

**Dvirka  
and  
Bartilucci**  
CONSULTING ENGINEERS

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July 13, 2009

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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. 17 (September 1, 2008 through November 30, 2008)  
D&B No. 2531

Dear Mr. Long:

The purpose of this letter is to summarize the performance monitoring activities completed by Dvirka and Bartilucci Consulting Engineers (D&B) of the groundwater extraction and treatment system at the Franklin Cleaners Site. This report addresses the period from September 1, 2008 through November 30, 2008. A site location map is presented as Figure 1 in Attachment A.

Presented below is a summary of system operations during the quarter, as well as the results of analytical testing completed in accordance with the approved work plan for the referenced work assignment.

**Groundwater Extraction and Treatment System Operation**

During this period, extraction well EW-1 operated at an average pumping rate of 34.0 gallons per minute (gpm) and extraction well EW-2 operated at an average pumping rate of 5.2 gpm. Approximately 0.54 pounds of PCE were removed from the extracted groundwater by the low profile air stripper during the reporting period and approximately 32.56 pounds of PCE have been removed since start-up of the system in September 2003. The average PCE removal efficiency for this quarter was greater than 99 percent.

Based on measurements recorded at the treatment system discharge flow meter, approximately 6,680,275 gallons of treated groundwater were discharged to the Nassau County Department of Public Works (NCDPW) storm sewer system. Note that this volume is inconsistent with the influent flow meters for EW-1 and EW-2 which recorded approximately 5,549,978 gallons of groundwater entering the treatment system. This inconsistency is possibly due to fouling of the influent flow meter paddle wheel.

# Dvirka and Bartilucci

CONSULTING ENGINEERS

Mr. Payson Long

Division of Environmental Remediation

New York State Department of Environmental Conservation

June 13, 2009

Page 2

During this period, the groundwater extraction and treatment system was inoperative for a total of approximately 107.5 hours due to system alarm conditions and routine system maintenance. Of the 107.5 hours, approximately 99.5 hours of "downtime" was due to a high-high wet well condition in the treatment system building, approximately 4.5 hours of "downtime" was due to a VFD fault of EW-1 or EW-2, and approximately 3.5 hours of "downtime" was due to routine wet well pump maintenance. In response to the significant amount of downtime associated with high-high wet well conditions, D&B observed the condition of the system immediately following shutdown due to high wet well conditions and during above average precipitation events. In addition, inspections were made of the treatment system discharge basin connected to a sewer located to the east of the treatment system building on Franklin Avenue; the basin and piping were found to be free of debris and flow was not impeded in any manner. However, D&B did observe that the treatment system discharge was often submerged in water following these above average precipitation events.

A summary of system downtime is presented in Attachment B. Copies of routine system maintenance reports, as prepared by Systematic Technologies, Inc., are presented in Attachment C.

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

Groundwater samples were collected from the EW-1 and EW-2 well influent piping sample taps, as well as from the air stripper (liquid) discharge sample tap, at a frequency of twice per month during each of the 3 months comprising this reporting period. Each sample was analyzed for volatile organic compounds (VOCs) utilizing United States Environmental Protection Agency (USEPA) Method OLMO4.2. The samples collected from the air stripper discharge sample tap were additionally analyzed for iron and manganese utilizing USEPA Method 200.7 and for pH utilizing 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. Based on the analytical results provided in Attachment D, extraction well EW-1 continues to exhibit concentrations of tetrachloroethene (PCE) in groundwater ranging from a low of 11.0 micrograms per liter (ug/l) detected on October 16, 2008, to a high of 16.0 ug/l detected on November 25, 2008. Extraction well EW-2 continues to exhibit concentrations of PCE ranging from a low of 45.0 ug/l detected on October 30, 2008, to a high of 82.0 ug/l detected on September 19, 2008. The discharge sample results for the period exhibited VOC, metals and pH concentrations below the effluent limitations.

A summary of the extraction and treatment system performance results since the system was put into operation is provided in Attachment E.

In addition, vapor phase samples were collected from the two carbon adsorption unit influent and effluent sample taps at a general frequency of once per week. Each sample was collected by filling a Tedlar bag directly from each of the influent and effluent sample taps located on the two carbon adsorption units. The samples were screened using a calibrated, handheld photoionization detector (PID). During the reporting period, PID readings collected from both carbon vessels ranged from 0.0 to 0.2 parts per million (ppm) for both the influent and effluent vapor samples at each carbon adsorption unit. Note that the PID

# Dvirka and Bartilucci

CONSULTING ENGINEERS

Mr. Payson Long

Division of Environmental Remediation

New York State Department of Environmental Conservation

June 13, 2009

Page 3

readings collected from carbon vessel outlets Nos. 1 and 2 were both below the NYSDEC site-specific effluent limit of 1.0 ppm.

## 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 groundwater monitoring wells ASMW-1 through ASMW-7 on December 3, 2008. Samples were analyzed for VOCs utilizing USEPA Method OLMO4.2. The locations of the monitoring wells are depicted on Figure 2 provided in Attachment A.

The results of the analyses of the groundwater samples collected from the monitoring wells are provided in Attachment D and summarized on Figure 2 provided in Attachment A. The results are compared to the NYSDEC Class GA Groundwater Standards and Guidance Values. Tetrachloroethene (PCE), at a concentration of 9.1 ug/l, was detected at a concentration exceeding its Class GA Standard of 5.0 ug/l in groundwater monitoring well ASMW-1. This PCE concentration represents an increase from the 5.6 ug/l concentration detected in the previous quarter (August 19, 2008) and is consistent with the relatively low concentrations detected in this monitoring well since 2004. The concentration of PCE detected in groundwater sample ASMW-2 (5.0 ug/l) increased from 3.5 ug/l detected in the previous quarter (August 19, 2008) and continues to maintain a decreasing trend since 2003. In addition, note that the PCE concentration detected in monitoring well ASMW-3 continues to exhibit a detectable concentration below its Class GA standard. VOCs were not detected in the groundwater samples collected from groundwater monitoring wells 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.

Groundwater sampling for Quarter 18 is scheduled for February 2009.

## Data Validation

The biweekly system samples and groundwater samples have been analyzed for VOCs by Mitkem Corporation (Mitkem). The effluent sample (AS-1) was additionally 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.

# Dvirka and Bartilucci

CONSULTING ENGINEERS

Mr. Payson Long

Division of Environmental Remediation

New York State Department of Environmental Conservation

June 13, 2009

Page 4

## Findings/Conclusions

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

- The analytical results of the system influent samples show that extraction wells EW-1 and EW-2 continue to capture VOC-contaminated groundwater of a combined total flow rate of 39.2, which is greater than the minimum required pumping rate of 20 gpm, as specified in the December 2000 Groundwater Extraction and Treatment System Design Report.
- 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 effluent discharge criteria.
- Concentrations of PCE detected in groundwater monitoring well ASMW-1 increased from 5.6 ug/l (August 19, 2008) to 9.1 ug/l (December 3, 2008); however, ASMW-1 continues to exhibit a decreasing trend from a high of 30 ug/l (May 16, 2005) for the past 3-year period.
- Concentrations of PCE detected in groundwater monitoring well ASMW-2 increased from 3.5 ug/l (August 19, 2008) to 5.0 ug/l (December 3, 2008); however, ASMW-2 continues to exhibit an overall decreasing trend from a high of 100 ug/l (February 24, 2005) for the past 3-year period.
- PCE concentrations remain non-detect in the downgradient groundwater monitoring wells (ASMA-4, ASMW-5, ASMW-6 and ASMW-7).
- The inconsistency noted between the influent flow meters for EW-1 and EW-2, and the treatment system discharge flow meter, is possibly due to fouling at the influent flow meter paddle wheels. However, note that the influent flow meters are a paddle wheel design and the effluent flow meter is a magnetic design and, as such, these meters will present slightly different accuracies.
- The recurring high wet well alarm conditions are likely the result of storm water backup in the storm water discharge basin, which frequently occurs following an above average precipitation event.
- As the downgradient early warning groundwater monitoring wells continue to exhibit non-detect VOC concentrations, it is concluded that the selected remedy is functioning as intended by the Record of Decisions (ROD). In addition, please note that the Village of Rockville Centre Public Supply Well located at Molloy College continues to exhibit non-detect concentrations of chlorinated VOCs.
- According to information received from the Director of Facilities for Molloy College, no new groundwater extraction wells have been installed on the Molloy College property, which is located immediately downgradient of the Franklin Cleaners off-site groundwater extraction and treatment system.
- A new DER-10 document, dated December 2002, has been implemented since the March 1998 ROD was issued.

# Dvirka and Bartilucci

CONSULTING ENGINEERS

Mr. Payson Long  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
June 13, 2009

Page 5

- The toxicity data, cleanup levels and remedial action objectives, as defined in the March 1998 ROD, remain unchanged.

## Recommendations

Based on the results of performance monitoring conducted during this 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.
- Disassemble and clean the influent flow meter paddle wheels on a monthly basis in an attempt to resolve the inconsistencies noted between the influent and effluent meters. If this is not effective, replacement of the influent meters with a type less susceptible to fouling may be necessary.

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

Very truly yours,



Stephen Tauss  
Project Manager

SET/PM/jmy,kap

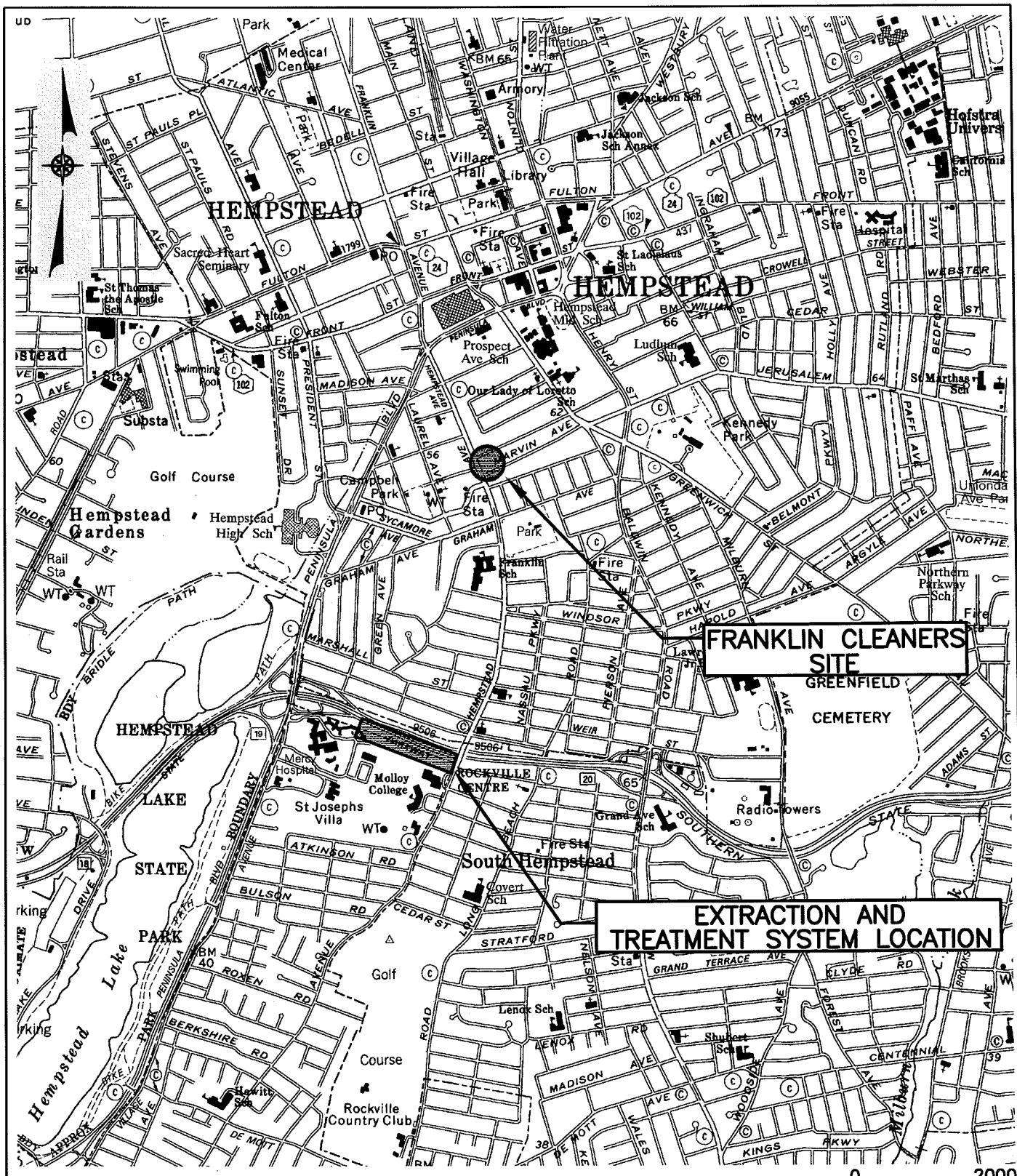
Attachments

cc: J. Trad (NYSDEC)  
J. Multari (Molloy College)  
J. Neri (H2M)  
R. Walka (D&B)  
F. DeVita (D&B)  
P. Martorano (D&B)

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**ATTACHMENT A**

**FIGURES**



SOURCE: USGS FREEPORT AND LYNBROOK QUADRANGLES

FRANKLIN CLEANERS SITE  
VILLAGE OF HEMPSTEAD, NEW YORK

**SITE LOCATION MAP**



**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
9/11/08 5:18 AM	9/11/08 10:40 AM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Restart system.
9/24/08 10:40 AM	9/24/08 2:05 PM	Routine Wet Well Pump Maintenance <sup>(1)</sup> . Restarted system.
10/17/08 5:00 PM	10/18/08 2:00 PM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Restart system.
10/25/08 10:00 PM	10/27/08 7:30 AM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Restart system.
10/29/08 1:00 PM	10/30/08 4:35 PM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Restart system.
11/6/08 7:00 AM	11/6/08 7:20 AM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Observed discharge pipe in storm sewer while pumping; water above discharge pipe. Restart system.
11/18/08 10:14 AM	11/18/08 2:20 PM	Alarm Condition #3 - High Wet Well: Trip breaker on wet well pumps. Pump wetwell down past shutoff float. Observed discharge pipe in storm sewer while pumping; water above discharge pipe. Restart system.
11/24/08 12:15 PM	11/24/08 4:30 PM	Alarm Conditions #3 & #5 - Failure EW-1/EW-2: Restart VFDs, restart system. System restarted though both wells not pumping. Shut down system, reset power to entire system. Restart system successfully.

NOTES:

1. Maintenance event performed by Systematic Technologies, Inc.

**ATTACHMENT C**

**SYSTEM MAINTENANCE REPORTS**

# MAINTENANCE AND INSPECTION REPORT

## FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 9/24/08

Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
L. Sorensen	President	1020	1445	4.5 on site
E. Sorensen	Technician	1020	1445	4.5 on site

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 5: Submersible Wet Well Pump Maintenance and Inspection

1. Checked electrical condition of insulation on power cable and all phases of motor;
2. Checked for any loose or faulty electrical connections within the pump control panel;
3. Checked voltage supply between all phases of the electrical control panel;
4. Checked voltage balance between all phases on the local side of the pump control with pump on;
5. Checked amperage draw on all phases of the pump motor;
6. Checked condition and operation of motor thermal protectors control system;
7. Checked condition of upper shaft seals (inspect condition of motor housing );
8. Checked condition and operation of leakage detector;
9. Checked lower shaft seals (inspect condition of oil);
10. Changed oil;
11. Checked for worn or loose impeller;
12. Checked all impeller wear rings;
13. Checked for noisy upper and lower bearings;
14. Physically checked for damage to pump and power cable;
15. Cleaned, reset and checked operation of the level sensors;
16. Checked for correct shaft rotation;
17. Tested pump operation cycle.

Name of Part / Supply / Material	Manufacturer	Model Number	Quantity Used
Pump Oil	ITT Flygt	Unknown	1 Quart

# MAINTENANCE AND INSPECTION REPORT

## FRANKLIN CLEANERS SITE, ROCKVILLE CENTRE, NY

Date: 10/30/08				
Name of Personnel Onsite	Title	Time Arrived	Time Departed	Total Hours
L. Sorensen	President	1600	1635	0.5 on site
E. Sorensen	Technician	1600	1635	0.5 on site

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

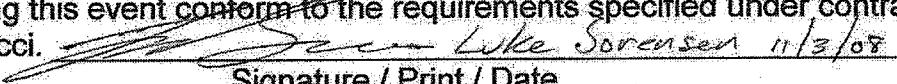
### Description of Work:

#### Item 2A: Pressure Blower Maintenance

1. Inspected fan wheel for wear and corrosion;
2. Inspected fan wheel for buildup of materials;
3. Inspected V-belt drive for proper alignment and tension
4. Lubricated motor bearings and fan bearings;
5. Inspected all setscrews and bolts for tightness.

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

**ATTACHMENT D**

**ANALYTICAL RESULTS**

FRANKLIN CLEANERS SITE  
NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050  
RESULTS OF ANALYSIS OF EW-1 INFLUENT FOR VOCs

SAMPLE ID	SYSTEM INFLOW (EW-1)	NYSC DEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES					
SAMPLE TYPE	WATER	WATER	WATER	WATER	WATER	WATER	
DATE OF COLLECTION	9/5/2008	9/19/2008	10/3/2008	10/16/2008	10/30/2008	11/12/2008	11/25/2008
COLLECTED BY	D&B						
UNITS	(ug/L)						
VOCs							
Dichlorodifluoromethane	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	--
Vinyl chloride	U	U	U	U	U	U	2 ST
Bromomethane	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	50 GV
Acetone	U	U	U	U	U	U	60 GV
Carbon disulfide	U	U	U	U	U	U	--
Methyl acetate	U	U	U	U	U	U	5 ST
Methylene chloride	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	10 GV
Methyl-tert butyl ether	U	U	U	U	U	U	5 ST
1,1-Dichlorethane	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	50 GV
2-Butanone	U	U	U	U	U	U	7 ST
Chloroform	U	U	U	U	U	U	5 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	--
Cyclohexane	U	U	U	U	U	U	5 ST
Carbon tetrachloride	U	U	U	U	U	U	1 ST
Benzene	U	U	U	U	U	U	0.6 ST
1,2-Dichloroethane	U	U	U	U	U	U	5 ST
Trichloroethene	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	1 ST
1,2-Dichloropropane	U	U	U	U	U	U	50 GV
Bromodichloromethane	U	U	U	U	U	U	0.4 ST
cis-1,3-Dichloropropene	U	U	U	U	U	U	--
4-Methyl-2-pentanone	U	U	U	U	U	U	5 ST
Toluene	U	U	U	U	U	U	0.4 ST
trans-1,3-Dichloropropene	U	U	U	U	U	U	1 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	5 ST
Tetrachloroethene	U	U	U	U	U	U	50 GV
2-Hexanone	U	U	U	U	U	U	50 GV
Dibromochloromethane	U	U	U	U	U	U	5 ST
1,2-Dibromobutane	U	U	U	U	U	U	5 ST
Chlorobenzene	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	3 ST
Xylene (total)	U	U	U	U	U	U	3 ST
Styrene	U	U	U	U	U	U	0.04 ST
Bromoform	U	U	U	U	U	U	5 ST
Isopropylbenzene	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	5 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	5 ST

## ABBREVIATIONS:

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

## QUALIFIERS:

U: Compound analyzed for but not detected

Concentration exceeds NYSDEC Class GA Groundwater Standards or Guidance Values

## NOTES:

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 / SITE No. 1-30-050**  
**RESULTS OF ANALYSIS OF EW-2 INFLUENT FOR VOCs**

SAMPLE ID	SYSTEM INFLUENT (EW-2)	NYSDEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES (ug/L)					
SAMPLE TYPE	WATER						
DATE OF COLLECTION	9/19/2008	D&B	10/3/2008	10/16/2008	D&B	10/30/2008	11/12/2008
COLLECTED BY							11/25/2008
UNITS	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	D&B
VOCS							
Dichlorodifluoromethane	U	U	U	U	U	U	5 ST
Chloromethane	U	U	U	U	U	U	2 ST
Vinyl chloride	U	U	U	U	U	U	5 ST
Bromomethane	U	U	U	U	U	U	5 ST
Chloroethane	U	U	U	U	U	U	5 ST
Trichlorofluoromethane	U	U	U	U	U	U	5 ST
1,1-Dichloroethene	U	U	U	U	U	U	5 ST
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	50 GV
Acetone	U	U	U	U	U	U	60 GV
Carbon disulfide	U	U	U	U	U	U	-
Methyl acetate	U	U	U	U	U	U	5 ST
Methylene chloride	U	U	U	U	U	U	5 ST
trans 1,2-Dichloroethene	U	U	U	U	U	U	10 GV
Methyl-tert butyl ether	U	U	U	U	U	U	5 ST
1,1-Dichloroethane	U	U	U	U	U	U	5 ST
cis-1,2-Dichloroethene	U	U	U	U	U	U	50 GV
2-Butanone	U	U	U	U	U	U	7 ST
Chloroform	U	U	U	U	U	U	5 ST
1,1,1-Trichloroethane	U	U	U	U	U	U	-
Cyclohexane	U	U	U	U	U	U	5 ST
Carbon tetrachloride	U	U	U	U	U	U	-
Benzene	U	U	U	U	U	U	1 ST
1,2-Dichloroethane	U	U	U	U	U	U	0.6 ST
Trichloroethene	U	U	U	U	U	U	5 ST
Methylcyclohexane	U	U	U	U	U	U	-
1,2-Dichloropropane	U	U	U	U	U	U	1 ST
Bromodichloromethane	U	U	U	U	U	U	50 GV
cis-1,3-Dichloropropene	U	U	U	U	U	U	0.4 ST
4-Methyl-2-pentanone	U	U	U	U	U	U	-
Toluene	U	U	U	U	U	U	5 ST
trans-1,3-Dichloropropene	U	U	U	U	U	U	0.4 ST
1,1,2-Trichloroethane	U	U	U	U	U	U	1 ST
Tetrachloroethene	U	U	U	U	U	U	5 ST
2-Hexanone	U	U	U	U	U	U	50 GV
Dibromochloromethane	U	U	U	U	U	U	5 ST
1,2-Dibromoethane	U	U	U	U	U	U	5 ST
Chlorobenzene	U	U	U	U	U	U	5 ST
Ethylbenzene	U	U	U	U	U	U	5 ST
Xylene (total)	U	U	U	U	U	U	5 ST
Styrene	U	U	U	U	U	U	50 GV
Bromoform	U	U	U	U	U	U	5 ST
Isopropylbenzene	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	3 ST
1,3-Dichlorobenzene	U	U	U	U	U	U	3 ST
1,4-Dichlorobenzene	U	U	U	U	U	U	3 ST
1,2-Dichlorobenzene	U	U	U	U	U	U	3 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	0.04 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	5 ST

**ABBREVIATIONS:**

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

**QUALIFIERS:**

U: Compound analyzed for but not detected

**NOTES:**

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D00446 / SITE No. 1-30-050**  
**RESULTS OF ANALYSIS OF AIR STRIPPER EFFLUENT FOR VOCs**

SAMPLE ID	SYSTEM EFFLUENT (AS-1) WATER	NYSDC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES (ug/L)						
SAMPLE TYPE	9/5/2008	9/19/2008	10/3/2008	10/16/2008	10/30/2008	11/12/2008	11/25/2008	EFFLUENT LIMITATIONS (ug/L)
DATE OF COLLECTION	D&B	11/25/2008						
COLLECTED BY	(ug/L)							
UNITS								
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	50 GV
Acetone	U	U	U	U	U	U	U	60 GV
Carbon disulfide	U	U	U	U	U	U	U	--
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	U	U	U	U	U	U	5 ST
2-Hexanone	U	U	U	U	U	U	U	50 GV
Di bromochloromethane	U	U	U	U	U	U	U	5 ST
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	3 ST
Xylene (total)	U	U	U	U	U	U	U	3 ST
Styrene	U	U	U	U	U	U	U	0.04 ST
Bromoform	U	U	U	U	U	U	U	5 ST
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	5 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	5 ST

**ABBREVIATIONS**

Concentration exceeds Site Specific Effluent Limitation

NOTES:

**QUALIFIERS:**

U: Compound analyzed for but not detected  
 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)							
SAMPLE TYPE	WATER							
DATE OF COLLECTION	9/5/2008	9/19/2008	10/3/2008	10/16/2008	10/30/2008	11/12/2008	11/25/2008	
COLLECTED BY	D&B							
UNITS	(ug/L)							
METALS								
Iron	U	119 B	U	83.1 B	376	168 B	66.5 B	
Manganese	28.0 B	26.6 B	26.7 B	29.6 B	33.9 B	26.9 B	26.8 B	
pH (S.U.)	7.5	7.2	7.2	7.4	6.9	7.2	7.0	6.5 to 8.5

**QUALIFIERS:**

U: Compound analyzed for but not detected  
B: Concentration is greater than the instrument detection limit (IDL) but less than the Contract Required Detection Limit (CRDL)

**ABBREVIATIONS:**

ug/L: Micrograms per liter

Concentration exceeds Site Specific Effluent

**NOTES:**

**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>
September 5, 2008	0.2	0.2	0.2	0.2
September 19, 2008	0.2	0.2	0.2	0.2
September 25, 2008	0.2	0.2	0.2	0.2
October 3, 2008	0.2	0.2	0.2	0.2
October 10, 2008	0.2	0.2	0.0	0.0
October 16, 2008	0.0	0.0	0.0	0.0
October 24, 2008	0.0	0.0	0.0	0.0
October 30, 2008	0.0	0.0	0.2	0.2
November 6, 2008	0.0	0.0	0.0	0.0
November 12, 2008	0.0	0.0	0.0	0.0
November 21, 2008	0.0	0.0	0.0	0.0
November 25, 2008	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.

**FRANKLIN CLEANERS SITE**  
**NYSDEC CONTRACT No. D004446 SITE No. 1-30-050**  
**RESULTS OF GROUNDWATER SAMPLING FOR VOCs**

SAMPLE ID	ASMW-1 WATER	ASMW-2 WATER	ASMW-3 WATER	ASMW-4 WATER	ASMW-5 WATER	ASMW-6 WATER	ASMW-7 WATER	NYSDEC CLASS GA GROUNDWATER STANDARDS AND GUIDANCE VALUES
SAMPLE TYPE	12/3/2008	12/3/2008	12/3/2008	12/3/2008	12/3/2008	12/3/2008	12/3/2008	D&B
DATE OF COLLECTION	D&B	12/3/2008						
COLLECTED BY	(ug/L)							
UNITS								
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	U	U	U	U	U	U	U	5 ST
2-Hexanone	U	U	U	U	U	U	U	50 GV
Dibromoethane	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	50 GV
Bromoform	U	U	U	U	U	U	U	5 ST
Isopropylbenzene	U	U	U	U	U	U	U	5 ST
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	3 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	0.04 ST
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	5 ST
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	-

**ABBREVIATIONS:**

ug/L = Concentration exceeds NYSDEC Class GA  
 Groundwater Standards or Guidance Values  
 -: Not established

**QUALIFIERS:**

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

**NOTES:**

**ATTACHMENT E**

**PERFORMANCE SUMMARY**

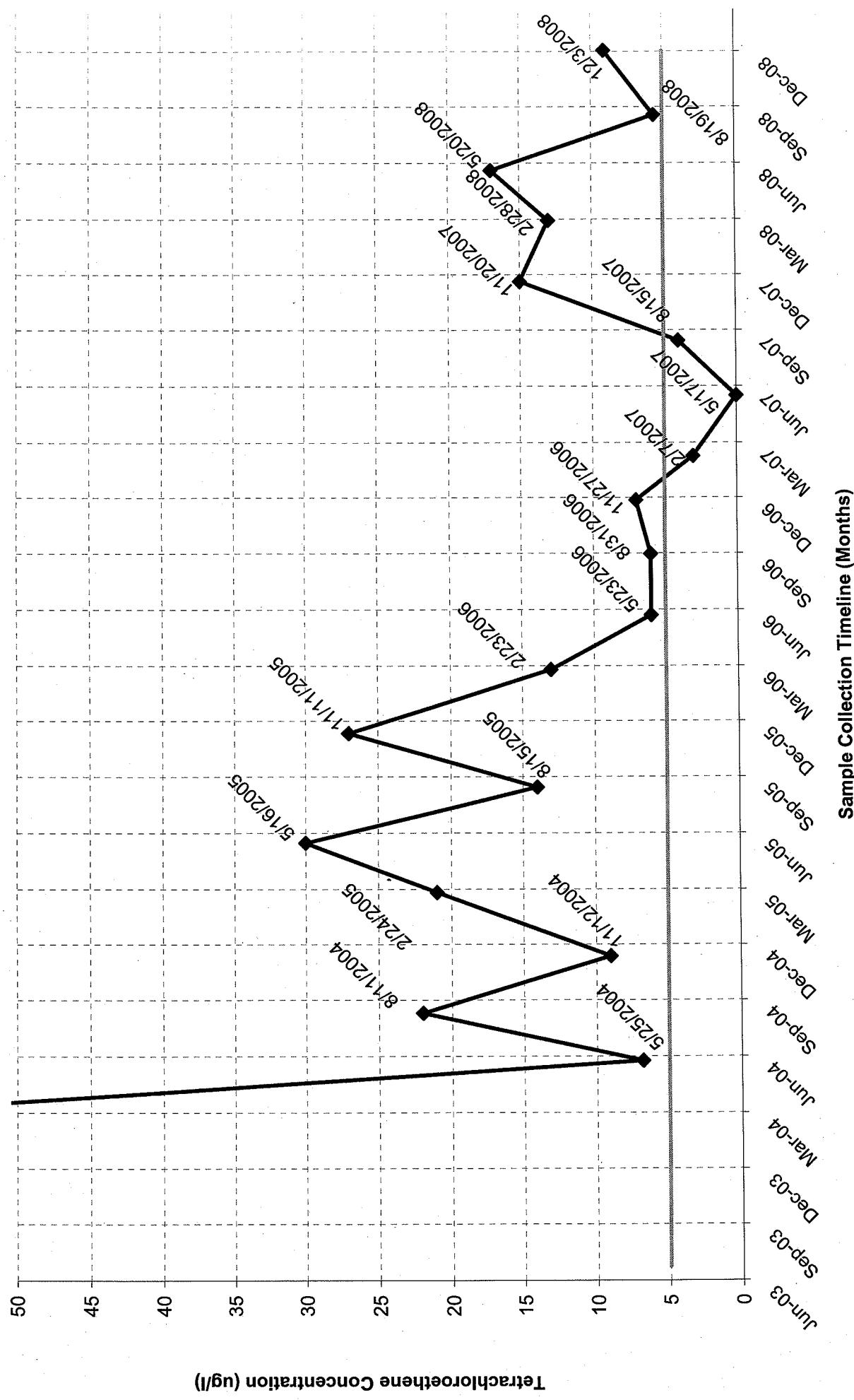


**ATTACHMENT F**

**MONITORING WELL TREND LINE GRAPHS**

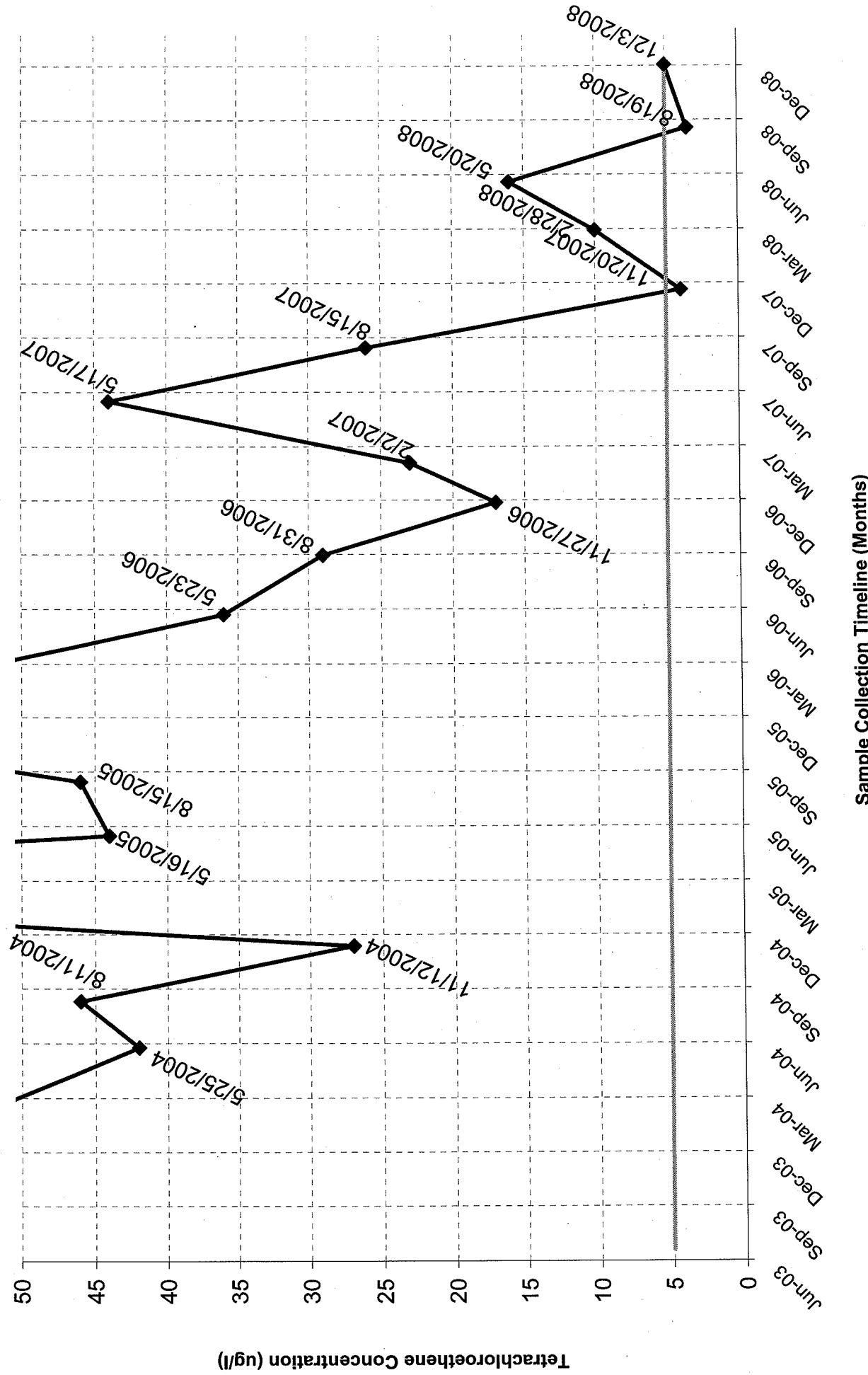
## GRAPH 1

**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**

