D&B Engineers and Architects, P.C.

ACTIVE INDUSTRIAL UNIFORM SITE GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

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REPORT TITLE

Site Management Quarterly Report No. 46

REPORTING PERIOD

April 1, 2016 through June 30, 2016

CLIENT

New York State Department of Environmental Conservation

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 12th Floor, Albany, New York 12233

Site

NYSDEC Site No. 152125, 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 site (the Site) groundwater extraction and treatment system (GWE&TS) 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 GWE&TS 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 GWE&TS location.

Groundwater Extraction and Treatment System Overview

The GWE&TS consists of two, 8-inch diameter extraction wells; 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). As per NYSDEC direction, extraction well RW-2 was shut down in April 2010 due to historically low VOC concentrations, and is now being monitored on a quarterly basis. Extracted groundwater is conveyed to the GWE&TS building via underground piping to two series-configured packed-tower air strippers. 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 the air stripping towers was treated utilizing two granular activated carbon (GAC) vessels in series. Based on historically low 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 GWE&TS is equipped with instrumentation and controls which allow for automated start-up and operation, and an autodial alarm notification system. Refer to *Figure 2* for an "as-built" 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 site-specific goals outlined in the March 1997 ROD are provided in *Attachment A*. 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 GWE&TS 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 practicable.
- Reduce the threat of inhalation of site-related vapor-phase contaminants to residents within homes downgradient of the Site.

Remedial System Optimization (RSO)

As part of an ongoing Remedial System Optimization (RSO) effort to improve the efficiency, effectiveness and net environmental benefit of the GWE&TS, an on-site source area assessment and temporary well plume re-delineation program was completed at the Site in February and March 2013. As per a recommendation of the following July 2013 RSO Data Summary Report, a remedial alternatives study was performed for the Site in October 2013. Following review of the remedial alternatives study and several follow-up discussions with the NYSDEC, it was determined that further plume delineation would be required prior to implementing any alternative remedial approach for the Site.

To this end, and based on D&B's recommendations, a membrane interface probe (MIP) investigation, including targeted groundwater sample collection, was completed at the Site on July 7 through 11 and July 14, 2014. It should be noted that the GWE&TS was manually shut down during the MIP Investigation in an effort to achieve static aquifer conditions. The results of the completed MIP investigation and groundwater sampling activities were summarized in a February 2015 MIP Investigation Summary Report. Based on the recommendations presented in the February 2015 MIP Investigation Summary Report, D&B prepared a draft chemical injection Pilot Study Scope of Work to address the identified remaining contamination at and downgradient of the Site. NYSDEC is currently evaluating moving forward with a chemical injection program at the Site.

It should be noted that a system repair and upgrade effort is planned to be completed at the Site in the near future. As a Baseline Investigation for the proposed chemical injection a Pilot Study was initially planned to be completed and as several system repair items were planned to be completed, the system was off-line per NYSDEC's direction following the MIP Investigation. The NYSDEC is still evaluating implementation of the chemical injection program.

Treatment System Operational Status

The GWE&TS was down during this reporting period due to several operational issues, which are detailed below.

System Wiring and Controls

During a previous reporting period the NYSDEC Remedial Services Contractor contacted ALM Systems, a systems integrator, to assess and troubleshoot issues associated with electrical wiring and systems controls. Following their assessment, several wiring issues were noted at the systems control panel and the PLC was also noted to not be optimally programmed. ALM Systems also concluded that wiring in the VFD had been incorrectly installed and an inoperable cooling fan in the VFD was contributing to operational issues with Transfer Pump P-1. ALM Systems recommended the wiring and systems control issues be rectified. A portion of these activities have been addressed and are detailed below. These repair activities will be reported once they have been completed.

Transfer Pump P-1

On January 21, 2016, the NYSDEC Remedial Services Contractor met with ALM Systems at the site to review and troubleshoot the issues with the GWE&TS's automated controls. ALM Systems noted several wiring and controls issues, including incorrect wiring at the VFD for Transfer Pump P-1 and an inoperable cooling fan in the VFD for Transfer Pump P-1.

Based on recommendations from ALM Systems and as directed by NYSDEC, the NYSDEC Remedial Services Contractor replaced the VFD at Transfer Pump P-1, ensuring it was properly wired on February 4, 2016; however, the VFD was not programmed at that time. The NYSDEC Remedial Services Contractor is coordinating with ALM Systems to complete the

VFD programming and restart the system.

Transfer Pump P-2

Transfer Pump P-2 was most recently replaced on October 28, 2015. However, it should be noted that the NYSDEC Remedial Services Contractor did not test the pump at that time as they were concerned with possibly rupturing the recently repaired effluent line and due to the reported system control issues.

Influent and Effluent Piping

The GWE&TS is currently limited to approximately 130 gpm, below its design capacity of approximately 200 gpm due to what was initially believed to be a blockage within the effluent line.

Following an unsuccessful blockage investigation in 2010, as previously reported, D&B prepared an effluent line investigation scope of work, dated January 14, 2015, for the investigation of any restrictions within the effluent piping. In addition, the January 14, 2015 scope of work also included provisions for the investigation of the influent piping for each extraction well to locate any below grade damage which may be allowing sand and gravel to enter the influent piping, as well as provisions for the installation of filter screens within each influent pipe to trap any such debris in an effort to limit damage to the system transfer pumps.

The NYSDEC Remedial Services Contractor completed the installation of the two filter screens within the influent piping on February 25, 2015. The NYSDEC Remedial Services Contractor initiated boroscoping activities on March 11, 2015 in an effort to identify any below grade damage or blockages within the effluent line. Boroscoping activities then continued at the influent lines and the effluent line from April 3 through April 16, 2015. The NYSDEC Remedial Services Contractor did not identify any significant or obvious blockages; however, the entire effluent line exhibited approximately 1/8 to 1/4 inches of residue and scaling throughout its entire inner diameter. This thickness of residue and scaling is not expected to greatly effect system effluent flow, though it is currently believed that this scaling may be contributing to system flow limitations.

The NYSDEC Remedial Services Contractor attempted to restart the GWE&TS on April 17, 2015; however, as the Transfer Pump P-1 VFD was not allowing Transfer Pump P-1 to operate at less than 100% capacity, the system could not be placed into routine operation at that time. The NYSDEC Remedial Services Contractor was on-site to troubleshoot the VFD on April 17 through 30, 2015 and attempted to restart the GWE&TS on April 30, 2015; however, upon restarting the system, the effluent pipe ruptured. Following two effluent pipe repair events, the effluent pipe was ultimately repaired on October 28, 2015. It should be noted that the effluent pipe was not tested following its repair due to the NYSDEC Remedial Services Contractor's concerns regarding possibly rupturing the line again.

A summary of GWE&TS runtime/downtime for this reporting period is summarized below.

Treatment System Runtime/Downtime Summary		
Approximate Runtime - Current Reporting Period [1][2]	0 hours	0%
Approximate Downtime - Current Reporting Period [2]	2,184 hours	100%
Approximate Total Runtime to Date [3]	61,486 hours	62.5%
Approximate Total Downtime to Date [3]	36,910 hours	37.5%

1. Total elapsed runtime for current reporting period is 2,184 hours (April 1, 2016 through June 30, 2016).
2. The downtime associated with this reporting period is due to wiring and control issues associated with the VFD for Transfer Pump P-1
3. Based on when D&B assumed O&M duties in February 2005. The GWE&TS was shut down from December 2012 to May 2013 due to elevated VOC concentrations detected in system aqueous-phase effluent samples and to allow for the completion of the field investigation portion of the RSO evaluation at the Site. In addition, GWE&TS was manually shut down on April 30, 2014 and remained off until November 3, 2014, when it was restarted, as per NYSDEC direction. The GWE&TS remained off during this time due to anomalous elevated contaminant concentrations in aqueous-phase effluent samples, for inspection of a partially blocked discharge pipe and in an effort to achieve static aquifer conditions for the MIP Investigation program.

Treatment System Performance Summary

The GWE&TS performance during the current reporting period and since D&B assumed O&M duties in February 2005 is summarized below. The GWE&TS was not operational during this reporting period, as detailed above.

Treatment System Performance Summary

Parameter	Quarter 46 (April 1, 2016 through June 30, 2016) [1]	Quarter 45 (January 1, 2016 through March 31, 2016) [2]	Totals to Date (February 2005 through current Quarter)
Influent			
RW-1 Average Pumping Rate (gal per min)	NA	NA	78
RW-1 Total Flow Volume (gal)	NA	NA	386,004,064
RW-1 Maximum Influent PCE Concentration (ug/l)	NA	1.2	510
RW-2 Average Pumping Rate (gal per min) [3]	NA	NA	79.8
RW-2 Total Flow Volume (gal)	NA	NA	129,900,729
RW-2 Maximum Influent PCE Concentration (ug/l)	NA	24	140
Influent Total Flow Volume (gal)	NA	NA	515,904,793
Effluent			
Effluent Total Flow Volume (gal)	NA	NA	512,942,731 [4]
Maximum Effluent PCE Concentration (ug/l)	NA	NA	16
VOC Removal Summary			
Total VOC Removal (lbs)	NA	NA	1,639
Average VOC Removal Rate (lbs/hr)	NA	NA	1.53E-02
VOC Removal Efficiency Range (%)	NA	NA	77.66 - 100

NA: Not applicable.

Notes:

1. As the GWE&TS was not operating throughout this reporting period, aqueous-phase influent and effluent samples were not collected.
2. As the GWE&TS was not operating, as detailed above, aqueous-phase influent samples were not collected throughout this reporting period. However, the NYSDEC Remedial Services Contractor collected a groundwater sample from extraction well RW-1 for VOC analysis only, during the quarterly groundwater sampling event conducted on January 5, 2016, per NYSDEC direction.
3. As described above, extraction well RW-2 was shut down in April 2010, and has generally remained off since this time, based on low historic VOC concentrations, as per NYSDEC direction. As RW-2 is not currently operating, monthly samples are not collected from this extraction well. RW-2 is currently being sampled on a quarterly basis, as part of the quarterly groundwater sampling effort.
4. The effluent flow meter was noted by the NYSDEC Remedial Services Contractor to be malfunctioning on January 1, 2014. The GWE&TS was shut down from this date until January 10, 2014. Per NYSDEC request, the GWE&TS was then operated without the effluent flow meter from January 10, 2014 to March 19, 2014, when a new meter was installed. The GWE&TS flow values were estimated based on recent effluent flow volume data from this approximate time period.

Treatment System Cost Summary[1]		
COST ITEM	**CURRENT REPORTING PERIOD BUDGET EXPENDED (April 1, 2016 through June 30, 2016)**	**PREVIOUS REPORTING PERIOD BUDGET EXPENDED (January 1, 2016 through March 31, 2016)**
ENGINEERING SUPPORT		
D&B Engineers and Architects, P.C.	$17,832	$14,709
SUBCONTRACTORS		
NYSDEC Remedial Services Contractor[2] (Routine/Non-Routine Maintenance Activities)	$4,862	$23,233
Test America (Analytical Laboratory)	$0	$0
SUB-TOTAL	$22,294	$23,233
UTILITIES		
Electric	$0	$1,879
Telephone	$116	$57
Natural Gas	$95	$53
Water	$0	$0
SUB-TOTAL	$211	$1,989
TOTAL COSTS	$22,905	$39,931
AVERAGE COST/MONTH	$7,635	$13,310
COST/POUND OF VOC REMOVED[3]	NA	NA

NA: Not applicable.

Notes:

1. The treatment system costs include monthly utility charges, maintenance costs and engineering costs. Capital construction costs and NYSDEC project management effort are not included in this evaluation.
2. Remedial Services Contractor costs do not include utility costs.
3. As the GWE&TS was not operating throughout this reporting period and the previous reporting period, VOCs were not removed throughout this reporting period and the previous reporting; therefore, total costs per pound of VOCs removed are not able to be calculated.

Treatment System Operation and Maintenance

A summary of GWE&TS runtime/downtime for this reporting period is summarized below. It should be noted that, as the GWE&TS was not operating throughout this reporting period, no alarm conditions occurred throughout this reporting period and routine and non-routine system maintenance activities were not conducted during this reporting period. As such, there are no operation and maintenance logs associated with this reporting period.

Routine Equipment Maintenance Schedule Summary

Major System Component	Manufacturer	Model Number	Maintenance Frequency	Maintenance Summary					
				Current Reporting Period (1)			Next Reporting Period		
				Apr-16	May-16	Jun-16	July-16	Aug-16	Sept-16
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 Stripper Maintenance	Branch Environmental	48T-25H	As needed based contaminant concentrations						
Air Stripper Transfer Pump Maintenance	Magnatex Pumps, Inc.	MTA-A10-P-F20-2-FE	Quarterly						

: Planned Activity

Notes:

1. Routine maintenance was not performed due to the system being shut down throughout this reporting period.

Non-Routine Treatment System Maintenance:

Non-routine maintenance activities were not completed during this reporting period.

Facility Maintenance:

No facility maintenance occurred during this reporting period.

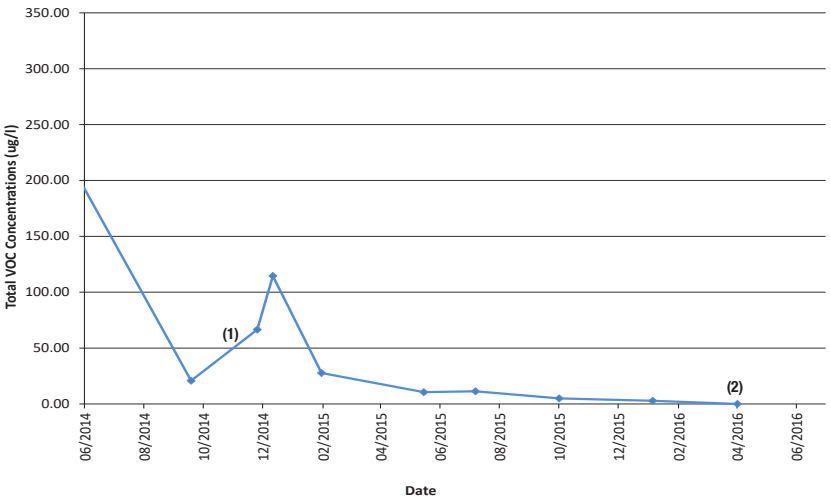
Alarm Conditions:

No alarm conditions occurred during this reporting period.

Treatment System Monitoring and Sampling Results

Treatment system and groundwater sampling activities were not completed this reporting period due to the system being non-operational and budgetary restrictions, per NYSDEC direction.

Extraction Well RW-1 Total VOC Concentration Trend Line



1. As previously discussed, the GWE&TS was manually shut down on April 30, 2014 and remained off until November 3, 2014, when it was restarted, as per NYSDEC direction. The GWE&TS remained off during this time due to anomalous elevated contaminant concentrations in aqueous-phase effluent samples, for inspection of a partially blocked discharge pipe and in an effort to achieve static aquifer conditions for the MIP Investigation program.
2. The GWE&TS was not operating throughout the duration of this and the previous reporting period. As such, aqueous-phase influent samples were not collected throughout this and the previous reporting period. It should be noted that a groundwater sample was collected from extraction well RW-1 for VOC analysis only, as part of the quarterly groundwater sampling conducted during the previous reporting period, per NYSDEC direction.

Extraction Well RW-1 - System Influent Contaminant Concentration Ranges/Averages (1)

Contaminant (2)	Current Reporting Period (3)	Previous Reporting Period (3)	Average to Date	Class GA Groundwater Standard
Tetrachlorothene (PCE)	--	1.2 ug/l	185 ug/l	5.0 ug/l
Trichlorothene (TCE)	--	0.44 ug/l	50 ug/l	5.0 ug/l
cis-1,2-Dichloroethene (cis-1,2-DCE)	--	1.2 ug/l	83 ug/l	5.0 ug/l
Vinyl chloride (VC)	--	ND	1 ug/l	2.0 ug/l
Iron	--	--	186 ug/l	300 ug/l
Manganese	--	--	1,198 ug/l	300 ug/l
Sodium	--	--	25,622 ug/l	20,000 ug/l

ND: Constituent concentration below the analytical detection limit.

--: Not analyzed.

Red font denotes an exceedance of the applicable standard.

1. Only includes constituents consistently or periodically detected in exceedance of their respective Class GA Groundwater Standard.
2. Click on the blue-colored contaminants for graphs of VOC concentrations over the last 2 years for VOCs detected above the Class GA Groundwater Standards for this and/or the previous reporting periods.
3. The GWE&TS was not operating throughout the duration of this and the previous reporting period. As such, aqueous-phase influent samples were not collected throughout this and the previous reporting period. It should be noted that a groundwater sample was collected from extraction well RW-1 for VOC analysis only, as part of the quarterly groundwater sampling conducted during the previous reporting period, per NYSDEC direction.

Aqueous-Phase Air Stripper Effluent Concentration Ranges (1)			
Discharge Permit Parameters	Current Reporting Period (2)	Previous Reporting Period (2)	Site-Specific Effluent Limit
PCE	--	--	10.0 ug/l
TCE	--	--	10.0 ug/l
cis-1,2-DCE	--	--	NL
VC	--	--	10.0 ug/l
Iron	--	--	1,000 ug/l
Manganese	--	--	NL
Sodium	--	--	NL
pH	--	--	6.5 - 8.5

ND: Constituent concentration below the analytical detection limit. NL: No limit. - - : Not analyzed.

1. Only includes constituents historically detected in exceedance of their respective Class GA Groundwater Standard in influent water.
2. As the GWE&TS was not operating, aqueous-phase effluent system samples were not collected throughout this and several previous reporting periods.

Quarterly Groundwater Monitoring Summary

Quarterly groundwater monitoring was not completed during this reporting period due to budgetary restrictions as per NYSDEC direction.

The locations of the on-site groundwater monitoring wells are depicted on *Figure 3* and the locations of off-site groundwater monitoring wells are depicted on *Figure 4*.

Although quarterly groundwater sampling was not completed during this reporting period, below is a table summarizing the site-specific contaminants of concern in on-site and off-site groundwater during the previous reporting period and site specific trends over the past 2-year period.

Site-Specific Contaminant of Concern Concentrations (1)(2)

Monitoring Well (2)	PCE		TCE		cis-1,2-DCE		Vinyl Chloride		Site-Specific 2-Year Contaminant Trend Analysis (3)
	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	NS	NS	NS	NS	NS	NS	NS	NS	Stable
MW-102	NS	NS	NS	NS	NS	NS	NS	NS	Stable
MW-103	NS	0.90 ug/l	NS	ND	NS	ND	NS	ND	Stable
MW-104	NS	33 ug/l	NS	4.5 ug/l	NS	0.43 ug/l	NS	ND	Increasing
MW-105	NS	4.3 ug/l	NS	0.54 ug/l	NS	27 ug/l	NS	0.89 ug/l	Increasing
MW-106	NS	13 ug/l	NS	11 ug/l	NS	26 ug/l	NS	2.0 ug/l	Decreasing
MW-107	NS	2.1 ug/l	NS	0.47 ug/l	NS	ND	NS	ND	Stable
MW-108	NS	NS	NS	NS	NS	NS	NS	NS	Stable
MW-4D	NS	400 ug/l	NS	34 ug/l	NS	2.8 ug/l	NS	0.22 ug/l	Decreasing
MW-5S	NS	2.2 ug/l	NS	0.24 ug/l	NS	ND	NS	ND	Stable
Off-Site Monitoring Wells									
MW-109	NS	NS	NS	NS	NS	NS	NS	NS	Stable
MW-111	NS	NS	NS	NS	NS	NS	NS	NS	Decreasing
MW-2S	NS	10 ug/l	NS	3.8 ug/l	NS	29 ug/l	NS	1.4 ug/l	Decreasing
RW-2 (2)	NS	24 ug/l	NS	6.7 ug/l	NS	7.7 ug/l	NS	0.65 ug/l	Decreasing

ND: Constituent concentration below the analytical detection limit. NS: Not sampled.

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).

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.

1. Quarterly groundwater sampling was not completed during this reporting period due to budgetary restrictions as per NYSDEC direction.
2. Extraction well RW-2 is typically sampled on a quarterly basis in order to better monitor off-site contaminant concentrations.
3. As groundwater samples were not collected during this reporting period the trend analysis excluded the current reporting period.

Data Validation:

Data validation was not required this reporting period as the NYSDEC Remedial Contractor did not complete quarterly groundwater sampling, influent and effluent system sampling.

Findings and Recommendations

Findings:

- GWE&TS Operation: Due to ongoing issues associated with various GWE&TS components the system was not operational during this reporting period. The GWE&TS will be restarted pending troubleshooting activities associated with Transfer Pump P-1, addressing system wiring and controls issues and proper testing of the repaired effluent line.
- GWE&TS Maintenance: The NYSDEC Remedial Services Contractor did not complete routine maintenance during this reporting period, as the GWE&TS was not operating.
- System Aqueous-Phase Influent and Effluent Contaminant Concentrations: As the GWE&TS was not operating throughout this reporting period, aqueous-phase influent and effluent samples were not collected.
- System Vapor-Phase Effluent Monitoring: System vapor-phase effluent samples are to be collected on a semi-annual basis. However, as the system was not operating throughout this and several previous reporting periods, vapor-phase effluent samples for laboratory analysis have not been collected since April 3, 2014.
- Monitoring Well Conditions: An inspection of the monitoring well network was not conducted during this reporting period due to budgetary restrictions, as per the NYSDEC direction.
- Monitoring/Extraction Well Sampling: Groundwater monitoring well and extraction well sampling was not conducted, during this reporting period due to NYSDEC budgetary restrictions, as per NYSDEC direction.

Recommendations:

- General Treatment System:
  - It is recommended to expedite the above-referenced repair activities and bring the GWE&TS back online and ensure contaminant capture on-site.
  - Based on varying site-specific contaminant concentrations collected in extraction well RW-2 throughout previous reporting periods, it is recommended that the GWE&TS be restarted with both extraction wells operating and remain operational to ensure capture of on-site and off-site shallow groundwater contamination.
  - Based on the remaining elevated contaminant concentrations in groundwater still detected at the site, it is recommended that additional subsurface investigation be completed beneath and in the immediate vicinity of the treatment system building to evaluate possible remaining areas of contamination below the treatment system building slab.
  - D&B recommends that the NYSDEC Remedial Services Contractor record more clear and detailed descriptions of completed field activities and issues encountered, as well as alarm triggers, downtime dates and times and the steps taken to bring the GWE&TS back online on the Site Activities and System Operation Logs, as appropriate. In addition, logs received over the last several quarters have included multiple copies of logs, including some differing information. As such, D&B further recommends that the NYSDEC Remedial Services Contractor make an effort to provide one set of logs with all descriptions and dates of activities clearly indicated. These steps will help enable D&B to better understand the current status of the GWE&TS and facilitate a more efficient preparation of the Site Management Quarterly Reports. In addition, it is recommended that the NYSDEC Remedial Services Contractor adhere to the routine maintenance schedule.
- Treatment System Operational Issues:
  - System Wiring and Controls: D&B recommends that the NYSDEC Remedial Services Contractor ensure that the system electrical components are properly wired and the VFDs and PLC are properly programmed to allow for proper and automated system operation. D&B can assist with this effort if needed.
  - Transfer Pump P-2: D&B recommends that the NYSDEC Remedial Services Contractor repair or replace Transfer Pump P-2 to ensure proper system operations.

- Effluent Piping: D&B recommends that the effluent line be tested to ensure it is capable of accepting system effluent flow.

- Monitoring/Extraction Well Sampling: Based on the widely varying VOC concentrations detected in several wells over the course of several previous monitoring events, it is recommended that the NYSDEC ensures that the Remedial Services Contractor is utilizing proper and consistent sampling techniques during each groundwater and system sampling event.
- Vapor-Phase Effluent Sampling: The NYSDEC Remedial Services Contractor should collect the semi-annual vapor-phase effluent samples as soon as the system is back up and running, as vapor-phase effluent samples have not been collected since April 3, 2014.
- Off-Site Extraction Well Contaminant Concentrations: As detailed above, off-site extraction well RW-2 has exhibited widely varying concentrations of total VOCs, with total VOC concentrations ranging from non-detect to a maximum of 258.83 ug/l (detected on March 21, 2014), since the well has been sampled along with the quarterly monitoring wells in mid-2011. It is recommended that the GWE&TS be restarted with both extraction wells operating and remain operational to ensure that site-specific contamination is adequately captured and not extending from the Site.
- Off-Site Monitoring Well Network: Due to the varying concentrations of total VOC's exhibited in RW-2 it is recommended that the shallow groundwater monitoring well network be expanded to included the installaion of additional shallow monitoring wells on Lane Street, Grove Street, Willow Lane and Palm Street.

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]
UST Removal and Phase I Contaminated Soil Removal IRM	06/2010
Phase II Contaminated Soil Removal IRM	07/2011

1. Construction of the GWE&TS was completed in December 2001. The GWE&TS 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 site-related contamination has not been fully remediated and continues to pose 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. Work continues to address residual on-site contamination and system optimization to expedite overall remediation and Site closure.

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: _____ MAY 17, 2017

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

Project Manager: _____ 5/18/2017

James Van Horn — **Date**
Project Manager