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Periodic Review Report

(May 2020-May 2021)

11-28 31st Drive, Queens, NY

NYSDEC Site # C241159

Prepared For:

GBT Real Estate, LLC

1083 Maple Lane

New Hyde Park, NY 11040

Prepared By:

Hydro Tech Environmental Engineering and Geology, DPC

77 Arkay Drive, Suite K

Hauppauge, NY 11788

May 20, 2021

CERTIFICATIONS

I, Tarek Z Khouri, certify that I am currently a NYS registered Professional Engineer and that this Periodic Review Report for the 11-28 31st Drive Site (Site Number: C241159) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Tarek Z. Khouri, P.E.

Name

Signature

May 20, 2021

Date

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1.0 EXECUTIVE SUMMARY

1.1. Summary of Site Condition and Remedial History

The project site is located at 11-28 31st Drive, in the Long Island City section of Queens County, New York and is identified as Block 502 and Lot 22 on the Queens Tax Map. The site is an approximately 0.055-acre area (2,400 square feet). The site is zoned R7A (residential) and is currently developed with a 6-story condominium building with slab on grade of approximately 1,550 square feet. An 850 square foot open rear yard exists in the southwestern portion of the site. The building has been vacant since the new development was finished in September 2019 and a total of 9 condominium units continue to be listed in the real estate market for sale.

The Site is enrolled in the New York State (NYS) Brownfield Cleanup Program (BCP) and referred as site No. C241159, which is administered by New York State Department of Environmental Conservation (NYSDEC). GBT Real Estate LLC entered into a Brownfield Cleanup Agreement (BCA) in June 2014 (amended March 2017) with the NYSDEC to remediate the site.

Based upon the results of remedial investigation completed by HydroTech during 2013 and 2015, the types of contamination at the site that were identified to require remediation included:

- Volatile organic compounds (VOCs) particularly trichloroethylene, or TCE, and tetrachloroethylene, or PCE in soil, groundwater, and soil vapors
- Heavy metals in soil including copper, lead, zinc, mercury, chromium trivalent, and chromium hexavalent.

Remedial actions performed at the site in accordance with the Decision Document dated September 2016 include:

- Removal of a 550-gallon underground gasoline storage tank (UST) (completed);
- Excavation and off-site disposal of contaminated soils/fill exceeding Track 2 restricted residential SCOs (completed);
- Treatment of groundwater contamination via in-situ chemical oxidant (ISCO) injections (completed);
- Installation of an active sub-slab depressurization (SSD) system as an engineering control to mitigate the migration of vapors into the building from groundwater (completed);
- Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site (completed);
- Implementation of a long-term groundwater monitoring plan (on-going).
- Implementation of Operation and Maintenance plan for the inspection and monitoring of SSD system (on-going).
- Periodic certification of the institutional and engineering controls (on-going).

In accordance with the Certificate of Completion (COC) issued for this Site on December 20, 2018, the NYSDEC-approved SMP dated November 2018 continued to be implemented at the Site along with subsequent requirements by the NYSDEC and the New York State Department of Health (NYSDOH) pertaining to the operation and monitoring of the SSD system. The purpose of the SMP is to manage and monitor the remaining contamination at the Site quarterly until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. The monitoring and sampling of the five groundwater monitoring wells and the vacuum monitoring and inspections of active SSD system were conducted quarterly following the December 2019 event, which was documented in the previous Periodic Review Report dated May 30, 2020. Two quarterly monitoring and sampling events are covered in this report and were

conducted during July 2020 and November-December 2020. The schedule of these quarterly events was altered due to delayed deliveries of sampling and monitoring equipment and other materials due to impacts associated with Covid-19. The third and fourth quarterly monitoring and sampling event of groundwater were waived following a petition filed with the NYSDEC in this regard during March 2021. NYSDSEC approved this petition and requested another round of groundwater monitoring and sampling during November 2021. Similarly, the schedule of the quarterly inspection and monitoring of the active SSD system was modified per NYSDEC approval to be pursued monthly by building staff and these monthly inspections shall be included in the annual PRR, along with the annual engineering/maintenance inspection. The first monthly inspection was performed by HydroTech during April 2021 for the training of building staff. NYSDEC also requested to update the modifications in the monitoring and sampling schedule in a revised SMP. **Appendix 1** provides NYSDEC correspondences.

1.2 Effectiveness of the Remedial Program

Progress made during the reporting period toward meeting the remedial objectives for the Site include continued monitoring of groundwater quality and the implementation and management of the institutional and engineering controls in accordance with the SMP. Monitoring data from the work completed to date shows that the remedial program is currently meeting the remedial objectives for the Site.

1.3 Compliance

No areas were identified as being currently out of compliance with the SMP requirements. As such, no steps are currently deemed necessary to correct areas of non-compliance.

2.0 Site Overview

The PRR is prepared for 11-28 31st Drive site located in the Long Island City section of Queens County, New York. This site is approximately 0.055-acre area or 2,400 square feet and is bounded by 31st Drive to the north- northeast, vacant land and a 1-story manufacturing building to the south-southwest, a 1-story cabinet manufacturing facility to the east-southeast and a vacant 1-story warehouse to the west- northwest. It is zoned R7A (residential) and is currently developed with a 6-story building with a total of 9 condominiums with a slab on-grade. The footprint of this building is approximately 1,550 square feet. An 850 square foot landscaped rear yard exists in the southwestern portion of the site. The building has been vacant since the new development was finished in September 2019 and a total of 9 condominium units continue to be listed in the real estate market for sale.

Site environmental history was previously characterized following Site enrollment into the NYSDEC BCP as site No. C241159. As part of this Site characterization, a total of six (6) permanent groundwater monitoring wells were installed including four on-site wells designated MW-1 to MW-4 and two off-site wells designated (MW-5 to MW-6, with MW-5 was then presumed destroyed. Contaminants of concern identified at the Site included Volatile organic compounds (VOCs) particularly trichloroethylene, or TCE, and tetrachloroethylene, or PCE in soil, groundwater and soil vapors and the metals in soil including copper, lead, zinc, mercury, chromium trivalent, and chromium hexavalent. **Figure 1** provides the location of monitoring wells.

During site remedial construction, several remedial actions were undertaken in compliance with the NYSDEC Decision Document dated September 2016 and were completed prior to the issuance of the Certificate of Completion (COC) with the exception of SSD system. The SSD system installation was completed post-COC during September 2019 in conjunction with the finishing of the new building construction at the Site. The SSD system included five (5) sub-slab vacuum monitoring points that were

installed through the building mat slab in accordance with NYSDEC requirements. Three (3) of these vacuum monitoring points are designated as VMP-1, VMP-2 and VMP-3 and were installed as permanent points in common areas of the building. The remaining two points were designated as VMP-4 and VMP-5 and were installed as temporary points in a rear ground-level residential unit and were decommissioned soon after system start-up. **Figure 2** provides the location of the vacuum monitoring points.

The remedial actions completed at the Site consisted of the following:

- Demolished and excavated the existing building slab and disposed 145 tons of clean C&D waste;
- Removed the 550-gallon gasoline UST and performed a post-excavation tank assessment;
- Excavated all soil/fill exceeding Track 2 SCOs to a depth of 3 feet below grade throughout the property and a depth of 6.6 feet below grade for the elevator pit and disposed 323.5 tons of nonhazardous contaminated historic fill/native soil;
- Imported of ¾-inch stone for establishing a 6-inch layer of porous layer for the SSD system under slab and a cover in open rear yard;
- Performed SCO injections in the vicinity of the removed UST by introducing a total of 1,900 lbs of persulfate and a total 120 lbs of FeEDTA activator via three injections points.
- Installed an active SSD system, which was completed and started-up along with the completion of building construction;
- Implemented a SMP to ensure proper operation and maintenance of the Engineering Controls; and
- Recording of an Environmental Easement against the site to ensure implementation of the SMP.

3.0 Evaluation of Remedy Performances, Effectiveness, and Protectiveness

The monitoring and sampling plan contemplated in the November 2018 site

Management Plan (SMP) and subsequent SSD system-related correspondences with NYSDEC outlines the following activities:

Monitoring Program	Frequency	Monitored	Analytical Parameter	Analytical Method
Groundwater	Two months after ISCO injections, and every quarter thereafter	Monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-6	PCE and TCE	EPA Method 8260
SSD system	At start-up and quarterly thereafter	Vacuum Monitoring points VMP-1, VMP-2, VMP-3, VMP-4 and VMP-5	Not Applicable	Not Applicable

A copy of the monitoring well locations included in **Figure 1**. A copy of SSD vacuum monitoring point locations is provided in **Figure 2**.

3.1 Groundwater Monitoring Data

A total of two rounds of groundwater sampling events are documented in this PRR. Groundwater samples were obtained on a quarterly basis from the monitoring wells MW-1 to MW-4 via Passive Diffusion Bag (PDB) samplers. Quarterly groundwater sampling events covered in this PRR were performed on July 31, 2020 and December 3, 2020. The July 2020 and December 2020 sampling events represent delayed events from originally scheduled sampling dates in June 2020 and September 2020 due to impacts associated with Covid 19.

During the two quarterly events, no groundwater sample could be collected from MW-6, which is located behind a locked construction fence erected around a vacant property located to the north of the site. A visual inspection of the remaining monitoring wells indicated they were all sound during this reporting period.

Groundwater monitoring data from the site has been submitted to NYSDEC as part of quarterly status reports. **Appendix 2** provides a copy of these quarterly status reports. The results of groundwater monitoring data collected before and after ISCO injections are summarized in **Table 1**.

In addition, the groundwater level measurements from the monitoring wells during this reporting period indicated the groundwater flow direction is toward the southwest, which is generally consistent with the historic site-specific groundwater flow direction. A groundwater flow diagram from the last groundwater monitoring event is provided in **Figure 3**.

Overall findings of the three quarterly groundwater monitoring events indicate PCE continues to be detected in MW-2 and MW-3 and MW-4. PCE concentrations detected in MW-2 showed a steady decrease from 21.90 µg/L reported in the previous PRR to a most recent concentration of 1.7 µg/L, which is below its GQS of 5 µg/L. PCE concentrations in MW-3 have not exceeded GQS since November 2018. PCE concentration detected in MW-4 most recently in December 2020 marginally exceeded its GQS with a concentration of 7.16 µg/L.

TCE was only detected in MW-2 during July 2020 at a concentration less than its GQS of 5 µg/L. TCE was not detected in any monitoring wells at the Site during December 2020.

The PCE and TCE data detected during this reporting period are consistent with the historic groundwater sampling performed at the Site and reflects a general reduction in since 2018 as a result of natural degradation.

Data Usability Summary Reports (DUSRs) were prepared for all groundwater data by Alpha GeoScience. These DUSRs indicated all laboratory data for the three sampling events are deemed acceptable. These DUSR were submitted as part of the QSRs included in **Appendix 2**. The groundwater data was also submitted electronically to NYSDEC EQuIS database through the Environmental Information Management System, using the standardized electronic data deliverable (EDD) format.

3.2 Active Sub-Slab Depressurization System Monitoring Data

The inspection and monitoring of the effectiveness and operation of the active SSD system installed at the Site was performed quarterly on July 15, 2020 and November 11, 2020 and monthly on April 16, 2021. The vacuum communication was verified through the three existing sub-slab vacuum monitoring points VMP-1, VMP-2 and VMP-3. **Figure 2** provides the location of the vacuum monitoring points.

During each monitoring event, the vacuum at the sub-slab monitoring points was measured utilizing an DP-Calc™ Micromanometer Model 8710. The SSD system components were also visually inspected for proper functioning in accordance with the SSD system Operation and Maintenance Plan in the SMP by recording the SSD system vacuum at the inline Dwyer Magnehelic dial type vacuum gauge, checking the audio/visual system alarm and observing the functioning of the fan. In addition, organic vapors were measured at the effluent of the SSD system utilizing a Photoionization detector (PID).

The SSD system monitoring data from all these events are summarized in **Table 2**. This data was also reported to NYSDEC along the quarterly groundwater monitoring data in the QSRs provided in **Appendix 2**.

The results of the SSD system monitoring for this reporting period indicate the vacuum at the SSD fan was measured at a minimum of -0.74, which is consistent with the previous measurements. The negative pressure readings measured across the building slab at VMP-1 trough VMP-3 recorded a minimum of -0.04 inches H_2O and a maximum of -0.03 inches H_2O. Overall assessment of this data indicates an adequate radius of influence of the SSD system, which continue to be sufficient for mitigating potential soil vapor intrusion beneath the building. In addition, no organic vapors were detected with the PID at the SSD system effluent. No deficiencies such as damaged SSD riser pipes or joints, alterations or cracks in building slab or , construction changes to building structure that would alter the system performance were noted during the inspection of the SSD system. **Appendix 3** provides the Quarterly SSD System Inspection Checklists.

4.0 Institutional Control/Engineering Control Compliance

4.1 Institutional Controls

The following Institutional Controls are included in the SMP for the site:

- The property may be used for: Restricted Residential, Commercial, and Industrial use;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in this SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP; and
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

The site-wide inspection determined that Institutional Controls have been complied with including compliance with the Environmental Easement and the SMP. There are no new conclusions or recommendations for change of Institutional Controls at this time.

4.2 Engineering Controls

The Engineering Control (EC) listed at the site includes the following:

- Active SSD system

The EC present at the site appears to be operating satisfactorily as designed to render the site protective to human health and environment. The SSD system operation is in compliance with the SMP. There are no new conclusions that would trigger any necessary changes or modifications to improve the operation of the EC present at the site.

Based upon the information evaluated in this report, the Institutional and Engineering Controls Certification and Form was filled and certified by Paul I. Matli, a New York State Licensed Professional Geologist (PG). A copy of the EC/IC Certification statement and form is included in **Appendix 4**.

4.0 Operation & Maintenance Compliance Report

The active SSD system is operating and maintained as required and in compliance with the Operation and Maintenance Plan in the SMP. No evidence or current of former deficiencies undermining the operation or functions of the EC were identified during this reporting period.

5.0 Conclusions and Recommendations

5.1 Compliance

The site construction was finished with a 6-strory condominium building that has been vacant. A total of 9 condominiums have been is listed on the real estate market for sale during this reporting period. The installation and start-up of an active SSD system was completed at the end of building construction.

The requirements stipulated in the November 2018 SMP regarding IC/EC's and the monitoring and O&M Plan and subsequent NYSDEC requirements in relation to the SSD system monitoring were met during the reporting period. No disturbance was observed in the land use and all the monitoring wells and the SSD system were maintained in good condition without the need for any repairs or maintenance as confirmed during each quarterly monitoring event.

Minor deficiencies in the ISCO treatment sampling requirements consisting of delayed start of quarterly groundwater monitoring and the lack of access to off-site monitoring well MW-6 were justified and deemed insignificant to impact the evaluation of groundwater quality and conclusions made in this PRR.

5.2 Performance and Effectiveness of Remedy

An evaluation of the components of the SMP during this reporting period indicates that the IC/EC controls were protective of human health and the environment. Quarterly groundwater data indicates PCE has marginally exceeded its GQS in one monitoring well present on-site (MW-3). PCE also exceeded its GQS in upgradient monitoring well located off-site (MW-6).

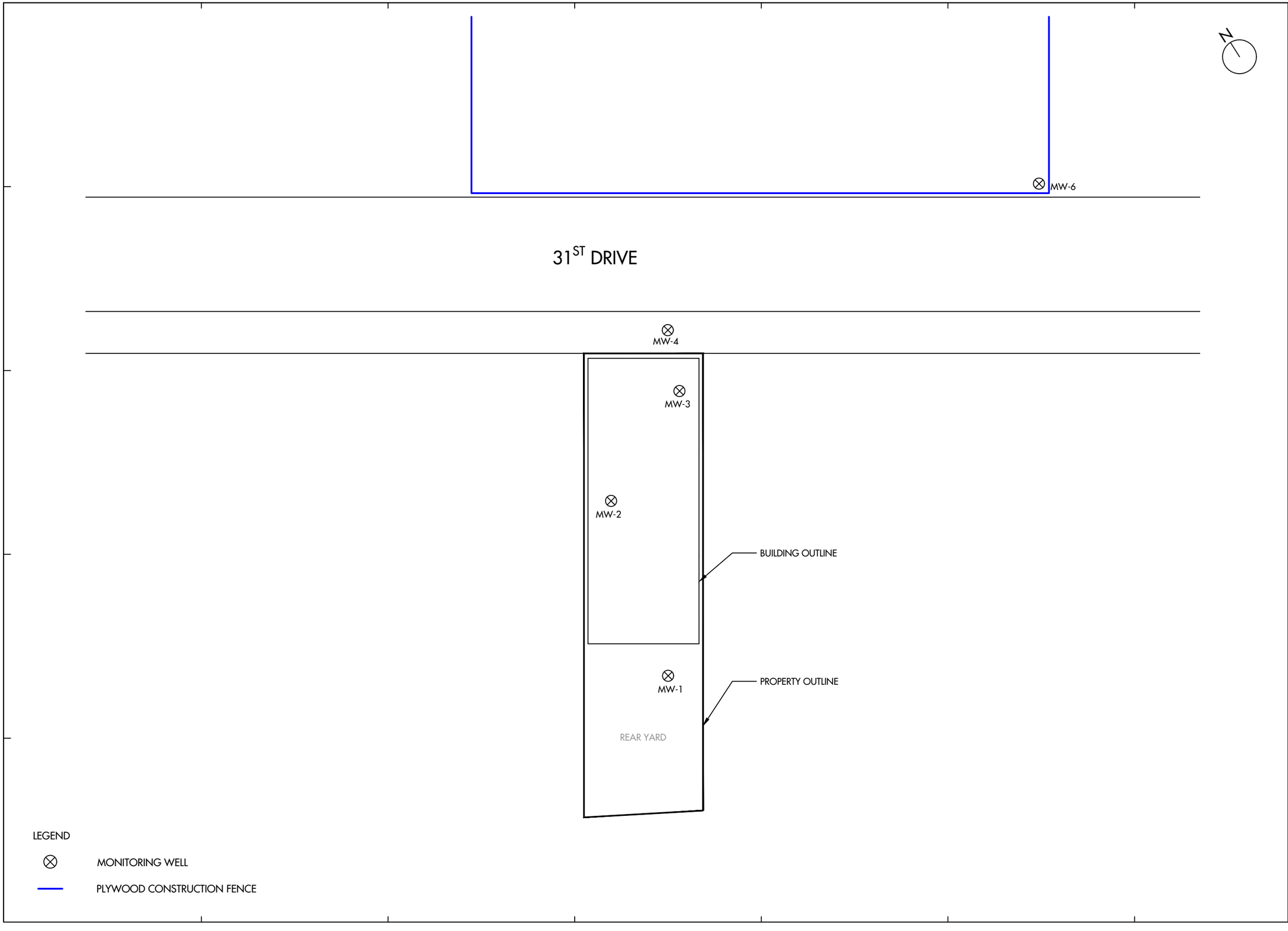
SSD monitoring data indicates the system is operating as designed by mitigating potential soil vapor intrusion beneath the building and rendering the site protective to human health and environment.

5.2 Recommendation

A summary of the recommended ICs/EC inspection, monitoring and sampling activities is provided below:

- Since the concentrations of contaminants of concern in groundwater have reached asymptotic levels that marginally exceeded GQS, it recommended that the groundwater monitoring and reporting shall be modified and then terminated pursuant to an updated SMP that will be submitted to NYSDEC for approval by July 30, 2021. The next groundwater monitoring and reporting shall be due in November 2021 as requested by NYSDEC in order to evaluate the natural attenuation of residual PCE concentrations in groundwater before making a final decision to terminate the groundwater monitoring program at the Site.
- Since the SSD system has proven to produce the required sub-slab vacuum communication for the mitigation of potential soil vapor intrusion beneath the building, it is recommended that SSD system monitoring, and inspection activities be changed from quarterly basis to annually and by also implementing monthly inspections by the building management as requested by NYSDEC for the proper implementation of O&M plan in the November 2018 SMP. The SSD system modified inspection and monitoring schedule shall be reflected in the updated SMP that will be submitted to NYSDEC for approval by July 30, 2021.
- The frequency for the submittal of PRR will be modified in the updated SMP from the 5-year intervals as listed in the November 2018 SMP to annually. The next PRR is due May 2022 or at another frequency as may be required by the NYSDEC.

FIGURES



DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

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15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

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BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 1: MONITORING WELL LOCATIONS

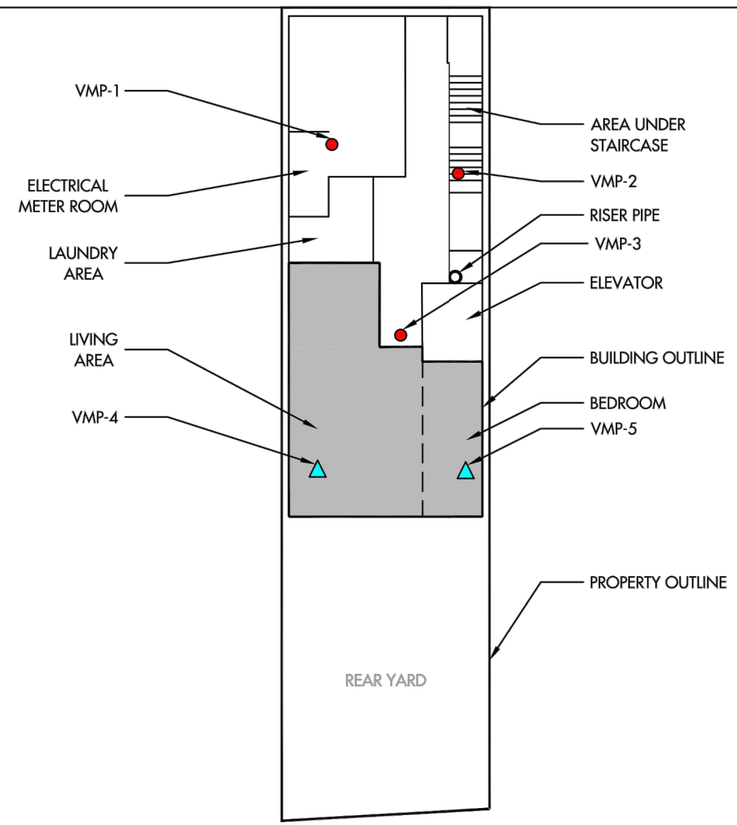
PROJECT NO.	DATE
190055	11/14/19
DRAWN BY A.R.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

N

31ST DRIVE



LEGEND

- PERMANENT VACUUM MONITORING POINTS
- TEMPORARY VACUUM MONITORING POINTS (DECOMMISSIONED AFTER SSDS STARTUP)
- RESIDENTIAL UNIT

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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BASE DRAWING PREPARED BY

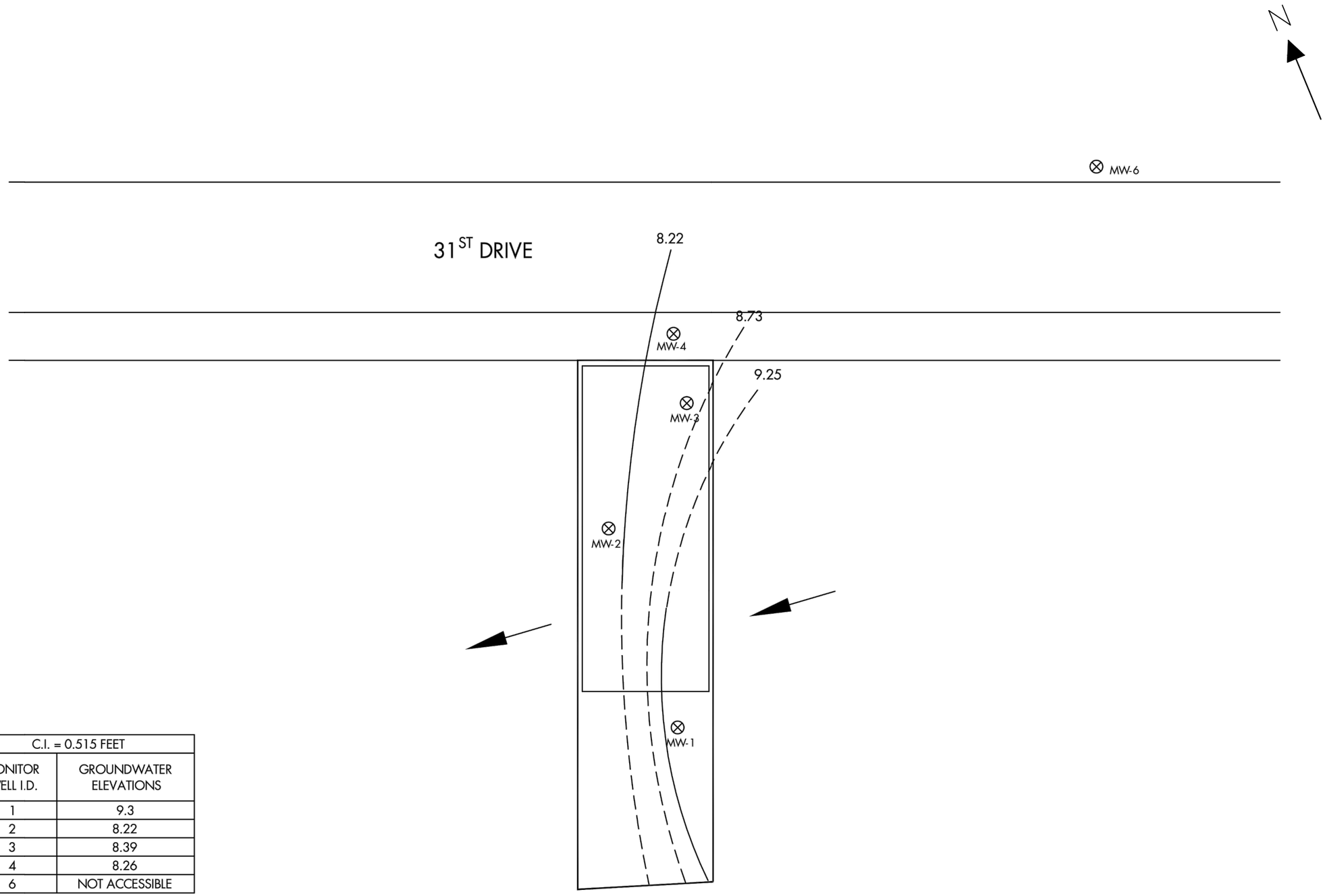
PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 2: VACUUM MONITORING POINTS LOCATIONS

PROJECT NO.	DATE
190055	5/13/21
DRAWN BY V.D.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.



C.I. = 0.515 FEET	
MONITOR WELL I.D.	GROUNDWATER ELEVATIONS
1	9.3
2	8.22
3	8.39
4	8.26
6	NOT ACCESSIBLE

LEGEND

⊗ MONITORING WELL

NOTE:
DASHED LINE WHERE CONTOUR IS INFERRED

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 3: GROUNDWATER FLOW CONTOUR MAP-NOVEMBER 2020

PROJECT NO.	DATE
190055	5/13/21
DRAWN BY V.D.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.

TABLES

Table 1
Groundwater Samples Analytical Results for PCE and TCE _ Over Time
11-28 31st Drive, Queens, NY

Sampling Date	MW-1		MW-2		MW-3		MW-4		MW-6	
	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE
1/13/2015	0.2 U	0.2	**3.03**	0.2 U	**20.83**	**0.52**	**3,799.8**	**17**	**85.83**	**8.90**
2/19/2018	**0.28** J	0.2 U	**25**	**0.4** J	**4.10**	0.2 U	**70**	**0.66**	**75**	**15**
7/24/2018	0.2 U	0.2 U	**20**	**0.63**	**1.20**	0.2 U	**13**	**0.43** J	**43**	**0.46** J
11/20/2018	0.2 U	0.2 U	**11.60**	**0.68**	0.22	0.2 U	**2.28**	0.2 U	**28.4**	**0.48** J
8/30/2019	0.2 U	0.2 U	**20.1**	**1.21**	**0.92**	0.2 U	**2.87**	0.2 U	**49.6**	**0.42** DJ
12/10/2019	0.2 U	0.2 U	**21.90**	**1.35**	**1.27**	0.2 U	**1.75**	0.2 U	NA	
3/17/2020	0.2 U	0.2 U	**6.77**	**0.52**	**1.50**	0.2 U	**6.70**	0.2 U	NA	
7/31/2020	0.2 U	0.2 U	**10**	**0.90**	**0.54**	0.2 U	**2.36**	0.2 U	NA	
12/3/2020	0.2 U	0.2 U	**1.70**	0.2 U	**1.28**	0.2 U	**7.16**	0.2 U	NA	

NOTES:
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
Shaded concentration exceeds GQS of PCE or TCE of 5 µg/L
GQS=NYSDEC TOGS Standards and Guidance Values - GA
PCE=Tetrachloroethylene
TCE=Trichloroethylene
1/13/2015=Sampling performed during the Remedial Investigation
2/19/2018=Baseline sampling performed prior to ISCO Injection Program
7/24/2018= Sampling performed 2 months post-ISCO injections
11/20/2018=Quaretrly sampling performed 5 months post-ISCO injections
8/30/2019 to 12/3/2020=Quartely sampling performed 30 months post-ISCO Injections to-
NA= Not sampled due to limited access

Table 2
SSDS Monitoring Results
11-28 31 Drive ,Queens, New York,
NYSDEC Site Number: C241159

Date/Time	SSDS Vacuum	SSDS Effluent			Vaccum Monitoring Points				
					VMP-1	VMP-2	VMP-3	VMP-4	VMP-5
		PID	Flow	Temp	Vacuum				
9/9/2019	-0.74	0.2	518	76.46	-0.031	-0.040	-0.041	-0.036	-0.039
10/15/2019	-0.74	NA	NA	NA	-0.030	-0.036	-0.042	-0.036	-0.038
12/10/2019	-0.74	0.1	470.8	62.2	-0.024	-0.032	-0.034	D	D
3/2/2020	-0.74	0.1	440.1	65.5	-0.023	-0.035	-0.033	D	D
7/15/2020	-0.74	0.3	503.7	78.0	-0.030	-0.040	-0.060	D	D
11/19/2020	-0.75	0.1	416.8	48.8	-0.030	-0.040	-0.040	D	D
4/16/2021	-0.74	0.1	390.4	51.1	-0.030	-0.030	-0.040	D	D

Vacuum --- Inch Water Flow
PID --- ppm
Flow --- CFM
Temperature --- ◦F
NA---Not measured
D---Decommissioned

APPENDICES

APPENDIX 1
NYSDEC CORRESPONDENCES

From: O'Connell, Jane H (DEC) <jane.oconnell@dec.ny.gov>
Sent: Wednesday, March 17, 2021 8:34 AM
To: Paul Matli <pmatli@hydrotechenvironmental.com>
Cc: Martinkat, Sondra (DEC) <sondra.martinkat@dec.ny.gov>; genmail@mcnyinc.com; Tarek Khouri <tkhouri@hydrotechenvironmental.com>; Kuehner, Wendy S (HEALTH) <wendy.kuehner@health.ny.gov>
Subject: RE: C241159 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

Thank you Paul. I am ok with monthly SSDS check by on-site staff and annual engineering/maintenance inspection by HydroTech. The monthly inspections must be documented and included in the PRR, along with the annual engineering/maintenance inspection. If any deficiencies are noted in the monthly inspection, HydroTech must be notified immediately to make necessary repairs, and that must be documented to DEC and DOH in an email as well as in the PRR.

Please submit draft revised sections and cover page for the SMP within 30 days to document the approved changes to the inspection/sampling frequency for the SSDS and groundwater sampling.

Jane

Jane H. O'Connell, P.G.
Regional Remediation Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4599 | F: (718) 482-6358 | M: (917) 817-1845 | jane.oconnell@dec.ny.gov
www.dec.ny.gov |

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

From: Paul Matli <pmatli@hydrotechenvironmental.com>
Sent: Tuesday, March 16, 2021 5:33 PM
To: O'Connell, Jane H (DEC) <jane.oconnell@dec.ny.gov>
Cc: Martinkat, Sondra (DEC) <sondra.martinkat@dec.ny.gov>; genmail@mcnyinc.com; Tarek Khouri <tkhouri@hydrotechenvironmental.com>
Subject: RE: C241159 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

Hello Jane – Thanks for your review of the January 2021 QSR and for the option to suspend the groundwater sampling till next fall.

My response to your question about the SSD system are highlighted in red below:

1. Does the system have remote telemetry to notify you if the blower is down? No Telemetry is being installed for this SSDS. There is a visual and audible alarm adjacent to the elevator door in the lobby area on the first floor.
2. Is there an on-site superintendent or other maintenance staff that can do monthly checks of the system. Yes, Tylor Man will be the on-site superintendent monitoring the SSD system on a monthly basis.

Regards,

Paul I. Matli, Ph.D., P.G.
Vice President
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Please consider the environment before printing this email

From: O'Connell, Jane H (DEC) <jane.oconnell@dec.ny.gov>
Sent: Tuesday, March 16, 2021 1:31 PM
To: Paul Matli <pmatli@hydrotechenvironmental.com>
Cc: Martinkat, Sondra (DEC) <sondra.martinkat@dec.ny.gov>; genmail@mcnyinc.com; Tarek Khouri <tkhouri@hydrotechenvironmental.com>
Subject: RE: C241159 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

Paul:

I have reviewed the quarterly report dated January 13, 2021. While I agree that the quarterly groundwater sampling can be suspended, I request that you perform one additional annual sampling event in November 2021. That data should be reported in the 2021 PRR with an evaluation of the historical data, including graphs showing the pre- and post-remedy gw concentrations in each well.

As for the SSDS, I have a couple of questions:

1. Does the system have remote telemetry to notify you if the blower is down?
2. Is there an on-site superintendent or other maintenance staff that can do monthly checks of the system?

I would need answers to the questions before I can weigh in on discontinuing the quarterly system checks by HydroTech.

Jane

Jane H. O'Connell, P.G.
Regional Remediation Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4599 | F: (718) 482-6358 | M: (917) 817-1845 | jane.oconnell@dec.ny.gov
www.dec.ny.gov |

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

---

From: Paul Matli <pmatli@hydrotechenvironmental.com>
Sent: Friday, March 12, 2021 5:44 PM
To: O'Connell, Jane H (DEC) <jane.oconnell@dec.ny.gov>
Cc: Martinkat, Sondra (DEC) <sondra.martinkat@dec.ny.gov>; genmail@mcnyinc.com; Tarek Khouri <tkhouri@hydrotechenvironmental.com>
Subject: RE: C241159 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

Jane – Please accept my apology for my repeated emails seeking the department approval of our recommendations made in the last QSR dated January 13, 2021 to modify the SMP to terminate the groundwater sampling and reduce the schedule of inspections of active SSDS system to annual monitoring.

I appreciate your response on this inquiry as we need your directions before we mobilize to Site to performed the annual ECs inspection for the second PRR that is due by May 20, 2021.

Regards,

Paul I. Matli, Ph.D., P.G.
Vice President
HydroTech Environmental
ENGINEERING AND GEOLOGY, DPC
77 Arkay Drive, Suite K, Hauppauge, NY 11788
Cell: 631-241-7165 | Tel: 631-462-5866 Ext 110 | Fax: 631-462-5277
Email: pmatli@hydrotechenvironmental.com
Website: www.hydrotechenvironmental.com
Please consider the environment before printing this email

APPENDIX 2
HISTORIC QUARTERLY STATUS REPORT

HydroTech Environmental
ENGINEERING AND GEOLOGY, DPC

NYC Office
15 Ocean Avenue, Suite 2B
Brooklyn, New York 11225
T (718) 636-0800 ; F (718) 636-0900

Long Island Office
77 Arkay Drive, Suite K
Hauppauge, New York 11788
T (631) 462-5866 ; F (631) 462-5877

WWW.HYDROTECHENVIRONMENTAL.COM

May 4, 2020

Ms. Sondra Martinkat
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, NY 11101-5407

Re: Quarterly Status Report # 3 – December 2019 to February 2020
11-28 31st Drive, Queens, NY
NYSBCP Site #C241159

Dear Ms. Martinkat:

This report is intended to serve as a Quarterly Status Report (QSR), covering the period from December 2019 through February 2020 for the above-referenced Site. The Site is enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and is assigned number **C241159**. The scope of work presented is based upon the NYSDEC-approved Site Management Plan (SMP) dated November 2018 and was performed on behalf of the property owner, GBT Real Estate, LLC. The scope of work involves the quarterly monitoring and sampling of five existing monitoring wells and the quarterly monitoring of the active Sub-Slab Depressurization System (SSDS).

Groundwater Monitoring and Sampling

In accordance with the NYSDEC-approved SMP, the five monitoring wells MW-1 to MW-4 and MW-6 have been gauged on a quarterly basis for the presence of free product and also to determine the depth to groundwater. The location of monitoring wells is shown in **Figure 1**. The groundwater monitoring and sampling for the quarterly period covered in this report was in fact performed during March 2020 instead of February 2020 due a back order of sampling materials. This gauging was performed on March 20, 2020 utilizing a Solinst 122 Oil/Water Interface Probe. During this event, access to monitoring well MW-6 has been obstructed by a locked construction fence erected around a vacant property located to the north of the Site. None of the remaining monitoring wells were found to contain free product. The depth to water during this monitoring event ranged from 9.71 feet in MW-4 to 11.40 feet in MW-1. This depth to water in these wells represents an increase by an average 0.26 feet since the last event during November 2019.

Table 1 provides the groundwater monitoring and elevation data for the period covered by this report and historical monitoring data. **Attachment A** provides the well monitoring sheet.

Utilizing historical monitoring well casing elevations and the depth to water, the groundwater elevation in the wells were then determined. The groundwater elevations indicate the groundwater flow direction beneath the Site continues to be toward the southwest, consistent

with the historic flow directions mapped for this Site. **Figure 2** provides a contour map of groundwater flow direction during March 2020.

Passive Diffusion Bag (PDB) samplers for the groundwater sampling were then placed inside each of the four the monitoring wells MW-1 to MW-4 following well gauging. The PDBs were left inside the wells for the duration of 14 days and were recovered on March 16, 2019.

The groundwater samples collected from the PDBs were placed in laboratory-supplied containers and secured in a cooler filled with ice and maintained at a maximum 4 degrees Celsius. The samples were transmitted under proper chain of custody procedures to a State-certified (ELAP) laboratory and analyzed for tetrachloroethylene (PCE) and trichloroethylene (TCE) in accordance with EPA Method 8260.

Investigatory-derived waste (IDW) consisting of excess liquid generated during the sampling from of PDBs were placed into a 55-gallon drum. The drum was disposed of in accordance with DER-10 Technical Guidance for Site Investigation and Remediation (May 2010). **Attachment B** provides a copy of the final disposal manifest.

Laboratory analytical results for PCE and TCE in groundwater samples are provided in **Table 2**. Table 2 also provides the PCE and TCE concentrations over time and a comparison to NYSDEC 6NYCRR Part 703.5 Class groundwater Quality Standards (GQS). **Attachment C** provides a copy of the laboratory analytical report.

As **Table 2** indicates, PCE was detected in MW-2 and MW-4 at a concentrations that marginally exceed its GQS of 5 µg/L. PCE is present in MW-2 at a concentration of 6.77 µg/L, which represents a 70% decrease from 21.90 µg/L detected during the previous sampling in December 2019. PCE in MW-4 occurred at 6.7 µg/L, which represents a slightly increased from 1.75 µg/L detected during December 2019. PCE continues to be undetected in MW-1 and its concentrations in MW-3 continues to be below its GQS. TCE was only detected in MW-2 at a concentration less than GQS of 5 µg/L. TCE was not detected in MW-1, MW-3 or MW-4.

Overall findings of this investigation continue to support the findings made over the course of historic groundwater sampling performed at this Site since November 2018. These findings reflect a general reduction in PCE and TCE concentrations since the completion of the remedial injection program.

The groundwater data was submitted electronically to the NYSDEC through the Environmental Information Management System using the NYSDEC standardized Electronic Data Deliverable (EDD) format. A Data Usability Summary Report (DUSR) was also prepared for the analytical results by an independent data reviewer, Mr. Donald Anne of Alpha Geoscience in Clifton Park, NY. The DUSR indicates the data is acceptable and is considered usable. A copy of the DUSR is provided in **Attachment D**.

Active Sub-Slab Depressurization System

The active SSDS has been monitored on a quarterly basis. For the period covered in this report, the monitoring of SSDS was performed alongside the gauging of monitoring wells on March 20, 2020. During this monitoring event, a Qualified Environmental Professional inspected the system for proper functioning in accordance with the SSDS Operation and Maintenance Plan in the SMP. **Figure 3** provides the location of the vacuum monitoring points associated with the SSDS.

Table 3 provides the SSDS Monitoring Data collected during March 2020. The SSDS vacuum observed at the inline Dwyer Magnehelic dial type vacuum gauge was recorded at -0.74 inches H_2O. The effluent of the SSDS was monitored with a Photoionization Detector (PID); no organic vapors were detected. The radius of influence of the SSDS was monitored by measuring the vacuum at the three permanent sub-slab vacuum monitoring points VMP-1 to VMP-.

The vacuum at the vacuum monitoring points VMP-1 to VMP-3 was measured using Model 8710 DP-Calc™ Micromanometer, which measures differential pressure in inches H_2O. Differential pressure readings obtained at the three vacuum monitoring points indicate a vacuum ranging between -0.023 and -0.035 inches H_2O across the building slab. This level of negative pressure is consistent with the previous monitoring performed during November 2019 and it continues to reflect a satisfactory sub-slab vacuum communication for mitigating potential soil vapor intrusion beneath the building.

The groundwater sampling and SSDS monitoring will continue on a quarterly basis in accordance with the NYSDEC-approved SMP. The next quarterly groundwater sampling and SSDS monitoring event is scheduled for May 2020.

Should you have any questions, please feel free to contact our office at your convenience.

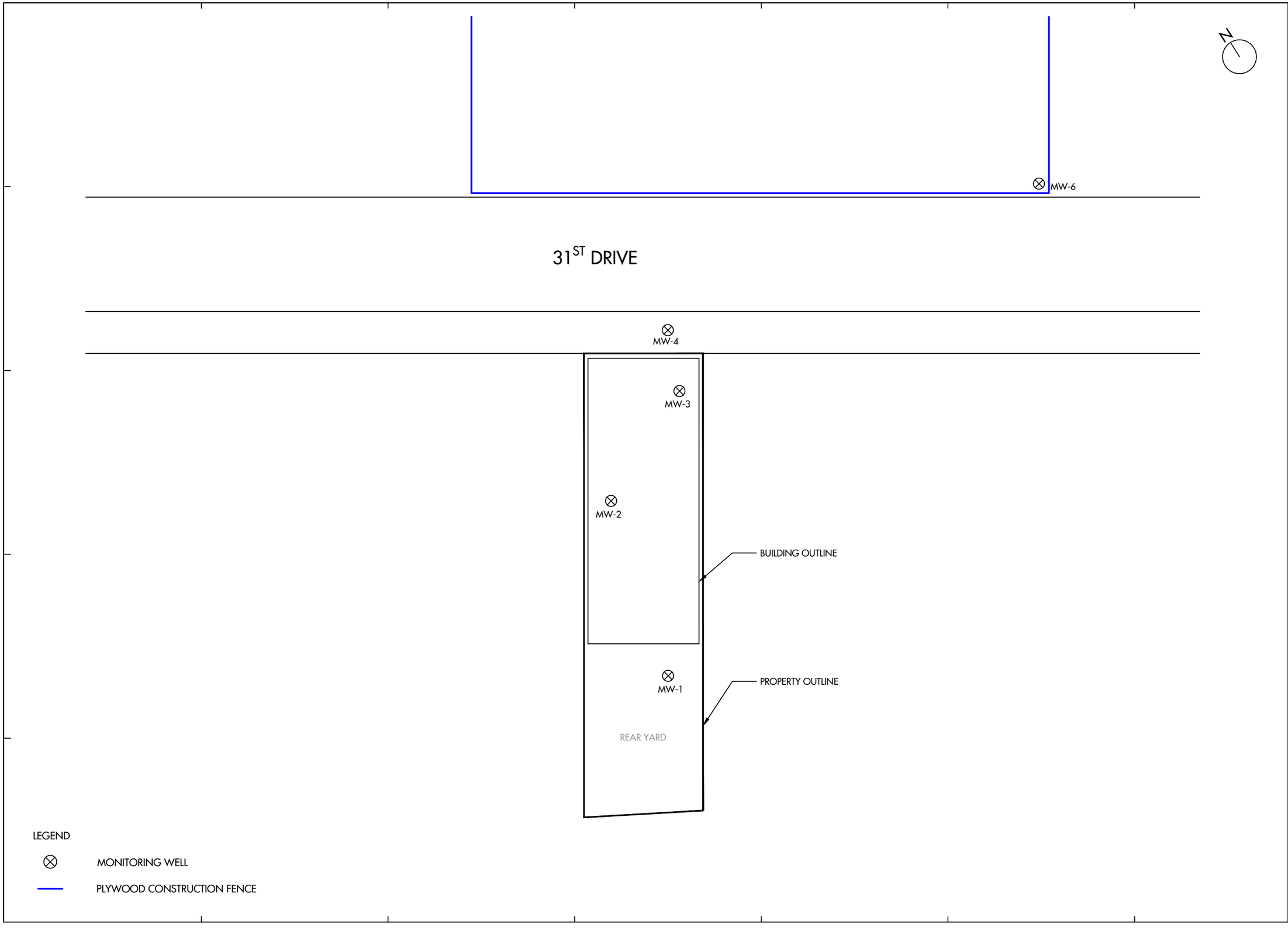
Very Truly Yours,
HydroTech Environmental Engineering and Geology, DPC

Paul I. Matli, PhD, PG
Senior Project Manager

PIM/as
Enc.

cc: Mr. George Man – GBT Real Estate LLC (by email) w/ Enc.
HydroTech file 190055 w/ Enc.

Figures



DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

77 ARKAY DRIVE, SUITE K
HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

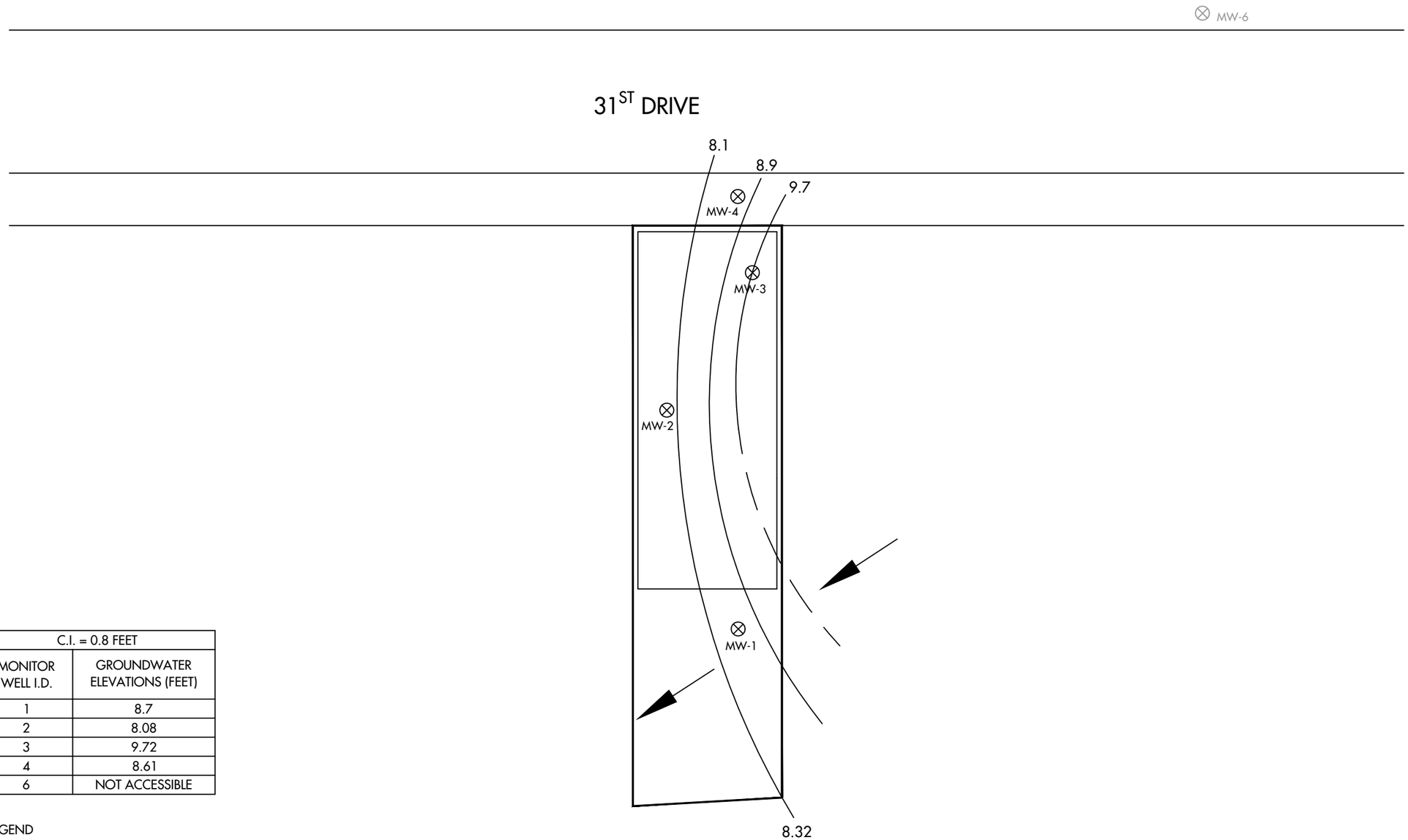
PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 1: SITE MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.



C.I. = 0.8 FEET	
MONITOR WELL I.D.	GROUNDWATER ELEVATIONS (FEET)
1	8.7
2	8.08
3	9.72
4	8.61
6	NOT ACCESSIBLE

LEGEND

⊗ MONITORING WELL

NOTE:
DASHED LINE WHERE CONTOUR IS INFERRED

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

77 ARKAY DRIVE, SUITE K
HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

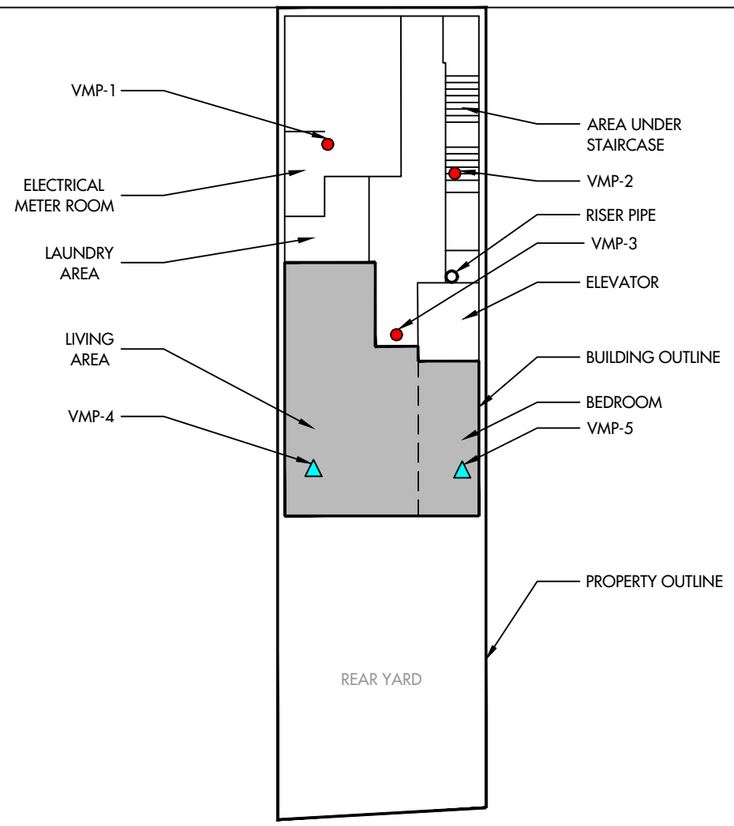
FIGURE 2: GROUNDWATER FLOW CONTOUR MAP

PROJECT NO.	DATE
190055	3/24/20
DRAWN BY A.R.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

31ST DRIVE



LEGEND

- PERMANENT VACUUM MONITORING POINTS
- TEMPORARY VACUUM MONITORING POINTS (DECOMMISSIONED AFTER SSDS STARTUP)
- RESIDENTIAL UNIT

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

77 ARKAY DRIVE, SUITE K
HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 3: VACUUM MONITORING POINTS MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.

Tables

Table 1

Groundwater Monitoring Results Over Time

11-28 31st Drive, Queens, NY

Well ID	Casing Elevation	August 2019			November 2019			March 2020		
		DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation
MW-1	12.7	ND	11.08	8.38	ND	11.23	8.53	ND	11.4	8.7
MW-2	12.7	ND	11.01	8.31	ND	11.15	8.45	ND	10.78	8.08
MW-3	11.51	ND	9.96	8.45	ND	10.1	8.59	ND	11.23	9.72
MW-4	11.10	ND	9.44	8.34	ND	9.60	8.50	ND	9.71	8.61
MW-6	9.47	ND	9.97	10.5	ND	10.15	10.68	ND	NA	NA

All values reported in feet.

DTW…Depth to Water from top of casing

DTP…Depth to Product from top of casing

ND…None Detected

NA…Not Accessible

Water Table elevations adjusted by a site benchmarck elevation of 10 feet

Tabel 2
Groundwater Samples Analytical Results for PCE and TCE _ Over Time
11-28 31st Drive, Queens, NY

Sample ID	MW-1													
Sampling Date	1/13/2015		2/19/2018		7/24/2018		11/20/2018		8/30/2019		########		3/17/2020	
Compound	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q
Tetrachloroethylene	0.2	U	**0.28**	J	0.22	U	0.22	U	0.22	U	0.20	U	0.20	U
Trichloroethylene	0.2	U	0.2	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample ID	MW-2													
Sampling Date	1/13/2015		2/19/2018		7/24/2018		11/20/2018		#######		########		3/17/2020	
Compound	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q
Tetrachloroethylene	**3.03**		**25**		**20**		**11.60**		**20.1**		**21.90**		**6.77**	
Trichloroethylene	0.2	U	**0.40**	J	**0.63**		**0.68**		**1.21**		**1.35**		**0.52**	

Sample ID	MW-3													
Sampling Date	1/13/2015		2/19/2018		7/24/2018		11/20/2018		8/30/2019		12/10/2019		3/17/2020	
Compound	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q
Tetrachloroethylene	**20.83**		**4.10**		**1.20**		0.22	U	**0.92**		**1.27**		**1.50**	
Trichloroethylene	**0.52**		0.2	U	0.20	U	0.20	U	0.20	u	0.20	U	0.20	U

Sample ID	MW-4													
Sampling Date	1/13/2015		2/19/2018		7/24/2018		11/20/2018		#######		12/10/2019		3/17/2020	
Compound	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q
Tetrachloroethylene	**3,799.8**		**70**		**13**		**2.28**		**2.87**		**1.75**		**6.70**	
Trichloroethylene	**17**		**0.66**		**0.43**	J	0.20	U	0.20		0.20	U	0.20	U

Sample ID	MW-6												Trip Blank		QGS
Sampling Date	1/13/2015		2/19/2018		7/24/2018		11/20/2018		8/30/2019		#######	3/17/2020	3/17/2020		
Compound	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	Q	µg/L	µg/L	µg/L	Q	
Tetrachloroethylene	**85.83**	D	**75**		**43**		**28.4**		**49.6**	D	**NA**	**NA**	0.20	U	5
Trichloroethylene	**8.90**		**15**		**0.46**	J	**0.48**	J	**0.42**	DJ			0.20	U	5

NOTES:

Q is the Qualifier Column with definitions as follows:
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte
GWS=NYSDEC TOGS Standards and Guidance Values - GA
▨ Shaded concentration exceeds GQS

1/13/2015=Sampling performed during the Remedial Investigation
2/19/2018=Baseline sampling performed prior to ISCO Injection Program
7/24/2018= Sampling performed 2 months post-ISCO injections
11/20/2018=Quaretrly sampling performed 5 months post-ISCO injections
8/30/2019=Quartely samplig performed 15 months post-ISCO Injections
NA= Not sampled due to limited access

Table 3

SSDS Monitoring Data Log Sheet Over Time

11-28 31 Drive ,Queens, New York,
NYSDEC Site Number: C241159

Date/Time	SSDS Vacuum	SSDS Effluent			Vaccum Monitoring Points				
					VMP-1	VMP-2	VMP-3	VMP-4	VMP-5
		PID	Flow	Temp	Vacuum				
9/9/2019	-0.74	0.2	518	76.46	-0.031	-0.040	-0.041	-0.036	-0.039
10/15/2019	-0.74	NA	NA	NA	-0.030	-0.036	-0.042	-0.036	-0.038
12/10/2019	-0.74	0.1	470.8	62.2	-0.024	-0.032	-0.034	D	D
3/2/2020	-0.74	0.1	440.1	65.5	-0.023	-0.035	-0.033	D	D

Vacuum --- Inch Water Flow

PID --- ppm

Flow --- CFM

Temperature --- ◦F

NA---Not measured

D---Decommissioned

Attachments

Attachment A
Well Monitoring Sheet

WELL MONITORING LOG SHEET

Project Name: 11-28 3 Drive Date: 3-17-2010

Client: Mr. George Man Instrument: _____

Site Location: 11-28 31 Drive Spill No.: _____

Monitoring Schedule: Monthly : _____ Quartely : _____ Bi-Annually :_____

Legend

S = Snow D = Dry G = Gone C = Can't Locate

DTW = Depth to Water DTP = Depth to Product PT = Product Thickness ND = None Detected

Monitoring Well	D.T.P.	D.T.W.	Riser abovegrund
MW-1	ND	11.4	
MW-2	ND	11.78	
MW-3	ND	11.23	
MW-4	ND	9.71	
MW-6	NA	NA	

Notes: All measurements in feet, below the nortnern top of well casing

Notes:

All measurements are reported in feet

ND=none detected

D=destroyed

NA

Reported By:

Paul I. Matli

Attachment B
Drum Disposal Manifest

18-2326-20 3934391 ~~3934386~~ 4/2

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N / A	1	(267) 406-0083	42373

GENERATOR

5. Generator's Name and Mailing Address
GBT Real Estate LLC
11-28 31st Drive
Long Island City NY 11106
Generator's Phone: 371 416-2002

Att: George Man Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Innovative Recycling Technologies, Inc.
U.S. EPA ID Number: NYR000134940

7. Transporter 2 Company Name
Republic Environmental Systems (Trans Group)LLC
U.S. EPA ID Number: PAD982661381

8. Designated Facility Name and Site Address
Republic Environmental Systems (PA), LLC
2869 Sandstone Drive
Hatfield PA 19440
Facility's Phone: 215 822-8995
U.S. EPA ID Number: PAD085690592

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Purge Water Non-DOT Regulated Material	01	DM	50	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
9.1)996775
Doc# 182319-20

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: James Ulrich on behalf of | Signature | Month 3 | Day 26 | Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Ulrich | Signature | Month 3 | Day 26 | Year 20

Transporter 2 Printed/Typed Name: Melissa B Deluca | Signature | Month 4 | Day 1 | Year 2020

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: MALVEY SMITH | Signature | Month 04 | Day 02 | Year 20

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

Attachment C

Laboratory Analytical Report

Technical Report

prepared for:

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Report Date: 03/25/2020
Client Project ID: 190055 11-28 31st Drive Queens NY
York Project (SDG) No.: 20C0824

Report Date: 03/25/2020
Client Project ID: 190055 11-28 31st Drive Queens NY
York Project (SDG) No.: 20C0824

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 18, 2020 and listed below. The project was identified as your project: **190055 11-28 31st Drive Queens NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20C0824-01	MW-1 (MS/MSD) - 20200317	Water	03/17/2020	03/18/2020
20C0824-02	MW-2 - 20200317	Water	03/17/2020	03/18/2020
20C0824-03	MW-3 - 20200317	Water	03/17/2020	03/18/2020
20C0824-04	MW-4 - 20200317	Water	03/17/2020	03/18/2020
20C0824-05	Trip Blank - 20200317	Water	03/17/2020	03/18/2020

General Notes for York Project (SDG) No.: 20C0824

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 03/25/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW-1 (MS/MSD) - 20200317 **York Sample ID:** 20C0824-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 00:18	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 00:18	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*85.4 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*97.5 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*105 %*	*79-122*

Sample Information

Client Sample ID: MW-2 - 20200317 **York Sample ID:** 20C0824-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**6.77**	CCV-E	ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 00:46	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	**Trichloroethylene**	**0.520**		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 00:46	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*91.0 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.6 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*104 %*	*79-122*

Sample Information

Client Sample ID: MW-3 - 20200317 **York Sample ID:** 20C0824-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Sample Information

Client Sample ID: MW-3 - 20200317 **York Sample ID:** 20C0824-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**1.49**	CCV-E	ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 01:15	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 01:15	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*91.4 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.1 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*103 %*	*79-122*

Sample Information

Client Sample ID: MW-4 - 20200317 **York Sample ID:** 20C0824-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**6.70**	CCV-E	ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 01:43	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 01:43	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*92.8 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.2 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*102 %*	*79-122*

Sample Information

Client Sample ID: Trip Blank - 20200317 **York Sample ID:** 20C0824-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **Trip Blank - 20200317** **York Sample ID:** **20C0824-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20C0824	190055 11-28 31st Drive Queens NY	Water	March 17, 2020 12:00 am	03/18/2020

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 02:12	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	03/24/2020 12:30	03/25/2020 02:12	AB
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*94.3 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.2 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*103 %*	*79-122*

Analytical Batch Summary

Batch ID: BC01436 **Preparation Method:** EPA 5030B **Prepared By:** CLS2

YORK Sample ID	Client Sample ID	Preparation Date
20C0824-01	MW-1 (MS/MSD) - 20200317	03/24/20
20C0824-02	MW-2 - 20200317	03/24/20
20C0824-03	MW-3 - 20200317	03/24/20
20C0824-04	MW-4 - 20200317	03/24/20
20C0824-05	Trip Blank - 20200317	03/24/20
BC01436-BLK1	Blank	03/24/20
BC01436-BS1	LCS	03/24/20
BC01436-BSD1	LCS Dup	03/24/20
BC01436-MS1	Matrix Spike	03/24/20
BC01436-MSD1	Matrix Spike Dup	03/24/20

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BC01436 - EPA 5030B											
Blank (BC01436-BLK1)								Prepared & Analyzed: 03/24/2020			
Tetrachloroethylene	ND	0.500	ug/L								
Trichloroethylene	ND	0.500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*8.49*		*"*	*10.0*		*84.9*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.75*		*"*	*10.0*		*97.5*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.7*		*"*	*10.0*		*107*	*79-122*				
LCS (BC01436-BS1)								Prepared & Analyzed: 03/24/2020			
Tetrachloroethylene	9.63		ug/L	10.0		96.3	82-131				
Trichloroethylene	9.87		"	10.0		98.7	82-128				
Surrogate: SURR: 1,2-Dichloroethane-d4	*8.91*		*"*	*10.0*		*89.1*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.60*		*"*	*10.0*		*96.0*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.4*		*"*	*10.0*		*104*	*79-122*				
LCS Dup (BC01436-BSD1)								Prepared & Analyzed: 03/24/2020			
Tetrachloroethylene	9.53		ug/L	10.0		95.3	82-131		1.04	30	
Trichloroethylene	9.91		"	10.0		99.1	82-128		0.404	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*8.65*		*"*	*10.0*		*86.5*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.75*		*"*	*10.0*		*97.5*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.5*		*"*	*10.0*		*105*	*79-122*				
Matrix Spike (BC01436-MS1)	*Source sample: 20C0824-01 (MW-1 (MS/MSD) - 20200317)							Prepared: 03/24/2020 Analyzed: 03/25/2020			
Tetrachloroethylene	10.4		ug/L	10.0	0.00	104	64-139				
Trichloroethylene	10.9		"	10.0	0.00	109	53-145				
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.20*		*"*	*10.0*		*92.0*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.52*		*"*	*10.0*		*95.2*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*79-122*				
Matrix Spike Dup (BC01436-MSD1)	*Source sample: 20C0824-01 (MW-1 (MS/MSD) - 20200317)							Prepared: 03/24/2020 Analyzed: 03/25/2020			
Tetrachloroethylene	10.6		ug/L	10.0	0.00	106	64-139		1.62	30	
Trichloroethylene	10.8		"	10.0	0.00	108	53-145		1.02	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.44*		*"*	*10.0*		*94.4*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.53*		*"*	*10.0*		*95.3*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.2*		*"*	*10.0*		*102*	*79-122*				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
20C0824-01	MW-1 (MS/MSD) - 20200317	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20C0824-02	MW-2 - 20200317	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20C0824-03	MW-3 - 20200317	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20C0824-04	MW-4 - 20200317	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20C0824-05	Trip Blank - 20200317	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

CCV-E The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES, INC.
120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page____ of ____

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 2000824

YOUR Information	Report to:	Invoice To:	Your Project ID	Turn-Around Time	Report/Deliverable Type
Company: HydroTech Env. Eng & Geol Dl	SAME [x]	SAME [ ]	#190055 11-28 31 Drive, LIC NY	RUSH-Same Day	Summary Report x
Address: 15 Ocean Ave. 2nd Fl	Name:	Name: SAME		RUSH-Next Day	QA Report x
Bklyn , NY 11225	Company:	Company:	Purchase Order #	RUSH-Two Day	CT RCP
Phone.: 718-636-0800	Address:	Address:		RUSH-Three Day	CT RCP DQA/DUE Pkg
Contact: Paul I. Matli			52479	~~RUSH~~-Four Day X	NY ASP A Package
E-mail: pmatli...hydrotechenvironmental.com	E-mail:	E-mail mward...hydrotechenvironmental.c	Samples from CT__NY__NJ__	Standard (5-7day)	NY ASP B Package x

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Paul Matli
Samples Collected/Authorized By (Signature)
Paul Matli
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part360-Expanded No Dioxins/Furans
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part360-Expanded Full List
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM

Report/Deliverable Type (cont.)	
NJDEP Reduced Deliv	
Excel	x
NYSDEC EQuIS	X
NJDEP SRP HazSite	
EQuIS	
GIS/KEY (std)	
YORK Regulatory Comp Excel compared to:	
See Comment below	
OTHER:	

Sample Identification	Date+Time Sampled	Matrix	Analysis Requested (List above includes common analysis)	Container Description
MW-1 (MS/MSD) - 20200317	3/17/2020	GW	PCE and TCE via EPA 8260B	9 x 40 mils vials
MW-2 - 20200317	x	X	X	3 x 40 mils vials
MW-3 - 20200317	x	X	X	x
MW-4 - 20200317	x	X	X	x
Trip Blank - 20200317	x	DI	X	2 x 40 mils vials
			Rec'd Eric Snyder 3/14/20 2235	
			Rel Eric Snyder 3/18/20 1826	

Comments:
x = same as before
Compare to NYSDEC - 1.1.1 TOGS- GQS
Samples collected via PDBs

Preservation (check all appliciable): 4°C____ Frozen____ HCl____ MeOH____ HNO$_3$____ H$_2$SO$_4$____ NaOH____ ZnAc____ Ascorbic Acid____ Other____

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By	Date/Time	Samples Received By	Date/Time	Temperature on Receipt
Paul Matli	3/18/20 9:15am	Allie v York	03/18/20 9:10	3.4 °C
Allie v York	03/18/20	K Blocker	3/18/20 1826	

Samples Relinquished By / Date/Time / Samples Received in LAB by / Date/Time

Attachment D

Copy of DUSR

ALPHA
GEOSCIENCE
Geology
Hydrology
Remediation
Water Supply

April 7, 2020

Mr. Paul I. Matli, Ph.D.
Hydro Tech Environmental
15 Ocean Ave., Suite 2B
Brooklyn, NY 11225

Re: Data Validation Report
March 2020 Ground Water Sampling Event
11-28 31st Drive, LIC, NY

Dear Dr. Matli:

The data usability summary report and data validation summary are attached to this letter for the above referenced project. The data for York Analytical Laboratories, Inc. SDG 20C0824 were acceptable with some minor issues that are identified in the validation summary. There were no data that were qualified as rejected, unusable (R) in the data pack.

We have attached lists of data validation acronyms and data qualifiers to assist you in the interpretation of the reviews. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Hydro Tech Environmental, Corp.

Sincerely,
Alpha Geoscience
Donald Anné

Donald Anné
Senior Chemist

DCA:dca
attachments

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

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Water Supply

Data Usability Summary Report for
York Analytical Laboratories, Inc., SDG: 20C0824

4 Ground Water Samples and 1 Trip Blank
Collected March 17, 2020

Prepared by: Donald Anné
April 7, 2020

The data package contains the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appears legible and complete. The data pack contains the results of 4 ground water samples and 1 trip blank analyzed for volatiles only.

The overall performances of the analyses are acceptable. York Analytical Laboratories, Inc. did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The positive volatile results for tetrachloroethylene were qualified as "estimated" (J) in samples MW-2-20200317, MW-3-20200317, and MW-4-20200317 because the %D for tetrachloroethylene was above the allowable maximum in the associated continuing calibration.

All data are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 8260C Volatiles Data for
York Analytical Laboratories, Inc., SDG: 20C0824

4 Ground Water Samples and 1 Trip Blank
Collected March 17, 2020

Prepared by: Donald Anné
April 7, 2020

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for applicable compounds were above the method minimums, as required.

The average RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required. The %D for tetrachloroethylene was above the method maximum on 03-24-20 (V81749.D).

The RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010), as required.

The %D for tetrachloroethylene was above the allowable maximum (25%) on 03-24-20 (V81749.D). Positive results for tetrachloroethylene should be considered estimated (J) in associated samples.

Blanks: The analyses of method and trip blanks reported trichloroethylene and tetrachloroethylene as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

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Matrix Spike/Matrix Spike Duplicate: The relative percent differences for tetrachloroethylene and trichloroethylene were below the allowable maximum and percent recoveries were within QC limits for aqueous MS/MSD sample MW-1 (MS/MSD)-20200317.

Laboratory Control Sample: The relative percent differences for trichloroethylene and tetrachloroethylene were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples BC01436-BS1 and BC04136-BSD1.

Compound ID: Checked compounds and surrogates were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

HydroTech Environmental
ENGINEERING AND GEOLOGY, DPC

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Long Island Office
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WWW.HYDROTECHENVIRONMENTAL.COM

August 31, 2020

Ms. Sondra Martinkat
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, NY 11101-5407

Re: Quarterly Status Report # 4 - March to May 2020 (Extended to July 2020)
11-28 31st Drive, Queens, NY
NYSBCP Site #C241159

Dear Ms. Martinkat:

This report is intended to serve as a Quarterly Status Report (QSR), covering the period from March 2020 through May 2020 for the above-referenced New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site number **C241159**. Due to impacts of COVID-19 and in accordance with NYS Governor's Executive Order 202.6, subsequent orders and New York City Department of Buildings (NYCDOB) Guidance on enforcement of Essential vs. Nonessential businesses, the May 2020 quarterly sampling was delayed until July 2020.

The scope of work presented in this report is based upon the NYSDEC-approved Site Management Plan (SMP) dated November 2018 and was performed on behalf of the property owner, GBT Real Estate, LLC. The scope of work is a continuation of the quarterly monitoring and sampling of five existing monitoring wells and the quarterly monitoring of the active Sub-Slab Depressurization System (SSDS) following the submission of a Periodic Review Report for this Site dated May 30, 2020.

Groundwater Monitoring and Sampling

In accordance with the NYSDEC-approved SMP, the five monitoring wells MW-1 to MW-4 and MW-6 have been gauged on a quarterly basis for the presence of free product and also to determine the depth to groundwater. The location of monitoring wells is shown in **Figure 1**. The groundwater monitoring and sampling for the quarterly period covered in this report was performed during July 2020 instead of May 2020 due to COVID-19.

The monitoring well gauging was performed on July 15, 2020 utilizing a Solinst 122 Oil/Water Interface Probe. During this event, access to monitoring well MW-6 continued to be obstructed by a locked construction fence erected around a vacant property located to the north of the Site. None of the four gauged monitoring wells were found to contain free product. The depth to water during this monitoring event ranged from 9.32 feet in MW-4 to 11.55 feet in MW-1. This depth to water in these wells represents a general decrease by an average 0.34 feet since the last event during February 2020.

Table 1 provides the groundwater monitoring and elevation data for the period covered by this report and historical monitoring data. **Attachment A** provides the well monitoring sheet.

Utilizing historical monitoring well casing elevations and the depth to water, the groundwater elevation in the wells were then determined. The groundwater elevations indicate the groundwater flow direction beneath the Site continues to be toward the southwest, consistent with the historic flow directions mapped for this Site. **Figure 2** provides a contour map of groundwater flow direction during July 2020.

Passive Diffusion Bag (PDB) samplers for the groundwater sampling were then placed inside each of the four the monitoring wells MW-1 to MW-4 following well gauging. The PDBs were left inside the wells for the duration of 16 days and were recovered on July 31, 2020.

The groundwater samples were placed in laboratory-supplied containers and secured in a cooler filled with ice and maintained at a maximum 4 degrees Celsius. The samples were transmitted under proper chain of custody procedures to a State-certified (ELAP) laboratory and analyzed for tetrachloroethylene (PCE) and trichloroethylene (TCE) in accordance with EPA Method 8260.

Investigatory-derived waste (IDW) consisting of excess liquid generated during the sampling from of PDBs were placed into a 55-gallon drum. The drum was disposed of in accordance with DER-10 Technical Guidance for Site Investigation and Remediation (May 2010). **Attachment B** provides a copy of the final disposal manifest.

Laboratory analytical results for PCE and TCE in groundwater samples are provided in **Table 2**. **Table 2** also provides the PCE and TCE concentrations over time and a comparison to NYSDEC 6NYCRR Part 703.5 Class groundwater Quality Standards (GQS). **Attachment C** provides a copy of the laboratory analytical report.

As **Table 2** indicates, PCE was detected in MW-2 at a concentration of 10 µg/L, which exceeds its GQS of 5 µg/L. This PCE concentration in MW-2 represents a slight increase from 6.77 µg/L detected during March 2020. PCE was also detected in MW-3 and MW-4 at concentrations that are below its GQS and they represent a reduction by approximately 64% since March 2020. PCE continues to be undetected in MW-1. TCE was only detected in MW-2 at a concentration less than GQS of 5 µg/L. TCE continues to be undetected in MW-1, MW-3 or MW-4.

These findings in this report are consistent with the historic groundwater sampling performed at the Site, which reflects a continued reduction in PCE and TCE since 2018 as a result of natural degradation.

The groundwater data was submitted electronically to the NYSDEC through the Environmental Information Management System using the NYSDEC standardized Electronic Data Deliverable (EDD) format. A Data Usability Summary Report (DUSR) was also prepared for the analytical results by an independent data reviewer, Mr. Donald Anne of Alpha Geoscience in Clifton Park,

NY. The DUSR indicates the data is acceptable and is considered usable. A copy of the DUSR is provided in **Attachment D**.

Active Sub-Slab Depressurization System

The active SSDS has been monitored on a quarterly basis. For the period covered in this report, the monitoring of SSDS was performed alongside the gauging of monitoring wells on July 15, 2020. During this monitoring event, a HydroTech Qualified Environmental Professional inspected the system for proper functioning in accordance with the SSDS Operation and Maintenance Plan in the SMP. **Figure 3** provides the location of the vacuum monitoring points associated with the SSDS.

Table 3 provides the SSDS Monitoring Data collected during July 2020. The SSDS vacuum observed at the inline Dwyer Magnehelic dial type vacuum gauge continues to record -0.74 inches H_2O. The effluent of the SSDS was monitored with a Photoionization Detector (PID); no organic vapors were detected. The radius of influence of the SSDS was monitored by measuring the vacuum at the three permanent sub-slab vacuum monitoring points VMP-1 to VMP-3.

The vacuum at the vacuum monitoring points VMP-1 to VMP-3 was measured using Model 8710 DP-Calc™ Micromanometer, which measures differential pressure in inches H_2O. Differential pressure readings obtained at the three vacuum monitoring points indicate a vacuum ranging between -0.03 and -0.06 inches H_2O beneath the building slab. Although this level of negative pressure shows a minor improvement since the previous monitoring in March 2020, it remains consistent with historic monitoring data reported since November 2019 and reflects a satisfactory sub-slab vacuum communication for soil vapor intrusion mitigation beneath the building.

The groundwater sampling and SSDS monitoring will continue on a quarterly basis in accordance with the NYSDEC-approved SMP. The next quarterly groundwater sampling and SSDS monitoring event is scheduled for October 2020.

Should you have any questions, please feel free to contact our office at your convenience.

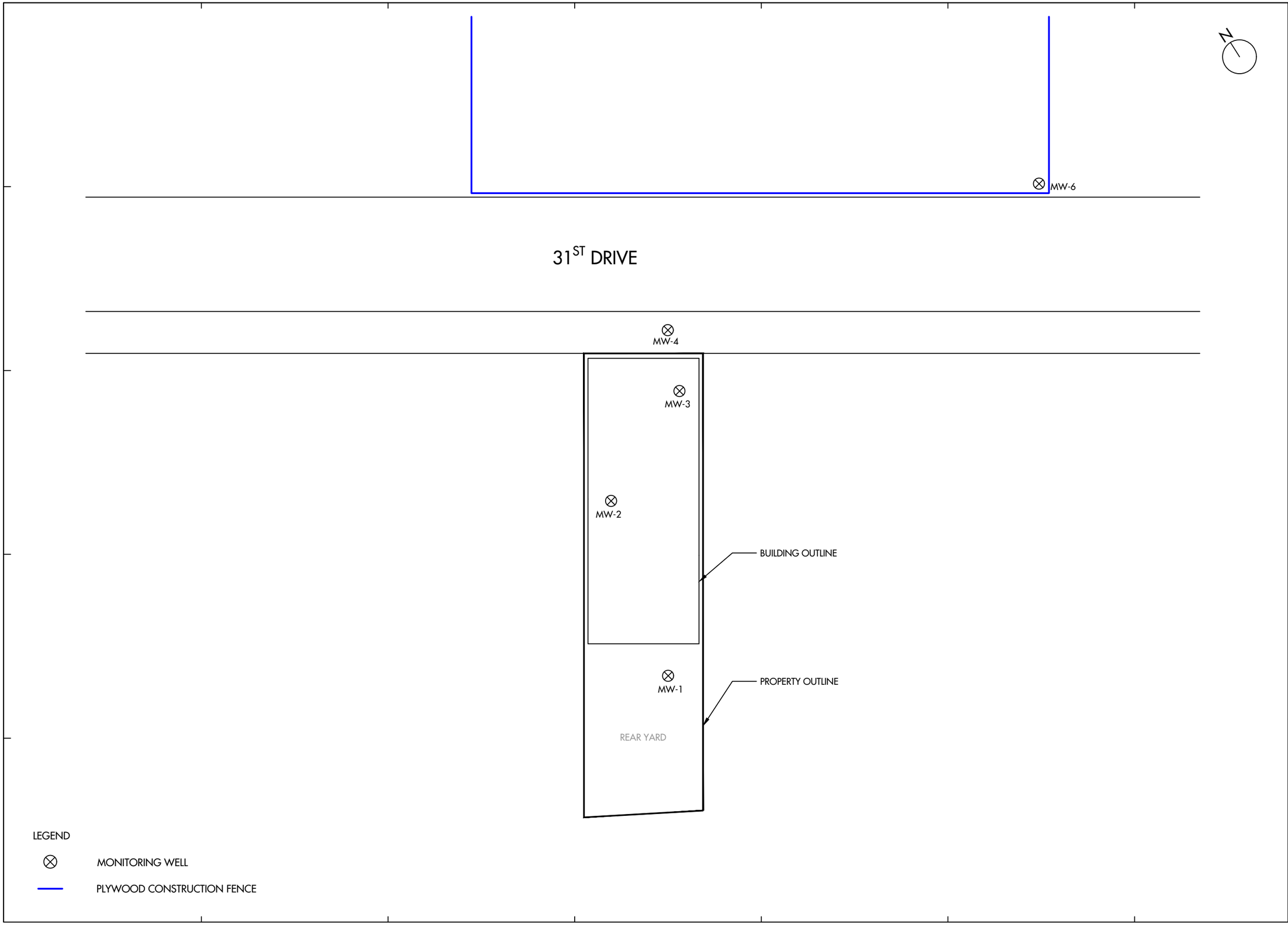
Very Truly Yours,
HydroTech Environmental Engineering and Geology, DPC

Paul I. Matli, PhD, PG
Senior Project Manager

PIM/as
Enc.

cc: Mr. George Man – GBT Real Estate LLC (by email) w/ Enc.
HydroTech file 190055 w/ Enc.

Figures



DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

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FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

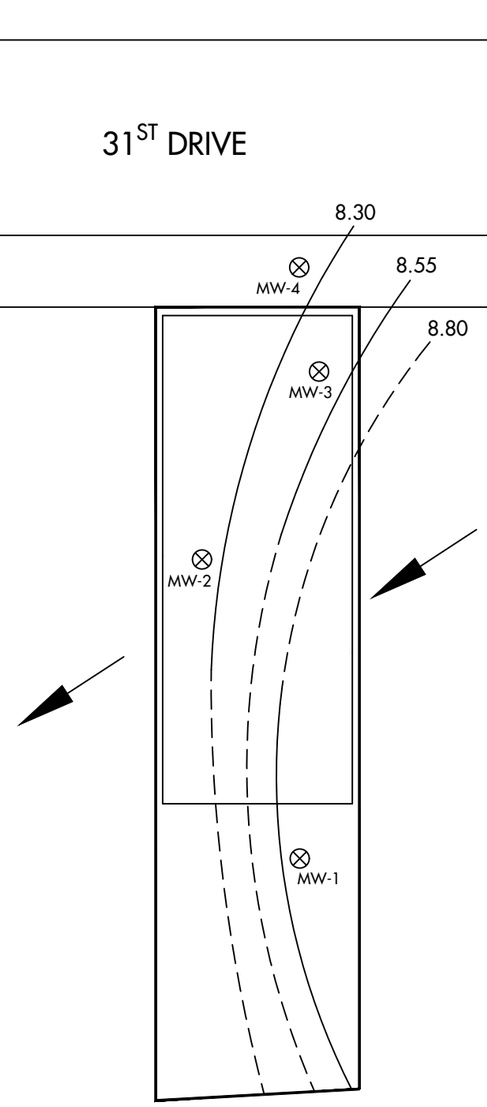
PROJECT FIGURE

FIGURE 1: SITE MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE



C.I. = 0.25 FEET	
MONITOR WELL I.D.	GROUNDWATER ELEVATIONS
1	8.85
2	8.25
3	8.41
4	8.22
6	NOT ACCESSIBLE

LEGEND

⊗ MONITORING WELL

NOTE:
DASHED LINE WHERE CONTOUR IS INFERRED

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

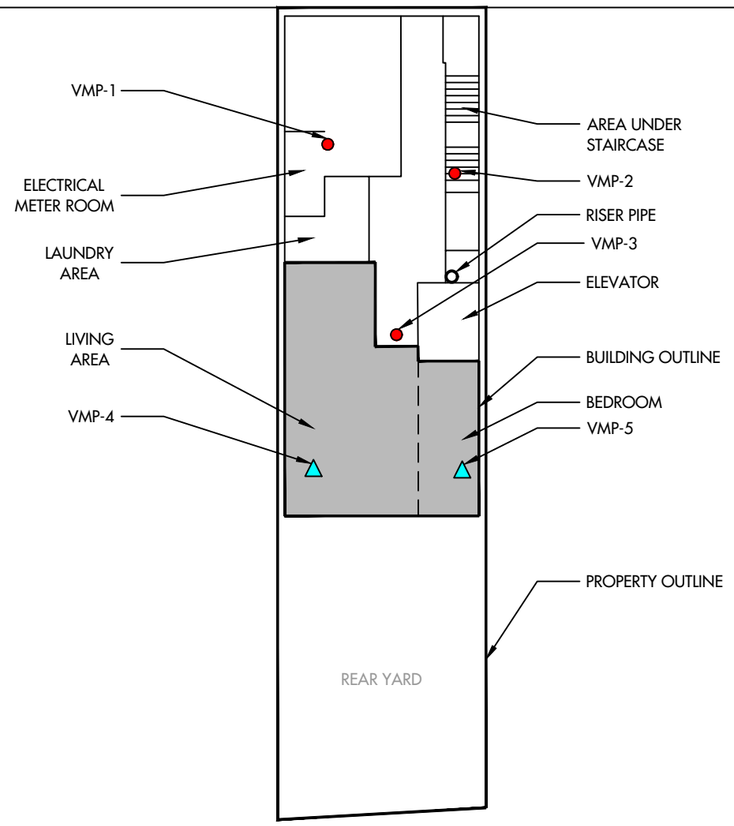
FIGURE 2: GROUNDWATER FLOW CONTOUR MAP - JULY 2020

PROJECT NO.	DATE
190055	8/11/20
DRAWN BY A.R.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

31ST DRIVE



LEGEND

- PERMANENT VACUUM MONITORING POINTS
- TEMPORARY VACUUM MONITORING POINTS (DECOMMISSIONED AFTER SSDS STARTUP)
- RESIDENTIAL UNIT

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 3: VACUUM MONITORING POINTS MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.

Tables

Table 1

Groundwater Monitoring Results Over Time

11-28 31st Drive, Queens, NY

Well ID	Casing Elevation	August 2019			November 2019			March 2020			July 2020		
		DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation
MW-1	12.7	ND	11.08	8.38	ND	11.23	8.53	ND	11.4	8.7	ND	11.55	8.85
MW-2	12.7	ND	11.01	8.31	ND	11.15	8.45	ND	10.78	8.08	ND	10.95	8.25
MW-3	11.51	ND	9.96	8.45	ND	10.1	8.59	ND	11.23	9.72	ND	9.92	8.41
MW-4	11.10	ND	9.44	8.34	ND	9.60	8.50	ND	9.71	8.61	ND	9.32	8.22
MW-6	9.47	ND	9.97	10.5	ND	10.15	10.68	ND	NA	NA	ND	NA	NA

All values reported in feet.

DTW…Depth to Water from top of casing .

DTP…Depth to Product from top of casing

ND…None Detected

NA…Not Accessible

Water Table elevations adjusted by a site benchmarck elevation of 10 feet

Tabel 2
Groundwater Samples Analytical Results for PCE and TCE _ Over Time
11-28 31st Drive, Queens, NY

Sampling Date	MW-1		MW-2		MW-3		MW-4		MW-6		Trip Blank	
	PCE	TCE	TCE	PCE	PCE	TCE	TCE	PCE	PCE	TCE	PCE	TCE
1/13/2015	0.2 U	0.2	**3.03**	0.2 U	**20.83**	**0.52**	**3,799.8**	**17**	**85.83**	**8.90**	0.2 U	0.2 U
2/19/2018	**0.28 J**	0.2 U	**25**	**0.4 J**	**4.10**	0.2 U	**70**	**0.66**	**75**	**15**	0.2 U	0.2 U
7/24/2018	0.2 U	0.2 U	**20**	**0.63**	**1.20**	0.2 U	**13**	**0.43 J**	**43**	**0.46 J**	0.2 U	0.2 U
11/20/2018	0.2 U	0.2 U	**11.60**	**0.68**	0.22	0.2 U	**2.28**	0.2 U	**28.4**	**0.48 J**	0.2 U	0.2 U
8/30/2019	0.2 U	0.2 U	**20.1**	**1.21**	**0.92**	0.2 U	**2.87**	0.2 U	**49.6**	**0.42 DJ**	0.2 U	0.2 U
12/10/2019	0.2 U	0.2 U	**21.90**	**1.35**	**1.27**	0.2 U	**1.75**	0.2 U	**NA**		0.2 U	0.2 U
3/17/2020	0.2 U	0.2 U	**6.77**	**0.52**	**1.50**	0.2 U	**6.70**	0.2 U	**NA**		0.2 U	0.2 U
7/31/2020	0.2 U	0.2 U	**10**	**0.90**	**0.54**	0.2 U	**2.36**	0.2 U	**NA**		0.2 U	0.2 U

NOTES:
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte
Shaded concentration exceeds GQS of PCE or TCE of 5 µg/L
GQS=NYSDEC TOGS Standards and Guidance Values - GA
PCE=Tetrachloroethylene
TCE=Trichloroethylene
1/13/2015=Sampling performed during the Remedial Investigation
2/19/2018=Baseline sampling performed prior to ISCO Injection Program
7/24/2018= Sampling performed 2 months post-ISCO injections
11/20/2018=Quaretrly sampling performed 5 months post-ISCO injections
8/30/2019 to July/31/2020=Quartely sampling performed 15 months post-ISCO Injections to-date
NA= Not sampled due to limited access

Table 3

SSDS Monitoring Data Log Sheet Over Time

11-28 31 Drive ,Queens, New York,
NYSDEC Site Number: C241159

Date/Time	SSDS Vacuum	SSDS Effluent			Vaccum Monitoring Points				
					VMP-1	VMP-2	VMP-3	VMP-4	VMP-5
		PID	Flow	Temp	Vacuum				
9/9/2019	-0.74	0.2	518	76.46	-0.031	-0.040	-0.041	-0.036	-0.039
10/15/2019	-0.74	NA	NA	NA	-0.030	-0.036	-0.042	-0.036	-0.038
12/10/2019	-0.74	0.1	470.8	62.2	-0.024	-0.032	-0.034	D	D
3/2/2020	-0.74	0.1	440.1	65.5	-0.023	-0.035	-0.033	D	D
7/15/2020	-0.74	0.3	503.7	78.0	-0.030	-0.040	-0.060	D	D

Vacuum --- Inch Water Flow
PID --- ppm
Flow --- CFM
Temperature --- ◦F
NA---Not measured
D---Decommissioned

Attachments

Attachment A
Well Monitoring Sheet

WELL MONITORING LOG SHEET

Project Name	11-28 31st Drive	Date	7-15-2020
Client	Mr. George Man	Instrument	
Site Location	11-28 31st Drive, LIC NY	BCP Site #	# C241159
Monitoring Schedule	Monthly : _____	Quartely : _x_____	Bi-Annually :_____

Legend

S = Snow D = Dry G = Gone C = Can't Locate NA = Not Accessible
DTW = Depth to Water DTP = Depth to Product PT = Product Thickness ND = None Detected

Monitoring Well	D.T.P.	D.T.W.
MW-1	ND	1.56
MW-2	ND	10.95
MW-3	ND	9.92
MW-4	ND	9.32
MW-6	NA	NA

Notes: All measurements in feet, below the nortnern top of well casing
Notes:
All measurements are reported in feet

Reported By:

Ruijie Xu

Attachment B
Drum Disposal Manifest

Attachment C

Laboratory Analytical Report

Technical Report

prepared for:

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Report Date: 08/06/2020
Client Project ID: 190055 11-28 31st Drive LIC
York Project (SDG) No.: 20G1207

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 08/06/2020
Client Project ID: 190055 11-28 31st Drive LIC
York Project (SDG) No.: 20G1207

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 31, 2020 and listed below. The project was identified as your project: **190055 11-28 31st Drive LIC**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20G1207-01	MW-1-20200731	Water	07/31/2020	07/31/2020
20G1207-02	MW-2-20200731	Water	07/31/2020	07/31/2020
20G1207-03	MW-3-20200731	Water	07/31/2020	07/31/2020
20G1207-04	MW-4-20200731	Water	07/31/2020	07/31/2020
20G1207-05	Trip Blank-20200731	Water	07/31/2020	07/31/2020

General Notes for York Project (SDG) No.: 20G1207

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 08/06/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW-1-20200731 **York Sample ID:** 20G1207-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:30 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:16	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:16	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.2 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*111 %*	*79-122*

Sample Information

Client Sample ID: MW-2-20200731 **York Sample ID:** 20G1207-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:35 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**10.0**		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:41	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	**Trichloroethylene**	**0.900**		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:41	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*95.8 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*109 %*	*79-122*

Sample Information

Client Sample ID: MW-3-20200731 **York Sample ID:** 20G1207-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:40 am	07/31/2020

Sample Information

Client Sample ID: MW-3-20200731 **York Sample ID:** 20G1207-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:40 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**0.540**		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:06	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:06	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*102 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*95.8 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*113 %*	*79-122*

Sample Information

Client Sample ID: MW-4-20200731 **York Sample ID:** 20G1207-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:45 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**2.36**		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:31	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:31	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.0 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*114 %*	*79-122*

Sample Information

Client Sample ID: Trip Blank-20200731 **York Sample ID:** 20G1207-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 12:00 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **Trip Blank-20200731** **York Sample ID:** **20G1207-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 12:00 am	07/31/2020

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	08/05/2020 06:00	08/05/2020 15:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	08/05/2020 06:00	08/05/2020 15:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.1 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*112 %*	*79-122*

Analytical Batch Summary

Batch ID: BH00207 **Preparation Method:** EPA 5030B **Prepared By:** SG

YORK Sample ID	Client Sample ID	Preparation Date
20G1207-01	MW-1-20200731	07/31/20
20G1207-02	MW-2-20200731	07/31/20
20G1207-03	MW-3-20200731	07/31/20
20G1207-04	MW-4-20200731	07/31/20
BH00207-BLK1	Blank	07/31/20
BH00207-BS1	LCS	07/31/20
BH00207-BSD1	LCS Dup	07/31/20
BH00207-MS1	Matrix Spike	07/31/20
BH00207-MSD1	Matrix Spike Dup	07/31/20

Batch ID: BH00260 **Preparation Method:** EPA 5030B **Prepared By:** TMP

YORK Sample ID	Client Sample ID	Preparation Date
20G1207-05	Trip Blank-20200731	08/05/20
BH00260-BLK1	Blank	08/05/20
BH00260-BS1	LCS	08/05/20
BH00260-BSD1	LCS Dup	08/05/20

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH00207 - EPA 5030B											
Blank (BH00207-BLK1)								Prepared: 07/31/2020 Analyzed: 08/01/2020			
Tetrachloroethylene	ND	0.500	ug/L								
Trichloroethylene	ND	0.500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.5*		*"*	*10.0*		*105*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.65*		*"*	*10.0*		*96.5*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*11.1*		*"*	*10.0*		*111*	*79-122*				
LCS (BH00207-BS1)								Prepared: 07/31/2020 Analyzed: 08/01/2020			
Tetrachloroethylene	9.91		ug/L	10.0		99.1	82-131				
Trichloroethylene	9.83		"	10.0		98.3	82-128				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.4*		*"*	*10.0*		*104*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.64*		*"*	*10.0*		*96.4*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.8*		*"*	*10.0*		*108*	*79-122*				
LCS Dup (BH00207-BSD1)								Prepared: 07/31/2020 Analyzed: 08/01/2020			
Tetrachloroethylene	9.99		ug/L	10.0		99.9	82-131		0.804	30	
Trichloroethylene	9.83		"	10.0		98.3	82-128		0.00	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.3*		*"*	*10.0*		*103*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.64*		*"*	*10.0*		*96.4*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*11.1*		*"*	*10.0*		*111*	*79-122*				
Matrix Spike (BH00207-MS1)	*Source sample: 20G1207-01 (MW-1-20200731)							Prepared: 07/31/2020 Analyzed: 08/01/2020			
Tetrachloroethylene	9.54		ug/L	10.0	0.00	95.4	64-139				
Trichloroethylene	10.1		"	10.0	0.00	101	53-145				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.6*		*"*	*10.0*		*106*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.62*		*"*	*10.0*		*96.2*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*11.1*		*"*	*10.0*		*111*	*79-122*				
Matrix Spike Dup (BH00207-MSD1)	*Source sample: 20G1207-01 (MW-1-20200731)							Prepared: 07/31/2020 Analyzed: 08/01/2020			
Tetrachloroethylene	9.42		ug/L	10.0	0.00	94.2	64-139		1.27	30	
Trichloroethylene	9.90		"	10.0	0.00	99.0	53-145		2.40	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.5*		*"*	*10.0*		*105*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.51*		*"*	*10.0*		*95.1*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.8*		*"*	*10.0*		*108*	*79-122*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH00260 - EPA 5030B											
Blank (BH00260-BLK1)								Prepared & Analyzed: 08/05/2020			
Tetrachloroethylene	ND	0.500	ug/L								
Trichloroethylene	ND	0.500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.4*		*"*	*10.0*		*104*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.63*		*"*	*10.0*		*96.3*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.7*		*"*	*10.0*		*107*	*79-122*				
LCS (BH00260-BS1)								Prepared & Analyzed: 08/05/2020			
Tetrachloroethylene	8.51		ug/L	10.0		85.1	82-131				
Trichloroethylene	8.57		"	10.0		85.7	82-128				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.3*		*"*	*10.0*		*103*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.56*		*"*	*10.0*		*95.6*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.5*		*"*	*10.0*		*105*	*79-122*				
LCS Dup (BH00260-BSD1)								Prepared & Analyzed: 08/05/2020			
Tetrachloroethylene	8.58		ug/L	10.0		85.8	82-131		0.819	30	
Trichloroethylene	8.31		"	10.0		83.1	82-128		3.08	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.2*		*"*	*10.0*		*102*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.56*		*"*	*10.0*		*95.6*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*10.8*		*"*	*10.0*		*108*	*79-122*				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
20G1207-01	MW-1-20200731	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20G1207-02	MW-2-20200731	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20G1207-03	MW-3-20200731	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20G1207-04	MW-4-20200731	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20G1207-05	Trip Blank-20200731	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Field Chain-of-Custody Record

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20G1207

Page 1 of 1

YOUR Information	Report To:	Invoice To:	YOUR Project Number / YOUR Project Name	Turn-Around Time
Company: Hydro Tech	Company:	Company: HydroTech	190055 - 11-28 31st Drive, LIC	RUSH - Next Day
Address: 15 Ocean Ave, 2nd Fl. Brooklyn NY 11225	Address: SAME	Address: 77 Arbor Drive, Suite K, Mineola, NY 11501		RUSH - Two Day
Phone: 718-636-0800	Phone:	Phone: 631-754-5866		RUSH - Three Day
Contact: Paul Maxli	Contact:	Contact: Anna Maria Cuerrieri.		RUSH - Four Day ✓
E-mail: pmaxli@hydrotechenvironmental.com	E-mail:	E-mail: acuerrieri@hydrotechenvironmental.com	YOUR PO#: 52505	Standard (5-7 Day)

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Samples Collected by: (print your name above and sign below) Ruijie Xu

Matrix Codes: S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil ; Other

Samples From: New York ✓; New Jersey; Connecticut; Pennsylvania; Other

Report / EDD Type (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

YORK Reg. Comp.: Compared to the following Regulation(s): (please fill in) NYSDEC 1.1.1 TOGS - GQS

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
MW-1 (MS/MSD) - 20200731	GW	7/31/20 @9:30	PCE & TCE via EPA 8260B	9x 40ml vials
MW-2 - 20200731		@9:35		3x 40ml vials
MW-3 - 20200731		@9:40		↓
MW-4 - 20200731		@9:45		
Trip Blank - 20200731	DI Water	↓	↓	2x 40ml vials

Comments: Samples are collected via PDBs.

Preservation: (check all that apply) HCl ✓ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___

Special Instruction: Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
	7/31/20 @9:50		7/31/20 @9:50		12:36P 7/31
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by / Date/Time	Temp. Received at Lab
				7/31/20 @12:36	10.2 °C Degrees C

Attachment D

Copy of DUSR

ALPHA
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Geology
Hydrology
Remediation
Water Supply

August 18, 2020

Mr. Paul I. Matli, Ph.D., P.G.
Hydro Tech Environmental
77 Arkay Drive, Suite K
Hauppauge, NY 11787

Re: Data Validation Report
July 2020 Ground Water Sampling Event
11-28 31st Drive, LIC, NY

Dear Dr. Matli:

The data usability summary report and data validation summary are attached to this letter for the above referenced project. The data for York Analytical Laboratories, Inc. SDG 20G1207 were acceptable with some minor issues that are identified in the validation summary. There were no data that were qualified as rejected, unusable (R) in the data pack.

We have attached lists of data validation acronyms and data qualifiers to assist you in the interpretation of the reviews. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Hydro Tech Environmental, Corp.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA:dca
attachments

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ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report for
York Analytical Laboratories, Inc., SDG: 20G1207

4 Ground Water Samples and 1 Trip Blank
Collected July 31, 2020

Prepared by: Donald Anné
August 18, 2020

The data package contains the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appears legible and complete. The data pack contains the results of 4 ground water samples and 1 trip blank analyzed for volatiles only.

The overall performances of the analyses are acceptable. York Analytical Laboratories, Inc. did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The positive volatile results for tetrachloroethylene were qualified as "estimated" (J) in samples MW-2-20200731, MW-3-20200731, and MW-4-20200731 because the %D for tetrachloroethylene was above the allowable maximum in the associated continuing calibration.

- The positive volatile result for trichloroethylene was qualified as "estimated" (J) in sample MW-2-20200731 because the %D for tetrachloroethylene was above the allowable maximum in the associated continuing calibration.

All data are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 8260C Volatiles Data for
York Analytical Laboratories, Inc., SDG: 20G1207

4 Ground Water Samples and 1 Trip Blank
Collected July 31, 2020

Prepared by: Donald Anné
August 18, 2020

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for applicable compounds were above the method minimums, as required.

The average RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required.

The RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010), as required.

The %Ds for tetrachloroethylene and trichloroethylene were above the allowable maximum (25%) on 08-01-20 (QV620450.D). Positive results for tetrachloroethylene and trichloroethylene should be considered estimated (J) in associated samples.

Blanks: The analyses of method and trip blanks reported trichloroethylene and tetrachloroethylene as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for tetrachloroethylene and trichloroethylene were below the allowable maximum and percent recoveries were within QC limits for aqueous MS/MSD sample MW-1-20200731.

Laboratory Control Sample: The relative percent differences for trichloroethylene and tetrachloroethylene were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples BH00207-BS1, BH00207-BSD1, BH00260-BS1, and BH00260-BSD1.

Compound ID: Checked compounds and surrogates were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

FORM VII

CONTINUING CALIBRATION CHECK

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	20G1207
Client:	Hydro Tech Environmental (Brooklyn)	Project:	190055 11-28 31st Drive LIC
Instrument ID:	QVOA9	Calibration:	YF00023
Lab File ID:	QV620450.D	Calibration Date:	06/26/20 10:36
Sequence:	Y0H0532	Injection Date:	08/01/20
Lab Sample ID:	Y0H0532-CCV1	Injection Time:	02:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloroethylene	A	10.0	9.78	0.2267893	0.3985762	0.2	75.7	20 *
Trichloroethylene	A	10.0	8.87	0.238664	0.3529542	0.2	47.9	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Sample Information

Client Sample ID: MW-1-20200731 **York Sample ID:** 20G1207-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:30 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:16	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:16	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.2 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*111 %*	*79-122*

Sample Information

Client Sample ID: MW-2-20200731 **York Sample ID:** 20G1207-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:35 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**10.0**	J	ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:41	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
79-01-6	**Trichloroethylene**	**0.900**	J	ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 08:41	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*95.8 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*109 %*	*79-122*

Sample Information

Client Sample ID: MW-3-20200731 **York Sample ID:** 20G1207-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:40 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: MW-3-20200731 **York Sample ID:** 20G1207-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:40 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**0.540**	J	ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:06	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:06	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*102 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*95.8 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*113 %*	*79-122*

Sample Information

Client Sample ID: MW-4-20200731 **York Sample ID:** 20G1207-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 9:45 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**2.36**	J	ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:31	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	07/31/2020 11:08	08/01/2020 09:31	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.0 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*114 %*	*79-122*

Sample Information

Client Sample ID: Trip Blank-20200731 **York Sample ID:** 20G1207-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 12:00 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	08/05/2020 06:00	08/05/2020 15:25	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

Sample Information

Client Sample ID: **Trip Blank-20200731** **York Sample ID:** **20G1207-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20G1207	190055 11-28 31st Drive LIC	Water	July 31, 2020 12:00 am	07/31/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	08/05/2020 06:00	08/05/2020 15:25	TMP
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*103 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*96.1 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*112 %*	*79-122*

HydroTech Environmental
ENGINEERING AND GEOLOGY, DPC
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WWW.HYDROTECHENVIRONMENTAL.COM

January 13, 2021

Ms. Sondra Martinkat
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, NY 11101-5407

Re: Quarterly Status Report #5 - August 2020 to December 2020
11-28 31st Drive, Queens, NY
NYSBCP Site #C241159

Dear Ms. Martinkat:

This report is intended to serve as a Quarterly Status Report (QSR), covering the period from August 2020 through December 2020 for the above-referenced New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site number **C241159**. Due to delays associated with impacts of COVID-19, the quarterly sampling event was delayed until December 2020.

The scope of work presented in this report is based upon the NYSDEC-approved Site Management Plan (SMP) dated November 2018 and was performed on behalf of the property owner, GBT Real Estate, LLC. The scope of work is a continuation of the quarterly monitoring and sampling of five existing monitoring wells and the quarterly monitoring of the active Sub-Slab Depressurization System (SSDS) following the submission of a May 30, 2020 Periodic Review Report.

Groundwater Monitoring and Sampling

In accordance with the NYSDEC-approved SMP, the five monitoring wells MW-1 to MW-4 and MW-6 have been gauged on a quarterly basis for the presence of free product, and also to determine the depth to groundwater. The location of monitoring wells is shown in **Figure 1**. The groundwater monitoring covered in this report was performed during November 2020 instead of October 2020 and the groundwater sampling was subsequently performed during December 2020 due to delays associated to impacts of COVID-19.

The monitoring well gauging was performed on November 19, 2020 utilizing a Solinst 122 Oil/Water Interface Probe. During this event, access to monitoring well MW-6 continued to be obstructed by a locked construction fence erected around a vacant property located to the north of the Site. None of the other four gauged monitoring wells were found to contain free product. The depth to water during this monitoring event ranged from 9.36 feet in MW-4 to 12 feet in MW-1. This depth to water in these wells represents an increase of 0.24 feet in MW-1 and MW-4 and an decrease by 0.025 feet in MW-2 and MW-3 since the last event during July 2020.

Table 1 provides the groundwater monitoring and elevation data for the period covered by this report and historical monitoring data. **Attachment A** provides the well monitoring sheet.

Utilizing historical monitoring well casing elevations and the depth to water, the groundwater elevation in the wells were then determined. The groundwater elevations indicate the groundwater flow direction beneath the Site continues to be toward the southwest, consistent with the historic flow directions mapped for this Site. **Figure 2** provides a contour map of groundwater flow direction during November 2020.

Passive Diffusion Bag (PDB) samplers for the groundwater sampling were then placed inside each of the four the monitoring wells MW-1 to MW-4 following well gauging. The PDBs were left inside the wells for the duration of 14 days and were recovered on December 3, 2020.

The groundwater samples were placed in laboratory-supplied containers and secured in a cooler filled with ice and maintained at a maximum 4 degrees Celsius. The samples were transmitted under proper chain of custody procedures to a State-certified (ELAP) laboratory and analyzed for tetrachloroethylene (PCE) and trichloroethylene (TCE) in accordance with EPA Method 8260.

Investigatory-derived waste (IDW) consisting of excess liquid generated during the sampling from of PDBs were placed into a 55-gallon drum. The drum was disposed of in accordance with DER-10 Technical Guidance for Site Investigation and Remediation (May 2010). **Attachment B** provides a copy of the final disposal manifest.

Laboratory analytical results for PCE and TCE in groundwater samples are provided in **Table 2**. **Table 2** also provides the PCE and TCE concentrations over time and a comparison to NYSDEC 6NYCRR Part 703.5 Class groundwater Quality Standards (GQS). **Attachment C** provides a copy of the laboratory analytical report.

As **Table 2** indicates, PCE was detected in MW-2, MW-3 and MW-4. PCE concentration in MW-4 (7.16 µg/L) marginally exceeds its GQS of 5 µg/L and it represents a slight increase from 2.36 µg/L detected during the last sampling event. PCE concentration detected in MW-2 was below its GQS for the first time since February 2018 and it represents a decrease by 83% since July 2020. PCE has continued to be undetected in MW-1 and has occurred in MW-3 at concentrations below GQS since approximately July 2018. TCE did not occur in any of the analyzed groundwater samples collected at the Site.

These findings in this report are consistent with the historic groundwater sampling performed at the Site, which reflects a continued reduction in PCE and TCE since 2018 as a result of natural degradation.

The groundwater data was submitted electronically to the NYSDEC through the Environmental Information Management System using the NYSDEC standardized Electronic Data Deliverable (EDD) format. A Data Usability Summary Report (DUSR) was also prepared for the analytical

results by an independent data reviewer, Mr. Donald Anne of Alpha Geoscience in Clifton Park, NY. The DUSR indicates the data is acceptable and is considered usable. A copy of the DUSR is provided in **Attachment D**.

Active Sub-Slab Depressurization System

The active SSDS has been monitored on a quarterly basis. For the period covered in this report, the monitoring of SSDS was performed alongside the gauging of monitoring wells on November 19, 2020. During this monitoring event, a HydroTech Qualified Environmental Professional inspected the system for proper functioning in accordance with the SSDS Operation and Maintenance Plan in the SMP. **Figure 3** provides the location of the vacuum monitoring points associated with the SSDS.

Table 3 provides the SSDS Monitoring Data collected during November 2020. The SSDS vacuum observed at the inline Dwyer Magnehelic dial type vacuum gauge continues to record -0.74 inches H_2O. The effluent of the SSDS was monitored with a Photoionization Detector (PID); no organic vapors were detected. The radius of influence of the SSDS was monitored by measuring the vacuum at the three permanent sub-slab vacuum monitoring points VMP-1 to VMP-3.

The vacuum at the vacuum monitoring points VMP-1 to VMP-3 was measured using Model 8710 DP-Calc™ Micromanometer, which measures differential pressure in inches H_2O. Differential pressure readings obtained at the three vacuum monitoring points beneath the building slab indicate a vacuum of -0.03 inches H_2O was measured in VMP-1 and -0.04 inches H_2O was measured in VMP-2 and VMP-3. This level of sub-slab negative pressure remains consistent with historic monitoring data reported since November 2019 and reflects a satisfactory sub-slab vacuum communication for soil vapor intrusion mitigation beneath the building.

Recommendations

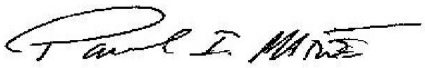
- PCE and TCE concentrations in groundwater have decreased by 92% to 100% to asymptotically low to undetected levels since the groundwater remediation by In-situ chemical oxidation (ISCO) injections during May 2018. Since March 2020, PCE has occurred in three on-site monitoring wells MW-2, MW-3 and MW-4 at a maximum concentration not exceeding 10 µg/L, while TCE occurred only in MW-2 at a maximum concentration not exceeding 0.90 µg/L until July 2020 and is currently undetected in this well.

    - Due to this significant decrease in PCE and TCE concentrations, HydroTech recommends the termination of the SMP program pertaining to the quarterly groundwater monitoring and sampling at this Site.
    - The monitoring wells MW-1 to MW-6 associated with this Site should also be properly decommissioned in accordance with the New York State Department of Environmental Conservation (NYSDEC) CP-43: Groundwater Monitoring Well Decommissioning Policy (November 2009) (CP-43).

- Since the SSDS has been demonstrated to be effectively operating at the Site after it was started-up during September 2019, HydroTech recommends the modification of the SMP program pertaining to the quarterly SSDS monitoring and change it to annual monitoring. The next annual SSDS monitoring event shall be scheduled in November 2021.

Should you have any questions, please feel free to contact our office at your convenience.

Very Truly Yours,
HydroTech Environmental Engineering and Geology, DPC

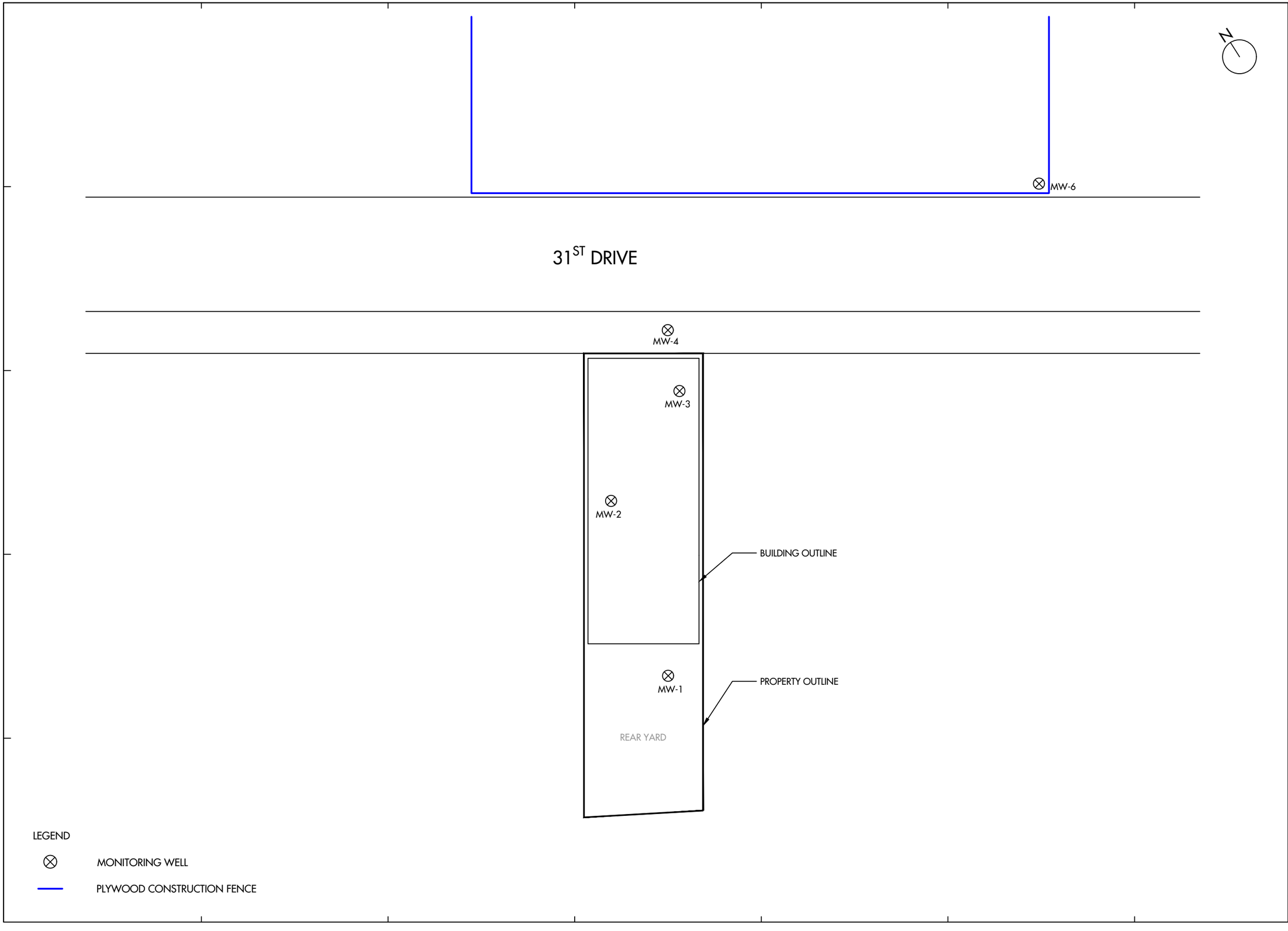


Paul I. Matli, PhD, PG
Senior Project Manager

PIM/as
Enc.

cc: Mr. George Man – GBT Real Estate LLC (by email) w/ Enc.
HydroTech file 190055 w/ Enc.

Figures



DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

77 ARKAY DRIVE, SUITE K
HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

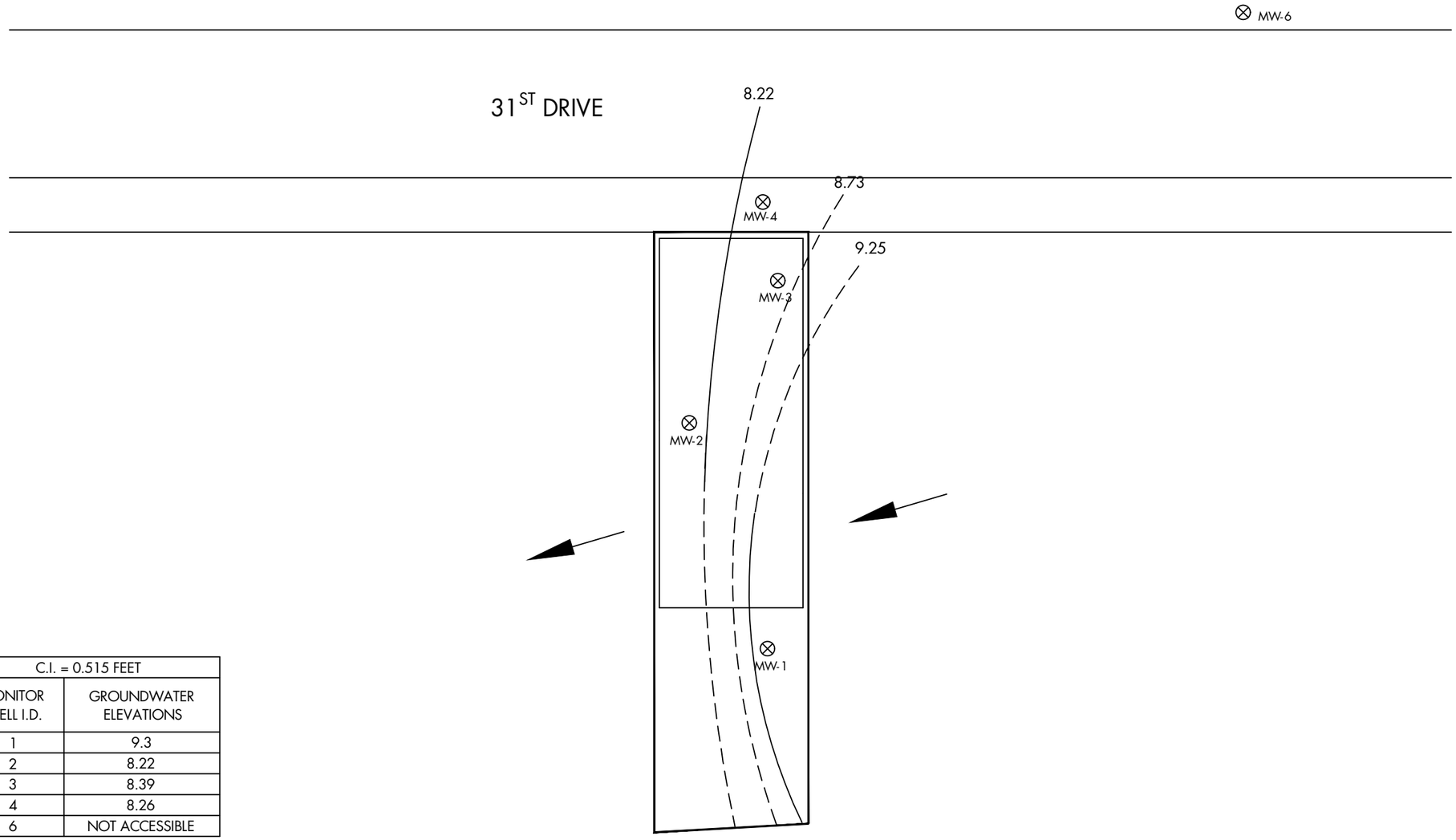
PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 1: SITE MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.



C.I. = 0.515 FEET	
MONITOR WELL I.D.	GROUNDWATER ELEVATIONS
1	9.3
2	8.22
3	8.39
4	8.26
6	NOT ACCESSIBLE

LEGEND

⊗ MONITORING WELL

NOTE:
DASHED LINE WHERE CONTOUR IS INFERRED

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

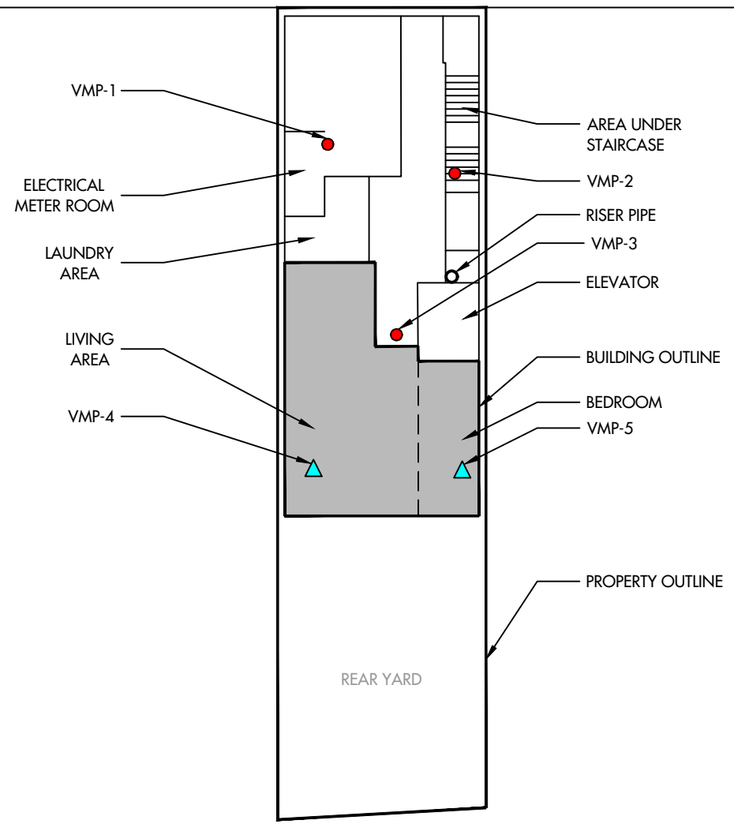
FIGURE 2: GROUNDWATER FLOW CONTOUR MAP - NOVEMBER 2020

PROJECT NO.	DATE
190055	1/11/21
DRAWN BY G.T.	REVIEWED BY P.M.
SCALE (11X17) NOT TO SCALE	APPROVED BY T.K.

DATE	DESCRIPTION	CHK

SEAL & SIGNATURE

31ST DRIVE



LEGEND

- PERMANENT VACUUM MONITORING POINTS
- TEMPORARY VACUUM MONITORING POINTS (DECOMMISSIONED AFTER SSDS STARTUP)
- RESIDENTIAL UNIT

HYDROTECH ENVIRONMENTAL ENGINEERING AND GEOLOGY, DPC

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HAUPPAUGE, NY 11788

15 OCEAN AVENUE, SUITE 2B BROOKLYN, NY 11225

TEL: (631) 462-5866

FAX: (631) 462-5877

BASE DRAWING PREPARED BY

PROJECT NAME AND ADDRESS

11-28 31ST DRIVE
QUEENS, NY 11106

PROJECT FIGURE

FIGURE 3: VACUUM MONITORING POINTS MAP

PROJECT NO.	DATE
190055	11/14/19
DRAWN BY: A.R.	REVIEWED BY: P.M.
SCALE (11X17): NOT TO SCALE	APPROVED BY: T.K.

Tables

Table 1

Groundwater Monitoring Results Over Time

11-28 31st Drive, Queens, NY

Well ID	Casing Elevation	August 2019			November 2019			March 2020			July 2020			November 2020		
		DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation	DTP	DTW	Water Table Elevation
MW-1	12.7	ND	11.08	8.38	ND	11.23	8.53	ND	11.4	8.7	ND	11.55	8.85	ND	12	9.3
MW-2	12.7	ND	11.01	8.31	ND	11.15	8.45	ND	10.78	8.08	ND	10.95	8.25	ND	10.92	8.22
MW-3	11.51	ND	9.96	8.45	ND	10.1	8.59	ND	11.23	9.72	ND	9.92	8.41	ND	9.9	8.39
MW-4	11.10	ND	9.44	8.34	ND	9.60	8.50	ND	9.71	8.61	ND	9.32	8.22	ND	9.36	8.26
MW-6	9.47	ND	9.97	10.5	ND	10.15	10.68	ND	NA	NA	ND	NA	NA	ND	NA	NA

All values reported in feet.

DTW…Depth to Water from top of casing .

DTP…Depth to Product from top of casing

ND…None Detected

NA…Not Accessible

Water Table elevations adjusted by a site benchmarck elevation of 10 feet

Table 2
Groundwater Samples Analytical Results for PCE and TCE _ Over Time
11-28 31st Drive, Queens, NY

Sampling Date	MW-1		MW-2		MW-3		MW-4		MW-6		Trip Blank	
	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE	PCE	TCE
1/13/2015	0.2 U	0.2	**3.03**	0.2 U	**20.83**	**0.52**	**3,799.8**	**17**	**85.83**	**8.90**	0.2 U	0.2 U
2/19/2018	**0.28 J**	0.2 U	**25**	**0.4 J**	**4.10**	0.2 U	**70**	**0.66**	**75**	**15**	0.2 U	0.2 U
7/24/2018	0.2 U	0.2 U	**20**	**0.63**	**1.20**	0.2 U	**13**	**0.43 J**	**43**	**0.46 J**	0.2 U	0.2 U
11/20/2018	0.2 U	0.2 U	**11.60**	**0.68**	0.22	0.2 U	**2.28**	0.2 U	**28.4**	**0.48 J**	0.2 U	0.2 U
8/30/2019	0.2 U	0.2 U	**20.1**	**1.21**	**0.92**	0.2 U	**2.87**	0.2 U	**49.6**	**0.42 DJ**	0.2 U	0.2 U
12/10/2019	0.2 U	0.2 U	**21.90**	**1.35**	**1.27**	0.2 U	**1.75**	0.2 U	**NA**		0.2 U	0.2 U
3/17/2020	0.2 U	0.2 U	**6.77**	**0.52**	**1.50**	0.2 U	**6.70**	0.2 U	**NA**		0.2 U	0.2 U
7/31/2020	0.2 U	0.2 U	**10**	**0.90**	**0.54**	0.2 U	**2.36**	0.2 U	**NA**		0.2 U	0.2 U
12/3/2020	0.2 U	0.2 U	**1.70**	0.2 U	**1.28**	0.2 U	**7.16**	0.2 U	**NA**		0.2 U	0.2 U

NOTES:
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte
Shaded concentration exceeds GQS of PCE or TCE of 5 µg/L
GQS=NYSDEC TOGS Standards and Guidance Values - GA
PCE=Tetrachloroethylene
TCE=Trichloroethylene
1/13/2015=Sampling performed during the Remedial Investigation
2/19/2018=Baseline sampling performed prior to ISCO Injection Program
7/24/2018= Sampling performed 2 months post-ISCO injections
11/20/2018=Quaretrly sampling performed 5 months post-ISCO injections
8/30/2019 to 12/12/2020=Quartely sampling performed **30 months** post-ISCO Injections to-date
NA= Not sampled due to limited access

Attachments

Attachment A
Well Monitoring Sheet

WELL MONITORING LOG SHEET

Project Name	11-28 31st Drive	Date	11-19-2020
Client	Mr. George Man	Instrument	
Site Location	11-28 31st Drive, LIC NY	BCP Site #	# C241159
Monitoring Schedule	Monthly : _____	Quartely : _x_____	Bi-Annually :_____

Legend

S = Snow D = Dry G = Gone C = Can't Locate NA = Not Accessible
DTW = Depth to Water DTP = Depth to Product PT = Product Thickness ND = None Detected

Monitoring Well	D.T.P.	D.T.W.
MW-1	ND	12
MW-2	ND	10.92
MW-3	ND	9.9
MW-4	ND	9.36
MW-6	NA	NA

Notes: All measurements in feet, below the nortnern top of well casing
Notes:
All measurements are reported in feet

Reported By:

Paul I. Matli

Attachment B
Drum Disposal Manifest

4220599 12/24

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	(267) 406-0085	42819

GENERATOR

5. Generator's Name and Mailing Address
GBT Real Estate LLC
11-28 31st Drive
Long Island City NY 11106
Attn: George Man
Generator's Phone: 371 416-2002

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
Innovative Recycling Technologies, Inc.
U.S. EPA ID Number: NYR000134940

7. Transporter 2 Company Name
Republic Environmental Systems (Trans Group) LLC
U.S. EPA ID Number: PAD982661881

8. Designated Facility Name and Site Address
Republic Environmental Systems (PA), LLC
2869 Sandstone Drive
Hatfield PA 19440
Facility's Phone: 215 822-8995
U.S. EPA ID Number: PAD085690592

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Hazardous Purge Water Non-DOT Regulated Material	01	DM	200	P
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
WL1995775
Doc# 708694-20

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Hanibal Tayeh
Signature:
Month 12 Day 14 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: James Urch
Signature:
Month 12 Day 14 Year 20
Transporter 2 Printed/Typed Name: Melissa Bell
Signature:
Month 12 Day 18 Year 2020

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
17b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: MICHAEL DIMAIO
Signature:
Month 12 Day 24 Year 20

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

Stericycle

CERTIFICATE OF TREATMENT, RECYCLING, AND/OR DISPOSAL

Generator: 615070 - GBT REAL ESTATE, LLC
11-28 31ST DRIVE
LONG ISLAND CITY NY, 11106

EPA ID: CESQG

Facility: REPUBLIC ENV SYS (PA) LLC
2869 SANDSTONE DRIVE
HATFIELD PA, 19440

EPA ID: PAD085690592

Manifest #: 42819
Waste Receipt #: HAT-9501W
Date Received: 12/24/2020

Line	Profile	Material Description	Treatment/ Disposal Description
1	996775-01	NON-REGULATED MATERIAL (PURGE WATER)	H141 STORAGE, BULKING, AND/OR TRANSFER OFF-SITE - NO TREATMENT/RECOVERY/BLENDING

Name: MARCIA THOMAS

Signature : Marcia Thomas

Title : Logistic Coordinator

Attachment C

Laboratory Analytical Report

Technical Report

prepared for:

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Report Date: 12/08/2020
Client Project ID: 190055 11-28 31 Drive Queens NY
York Project (SDG) No.: 20L0252

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/08/2020
Client Project ID: 190055 11-28 31 Drive Queens NY
York Project (SDG) No.: 20L0252

Hydro Tech Environmental (Brooklyn)
15 Ocean Avenue, Suite 2B
Brooklyn NY, 11225
Attention: Paul Matli

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 03, 2020 and listed below. The project was identified as your project: **190055 11-28 31 Drive Queens NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

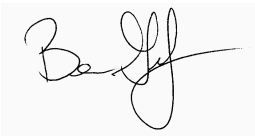
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20L0252-01	MW-1_20201203	Water	12/03/2020	12/03/2020
20L0252-02	MW-2_20201203	Water	12/03/2020	12/03/2020
20L0252-03	MW-3_20201203	Water	12/03/2020	12/03/2020
20L0252-04	MW-4_20201203	Water	12/03/2020	12/03/2020
20L0252-05	Trip Blank_20201203	Water	12/03/2020	12/03/2020

General Notes for York Project (SDG) No.: 20L0252

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 12/08/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW-1_20201203 **York Sample ID:** 20L0252-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:00 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:59	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:59	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*106 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*89.5 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*83.1 %*	*79-122*

Sample Information

Client Sample ID: MW-2_20201203 **York Sample ID:** 20L0252-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:10 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**1.70**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.4 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.4 %*	*79-122*

Sample Information

Client Sample ID: MW-3_20201203 **York Sample ID:** 20L0252-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:20 am	12/03/2020

Sample Information

Client Sample ID: MW-3_20201203 **York Sample ID:** 20L0252-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:20 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**1.28**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:51	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:51	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.7 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.0 %*	*79-122*

Sample Information

Client Sample ID: MW-4_20201203 **York Sample ID:** 20L0252-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:15 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**7.16**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 21:18	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	**Trichloroethylene**	**0.270**	QL-02, J	ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 21:18	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*108 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*89.9 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*83.8 %*	*79-122*

Sample Information

Client Sample ID: Trip Blank_20201203 **York Sample ID:** 20L0252-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 12:00 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **Trip Blank_20201203** **York Sample ID:** **20L0252-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 12:00 am	12/03/2020

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:33	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:33	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.1 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.7 %*	*79-122*

Analytical Batch Summary

Batch ID: BL00220 **Preparation Method:** EPA 5030B **Prepared By:** TMP

YORK Sample ID	Client Sample ID	Preparation Date
20L0252-01	MW-1_20201203	12/03/20
20L0252-02	MW-2_20201203	12/03/20
20L0252-03	MW-3_20201203	12/03/20
20L0252-04	MW-4_20201203	12/03/20
20L0252-05	Trip Blank_20201203	12/03/20
BL00220-BLK1	Blank	12/03/20
BL00220-BS1	LCS	12/03/20
BL00220-MS1	Matrix Spike	12/03/20
BL00220-MSD1	Matrix Spike Dup	12/03/20

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL00220 - EPA 5030B											
Blank (BL00220-BLK1)								Prepared & Analyzed: 12/03/2020			
Tetrachloroethylene	ND	0.500	ug/L								
Trichloroethylene	ND	0.500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.8*		*"*	*10.0*		*108*	*69-130*				
Surrogate: SURR: Toluene-d8	*8.95*		*"*	*10.0*		*89.5*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*8.54*		*"*	*10.0*		*85.4*	*79-122*				
LCS (BL00220-BS1)								Prepared & Analyzed: 12/03/2020			
Tetrachloroethylene	8.56		ug/L	10.0		85.6	82-131				
Trichloroethylene	8.17		"	10.0		81.7	82-128	Low Bias			
Surrogate: SURR: 1,2-Dichloroethane-d4	*9.67*		*"*	*10.0*		*96.7*	*69-130*				
Surrogate: SURR: Toluene-d8	*9.08*		*"*	*10.0*		*90.8*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*8.99*		*"*	*10.0*		*89.9*	*79-122*				
Matrix Spike (BL00220-MS1)	*Source sample: 20L0252-01 (MW-1_20201203)							Prepared: 12/03/2020 Analyzed: 12/04/2020			
Tetrachloroethylene	13.1		ug/L	10.0	0.00	131	64-139				
Trichloroethylene	11.3		"	10.0	0.00	113	53-145				
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.4*		*"*	*10.0*		*104*	*69-130*				
Surrogate: SURR: Toluene-d8	*8.93*		*"*	*10.0*		*89.3*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*8.45*		*"*	*10.0*		*84.5*	*79-122*				
Matrix Spike Dup (BL00220-MSD1)	*Source sample: 20L0252-01 (MW-1_20201203)							Prepared: 12/03/2020 Analyzed: 12/04/2020			
Tetrachloroethylene	13.3		ug/L	10.0	0.00	133	64-139		1.74	30	
Trichloroethylene	11.3		"	10.0	0.00	113	53-145		0.177	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*10.8*		*"*	*10.0*		*108*	*69-130*				
Surrogate: SURR: Toluene-d8	*8.70*		*"*	*10.0*		*87.0*	*81-117*				
Surrogate: SURR: p-Bromofluorobenzene	*8.60*		*"*	*10.0*		*86.0*	*79-122*				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
20L0252-01	MW-1_20201203	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20L0252-02	MW-2_20201203	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20L0252-03	MW-3_20201203	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20L0252-04	MW-4_20201203	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
20L0252-05	Trip Blank_20201203	40mL Clear Vial, Sodium Bisulfate; Cool 4°C

Sample and Data Qualifiers Relating to This Work Order

QL-02 This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20L0752

Page 1 of 1

YOUR Information	Report To:	Invoice To:	YOUR Project Number	Turn-Around Time
Company: Hydrotech	Company: SAMC	Company: SAMC	190055	RUSH - Next Day
Address: 77 Arkay Dr. Ste K Hauppauge NY	Address:	Address:	YOUR Project Name: 11-28 31 Drive Queens NY	RUSH - Two Day
Phone: 718 628 0800	Phone:	Phone:		RUSH - Three Day
Contact: Paul Mathi	Contact:	Contact:		RUSH - Four Day ✓
E-mail:	E-mail:	E-mail:	YOUR PO#: 52547	Standard (5-7 Day)

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Paul E Mathi
Samples Collected by: (print your name above and sign below)
Paul E Mathi

Matrix Codes
S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil ⋮ Other

Samples From
New York ✓
New Jersey
Connecticut
Pennsylvania
Other

Report / EDD Type (circle selections)
Summary Report; CT RCP; Standard Excel EDD
QA Report; CT RCP DQA/DUE; EQuIS (Standard)
NY ASP A Package; NJDEP Reduced Deliverables; NYSDEC EQuIS
NY ASP B Package; NJDKQP; NJDEP SRP HazSite; Other:

YORK Reg. Comp.
Compared to the following Regulation(s): (please fill in)
NYSDEC DQs.

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
MW-1 (MS/MSD) - 20201203	GW	12/3/20 - 1010	PCE and TCE via EPA 8260B	9 x 40 ml VOA
MW-2 - 20201203		12/3/20 1013		3 x 40 ml VOA
MW-3 - 20201203		12/3/20 1020		
MW-4 - 20201203		12/3/20 1015		2 x 40 ml VOA
Trip Blank - 20201203	DI	12/3/20		

Comments:

Preservation: (check all that apply)
HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

Special Instruction
Field Filtered ___
Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Paul E Mathi	12/3/20 1013		12/3/20 1012		12/3/20 1015
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
~~J Hunter~~ / York 13.2°C From Field Not on ice	12/3/20 10:55am				
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by / Date/Time	Temp. Received at Lab
				~~J Hunter~~ / York 12/3/20 10:55am	13.2°C Degrees C

Attachment D

Copy of DUSR

ALPHA
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Geology
Hydrology
Remediation
Water Supply

January 5, 2021

Mr. Paul I. Matli, Ph.D., P.G.
Hydro Tech Environmental
77 Arkay Drive, Suite K
Hauppauge, NY 11787

Re: Data Validation Report
December 2020 Ground Water Sampling Event
11-28 31st Drive, LIC, NY

Dear Dr. Matli:

The data usability summary report and data validation summary are attached to this letter for the above referenced project. The data for York Analytical Laboratories, Inc. SDG 20L0252 were acceptable with some minor issues that are identified in the validation summary. There were no data that were qualified as rejected, unusable (R) in the data pack.

We have attached lists of data validation acronyms and data qualifiers to assist you in the interpretation of the reviews. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Hydro Tech Environmental, Corp.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA:dca
attachments

z:\projects\2015\15600 - 15620\15604-11-28 31 drive\2020\11-28 31 drive-204.ltr.docx

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report for
York Analytical Laboratories, Inc., SDG: 20L0252

4 Ground Water Samples and 1 Trip Blank
Collected December 3, 2020

Prepared by: Dinah Dixon
Reviewed by: Donald Anné

January 5, 2021

The data package contains the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appears legible and complete. The data pack contains the results of 4 ground water samples and 1 trip blank analyzed for volatiles only.

The overall performances of the analyses are acceptable. York Analytical Laboratories, Inc. did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" volatile results for trichloroethylene were qualified as "estimated" (UJ) in samples MW-1_20201203, MW-2_20201203, MW-3_20201203, and Trip Blank_20201203 because the percent recovery for trichloroethylene was below QC limits, but no below 30% in the associated aqueous LCS.

- The positive volatile result for trichloroethylene was qualified as "estimated, biased low" (J-) in sample MW-4_20201203, because the percent recovery for trichloroethylene was below the lower QC limit in the associated LCS.

All data are considered usable, with estimated (UJ or J-) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

z:\projects\2015\15600 - 15620\15604-11-28 31 drive\2020\20l0252.dus.docx

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 8260C Volatiles Data for
York Analytical Laboratories, Inc., SDG: 20L0252

4 Ground Water Samples and 1 Trip Blank
Collected December 3, 2020

Prepared by: Dinah Dixon
Reviewed by: Donald Anné
January 5, 2021

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for applicable compounds were above the method minimums, as required.

The average RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required.

The RRF for trichloroethylene and tetrachloroethylene were above the allowable minimum (0.010 and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analyses of method and trip blanks reported trichloroethylene and tetrachloroethylene as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for tetrachloroethylene and trichloroethylene were below the allowable maximum and percent recoveries were within QC limits for aqueous MS/MSD sample MW-1_20201203.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Laboratory Control Sample: The percent recovery for trichloroethylene was below QC limits, but not below 30% for aqueous sample BL00220-BS1. Samples reporting positive results for trichloroethylene should be considered as estimated, biased low (J-) and not detected results should be considered estimated (UJ) in associated aqueous samples.

Compound ID: Checked compounds and surrogates were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	20L0252
Client:	Hydro Tech Environmental (Brooklyn)	Project:	190055 11-28 31 Drive Queens NY
Matrix:	Water		
Batch:	BL00220	Laboratory ID:	BL00220-BS1
Preparation:	EPA 5030B	Initial/Final:	25 mL / 25 mL

COMPOUND	SPIKE ADDED ppb	LCS CONCENTRATION ppb	LCS % REC. #	QC LIMITS REC.
Tetrachloroethylene	10.0	8.56	85.6	82 - 131
Trichloroethylene	10.0	8.17	81.7 *	82 - 128

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Sample Information

Client Sample ID: MW-1_20201203 **York Sample ID:** 20L0252-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:00 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:59	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND	UJ	ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 19:59	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*106 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*89.5 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*83.1 %*	*79-122*

Sample Information

Client Sample ID: MW-2_20201203 **York Sample ID:** 20L0252-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:10 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**1.70**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND	UJ	ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:25	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.4 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.4 %*	*79-122*

Sample Information

Client Sample ID: MW-3_20201203 **York Sample ID:** 20L0252-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:20 am	12/03/2020

Sample Information

Client Sample ID: MW-3_20201203 **York Sample ID:** 20L0252-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:20 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**1.28**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:51	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND	UJ	ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 20:51	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.7 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.0 %*	*79-122*

Sample Information

Client Sample ID: MW-4_20201203 **York Sample ID:** 20L0252-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 10:15 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	**Tetrachloroethylene**	**7.16**		ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 21:18	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	**Trichloroethylene**	**0.270**	J- QL-02, J	ug/L	0.200	0.500	1	EPA 8260C	12/03/2020 13:47	12/03/2020 21:18	TMP
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*108 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*89.9 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*83.8 %*	*79-122*

Sample Information

Client Sample ID: Trip Blank_20201203 **York Sample ID:** 20L0252-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 12:00 am	12/03/2020

Volatile Organics, 8260 - TCE/PCE

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: **Trip Blank_20201203** **York Sample ID:** **20L0252-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20L0252	190055 11-28 31 Drive Queens NY	Water	December 3, 2020 12:00 am	12/03/2020

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
127-18-4	Tetrachloroethylene	ND		ug/L	0.200	0.500	1	EPA 8260C Certifications:	12/03/2020 13:47	12/03/2020 19:33 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	TMP
79-01-6	Trichloroethylene	ND	UJ	ug/L	0.200	0.500	1	EPA 8260C Certifications:	12/03/2020 13:47	12/03/2020 19:33 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	TMP

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*107 %*	*69-130*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*90.1 %*	*81-117*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*82.7 %*	*79-122*

APPENDIX 3
QUARTERLY SSD SYSTEM INSPECTION CHECKLISTS

Inspector's name and title	Site Address	Date
Donovan Edwards	11-28 31 Drive, LIC, NY	7/15/2021

Remedy Description of Cover Systems

1. Review of the current remedy

Identify the current remedy:

☑ SSDS		

How many SSDS Systems are used ? One

2. Review of the current remedy goals

What schedule has been established for monitoring of SSDS ? Quarterly

B. Summary of Remedy Performance Assessment

1. Evaluate remedy effectiveness:

Based on information collected since the last O&M review, do monitoring data indicate that the system is failing or could eventually fail to meet remedy goals?	☑ Yes ☐ No
Since the last O&M review, have monitoring data exhibited trends indicative of a new or renewed release?	☐ Yes ☑ No
Since the last O&M review, have changes in landuse been suggested and or implemented that have the potential to reduce the protectiveness of the SSDS remedy?	☐ Yes ☑ No
Since the last O&M review, have contaminants been identified in new locations or at higher concentrations where they pose or have the potential to pose unacceptable risks to receptors?	☐ Yes ☑ No
If you answered yes to any of the above questions, did the information suggest the need for immediate action or is the condition being monitored to evaluate the need for future action? Use this space to comment. What actions, if any, have been taken and/or are planned in response to the new information?	☐ Immediate Action ☐ Monitor for future ☑ N/A
Based on your answers to the above questions, is there reason to evaluate the need for a contingent remedy at this time? If yes, use this space to comment.	☐ Yes ☑ No

SSDS

PID at effluent	0.1 PPM
Vacuum guage -	-0.74 Inch H20
Vacuum Reading at the 3 vacuum monitorinbg points : VMP-1= -0.03 ; VMP-2= -0.04 ; VMP-3= -0.06	Inch H20
Fan Condition	☑ Function ☐ Damage
Alarm Condition	☑ Function ☐ Damage
Was the Subslab Depressurization System (SSDS) operating upon arrival? If "No," explain below why the system was not running, efforts taken to restart the SSDS and if the system was operational when leaving. If successful in making the SSDS operational, complete the remainder of the checklist.	☑ Yes

	□ No
Were all sub-slab vacuum readings less than of equal to - 0.01 inches of water? If "Yes," the SSDS is deemed still effective and the vacuum readings taken during this inspection are now the new baseline readings. If "No," system must be adjusted/amended and the SSDS re-commissioned. Discuss adjustments and amendments below:	☒ Yes □ No
List below all pertinent observations and actions taken during this Inspection: i.e., sagging/damaged pipes, construction changes to building that may affect the system, pipe leaks that may need smoke test, is building still vacant, has occupancy zoning changed (i.e. commercial to residential), are non-SSDS engineered systems still functioning as designed etc. Add additional pages as needed.	
Did you observe breaking or cracks in the slab cover	□ Yes ☒ No
If yes describe the level of alteration needed for repairs and remedies?	

Inspector's name and title	Site Address	Date
Domo Vom Edward	11-28 31 Drive, LIC, NY	11 - 19 - 2021

Remedy Description of Cover Systems

1. Review of the current remedy

Identify the current remedy:

☒SSDS		

How many SSDS Systems are used ? One

2. Review of the current remedy goals

What schedule has been established for monitoring of SSDS ?

quarterly

B. Summary of Remedy Performance Assessment

1. Evaluate remedy effectiveness:

Based on information collected since the last O&M review, do monitoring data indicate that the system is failing or could eventually fail to meet remedy goals?	☒Yes ☐ No
Since the last O&M review, have monitoring data exhibited trends indicative of a new or renewed release?	☐ Yes ☒No
Since the last O&M review, have changes in landuse been suggested and or implemented that have the potential to reduce the protectiveness of the SSDS remedy?	☐ Yes ☒No
Since the last O&M review, have contaminants been identified in new locations or at higher concentrations where they pose or have the potential to pose unacceptable risks to receptors?	☐ Yes ☒No
If you answered yes to any of the above questions, did the information suggest the need for immediate action or is the condition being monitored to evaluate the need for future action? Use this space to comment. What actions, if any, have been taken and/or are planned in response to the new information?	☐ Immediate Action ☐ Monitor for future ☒N/A
Based on your answers to the above questions, is there reason to evaluate the need for a contingent remedy at this time? If yes, use this space to comment.	☐ Yes ☒No

SSDS

PID at effluent	0.1 PPM
Vacuum guage -	-0.75 Inch H20
Vacuum Reading at the 8 vacuum monitorinbg points : VMP-1= -0.03 ; VMP-2= -0.04 ; VMP-3= -0.06	Inch H20
Fan Condition	☒Function ☐ Damage
Alarm Condition	☒Function ☐ Damage
Was the Subslab Depressurization System (SSDS) operating upon arrival? If "No," explain below why the system was not running, efforts taken to restart the SSDS and if the system was operational when leaving. If successful in making the SSDS operational, complete the remainder of the checklist.	☒Yes

	□ No
Were all sub-slab vacuum readings less than of equal to - 0.01 inches of water? If "Yes," the SSDS is deemed still effective and the vacuum readings taken during this inspection are now the new baseline readings. If "No," system must be adjusted/amended and the SSDS re-commissioned. Discuss adjustments and amendments below:	□ Yes □ No
List below all pertinent observations and actions taken during this Inspection: i.e., sagging/damaged pipes, construction changes to building that may affect the system, pipe leaks that may need smoke test, is building still vacant, has occupancy zoning changed (i.e. commercial to residential), are non-SSDS engineered systems still functioning as designed etc. Add additional pages as needed.	
Did you observe breaking or cracks in the slab cover	□ Yes □ No
If yes describe the level of alteration needed for repairs and remedies?	

Inspector's name and title	Site Address	Date
Donovan Edwards	11-28 31 Drive, LIC, NY	4-16-21

Remedy Description of Cover Systems

1. Review of the current remedy

Identify the current remedy:

☑ SSDS		

How many SSDS Systems are used ? One (1)

2. Review of the current remedy goals

What schedule has been established for monitoring of SSDS ? quarterly

B. Summary of Remedy Performance Assessment

1. Evaluate remedy effectiveness:

Based on information collected since the last O&M review, do monitoring data indicate that the system is failing or could eventually fail to meet remedy goals?	☑ Yes ☐ No
Since the last O&M review, have monitoring data exhibited trends indicative of a new or renewed release?	☐ Yes ☑ No
Since the last O&M review, have changes in landuse been suggested and or implemented that have the potential to reduce the protectiveness of the SSDS remedy?	☐ Yes ☑ No
Since the last O&M review, have contaminants been identified in new locations or at higher concentrations where they pose or have the potential to pose unacceptable risks to receptors?	☐ Yes ☑ No
If you answered yes to any of the above questions, did the information suggest the need for immediate action or is the condition being monitored to evaluate the need for future action? Use this space to comment. What actions, if any, have been taken and/or are planned in response to the new information?	☐ Immediate Action ☐ Monitor for future ☑ N/A
Based on your answers to the above questions, is there reason to evaluate the need for a contingent remedy at this time? If yes, use this space to comment.	☐ Yes ☐ No

SSDS

PID at effluent	0.0 PPM
Vacuum guage -	-0.74 Inch H20
Vacuum Reading at the 3 vacuum monitorinbg points : VMP-1= ; VMP-2= ; VMP-3= -003 -0.03 -0.04	Inch H20
Fan Condition	☑ Function ☐ Damage
Alarm Condition	☐ Function ☐ Damage
Was the Subslab Depressurization System (SSDS) operating upon arrival? If "No," explain below why the system was not running, efforts taken to restart the SSDS and if the system was operational when leaving. If successful in making the SSDS operational, complete the remainder of the checklist.	☑ Yes

	□ No
Were all sub-slab vacuum readings less than of equal to - 0.01 inches of water? If "Yes," the SSDS is deemed still effective and the vacuum readings taken during this inspection are now the new baseline readings. If "No," system must be adjusted/amended and the SSDS re-commissioned. Discuss adjustments and amendments below:	✓ □ Yes □ No
List below all pertinent observations and actions taken during this Inspection: i.e., sagging/damaged pipes, construction changes to building that may affect the system, pipe leaks that may need smoke test, is building still vacant, has occupancy zoning changed (i.e. commercial to residential), are non-SSDS engineered systems still functioning as designed etc. Add additional pages as needed.	
Did you observe breaking or cracks in the slab cover	□ Yes ✓ ~~□ No~~
If yes describe the level of alteration needed for repairs and remedies?	

APPENDIX 4
EC/IC INSPECTION AND CERTIFICATION FORM

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. C241159

Site Name 11-28 31st Drive

Site Address: 11-28 31st Drive Zip Code: 11106
City/Town: Queens
County: Queens
Site Acreage: 0.055

Reporting Period: April 20, 2020 to April 20, 2021

	YES	NO
1. Is the information above correct?	☐	☑
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	☑	☐
7. Are all ICs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative _____ Date _____

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☑
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☑	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C241159

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
4-502-22	GBT Real Estate LLC	Soil Management Plan Ground Water Use Restriction Site Management Plan O&M Plan IC/EC Plan Landuse Restriction Monitoring Plan

Prohibition of use of groundwater without treatment
Compliance with a soils management plan
Compliance with a site management plan
Quarterly monitoring of groundwater
Use as restricted residential
Compliance with Operations & Maintenance Plan for SSDS

Box 4

Description of Engineering Controls

Parcel	Engineering Control
4-502-22	Vapor Mitigation Monitoring Wells

Sub-slab depressurization system
Groundwater monitoring with treatment by ISCO if needed

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C241159

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Paul I. Math at 77 Arkay Drive Ste K, Hauppauge, NY, 11788
print name print business address

am certifying as Remedial party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Paul I. Math 5/20/21
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Tarek Z. Khouri at 77 Arkay Dr. Ste K, Hauppauge, NY, 11788
print name print business address

am certifying as a Professional Engineer for the Remedial Party
(Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

5/20/21
Date