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A Division of D&B Engineers and Architects, P.C.

ACTIVE INDUSTRIAL UNIFORM GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

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REPORT TITLE

Site Management Quarterly Report No. 26

REPORTING PERIOD

April 1, 2011 through June 30, 2011

CLIENT

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Division of Environmental Remediation
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Site

NYSDEC Site No. 1-52-125, Active Industrial Uniform Site Groundwater Extraction and Treatment System, Village of Lindenhurst, Town of Babylon, Suffolk County, New York.

Project Background and Site Description

The Active Industrial Uniform (the Site) groundwater extraction and treatment system was designed to recover and treat a chlorinated solvent-contaminated groundwater plume emanating from the Site, a former dry cleaning and laundry facility. Dry cleaning activities were conducted at the site from the 1980's to 1987. The groundwater extraction and treatment system has been in operation since December 2001; however, D&B assumed site management duties for the Site in February 2005. Refer to *Figure 1* for a Site location map depicting the treatment system location.

Groundwater Extraction and Treatment System Overview

The treatment system consists of two, 8-inch diameter extraction wells, with one located on-site in the southwest portion of the Site (RW-1), and one located off-site, approximately 1,500 feet southwest of the Site (RW-2). However, as per NYSDEC direction, extraction well RW-2 was shut-down in April 2010 due to low historic VOC concentrations. Extracted groundwater is conveyed to the treatment system building via underground piping to two series-configured packed-tower air strippers. However, based on an evaluation of each of the packed-tower air stripper's performance over the last several years of operation and in order to reduce the electrical consumption of the treatment system, one of the two series-configured air stripper towers was taken out of service in May 2011. Treated groundwater is pumped via underground piping to a storm water basin located approximately 1,000 feet west of the Site, which subsequently discharges into Little Neck Creek, in accordance with all applicable discharge standards. Exhaust gas from each air stripper was treated utilizing two granular activated carbon (GAC) vessels in series. However, based on low historic contaminant concentrations detected in the air stripper exhaust gas, the air stripper exhaust piping was reconfigured to bypass the GAC vessels and discharge directly to the atmosphere in June 2011, per the direction of the NYSDEC. The treatment system is equipped with instrumentation and controls which allow for automated startup and operation, and an autodial alarm notification system. Refer to *Figure 2* for an "as-built" treatment system layout diagram.

Regulatory Requirements/Cleanup Goals

Site-specific remedial goals have been established through the remedy selection process and are documented in the Record of Decision (ROD), dated March 1997. The overall goal is to meet all appropriate Standards, Criteria, and Guidance (SCGs) and to be protective of human health and the environment. Implementation of the groundwater extraction and treatment system is specifically focused on the following goals:

- Reduce, control, or eliminate contaminated media to the extent practicable;

- Eliminate the threat to surface waters by remediating groundwater to the extent practicable;
- Mitigate the impacts of contaminated groundwater to the environment;
- Prevent, to the extent possible, migration of contaminants;
- Provide for attainment of SCGs for groundwater, soil and indoor air within the limits of the affected area, to the extent practical; and
- Reduce the threat to homes from high groundwater.

Treatment System Performance Summary

The treatment system performance during the current reporting period and since D&B assumed O&M duties in February 2005 is summarized below.

System Extraction Rates and Total Flow Volumes

	RW-1 (1)	RW-2 (2)	System Effluent
Average Pumping Rate - Current Reporting Period	0 gpm	NA	0 gpm
Average Pumping Rate - Previous Reporting Period	0 gpm	NA	0 gpm
Average Pumping Rate to Date	68 gpm	80 gpm	104 gpm
Total Flow Volume - Current Reporting Period	25,913 gal.	NA	25,227 gal.
Total Flow Volume to Date	277,921,408 gal.(3)	129,900,729 gal.	405,601,155 gal. (3)

NA: Not applicable

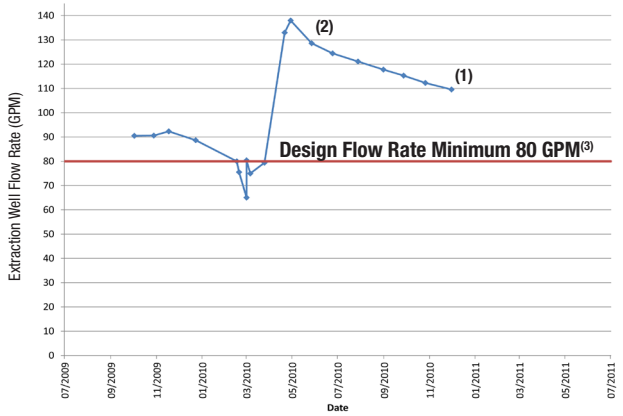
1. Extraction well RW-1 did not operate the vast majority of this reporting period and the entire previous reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.
2. As described above, extraction well RW-2 was shut down in April 2010 based on low historic VOC concentrations, as per NYSDEC direction.
3. Note that, due to the fact that the treatment system was shut down for the majority of the previous two reporting periods, the total flow information for RW-1 and the system effluent provided in Quarterly Report Nos. 24 and 25 were based on estimates. The information presented above depicts actual total flow volumes collected during this reporting period.

The treatment system was not operational during the vast majority of this reporting period due to the following system malfunctions and activities:

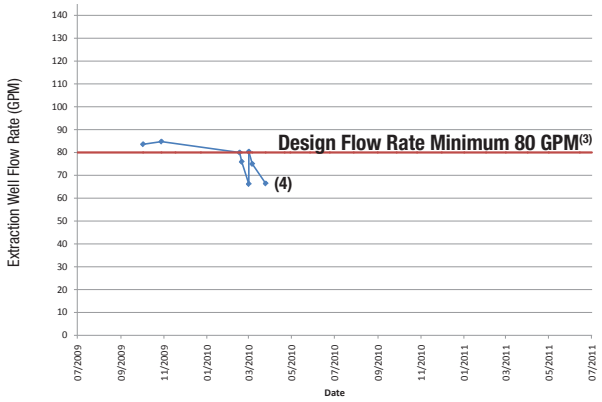
- As detailed in the previous Quarterly Report, the bed screen supports located in the carbon vessels rusted and failed on December 23, 2010, resulting in ejection of the granular activated carbon (GAC) material. D&B initially recommended the bed screen be repaired so the system could be restarted. Based on NYSDEC's Air Guide-1 modeling and overall decreasing vapor-phase contaminant concentrations, the NYSDEC decided that the treatment system GAC vessels could be bypassed while still remaining protective of human health and the environment. As such, the treatment system effluent vapor piping was re-routed in order to bypass the GAC vessels and the treatment system was restarted on June 14, 2011. However, after 4 hours of operation the system was shutdown due to a continuous loud noise emitted by the system exhaust stack. It is suspected that the loud noise was caused by an increase in effluent air flow following the GAC vessel bypass. In order to decrease the system exhaust stack airflow, while at the same time reducing the electrical consumption of the treatment system, D&B recommended the installation of a variable frequency drive (VFD) on the pressure blower.
- Following the system shut-down due to the loud noise and as per the direction of the NYSDEC, the treatment system remained off for the remainder of this reporting period while further modifications to decrease the loud noise and increase the treatment system efficiency were evaluated.

As detailed above, the treatment system remained off for the entire reporting period (with exception of 4 hours). As such, sampling and monitoring activities were not conducted during this reporting period.

Extraction Well RW-1 Flow Rate Trend Line

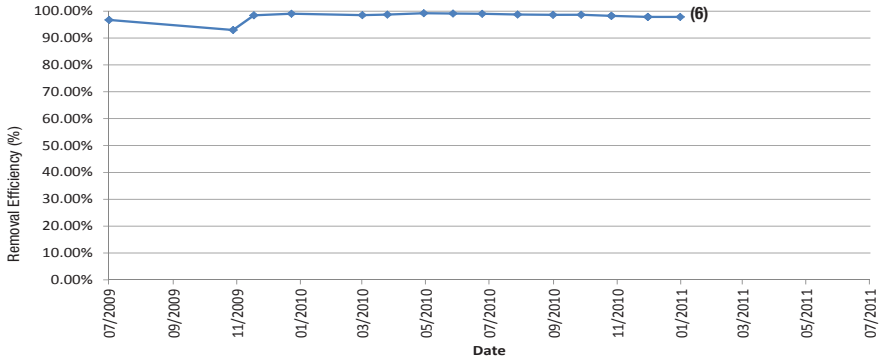


Extraction Well RW-2 Flow Rate Trend Line



1. As detailed above, the treatment system did not operate the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.
2. Based on the decreasing well yield it may be warranted to reapply the Aqua-Freed process to improve well yield.
3. Based on design information presented in the Active Industrial design documents, containment of the Active Industrial chlorinated plume could be achieved with on-site extraction well RW-1 operating at a minimum of 80% of the design flow rate of 100 GPM (80 GPM).
4. As detailed above, extraction well RW-2 was shutdown in April 2010 due to low historic VOC concentrations.

Air Stripper VOC Removal Efficiency(5)



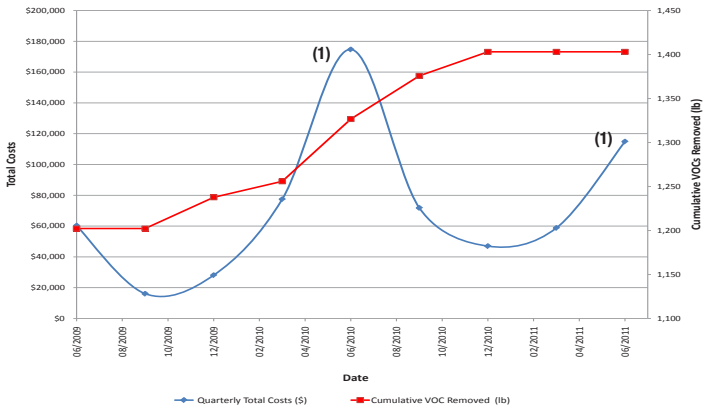
5. The packed-tower air strippers have operated at an approximate efficiency ranging from 92.65% to 99.47% since D&B assumed O&M duties in February 2005.
6. As detailed above, the treatment system did not operate the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.

VOC Removal Assessment [7]	
VOC Removal - Current Reporting Period [8]	0.0 lbs.
VOC Removal - Previous Reporting Period [9]	0.0 lbs.
Average VOC Removal to Date	24.5 lbs.
Total VOC Removal to Date	1,396 lbs.

VOC Removal Costs [7]	
VOC Removal Cost - Current Reporting Period [8]	NA
VOC Removal Cost - Previous Reporting Period [9]	NA
Average VOC Removal Cost to Date [10]	$1,792 per lb.

7. The VOC removal costs include monthly utility charges, maintenance costs and engineering costs. Capital construction costs and NYSDEC project management effort are not included in this evaluation.
8. The treatment system did not operate the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.
9. The treatment system did not operate during the previous reporting period due to a carbon vessel bed screen failure.
10. Average calculated from when D&B assumed O&M duties in February 2005 through the current reporting period.

VOC Removal/Operational Cost Trend Line



1. Costs reflected for this period are primarily the result of contaminated soil excavation activities completed by the NYSDEC "call-out" contractor, per the approval of the NYSDEC.

System Operation and Maintenance

Routine and non-routine maintenance completed during this reporting period and a summary of the alarm conditions and associated treatment system runtime/downtime for this reporting period are summarized below. Refer to *Attachment A* for operation and maintenance logs, as prepared by the NYSDEC "call-out" contractor for this reporting period.

Routine Equipment Maintenance Schedule Summary

Major System Component	Manufacturer	Model Number	Maintenance Frequency	Maintenance Summary					
				Current Reporting Period (2)			Next Reporting Period		
				Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
Extraction Well Pump RW-1	Grundfos Pump Corp.	150550-2	As needed based on flow trends						
Extraction Well Pump RW-2	Grundfos Pump Corp.	1505100-5	As needed based on flow trends						
Pressure Blower	Cincinnati Fan	PB-18	Bi-Monthly						
Vapor Carbon Vessels	Cameron Great Lake	VS7.2x6.7x8.6-5000-DUAL	As needed based on analytical results						
Air Strippers	Branch Environmental	48T-25H	As needed based contaminant concentrations						
Air Stripper Transfer Pumps	Magnatex Pumps, Inc.	MTA-A10-P-F20-2-FE	Quarterly						

##/##/##	Activity Completed		Planned Activity

2. Routine maintenance activities were not performed during this period, as the treatment system was not operational.

Non-Routine System Maintenance:

- Removal of carbon from the carbon vessels on April 4 and 5, 2011;
- Site meeting between the NYSDEC "call-out" contractor and Suffolk County Water Authority (SCWA) to locate and record a reading from the water usage meter on April 26, 2011;
- Two roll-off containers were delivered to the site on May 2, 2011. Concrete excavated during the 2010 UST removal excavation was broken up and loaded into the containers for disposal;
- PID readings were collected from the soil stock-pile from the UST removal excavation on May 6, 2011;
- Carbon drums were removed from the site on May 6, 2011;
- Weed removal services on May 12 and 23, 2011;
- Installation of new locks on all monitoring wells on May 12 and 13, 2011;
- Site meeting between the NYSDEC "call-out" contractor and SCWA to record a reading from the water usage meter on May 20, 2011. Additionally, SCWA installed a new water usage meter, which will allow readings to be obtained remotely;
- Assessment of the ex-situ SVE system, draining of the SVE moisture knock-out drum and replacement of a light on the system control panel on May 23, 2011;
- Site meeting between the NYSDEC "call-out" contractor, D&B project manager and NYSDEC project manager to discuss remedial activities and introduce the new NYSDEC project manager on May 24, 2011;
- The property fence on the south side of the site was repaired on May 26, 2011; and
- Composite confirmatory soil sample collected from the ex-situ soil pile on May 26, 2011.

System Runtime/Downtime Summary		
Runtime - Current Reporting Period [1]	4 hours [3]	0.2%
Downtime - Current Reporting Period [1]	2,180 hours	99.8%
Total Runtime to Date [2]	42,104 hours	77.2%
Total Downtime to Date [2]	12,444 hours	22.8%

1. Total elapsed runtime for current reporting period is 2,184 hours (April 1, 2011 through June 30, 2011).
2. Based on the start of D&B's O&M duties in February 2005.
3. The treatment system did not operate during the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.

IRM Activities

Based on recommendations provided in Quarterly Report No. 22, an area of contaminated soil was delineated and excavated from the Site in June and July 2011 as part of an Interim Remedial Measure (IRM). All IRM engineering and associated analytical data evaluation activities were completed by D&B, while the collection and analysis of all soil samples and implementation of all IRM fieldwork activities, including air monitoring, were completed by the NYSDEC "call-out" contractor. D&B performed several "spot checks" throughout the completion of the IRM activities, on a generally weekly basis.

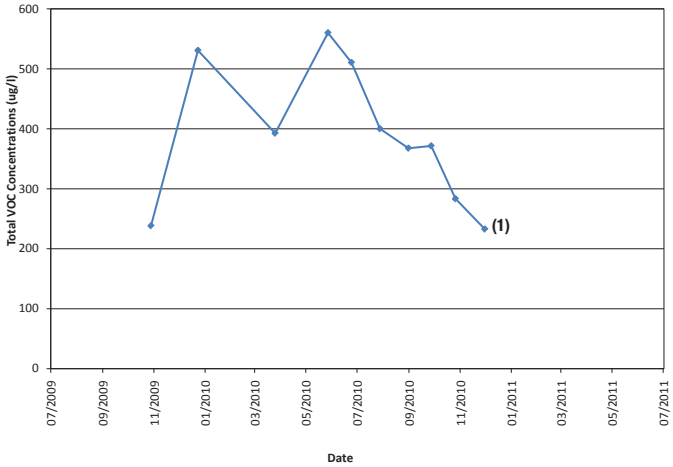
In order to limit waste disposal costs, the NYSDEC decided to remediate the excavated soil on-site utilizing an ex-situ soil vapor extraction (SVE) system. The SVE system was constructed of poly-sheeting, PVC piping and a pressure blower. Soil vapor generated from the SVE system was initially routed through two 55-gallon GAC units; however, based on low VOC concentrations detected in the SVE system effluent and based on direction from the NYSDEC, the two GAC units were removed from this system in June 2011.

Following remediation, the excavated soil will be utilized to backfill the excavation area and regrade areas of the Site to the west of the treatment system building. The SVE system is still operating at this time. Further details, including a figure depicting the excavation area and all associated sample locations and a summary of all endpoint and sidewall sample results, are provided in the draft Final Engineering Report for the Active Industrial Uniform Site, dated November 2011.

System Monitoring and Sampling Results

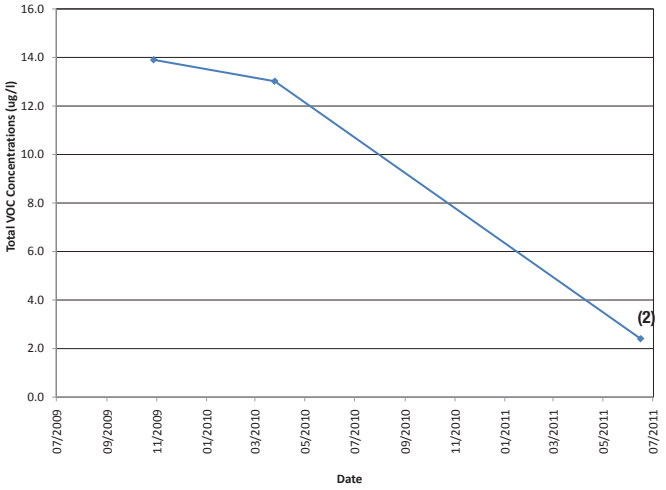
A summary of the pertinent routine treatment system monitoring and sampling results are provided below.

Extraction Well RW-1 Total VOC Concentration Trend Line



1. The treatment system did not operate during the vast majority of this reporting period and the entire previous reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.

Extraction Well RW-2 Total VOC Concentration Trend Line



2. RW-2 was shut down in April 2010 due to low historic VOC concentrations, as per the direction of the NYSDEC. Note that, based on recommendations provided by D&B, RW-2 is now sampled on a quarterly basis (starting on June 17, 2011) to monitor off-site VOC concentrations and to determine whether RW-2 should be restarted.

Extraction Well RW-1 - System Influent Contaminant Concentration Ranges/Averages [1]

Contaminant	Current Reporting Period [2]	Previous Reporting Period [3]	Average to Date	Class GA Groundwater Standard
Tetrachlorothene (PCE)	- -	- -	234 ug/l	5.0 ug/l
Trichlorothene (TCE)	- -	- -	64 ug/l	5.0 ug/l
cis-1,2-Dichloroethene (cis-1,2-DCE)	- -	- -	102 ug/l	5.0 ug/l
trans-1,2-Dichloroethene (trans-1,2-DCE)	- -	- -	0.09 ug/l	5.0 ug/l
Vinyl chloride (VC)	- -	- -	0.67 ug/l	2.0 ug/l
1,1,1-Trichloroethane (1,1,1-TCA)	- -	- -	0.15 ug/l	5.0 ug/l
Iron	- -	- -	164 ug/l	300 ug/l
Manganese	- -	- -	1,177 ug/l	300 ug/l
Sodium	- -	- -	25,161 ug/l	20,000 ug/l
pH	- -	- -	6.2 ug/l	6.5-8.5 ug/l

Aqueous Phase Air Stripper Effluent Concentration Ranges [1]

Discharge Permit Parameters	Current Reporting Period [2]	Previous Reporting Period [3]	Site-Specific Effluent Limit
PCE	- -	- -	4.0 ug/l
TCE	- -	- -	10.0 ug/l
cis-1,2-DCE	- -	- -	10.0 ug/l
trans-1,2-DCE	- -	- -	10.0 ug/l
VC	- -	- -	10.0 ug/l
1,1,1-TCA	- -	- -	5.0 ug/l
Iron	- -	- -	4,000 ug/l
Manganese	- -	- -	2,000 ug/l
Sodium	- -	- -	NA
pH	- -	- -	6-9

- - : Not analyzed. NA: Not applicable.

1. Only includes constituents typically detected in exceedance of their respective Class GA Groundwater Standard.
2. The treatment system did not operate during the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.
3. Groundwater extraction and treatment system did not operate during the previous reporting period due to a carbon vessel bed screen failure.

Vapor Phase Carbon Adsorption Vessels				
	Carbon Vessel 1 Influent [1]	Carbon Vessel Midfluent [1]	Carbon Vessel 2 Effluent [1]	Site-Specific Limits
PCE	- -	- -	- -	0.007 lbs/hr
TCE	- -	- -	- -	0.006 lbs/hr
Xylene	- -	- -	- -	0.001 lbs/hr
1,2-DCE (total)	- -	- -	- -	0.003 lbs/hr
VC	- -	- -	- -	0.014 lbs/hr
1,1,1-TCA	- -	- -	- -	0.001 lbs/hr
Pressure Blower Flow Rate	- -	- -	- -	NA
Maximum Total VOC Emissions	- -	- -	- -	0.5 lbs/hr [2]

- - : Not analyzed. NA: Not applicable.
1. The treatment system did not operate during the vast majority of this reporting period due to a carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up.
2. The site-specific effluent limit of 0.5 lbs/hr was developed in consultation with the NYSDEC and is utilized as a means to monitor total vapor-phase VOCs emitted by the treatment system.

Groundwater Monitoring Summary

The network of groundwater monitoring wells was sampled to determine groundwater quality at, and in the vicinity of, the Site. Samples were collected from nine on-site groundwater monitoring wells (MW-101 through MW-108 and MW-5S) and three off-site groundwater monitoring wells (MW-109, MW-111 and MW-2S). The locations of the on-site groundwater monitoring wells are depicted in *Figure 3*, and the locations of the off-site groundwater monitoring wells are depicted on *Figure 4*.

Groundwater Monitoring Well Condition Summary:

All twelve groundwater monitoring wells were found to be accessible during the groundwater monitoring sampling event conducted on June 16 and 17, 2011. Although all groundwater monitoring wells were located as indicated on the Site map, none had visible well IDs or measuring points. All groundwater monitoring well concrete well pads (where applicable), protective casings, surface seals, PVC well risers, well plugs and locks were observed to be present and in good condition, with the following exceptions:

- As final restoration/grading has not yet been completed in the vicinity of monitoring well locations MW-104 and MW-5S, these wells do not have concrete well pads;
- The manhole was observed to be damaged and the cover could not be bolted down at MW-111;
- Missing bolts were observed on the manholes at MW-101, MW-102 and MW-106; and
- Stripped eyelets were observed on the well casings at MW-102, MW-106, MW-108 and MW-109.

A summary of the field inspection logs for all groundwater monitoring wells assessed during this period are provided in *Attachment B*.

Groundwater Monitoring Results Summary:

A headspace reading was collected utilizing a photoionization detector (PID) at each groundwater monitoring well immediately after the removal of the well caps and plugs. The on-site groundwater monitoring wells exhibited concentrations of total VOCs in well headspace ranging from 0.5 ppm to a maximum concentration of 13.2 ppm, detected in groundwater monitoring well MW-107. The off-site groundwater monitoring wells exhibited concentrations of total VOCs in well headspace ranging from 0.4 ppm to a maximum concentration of 0.6 ppm, detected in groundwater monitoring well MW-109.

Below is a detailed summary of the site-specific contaminant of concern concentrations in on-site and off-site groundwater. Refer to *Attachment C* for analytical data results.

Site-Specific Contaminant of Concern Concentrations

Monitoring Well [1]	PCE		TCE		cis-1,2-DCE		Vinyl Chloride		Site-Specific 2-Year Contaminant Trend Analysis
	Current Reporting Period	Previous Reporting Period	Current Reporting Period	Previous Reporting Period	Current Reporting Period	Previous Reporting Period	Current Reporting Period	Previous Reporting Period	
On-Site Monitoring Wells									
MW-101	1.0 ug/l	1.0 ug/l	0.74 ug/l	0.65 ug/l	ND	ND	ND	ND	Stable
MW-102	2.6 ug/l	1.3 ug/l	0.45 ug/l	ND	ND	ND	ND	ND	Stable
MW-103	4.9 ug/l	17.0 ug/l	0.58 ug/l	ND	1.5 ug/l	3.1 ug/l	0.38 ug/l	1.1 ug/l	Stable
MW-104	62.0 ug/l	44.0 ug/l	4.9 ug/l	2.8 ug/l	0.33 ug/l	ND	ND	ND	Decreasing
MW-105 [2]	9.1 ug/l	1.8 ug/l	20.0 ug/l	37.0 ug/l	1,000 ug/l	430 ug/l	77.0 ug/l	65.0 ug/l	Increasing
MW-106	80 ug/l	92.0 ug/l	63.0 ug/l	50 ug/l	80.0 ug/l	140 ug/l	0.31 ug/l	2.1 ug/l	Decreasing
MW-107	7.3 ug/l	3.9 ug/l	0.96 ug/l	0.97 ug/l	0.33 ug/l	0.31 ug/l	ND	ND	Decreasing
MW-108	5.6 ug/l	6.6 ug/l	1.1 ug/l	1.4 ug/l	2.2 ug/l	3.9 ug/l	ND	ND	Increasing
MW-5S	0.60 ug/l	0.60 ug/l	ND	0.75 ug/l	ND	ND	ND	ND	Decreasing
Off-Site Monitoring Wells									
MW-109	0.97 ug/l	1.0 ug/l	1.1 ug/l	1.1 ug/l	1.4 ug/l	1.0 ug/l	ND	ND	Decreasing
MW-111	0.54 ug/l	0.52 ug/l	ND	ND	ND	ND	ND	ND	Stable
MW-2S	38.0 ug/l	4.0 ug/l	14.0 ug/l	7.6 ug/l	34.0 ug/l	32.0 ug/l	2.0 ug/l	ND	Decreasing

ND: Constituent concentration below the analytical detection limit.
--: Not analyzed.
Red font denotes an exceedance of the constituents Class GA Groundwater Standard (5.0 ug/l for PCE, TCE and cis-1,2-DCE, and 2.0 ug/l for VC).

1. Click on monitoring well IDs for graphs depicting contaminant concentrations over the last 2 years in wells exhibiting exceedances of the Class GA Groundwater Standards for this and the previous reporting period.
2. In addition to the site-specific contaminants of concern exceedances summarized above, trans-1,2-dichloroethene, at a concentration of 11 ug/l, was detected in exceedance of its Class GA Groundwater Standard of 5.0 ug/l in on-site monitoring well MW-105.

Note that the majority of the groundwater monitoring wells exhibit overall decreasing or stable concentrations of the site-specific contaminants over the past 2-year period. In addition, a gross plume model depicting the estimated extent of the total chlorinated VOC plume is provided as *Figure 5*. Note that, due to the limited number of sample and data points downgradient of the treatment system, the overall extent of the total chlorinated VOC plume is estimated and the plume extent is based on a total chlorinated VOC concentration of 5.0 ug/l. In comparison to the previous reporting period, the plume extent has slightly decreased due to a decrease in contaminant concentrations in on-site monitoring wells MW-103 and MW-106 and off-site monitoring well MW-109.

Data Validation:

All sample results have been reviewed by D&B and deemed valid and usable for environmental assessment purposes. No qualification of the data was necessary based upon D&B's review. Data Validation Checklists are presented in *Attachment D*.

Findings and Recommendations

Findings:

- General Treatment System: The treatment system was not operational for the entire reporting period, with the exception of 4 hours following the reconfiguration of the system vapor-phase effluent piping, due to the carbon vessel bed screen failure and a continuous loud noise emitted by the treatment system exhaust stack upon start-up on June 14, 2011. As such, sampling and system monitoring activities were not completed during this reporting period. Following the system shut-down due to the loud noise and as per the direction of the NYSDEC, the treatment system remained off for the remainder of this reporting period as further system modifications were evaluated. D&B recommended the installation of a VFD on the pressure blower in order to decrease the system exhaust stack airflow and reduce the electrical consumption of the system. Note the VFD was installed in July 2011 and will be summarized in the following Quarterly Report. As described above, additional system modification activities were completed following this reporting period in order to improve the efficiency of the treatment system and will be summarized in the following Quarterly Report;
- IRM Activities: An IRM consisting of the excavation of contaminated soil was completed in the southwest area of the Site. As detailed above, the excavated soil is currently being remediated on-site utilizing a SVE system and will be utilized as backfill following remediation;
- Monitoring Well Conditions: All groundwater monitoring wells were observed to be in good condition, with the following exceptions:
  - No monitoring wells had visible well IDs or measuring points;
  - As final restoration/grading has not yet been completed in the vicinity of monitoring wells MW-104 and MW-5S, these wells do not have concrete well pads;
  - The manhole was observed to be damaged and the cover could not be bolted down at MW-111;
  - Missing bolts were observed on the manholes at MW-101, MW-102 and MW-106; and
  - Stripped eyelets were observed on the well casings at MW-102, MW-106, MW-108 and MW-109;
- Monitoring Well Headspace: Total VOC concentrations in on-site monitoring well headspace ranged from 0.5 ppm to a maximum concentration of 13.2 ppm, detected in on-site monitoring well MW-107. Total VOC concentrations in off-site monitoring well headspace ranged from 0.4 ppm to a maximum concentration of 0.6 ppm, detected in off-site monitoring well MW-109; and
- Monitoring Well Contaminant Concentrations: Six on-site groundwater monitoring wells (MW-103, MW-104, MW-105, MW-106, MW-107 and MW-108) and one off-site monitoring well (MW-2S) exhibited one or more of the site-specific VOCs at concentrations exceeding their respective Class GA Groundwater Standards during this reporting period. However, contaminant concentrations in these monitoring wells have generally remained similar to or have decreased compared to the previous reporting period, with the exception of monitoring wells MW-105 and MW-2S.

Recommendations:

- General Extraction and Treatment System: Continued operation of GWE&Ts and repair and update appropriate treatment system components in order to reduce treatment system downtime and increase overall efficiency;
- Groundwater Sampling: Collect routine groundwater samples from off-site extraction well RW-2, in order to better monitor off-site contamination concentrations and to determine whether the extraction well should be re-started;
- Monitoring Well Measuring Points: Well IDs and measuring points should be permanently fixed and clearly marked on each groundwater monitoring well for identification purposes;
- Monitoring Well Casings: Repair the manhole at monitoring well MW-111, the well casing eyelets at monitoring wells MW-102, MW-106, MW-108 and MW-109, and replace the missing bolts at monitoring wells MW-101, MW-102 and MW-106 in order to maintain the security of the monitoring wells;

- UST Excavation Area Restoration: Restore the UST removal excavation area to final grade and replace the well pads at monitoring wells MW-104 and MW-5S;
- Monitoring Well Headspace: Continue to assess headspace conditions in each groundwater monitoring well as part of the routine groundwater monitoring;
- Extraction Well ROI Analysis: In order to ensure the treatment system on-site extraction well is operating at an optimal and efficient flow rate, D&B recommends performing an annual radius of influence (ROI) analysis for extraction well RW-1;
- Temporary Geoprobe Wells: Based on the elevated contaminant concentrations detected in on-site monitoring well MW-106 and off-site monitoring well MW-2S, it may be warranted to install and sample several temporary geoprobe wells in the southeastern area of the Site and downgradient of the Site to more accurately define the current location of the PCE plume in these areas. Based on the results of the temporary well sampling, it may be warranted to install additional permanent monitoring wells in these areas and/or modify the current extraction well configuration in order to optimize and accelerate the recovery and treatment of the entire plume. Upon approval of this recommendation, D&B will provide the NYSDEC with a temporary well installation and sampling scope of work for review and approval; and
- RSO Evaluation: Based on the identification of several below grade structures and contaminated soil to the west of the treatment system and consistently elevated contaminant concentrations detected in several on-site monitoring wells, D&B recommends performing a Remedial Site Optimization (RSO) evaluation to further investigate residual on-site soil contamination, areal plume extents, treatment system equipment efficiency and operation, and possibly consider alternative remedial technologies, such as monitored natural alternation (MNA) and/or in-situ chemical injections.

Reclassification/Delisting Evaluation

The Site was originally listed as a Class 2 Inactive Hazardous Waste Site by the NYSDEC in November 1990. Since this time, completion of the following project phases has occurred, as summarized below:

Project Phases and Completion Dates

Project Phase	*Completion Date*
Remedial Investigation	04/1994
Phase II Remedial Design Investigation	12/1998
Remedial Design	06/2000
Groundwater Extraction and Treatment System Construction	12/2001 (1)

1. Construction of the groundwater extraction and treatment system was completed in December 2001. The groundwater extraction and treatment system was placed into routine operation in December 2001 and D&B assumed O&M duties in February 2005.

Given the above, it does not appear that the Active Industrial Uniform Site can be reclassified at this time, pursuant to the requirements identified in 6 NYCRR §375-2.7, as the contamination has not been fully remediated and continues to constitute a significant threat to public health and the environment. As such, Site delisting is not recommended at this time, as all remediation and post-remediation activities have not been satisfactorily completed. However, as detailed in several previous Quarterly Reports, several USTs, below-grade drainage structures and contaminated soil have been identified and were removed from the site, which will likely accelerate overall remediation of the site.

Report Certification:

I have personally examined and am familiar with the information submitted in the referenced Report. To the best of my knowledge and belief, and based upon my inquiry of those individuals immediately responsible for obtaining the information reported therein, I certify that the submitted information is true, accurate, and complete.

Project Director: _____ 12·23·11

Richard M. Walka — **Date**
Senior Vice President

Project Manager: _____ 12/22/11

Stephen E. Tauss — **Date**
Geologist II