



**Dvirka  
and  
Bartilucci**  
CONSULTING ENGINEERS

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AUG 3 2007

July 31, 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. 11 (March 1, 2007 through May 31, 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 March 1, 2007 through May 31, 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 40.3 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, as a result of a short circuit to the ground in the down-well/pump power cable assembly, as diagnosed by Systematic Technologies on December 6, 2006. A change order to complete the work was submitted to the New York State Department of Environmental conservation (NYSDEC) for review and approval.

Approximately 4,969,200 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 inconsistent with the influent flow meter which recorded approximately 4,568,100 gallons of groundwater entering the treatment system.

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During this period, the groundwater extraction and treatment system was inoperative for a total of approximately 270 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 six alarm episodes and one maintenance event. A summary of system downtime is presented in Attachment B. Copies of routine system maintenance reports, as prepared by Systematic Technologies, 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 9 micrograms per liter (ug/l) on March 5, 2007, to a high of 20 ug/l on April 3, 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, with the exception of the effluent sample for iron on May 16, 2007. Iron was detected at a concentration of 1,220 ug/l, which is above the NYSDEC effluent limitation of 1,000 ug/l. Iron effluent samples collected on May 2, 2007 and May 29, 2007 were both below the NYSDEC effluent limitation of 1,000 ug/l; thus, the exceedance was temporary and possibly attributed to iron adsorbed on sediment in the sample vial.

Approximately 0.65 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.

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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, ASMW-2, ASMW-3, ASMW-4, ASMW-5, ASMW-6 and ASMW-7 on May 17, 2007. Samples were analyzed for VOCs by USEPA Method OLMO4.2. The locations of the monitoring wells are shown in Figure 2 in Attachment A.

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 3 ug/l (February 7, 2007) to non-detect (May 17, 2007). The concentration of PCE detected in the sample from monitoring well ASMW-2 increased from 23 ug/l (February 2, 2007) to 44 ug/l (May 17, 2007) but continues to maintain a historical decreasing trend. The detected concentration of PCE in the sample from monitoring well ASMW-3 continues to be below 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-3, 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:

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- 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 groundwater discharge samples show that the air stripper is effectively removing the captured VOCs and reducing concentrations to below the discharge criteria.
- The analytical results for the groundwater discharge sample collected on May 14, 2007 exceeded the iron NYSDEC effluent limit of 1,000 ug/l; however, the groundwater discharge samples collected on May 2, 2007 and May 29, 2007 were both below the iron NYSDEC effluent limit, indicating that the exceedance was temporary.
- The nondetection of PCE in groundwater monitoring well ASMW-1 continues to be below the standard (5 ug/l) and indicates that the extraction system is continuing to reduce the horizontal extent of the PCE plume.
- Concentrations of PCE detected in groundwater monitoring well ASMW-2 increased from 23 ug/l (February 2, 2007) to 44 ug/l (May 17, 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.

# Dvirka and Bartilucci

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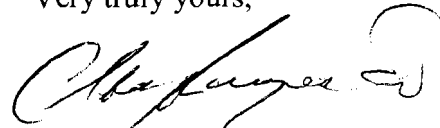
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- Continue groundwater monitoring through the existing monitoring well network to determine contaminant concentration trends over time and to evaluate the continued effectiveness of the remediation system.
- Pull and replace extraction well EW-2 well pump. A change order to perform the work was submitted to the NYSDEC for review on June 18, 2007.

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/jmy

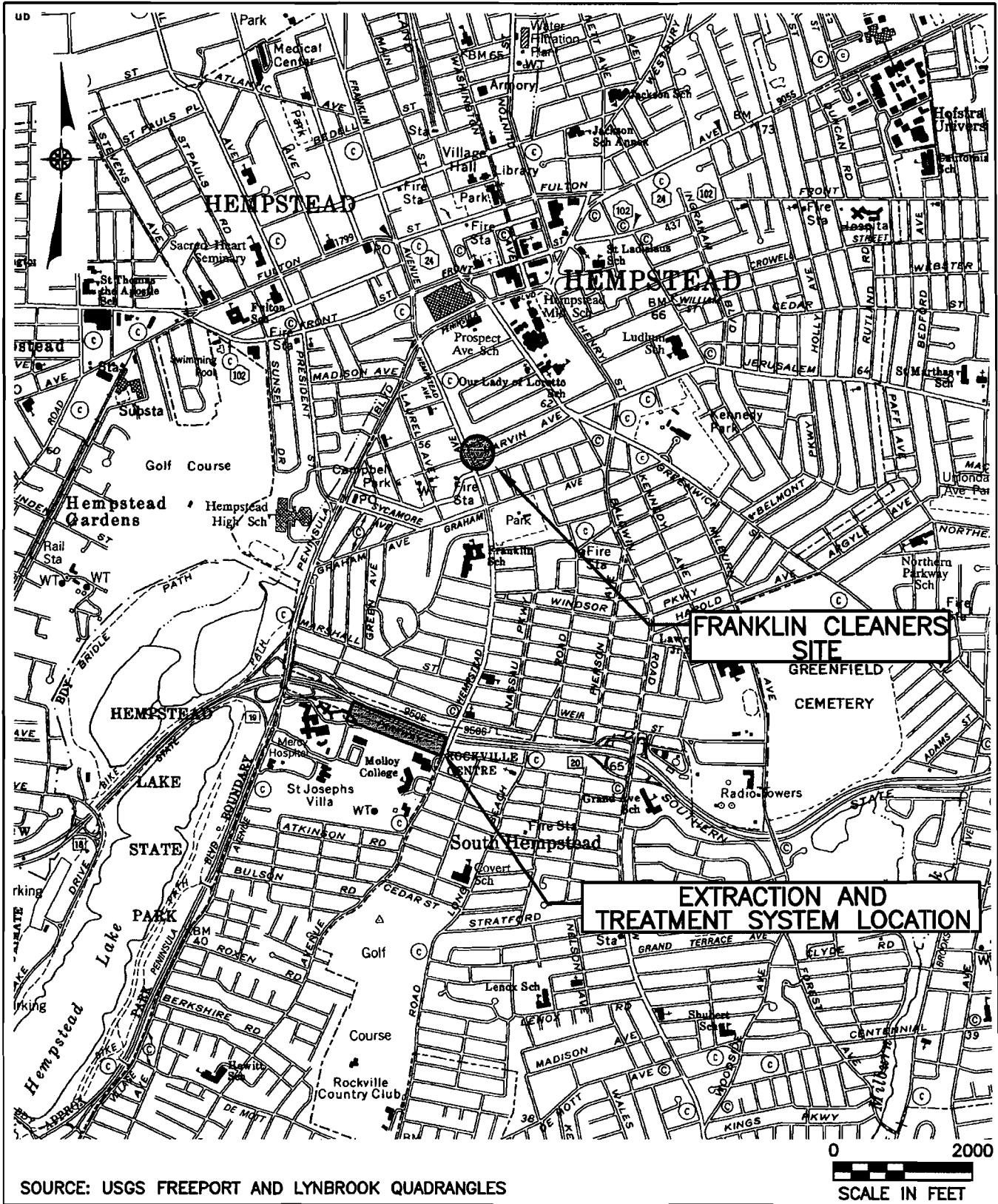
Attachments

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

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**ATTACHMENT A**

**FIGURES**



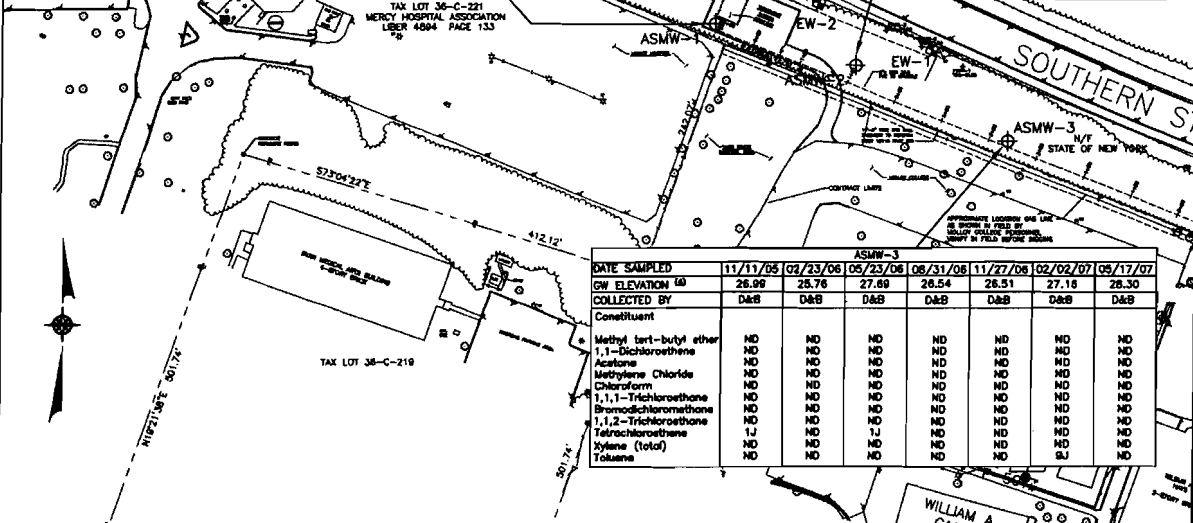
FRANKLIN CLEANERS SITE  
VILLAGE OF HEMPSTEAD, NEW YORK

**SITE LOCATION MAP**

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

FIGURE 1

ASMW-1								ASMW-2							
DATE SAMPLED	11/11/05	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07	DATE SAMPLED	11/11/05	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07
GW ELEVATION (ft)	26.70	27.68	26.89	25.89	26.76	28.28	27.80	GW ELEVATION (ft)	26.33	28.30	27.34	26.30	25.91	26.37	27.34
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B	COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B
Constituent								Constituent							
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND	Acetone	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	Methyl acetate	ND	ND	ND	ND	ND	ND	ND
Chloroform	2J	2J	ND	ND	ND	ND	ND	Methylene Chloride	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2J	2J	ND	ND	ND	ND	ND	Chloroform	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	27	1J	6J	6J	7J	3J	ND	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ND	3J	ND	ND	ND	2J	ND	Tetrachloroethane	68	3J	36	29	17	2J	44
Toluene	ND	ND	ND	ND	ND	ND	ND	Xylene (total)	ND	ND	ND	ND	ND	ND	ND



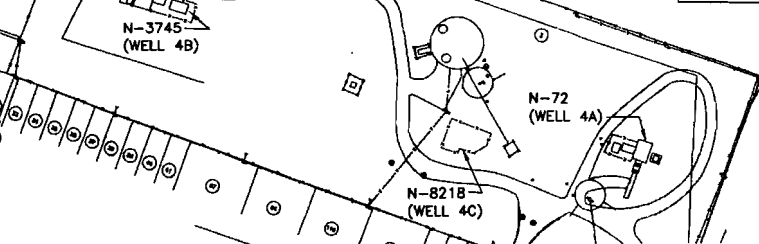
ASMW-4							
DATE SAMPLED	11/11/05	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07
GW ELEVATION (ft)	25.51	25.21	25.15	24.03	24.70	25.02	26.26
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B
Constituent							
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ND	2J	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	1J	ND	ND	ND	5J	ND

ASMW-5							
DATE SAMPLED	11/11/05	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07
GW ELEVATION (ft)	24.81	25.47	25.37	23.15	24.04	23.75	25.18
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B
Constituent							
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	ND	ND	ND

ASMW-7							
DATE SAMPLED	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07	
GW ELEVATION (ft)	21.80	21.97	21.78	22.83	17.23	23.66	
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	
Constituent							
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	
Acetone	ND	ND	ND	ND	ND	ND	
Methylene Chloride	ND	ND	ND	ND	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	ND	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	
Tetrachloroethane	ND	ND	ND	ND	ND	ND	
Xylene (total)	ND	ND	ND	ND	ND	ND	

ASMW-6							
DATE SAMPLED	02/23/06	05/23/06	08/31/06	11/27/06	02/02/07	05/17/07	
GW ELEVATION (ft)	25.01	23.61	22.92	24.04	21.11	25.18	
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	
Constituent							
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	
Acetone	ND	ND	ND	ND	ND	ND	
Methylene Chloride	ND	ND	ND	ND	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	ND	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	
Tetrachloroethane	ND	ND	ND	ND	ND	ND	
Xylene (total)	ND	ND	ND	ND	ND	ND	

GROUNDWATER MONITORING WELLS				
WELL NUMBER	WELL DEPTH (TOC)	SCREEN LENGTH	GROUND SURFACE ELEVATION (ft)	TOP OF CASING ELEVATION (ft)
ASMW-1	90'-0"	10'-0"	48.09	47.29
ASMW-2	90'-0"	10'-0"	46.21	46.25
ASMW-3	90'-0"	10'-0"	47.37	46.99
ASMW-4	110'-0"	10'-0"	44.50	44.06
ASMW-5	133'-0"	10'-0"	44.64	44.28
ASMW-6	132'-0"	10'-0"	43.84	43.33
ASMW-7	250'-0"	20'-0"	43.56	43.21



NOTES:

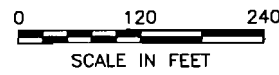
- GROUNDWATER SAMPLES ANALYZED BY USEPA METHOD OLMO 4.2
- RESULTS REPORTED ONLY FOR COMPOUNDS DETECTED ABOVE MDL
- RESULTS ARE REPORTED IN MICROGRAMS PER LITER (ug/l)
- MEASURED IN FEET ABOVE MEAN SEA LEVEL

ABBREVIATIONS:

- D - DILUTED
- J - ESTIMATED
- ND - NOT DETECTED

LEGEND:

- ⊕ GROUNDWATER MONITORING WELL
- ⊞ GROUNDWATER EXTRACTION WELL
- ⊙ IRRIGATION WELL
- FORMER GROUNDWATER PROBE



FRANKLIN CLEANERS SITE  
VILLAGE OF HEMPSTEAD, NEW YORK  
MONITORING WELL LOCATION MAP AND SUMMARY OF SAMPLE RESULTS  
THROUGH MAY 2007



FIGURE 2

F:\2531DWG\Quarterly Reports\Quarter 1\Figure 2.dwg, FIG 2, 06/19/07, 10:13:41 AM, PManorano



**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
3/25/07 7:00 PM	3/27/07 3:20 PM	Alarm condition No. 3 - High high wet well. Turn wet well breaker off then on. Purge wet well. Restarted system.
4/2/07 9:30 AM	4/3/07 3:30 PM	Alarm condition No. 3 - High high wet well. Turn wet well breaker off then on. Purge wet well. Restarted system.
4/16/07 2:30 PM	4/16/07 3:40 PM	Alarm condition No. 3 - High high wet well. Turn wet well breaker off then on. Purge wet well. Restarted system.
4/17/07 10:00 AM	4/19/07 3:30 PM	Alarm condition No. 3, 4 and 5 - EW-1 alarm. Reset EW-1 VFD and reset main control panel. Restarted system.
4/25/07 8:40 AM	4/25/07 9:20 AM	(1) Blower Maintenance - Performed routine blower maintenance and restarted system once maintenance was completed.
4/30/07 5:55 PM	5/2/07 9:00 AM	Alarm condition No. 3 - High high wet well. Turn wet well breaker off then on. Purge wet well. Restarted system.
5/26/07 5:00 PM	5/29/07 4:45 PM	Alarm condition No. 3 - High high wet well. Turn wet well breaker off then on. Purge wet well. Restarted system.

**NOTES:**

1. Blower maintenance event performed by Systematic Technologies, Inc.

**ATTACHMENT C**

**SYSTEM MAINTENANCE REPORTS**

## MAINTENANCE AND INSPECTION REPORT

### FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 4/25/07				
Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
L. Sorensen	Technician	0830	0930	1

Check off Items that were completed:

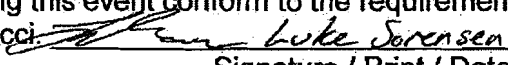
- Item 1: Snow Removal
- Item 2A: Pressure Blower Maintenance
- Item 2B: Pressure Blower Fan Wheel Replacement
- Item 3: Air Stripper Maintenance
- Item 4: Granular Activated Carbon Removal and Replacement
- Item 5: Submersible Wet Well Pump Maintenance and Inspection
- Item 6: Non-routine Maintenance

Description of Work:

Item 2A: Pressure Blower Maintenance: Inspected pressure wheel – okay; greased bearings; checked belt tension – okay; inspected fasteners for tightness – okay.

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.


  
 Signature / Print / Date 4/30/07

**ATTACHMENT D**

**ANALYTICAL RESULTS**

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004448 / 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
	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
DATE OF COLLECTION	5/17/07	5/17/07	5/17/07	5/17/07	5/17/07	5/17/07	5/17/07	
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B	
UNITS	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Dichlorodifluoromethane	U	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	U	-
Vinyl chloride	U	U	U	U	U	U	U	2 ST
Bromomethane	U	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	5 ST
Acetone	U	U	U	U	U	U	U	50 GV
Carbon disulfide	U	U	U	U	U	U	U	60 GV
Methyl acetate	U	U	U	U	U	U	U	-
Methylene chloride	U	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	U	5 ST
Methyl-tert butyl ether	U	U	U	U	U	U	U	10 GV
1,1-Dichloroethane	U	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	5 ST
2-Butanone	U	U	U	U	U	U	U	50 GV
Chloroform	U	U	U	U	U	U	U	7 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	U	5 ST
Cyclohexane	U	U	U	U	U	U	U	-
Carbon tetrachloride	U	U	U	U	U	U	U	5 ST
Benzene	U	U	U	U	U	U	U	1 ST
1,2-Dichloroethane	U	U	U	U	U	U	U	0.6 ST
Trichloroethene	U	U	U	U	U	U	U	5 ST
Methylcyclohexane	U	U	U	U	U	U	U	-
1,2-Dichloropropane	U	U	U	U	U	U	U	1 ST
Bromodichloromethane	U	U	U	U	U	U	U	50 GV
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4 ST
4-Methyl-2-pentanone	U	U	U	U	U	U	U	-
Toluene	U	U	U	U	U	U	U	5 ST
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	U	1 ST
Tetrachloroethene	U	44	U	U	U	U	U	5 ST
2-Hexanone	U	U	U	U	U	U	U	50 GV
Dibromochloromethane	U	U	U	U	U	U	U	50 GV
1,2-Dibromoethane	U	U	U	U	U	U	U	5 ST
Chlorobenzene	U	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	U	5 ST
Xylene (total)	U	U	U	U	U	U	U	5 ST
Styrene	U	U	U	U	U	U	U	5 ST
Bromoform	U	U	U	U	U	U	U	50 GV
Isopropylbenzene	U	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	0.04 ST
1,2,4-Trichlorobenzene	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  
 ST: Standard Value  
 GV: Guidance Value

**QUALIFIERS:**

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

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 / 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)	SYSTEM INFLUENT (EW-1)	SYSTEM INFLUENT (EW-1)	SYSTEM INFLUENT (EW-1)	NYSDEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES
SAMPLE TYPE	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
DATE OF COLLECTION	3/5/2007	3/23/2007	4/3/2007	4/16/2007	5/2/2007	5/16/2007	5/29/2007	
COLLECTED BY	D&B	D&B	D&B	D&B	D&B	D&B	D&B	
UNITS	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
VOCs								
Dichlorodifluoromethane	U	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	U	-
Vinyl chloride	U	U	U	U	U	U	U	2 ST
Bromomethane	U	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	5 ST
Acetone	U	U	U	U	U	U	U	50 GV
Carbon disulfide	U	U	U	U	U	U	U	60 GV
Methyl acetate	U	U	U	U	U	U	U	-
Methylene chloride	U	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	U	5 ST
Methyl-tert butyl ether	U	U	U	U	U	U	U	10 GV
1,1-Dichloroethane	U	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	5 ST
2-Butanone	U	U	U	U	U	U	U	50 GV
Chloroform	U	U	U	U	U	U	U	7 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	U	5 ST
Cyclohexane	U	U	U	U	U	U	U	-
Carbon tetrachloride	U	U	U	U	U	U	U	5 ST
Benzene	U	U	U	U	U	U	U	1 ST
1,2-Dichloroethane	U	U	U	U	U	U	U	0.6 ST
Trichloroethene	U	U	U	U	U	U	U	5 ST
Methylcyclohexane	U	U	U	U	U	U	U	-
1,2-Dichloropropane	U	U	U	U	U	U	U	1 ST
Bromodichloromethane	U	U	U	U	U	U	U	50 GV
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4 ST
4-Methyl-2-pentanone	U	U	U	U	U	U	U	-
Toluene	U	U	U	U	U	U	U	5 ST
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	0.4 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	U	1 ST
Tetrachloroethene	9 J	19	20	17	16	16	15	5 ST
2-Hexanone	U	U	U	U	U	U	U	50 GV
Dibromochloromethane	U	U	U	U	U	U	U	50 GV
1,2-Dibromoethane	U	U	U	U	U	U	U	5 ST
Chlorobenzene	U	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	U	5 ST
Xylene (total)	U	U	U	U	U	U	U	5 ST
Styrene	U	U	U	U	U	U	U	5 ST
Bromoform	U	U	U	U	U	U	U	50 GV
Isopropylbenzene	U	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	U	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	0.04 ST
1,2,4-Trichlorobenzene	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.

**ABBREVIATIONS:**

ug/L = Micrograms per liter  
 --: Not established  
 ST: Standard Value  
 GV: Guidance Value

**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 sample, value estimated.

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050**  
**RESULTS OF ANALYSIS OF AIR STRIPPER EFFLUENT FOR VOCs**

SAMPLE ID	SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		SYSTEM EFFLUENT (AS-1)		EFFLUENT LIMITATIONS (ug/L)	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		
DATE OF COLLECTION	3/5/2007	3/23/2007	4/3/2007	4/16/2007	5/2/2007	5/16/2007	5/29/2007					
COLLECTED BY												
UNITS	(ug/L)											
Dichlorodifluoromethane	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	--
Vinyl chloride	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	5 ST
Chloroethane	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	5 ST
1,1-Dichloroethene	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	50 GV
Acetone	U	U	U	U	U	U	U	U	U	U	U	60 GV
Carbon disulfide	U	U	U	U	U	U	U	U	U	U	U	--
Methyl acetate	U	U	U	U	U	U	U	U	U	U	U	5 ST
Methylene chloride	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	10 GV
Methyl-tert butyl ether	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1-Dichloroethane	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	50 GV
2-Butanone	U	U	U	U	U	U	U	U	U	U	U	7 ST
Chloroform	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	--
Cyclohexane	U	U	U	U	U	U	U	U	U	U	U	5 ST
Carbon tetrachloride	U	U	U	U	U	U	U	U	U	U	U	10 GV
Benzene	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	1 ST
Trichloroethene	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	5 ST
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	U	10
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	U	--
dis-1,3-Dichloropropane	U	U	U	U	U	U	U	U	U	U	U	1 ST
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	U	U	U	50 GV
Toluene	U	U	U	U	U	U	U	U	U	U	U	0.4 ST
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	--
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	5 ST
Tetrachloroethene	U	U	U	U	U	U	U	U	U	U	U	0.4 ST
2-Hexanone	U	U	U	U	U	U	U	U	U	U	U	1 ST
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	U	5 ST
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	U	5 ST
Chlorobenzene	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	5 ST
Xylene (total)	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	50 GV
Bromoforn	U	U	U	U	U	U	U	U	U	U	U	5 ST
Isopropylbenzene	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	5 ST
1,3-Dichlorobenzene	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	3 ST
1,2-Dichlorobenzene	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	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	5 ST

**NOTES:**                      Concentration exceeds Site Specific Effluent Limitation

**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.

ST: Standard Value  
GV: Guidance Value



**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 / 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)	SYSTEM EFFLUENT (AS-1)	SYSTEM EFFLUENT (AS-1)	EFFLUENT LIMITATIONS
SAMPLE TYPE	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
DATE OF COLLECTED BY	3/5/2007 D&B	3/23/2007 D&B	4/3/2007 D&B	4/16/2007 D&B	5/2/2007 D&B	5/16/2007 D&B	5/29/2007 D&B	
UNITS	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<b>METALS</b>								
Iron	55.0 B	33.4 B	81.6 B	63.7 B	320	1,220	U	1000
Manganese	40.4 B	39.4 B	35.5 B	36.7 B	51.6 B	36.3 B	34.9 B	1000
pH (S.U.)	7.4	7.4	7.4	7.4	7.3	7.5	7.3	6.5 to 8.5

**NOTES:**

Concentration exceeds Site Specific Effluent Limitation

**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)
DATE OF COLLECTION	<i>PID Reading</i>	<i>PID Reading</i>	<i>PID Reading</i>	<i>PID Reading</i>
March 5, 2007	0.0	0.0	0.0	0.0
March 12, 2007	0.0	0.0	0.0	0.0
March 23, 2007	0.0	0.0	0.0	0.0
March 27, 2007	0.0	0.0	0.0	0.0
April 3, 2007	0.0	0.0	0.0	0.0
April 13, 2007	0.0	0.0	0.0	0.0
April 16, 2007	0.0	0.0	0.0	0.0
April 25, 2007	0.0	0.0	0.0	0.0
May 2, 2007	0.0	0.0	0.0	0.0
May 11, 2007	0.0	0.0	0.0	0.0
May 16, 2007	0.0	0.0	0.0	0.0
May 23, 2007	0.0	0.0	0.0	0.0
May 29, 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 <sup>(1)</sup>	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 <sup>(2)</sup> (lbs)
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	7.17E-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 <sup>(4)</sup>
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 <sup>(5)</sup>	37.8	26	2.0	200	< 0.5	98.56	4.92E-04 2.00E-04	136 507	26.42 <sup>(4)</sup>
12/5/2005	0.0	NS	1.6	170	< 0.5	99.71	1.36E-04	106	26.43
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	26.67
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 <sup>(4)</sup>
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	27.08 <sup>(4)</sup>
6/5/2006	0.0	NS	2.6	120	< 0.5	99.58	1.56E-04	337	27.14
6/19/2006	0.0	NS	2.7	120	< 0.5	99.58	1.62E-04	327	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 <sup>(4)</sup>
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 <sup>(4)</sup>
12/15/2006	39.3	19	0.0	NS	< 0.5	97.37	3.74E-04	261	28.21
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 <sup>(4)</sup>
3/6/2007	38.0	18	0.0	NS	< 0.5	97.11	3.71E-04	112	28.82
3/23/2007	41.1	19	0.0	NS	< 0.5	97.37	3.91E-04	431	28.99
4/3/2007	39.2	20	0.0	NS	< 0.5	97.50	3.93E-04	190	29.06
4/16/2007	40.5	17	0.0	NS	< 0.5	97.06	3.45E-04	286	29.16
5/2/2007	39.2	16	0.0	NS	< 0.5	96.88	3.14E-04	284	29.25
5/16/2007	39.5	16	0.0	NS	< 0.5	96.88	3.16E-04	336	29.36
5/29/2007	41.4	15	0.0	NS	< 0.5	96.67	3.11E-04	301	29.45 <sup>(4)</sup>

**NOTES:**

1. Data from 9/23/03 through 8/25/04 reported by URS Corporation.
2. PCE removal calculations as of September 9, 2003 system start-up date.
3. Performance results for the reporting period are shaded.
4. Estimated through the end of the reporting period.
5. 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:**

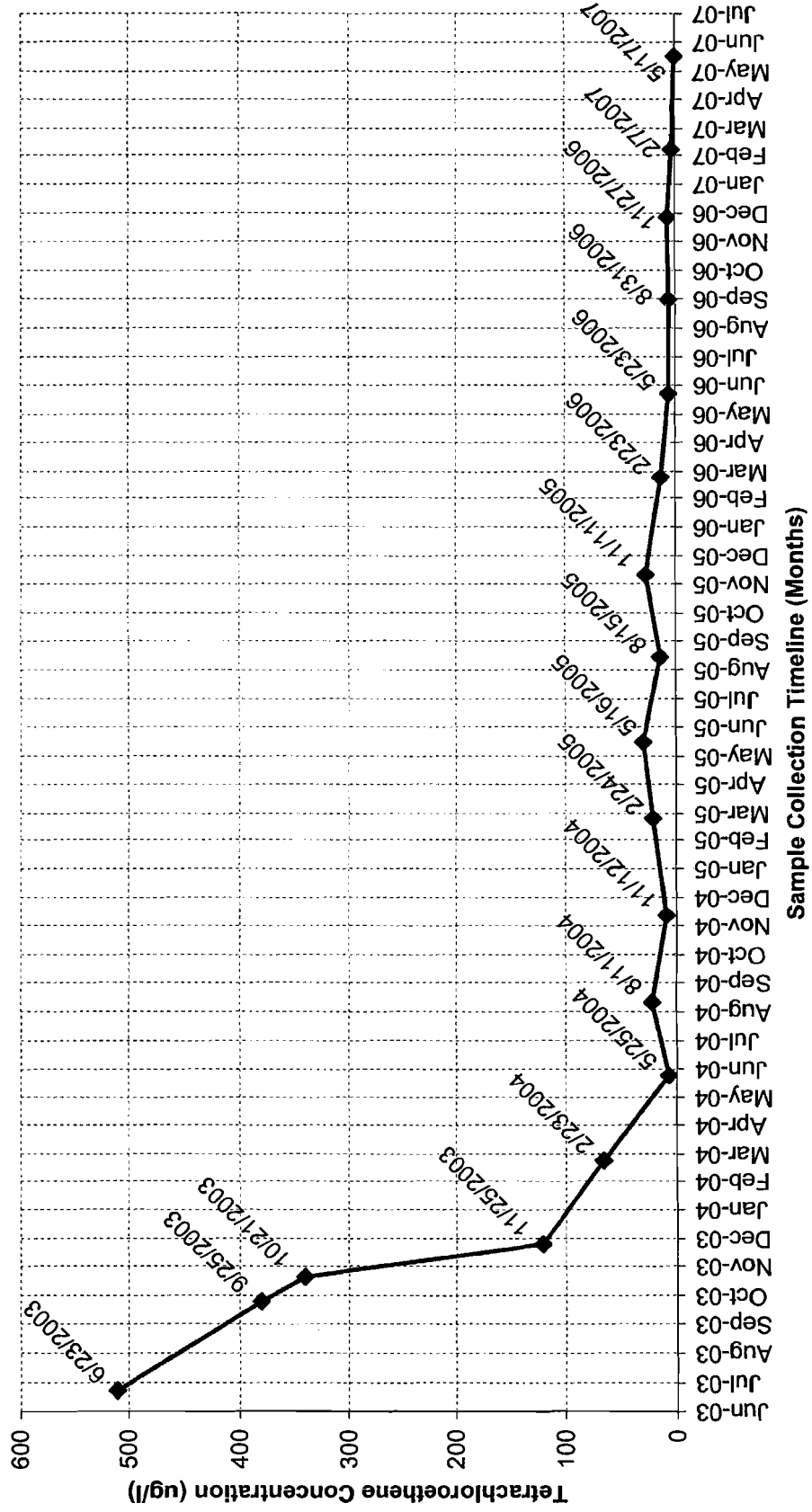
D: Result taken from reanalysis at a secondary dilution  
J: Compound found at a concentration below CRDL, value estimated  
B: Compound detected in method blank as well as the sample, value estimated  
E: Compound concentration exceeds instrument calibration range, value estimated

**ATTACHMENT F**

**MONITORING WELL TREND LINE GRAPHS**

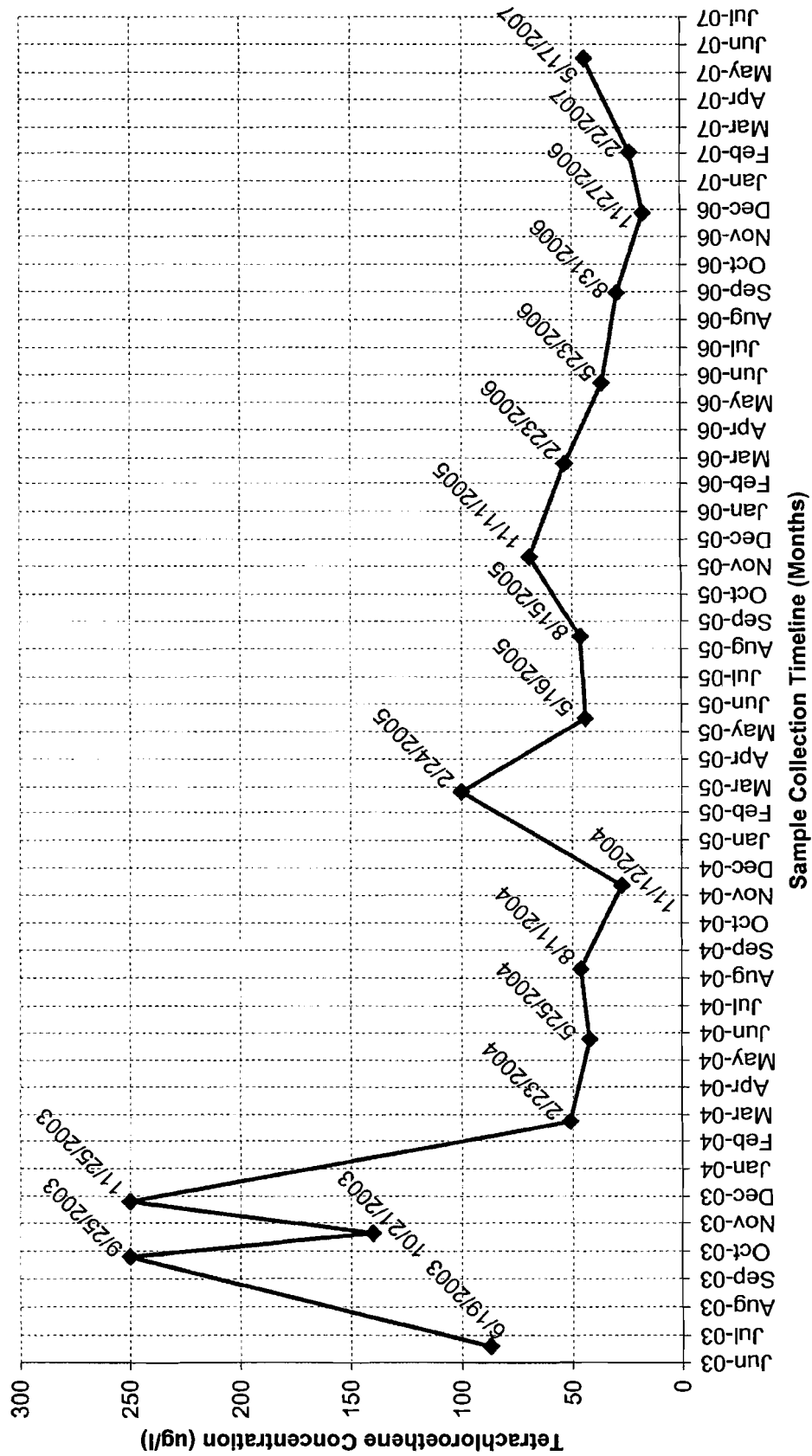
GRAPH 1

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

