U	--	5 ST
1,1,2,2-Tetrachloroethane		U	U	U	U	U	U	U	U	U	--	5 ST
1,3-Dichlorobenzene		U	U	U	U	U	U	U	U	U	--	3 ST
1,4-Dichlorobenzene		U	U	U	U	U	U	U	U	U	--	3 ST
1,2-Dichlorobenzene		U	U	U	U	U	U	U	U	U	--	3 ST
1,2-Dibromo-3-chloropropane		U	U	U	U	U	U	U	U	U	--	0.04 ST
1,2,4-Trichlorobenzene		U	U	U	U	U	U	U	U	U	--	5 ST

**NOTES:**  
 Concentration exceeds NYSDEC Class GA  
 Groundwater Standards or Guidance Values

**ABBREVIATIONS**  
 ug/L = Micrograms per liter  
 --: Not established

**QUALIFIERS:**  
 U: Compound analyzed for but not detected  
 J: Compound found at a concentration below CRDL, value estimated  
 U\*: Result qualified as non-detect due to validation criteria.

FRANKLIN CLEANERS SITE  
 NYSDEC CONTRACT No. D004264 / SITE No. 1-30-050  
 RESULTS OF ANALYSIS OF AIR STRIPPER EFFLUENT IRON, MANGANESE AND pH

SAMPLE ID	SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		EFFLUENT LIMITATIONS
	WATER	D&B (ug/L)	WATER	D&B (ug/L)	WATER	D&B (ug/L)	WATER	D&B (ug/L)	WATER	D&B (ug/L)	
DATE OF COLLECTION	12/15/2006		12/28/2007		1/22/2007		2/7/2007		2/23/2007		
COLLECTED BY											
UNITS											(ug/L)
<b>METALS</b>											
Iron	25.9 B		151 B		21.3 B		35.6 B		32.1 B		1000
Manganese	38.7 B		43.0 B		39.9 B		41.4 B		34.8 B		1000
pH (S.U)	7.4		7.6		7.3		7.6		7.4		6.5 to 8.5

**ABBREVIATIONS:**  
 ug/L: Micrograms per liter

**QUALIFIERS:**  
 B: Concentration is greater than the instrument detection limit (IDL) but less than the Contract Required Detection Limit (CRDL)  
 \*: Result qualified as suspect based on validation criteria.

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050**  
**VAPOR PHASE SAMPLE RESULTS**

SAMPLE ID	CARBON VESSEL NO. 1 INFLUENT	CARBON VESSEL NO. 1 EFFLUENT	CARBON VESSEL NO. 2 INFLUENT	CARBON VESSEL NO. 2 EFFLUENT
SAMPLE TYPE	AIR	AIR	AIR	AIR
COLLECTED BY	D&B	D&B	D&B	D&B
UNITS	(ppm)	(ppm)	(ppm)	(ppm)
<b>DATE OF COLLECTION</b>	<b>PID Reading</b>	<b>PID Reading</b>	<b>PID Reading</b>	<b>PID Reading</b>
12/4/2006	0.0	0.0	0.0	0.0
12/15/2006	0.0	0.0	0.0	0.0
12/19/2006	0.0	0.0	0.0	0.0
12/28/2006	0.0	0.0	0.0	0.0
1/2/2007	0.0	0.0	0.0	0.0
1/7/2007	0.0	0.0	0.0	0.0
1/15/2007	0.0	0.0	0.0	0.0
1/22/2007	0.0	0.0	0.0	0.0
1/29/2007	0.0	0.0	0.0	0.0
2/7/2007	0.0	0.0	0.0	0.0
2/15/2007	0.0	0.0	0.0	0.0
2/23/2007	0.0	0.0	0.0	0.0
2/26/2007	0.0	0.0	0.0	0.0

**NOTES:**

Samples were collected by filling a Tedlar bag at each of the sampling locations. Samples were tested using a handheld photoionization detector (PID).  
 \* Sample not taken due to sporadic and inconsistent readings from PID, possibly due to very cold weather and possible condensation on the bulb.

**ATTACHMENT E**

**PERFORMANCE SUMMARY**

**FRANKLIN CLEANERS SITE  
NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050  
EXTRACTION AND TREATMENT SYSTEM PERFORMANCE RESULTS**

DATE OF SAMPLE COLLECTION (1)	SYSTEM INFLUENT (EW-1) AVERAGE EXTRACTION RATE (gpm)	SYSTEM INFLUENT (EW-1) PCE CONCENTRATION (ug/l)	SYSTEM INFLUENT (EW-2) AVERAGE EXTRACTION RATE (gpm)	SYSTEM INFLUENT (EW-2) PCE CONCENTRATION (ug/l)	SYSTEM EFFLUENT (AS-1) PCE CONCENTRATION (ug/l)	PCE REMOVAL EFFICIENCY (%)	ESTIMATED AVERAGE PCE REMOVAL RATE (lb/hr)	ESTIMATED SYSTEM RUNTIME (hr)	ESTIMATED CUMULATIVE PCE REMOVAL (2) (lbs)
3/7/2005	35.8	41	2.8	290 D	< 0.5	99.15	1.14E-03	184	22.48
3/21/2005	36.6	34	3.0	190 D	< 0.5	98.91	9.09E-04	227	22.68
4/5/2005	35.8	29	3.2	190	< 0.5	98.82	8.24E-04	282	22.91
4/19/2005	35.6	33	2.7	210 D	< 0.5	98.90	8.72E-04	337	23.21
5/2/2005	36.2	31	2.6	230 D	< 0.5	98.87	8.61E-04	310	23.48
5/16/2005	37.0	33	2.4	220	< 0.5	98.87	8.76E-04	710	24.10 (4)
6/6/2005	34.7	27	2.8	190	< 0.5	98.72	7.36E-04	74	24.15
6/20/2005	36.9	32	2.6	150 D	< 0.5	98.74	7.87E-04	279	24.37
7/5/2005	35.7	26	2.5	220 E	1 J	97.42	7.19E-04	358	24.63
7/25/2005	36.2	26	2.2	180 D	< 0.5	98.56	6.70E-04	392	24.89
8/8/2005	36.2	21 B	2.7	120 B	< 0.5	98.21	5.43E-04	239	25.02
8/31/2005	35.3	24	2.5	180	< 0.5	98.54	6.50E-04	525	25.36 (4)
9/12/2005	38.0	21	2.4	170	< 0.5	98.33	6.04E-04	192	25.48
9/26/2005	37.0	26	2.0	160 D	< 0.5	98.48	6.42E-04	310	25.68
10/10/2005	36.5	19	2.0	160	< 0.5	98.10	5.08E-04	313	25.84
10/24/2005	37.4	24	2.4	150	< 0.5	98.42	6.30E-04	300	26.03
11/8/2005	37.8	26	2.6	190 D	< 0.5	98.63	7.40E-04	306	26.25
11/21/05(6)	37.8	26	2.0	200	< 0.5	98.56	4.92E-04	136	26.42 (4)
12/5/2005	0.0	NS	1.6	170	< 0.5	99.71	1.36E-04	106	26.44
12/21/2005	0.0	NS	3.0	140	< 0.5	99.64	2.10E-04	241	26.49
1/4/2006	0.0	NS	2.8	180	< 0.5	99.72	2.52E-04	340	26.57
1/24/2006	0.0	NS	2.8	160	< 0.5	99.69	2.24E-04	462	26.68
2/6/2006	0.0	NS	2.4	160	< 0.5	99.69	1.92E-04	311	26.73
2/21/2006	0.0	NS	3.1	180	< 0.5	99.72	2.79E-04	425	26.73 (4)
3/7/2006	0.0	NS	2.9	140	< 0.5	99.64	2.03E-04	154	26.77
3/22/2006	0.0	NS	3.0	160	< 0.5	99.69	2.40E-04	361	26.85
4/3/2006	0.0	NS	2.8	82	< 0.5	99.39	1.15E-04	287	26.89
4/18/2006	0.0	NS	2.9	120	< 0.5	99.58	1.74E-04	363	26.95
5/9/2006	0.0	NS	3.1	100	< 0.5	99.50	1.55E-04	481	27.02
5/22/2006	0.0	NS	3.0	130	< 0.5	99.62	1.95E-04	312	27.09 (4)
6/5/2006	0.0	NS	2.6	120	< 0.5	99.58	1.56E-04	327	27.14
6/19/2006	0.0	NS	2.7	120	< 0.5	99.58	1.62E-04	337	27.19
7/6/2006	0.0	NS	3.1	110	< 0.5	99.55	1.71E-04	301	27.24
7/17/2006	0.0	NS	3.0	130	< 0.5	99.62	1.95E-04	354	27.31 (4)
9/12/2006	38.9	23	0.0	NS	< 0.5	97.83	4.48E-04	122	27.37
9/25/2006	38.6	23	0.0	NS	< 0.5	97.83	4.45E-04	311	27.50
10/2/2006	40.2	22	0.0	NS	< 0.5	97.73	4.43E-04	169	27.58
10/16/2006	39.8	22	0.0	NS	< 0.5	97.73	4.38E-04	335	27.73
10/30/2006	39.2	24	0.0	NS	< 0.5	97.92	4.71E-04	280	27.86
11/13/2006	37.8	18 B	0.0	NS	< 0.5	97.22	3.41E-04	335	27.97
11/28/2006	41.1	17	0.0	NS	< 0.5	97.06	3.50E-04	418	28.12 (4)
12/15/2006	39.3	19	0.0	NS	< 0.5	97.37	3.74E-04	261	28.22
12/28/2006	41.2	20	0.0	NS	< 0.5	97.50	4.13E-04	309	28.34
1/7/2007	38.3	17	0.0	NS	< 0.5	97.06	3.26E-04	311	28.44
1/22/2007	38.9	18	0.0	NS	< 0.5	97.22	3.51E-04	289	28.55
2/7/2007	37.9	19	0.0	NS	< 0.5	97.37	3.61E-04	383	28.68
2/23/2007	36.9	13	0.0	NS	< 0.5	96.15	2.40E-04	489	28.80 (4)

**NOTES:**

- Data from 9/23/03 through 8/25/04 reported by URS Corporation.
- PCE removal calculations as of September 9, 2003 system start-up date.
- Performance results for the reporting period are shaded.
- Estimated through the end of the reporting period.
- Results show removal efficiency and runtimes for both EW-1 and EW-2

**ABBREVIATIONS:**

gpm: gallons per minute  
ug/L: micrograms per liter  
lb/hr: pounds per hour  
NS: Not sampled

**QUALIFIERS:**

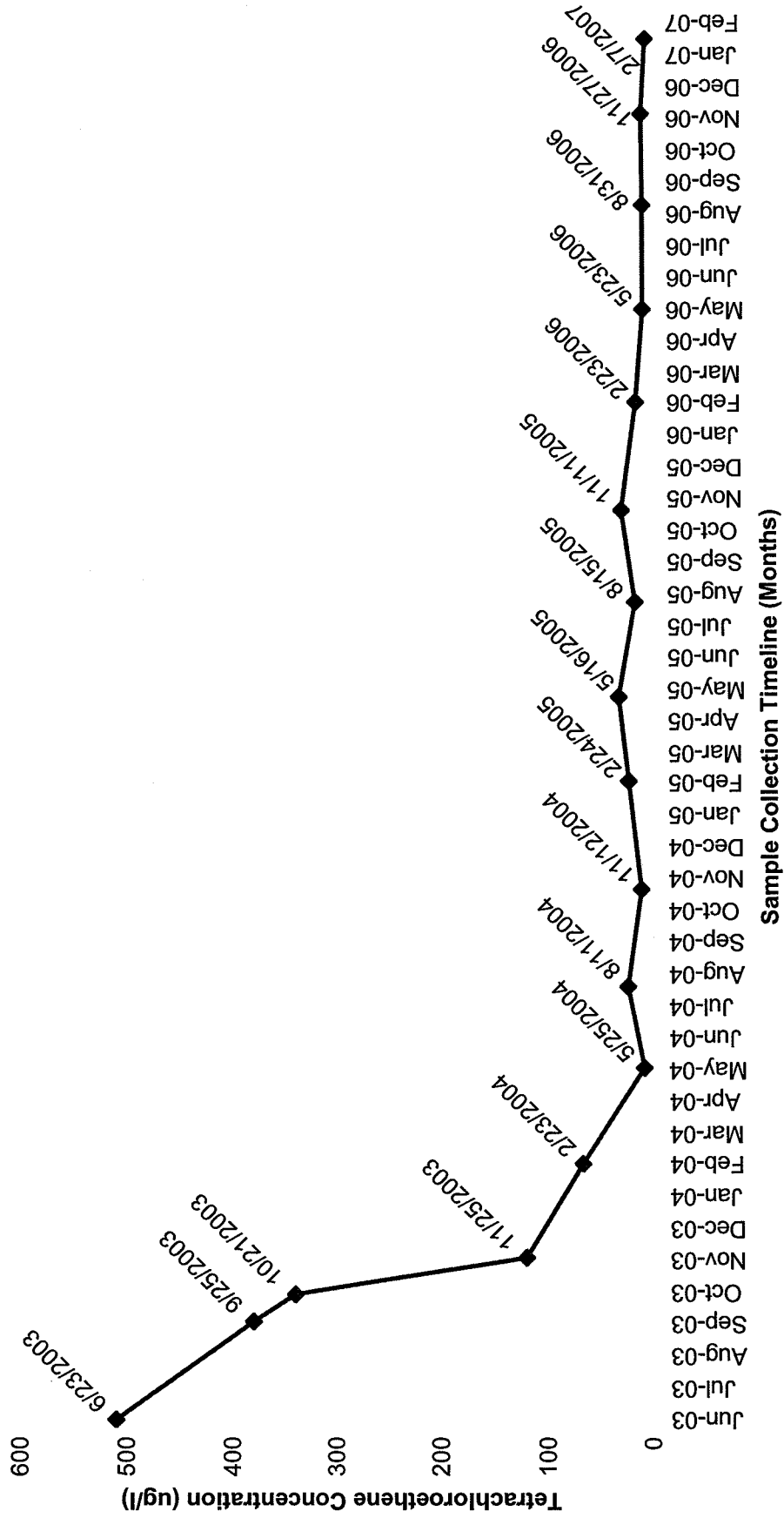
- D: Result taken from reanalysis at a secondary dilution
- J: Compound found at a concentration below CRDL, value estimated
- B: Compound detected in method blank as well as the sample, value estimated
- E: Compound concentration exceeds instrument calibration range, value estimated

**ATTACHMENT F**

**MONITORING WELL TREND LINE GRAPHS**

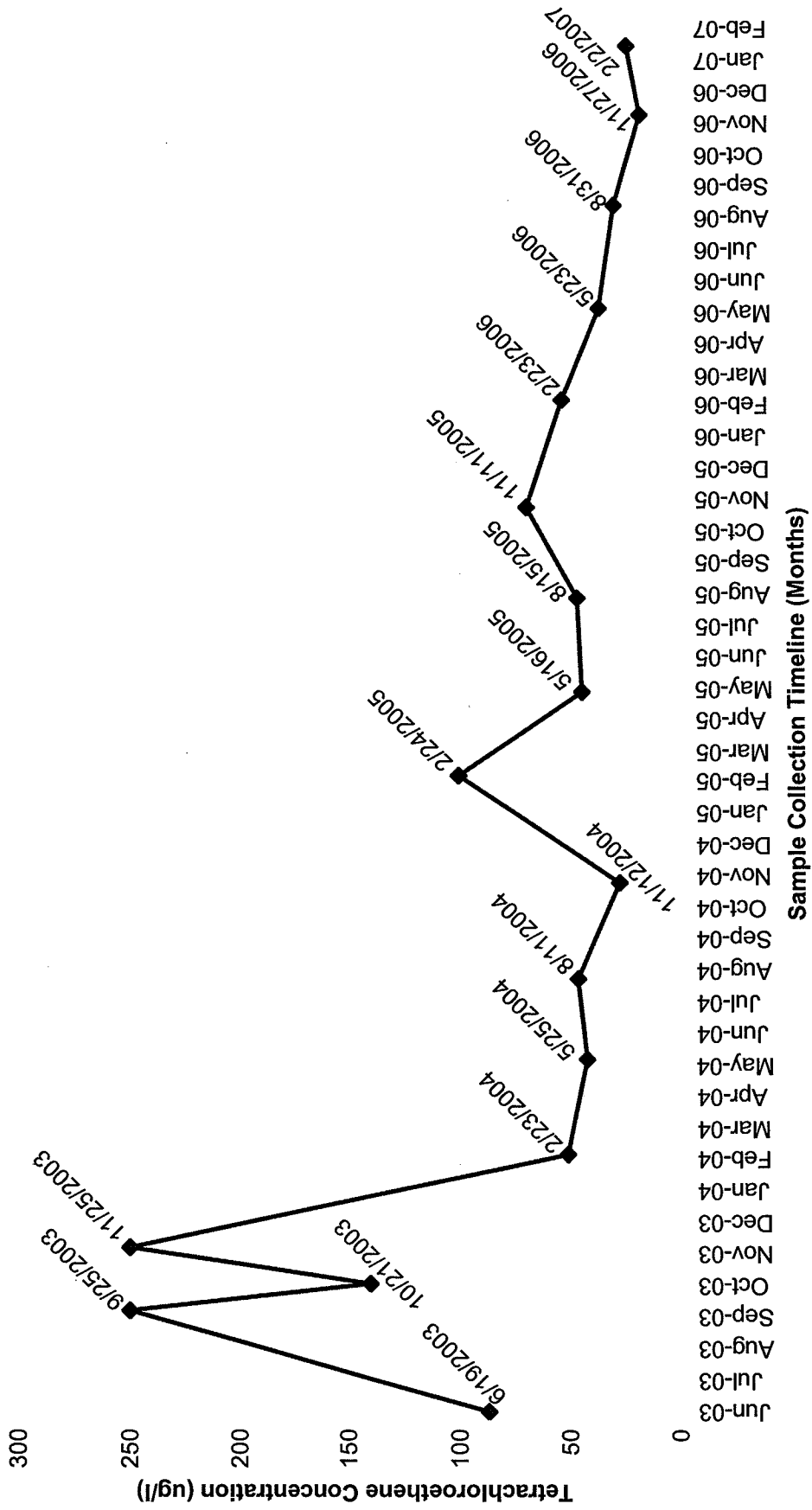
GRAPH 1

Franklin Cleaners Site  
NYSDEC Contract No. D004446 / Site No. 1-30-050  
Groundwater Monitoring Well ASMW-1



GRAPH 2

Franklin Cleaners Site  
 NYSDEC Contract No. D004446 / Site No. 1-30-050  
 Groundwater Monitoring Well ASMW-2





GRAPH 3

Franklin Cleaners Site  
 NYSDEC Contract No. D004446 / Site No. 1-30-050  
 Groundwater Monitoring Well ASMW-3

