NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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May 14, 2019

Mr. James Van Horn
Project Manager - D&B Engineers and Architects, P.C.
330 Crossways Park Drive
Woodbury, New York 11797
JVanHorn@db-eng.com

RE: Pre-Design Investigation Report (March 2019)
Site Name: Wantagh Cleaners OU2 Site
DEC Site No. 130064
Town of Hempstead, Nassau County, New York

Dear Mr. Van Horn:

The New York State Department of Environmental Conservation (NYSDEC) reviewed the subject report dated March 2019 and finds the recommendations outlined in Section 5.2 acceptable to advance the project. Please provide the Department with a letter work plan outlining the proposed work scope and schedule associated with chemical oxidation pilot study and installation of permanent monitoring wells.

Property transfer is currently in progress and it is anticipated that the on-site building will be demolished and that a sub-slab depressurization system will not be required. The placement of and access to injection wells will require future coordination with the property owner. If you have any questions, please contact me by email lisa.gorton@dec.ny.gov or by phone at (518) 402-9574.

Sincerely,

Lisa A. Gorton

Lisa Gorton, P.E.
Project Manager
Remedial Bureau E, Remedial Section A
Division of Environmental Conservation

ec: David Harrington, DEC

MAY 2019

New York State Department of Environmental Conservation

Division of Environmental Remediation

Wantagh Cleaners OU2 Site

Pre-Design Investigation Report

Site No. 130064

D&B Engineers and Architects, P.C.

PRE-DESIGN INVESTIGATION REPORT

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK
SITE NO. 130064

WORK ASSIGNMENT NO. D007620-40

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

Prepared by:

D&B ENGINEERS AND ARCHITECTS, P.C.

MAY 2019

PRE-DESIGN INVESTIGATION REPORT
WANTAGH CLEANERS OU2 SITE

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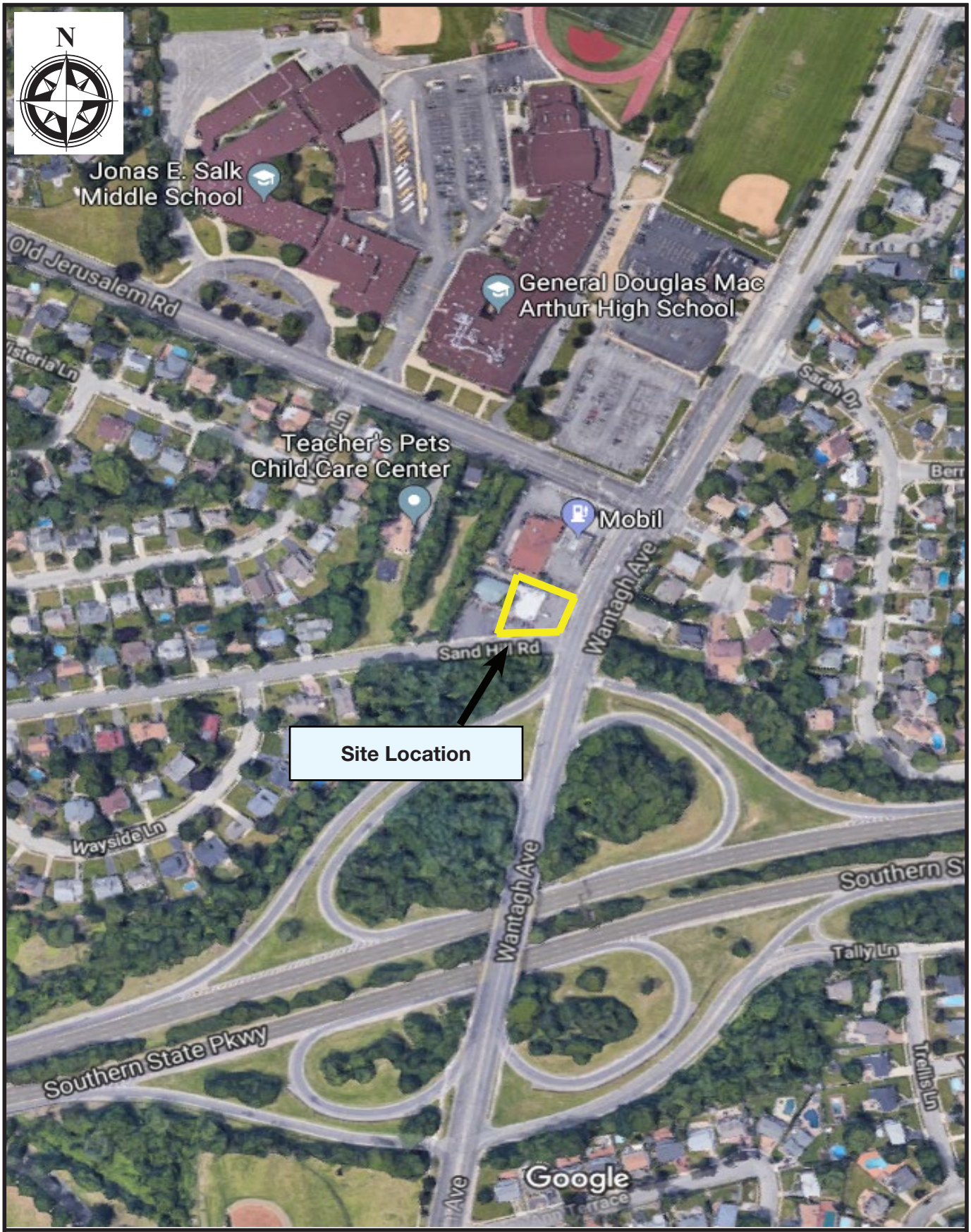
1.0 INTRODUCTION

In accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Scope of Work dated July 19, 2018, D&B Engineers and Architects, P.C. (D&B) has been issued a Work Assignment to complete a Remedial Design (RD) for the Wantagh Cleaners OU2 Site (the Site) located in the Town of Hempstead, New York (refer to Figure 1-1). Under this RD Work Assignment D&B has been tasked to complete a Pre-Design Investigation (PDI), where field activities were completed between August 2018 and November 2018. The purpose of the PDI was to obtain current groundwater quality information at the Site and downgradient of the Site; determine if soil vapor intrusion was affecting the indoor air quality at the nearby Teacher's Pets Child Care Center (TPCCC); and, provide data for the design of a soil vapor extraction system. This Pre-Design Investigation Report presents the results, conclusions and recommendations associated with PDI and has been completed in accordance with the requirements of NYSDEC Division of Environmental Remediation's (DER) Technical Guidance for Site Investigation and Remediation, dated May 2010 (DER-10).



D&B Engineers and Architects, P.C.

WANTAGH CLEANERS OU2 SITE

TOWN OF HEMPSTEAD

SITE LOCATION MAP

FIGURE 1-1

2.0 SITE DESCRIPTION AND HISTORY

2.1 Site Description

The Site is located at 920 Wantagh Avenue, Town of Hempstead, New York at the intersection of Wantagh Avenue and Sand Hill Road (see Figure 2-1 – Site Plan). The Site is in an area characterized by residential, and commercial land use. The topography of the Site is relatively flat with elevations ranging from approximately 43 to 45 feet above mean sea level.

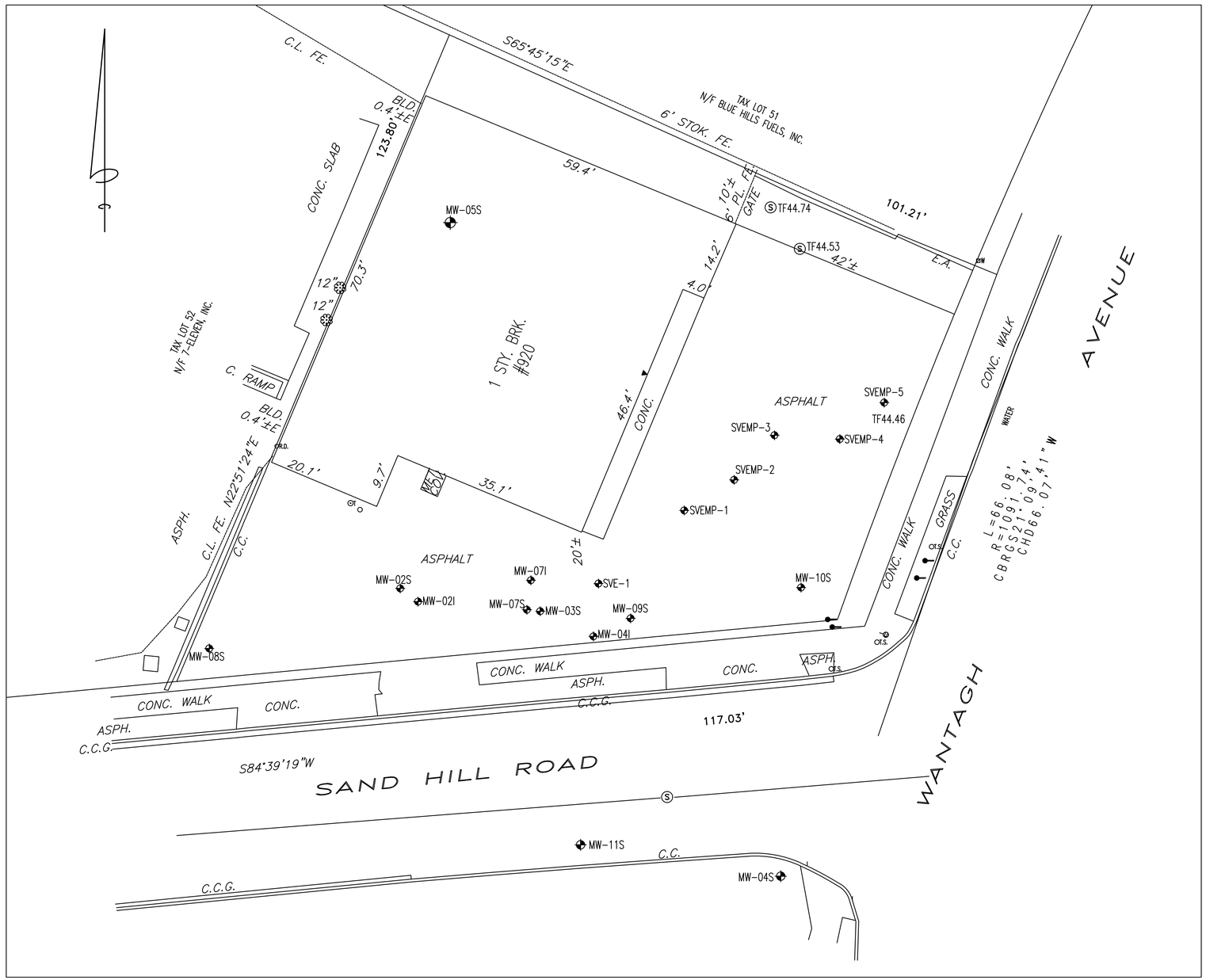
920 Wantagh Avenue, identified as Nassau County Tax ID 51-374-53, is a commercial property made up of an approximately 0.22-acre rectangular shaped lot, with one approximately 3,556 square-foot square-shaped single-story brick building. The property was previously a dry cleaners; however, is currently vacant. The exterior surfaces of the Wantagh Cleaners property are covered with asphalt and concrete, and the utilities include gas, electric, water and sewer.

2.2 Site Geology and Hydrogeology

The site is underlain by the Upper Glacial Aquifer. The unsaturated zone consists of brown and black silty and coarse sand intermixed with pebbles. The saturated zone below the water table consists of brown silty sand mixed with pebbles. Based on measured groundwater elevations, the localized groundwater flow direction is in a southerly direction. Groundwater elevation data and a groundwater surface elevation contour map are provided in Appendix A.

2.3 Remedial History

The site has been the location of a dry-cleaning facility from 1974 to August of 2018. Three on-site leaching pools were used for disposing wastewater containing tetrachloroethene into subsurface soils and groundwater from 1974 to 1991. In March 1991, the facility was connected to the public sewer system as ordered by the Nassau County Department of Health (NCDH). In 1992, based upon the results of a 1991 preliminary site assessment, the on-site leaching pools were



MW-COORDINATES/ELEVATIONS (NAD83/NAVD88)
TF DENOTES TOP CASING ELEVATION
TP DENOTES TOP OF PIPE ELEVATION (NORTH SIDE)

Northing(Y)	Easting(X)	Elev(TF)	Elev(TP)	Description
195260.6930	1121154.7420	44.30	43.84	MW-SVE1
195251.3830	1121153.8510	43.80	43.56	MW-04I
195248.7580	1121150.1970	43.56		MW-C
195249.9730	1121142.7160	43.61		MW-B
195256.0750	1121142.1200	43.76	43.42	MW-07S
195255.8230	1121144.4600	43.77	43.41	MW-03S
195261.2770	1121142.8190	44.03	43.75	MW-07I
195263.0960	1121179.7520	44.51		MW-D
195254.5720	1121160.4050	44.07	43.80	MW-09S
195250.2670	1121135.1710	43.44		MW-A
195259.8410	1121119.7730	43.57	43.33	MW-02S
195257.5080	1121122.9190	43.52	43.22	MW-02I
195260.0030	1121190.4720	44.46	44.20	MW-10S
195324.3500	1121128.5870	45.51	45.26	MW-05S
195209.0760	1121186.8840	44.39	44.06	MW-04S
195214.6010	1121151.5850	43.47	43.14	MW-11S
195567.9940	1121131.6940	43.85	43.60	MW-01S
195292.5700	1121205.0420	44.54	44.30	MW-SVEMP-5
195286.2850	1121197.2480	44.58	44.25	MW-SVEMP-4
195286.7450	1121185.7310	44.68	44.38	MW-SVEMP-3
195278.8900	1121178.6660	44.62	44.46	MW-SVEMP-2
195273.6350	1121169.7690	44.76	44.58	MW-SVEMP-1
195249.2500	1121086.1050	43.17	42.85	MW-08S

NOTE:
-THIS SURVEY IS FOR MUNICIPAL PURPOSES ONLY NOT INTENDED FOR TITLE CONVEYANCE.
-ELEVATIONS REFER TO NAVD88 VERTICAL DATUM
-COORDINATES REFER TO NAD83 (LIZONE)

LEGEND

◆ MONITORING WELL

NOTES:
-UTILITIES SHOWN ARE PER FIELD OBSERVATIONS, PARTIAL MARKOUTS AND AVAILABLE RECORDS AND ARE NOT GUARANTEED.
- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (LIZONE)

Source: Survey completed by American Engineering & Land Surveying P.C. on September 19, 2018.

D&B ENGINEERS AND ARCHITECTS, P.C.

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

SITE PLAN

SCALE 1"=10'

0 10 20 30

FIGURE 2-1

emptied, cleaned and backfilled, and a floor drain was cleaned and filled. The NYSDEC conducted another preliminary site assessment, in 1994, that resulted in the site being listed as a Class 2 site in May 1995. A Focused Remedial Investigation was conducted from 1997 thru 1998, and an air sparge/soil vapor extraction system was installed as an interim remedial measure in 1998/1999. A no further action Record of Decision was issued in May 1999 based on the results of the interim remedial measure. The site was subsequently removed from the State Registry of Inactive Hazardous Waste Disposal Sites in 2003.

In 2009, based upon the results of a 2007 soil vapor intrusion evaluation required by the NYSDEC and New York State Department of Health's soil vapor intrusion legacy site initiative, a new operable unit was assigned to the Site which was listed as Class 2 on the registry. A Remedial Investigation was initiated to investigate soil vapor intrusion impacts. The Remedial Investigation was conducted from 2011 through 2014 and a subsequent Feasibility Study was completed in 2016. The selected remedy for the site per the March 2017 Record of Decision is air sparging/soil vapor extraction, enhanced bioremediation and vapor mitigation.

3.0 SITE INVESTIGATION

The PDI field activities were completed by D&B and its subcontractors between August 2018 and November 2018. The PDI field activities were completed in accordance with the NYSDEC approved Scope of Work, dated July 19, 2018, and subsequent approved modifications during the implementation of the field activities. The following activities were performed:

- Mobilization
- Geophysical Survey
- On-site Groundwater Monitoring Well Installation
- Well Development
- Groundwater Monitoring Well Water Level Measurements and Sampling
- Off-site Discrete-Depth Groundwater Sampling
- Soil Vapor Intrusion Evaluation (TPCCC)
- Soil Vapor Extraction Pilot Test
- Site Survey
- Investigation Derived Waste Management

The scope of completed field activities and methods are discussed below. Sample locations are depicted on Figure 2-1 (above) which includes the locations of all groundwater monitoring well samples, Figure 3-1 which includes the locations of all off-site discrete depth groundwater samples and Figure 3-2 which includes the locations of all vapor samples collected at the TPCCC. Due to field conditions and/or the presence of underground utilities, modifications to the scope of work were necessary, including the relocation of several sample locations. All such modifications were approved in advance of the PDI field activities by NYSDEC and are discussed below in the appropriate sections.

LEGEND:

U (20, 25) — DISCRETE–DEPTH GROUNDWATER SAMPLING LOCATION, WITH DEPTH OF SAMPLES (IN FEET BGS)

Sources: ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGA, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

D&B ENGINEERS AND ARCHITECTS, P.C.

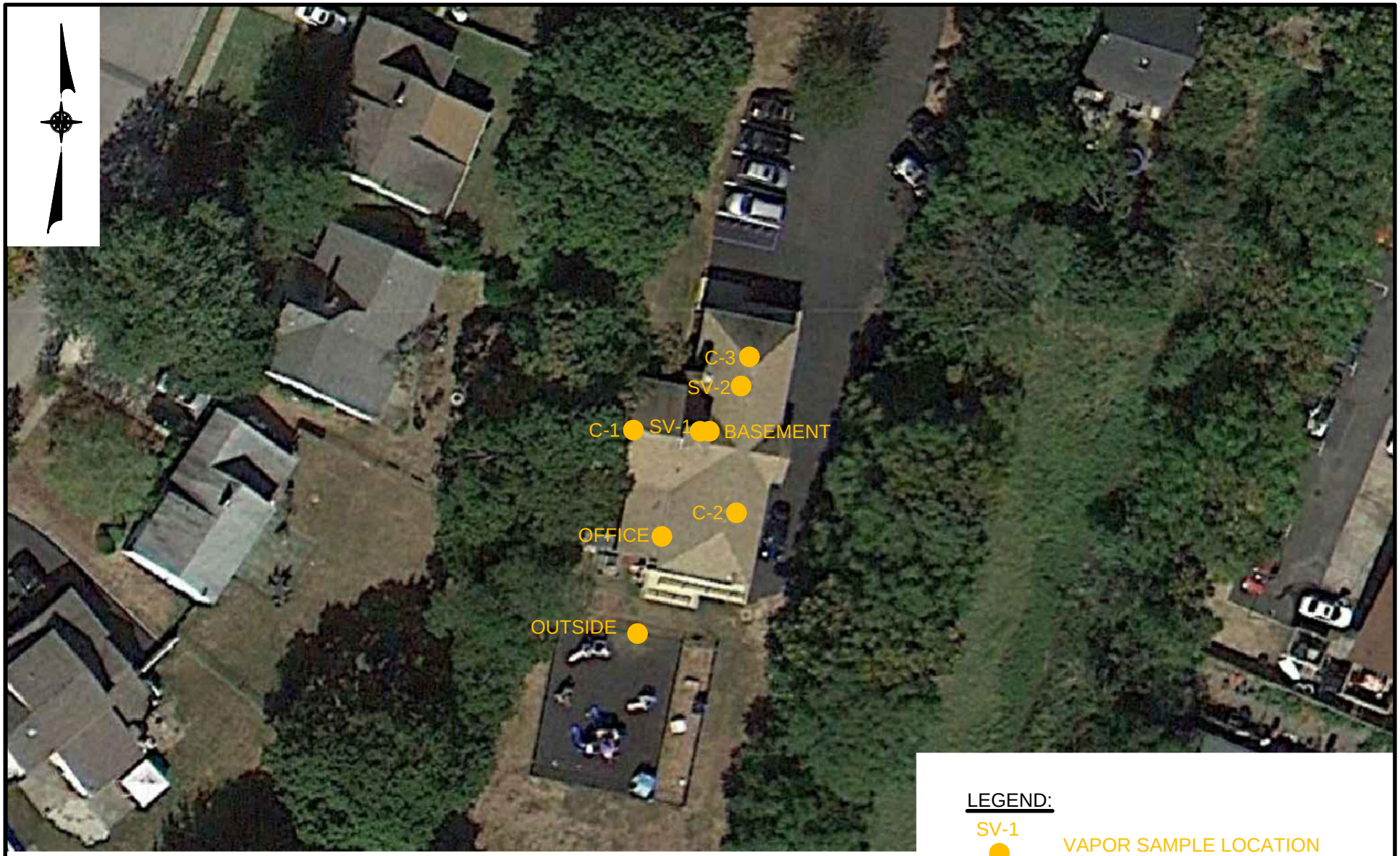
WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

APPROXIMATE SCALE: 1"=720'

OFF-SITE SAMPLE LOCATION MAP

FIGURE 3-1

F:\3150-40B\dwg\3150-40B-C-SAMPLE MAP_updated.dwg, 3/26/2019 8:55:06 AM, DBCadd



MAP SOURCE: GOOGLE EARTH

D&B ENGINEERS AND ARCHITECTS, P.C.

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

TEACHER'S PET CHILD CARE CENTER SAMPLE LOCATION MAP
NOVEMBER 19, 2018

SCALE: 1"=40'

FIGURE 3-2

3.1 Site Investigation Field Activities

Mobilization

The following permits, approvals, and/or notifications were obtained or completed by either D&B, D&B's subcontractor, or NYSDEC as part of the project:

- New York State Parks, Recreation and Historical Preservation Parkway Use Permit.
- New York State Department of Transportation Highway Work Permit
- Town of Hempstead Department of Highways Right of Way Permits
- New York 811 and Non-member Utility Companies, Utility Mark-out Request

Geophysical Survey

Prior to undertaking any intrusive activities, a geophysical survey was completed by Utility Detection Inc. to: 1) verify the locations of known underground utilities that were identified by New York 811 and non-member utility companies; 2) identify and mark the location of any unknown/unmarked utilities or subsurface structures; and, 3) clear each proposed subsurface sampling location prior to drilling. The geophysical survey was performed using non-intrusive locating techniques including ground penetrating radar and an electromagnetic utility locating system. All utilities and/or structures that were identified during the survey were marked on the ground using standard utility color codes. A location for each proposed subsurface sampling location, which was clear of utilities and subsurface structures and suitable for a utility clearance test pit and drilling was identified in white on the ground surface.

Groundwater Monitoring Well Installation

Seven groundwater monitoring wells (MW-05S, MW-07S, MW-07I, MW-08S, MW-09S, MW-10S and MW-11S) were installed by Aztech Environmental Technologies (Aztech) during the period from September 5, 2018 to September 14, 2018. Groundwater monitoring well MW-06S, which was proposed in the approved Scope of Work, could not be installed because a

subgrade concrete slab was encountered at this location during hand clearing activities. The monitoring well locations are depicted on Figure 2-1.

The monitoring wells were installed using hollow stem auger (HSA) drilling methods to depths ranging from approximately 17.63 to 59.10 feet below ground surface (bgs). The wells were installed using a direct-push drill rig capable of turning 4.25-inch inner diameter HSAs. Each well was constructed utilizing 2-inch diameter (I.D.) Schedule 40 polyvinyl chloride (PVC) riser and 10 feet of 0.010-inch slotted well screen. A No.1 well sand pack was placed around each well screen. A bentonite seal was placed above the sand pack followed by the installation of a cement/bentonite grout to grade. Protective, flush-to-grade casings with locking covers were installed at each well location. Monitoring well construction logs were generated and are provided in Appendix B. A summary of the depth of each newly installed monitoring well and construction details are presented below in Table 3-1.

Table 3-1: Monitoring Well Construction Summary

Well ID	Depth of Well (Feet bgs)	Depth of Screened Interval (Feet bgs)	Well Inner Diameter (inches)	Protective Casing Elev. (U.S. Survey Feet)	PVC Elev. (U.S. Survey Feet)	Screened Interval Elev. (U.S. Survey Feet)	Northing (U.S. Survey Feet)	Easting (U.S. Survey Feet)
MW-05S	17.63	7.63 - 17.63	2.0	45.51	45.26	37.63 - 27.63	195324.35	1121128.587
MW-07S	19.10	9.10 – 19.10	2.0	43.76	43.42	34.32 – 24.32	195256.075	1121142.12
MW-07I	59.10	49.10 – 59.10	2.0	44.03	43.75	(-5.35) – (-15.35)	195261.277	1121142.819
MW-08S	17.68	7.68 – 17.68	2.0	43.17	42.85	35.17 – 25.17	195249.25	1121086.105
MW-09S	18.81	8.81 - 18.81	2.0	44.07	43.80	34.99 – 24.99	195254.572	1121160.405
MW-10S	18.46	8.46 – 18.46	2.0	44.46	44.20	35.74 – 25.74	195260.003	1121190.472
MW-11S	18.65	8.65 – 18.65	2.0	43.47	43.14	34.49 – 24.49	195214.601	1121151.585

Notes:
ID: Identification
bgs: below ground surface
Elev.: Elevation
U.S.: United States
PVC: Polyvinyl chloride
Vertical Datum: North American Vertical Datum 88
Horizontal Datum: North American Datum of 1983 (NAD83)

Well Development

Following installation, the groundwater monitoring wells were developed on September 18, 2018 and September 19, 2018 to remove foreign materials introduced during drilling and to facilitate hydraulic communication between the formation and the well. Standard surging and pumping techniques were used to develop the wells. Well development water was monitored for turbidity during purging using a water quality meter and readings were recorded. Development was considered complete when either the turbidity of the purge water was below 50 nephelometric turbidity units (NTUs), the well purged dry, or 10 well volumes were removed. Monitoring well development logs were generated and are provided in Appendix B.

Groundwater Monitoring Well Water Level Measurements and Sampling

Over the course of the PDI, water levels were measured at the newly installed monitoring wells. Depth to water measurements and topographic survey data were used to calculate groundwater elevations and to prepare a groundwater elevation contour map. Groundwater level measurements and a groundwater contour map are provided in Appendix A. Based on groundwater elevation measurements, the groundwater flow direction on-site was to the south at the time of PDI field investigation.

Groundwater samples were collected from the seven newly installed monitoring wells and six existing monitoring wells using low-flow sampling methodologies on September 24, 2018, September 26, 2018 and October 30, 2018. PID headspace readings were measured at each location prior to groundwater sample collection. In addition, the depth to water was measured from the surveyed referenced mark using an electronic water level indicator, which was decontaminated between locations. During purging, dissolved oxygen, oxidation/reduction potential, turbidity, temperature, conductivity, and pH were measured using a water quality meter. Monitoring well sampling logs were generated and are provided in Appendix B.

All collected groundwater samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) +10 by USEPA Method 8260. Additionally, seven samples

(MW-05S, MW-07S, MW-07I, MW-08S, MW-09S, MW-10S and MW-11S) were analyzed for 1,4-Dioxane by USEPA Method 8270 SIM, and Per- and Poly-Fluorinated Alkyl Substances (PFAS) by USEPA Method 537 Modified. Monitoring well groundwater sample analytical results are described in Section 4.2 and analytical data summary tables are provided in Appendix C.

Off-Site Discrete-Depth Groundwater Sampling

Thirteen discrete-depth groundwater sample locations (O, QR, U, YY, XX, EEE, III, RRR, SSS, DT1G, DT1F, DT2C and DT2E) were installed and associated groundwater samples were collected during the period from September 12, 2018 to September 25, 2018. A discrete-depth groundwater sample was not collected at sample location U at a depth of 15 ft. bgs. due insufficient yield at that depth interval, which was proposed in the approved Scope of Work. The discrete-depth groundwater probe sample locations are depicted on Figure 3-1.

The discrete-depth groundwater samples were collected utilizing a direct-push drill rig to advance a SP-16 groundwater sampler and the samples were analyzed for TCL VOCs+10 by USEPA Method 8260. Each discrete-depth groundwater sample location/interval was purged of approximately two gallons to attempt to reduce turbidity of recovered groundwater. During purging, dissolved oxygen, oxidation/reduction potential, turbidity, temperature, conductivity, and pH were measured using a water quality meter. Groundwater sampling logs were generated and are provided in Appendix B. The sample collection depth intervals at the discrete-depth groundwater sampling locations are summarized in Table 3-2 below. Discrete-depth groundwater sample analytical results are described in Section 4.2 and analytical data summary tables are provided in Appendix C.

Table 3-2: Discrete-Depth Groundwater Sample Collection Depths

Sample Location	O	QR	U	YY	XX	EEE	III
Sample Depth Intervals (Feet BGS)	15, 20, 25	15, 20, 25	20, 25	20, 25, 30	65, 75, 85	25, 35, 45, 55, 65, 75	25, 35, 45, 55, 65, 75, 85, 95

Table 3-2: Discrete-Depth Groundwater Sample Collection Depths (continued)

Sample Location	RRR	SSS	DT1G	DT1F	DT2C	DT2E
Sample Depth Intervals (Feet BGS)	35, 45, 55, 65	55, 65, 75, 85, 95	75, 85, 95	45, 55, 65	55, 65, 75	15, 25, 35, 45, 55, 65, 75, 85

Soil Vapor Intrusion Evaluation (TPCCC)

Two sub-slab soil vapor samples (SV-1 and SV-2) were collected within the Teacher's Pets Child Care Center, five indoor air samples were also collected within the Center (Basement, Office, C-1, C-2 and C-3), and one outdoor ambient air sample was collected (Outside). Sub-slab soil vapor, indoor air and outdoor ambient air samples were collected to evaluate the potential for soil vapor intrusion at the property, and to evaluate the potential for exposures within the Teacher's Pets Child Care Center building. The sub-slab vapor points were installed by Aztech Technologies (Aztech) on September 24, 2018, and the sub-slab soil vapor, indoor air, and outdoor ambient air samples were collected November 19, 2018. The sample locations are presented on Figure 3-2.

Prior to installation of the sub-slab vapor points the building floor was inspected for any penetrations. The sub-slab soil vapor point locations were chosen to ensure minimal potential for ambient air infiltration via floor penetrations. The concrete slab was cored at each sub-slab sample location. The sub-slab vapor points were constructed to approximately 1.5 feet below grade, using stainless steel screens and polyethylene tubing. The point screens were approximately 6-inches long and constructed of double-woven stainless-steel wire. Washed sand was placed around the screened portion of each vapor point extending from the bottom of the borehole to approximately 2-inches above the screen followed by a bentonite seal.

After construction each vapor point was purged using a low-flow sample pump to evacuate 3 volumes of soil vapor. A PID was utilized to record volatile organic compound (VOC) concentrations from the soil vapor probes in ppb. Helium was used as a tracer gas to ensure that an adequate surface seal was created during construction. Flush mount protective casings with locking covers were installed at the sub-slab vapor point locations. Construction logs for the sub-

slab soil vapor points are provided in Appendix B.

Prior to performing the sampling, an indoor air quality questionnaire and building inventory was completed by D&B to evaluate the type of structure, floor layout and physical conditions of the building, as well as identify and minimize conditions that may have affected or interfered with testing. A parts per billion (ppb) range PID was used to evaluate potential interferences. The indoor air quality questionnaire and building inventory are provided in Appendix D.

During sampling the sub-slab vapor points were connected through tubing to a laboratory supplied batch certified clean 6-liter SUMMA canister, fitted with laboratory calibrated low-flow regulators that were set to collect the sample over a 8-hour period with the regulator calibrated at a flow rate that did not exceed 0.2 liters per minute. The soil vapor points were purged using a low-flow sample pump to evacuate 3 volumes of soil vapor. A PID was utilized to record VOC concentrations from the soil vapor probes in ppb at the start and end of sample collection. Helium was used as a tracer gas to ensure that an adequate surface seal was created during sampling.

The indoor air samples were collected utilizing batch certified clean 6-liter SUMMA canisters fitted with laboratory calibrated low-flow regulators. The samples were collected over a 8-hour period with the regulator calibrated at a flow rate that did not exceed 0.2 liters per minute. The canisters were placed at a height of approximately 3 feet above the floor.

The outdoor ambient air sample was collected over a 8-hour period during sub-slab soil vapor and indoor air sampling activities. The ambient air sample was collected in an observed upwind direction. The ambient air sample was screened with a calibrated ppb range PID, and readings were recorded prior to sampling. The ambient air sample was collected utilizing batch certified clean 6-liter SUMMA canister with a laboratory calibrated low-flow regulator over a 8-hour period with the regulator calibrated at a flow rate that did not exceed 0.2 liters per minute. The canister was placed in a secure location at a height of approximately 3 feet above the ground surface.

Sub-slab soil vapor, indoor air, and outdoor ambient air samples were collected for laboratory analysis of VOCs via USEPA Method TO-15. Analytical results are described in Section 4.3 and analytical data summary tables are provided in Appendix C.

Soil Vapor Extraction Pilot Test

The on-site soil vapor extraction (SVE) pilot test was conducted to gather information necessary for designing a SVE system to address remaining soil contamination at the Site, as well as provide vapor mitigation for the one on-site structure. The SVE pilot test included the installation of a SVE well (SVE-1) along with a network of five (5) permanent monitoring points (SVEMP-1 through SVEMP-5) and a network of five (5) temporary sub-slab monitoring points (SSMP-1 through SSMP-5), to determine radius of influence (ROI), as well as wellhead pressures and flowrates required to provide air distribution within the unsaturated zone.

The SVE well was installed by Aztech using a direct-push drill rig capable of turning 6.25-inch inner diameter HSAs. The SVE well was constructed utilizing 4-inch diameter (I.D.) Schedule 40 PVC riser and 7 feet of 0.020-inch slotted well screen located from 3 to 10-feet bgs. A No. 2 well gravel pack was placed around the well screen. A bentonite seal was placed above the sand pack followed by the installation of a cement/bentonite grout to grade.

The permanent monitoring points were installed by Aztech using a direct-push drill rig capable turning 4.25-inch inner diameter HSAs. The monitoring points were constructed using one-inch diameter Schedule 40 PVC riser and 7-foot of 0.010-inch slotted well screen located from 3 to 10-feet bgs. A No. 1 well gravel pack was placed around the well screen. A bentonite seal was placed above the sand pack followed by the installation of a bentonite powder to grade. All five temporary sub-slab monitoring points were installed by Clean Globe Environmental, LLC (Clean Globe) to below the concrete slab within the on-site building using a concrete hammer drill, polyethylene tubing and a bentonite seal. Flush-mount protective casings with locking covers were installed at the SVE well and permanent monitoring point locations. The Site Plan depicts locations of the SVE well and the permanent monitoring point locations. Appendix B includes construction logs for the SVE well and permanent monitoring points.

Upon successful installation of the SVE well and monitoring points, a series of pilot tests were conducted utilizing a portable regenerative blower to induce negative pressure at the SVE well at various flow rates (20 cubic feet per minute (CFM), 40 CFM, 60 CFM and 80 CFM) to establish effective SVE radius of influence. Immediately prior to conducting the SVE pilot test, subsurface pressure measurements and headspace total organic vapor readings were collected from the network of five (5) newly installed permanent monitoring points (SVEMP-1 through SVEMP-5) and five (5) temporary vapor points (VP-1 through VP-5) to establish baseline conditions at the Site. The network of existing monitoring wells were also utilized during the test to collect periodic pressure influence readings.

The SVE pilot study was conducted on September 30, 2018 by Clean Globe utilizing various flow rates and operating pressures as described above. Each series of pilot testing activities (total of 4 different flow rates) was conducted for approximately one hour and until pressure influence readings stabilized within 10 percent of each other for three successive readings. As part of these efforts, a soil vapor sample was collected and analyzed for VOCs via EPA Method TO-15 at the SVE well to determine requirements for exhaust gas treatment based on contaminant loading rates observed during the testing. The results of the pilot test with associated analytical results are described in Section 4.4 and analytical data summary tables are provided in Appendix C.

Site Survey

On September 25, 2018, October 1, 2018 and October 6, 2018, American Engineering & Land Surveying, P.C. (American), a New York State licensed surveyor, performed a physical features and property boundary survey that included identifying the locations and elevations (top of outer protective steel casing, top of inner PVC casing, and ground surface) of the newly installed monitoring wells, existing monitoring wells, newly installed SVE well and for the new permanent monitoring points. A copy of the Site survey is presented in Appendix E.

Investigation Derived Waste Management

Investigation Derived Waste (IDW) generated during the PDI activities included decontamination fluid, used personal protective equipment (PPE), used disposable sampling equipment, well purge and development water, and soil cuttings. All IDW was containerized in DOT-approved 55-gallon drums. The drums are currently staged on-site and will be removed from the Site pending waste characterization sampling.

3.2 Field Procedures, Analytical Methods, and Quality Assurance

All investigation and sampling activities were performed in accordance with D&B's Generic Field Activities Plan (FAP) and Generic Quality Assurance Project Plan (QAPP), which have been approved for use on D&B's Standby Contract for Engineering Services with the NYSDEC. The FAP is dated February 2013 and the QAPP is dated April 2011.

Quality control (QC) samples included matrix spike (MS) and matrix spike duplicates (MSD) and trip blanks. Matrix spike and matrix spike duplicates were collected at a minimum frequency of one per twenty samples and analyzed for the same analytes as the environmental samples. Trip blanks were supplied with each shipment of sample containers for water samples. Trip blanks were analyzed for VOCs only. Additionally, an equipment blank was collected associated with the PFAS sampling.

All samples were submitted to Test America, a NYSDOH ELAP certified laboratory, for analysis. Test America performed the analysis in accordance with the latest edition of the NYSDEC Analytical Services Protocol and provided 8 NYSDEC Category B laboratory deliverables packages. A Data Usability Summary Report was prepared for the packages and is discussed in Section 4.5. Data validation checklists are provided in Appendix F.

4.0 DISCUSSION OF RESULTS

This section presents a detailed discussion of the results. Analytical results summary tables are provided in Appendix C.

4.1 Applicable Regulatory Standards

The groundwater sample results were compared to standards, criteria and guidelines (SCGs) selected for the Site to determine the significance of the analytical data. The groundwater data was compared to Class GA groundwater standards and guidance values as defined in the NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (1.1.1) - Ambient Water Quality Standards, Criteria and Guidance (SCG) Values. Air sample data, including sub-slab soil vapor, indoor air, and outdoor ambient air data was compared to the NYSDOH May 2017 Updates to Soil Vapor / Indoor Air Decision Matrices, as well as NYSDOH air guideline values.

4.2 Groundwater Samples

Groundwater samples were collected from the seven newly installed monitoring wells (MW-05S, MW-07S, MW-07I, MW-08S, MW-09S, MW-10S and MW-11S), as well as the six existing monitoring wells (MW-01S, MW-02S, MW-02I, MW-03S, MW-04S and MW-04I) and from thirteen offsite discrete depth groundwater probe locations (O, QR, U, YY, XX, EEE, III, RRR, SSS, DT1G, DT1F, DT2C and DT2E). The groundwater samples collected from the newly installed monitoring wells were analyzed for TCL VOCs+10, 1,4-Dioxane and PFAS and the existing monitoring wells were analyzed for TCL VOCs+10, only. The discrete depth groundwater probe samples were analyzed for TCL VOCs+10.

Groundwater Monitoring Well Samples

Groundwater monitoring well samples were collected from depths ranging from 17.63 to 59.10 feet bgs. The groundwater data was compared to Class GA SCG values. Compounds

detected in the groundwater monitoring well samples above SCGs are summarized in Table 4-1 below and analytical data summary tables are provided in Appendix C. Figure 4-1 summarizes VOC exceedances of SCGs in on-site groundwater. Figure 4-2 and Figure 4-3 summarize concentrations of PFAS and 1,4-Dioxane detected in on-site groundwater, respectively.

Table 4-1: Groundwater Monitoring Well Sample Results Exceeding SCGs

Sample ID Sample Depth	**MW-01S 15.5-25.5**	**MW-02S 15.7-25.7**	**MW-02I 50-60**	**MW-03S 15.7-25.7**	**MW-04S 15.8-25.8**	**MW-04I 46-56**	**MW-05S 7.63-17.63**	**NYSDEC Class GA Standard or Guidance**
Date	**9/26/18**	**9/26/18**	**9/26/18**	**9/26/18**	**9/26/18**	**9/26/18**	**9/24/18**	
PCE (ug/l)	0.48 J	U	U	***680***	1.5	0.75 J	***83***	5
TCE (ug/l)	U	U	U	***340***	U	0.88 J	***39***	5
Cis-1,2-DCE (ug/l)	U	2.1	U	***230***	U	U	***100***	5
VC (ug/l)	U	U	U	U	U	U	U	2
Chloroform (ug/l)	0.71 J	U	0.52 J	U	U	0.45 J	U	7
Sample ID Sample Depth	**MW-07S 9.1-19.1**	**MW-07I 49.1-59.1**	**MW-08S 7.68-17.68**	**MW-09S 8.81–18.81**	**MW-10S 8.46-18.46**	**MW-11S 8.65-18.65**	**NYSDEC Class GA Standard or Guidance**	
Date	**9/24/18**	**9/24/18**	**9/24/18**	**9/24/18**	**9/24/18**	**9/26/18**		
PCE (ug/l)	***1,300***	0.42 J	0.75 J	***22***	***10***	***1,200***	5	
TCE (ug/l)	***570***	U	0.66 J	*3.4*	0.96 J	***520***	5	
Cis-1,2-DCE (ug/l)	***940***	U	U	1.7	U	***1,100***	5	
VC (ug/l)	***40 J***	U	U	U	U	U	2	
Chloroform (ug/l)	U	0.41 J	U	***10***	U	U	7	

Notes:
ug/l: Micrograms per liter
U: Analyzed for but not detected
J: Estimated Value
Bold**:** Exceeds SCG

As shown above, PCE was detected in eleven of the thirteen groundwater monitoring well samples and six of the samples exhibited PCE concentrations above its respective NYSDEC Class GA groundwater standard. TCE was detected in eight of the thirteen groundwater monitoring well samples and four of the samples exhibited TCE concentrations above its respective NYSDEC Class GA groundwater standard. Cis-1,2-DCE was detected in six of the thirteen groundwater monitoring well samples and four of the samples exhibited cis-1,2-DCE concentrations above its respective NYSDEC Class GA groundwater standard. VC was detected in one of the thirteen groundwater monitoring well samples and was at a concentration above its respective NYSDEC Class GA groundwater standard. Chloroform was detected in five of the thirteen groundwater monitoring well samples and one of the samples exhibited chloroform concentrations above its respective NYSDEC

Sample Location	MW-05S
Date	9/24/2018
Depth (feet bgs)	7.63-17.63
PCE	83
TCE	39
CIS-1,2-DCE	100
VC	U
Chloroform	U

Sample Location	MW-07I
Date	9/24/2018
Depth (feet bgs)	49.1-59.1
PCE	0.42 J
TCE	U
CIS-1,2-DCE	U
VC	U
Chloroform	0.41 J

Sample Location	MW-07S
Date	9/24/2018
Depth (feet bgs)	9.1-19.1
PCE	1,300
TCE	570
CIS-1,2-DCE	940
VC	40 J
Chloroform	U

Sample Location	MW-01S
Date	9/26/2018
Depth (feet bgs)	15.5-25.5
PCE	0.48 J
TCE	U
CIS-1,2-DCE	U
VC	U
Chloroform	0.71 J

Sample Location	MW-03S
Date	9/26/2018
Depth (feet bgs)	15.7-25.7
PCE	680
TCE	340
CIS-1,2-DCE	230
VC	U
Chloroform	U

Sample Location	MW-08S
Date	9/24/2018
Depth (feet bgs)	7.68-17.68
PCE	0.75 J
TCE	0.66 J
CIS-1,2-DCE	U
VC	U
Chloroform	U

Sample Location	MW-10S
Date	9/24/2018
Depth (feet bgs)	8.46-18.46
PCE	10
TCE	0.96 J
CIS-1,2-DCE	U
VC	U
Chloroform	U

Sample Location	MW-09S
Date	9/24/2018
Depth (feet bgs)	8.81-18.81
PCE	22
TCE	3.4
CIS-1,2-DCE	1.7
VC	U
Chloroform	10

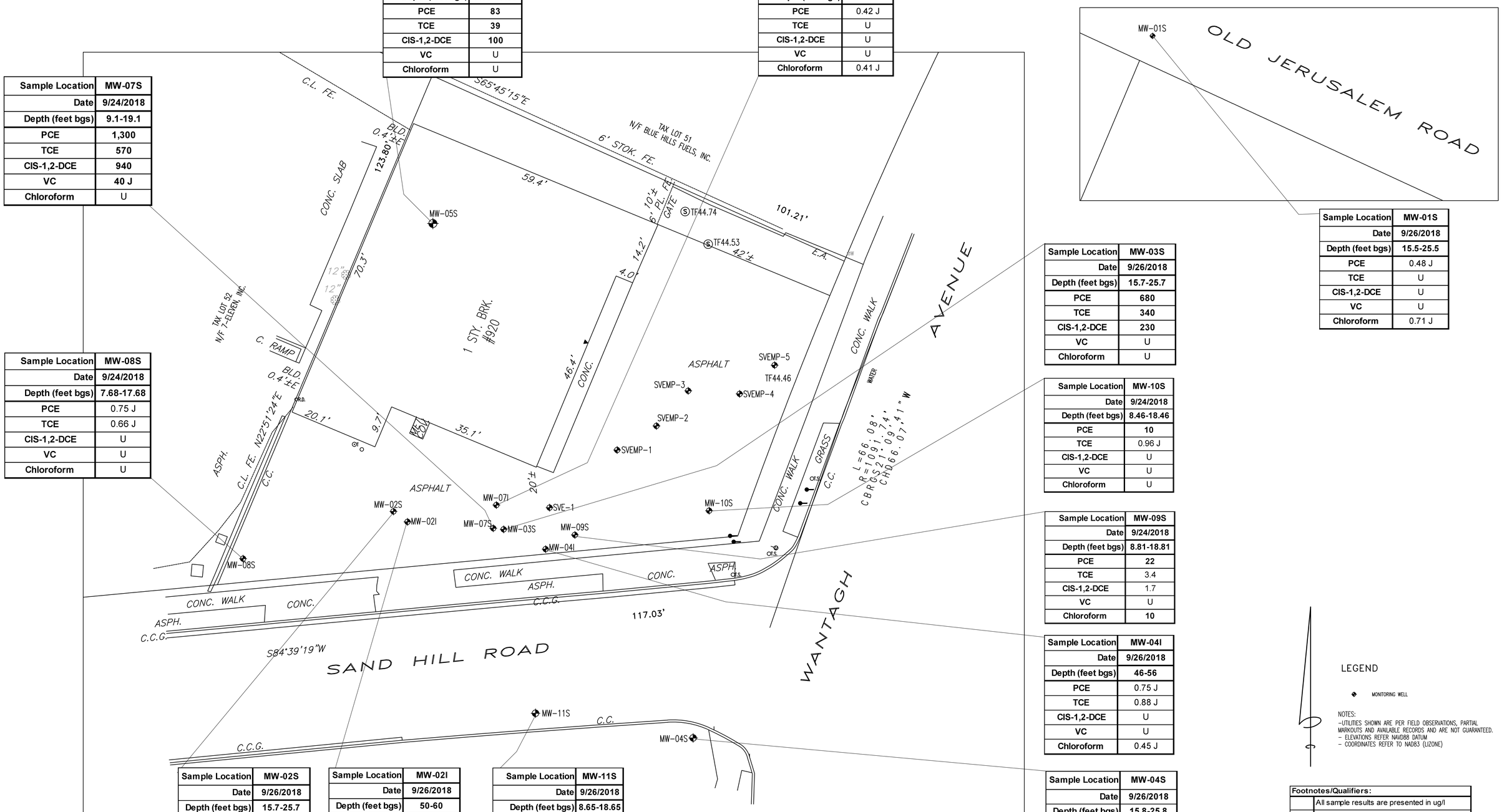
Sample Location	MW-04I
Date	9/26/2018
Depth (feet bgs)	46-56
PCE	0.75 J
TCE	0.88 J
CIS-1,2-DCE	U
VC	U
Chloroform	0.45 J

Sample Location	MW-04S
Date	9/26/2018
Depth (feet bgs)	15.8-25.8
PCE	1.5
TCE	U
CIS-1,2-DCE	U
VC	U
Chloroform	U

Sample Location	MW-02S
Date	9/26/2018
Depth (feet bgs)	15.7-25.7
PCE	U
TCE	U
CIS-1,2-DCE	2.1
VC	U
Chloroform	U

Sample Location	MW-02I
Date	9/26/2018
Depth (feet bgs)	50-60
PCE	U
TCE	U
CIS-1,2-DCE	U
VC	U
Chloroform	0.52 J

Sample Location	MW-11S
Date	9/26/2018
Depth (feet bgs)	8.65-18.65
PCE	1,200
TCE	520
CIS-1,2-DCE	1,100
VC	U
Chloroform	U



LEGEND

◆ MONITORING WELL

NOTES:
- UTILITIES SHOWN ARE PER FIELD OBSERVATIONS, PARTIAL MARKOUTS AND AVAILABLE RECORDS AND ARE NOT GUARANTEED.
- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (LIZONE)

Footnotes/Qualifiers:	
	All sample results are presented in ug/l
ug/l:	Milligram per liter
bgs:	Below ground surface
U:	Analyzed for but not detected
J:	Estimated value
Bold:	Exceeds SCG standards

Source: Survey completed by American Engineering & Land Surveying P.C. on September 19, 2018.

D&B ENGINEERS AND ARCHITECTS, P.C.

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPTEAD

On-Site VOC Sample Results Exceeding SCGs In Groundwater

SCALE 1"=10' (0, 10, 20, 30)

FIGURE 4-1

Sample Location	MW-05S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	U
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	4.8 J
Perfluorobutanesulfonic acid (PFBS)	33
Perfluorobutanoic Acid	19
Perfluorodecane Sulfonic Acid	U
Perfluorodecanoic acid (PFDA)	56
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	2.4
Perfluoroheptanoic acid (PFHpA)	35
Perfluorohexanesulfonic acid (PFHxS)	16
Perfluorohexanoic acid (PFHxA)	32
Perfluorononanoic acid (PFNA)	17
Perfluorooctane Sulfonamide (FOSA)	8.3
Perfluorooctanesulfonic acid (PFOS)	100
Perfluorooctanoic acid (PFOA)	77
Perfluoropentanoic Acid (PFPeA)	44
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	1.2 J
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	2.5 J
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	1.7 J

Sample Location	MW-09S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	71
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	14 J
Perfluorobutanesulfonic acid (PFBS)	U
Perfluorobutanoic Acid	0.42 J
Perfluorodecane Sulfonic Acid	U
Perfluorodecanoic acid (PFDA)	1.1 J
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	U
Perfluoroheptanoic acid (PFHpA)	0.23 J
Perfluorohexanesulfonic acid (PFHxS)	UB
Perfluorohexanoic acid (PFHxA)	U
Perfluorononanoic acid (PFNA)	U
Perfluorooctane Sulfonamide (FOSA)	65
Perfluorooctanesulfonic acid (PFOS)	5.7
Perfluorooctanoic acid (PFOA)	U
Perfluoropentanoic Acid (PFPeA)	0.78 J
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	U

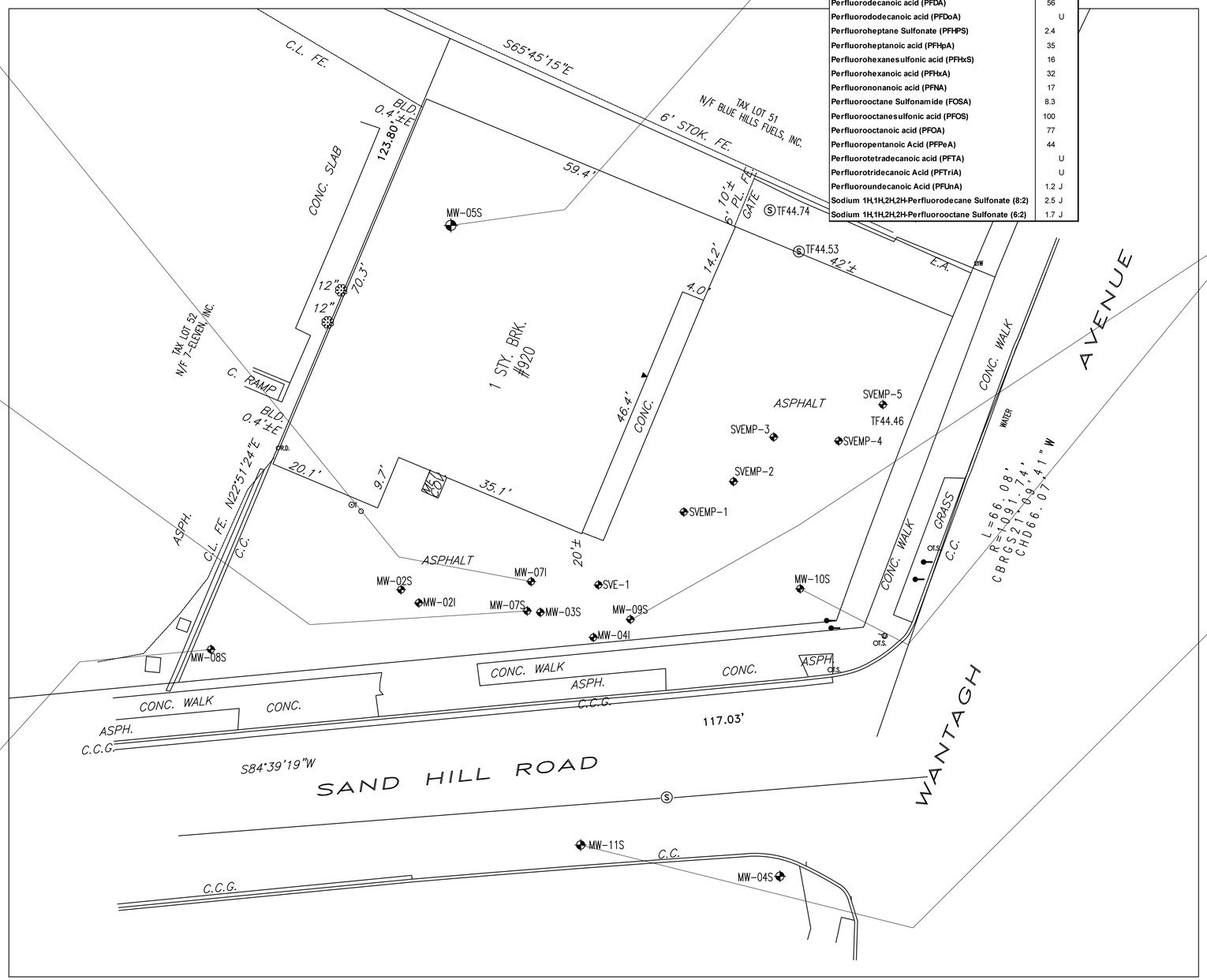
Sample Location	MW-07I
2-(N-methyl perfluorooctanesulfonamido) acetic acid	4.4 J
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	U
Perfluorobutanesulfonic acid (PFBS)	5.7
Perfluorobutanoic Acid	4.9
Perfluorodecane Sulfonic Acid	U
Perfluorodecanoic acid (PFDA)	1 J
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	0.65 J
Perfluoroheptanoic acid (PFHpA)	5.5
Perfluorohexanesulfonic acid (PFHxS)	UB
Perfluorohexanoic acid (PFHxA)	6.4
Perfluorononanoic acid (PFNA)	2.5
Perfluorooctane Sulfonamide (FOSA)	0.37 J
Perfluorooctanesulfonic acid (PFOS)	15
Perfluorooctanoic acid (PFOA)	17
Perfluoropentanoic Acid (PFPeA)	6.8
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	U

Sample Location	MW-10S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	U
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	U
Perfluorobutanesulfonic acid (PFBS)	5.9
Perfluorobutanoic Acid	14
Perfluorodecane Sulfonic Acid	1.1 J
Perfluorodecanoic acid (PFDA)	3.4
Perfluorododecanoic acid (PFDoA)	0.69 J
Perfluoroheptane Sulfonate (PFHPS)	0.52 J
Perfluoroheptanoic acid (PFHpA)	30
Perfluorohexanesulfonic acid (PFHxS)	19
Perfluorohexanoic acid (PFHxA)	29
Perfluorononanoic acid (PFNA)	8.4
Perfluorooctane Sulfonamide (FOSA)	U
Perfluorooctanesulfonic acid (PFOS)	31
Perfluorooctanoic acid (PFOA)	18
Perfluoropentanoic Acid (PFPeA)	41
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	3.8 J

Sample Location	MW-07S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	66
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	14 J
Perfluorobutanesulfonic acid (PFBS)	13
Perfluorobutanoic Acid	47
Perfluorodecane Sulfonic Acid	0.79 J
Perfluorodecanoic acid (PFDA)	13
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	1.2 J
Perfluoroheptanoic acid (PFHpA)	150
Perfluorohexanesulfonic acid (PFHxS)	11
Perfluorohexanoic acid (PFHxA)	130
Perfluorononanoic acid (PFNA)	8.8
Perfluorooctane Sulfonamide (FOSA)	1.7 J
Perfluorooctanesulfonic acid (PFOS)	25
Perfluorooctanoic acid (PFOA)	120
Perfluoropentanoic Acid (PFPeA)	140
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	2.8 J

Sample Location	MW-11S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	39
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	14 J
Perfluorobutanesulfonic acid (PFBS)	37
Perfluorobutanoic Acid	21
Perfluorodecane Sulfonic Acid	1.7
Perfluorodecanoic acid (PFDA)	15
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	3.2
Perfluoroheptanoic acid (PFHpA)	37
Perfluorohexanesulfonic acid (PFHxS)	26
Perfluorohexanoic acid (PFHxA)	38
Perfluorononanoic acid (PFNA)	11
Perfluorooctane Sulfonamide (FOSA)	5.7
Perfluorooctanesulfonic acid (PFOS)	150
Perfluorooctanoic acid (PFOA)	120
Perfluoropentanoic Acid (PFPeA)	50
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	U

Sample Location	MW-08S
2-(N-methyl perfluorooctanesulfonamido) acetic acid	U
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	U
Perfluorobutanesulfonic acid (PFBS)	6.3
Perfluorobutanoic Acid	18
Perfluorodecane Sulfonic Acid	U
Perfluorodecanoic acid (PFDA)	5.1
Perfluorododecanoic acid (PFDoA)	U
Perfluoroheptane Sulfonate (PFHPS)	0.43 J
Perfluoroheptanoic acid (PFHpA)	17
Perfluorohexanesulfonic acid (PFHxS)	UB
Perfluorohexanoic acid (PFHxA)	43
Perfluorononanoic acid (PFNA)	6.5
Perfluorooctane Sulfonamide (FOSA)	2.7
Perfluorooctanesulfonic acid (PFOS)	33
Perfluorooctanoic acid (PFOA)	29
Perfluoropentanoic Acid (PFPeA)	44
Perfluorotetradecanoic acid (PFTA)	U
Perfluorotridecanoic Acid (PFTriA)	U
Perfluoroundecanoic Acid (PFUnA)	2.6
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	2.7 J
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	2.7 J



Footnotes/Qualifiers:

All sample results are collected in ng/l

ng/l: Nanogram per liter

U: Analyzed for but not detected

UB: Qualified as non detect due to blank result

J: Estimated value or limit

LEGEND

MONITORING WELL

NOTES:
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- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (LIZONE)

Source: Survey completed by American Engineering & Land Surveying P.C. on September 19, 2018.

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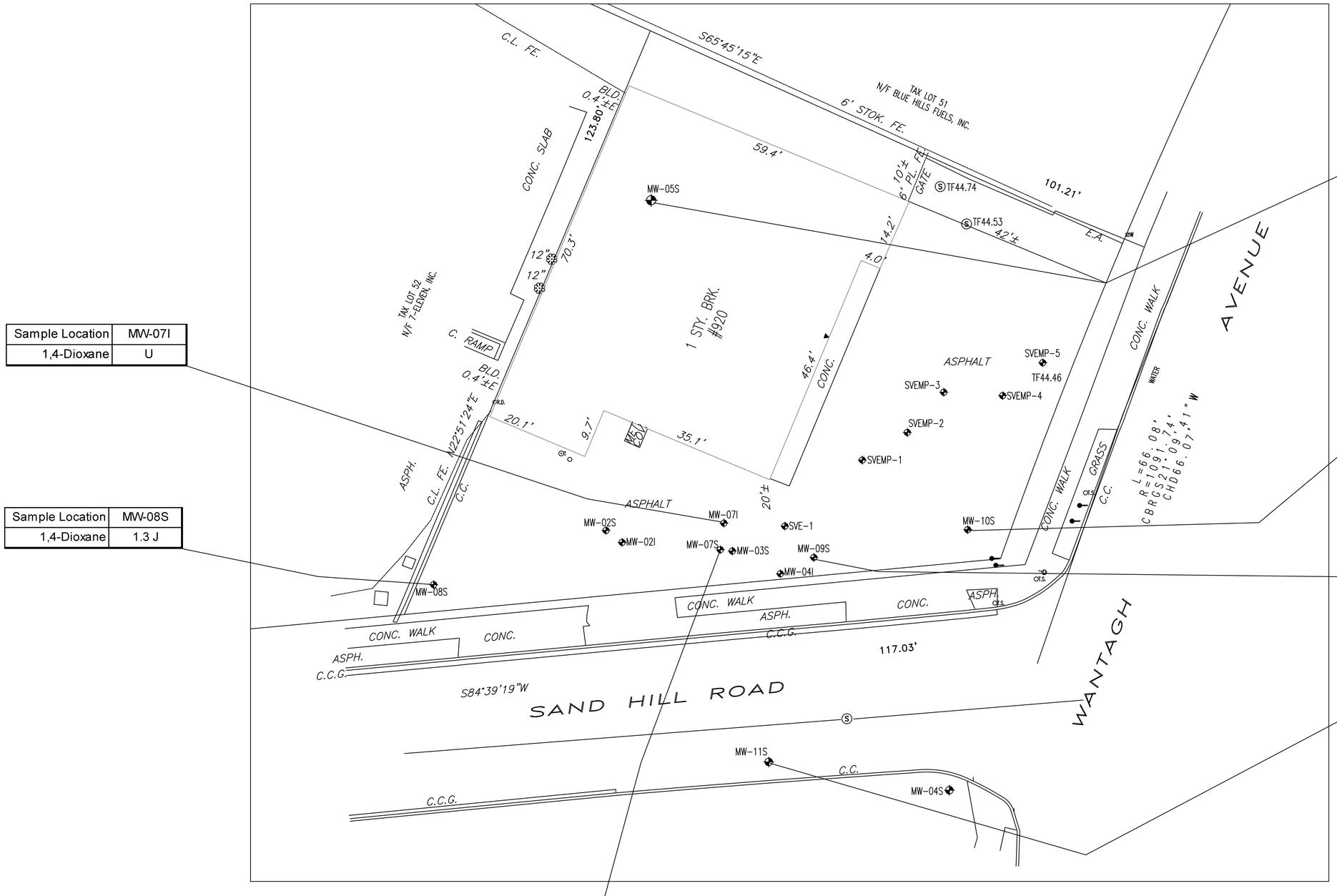
WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPTEAD

On-Site PFAS Concentrations in Groundwater

SCALE 1"=10' (0, 10, 20, 30)

FIGURE 4-2



Sample Location	MW-05S
1,4-Dioxane	0.23

Sample Location	MW-07I
1,4-Dioxane	U

Sample Location	MW-10S
1,4-Dioxane	U

Sample Location	MW-08S
1,4-Dioxane	1.3 J

Sample Location	MW-09S
1,4-Dioxane	1.6 J

Sample Location	MW-11S
1,4-Dioxane	1.4 J

Sample Location	MW-07S
1,4-Dioxane	0.71

LEGEND

◆ MONITORING WELL

NOTES:
- UTILITIES SHOWN ARE PER FIELD OBSERVATIONS, PARTIAL MARKOUTS AND AVAILABLE RECORDS AND ARE NOT GUARANTEED.
- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (LIZONE)

Footnotes/Qualifiers:	
	All sample results are presented in ug/l
ug/l:	Milligram per liter
bgs:	Below ground surface
U:	Analyzed for but not detected
Bold:	**Exceeds SCG standards**

Source: Survey completed by American Engineering & Land Surveying P.C. on September 19, 2018.

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WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

On-site 1,4-Dioxane Concentrations in Groundwater

0 10 20 30
SCALE 1"=10'

FIGURE 4-3

Class GA groundwater standard. Concentrations of PCE ranged from not detected to a high of 1,300 ug/l. Concentrations of TCE ranged from not detected to a high of 570 ug/l. Concentrations of cis-1,2-DCE ranged from not detected to a high of 1,100 ug/l. VC ranged from not detected to a high of 40 ug/l and chloroform ranged from not detected to a high of 10 ug/l. Per and poly fluorinated alkyl substances (PFAS) were detected in all seven groundwater samples analyzed for these compounds. Additionally, 1,4-dioxane was detected in five of the seven groundwater monitoring well samples.

Offsite Discrete Depth Groundwater Samples

Discrete depth groundwater samples were collected from depths ranging from 15 to 95 feet bgs with samples collected from various discrete depth intervals at locations (O, QR, U, YY, XX, EEE, III, RRR, SSS, DT1G, DT1F, DT2C and DT2E). The groundwater data was compared to Class GA groundwater standards and guidance values. Compounds detected in the discrete depth groundwater samples in exceedance of SCGs are summarized in Table 4-2 below. Figure 4-4 summarizes exceedances of SCGs in groundwater at the offsite discrete depth groundwater probe locations.

Table 4-2: Offsite Discrete Depth Groundwater Sample Results Exceeding SCGs

Sample Location	**O (15)**	**O (20)**	**O (25)**	**QR (20)**	**QR (25)**	**NYSDEC Class GA Standard or Guidance**
Date	**9/25/18**	**9/25/18**	**9/25/18**	**9/25/18**	**9/25/18**	
Cis-1,2-DCE (ug/l)	**37 J**	**180 DJ**	**140 J**	1.6 J	**67 J**	5
PCE (ug/l)	**26 J**	**48 J**	**94 J**	**5.6 J**	**25 J**	5
TCE (ug/l)	**11 J**	**31 J**	**60 J**	1.1 J	**20 J**	5
MTBE (ug/l)	U	U	U	U	U	10
Chloroform (ug/l)	U	U	U	U	U	7
Sample Location	**XX (65)**	**XX (75)**	**SSS (55)**	**SSS (65)**	**SSS (85)**	**NYSDEC Class GA Standard or Guidance**
Date	**9/12/18**	**9/12/18**	**9/20/18**	**9/20/18**	**9/20/18**	
Cis-1,2-DCE (ug/l)	**7.6 J**	**12 J**	**6.6**	**10**	**12**	5
PCE (ug/l)	**6.6 J**	**7 J**	**5.9**	**6.4**	1.4	5
TCE (ug/l)	4.8 J	4.7 J	3.9	4.9	0.89 J	5
MTBE (ug/l)	0.78 J	2.7 J	U	U	1.6	10
Chloroform (ug/l)	UJ	UJ	0.56 J	**9.9**	U	7

Table 4-2: Offsite Discrete Depth Groundwater Sample Results Exceeding SCGs (continued)

Sample Location	SSS (95)	III (85)	DT1G (75)	DT1G (85)	NYSDEC Class GA Standard or Guidance
Date	9/20/18	9/20/18	9/21/18	9/21/18	
Cis-1,2-DCE (ug/l)	**7.3**	**5.4**	2.1 J	2.6 J	5
PCE (ug/l)	4.6	3.4	**8.5 J**	**29 J**	5
TCE (ug/l)	2.5	1.8	2.1 J	2.3 J	5
MTBE (ug/l)	4.6	U	UJ	0.48 J	10
Chloroform (ug/l)	U	0.34 J	UJ	UJ	7
Sample Location	**DT1G (95)**	**DT1F (65)**	**DT2E (25)**	**DT2E (55)**	**NYSDEC Class GA Standard or Guidance**
Date	**9/21/18**	**9/24/18**	**9/25/18**	**9/25/18**	
Cis-1,2-DCE (ug/l)	2.8 J	U	**27 J**	**24 J**	5
PCE (ug/l)	**54 J**	**11 J**	1.2 J	**44 J**	5
TCE (ug/l)	3.1 J	3.3 J	3.7 J	**9.8 J**	5
MTBE (ug/l)	0.87 J	U	0.17 J	5 J	10
Chloroform (ug/l)	UJ	U	U	U	7
Sample Location	**DT2E (65)**	**DT2E (75)**	**DT2E (85)**	**NYSDEC Class GA Standard or Guidance**	
Date	**9/25/18**	**9/25/18**	**9/25/18**		
Cis-1,2-DCE (ug/l)	**59 J**	**59 J**	**6.2 J**	5	
PCE (ug/l)	**64 J**	**39 J**	**37 J**	5	
TCE (ug/l)	**19 J**	**11 J**	2.1 J	5	
MTBE (ug/l)	**22 J**	**15 J**	1.9 J	10	
Chloroform (ug/l)	U	U	U	7	

(15): Indicates sample depth in feet bgs
ug/l: Micrograms per liter
U: Analyzed for but not detected
J: Estimated Value
***Bold*: Exceeds SCG**

Sample Location	O		
Date	9/25/2018		
Depth (feet bgs)	15	20	25
PCE	26	48	94
TCE	11	31	60
CIS-1,2-DCE	37 J	180 J	140 J
MTBE	U	U	U
Chloroform	U	U	U

Footnotes/Qualifiers:	
	All sample results are presented in ug/l
ug/l:	Milligram per liter
bgs:	Below ground surface
U:	Analyzed for but not detected
J:	Estimated value
Bold:	Exceeds SCG standards

Sample Location	QR	
Date	9/25/2018	
Depth (feet bgs)	20	25
PCE	5.6 J	25 J
TCE	1.1 J	20 J
CIS-1,2-DCE	1.6 J	67 J
MTBE	U	U
Chloroform	U	U

Sample Location	XX	
Date	9/12/2018	
Depth (feet bgs)	65	75
PCE	6.6 J	7 J
TCE	4.8 J	4.7 J
CIS-1,2-DCE	7.6 J	12 J
MTBE	0.78 J	2.7 J
Chloroform	UJ	UJ

Sample Location	III
Date	9/20/2018
Depth (feet bgs)	85
PCE	3.4
TCE	1.8
CIS-1,2-DCE	5.4
MTBE	U
Chloroform	0.34 J

Sample Location	DT1G		
Date	9/21/2018		
Depth (feet bgs)	75	85	95
PCE	8.5 J	29 J	54 J
TCE	2.1 J	2.3 J	3.1 J
CIS-1,2-DCE	2.1 J	2.6 J	2.8 J
MTBE	UJ	0.48 J	0.87 J
Chloroform	UJ	UJ	UJ

Sample Location	SSS			
Date	9/20/2018			
Depth (feet bgs)	55	65	85	95
PCE	5.9	6.4	1.4	4.6
TCE	3.9	4.9	0.89 J	2.5
CIS-1,2-DCE	6.6	10	12.0	7.3
MTBE	U	U	1.6	4.6
Chloroform	0.56 J	9.9	U	U

Sample Location	DT1F
Date	9/24/2018
Depth (feet bgs)	65
PCE	11 J
TCE	3.3 J
CIS-1,2-DCE	U
MTBE	U
Chloroform	U

Sample Location	DT2C
Date	9/21/2018
Depth (feet bgs)	75
PCE	0.78 J
TCE	5
CIS-1,2-DCE	4.6
MTBE	6.7
Chloroform	U

Sample Location	DT2E				
Date	9/25/2018				
Depth (feet bgs)	25	55	65	75	85
PCE	1.2 J	44 J	64 J	39 J	37 J
TCE	3.7 J	9.8 J	19 J	11 J	2.1 J
CIS-1,2-DCE	27 J	24 J	59 J	59 J	6.2 J
MTBE	0.17 J	5 J	22 J	15 J	1.9 J
Chloroform	U	U	U	U	U

U

YY

EEE

RRR

LEGEND:

U — DISCRETE–DEPTH GROUNDWATER SAMPLING LOCATION

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGA, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

D&B ENGINEERS AND ARCHITECTS, P.C.

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

OFF-SITE DISCRETE DEPTH GROUNDWATER SAMPLE RESULTS EXCEEDING SCGs

APPROXIMATE SCALE: 1"=720'

FIGURE 4-4

As shown in Table 4-2 and Figure 4-4, seventeen of the fifty-four samples collected exhibited concentrations of PCE above its NYSDEC Class GA SCG. Additionally, seven of the fifty-four samples collected exhibited the presence of TCE at concentrations above its Class GA SCG. Sixteen samples collected exhibited the presence of cis-1,2-dichloroethylene exceeding its Class GA SCG. Two samples collected exhibited the presence of MTBE exceeding its Class GA SCG. One sample collected exhibited the presence of chloroform exceeding its Class GA SCG.

Concentrations of PCE ranged from not detected to a high of 94 ug/l. Concentrations of TCE ranged from not detected to a high of 60 ug/l. Concentrations of cis-1,2-DCE ranged from not detected to a high of 180 ug/l. Concentrations of MTBE ranged from not detected to a high of 22 ug/l. Concentrations of chloroform ranged from not detected to a high of 9.9 ug/l.

4.3 Soil Vapor Intrusion Evaluation (TPCCC)

A total of eight air samples were collected for volatile organic compound (VOC) analysis, including: two sub-slab soil vapor samples (SV-1 and SV-2), five indoor air samples (Basement, C-1, C-2, C-3 and Office), and one outdoor ambient air sample (Outside) at the Teacher's Pets Child Care Center. Sub-slab soil vapor, indoor air, and outdoor ambient air samples were analyzed for VOCs via USEPA Method TO-15. Analytical data summary tables are provided in Appendix C and Figure 3-2 depicts the locations of the samples collected.

Several VOCs were detected in all air samples collected. The concentrations of VOCs detected were fairly uniform throughout all the samples. Indoor air and sub-slab soil vapor samples were compared to the decision matrices and air guideline values provided by the NYSDOH. No VOC compounds from the NYSDOH Soil Vapor/Indoor Air Matrices A through C were detected at concentrations that would require additional actions to address human exposures. Additionally, no VOC compounds were detected at concentrations exceeding their respective air guideline values.

4.4 Soil Vapor Extraction Pilot Test

The objective of the SVE pilot test was to gather information necessary to design a SVE system to address remaining soil contamination at the Site, as well as to provide for vapor mitigation at the one on-site structure. A series of pilot tests were conducted utilizing a portable regenerative blower to induce negative pressure at the SVE well at various flow rates (20 CFM, 40 CFM, 60 CFM, and 80 CFM) to establish effective SVE radius of influence.

Vacuum response measurements were collected at approximately 15 minute intervals throughout the pilot test from the five permanent soil vapor monitoring points (SVEMP-1 through SVEMP-5), five temporary sub-slab vapor points (VP-1 through VP-5) and seven on-site groundwater monitoring wells (MW-02S, MW-03S, MW-05S, MW-07S, MW-08S, MW-09S and MW-10S) which range in distance from approximately 10 to 65 feet away from the SVE well. The pilot test was conducted over a period of one day utilizing various flow rates and operating pressures as described above. A summary of the vacuum response readings collected from the monitoring locations during the evaluation, corresponding to various air flow rates and vacuum applied at the wellhead is provided in Appendix G.

In general, air flow rates and vacuum responses remained relatively constant at the SVE well during each step of the evaluation. Upon reviewing the vacuum response data set it was determined the limited vacuum response observed at the sub-slab vapor points would not be effective for vapor mitigation at the on-site structure by utilizing surrounding SVE wells; therefore, further evaluation of this data is not provided. Additionally, as the vacuum response was much more evenly distributed at the soil vapor monitoring points compared to the groundwater monitoring wells, the monitoring point data only was utilized for the analysis presented below.

The ROI for each flow rate was calculated by plotting the measured vacuum response in each soil vapor monitoring point and the distance from the SVE well to the soil vapor monitoring points on a semi-log graph. The distance from the SVE well to the soil vapor monitoring points was placed on the logarithmic scale and the measured vacuum response was placed on the arithmetic scale for each flow rate. A best-fit line was placed on each graph. The distance where

the vacuum response was -0.1 inches of water was considered to be within the zone of influence. ROI graphs are presented as Appendix G. Based on the test data, the approximate ROI for the SVE well was 7 feet for the 20 SCFM test, 27 feet for the 40 SCFM test, 35 feet for the 60 SCFM test and 43 feet for the 80 SCFM test.

The analytical results from the vapor sample collected during the 40 SCFM test indicated concentrations of total volatile organic compounds (TVOCs) were 138,928 µg/m^3. Based on an average air discharge flow rate of 40 SCFM and the TVOC concentration detected in the vapor sample collected during the test, the TVOC discharge rate would be approximately 0.0208 lbs/hr. A summary of the vapor discharge results is provided in Appendix C.

4.5 Data Usability Summary Report

A total of 67 groundwater samples, 9 air/soil vapor samples, 1 field duplicate, 4 trip blanks and 1 field blank were collected for analysis as part of the remedial investigation completed at the 920 Wantagh Ave, Town of Hempstead, New York Site between September 12, 2018 and November 19, 2018. Air samples were submitted to Test America Laboratories, Inc. located in South Burlington, Vermont for analysis of Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) method TO-15. Groundwater samples were submitted to Test America Laboratories, Inc. located in Amherst, NY, for analysis of VOCs by USEPA method 8620C; selected samples were also analyzed for 1,4-Dioxane by USEPA method 8270D SIM. In addition, seven groundwater samples were submitted to Test America Laboratories, Inc. located in Sacramento, California for analysis of Per- and Poly-Fluorinated Alkyl Substances (PFAs) by USEPA method 537.

Test America Laboratories, Inc. provided 8 NYSDEC Analytical Services Protocol (ASP) Category B Sample Deliverable Group (SDG) laboratory packages [200-45587 (air VOC data), 200-46352 (air VOC data), 320-43822 (water PFAs data), 460-168374 (water 1,4-dioxane data), 480-141888 (water VOC data), 480-142369 (water VOC data), 480-142708 (water VOC data) and 480-142747 (water VOC data)] for review. These data packages were reviewed by Ms. Donna Brown, D&B's Quality Assurance/Quality Control (QA/QC) Officer. Ms.

Brown meets the New York State Department of Environmental Conservation (NYSDEC) requirements of a data validator as listed in the DER-10 Technical Guidance for Site Investigation and Remediation, dated June 2010. The review of the data was conducted in accordance with NYSDEC 7/05 ASP QA/QC requirements, as well as DER-10.

All samples were analyzed using the proper methods and within the method-specified holding times, in accordance with the 2005 NYSDEC ASP. The internal standard area counts and spike recoveries were within QC limits except where noted below. Initial and continuing calibrations were analyzed at the method specified frequency and were within QC limits. Raw data confirmed the reported sample results. The following sample results were qualified based on validation of the data:

- Tetrachloroethene exceeded the calibration range in SVE-Effluent and was reanalyzed at a secondary dilution. The secondary dilution was reported for tetrachloroethene (D) in SVE-Effluent.

- Cis-1,2-dichloroethene exceeded the calibration range in sample O (20) and was reanalyzed at a secondary dilution. The secondary dilution was reported for cis-1,2-dichloroethene (D) in sample O (20).

- Perfluorohexanesulfonic acid (PFHxS) was detected in the Equipment Blank and method blanks. Perfluorohexanesulfonic acid (PFHxS) was qualified as non-detect (UB) in samples MW-07I, MW-08S and MW-09S. The "B" qualifier was removed from samples Blind Duplicate, MW-05S, MW-11S, MW-07S and MW-10S because the results were more than ten times that found in the blank.

- An "E" flag was generated based upon the bias corrected on the recovery of the 1,4-dioxane-d8 isotope in samples MW-08S, MW-11S and MW-09S. The "E" qualifier was removed from samples MW-08S, MW-11S and MW-09S and 1,4-dioxane was qualified as estimated (J).

- The following samples had significant headspace: XX(85), XX(75), XX(65), DT1G (95), DT1G (85), DT1G (75), DT2C (65), DT2C (55), RRR (65) and III (95). The following samples had pH greater than 2: XX(85), III (65), DT1G (85), RRR (65), RRR (55), RRR (35), III (95) and SSS (75). All VOC results were qualified as estimated (J/UJ) in samples XX(85), XX(75), XX(65), DT1G (95), DT1G (85), DT1G (75), DT2C (65), DT2C (55), RRR (65), RRR (55), RRR (35), III (95), III (65), and SSS (75).

- 2-Butanone, acetone and benzene were detected in the TRIP BLANK. The following were qualified as non-detect (UB): 2-butanone in samples RRR (65), RRR (45), RRR

(35), III (95), III (85), III (75), III (55), III (45), III (35), SSS (95), SSS (85) and SSS (75); acetone in samples RRR (65), RRR (55), RRR (45), RRR (35), III (95), III (85), III (75), III (65), III (55), III (45), III (35), SSS (95), SSS (85), SSS (75), DT1G (95), DT1G (85), DT1G (75), DT2C (75), DT2C (65) and DT2C (55); benzene in samples RRR (65) and III (95).

- The percent recoveries (%Rs) were above the QC limits in the MS, MSD and or LCS for numerous VOCs. The following results were above the reporting limit and were qualified as estimated (J): tetrachloroethene in samples DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), QR (15), O (25), O (20) and O (15); trichloroethene in samples DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (25), QR (25), QR (20), O (25), O (20) and O (15); 1,1-dichloroethane in samples SSS (85), DT2E (85) and DT2E (75); cis-1,2-dichloroethene in samples DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), O (25), O (20) and O (15); methyl tert-butyl ether in samples DT2E (85), DT2E (75), DT2E (65) and DT2E (55); trans-1,2-dichloroethene in samples QR (25) and O (20); and vinyl chloride in samples O (20) and MW-07S.

Based on the findings of the data validation process, the results have been deemed valid and usable for environmental assessment purposes. Copies of the data validation checklists are provided in Appendix F.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The following conclusions are based on the finding of this investigation/evaluation performed at the Site.

- Monitoring Well Groundwater Samples: Monitoring well groundwater samples detected PCE exceeding NYSDEC Class GA SCG values at six of the thirteen groundwater sample locations and TCE exceeding NYSDEC Class GA SCG values at four of the thirteen sample locations. Cis-1,2-dichloroethylene was detected exceeding SCGs in four monitoring well groundwater samples and VC was detected exceeding SCGs in one monitoring well sample. Additionally, chloroform was detected exceeding SCGs in one monitoring well sample. The highest concentrations of VOCs were detected in shallow groundwater, within the vicinity of a former dry well and hydraulically downgradient of the structure within the groundwater samples collected from monitoring wells MW-03S, MW-07S and MW-11S. The elevated concentrations of these compounds indicates that source material remains on-site in the vicinity of the former dry well.

- Off-Site Discrete Groundwater Samples: Discrete depth groundwater samples detected PCE exceeding NYSDEC Class GA SCG values at seventeen of the fifty-four groundwater sample locations and TCE exceeding NYSDEC Class GA SCG values at seven of the fifty-four groundwater sample locations. Cis-1,2-DCE was detected exceeding SCGs in sixteen of the fifty-four discrete depth groundwater samples and MTBE was detected exceeding SCGs in two of the fifty-four groundwater samples. Additionally, chloroform was detected exceeding SCGs in one of the fifty-four groundwater samples. The highest concentrations of VOCs were detected in shallow groundwater at boring location O, closest to the site. Additionally, concentrations exceeding SCGs were detected over a mile downgradient of the Site. These results are consistent with the findings of the RI report.

- Soil Vapor Intrusion Evaluation (TPCCC): Several VOCs were detected in the sub-slab soil vapor, indoor air and outdoor ambient air samples. No VOC compounds from the NYSDOH Soil Vapor/Indoor Air Matrices A through C were detected at concentrations that would require additional actions to address human exposures. Additionally, no VOC compounds were detected at concentrations exceeding their respective air guideline values.

- SVE Pilot Test:

  In general, air flow rates and vacuum responses remained relatively constant at the SVE well during each step of the evaluation. Upon reviewing the vacuum response data set it was determined the limited vacuum response observed at the sub-slab vapor points

would not be effective for vapor mitigation at the on-site structure by utilizing surrounding SVE wells; therefore, further evaluation of this data was not completed. Additionally, as the vacuum response was much more evenly distributed at the soil vapor monitoring points compared to the groundwater monitoring wells, the monitoring point data only was utilized for the analysis.

The approximate ROI for the SVE well was 7 feet for the 20 SCFM test, 27 feet for the 40 SCFM test, 35 feet for the 60 SCFM test and 43 feet for the 80 SCFM test. Additionally, the analytical results from the vapor sample collected during the 40 SCFM test indicated concentrations of total TVOCs were 138,928 µg/m3. Based on an average air discharge flow rate of 40 SCFM and the TVOC concentration detected in the vapor sample collected during the test, the TVOC discharge rate would be approximately 0.0208 lbs/hr. The location of the vapor extraction well is in close proximity to the location of the identified on-site groundwater contamination; however, the concentrations identified in the soil vapor exhaust sample are not indicative of source material in the vadose zone.

5.2 Recommendations

Based on the results of the investigation/evaluation performed, residual groundwater contamination remains on-site. As the source of the remaining on-site groundwater contamination is in vicinity of a former dry well and hydraulically downgradient of this structure, it is recommended to perform limited treatment of the groundwater in this area. As the concentrations identified in the soil vapor exhaust sample are not indicative of source material in the vadose zone, and as it was determined that a soil vapor extraction system would not be effective at reducing soil vapor intrusion within the building, it is recommended not to install an air sparge with soil vapor extraction system at the Site. In lieu of implementation of the air sparge with soil vapor extraction system remedy, it is recommended to evaluate in-situ chemical oxidation to treat the identified contamination on-site through the implementation of a pilot study. In addition, it is recommended that a SSDS system be installed for the on-site building.

As limited off-site groundwater contamination was identified, it is recommended that permanent monitoring wells be installed in the vicinity of boring location O to provide for long-term monitoring of the identified groundwater contamination.

With regard to the TPCC, no additional actions are recommended at this time; however, the results of the soil vapor intrusion study should be provided to both the facility operator and owner.

APPENDIX A

GROUNDWATER ELEVATION DATA AND FIGURES

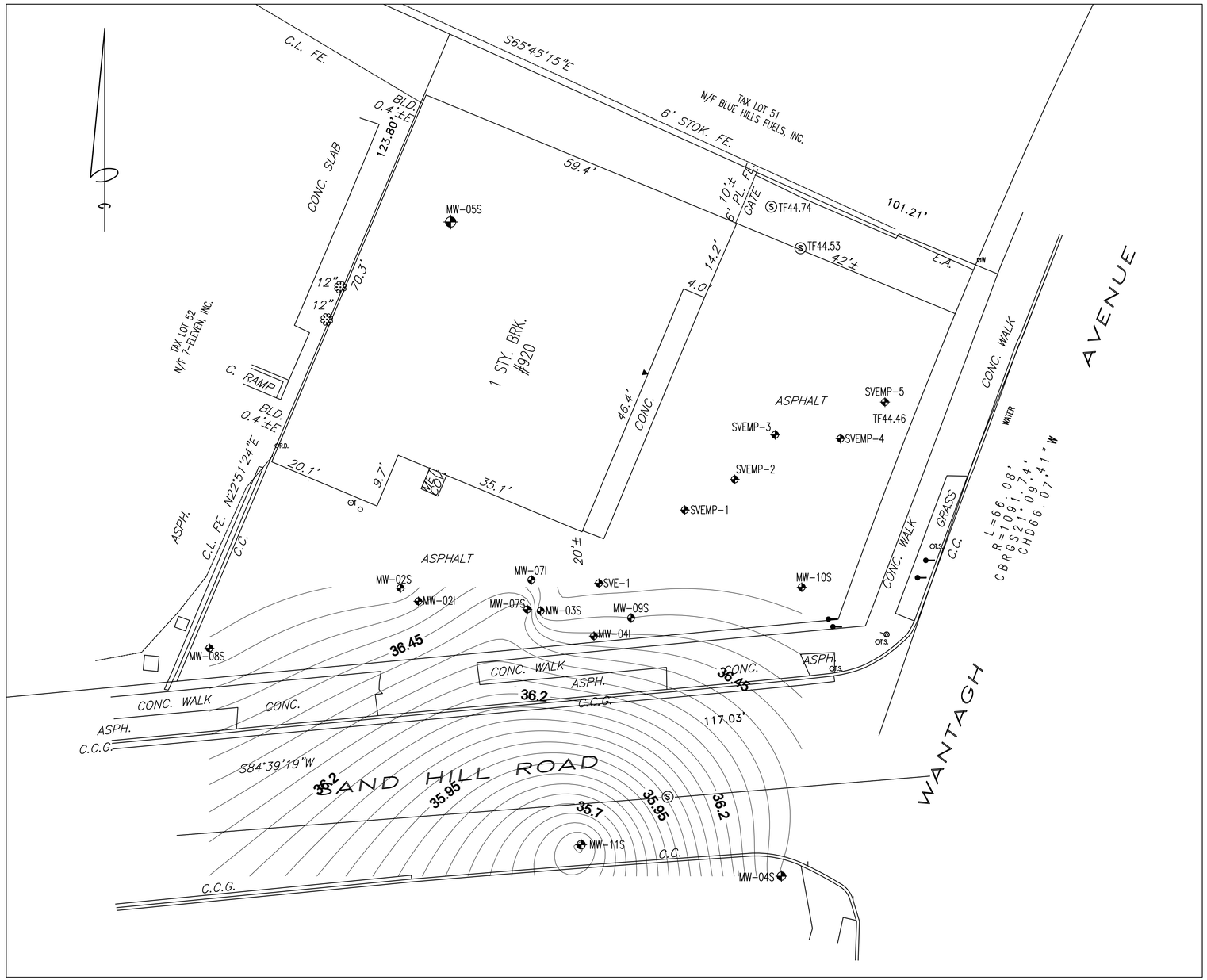
WANTAGH CLEANERS SITE
PRE-DESIGN INVESTIGATION

Table A-1: Groundwater Elevation Measurements

WELL	LOCATION		GROUND ELEVATION (U.S. Survey Ft.)	TOP OF PVC RISER (U.S. Survey Ft.)	DATE 9/24/2018		DATE 2/12/2019	
	NORTH	EAST			DTW	ELEV	DTW	ELEV
MW-01S	195567.994	1121131.694	43.85	43.6	8.98	34.62	6.26	37.34
MW-02S	195259.841	1121119.773	43.57	43.33	9.63	33.70	6.69	36.64
MW-02I	195257.508	1121122.919	43.52	43.22	9.63	33.59	6.65	36.57
MW-03S	195255.823	1121144.46	43.77	43.41	9.73	33.68	6.81	36.60
MW-04S	195209.076	1121186.884	44.39	44.06	10.46	33.60	7.65	36.41
MW-04I	195251.383	1121153.851	43.80	43.56	9.71	33.85	6.71	36.85
MW-05S	195324.35	1121128.587	45.51	45.26	11.44	33.82	--	--
MW-07S	195256.075	1121142.12	43.76	43.42	9.91	33.51	7.05	36.37
MW-07I	195261.277	1121142.819	44.03	43.75	9.75	34.00	6.81	36.94
MW-08S	195249.25	1121086.105	43.17	42.85	9.10	33.75	6.21	36.64
MW-09S	195254.572	1121160.405	44.07	43.80	10.15	33.65	7.25	36.55
MW-10S	195260.003	1121190.472	44.46	44.20	10.49	33.71	7.57	36.63
MW-11S	195214.601	1121151.585	43.47	43.14	9.42	33.72	7.66	35.48

NOTES

-- Not measured
U.S.: United States
Ft.: Feet
DTW: Depth to water
ELEV: Elevation
Vertical Datum: North American Vertical Datum 88
Horizontal Datum: North American Datum 83



MW-COORDINATES/ELEVATIONS (NAD83/NAVD88)
TF DENOTES TOP CASING ELEVATION
TP DENOTES TOP OF PIPE ELEVATION (NORTH SIDE)

Northing(Y)	Easting(X)	Elev(TF)	Elev(TP)	Description
195260.6930	1121154.7420	44.30	43.84	MW-SVE1
195251.3830	1121153.8510	43.80	43.56	MW-04I
195248.7580	1121150.1970	43.56		MW-C
195249.9730	1121142.7160	43.61		MW-B
195256.0750	1121142.1200	43.76	43.42	MW-07S
195255.8230	1121144.4600	43.77	43.41	MW-03S
195261.2770	1121142.8190	44.03	43.75	MW-07I
195263.0960	1121179.7520	44.51		MW-D
195254.5720	1121160.4050	44.07	43.80	MW-09S
195250.2670	1121135.1710	43.44		MW-A
195259.8410	1121119.7730	43.57	43.33	MW-02S
195257.5080	1121122.9190	43.52	43.22	MW-02I
195260.0030	1121190.4720	44.46	44.20	MW-10S
195324.3500	1121128.5870	45.51	45.26	MW-05S
195209.0760	1121186.8840	44.39	44.06	MW-04S
195214.6010	1121151.5850	43.47	43.14	MW-11S
195567.9940	1121131.6940	43.85	43.60	MW-01S
195292.5700	1121205.0420	44.54	44.30	MW-SVEMP-5
195286.2850	1121197.2480	44.58	44.25	MW-SVEMP-4
195286.7450	1121185.7310	44.68	44.38	MW-SVEMP-3
195278.8900	1121178.6660	44.62	44.46	MW-SVEMP-2
195273.6350	1121169.7690	44.76	44.58	MW-SVEMP-1
195249.2500	1121086.1050	43.17	42.85	MW-08S

NOTE:
-THIS SURVEY IS FOR MUNICIPAL PURPOSES ONLY NOT INTENDED FOR TITLE CONVEYANCE.
-ELEVATIONS REFER TO NAVD88 VERTICAL DATUM
-COORDINATES REFER TO NAD83 (LIZONE)

LEGEND

◆ MONITORING WELL

NOTES:
-UTILITIES SHOWN ARE PER FIELD OBSERVATIONS, PARTIAL MARKOUTS AND AVAILABLE RECORDS AND ARE NOT GUARANTEED.
- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (LIZONE)

Source: Survey completed by American Engineering & Land Surveying P.C. on September 19, 2018.

D&B ENGINEERS AND ARCHITECTS, P.C.

WANTAGH CLEANERS OU2 SITE
TOWN OF HEMPSTEAD

GROUNDWATER CONTOUR MAP

0 10 20 30
SCALE 1"=10'

APPENDIX A-1

APPENDIX B

FIELD FORMS

DISCRETE OFF-SITE GROUNDWATER
SAMPLE INFORMATION RECORDS

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/24/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1F (45)

Field Sample I.D. Number: DT1F (45) **Time** 4:20 pm

Weather Partly Cloudy **Temperature** 60-65° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 45 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.82 **Turbidity (NTUs)** 1000 **ORP** -283

Temperature (ºC) 16.39 **Specific Conductance (ms/cm)** 0.450

Dissolved Oxygen (mg/l) 0.38

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/24/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1F (55)

Field Sample I.D. Number: DT1F (55) **Time** 3:40 pm

Weather Partly Cloudy **Temperature** 60-65° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown Tan **pH** 6.67 **Turbidity (NTUs)** 1000 **ORP** -83

Temperature (ºC) 16.13 **Specific Conductance (ms/cm)** 0.441

Dissolved Oxygen (mg/l) 0.64

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/24/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1F (65)

Field Sample I.D. Number: DT1F (65) **Time** 2:50 pm

Weather Partly Cloudy **Temperature** 60-65° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown Tan **pH** 6.51 **Turbidity (NTUs)** 1000 **ORP** -931

Temperature (ºC) 17.38 **Specific Conductance (ms/cm)** 0.397

Dissolved Oxygen (mg/l) 0.68

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1G (75)

Field Sample I.D. Number: DT1G (75) **Time** 9:30 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown Tan **pH** 7.05 **Turbidity (NTUs)** 1000 **ORP** -138

Temperature (ºC) 17.72 **Specific Conductance (ms/cm)** 0.574

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1G (85)

Field Sample I.D. Number: DT1G (85) **Time** 9:15 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 85 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.25 **Turbidity (NTUs)** 1000 **ORP** -170

Temperature (ºC) 18.00 **Specific Conductance (ms/cm)** 0.679

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT1G (95)

Field Sample I.D. Number: DT1G (95) **Time** 9:00 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 95 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Tan cloudy silty **pH** 7.01 **Turbidity (NTUs)** 1000 **ORP** -128

Temperature (ºC) 18.58 **Specific Conductance (ms/cm)** 0.670

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2C (55)

Field Sample I.D. Number: DT2C (55) **Time** 12:10 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.23 **Turbidity (NTUs)** 1000 **ORP** -168

Temperature (ºC) 18.03 **Specific Conductance (ms/cm)** 0.442

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Collected MS/MSD

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2C (65)

Field Sample I.D. Number: DT2C (65) **Time** 11:50 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.46 **Turbidity (NTUs)** 1000 **ORP** -174

Temperature (ºC) 18.52 **Specific Conductance (ms/cm)** 0.407

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/21/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2C (75)

Field Sample I.D. Number: DT2C (75) **Time** 11:35 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.87 **Turbidity (NTUs)** 1000 **ORP** -89

Temperature (ºC) 20.77 **Specific Conductance (ms/cm)** 0.362

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (15)

Field Sample I.D. Number: DT2E (15) **Time** 11:30 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 15 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.88 **Turbidity (NTUs)** 1000 **ORP** -310

Temperature (ºC) 19.92 **Specific Conductance (ms/cm)** 0.349

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Collected MS/MSD.

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (25)

Field Sample I.D. Number: DT2E (25) **Time** 11:20 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.67 **Turbidity (NTUs)** 1000 **ORP** -424

Temperature (ºC) 18.12 **Specific Conductance (ms/cm)** 0.853

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (35)

Field Sample I.D. Number: DT2E (35) **Time** 11:00 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 35 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.86 **Turbidity (NTUs)** 1000 **ORP** -423

Temperature (ºC) 17.61 **Specific Conductance (ms/cm)** 0.733

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (45)

Field Sample I.D. Number: DT2E (45) **Time** 10:45 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 45 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.80 **Turbidity (NTUs)** 1000 **ORP** -414

Temperature (ºC) 17.36 **Specific Conductance (ms/cm)** 0.661

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (55)

Field Sample I.D. Number: DT2E (55) **Time** 10:25 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.57 **Turbidity (NTUs)** 1000 **ORP** -407

Temperature (ºC) 17.76 **Specific Conductance (ms/cm)** 0.451

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (65)

Field Sample I.D. Number: DT2E (65) **Time** 10:10 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.00 **Turbidity (NTUs)** 1000 **ORP** -137

Temperature (ºC) 18.27 **Specific Conductance (ms/cm)** 0.456

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (75)

Field Sample I.D. Number: DT2E (75) **Time** 9:30 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.47 **Turbidity (NTUs)** 1000 **ORP** -113

Temperature (ºC) 17.77 **Specific Conductance (ms/cm)** 0.372

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: DT2E (85)

Field Sample I.D. Number: DT2E (85) **Time** 9:10 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 85 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.31 **Turbidity (NTUs)** 1000 **ORP** -232

Temperature (ºC) 17.60 **Specific Conductance (ms/cm)** 0.363

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (25)

Field Sample I.D. Number: EEE (25) **Time** 4:58 PM

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.97 **Turbidity (NTUs)** +1000 **ORP** 43

Temperature (ºC) 17.47 **Specific Conductance (ms/cm)** 0.263

Dissolved Oxygen (mg/l) 3.86

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (35)

Field Sample I.D. Number: EEE (35) **Time** 4:35 pm

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 35 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.22 **Turbidity (NTUs)** +1000 **ORP** -81

Temperature (ºC) 18.20 **Specific Conductance (ms/cm)** 0.537

Dissolved Oxygen (mg/l) 0.35

Constituents Sampled

VOCs

Remarks:

Collected MS/MSD.

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (45)

Field Sample I.D. Number: EEE (45) **Time** 4:15 pm

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 45 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.15 **Turbidity (NTUs)** +1000 **ORP** -85

Temperature (ºC) 17.17 **Specific Conductance (ms/cm)** 0.463

Dissolved Oxygen (mg/l) 1.17

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (55)

Field Sample I.D. Number: EEE (55) **Time** 3:58 pm

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.48 **Turbidity (NTUs)** +1000 **ORP** -122

Temperature (ºC) 17.05 **Specific Conductance (ms/cm)** 0.455

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (65)

Field Sample I.D. Number: EEE (65) **Time** 3:35 PM

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 8.27 **Turbidity (NTUs)** +1000 **ORP** -370

Temperature (ºC) 18.87 **Specific Conductance (ms/cm)** 0.476

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: EEE (75)

Field Sample I.D. Number: EEE (75) **Time** 3:10 PM

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.73 **Turbidity (NTUs)** +1000 **ORP** 45

Temperature (ºC) 18.90 **Specific Conductance (ms/cm)** 0.494

Dissolved Oxygen (mg/l) 1.73

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (25)

Field Sample I.D. Number: III (25) **Time** 12:25 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.86 **Turbidity (NTUs)** 1000 **ORP** -38

Temperature (ºC) 15.37 **Specific Conductance (ms/cm)** 0.192

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (35)

Field Sample I.D. Number: III (35) **Time** 12:10 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 35 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.25 **Turbidity (NTUs)** 1000 **ORP** -95

Temperature (ºC) 15.43 **Specific Conductance (ms/cm)** 0.102

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (45)

Field Sample I.D. Number: III (45) **Time** 12:00 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 45 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.40 **Turbidity (NTUs)** 1000 **ORP** -101

Temperature (ºC) 14.95 **Specific Conductance (ms/cm)** 0.211

Dissolved Oxygen (mg/l) 0.13

Constituents Sampled

VOCs

Remarks:

Collected MS/MSD.

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (55)

Field Sample I.D. Number: III (55) **Time** 11:40 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.98 **Turbidity (NTUs)** 1000 **ORP** -226

Temperature (ºC) 15.62 **Specific Conductance (ms/cm)** 0.311

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (65)

Field Sample I.D. Number: III (65) **Time** 11:10 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 8.20 **Turbidity (NTUs)** 1000 **ORP** -260

Temperature (ºC) 17.33 **Specific Conductance (ms/cm)** 0.329

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (75)

Field Sample I.D. Number: III (75) **Time** 10:55 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 7.48 **Turbidity (NTUs)** 1000 **ORP** -149

Temperature (ºC) 15.40 **Specific Conductance (ms/cm)** 0.236

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (85)

Field Sample I.D. Number: III (85) **Time** 10:35 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 85 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 8.22 **Turbidity (NTUs)** 1000 **ORP** -227

Temperature (ºC) 17.51 **Specific Conductance (ms/cm)** 0.322

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: III (95)

Field Sample I.D. Number: III (95) **Time** 9:55 am

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 95 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 8.27 **Turbidity (NTUs)** 1000 **ORP** -277

Temperature (ºC) 19.69 **Specific Conductance (ms/cm)** 0.333

Dissolved Oxygen (mg/l) 0.20

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: O(15)

Field Sample I.D. Number: O(15) **Time** 3:55 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 15 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.75 **Turbidity (NTUs)** 480 **ORP** 21

Temperature (ºC) 19.93 **Specific Conductance (ms/cm)** 0.550

Dissolved Oxygen (mg/l) 0.56

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: O (20)

Field Sample I.D. Number: O (20) **Time** 3:40 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 20 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.69 **Turbidity (NTUs)** 583 **ORP** -367

Temperature (ºC) 19.25 **Specific Conductance (ms/cm)** 0.550

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: O(25)

Field Sample I.D. Number: O(25) **Time** 3:25 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.69 **Turbidity (NTUs)** 1000 **ORP** -176

Temperature (ºC) 19.03 **Specific Conductance (ms/cm)** 0.285

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: QR (15)

Field Sample I.D. Number: QR (15) **Time** 2:55 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 15 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.08 **Turbidity (NTUs)** 1000 **ORP** 121

Temperature (ºC) 18.83 **Specific Conductance (ms/cm)** 0.572

Dissolved Oxygen (mg/l) 5.32

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: QR (20)

Field Sample I.D. Number: QR (20) **Time** 2:25 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 20 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.27 **Turbidity (NTUs)** 543 **ORP** 72

Temperature (ºC) 18.57 **Specific Conductance (ms/cm)** 0.658

Dissolved Oxygen (mg/l) 3.57

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: QR (25)

Field Sample I.D. Number: QR (25) **Time** 2:10 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.59 **Turbidity (NTUs)** 1000 **ORP** 71

Temperature (ºC) 17.21 **Specific Conductance (ms/cm)** 0.599

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/19/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: RRR (35)

Field Sample I.D. Number: RRR (35) **Time** 3:10 pm

Weather Partly cloudy **Temperature** 61-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 35 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 6.99 **Turbidity (NTUs)** 948 **ORP** -81

Temperature (ºC) 27.89 **Specific Conductance (ms/cm)** 0.523

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/19/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: RRR (45)

Field Sample I.D. Number: RRR (45) **Time** 2:55 pm

Weather Partly cloudy **Temperature** 61-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 45 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 7.11 **Turbidity (NTUs)** +1000 **ORP** -104

Temperature (ºC) 27.35 **Specific Conductance (ms/cm)** 0.512

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/19/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: RRR (55)

Field Sample I.D. Number: RRR (55) **Time** 2:25 pm

Weather Partly cloudy **Temperature** 61-77° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.31 **Turbidity (NTUs)** +1000 **ORP** -95

Temperature (ºC) 25.34 **Specific Conductance (ms/cm)** 0.463

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/19/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: RRR (65)

Field Sample I.D. Number: RRR (65) **Time** 2:00 pm

Weather Partly cloudy **Temperature** 61-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Silty brown **pH** 7.58 **Turbidity (NTUs)** +1000 **ORP** -161

Temperature (ºC) 20.98 **Specific Conductance (ms/cm)** 0.498

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: SSS (55)

Field Sample I.D. Number: SSS (55) **Time** 4:10 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 55 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.94 **Turbidity (NTUs)** 1000 **ORP** -86

Temperature (ºC) 16.74 **Specific Conductance (ms/cm)** 0.482

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: SSS (65)

Field Sample I.D. Number: SSS (65) **Time** 3:55 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 65 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.97 **Turbidity (NTUs)** 1000 **ORP** -109

Temperature (ºC) 17.23 **Specific Conductance (ms/cm)** 0.602

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: SSS (75)

Field Sample I.D. Number: SSS (75) **Time** 3:40 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.66 **Turbidity (NTUs)** 1000 **ORP** -210

Temperature (ºC) 17.85 **Specific Conductance (ms/cm)** 0.435

Dissolved Oxygen (mg/l) 1.65

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: SSS (85)

Field Sample I.D. Number: SSS (85) **Time** 3:30 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil _____ **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 85 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.97 **Turbidity (NTUs)** 1000 **ORP** -113

Temperature (ºC) 18.63 **Specific Conductance (ms/cm)** 0.447

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/20/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: SSS (95)

Field Sample I.D. Number: SSS (95) **Time** 3:10 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 95 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.53 **Turbidity (NTUs)** 1000 **ORP** -31

Temperature (ºC) 18.73 **Specific Conductance (ms/cm)** 0.405

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: U (20)

Field Sample I.D. Number: U (20) **Time** 5:35 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 20 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.97 **Turbidity (NTUs)** 1000 **ORP** -46

Temperature (ºC) 18.81 **Specific Conductance (ms/cm)** 0.964

Dissolved Oxygen (mg/l) 1.51

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/25/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: U (25)

Field Sample I.D. Number: U (25) **Time** 5:25 pm

Weather Cloudy **Temperature** 63-72° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 7.05 **Turbidity (NTUs)** 1000 **ORP** 7

Temperature (ºC) 21.87 **Specific Conductance (ms/cm)** 0.686

Dissolved Oxygen (mg/l) 1.69

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/12/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: XX (65)

Field Sample I.D. Number: XX (65) **Time** 3:31 pm

Weather Overcast with chance of rain **Temperature** 69-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A **Measurement Method** --

Depth of Sample Inlet 65 ft. **Measurement Method** Water Level Meter

Volume Removed N/A **Removal Method** Low flow peri-pump

Field Test Results

Color -- **pH** 7.63 **Turbidity (NTUs)** +1000 **ORP** -146

Temperature (ºC) 20.15 **Specific Conductance (ms/cm)** 0.484

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/12/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: XX (75)

Field Sample I.D. Number: XX (75) **Time** 3:10 pm

Weather Overcast with chance of rain **Temperature** 69-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 75 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 8.14 **Turbidity (NTUs)** +1000 **ORP** -284

Temperature (ºC) 18.27 **Specific Conductance (ms/cm)** 0.481

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/12/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: XX (85)

Field Sample I.D. Number: XX (85) **Time** 1:57 pm

Weather Overcast with chance of rain **Temperature** 69-77° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 85 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Gray-Tan **pH** 7.69 **Turbidity (NTUs)** +1000 **ORP** -191

Temperature (ºC) 19.67 **Specific Conductance (ms/cm)** 0.746

Dissolved Oxygen (mg/l) 0.00

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: YY (20)

Field Sample I.D. Number: YY (20) **Time** 12:23 pm

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 20 ft.

Removal Method Low flow peri-pump

Field Test Results

Color -- **pH** 6.93 **Turbidity (NTUs)** +1000 **ORP** -40

Temperature (ºC) 19.16 **Specific Conductance (ms/cm)** 0.466

Dissolved Oxygen (mg/l) 1.31

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: YY (25)

Field Sample I.D. Number: YY (25) **Time** 12:10 pm

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 25 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Brown silty **pH** 6.81 **Turbidity (NTUs)** +1000 **ORP** 0

Temperature (ºC) 17.68 **Specific Conductance (ms/cm)** 0.584

Dissolved Oxygen (mg/l) 2.19

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

D&B ENGINEERS AND ARCHITECTS, P.C.

Date: 9/13/2018

SAMPLE INFORMATION RECORD

Site: Wantagh Cleaners, Wantagh, NY **Sample Crew:** Tara Judge

Sample Location/Well No.: YY (30)

Field Sample I.D. Number: YY (30) **Time** 12:00

Weather Partly cloudy **Temperature** 65-78° F

Sample Type:

Groundwater X **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water N/A

Depth of Sample Inlet 30 ft.

Removal Method Low flow peri-pump

Field Test Results

Color Tan silty **pH** 6.73 **Turbidity (NTUs)** +1000 **ORP** 14

Temperature (ºC) 17.36 **Specific Conductance (ms/cm)** 0.732

Dissolved Oxygen (mg/l) 2.30

Constituents Sampled

VOCs

Remarks:

Well Casing Volumes

GAL/FT	**1¼" = 0.077**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" =0.10	**2½" = 0.24**	**3½" = 0.50**	**6" = 1.46**

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-05S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.07 ft.
Initial static water level (from top of casing) ..... 10.63 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 6.44 ft. of water x 0.16 = 1.04 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.6 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	19.57	5.93	0.003	507	7.16	76
1,000	19.96	6.34	0.003	510	7.56	-10
2,000	20.12	6.62	0.003	529	7.76	-26
3,000	20.15	6.70	0.003	536	7.76	-34
4,000	20.20	6.66	0.003	530	7.82	-34
5,000	20.22	6.68	0.003	518	8.24	-35
6,000	19.89	6.64	0.278	104	3.82	-35
7,000	20.02	6.75	0.280	61.8	3.74	-41
8,000	20.06	6.77	0.281	34.6	3.64	-41
9,000	20.11	6.82	0.282	18.4	3.64	-44
10,000	20.12	6.83	0.282	13.0	3.65	-44

Sample ID: MW-05S
Sample Time: 8:10AM
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-07I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 57.68 ft.
Initial static water level (from top of casing) ..... 8.91 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 48.77 ft. of water x 0.16 = 7.94 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
4.22 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.03	6.94	0.406	10.8	4.82	-69
1,500	16.70	6.34	0.408	9.1	4.83	30
3,000	16.13	5.97	0.405	8.2	4.67	82
4,500	15.95	5.91	0.404	6.6	4.69	97
6,000	15.74	5.80	0.403	5.3	4.70	117
7,500	15.73	5.79	0.405	3.1	4.72	126
9,000	15.69	5.81	0.405	3.6	4.64	131
10,500	15.73	5.81	0.405	2.9	4.79	138
12,000	15.75	5.81	0.406	2	4.71	144
13,000	15.80	5.81	0.407	1.9	4.70	148
14,000	15.85	5.82	0.407	2	4.70	152
15,000	15.84	5.80	0.407	0.9	4.70	160
16,000	15.85	5.80	0.407	1.1	4.70	160

Sample ID: MW-07I
Sample Time: 10:20 am
Pump: Solnist Peri-pump
Flow Rate: 333 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-07S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 19.01 ft.
Initial static water level (from top of casing) ..... 9.15 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.86 ft. of water x 0.16 = 1.61 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
7.5 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.84	6.54	0.446	116	0.79	-51
1,000	18.99	6.55	0.447	325	0.61	-57
2,000	19.17	6.59	0.446	376	0.52	-67
3,000	19.20	6.59	0.447	141	0.50	-71
4,000	19.19	6.58	0.447	50.9	0.51	-71
5,000	19.20	6.58	0.443	25.3	0.45	-73
6,000	19.24	6.58	0.443	9.1	0.44	-74
7,000	19.21	6.58	0.442	11.6	0.41	-75
8,000	19.20	6.59	0.439	0.9	0.52	-78
9,000	19.20	6.59	0.440	0.5	0.62	-79
10,000	19.21	6.59	0.441	0.6	0.66	-78
11,000	19.18	6.59	0.440	1.0	0.59	-83
12,000	19.16	6.59	0.441	1.5	0.50	-80

Sample ID: MW-07S
Sample Time: 11:00 am
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-08S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.43 ft.
Initial static water level (from top of casing) ..... 8.30 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.13 ft. of water x 0.16 = 1.49 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
2.11 gal. >3 volumes: yes no X purged dry? yes no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.90	6.55	0.541	110	1.10	-78
1,000	18.95	6.54	0.540	105	1.11	-76
2,000	19.31	6.49	0.535	78.1	0.89	-70
3,000	19.65	6.46	0.515	47	0.60	-68
4,000	19.72	6.43	0.510	23.2	0.53	-67
5,000	16.67	6.44	0.509	19.9	0.51	-69
6,000	19.65	6.43	0.512	15.5	0.49	-68
7,000	19.63	6.42	0.513	13.3	0.49	-68
8,000	19.63	6.43	0.503	12.7	0.48	-69

Sample ID: MW-08S (MS/MSD collected)
Sample Time: 9:15 am
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane
Collected MS/MSD

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-09S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.50 ft.
Initial static water level (from top of casing) ..... 9.31 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.19 ft. of water x 0.16 = 1.49 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.9 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	15.93	6.78	0.229	34.7	5.47	20
1,000	15.92	6.73	0.225	18.3	5.25	40
2,000	15.92	6.72	0.225	15.5	5.18	43
3,000	15.95	6.68	0.226	10.9	5.13	50
4,000	15.95	6.65	0.225	11.4	5.12	56
5,000	15.96	6.67	0.226	10.4	5.05	62
6,000	15.98	6.66	0.226	9.3	5.01	68
7,000	15.98	6.67	0.226	9	4.93	70
8,000	15.99	6.65	0.225	0.0	4.87	75
9,000	16.00	6.65	0.226	0.0	4.84	80
10,000	15.99	6.65	0.226	0.0	4.83	79
11,000	15.99	6.65	0.226	0.0	4.86	81

Sample ID: MW-09S
Sample Time: 1:40 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-10S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.10 ft.
Initial static water level (from top of casing) ..... 9.65 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 8.45 ft. of water x 0.16 = 1.37 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.11 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.71	6.46	0.557	352	2.50	77
1000	18.52	6.43	0.584	194	1.45	85
2000	18.70	6.41	0.577	53.1	1.33	92
3000	18.81	6.41	0.571	33.9	1.31	95
4000	18.85	6.40	0.553	21.3	1.32	98
5000	18.88	6.38	0.546	12.1	1.31	102
6000	18.88	6.37	0.539	10.1	1.32	104
7000	18.88	6.35	0.533	8	1.37	107
8000	18.87	6.37	0.527	5.4	1.40	107

Sample ID: MW-10S
Sample Time: 2:20 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-11S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.41 ft.
Initial static water level (from top of casing) ..... 8.71 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.60 ft. of water x 0.16 = 1.56 gallons
3 in. casing: _____ ft. of water x 0.36 = _____ gallons
4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:
2.6 gal. >3 volumes: yes _____ no X purged dry? yes _____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.24	6.39	0.742	205	1.46	-39
1,000	18.25	6.41	0.740	108	1.47	-41
2,000	18.45	6.40	0.720	3.3	1.42	-52
3,000	18.51	6.43	0.697	4.1	1.18	-65
5,000	18.52	6.44	0.695	1	1.21	-66
6,000	18.55	6.44	0.709	1.3	1.20	-68
7,000	18.49	6.45	0.724	1.2	1.17	-72
8,000	18.47	6.44	0.726	0.8	1.19	-72
9,000	18.41	6.44	0.728	0.0	1.17	-72
10,000	18.38	6.44	0.729	0.0	1.14	-73

Sample ID: MW-11S
Sample Time: 12:20 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes _____ no X describe
Sheen? yes _____ no X describe
Odor? yes _____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-01S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.36 ft.
Initial static water level (from top of casing) ..... 8.88 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 16.48 ft. of water x 0.16 = 2.68 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
5.81 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (C°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.75	6.14	0.241	135	8.63	98
2,000	18.48	6.06	0.241	87.4	8.02	121
4,000	18.49	6.03	0.248	37.1	6.61	151
6,000	18.54	6.06	0.251	2.3	6.22	170
8,000	18.60	6.07	0.253	0	6.02	183
10,000	18.57	6.08	0.255	0	5.92	188
12,000	18.60	6.08	0.255	0	5.72	191
14,000	18.79	6.12	0.254	0	5.57	191
16,000	18.84	6.12	0.254	0	5.55	192
18,000	18.80	6.10	0.255	0	5.53	195
20,000	18.80	6.09	0.255	0	5.50	198
22,000	18.78	6.11	0.254	0	5.49	198

Sample ID: MW-01S
Sample Time: 2:45 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-02I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 59.81 ft.
Initial static water level (from top of casing) ..... 9.10 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 50.71 ft. of water x 0.16 = 8.26 gallons
3 in. casing: _____ ft. of water x 0.36 = _____ gallons
4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:
24.79 gal. >3 volumes: yes _____ no X purged dry? yes _____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	16.50	6.10	0.385	57.1	4.00	173
2,000	16.05	6.05	0.384	50.9	3.95	180
4,000	15.98	5.93	0.380	6.2	3.91	199
6,000	15.85	5.74	0.373	0	3.98	226
8,000	15.82	5.70	0.371	0	3.98	240
10,000	15.81	5.67	0.372	0	3.98	247
12,000	15.74	5.67	0.370	0	4.06	254
14,000	15.72	5.66	0.370	0	4.97	259
16,000	15.71	5.64	0.370	0	5.03	264
18,000	15.71	5.66	0.369	0	5.01	266
20,000	15.70	5.64	0.369	0	5.06	269

Sample ID: MW-02I
Sample Time: 10:00 am
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes _____ no X describe
Sheen? yes _____ no X describe
Odor? yes _____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-02S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.38 ft.
Initial static water level (from top of casing) ..... 9.11 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 16.27 ft. of water x 0.16 = 2.65 gallons
3 in. casing: _____ ft. of water x 0.36 = _____ gallons
4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:
7.95 gal. >3 volumes: yes X no _____ purged dry? yes _____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.49	6.28	0.167	27.5	6.15	0
3,000	18.51	6.33	0.127	0.0	4.50	2
6,000	18.60	6.32	0.124	0.0	4.19	4
9,000	18.71	6.33	0.115	0.0	7.79	18
11,000	18.66	6.31	0.110	0.0	7.60	22
13,000	18.68	6.30	0.110	0.0	7.46	21
15,000	18.68	6.31	0.109	0.0	7.29	21
17,000	18.66	6.31	0.108	0.0	7.00	21

Sample ID: MW-02S
Sample Time: 9:15 am
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes _____ no X describe
Sheen? yes _____ no X describe
Odor? yes _____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-03S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.36 ft.
Initial static water level (from top of casing) ..... 9.58 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 15.8 ft. of water x 0.16 = 2.57 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
7.39 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.90	6.33	0.328	92.8	5.98	-45
2,000	18.72	6.35	0.322	22.8	4.99	-49
4,000	18.70	6.43	0.282	0	3.76	-57
6,000	18.80	6.43	0.276	0	1.69	-56
8,000	18.79	6.41	0.260	0	1.00	-61
10,000	18.78	6.42	0.261	0	0.99	-62
12,000	18.76	6.49	0.252	0	0.71	-65
14,000	18.70	6.47	0.248	0	0.27	-64
16,000	18.65	6.44	0.240	0	0.15	-63
18,000	18.65	6.48	0.234	0	0.02	-66
20,000	18.75	6.45	0.226	0	0.00	-64
22,000	18.76	6.45	0.238	0	0.00	-67
24,000	18.76	6.45	0.226	0	0.00	-66
26,000	18.71	6.43	0.227	0	0.00	-66
28,000	18.73	6.46	0.227	0	0.00	-69

Sample ID: MW-03S
Sample Time: 12:35 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-04I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 54.45 ft.
Initial static water level (from top of casing) ..... 9.27 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 45.18 ft. of water x 0.16 = 7.36 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
5.81 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.14	6.08	0.332	257	10.16	97
2,000	16.50	5.89	0.333	19.4	7.74	177
4,000	16.29	5.80	0.330	0	6.89	203
6,000	16.24	5.79	0.330	0	5.75	210
8,000	16.17	5.78	0.330	0	6.47	219
10,000	16.10	5.78	0.330	0	6.15	233
12,000	16.07	5.79	0.331	0	5.91	221
14,000	16.08	5.77	0.330	0	5.87	236
16,000	16.08	5.79	0.330	0	5.72	238
18,000	16.05	5.80	0.330	0	5.64	238
20,000	16.00	5.82	0.328	0	5.47	240
22,000	16.01	5.80	0.328	0	5.47	242

Sample ID: MW-04I
Sample Time: 1:25 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000ml/min

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-04S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.31 ft.
Initial static water level (from top of casing) ..... 9.97 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 15.34 ft. of water x 0.16 = 2.50 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
5.81 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.68	6.36	0.228	197	5.84	83
2,000	17.94	6.19	0.238	22.6	3.34	165
4,000	17.96	6.19	0.242	13.4	3.13	175
6,000	17.93	6.13	0.239	23	2.46	185
8,000	17.94	6.15	0.234	0	2.10	189
10,000	17.90	6.17	0.231	0	1.72	193
12,000	18.01	6.18	0.233	0	1.45	195
14,000	18.01	6.20	0.232	0	1.41	196
16,000	18.00	6.19	0.233	0	1.16	99
18,000	18.02	6.19	0.232	0	1.08	200
20,000	18.05	6.18	0.231	0	1.00	201
22,000	18.04	6.19	0.229	0	0.99	201

Sample ID: MW-04S
Sample Time: 11:30
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level

Analyzed:
VOCs - (3) 40 ml VOAs

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/24/2018

WELL ID: MW-05S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 16.95 ft.
Initial static water level (from top of casing) ..... 11.44 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 5.51 ft. of water x 0.16 = 0.898 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.69 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	19.84	7.89	0.602	1000	0.88	-194
2,000	19.77	7.62	0.457	1000	3.39	-150
4,000	19.67	7.35	0.369	1000	6.44	-108
6,000	19.61	7.23	0.347	1000	6.05	-87
8,000	19.59	7.15	0.339	354	5.37	-73
10,000	19.58	7.15	0.342	394	5.31	-73
12,000	19.59	7.12	0.339	264	4.93	-68
14,000	19.58	7.09	0.335	243	4.70	-64
16,000	19.58	7.10	0.334	210	4.59	-63
18,000	19.58	7.10	0.332	186	4.44	-62
20,000	19.58	7.11	0.331	176	4.37	-62
22,000	19.58	7.10	0.330	200	4.29	-61
24,000	19.55	7.09	0.327	129	3.55	-57
26,000	19.56	7.10	0.328	102	3.45	-51

Sample ID: MW-05S
Sample Time: 12:40 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/24/2018

WELL ID: MW-07I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 57.31 ft.
Initial static water level (from top of casing) ..... 9.75 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 47.56 ft. of water x 0.16 = 7.75 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
7.5 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	15.80	6.38	0.317	1000	4.37	146
3,000	15.69	6.29	0.327	1000	4.02	159
6,000	15.67	6.30	0.327	450	4.52	160
9,000	15.81	6.37	0.333	800	3.29	157
10,500	15.75	6.30	0.324	500	3.28	181
12,000	15.66	6.29	0.325	193	3.27	182
13,500	15.65	6.28	0.325	177	3.24	183
15,000	15.65	6.28	0.324	142	3.36	184
16,500	15.61	6.23	0.324	125	3.32	188
18,000	15.59	6.23	0.325	125	3.32	184
19,500	15.56	6.24	0.325	170	3.40	190
21,000	15.56	6.24	0.324	90.1	3.41	191
22,500	15.55	6.26	0.326	75.5	3.48	190
24,000	15.54	6.24	0.325	77.3	3.55	191
25,500	15.54	6.23	0.325	52.3	3.42	193
27,000	15.53	6.23	0.324	50.1	3.46	182
28,500	15.51	6.22	0.325	55.1	3.48	193

Sample ID: MW-07I
Sample Time: 10:10 am
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/24/2018

WELL ID: MW-07S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 19.21 ft.
Initial static water level (from top of casing) ..... 9.91 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.3 ft. of water x 0.16 = 1.52 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
7.5 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	19.69	7.52	0.476	1000	3.15	-136
1,500	19.68	6.85	0.386	516	0.57	-80
3,000	19.56	6.81	0.373	600	0.28	-80
4,500	19.53	6.77	0.368	173	0.09	-78
6,000	19.48	6.78	0.367	160	0.01	-83
7,500	19.43	6.77	0.365	117	0.00	-82
9,000	19.43	6.77	0.366	86	0.00	-84
10,500	19.44	6.75	0.363	90.1	0.00	-83
12,000	19.42	6.77	0.366	60.8	0.00	-84

Sample ID: MW-07S
Sample Time: 11:20 am
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/24/2018

WELL ID: MW-08S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.68 ft.
Initial static water level (from top of casing) ..... 9.10 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 8.58 ft. of water x 0.16 = 1.39 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
4.19 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	20.59	6.64	0.435	200	2.86	-50
1,000	20.63	6.62	0.430	220	1.96	-46
2,000	20.73	6.61	0.431	109	0.00	-44
3,000	20.67	6.59	0.424	51.7	0.00	-41
4,000	20.62	6.59	0.423	46.7	0.00	-43
5,000	20.66	6.59	0.423	10.3	0.00	-41
6,000	20.64	6.59	0.421	22.9	0.00	-43
7,000	20.62	6.61	0.422	75.6	0.00	-44

Sample ID: MW-08S
Sample Time: 3:30 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 333 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber
MS/MSD collected and Blind Duplicate for PFAS

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/24/2018

WELL ID: MW-09S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.61 ft.
Initial static water level (from top of casing) ..... 10:15 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 8.46 ft. of water x 0.16 = 1.38 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
4.13 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	22.47	7.31	0.185	1000	3.18	32
1,000	21.49	7.04	0.183	1000	3.05	51
2,000	21.35	6.99	0.176	508	4.95	65
3,000	21.31	6.98	0.175	195	5.00	75
4,000	21.29	6.97	0.176	100	6.30	80
5,000	21.28	6.96	0.175	85	6.97	82
6,000	21.41	7.00	0.177	48.2	7.33	77
7,000	21.41	7.02	0.175	58.2	7.22	79
8,000	21.40	7.03	0.177	34.2	7.11	80
9,000	21.45	6.99	0.174	20.5	7.00	84
10,000	21.50	6.88	0.184	450	2.81	85
11,000	21.47	6.76	0.180	330	1.65	100
12,000	21.55	6.84	0.180	208	1.64	99
13,000	21.50	6.80	0.181	190	2.23	98

Sample ID: MW-09S
Sample Time: 2:30 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 333 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/24/2018

WELL ID: MW-10S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.40 ft.
Initial static water level (from top of casing) ..... 10.49 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 7.91 ft. of water x 0.16 = 1.29 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
3.87 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	20.00	6.65	0.478	393	4.39	78
1,500	20.57	6.58	0.419	116	3.33	113
3,000	20.56	6.55	0.406	79.5	1.53	126
4,500	20.56	6.53	0.405	58.5	1.26	139
6,000	20.57	6.54	0.398	55.0	1.06	140
7,500	20.50	6.55	0.408	29.8	1.21	139
9,000	20.54	6.54	0.402	18.8	0.72	145
10,500	20.55	6.52	0.413	12.8	0.76	148
12,000	20.52	6.53	0.406	9.2	1.82	152
13,500	20.53	6.53	0.409	8.5	1.63	152

Sample ID: MW-10S (MS/MSD collected)
Sample Time: 4:35 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 9/26/2018

WELL ID: MW-11S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.65 ft.
Initial static water level (from top of casing) ..... 9.05 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.60 ft. of water x 0.16 = 1.56 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
4.75 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	20.63	6.21	0.591	247	6.03	5
2,000	20.62	6.20	0.587	85.3	4.21	6
4,000	20.61	6.21	0.561	76.1	3.34	7
6,000	20.55	6.21	0.549	55.6	2.73	-16
8,000	20.51	6.23	0.544	15.6	2.22	-25
10,000	20.47	6.23	0.539	0	1.85	-28
12,000	20.45	6.23	0.537	0	1.46	-30
14,000	20.46	6.23	0.536	0	1.25	-34
16,000	20.44	6.24	0.539	0	1.03	-41
18,000	20.42	6.24	0.532	0	0.92	-41

Sample ID: MW-11S
Sample Time: 10:45 am
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 1,000 ml/min

Analyzed:
VOCs – (3) 40 ml VOAs
PFAS - (2) 250 mL plastic bottles
1,4-DIOXANE - (2) 1 L Amber

Observations
Weather/Temperature: Cloudy, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG FOR 1,4-DIOXANE
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-05S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.07 ft.
Initial static water level (from top of casing) ..... 10.63 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 6.44 ft. of water x 0.16 = 1.04 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.6 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	19.57	5.93	0.003	507	7.16	76
1,000	19.96	6.34	0.003	510	7.56	-10
2,000	20.12	6.62	0.003	529	7.76	-26
3,000	20.15	6.70	0.003	536	7.76	-34
4,000	20.20	6.66	0.003	530	7.82	-34
5,000	20.22	6.68	0.003	518	8.24	-35
6,000	19.89	6.64	0.278	104	3.82	-35
7,000	20.02	6.75	0.280	61.8	3.74	-41
8,000	20.06	6.77	0.281	34.6	3.64	-41
9,000	20.11	6.82	0.282	18.4	3.64	-44
10,000	20.12	6.83	0.282	13.0	3.65	-44

Sample ID: MW-05S
Sample Time: 8:10AM
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-07I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 57.68 ft.
Initial static water level (from top of casing) ..... 8.91 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 48.77 ft. of water x 0.16 = 7.94 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
4.22 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.03	6.94	0.406	10.8	4.82	-69
1,500	16.70	6.34	0.408	9.1	4.83	30
3,000	16.13	5.97	0.405	8.2	4.67	82
4,500	15.95	5.91	0.404	6.6	4.69	97
6,000	15.74	5.80	0.403	5.3	4.70	117
7,500	15.73	5.79	0.405	3.1	4.72	126
9,000	15.69	5.81	0.405	3.6	4.64	131
10,500	15.73	5.81	0.405	2.9	4.79	138
12,000	15.75	5.81	0.406	2	4.71	144
13,000	15.80	5.81	0.407	1.9	4.70	148
14,000	15.85	5.82	0.407	2	4.70	152
15,000	15.84	5.80	0.407	0.9	4.70	160
16,000	15.85	5.80	0.407	1.1	4.70	160

Sample ID: MW-07I
Sample Time: 10:20 am
Pump: Solnist Peri-pump
Flow Rate: 333 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-07S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 19.01 ft.
Initial static water level (from top of casing) ..... 9.15 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.86 ft. of water x 0.16 = 1.61 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
7.5 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.84	6.54	0.446	116	0.79	-51
1,000	18.99	6.55	0.447	325	0.61	-57
2,000	19.17	6.59	0.446	376	0.52	-67
3,000	19.20	6.59	0.447	141	0.50	-71
4,000	19.19	6.58	0.447	50.9	0.51	-71
5,000	19.20	6.58	0.443	25.3	0.45	-73
6,000	19.24	6.58	0.443	9.1	0.44	-74
7,000	19.21	6.58	0.442	11.6	0.41	-75
8,000	19.20	6.59	0.439	0.9	0.52	-78
9,000	19.20	6.59	0.440	0.5	0.62	-79
10,000	19.21	6.59	0.441	0.6	0.66	-78
11,000	19.18	6.59	0.440	1.0	0.59	-83
12,000	19.16	6.59	0.441	1.5	0.50	-80

Sample ID: MW-07S
Sample Time: 11:00 am
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-08S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.43 ft.
Initial static water level (from top of casing) ..... 8.30 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.13 ft. of water x 0.16 = 1.49 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.11 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.90	6.55	0.541	110	1.10	-78
1,000	18.95	6.54	0.540	105	1.11	-76
2,000	19.31	6.49	0.535	78.1	0.89	-70
3,000	19.65	6.46	0.515	47	0.60	-68
4,000	19.72	6.43	0.510	23.2	0.53	-67
5,000	16.67	6.44	0.509	19.9	0.51	-69
6,000	19.65	6.43	0.512	15.5	0.49	-68
7,000	19.63	6.42	0.513	13.3	0.49	-68
8,000	19.63	6.43	0.503	12.7	0.48	-69

Sample ID: MW-08S (MS/MSD collected)
Sample Time: 9:15 am
Pump: Solnist Peri-pump
Flow Rate: 500 ml/min
Meters: Horiba U52 and water level

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane
Collected MS/MSD

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 10/30/2018

WELL ID: MW-09S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.50 ft.
Initial static water level (from top of casing) ..... 9.31 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.19 ft. of water x 0.16 = 1.49 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.9 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	15.93	6.78	0.229	34.7	5.47	20
1,000	15.92	6.73	0.225	18.3	5.25	40
2,000	15.92	6.72	0.225	15.5	5.18	43
3,000	15.95	6.68	0.226	10.9	5.13	50
4,000	15.95	6.65	0.225	11.4	5.12	56
5,000	15.96	6.67	0.226	10.4	5.05	62
6,000	15.98	6.66	0.226	9.3	5.01	68
7,000	15.98	6.67	0.226	9	4.93	70
8,000	15.99	6.65	0.225	0.0	4.87	75
9,000	16.00	6.65	0.226	0.0	4.84	80
10,000	15.99	6.65	0.226	0.0	4.83	79
11,000	15.99	6.65	0.226	0.0	4.86	81

Sample ID: MW-09S
Sample Time: 1:40 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-10S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.10 ft.
Initial static water level (from top of casing) ..... 9.65 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 8.45 ft. of water x 0.16 = 1.37 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.11 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	17.71	6.46	0.557	352	2.50	77
1000	18.52	6.43	0.584	194	1.45	85
2000	18.70	6.41	0.577	53.1	1.33	92
3000	18.81	6.41	0.571	33.9	1.31	95
4000	18.85	6.40	0.553	21.3	1.32	98
5000	18.88	6.38	0.546	12.1	1.31	102
6000	18.88	6.37	0.539	10.1	1.32	104
7000	18.88	6.35	0.533	8	1.37	107
8000	18.87	6.37	0.527	5.4	1.40	107

Sample ID: MW-10S
Sample Time: 2:20 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

FIELD OBSERVATION LOG
MONITORING WELL SAMPLE RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE: 10/30/2018

WELL ID: MW-11S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.41 ft.
Initial static water level (from top of casing) ..... 8.71 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump		Peristaltic Pump (Low Flow)	X

Well Volume Calculation:
2 in. casing: 9.60 ft. of water x 0.16 = 1.56 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
2.6 gal. >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests

Volume (mL)	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial	18.24	6.39	0.742	205	1.46	-39
1,000	18.25	6.41	0.740	108	1.47	-41
2,000	18.45	6.40	0.720	3.3	1.42	-52
3,000	18.51	6.43	0.697	4.1	1.18	-65
5,000	18.52	6.44	0.695	1	1.21	-66
6,000	18.55	6.44	0.709	1.3	1.20	-68
7,000	18.49	6.45	0.724	1.2	1.17	-72
8,000	18.47	6.44	0.726	0.8	1.19	-72
9,000	18.41	6.44	0.728	0.0	1.17	-72
10,000	18.38	6.44	0.729	0.0	1.14	-73

Sample ID: MW-11S
Sample Time: 12:20 pm
Pump: Solnist Peri-pump
Meters: Horiba U52 and water level
Flow Rate: 500 ml/min

Analyzed:
(2) 1L Amber glass bottles for 1,4 Dioxane

Observations
Weather/Temperature: Sunny, 40-50 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SVE Pilot Well

Total Depth 10 ft. Surface Elevation 44.30 Top Riser Elevation 43.84

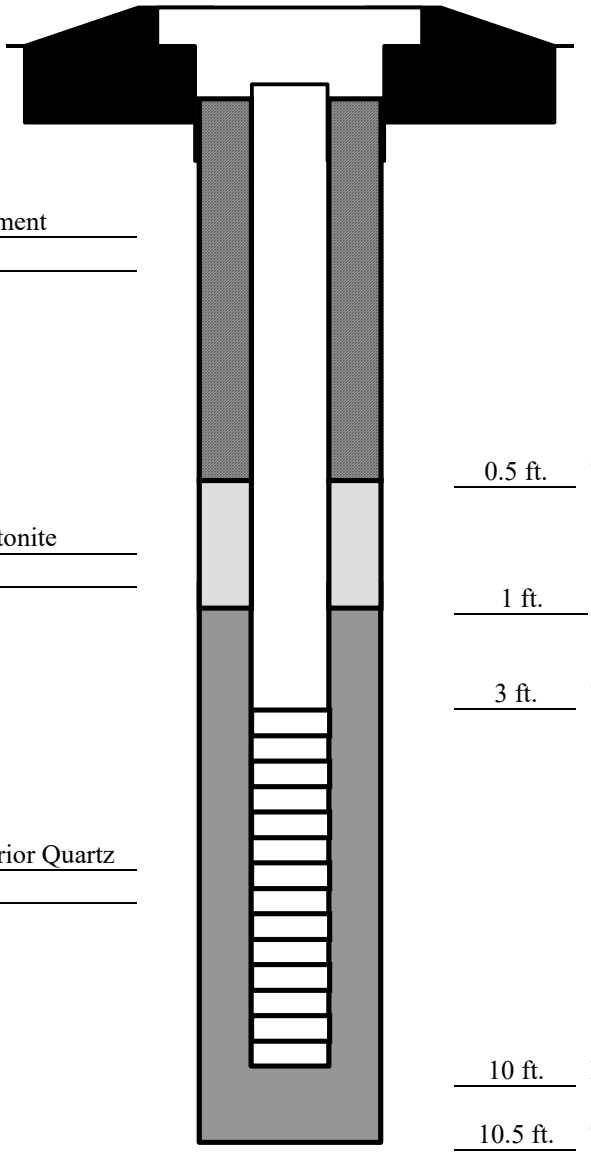
Water Levels (Depth) -- Date Installed 9/5/2018

Riser Dia. 4 in. Material sch 40 PVC Length 3 ft.

Screen Dia. 4 in. Material sch 40 PVC Length 7 ft. Slot Size 0.020 in

SCHEMATIC

Flush Mount Manhole



Grout Type Bentonite / Cement Mixture

0.5 ft. Top Seal

Seal Type Hole plug/Bentonite pellets

1 ft. Top Sand Pack

3 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #2

10 ft. Bottom Screen

10.5 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Monitoring Point Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SVEMP-1

Total Depth 10 ft. Surface Elevation 44.76 Top Riser Elevation 44.58

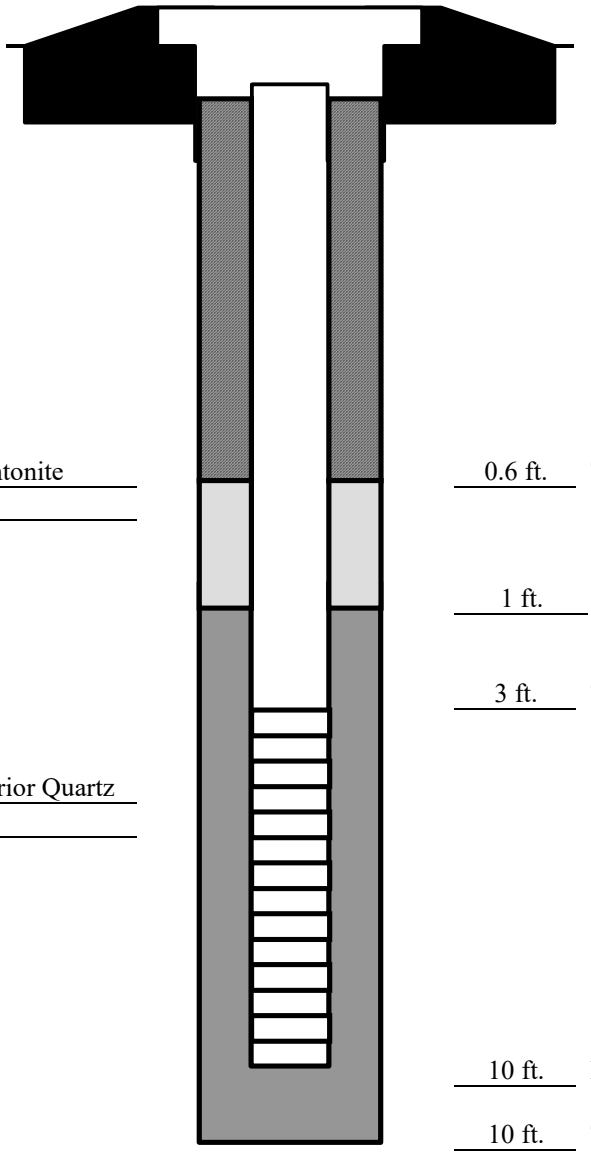
Water Levels (Depth) -- Date Installed 9/10/2018

Riser Dia. 1 in. Material sch 40 PVC Length 3 ft.

Screen Dia. 1 in. Material sch 40 PVC Length 7 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Seal Type Hole plug/ Bentonite powder

0.6 ft. Top Seal

1 ft. Top Sand Pack

3 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #1

10 ft. Bottom Screen

10 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Monitoring Point Construction Log

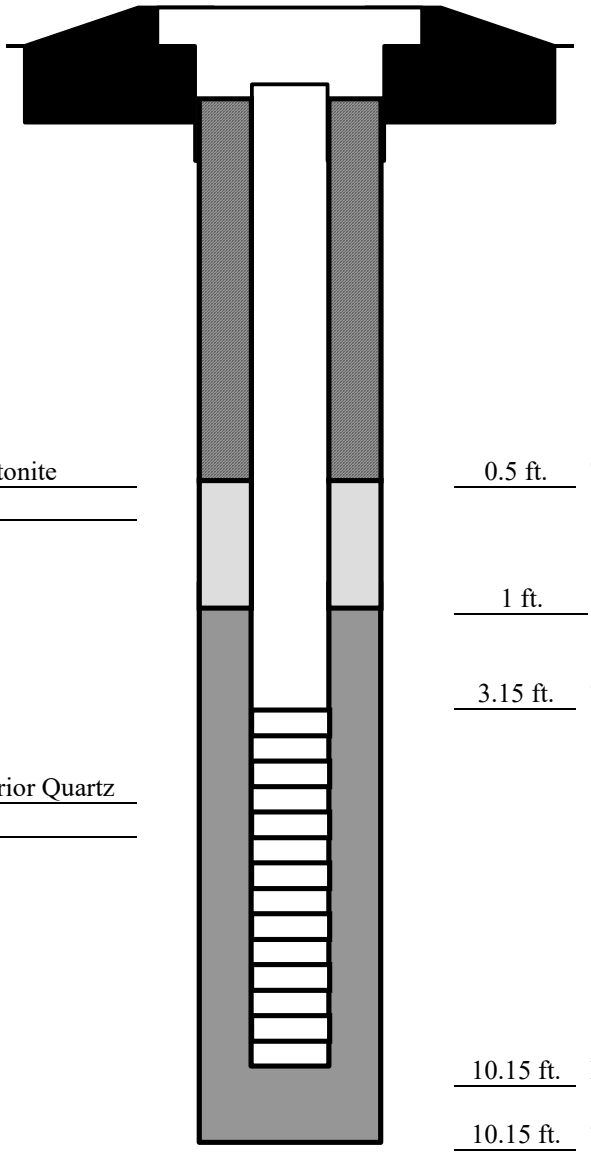
Site Wantagh Cleaners Job No. 3150-40 Well No. SVEMP-2
Total Depth 10.15 ft. Surface Elevation 44.62 Top Riser Elevation 44.46

Water Levels (Depth) -- Date Installed 9/10/2018

Riser Dia. 1 in. Material sch 40 PVC Length 3 ft.
Screen Dia. 1 in. Material sch 40 PVC Length 7 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Seal Type Hole plug/Bentonite powder

0.5 ft. Top Seal

1 ft. Top Sand Pack

3.15 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz
Size #1

10.15 ft. Bottom Screen

10.15 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Monitoring Point Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SVEMP-3

Total Depth 10.15 ft. Surface Elevation 44.68 Top Riser Elevation 44.38

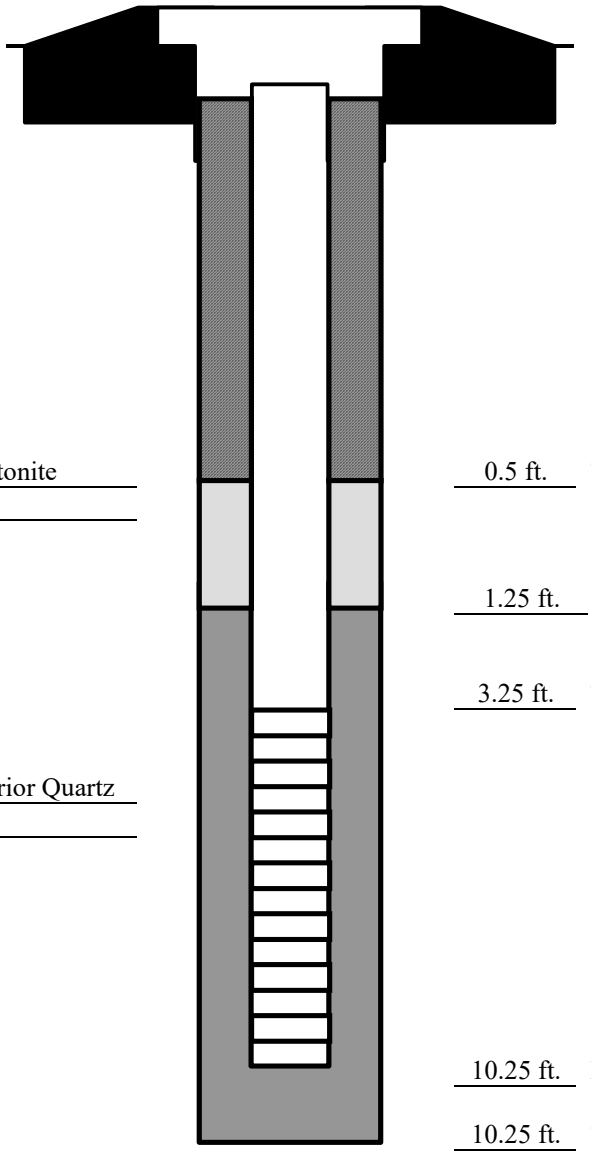
Water Levels (Depth) -- Date Installed 9/11/2018

Riser Dia. 1 in. Material sch 40 PVC Length 3 ft.

Screen Dia. 1 in. Material sch 40 PVC Length 7 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Seal Type Hole plug/Bentonite powder

0.5 ft. Top Seal

1.25 ft. Top Sand Pack

3.25 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #1

10.25 ft. Bottom Screen

10.25 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Monitoring Point Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SVEMP-4

Total Depth 10.25 ft. Surface Elevation 44.58 Top Riser Elevation 44.25

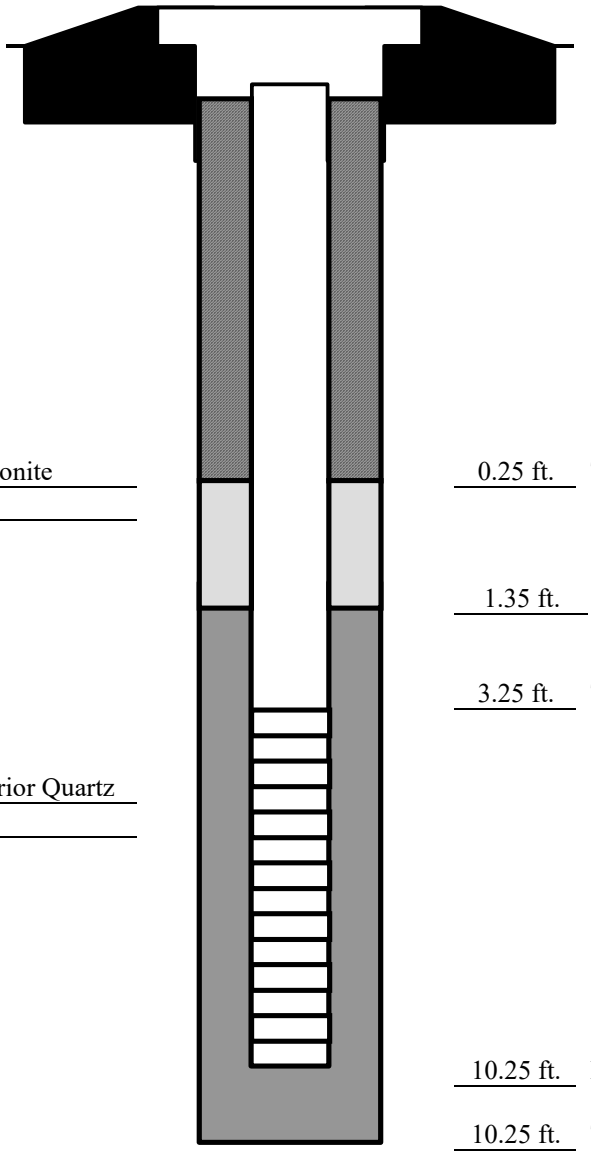
Water Levels (Depth) -- Date Installed 9/11/2018

Riser Dia. 1 in. Material sch 40 PVC Length 3 ft.

Screen Dia. 1 in. Material sch 40 PVC Length 7 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Seal Type Hole plug/bentonite powder

0.25 ft. Top Seal

1.35 ft. Top Sand Pack

3.25 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #1

10.25 ft. Bottom Screen

10.25 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

SVE Monitoring Point Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SVEMP-5

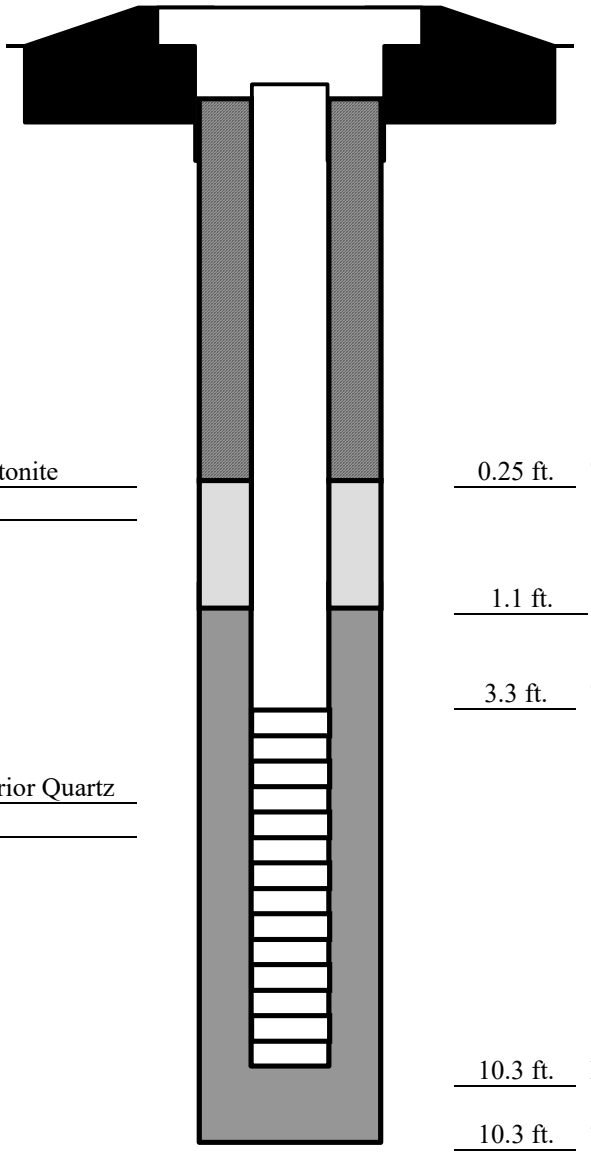
Total Depth 10.3 ft. Surface Elevation 44.54 Top Riser Elevation 44.30

Water Levels (Depth) -- Date Installed 9/11/2018

Riser Dia. 1 in. Material sch 40 PVC Length 3 ft.

Screen Dia. 1 in. Material sch 40 PVC Length 7 ft. Slot Size 0.010 in

SCHEMATIC



Flush Mount Manhole

Seal Type Hole Plug/Bentonite powder

0.25 ft. Top Seal

1.1 ft. Top Sand Pack

3.3 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #1

10.3 ft. Bottom Screen

10.3 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

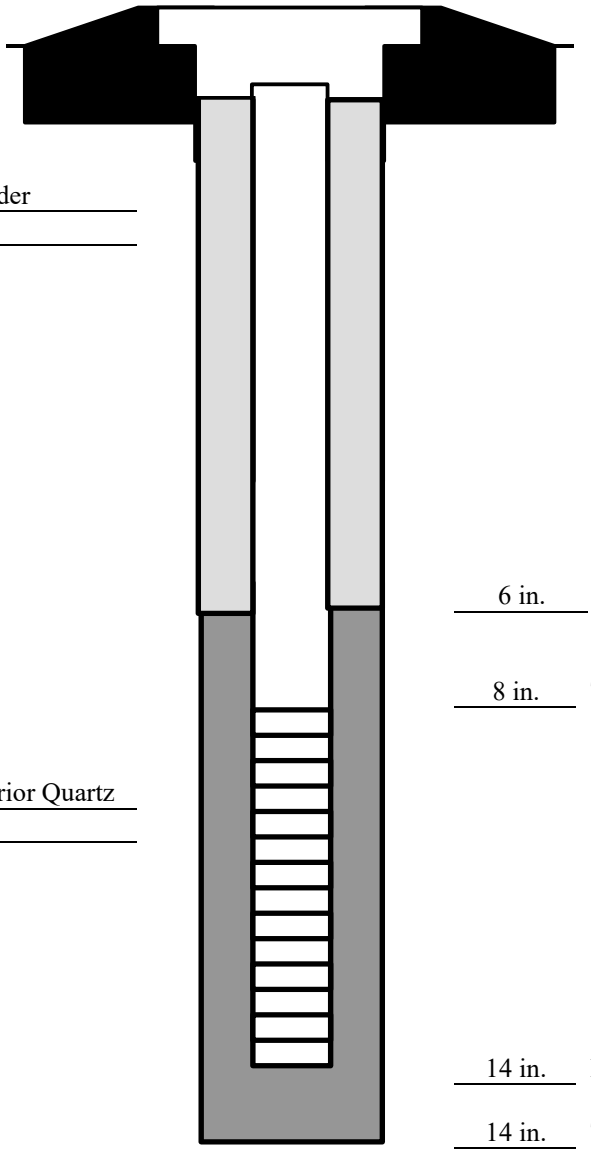
Soil Vapor Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SV-1
Total Depth 1.1 ft. Surface Elevation NA Top Riser Elevation NA

Water Levels (Depth) -- Date Installed 9/24/2018

Tubing Dia. NA Material Teflon-tubing Length 8 in.
Screen Dia. 0.25 in Material Stainless steel Length 6 in.

SCHEMATIC



Flush Mount Manhole

Seal Type Bentonite powder

6 in. Top Sand Pack

8 in. Top Screen

Sand Pack Type Fillpro Superior Quartz
Size #1

14 in. Bottom Screen

14 in. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

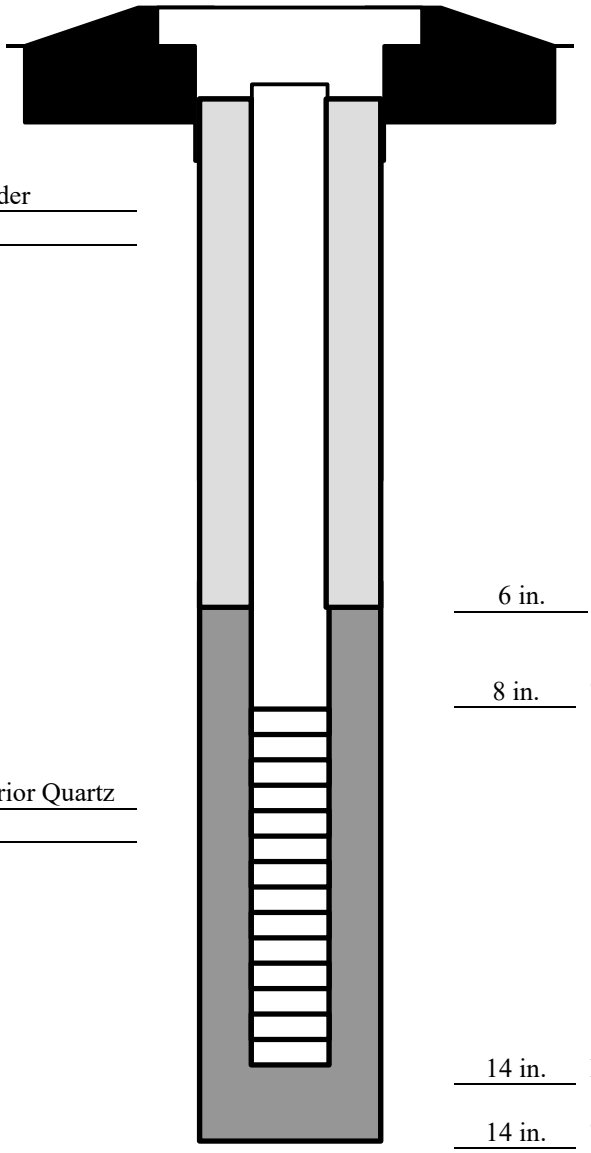
Soil Vapor Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. SV-2
Total Depth 1.1 ft. Surface Elevation NA Top Riser Elevation NA

Water Levels (Depth) -- Date Installed 9/24/2018

Tubing Dia. NA Material Teflon-tubing Length 8 in.
Screen Dia. 0.25 in Material Stainless steel Length 6 in.

SCHEMATIC



Flush Mount Manhole

Seal Type Bentonite powder

6 in. Top Sand Pack

8 in. Top Screen

Sand Pack Type Fillpro Superior Quartz
Size #1

14 in. Bottom Screen

14 in. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-05S

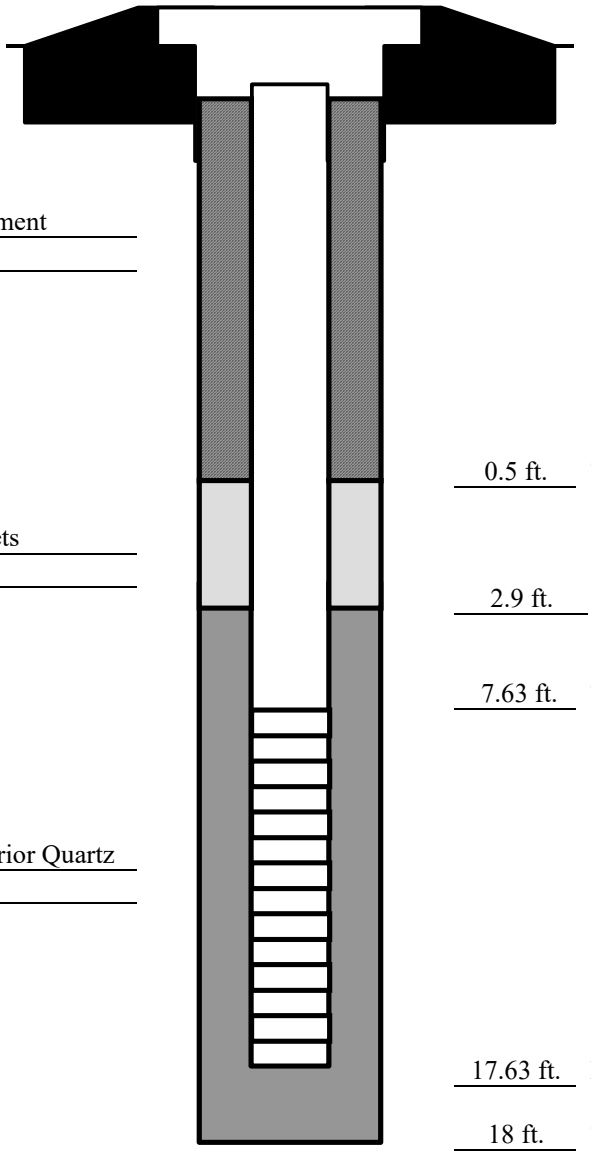
Total Depth 17.63 ft. Surface Elevation 45.51 ft. amsl Top Riser Elevation 45.26 ft. amsl

Water Levels (Depth) 10.10 ft. amsl Date Installed 9/14/2018

Riser Dia. 1 in. Material sch 40 PVC Length 7.63 ft.

Screen Dia. 1 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC



Flush Mount Manhole

Grout Type Bentonite / Cement Mixture

Seal Type Bentonite pellets

Sand Pack Type Fillpro Superior Quartz

Size #1

0.5 ft. Top Seal

2.9 ft. Top Sand Pack

7.63 ft. Top Screen

17.63 ft. Bottom Screen

18 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-07I

Total Depth 59.10 ft. Surface Elevation 44.03 ft. amsl Top Riser Elevation 43.75 ft. amsl

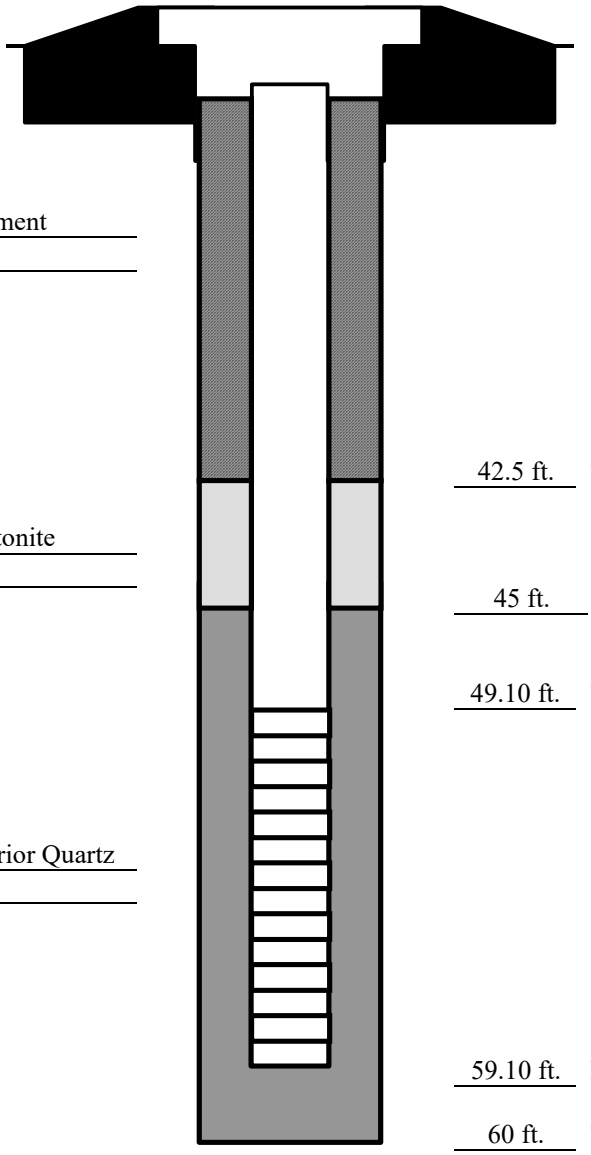
Water Levels (Depth) 10.12 ft. amsl Date Installed 9/5/2018

Riser Dia. 2 in. Material sch 40 PVC Length 49.10 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Grout Type Bentonite / Cement Mixture

42.5 ft. Top Seal

Seal Type Hole Plus/Bentonite pellets

45 ft. Top Sand Pack

49.10 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #2

59.10 ft. Bottom Screen

60 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-07S

Total Depth 19.10 ft. Surface Elevation 43.76 ft. amsl Top Riser Elevation 43.42 ft. amsl

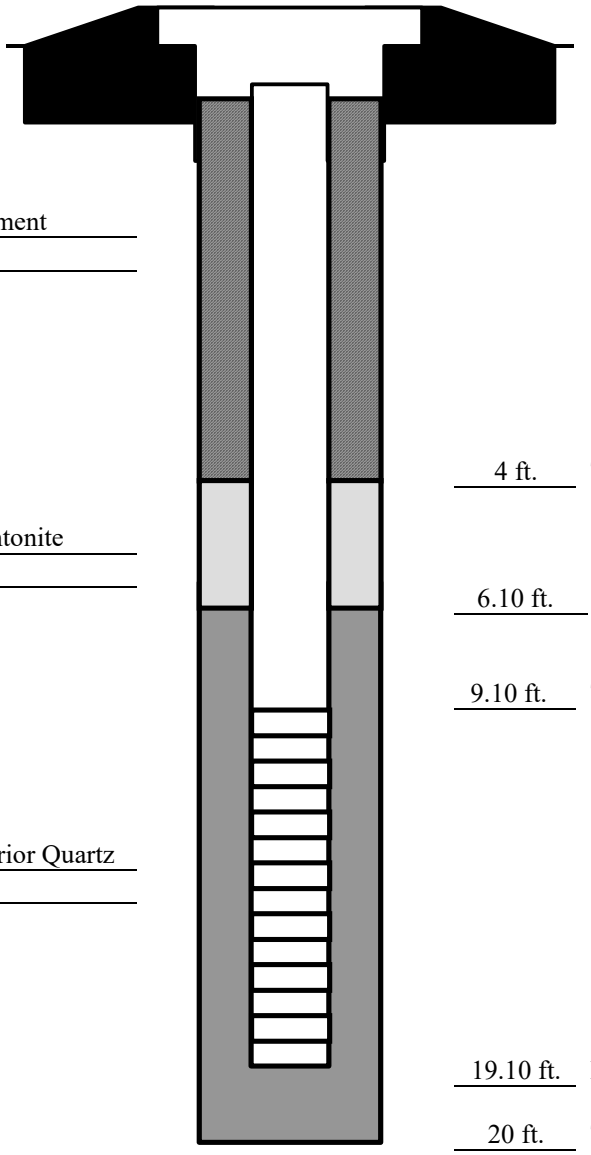
Water Levels (Depth) 10.50 ft. amsl Date Installed 9/6/2018

Riser Dia. 2 in. Material sch 40 PVC Length 9.10 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Grout Type Bentonite / Cement Mixture

4 ft. Top Seal

Seal Type Hole plug/ Bentonite pellets

6.10 ft. Top Sand Pack

9.10 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #2

19.10 ft. Bottom Screen

20 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-08S

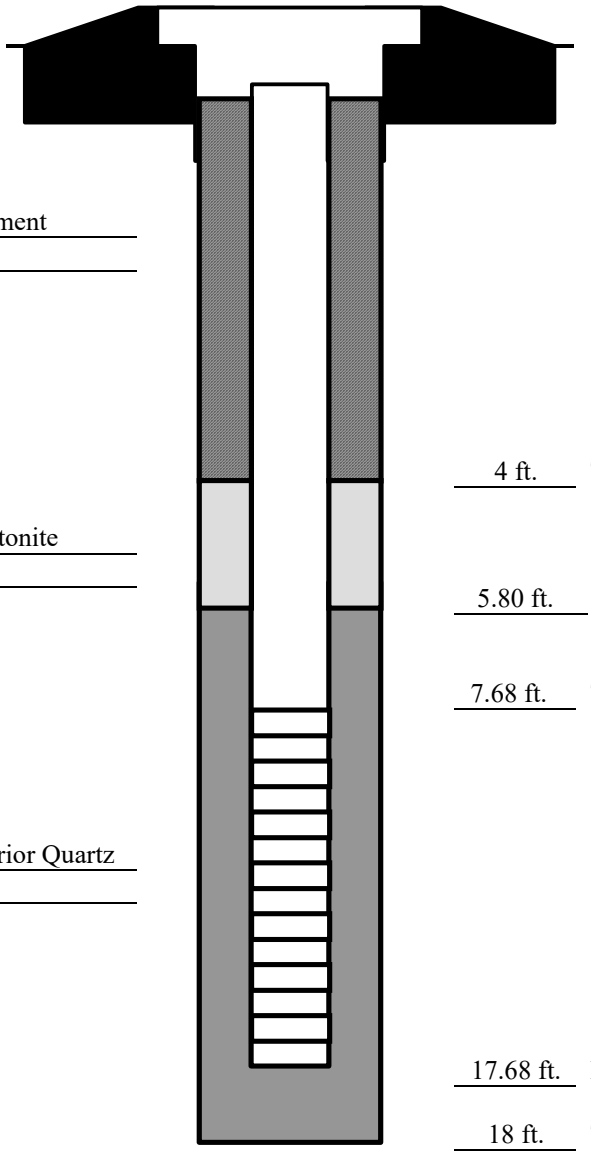
Total Depth 17.68 ft. Surface Elevation 43.17 ft. amsl Top Riser Elevation 42.85 ft. amsl

Water Levels (Depth) 9.25 ft. amsl Date Installed 9/13/2018

Riser Dia. 2 in. Material sch 40 PVC Length 7.68 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC



Flush Mount Manhole

Grout Type Bentonite / Cement Mixture

Seal Type Hole Plug/Bentonite pellets

Sand Pack Type Fillpro Superior Quartz

Size #2

4 ft. Top Seal

5.80 ft. Top Sand Pack

7.68 ft. Top Screen

17.68 ft. Bottom Screen

18 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-09S

Total Depth 18.81 ft. Surface Elevation 44.07 ft. amsl Top Riser Elevation 43.80 ft. amsl

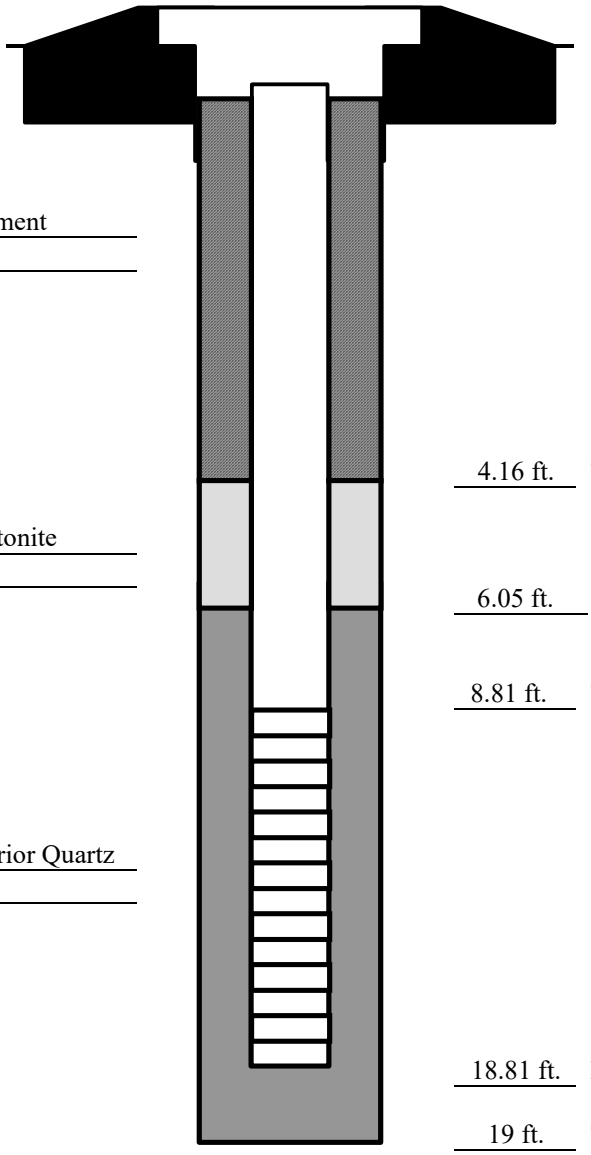
Water Levels (Depth) 10.01 ft. Date Installed 9/7/2018

Riser Dia. 2 in. Material sch 40 PVC Length 8.81 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Grout Type Bentonite / Cement Mixture

4.16 ft. Top Seal

Seal Type Hole plug/Bentonite pellets

6.05 ft. Top Sand Pack

8.81 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #2

18.81 ft. Bottom Screen

19 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-10S

Total Depth 18.46 ft. Surface Elevation 44.46 ft. amsl Top Riser Elevation 44.20 ft. amsl

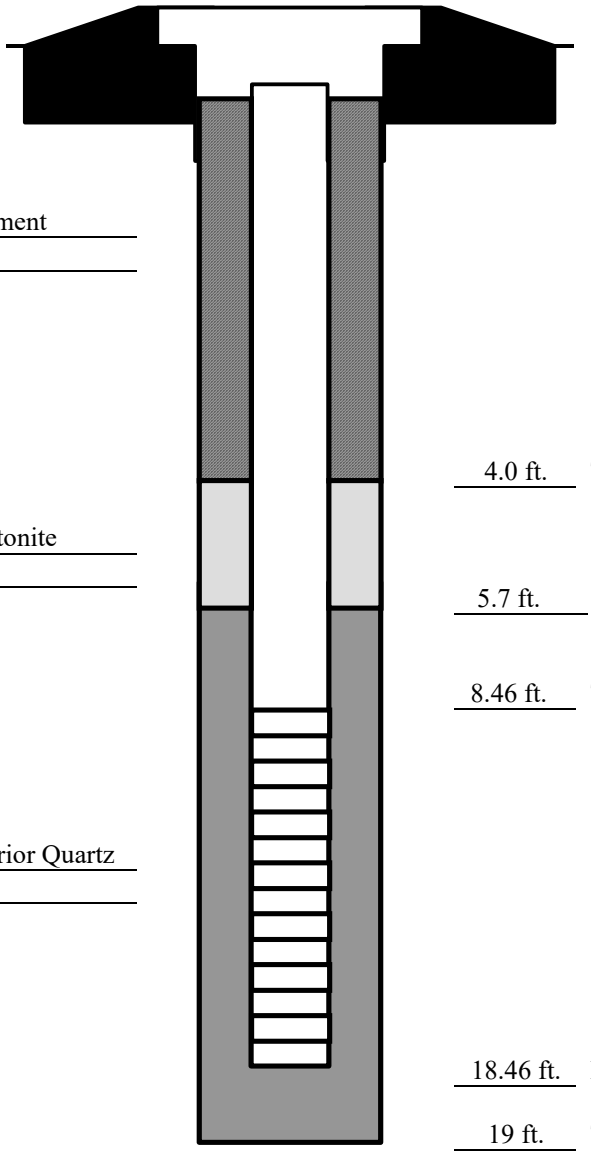
Water Levels (Depth) 10.25 ft. Date Installed 9/7/2018

Riser Dia. 2 in. Material sch 40 PVC Length 8.46 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC

Flush Mount Manhole



Grout Type Bentonite / Cement Mixture

4.0 ft. Top Seal

Seal Type Hole plug/Bentonite pellets

5.7 ft. Top Sand Pack

8.46 ft. Top Screen

Sand Pack Type Fillpro Superior Quartz

Size #1

18.46 ft. Bottom Screen

19 ft. Total Depth of Boring

D&B ENGINEERS AND ARCHITECTS, P.C.

Well Construction Log

Site Wantagh Cleaners Job No. 3150-40 Well No. MW-11S

Total Depth 18.65 ft. Surface Elevation 43.47 ft. amsl Top Riser Elevation 43.14 ft. amsl

Water Levels (Depth) 10.51 ft. Date Installed 9/7/2018

Riser Dia. 2 in. Material sch 40 PVC Length 8.65 ft.

Screen Dia. 2 in. Material sch 40 PVC Length 10 ft. Slot Size 0.010 in

SCHEMATIC

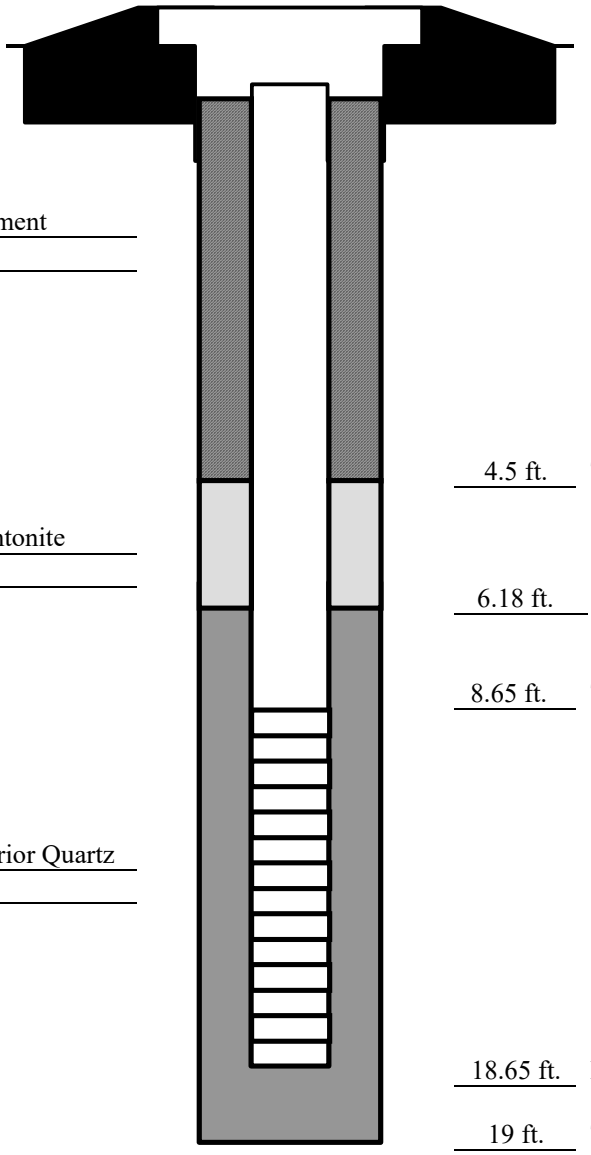
Flush Mount Manhole

Grout Type Bentonite / Cement Mixture

Seal Type Hole Plug/ Bentonite pellets

Sand Pack Type Fillpro Superior Quartz

Size #2



4.5 ft. Top Seal

6.18 ft. Top Sand Pack

8.65 ft. Top Screen

18.65 ft. Bottom Screen

19 ft. Total Depth of Boring

ON-SITE MONITORING WELL DEVELOPMENT LOGS

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/19/2018

WELL ID: MW-01S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.28 ft.
Initial static water level (from top of casing) ..... 8.98 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 16.30 ft. of water x 0.16 = 7.97 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
55 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	18.24	5.74	0.233	218	7.63	245
Pump set mid-screen	18.34	5.85	0.241	51.8	6.41	251
	18.41	5.87	0.242	38.2	6.03	253
	18.59	6.04	0.232	1000	5.31	247
	18.46	5.99	0.242	520	5.63	246
	18.49	6.04	0.243	145	5.55	242
Surge to bottom	18.62	6.19	0.242	696	5.43	237
	18.49	6.11	0.243	19.4	5.43	242
	18.40	6.11	0.239	390	5.29	246
	18.50	6.14	0.243	30.5	5.42	244
	18.48	6.11	0.243	7.5	5.40	243
Surge to bottom	18.45	6.17	0.243	3.5	5.42	239
	18.52	6.20	0.242	631	5.39	242
	18.51	6.17	0.244	60.7	5.41	244
	18.49	6.11	0.243	32.4	5.37	244
	18.49	6.18	0.243	25	5.41	243
	18.47	6.15	0.243	20.4	5.41	243

Method:
Purge Start: 9:40 am
Purge Stop: 10:20 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Partly Cloudy, 61-72 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (15 to 25 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/19/2018

WELL ID: MW-02I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 59.85 ft.
Initial static water level (from top of casing) ..... 9.30 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 50.55 ft. of water x 0.16 = 8.24 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
65 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	15.05	6.04	0.361	35.8	5.02	190
Pump set mid-screen	14.97	5.59	0.353	0.0	5.07	244
	14.97	5.59	0.352	0.0	5.05	252
	15.27	5.59	0.352	250	5.01	264
	14.96	5.54	0.351	6.0	5.05	278
	14.96	5.56	0.351	0.0	5.05	281
Surge to bottom	14.97	5.60	0.350	4	5.03	283
	14.95	5.55	0.351	0.0	5.03	290
	17.01	6.01	0.261	198	4.44	108
	15.25	5.57	0.345	0.0	4.98	204
	15.02	5.63	0.349	0.0	4.96	230
Surge to bottom	15.05	5.61	0.351	321	4.94	253
	14.98	5.59	0.350	100	4.94	259
	14.95	5.55	0.350	2.3	4.95	266
	14.92	5.55	0.349	0.0	4.95	271
	14.93	5.53	0.349	0.0	4.97	278

Method:
Purge Start: 7:30 am
Purge Stop: 8:16 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Partly Cloudy, 61-77 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe
Comments: Purge water contained in (1.25) 55-gallon drum.
Periodic surging was performed throughout the screened zone (50 - 60 ft) using 3/8*1/4 in. poly-tubing.

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-02S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.43 ft.
Initial static water level (from top of casing) ..... 9.14 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 16.29 ft. of water x 0.16 = 2.60 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
45 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	17.47	6.17	0.063	39	0.0	82
Pump set mid-screen	17.50	5.95	0.063	6.2	0.0	84
	17.51	5.90	0.065	0.0	0.0	78
	17.47	5.88	0.059	100	0.0	88
	17.54	6.03	0.076	0.6	0.0	53
	17.53	6.08	0.075	0.0	0.0	45
Surge to bottom	17.53	6.20	0.079	172.9	0.0	38
	17.56	6.23	0.079	50	0.0	33
	17.53	6.22	0.069	30	0.0	40
	17.56	6.25	0.068	4.5	0.0	30

Method:
Purge Start: 5:00 pm
Purge Stop: 5:35 pm
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (16 to 26 ft) using 3/8*1/4 in. poly-tubing.

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-03S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.35 ft.
Initial static water level (from top of casing) ..... 9.36 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 15.99 ft. of water x 0.16 = 2.60 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
35 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	17.32	6.00	0.202	400	0.00	18
Pump set mid-screen	17.36	6.00	0.203	210	0.00	14
	17.60	6.28	0.147	357	0.00	-3
	17.56	6.21	0.197	24.7	0.00	-22
	17.54	6.28	0.198	4	0.00	-27
	18.00	6.51	0.128	250	0.00	-49
Surge to bottom	17.48	6.39	0.196	60.3	0.00	-36
	17.57	6.54	0.197	5.5	0.00	-49
	17.50	6.52	0.190	189.7	0.00	-60
Surge to bottom	17.56	6.49	0.197	13	0.00	-48
	17.53	6.49	0.198	3.7	0.00	-51
	17.52	6.49	0.198	0.3	0.00	-49

Method:
Purge Start: 4:30 pm
Purge Stop: 5:15 pm
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (16 to 26 ft) using 3/8*1/4 in. poly-tubing.

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-04I
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 54.65 ft.
Initial static water level (from top of casing) ..... 9.45 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 45.2 ft. of water x 0.16 = 7.36 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
35 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	15.33	5.61	0.325	1000	5.37	198
Pump set mid-screen	15.02	5.61	0.320	56.5	5.13	220
	15.92	5.97	0.326	1000	5.00	217
	15.98	5.91	0.322	1000	5.06	222
	15.24	5.41	0.321	126	5.21	242
	15.15	5.53	0.322	146	5.11	257
Surge to bottom	14.98	5.63	0.322	0.0	5.04	265
	15.32	5.82	0.322	65.8	5.02	259
	15.75	5.88	0.322	200	4.99	261
Surge to bottom	16.16	5.83	0.323	224	4.98	252
	16.07	5.80	0.323	150	5.00	249
	15.90	5.74	0.323	85	5.01	260
	15.97	5.81	0.320	6.8	5.02	256
	15.65	5.83	0.323	47.7	5.00	261
	15.80	5.83	0.322	15.3	4.99	260

Method:
Purge Start: 3:30 pm
Purge Stop: 4:30 pm
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (45 to 55 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/19/2018

WELL ID: MW-04S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 25.32 ft.
Initial static water level (from top of casing) ..... 10.40 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 14.92 ft. of water x 0.16 = 2.43 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
45 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	17.02	5.96	0.196	1000	0.58	240
Pump set mid-screen	17.35	6.15	0.198	1000	0.62	235
	17.60	6.10	0.201	110	0.63	239
	17.63	6.08	0.202	12.7	0.61	244
	17.25	6.35	0.185	1000	0.14	235
	17.64	6.20	0.207	351	0.59	243
Surge to bottom	17.56	6.15	0.202	76.9	0.43	246
	17.58	6.20	0.201	12.9	0.51	245
	17.72	6.07	0.204	875	0.74	252
	17.58	6.09	0.196	165	0.46	250
	17.57	6.13	0.198	71.2	0.46	247
Surge to bottom	17.56	6.05	0.200	30.9	0.45	251
	17.55	6.05	0.201	10.5	0.39	253
	17.32	6.24	0.182	1000	0.46	246
	17.36	6.23	0.193	1000	0.42	247
	17.56	6.23	0.201	134	0.41	245
	17.58	6.21	0.201	44.5	0.41	246

Method:
Purge Start: 8:40 am
Purge Stop: 9:20 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Partly Cloudy, 61-77 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (16 to 26 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-07I
PERSONNEL: Tara Judge
Depth of well (from top of casing) ..... 57.25 ft.
Initial static water level (from top of casing) ..... 9.60 ft.

Purging Method

Airlift	___	Centrifugal	___
Bailer	___	Pos. Displ.	___
Submersible Pump	___	Peristaltic Pump (Low Flow)	___

Well Volume Calculation:
2 in. casing: 47.65 ft. of water x 0.16 = 7.76 gallons
3 in. casing: _____ ft. of water x 0.36 = _____ gallons
4 in. casing: _____ ft. of water x 0.65 = _____ gallons

volume of water removed:
55 gal. >3 volumes: yes X no ___ purged dry? yes _____ no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial Readings	14.94	6.41	0.321	360	3.71	210
Pump at bottom	14.86	5.54	0.329	129	4.09	235
	14.86	5.40	0.331	110	3.92	246
	14.84	5.32	0.330	73.3	4.00	252
Surged to bottom	15.05	5.33	0.334	1000	3.55	258
	15.01	5.15	0.350	1000	3.65	266
	14.78	5.21	0.331	113	4.23	263
	14.79	5.21	0.331	106	4.25	264
	14.78	5.23	0.331	112	4.25	262
Surged to bottom	14.88	5.40	0.330	1000	4.00	237
	14.77	5.21	0.330	550	4.41	255
Surged to bottom	14.97	5.48	0.343	1000	3.36	230
	14.76	5.27	0.328	633	4.42	254
	14.74	5.29	0.329	502	4.44	252
	14.75	5.30	0.328	450	4.45	252
	14.75	5.30	0.328	380	4.45	252
	14.73	5.97	0.327	290	4.47	218
Surged to bottom	14.73	5.91	0.327	204	4.50	223
	14.74	5.95	0.327	142	4.52	223
	14.74	5.94	0.326	137	4.52	224
	14.74	5.92	0.326	117	4.52	226
	14.75	5.93	0.325	88.3	4.54	226
	14.74	5.90	0.326	90.1	4.53	228
	14.75	5.92	0.325	89.1	4.54	227
	14.74	5.91	0.326	75.3	4.53	228

Method:
Purge Start: 840 am
Purge Stop: 950 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations

Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes _____ no X describe
Sheen? yes _____ no X describe
Odor? yes _____ no X describe

Comments: Purge water contained in (1.5) 55-gallon drum.
Periodic surging was performed throughout the screened zone (48 - 58 ft) using 3/8*1/4 in. poly-tubing.

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-07S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 19.27 ft.
Initial static water level (from top of casing) ..... 9.45 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 9.82 ft. of water x 0.16 = 1.60 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
50 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial Readings	19.88	6.29	0.481	1000	0.00	-52
	19.39	6.66	0.396	910	0.00	-105
	19.38	6.70	0.388	432	0.00	-110
Surge to bottom	19.33	6.69	0.384	211	0.00	-118
	19.31	6.69	0.386	61.5	0.00	-126
	19.29	6.68	0.386	57.5	0.00	-126
Surge to bottom	20.04	6.75	0.394	1000	0.00	-133
	19.14	6.07	0.387	198	0.00	-100
	19.14	6.06	0.387	156	0.00	-100
	19.12	6.07	0.382	105	0.00	-101
	19.05	6.34	0.386	1000	0.00	-118
	19.07	6.36	0.389	51.8	0.00	-120
	19.07	6.43	0.390	20.0	0.00	-125
Surge to bottom	19.04	6.62	0.388	410	0.00	-137
	19.03	6.64	0.388	33.3	0.00	-139
	19.03	6.65	0.388	12.3	0.00	-140
	19.03	6.65	0.389	9	0.00	-141

Method:
Purge Start: 9:55 am
Purge Stop: 10:44 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)
Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe

Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (9 to 19 ft) using 3/8*1/4 in. poly-tubing.

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-08S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 17.67 ft.
Initial static water level (from top of casing) ..... 9.81 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 7.86 ft. of water x 0.16 = 1.21 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
70 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	20.57	6.02	0.359	1000	7.18	24
Pump set mid-screen	20.56	5.93	0.336	975	0.00	0
	20.49	5.93	0.339	125	0.00	-4
	20.43	6.07	0.346	75.1	0.00	-20
	20.45	6.00	0.344	1000	0.00	0
Surge to bottom	20.43	5.96	0.346	521	0.00	-3
	20.40	5.99	0.351	46	0.00	-10
	20.43	6.07	0.345	1000	0.00	-8
	20.37	6.08	0.346	974	0.00	-9
Surge to bottom	20.39	6.06	0.349	445	0.00	-11
	20.33	6.29	0.343	1000	0.00	-26
	20.40	6.39	0.346	443	0.00	-33
	20.39	6.24	0.346	137	0.00	-27
Surge to bottom	20.22	6.44	0.336	1000	0.00	-42
	20.36	6.42	0.335	198	0.00	-52
	20.36	6.50	0.347	57.8	0.00	-48
	20.36	6.45	0.345	15.3	0.00	-46
	20.36	6.45	0.342	3.7	0.00	-47
	20.35	6.45	0.341	4.7	0.00	-48
	20.36	6.49	0.343	4.1	0.00	-50

Method:
Purge Start: 11:40 am
Purge Stop: 12:35 pm
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe
Comments: Purge water contained in (1.25) 55-gallon drum.
Periodic surging was performed throughout the screened zone (8 to 18 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-09S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.67 ft.
Initial static water level (from top of casing) ..... 10.01 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 8.66 ft. of water x 0.16 = 1.41 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
65 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial Readings	21.74	6.16	0.180	1000	2.33	111
	21.53	6.27	0.179	622	2.46	133
	21.44	6.57	0.178	195	2.63	133
Surge to bottom	21.40	6.59	0.177	67.7	2.70	140
	21.33	6.50	0.177	1000	2.86	163
	21.26	6.61	0.176	923	2.90	163
Surge to bottom	21.23	6.62	0.176	187	2.96	164
	21.23	6.64	0.176	99.1	2.99	165
	21.51	6.81	0.182	1000	2.05	160
	21.42	6.13	0.175	1000	2.96	197
	21.28	6.03	0.175	1000	2.99	207
	21.21	6.03	0.176	126	2.94	207
	21.19	6.03	0.176	24.6	2.94	208
Surge to bottom	21.17	6.05	0.175	5.3	2.93	207
	21.16	6.06	0.175	0.0	2.91	200

Method:
Purge Start: 10:50 am
Purge Stop: 11:35 am
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe

Comments: Purge water contained in (1.25) 55-gallon drum.
Periodic surging was performed throughout the screened zone (9 to 19 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-10S
PERSONNEL: Tara Judge

Depth of well (from top of casing) ..... 18.40 ft.
Initial static water level (from top of casing) ..... 10.43 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 8.03 ft. of water x 0.16 = 1.31 gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: ____ ft. of water x 0.65 = ____ gallons

volume of water removed:
50 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	21.11	6.01	0.343	1000	2.61	149
Pump set mid-screen	21.00	6.13	0.335	1000	0.42	174
	20.90	6.24	0.344	1000	0.29	173
	20.85	6.25	0.351	370	0.15	177
	20.74	6.20	0.348	1000	0.23	185
	20.80	6.20	0.354	166	0.06	190
Surge to bottom	20.65	6.28	0.353	1000	0.04	192
	20.80	6.29	0.355	127	0.00	193
	20.79	6.37	0.358	18.7	0.00	192
Surge to bottom	20.77	6.39	0.357	7.0	0.00	189
	20.67	6.37	0.373	1000	0.00	194
	20.73	6.36	0.363	500	0.00	193
	20.75	6.41	0.357	50.1	0.00	190
	20.75	6.39	0.361	15.6	0.00	191
	20.75	6.39	0.362	3.2	0.00	191
	20.74	6.37	0.361	1.0	0.00	194

Method:
Purge Start: 12:50 pm
Purge Stop: 1:40 pm
Pump: Whale Premium Pump 12 volt - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe
Comments: Purge water contained in (1) 55-gallon drum.
Periodic surging was performed throughout the screened zone (8 to 18 ft) using 3/8*1/4 in. poly-tubing

FIELD OBSERVATION LOG
MONITORING WELL DEVELOPMENT RECORD

SITE Wantagh Cleaners, Wantagh, NY DATE 9/18/2018

WELL ID: MW-11S
PERSONNEL: Tara Judge
Depth of well (from top of casing) ..... 18.59 ft.
Initial static water level (from top of casing) ..... 9.40 ft.

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible Pump	X	Peristaltic Pump (Low Flow)	

Well Volume Calculation:
2 in. casing: 9.19 ft. of water x 0.16 = 1.50 gallons
3 in. casing: ft. of water x 0.36 = gallons
4 in. casing: ft. of water x 0.65 = gallons

volume of water removed:
75 gal. >3 volumes: yes X no purged dry? yes no X

Field Tests

Comments	Temp (c°)	pH	Conductivity (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	ORP (mv)
Initial reading	19.81	6.23	0.545	1000	1.50	-37
Pump set mid-screen	19.54	6.23	0.595	1000	0.00	-59
	19.45	6.37	0.570	1000	0.00	-69
	19.45	6.18	0.558	1000	0.00	-60
	19.40	6.17	0.560	1000	0.00	-64
	19.42	6.22	0.579	280	0.00	-72
Surge to bottom	19.41	6.34	0.576	69.5	0.00	-81
	19.38	6.38	0.557	1000	0.00	-84
	19.47	6.38	0.605	500	0.00	-86
Surge to bottom	19.41	6.46	0.575	75.4	0.00	-91
	19.41	6.43	0.564	1000	0.00	-87
	19.31	6.02	0.562	1000	0.00	-72
	19.38	6.20	0.587	400	0.00	-82
	19.36	6.31	0.572	100	0.00	-91
	19.35	6.28	0.577	4	0.00	-95
	19.35	6.41	0.577	0.0	0.00	-103
Surge to bottom	19.34	6.41	0.576	0.0	0.00	-105
	19.40	6.31	0.584	400	0.00	-95
	19.36	6.36	0.576	133	0.00	-100
	19.34	6.37	0.576	20	0.00	-104
	19.31	6.37	0.574	3.1	0.00	-106

Method:
Purge Start: 2:00 pm
Purge Stop: 3:05 pm
Pump: Whale Premium Pump - Airlift Method
Meters: Horiba U52 and water level
Flow Rate: 4 gallons per minute (gpm)

Observations
Weather/Temperature: Rain, 60-75 F
Description: Clear, no odor, no sheen
Free Product? yes no X describe
Sheen? yes no X describe
Odor? yes no X describe

Comments: Purge water contained in (1.5) 55-gallon drum.
Periodic surging was performed throughout the screened zone (9 to 19 ft) using 3/8*1/4 in. poly-tubing.

APPENDIX C

ANALYTICAL DATA SUMMARY TABLES

Table 1
Wantagh Cleaners OU2 Site
On-Site Groundwater Monitoring Well Sample Results
Volatile Organic Compounds

Sample ID	MW-01S	MW-02I	MW-02S	MW-03S	MW-04I	MW-04S	MW-05S	MW-07I	MW-07S	MW-08S	MW-09S	MW-10S	MW-11S	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/26/2018	
Start depth (BLS)	15.5	50	15.7	15.7	46	15.8	7.63	49.1	9.1	7.68	8.81	8.46	8.65	
End depth (BLS)	25.5	60	25.7	25.7	56	25.8	17.63	59.1	19.1	17.68	18.81	18.46	18.65	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS														
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	1
1,1-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,1-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U	U	U	U	U	U	U	U	0.04
1,2-Dibromoethane	U	U	U	U	U	U	U	U	U	U	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	3
1,2-Dichloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	0.6
1,2-Dichloropropane	U	U	U	U	U	U	U	U	U	U	U	U	U	1
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	3
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	3
2-Hexanone	U	U	U	U	U	U	U	U	U	U	U	U	U	50
Acetone	U	U	U	U	U	U	U	U	U	3.5 J	4.8 J	U	U	50
Benzene	U	U	U	U	U	U	U	U	U	U	U	U	U	1
Bromodichloromethane	U	U	U	U	U	U	U	U	U	U	8.5	U	U	50
Bromoform	U	U	U	U	U	U	U	U	U	U	1.9	U	U	50
Bromomethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Carbon Disulfide	U	U	U	U	U	U	U	U	U	U	U	U	U	60
Carbon Tetrachloride	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Chloroethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Chloroform	0.71 J	0.52 J	U	U	0.45 J	U	U	0.41 J	U	U	***10***	U	U	7
Chloromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Cis-1,2-Dichloroethylene	U	U	2.1	***230***	U	U	***100***	U	***940***	U	1.7	U	***1100***	5
Cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	U	U	0.4
Cyclohexane	U	U	U	U	U	U	U	U	U	U	U	U	U	--

See next page for footnotes.

Table 1
Wantagh Cleaners OU2 Site
On-Site Groundwater Monitoring Well Sample Results
Volatile Organic Compounds

Sample ID	MW-01S	MW-02I	MW-02S	MW-03S	MW-04I	MW-04S	MW-05S	MW-07I	MW-07S	MW-08S	MW-09S	MW-10S	MW-11S	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/24/2018	9/26/2018	
Start depth (BLS)	15.5	50	15.7	15.7	46	15.8	7.63	49.1	9.1	7.68	8.81	8.46	8.65	
End depth (BLS)	25.5	60	25.7	25.7	56	25.8	17.63	59.1	19.1	17.68	18.81	18.46	18.65	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	U	U	U	U	U	U	U	6.7	U	U	50
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Methyl Acetate	U	U	U	U	U	U	U	U	U	U	U	U	U	--
Methyl Ethyl Ketone	U	U	U	U	U	U	U	U	U	U	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	U	U	U	U	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	U	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Tert-Butyl Methyl Ether	U	U	U	U	U	U	U	U	U	U	U	U	U	10
Tetrachloroethylene	0.48 J	U	U	***680***	0.75 J	1.5	***83***	0.42 J	***1300***	0.75 J	***22***	***10***	***1200***	5
Toluene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	U	U	U	U	U	0.4
Trichloroethylene	U	U	U	***340***	0.88 J	U	***39***	U	***570***	0.66 J	3.4	0.96 J	***520***	5
Trichlorofluoromethane	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Vinyl Chloride	U	U	U	U	U	U	U	U	***40 J***	U	U	U	U	2
Xylenes, Total	U	U	U	U	U	U	U	U	U	U	U	U	U	5
Total Volatile Compounds	1.19	0.52	2.1	1,250	2.08	1.50	222.0	0.83	2,850	4.91	59.00	10.96	2,820	--

Footnotes/Qualifiers:

BLS: Below land surface

ug/l: Micrograms per liter

--: No standard

U: Analyzed for but not detected

J: Estimated value or limit

JB: Estimated value, also dectected in method blank

Exceeds Class GA Standard or Guidance Value

Table 2
Wantagh Cleaners OU2 Site
Groundwater Well Samples
PFAs

Sample ID Sampling Date	MW-05S 9/24/2018	MW-07I 9/24/2018	MW-07S 9/24/2018	MW-08S 9/24/2018	Blind Duplicate 9/24/2018	MW-09S 9/24/2018	MW-10S 9/24/2018	MW-11S 9/26/2018	Equipment Blank 9/26/2018
PFAs in ng/l									
2-(N-methyl perfluorooctanesulfonamido) acetic acid	U	4.4 J	66	U	U	71	U	39	U
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	4.8 J	U	14 J	U	U	14 J	U	14 J	U
Perfluorobutanesulfonic acid (PFBS)	33	5.7	13	6.3	6.7	U	5.9	37	U
Perfluorobutanoic Acid	19	4.9	47	18	18	0.42 J	14	21	U
Perfluorodecane Sulfonic Acid	U	U	0.79 J	U	U	U	1.1 J	1.7	U
Perfluorodecanoic acid (PFDA)	56	1 J	13	5.1	5.1	1.1 J	3.4	15	U
Perfluorododecanoic acid (PFDoA)	U	U	U	U	U	U	0.69 J	U	U
Perfluoroheptane Sulfonate (PFHPS)	2.4	0.65 J	1.2 J	0.43 J	0.26 J	U	0.52 J	3.2	U
Perfluoroheptanoic acid (PFHpA)	35	5.5	150	17	21	0.23 J	30	37	U
Perfluorohexanesulfonic acid (PFHxS)	16	UB	11	UB	3.2	UB	19	26	0.24 JB
Perfluorohexanoic acid (PFHxA)	32	6.4	130	43	48	U	29	38	U
Perfluorononanoic acid (PFNA)	17	2.5	8.8	6.5	6.6	U	8.4	11	U
Perfluorooctane Sulfonamide (FOSA)	8.3	0.37 J	1.7 J	2.7	2.6	65	U	5.7	U
Perfluorooctanesulfonic acid (PFOS)	100	15	25	33	31	5.7	31	150	U
Perfluorooctanoic acid (PFOA)	77	17	120	29	34	U	18	120	U
Perfluoropentanoic Acid (PFPeA)	44	6.8	140	44	50	0.78 J	41	50	U
Perfluorotetradecanoic acid (PFTA)	U	U	U	U	U	U	U	U	U
Perfluorotridecanoic Acid (PFTriA)	U	U	U	U	U	U	U	U	U
Perfluoroundecanoic Acid (PFUnA)	1.2 J	U	U	2.6	2.7	U	U	U	U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	2.5 J	U	U	2.7 J	2.1 J	U	U	U	U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	1.7 J	U	2.8 J	2.7 J	1.9 J	U	3.8 J	U	U

Footnotes/Qualifiers:

ng/l: Nanogram per liter
U: Analyzed for but not detected
UB: Qualified as non detect due to blank result
J: Estimated value or limit
JB: Estimated value, also detected in method blank
--: Not analyzed

D&B Engineers and Architects, P.C.

Table 3
Wantagh Cleaners OU2 Site
Groundwater Well Samples
1,4-Dioxane

Sample ID	Sampling Date	1,4-DIOXANE (ug/l)
MW-05S	10/30/2018	0.23
MW-07I	10/30/2018	U
MW-07S	10/30/2018	0.71
MW-08S	10/30/2018	1.3 J
MW-09S	10/30/2018	1.6 J
MW-10S	10/30/2018	U
MW-11S	10/30/2018	1.4 J

Footnotes/Qualifiers:

ug/l: Micrograms per liter
U: Analyzed for but not detected
J: Estimated value or limit
--: Not analyzed

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	O	O	O	QR	QR	QR	U	U	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	
Start depth (BLS)	25	20	15	25	20	15	25	20	
End depth (BLS)	25	20	15	25	20	15	25	20	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	5
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	1
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5
1,1-Dichloroethene	U	0.4 J	U	U	U	U	U	U	5
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U	U	U	0.04
1,2-Dibromoethane	U	U	U	U	U	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	3
1,2-Dichloroethane	U	U	U	U	U	U	U	U	0.6
1,2-Dichloropropane	U	U	U	U	U	U	U	U	1
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	3
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	3
2-Hexanone	U	U	U	U	U	U	U	U	50
Acetone	U	U	U	U	3.6 J	U	4.8 J	U	50
Benzene	U	U	U	U	U	U	U	U	1
Bromodichloromethane	U	U	U	U	U	U	U	U	50
Bromoform	U	U	U	U	U	U	U	U	50
Bromomethane	U	U	U	U	U	U	U	U	5
Carbon Disulfide	U	U	U	U	U	U	U	U	60
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	U	U	5
Chloroethane	U	U	U	U	U	U	U	U	5
Chloroform	U	U	U	U	U	U	U	U	7
Chloromethane	U	U	U	U	U	U	U	U	5
Cis-1,2-Dichloroethylene	***140 J***	***180 DJ***	***37 J***	***67 J***	1.6 J	U	U	U	5
Cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	0.4
Cyclohexane	U	U	U	U	U	U	U	U	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	O	O	O	QR	QR	QR	U	U	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	
Start depth (BLS)	25	20	15	25	20	15	25	20	
End depth (BLS)	25	20	15	25	20	15	25	20	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	U	U	U	U	U	50
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	U	U	5
Isopropylbenzene	U	U	U	U	U	U	U	U	5
Methyl Acetate	U	U	U	U	U	U	U	U	--
Methyl Ethyl Ketone	U	U	U	U	U	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	U	U	5
Tert-Butyl Methyl Ether	U	U	U	U	U	U	U	U	10
Tetrachloroethylene	***94*** ***J***	***48*** ***J***	***26*** ***J***	***25*** ***J***	***5.6*** ***J***	3.8 J	U	U	5
Toluene	U	U	U	U	U	U	U	U	5
Trans-1,2-Dichloroethene	U	2.4 J	U	1.9 J	U	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	0.4
Trichloroethylene	***60*** ***J***	***31*** ***J***	***11*** ***J***	***20*** ***J***	1.1 J	0.76 J	U	U	5
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5
Vinyl Chloride	U	1.3 J	U	U	U	U	U	U	2
Xylenes, Total	U	U	U	U	U	U	U	U	5
Total Volatile Compounds	294	263.1	74	113.9	11.9	4.56	4.8	0	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	YY	YY	YY	XX	XX	XX	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/12/2018	9/12/2018	
Start depth (BLS)	30	25	20	85	75	65	
End depth (BLS)	30	25	20	85	75	65	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	UJ	UJ	UJ	5
1,1,1-Trichloroethane	U	U	U	UJ	UJ	UJ	5
1,1,2,2-Tetrachloroethane	U	U	U	UJ	UJ	UJ	5
1,1,2-Trichloroethane	U	U	U	UJ	UJ	UJ	1
1,1-Dichloroethane	U	U	U	UJ	UJ	UJ	5
1,1-Dichloroethene	U	U	U	UJ	UJ	UJ	5
1,2,4-Trichlorobenzene	U	U	U	UJ	UJ	UJ	5
1,2-Dibromo-3-Chloropropane	U	U	U	UJ	UJ	UJ	0.04
1,2-Dibromoethane	U	U	U	UJ	UJ	UJ	0.0006
1,2-Dichlorobenzene	U	U	U	UJ	UJ	UJ	3
1,2-Dichloroethane	U	U	U	UJ	UJ	UJ	0.6
1,2-Dichloropropane	U	U	U	UJ	UJ	UJ	1
1,3-Dichlorobenzene	U	U	U	UJ	UJ	UJ	3
1,4-Dichlorobenzene	U	U	U	UJ	UJ	UJ	3
2-Hexanone	U	U	U	UJ	UJ	UJ	50
Acetone	4.7 J	5.5 J	6.3 J	16 J	9 J	8.3 J	50
Benzene	U	U	U	UJ	UJ	UJ	1
Bromodichloromethane	U	U	U	UJ	UJ	UJ	50
Bromoform	U	U	U	UJ	UJ	UJ	50
Bromomethane	U	U	U	UJ	UJ	UJ	5
Carbon Disulfide	U	U	U	UJ	0.31 J	0.28 J	60
Carbon Tetrachloride	U	U	U	UJ	UJ	UJ	5
Chlorobenzene	U	U	U	UJ	UJ	UJ	5
Chloroethane	U	U	U	UJ	UJ	UJ	5
Chloroform	U	U	2.4	UJ	UJ	UJ	7
Chloromethane	U	U	U	UJ	UJ	UJ	5
Cis-1,2-Dichloroethylene	U	U	U	2.2 J	***12 J***	***7.6 J***	5
Cis-1,3-Dichloropropene	U	U	U	UJ	UJ	UJ	0.4
Cyclohexane	U	U	U	UJ	UJ	UJ	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	YY	YY	YY	XX	XX	XX	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/13/2018	9/13/2018	9/13/2018	9/12/2018	9/12/2018	9/12/2018	
Start depth (BLS)	30	25	20	85	75	65	
End depth (BLS)	30	25	20	85	75	65	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	UJ	UJ	UJ	50
Dichlorodifluoromethane	U	U	U	UJ	UJ	UJ	5
Ethylbenzene	U	U	U	UJ	UJ	UJ	5
Isopropylbenzene	U	U	U	UJ	UJ	UJ	5
Methyl Acetate	U	U	U	UJ	UJ	UJ	--
Methyl Ethyl Ketone	U	U	U	4.5 J	UJ	3.5 J	50
Methyl Isobutyl Ketone	U	U	U	UJ	UJ	UJ	--
Methylcyclohexane	U	U	U	UJ	UJ	UJ	--
Methylene Chloride	U	U	U	0.65 J	0.57 J	0.63 J	5
Styrene	U	U	U	UJ	UJ	UJ	5
Tert-Butyl Methyl Ether	U	U	U	UJ	2.7 J	0.78 J	10
Tetrachloroethylene	0.84 J	1.4	0.5 J	3.2 J	***7 J***	***6.6 J***	5
Toluene	U	U	U	1.6 J	UJ	UJ	5
Trans-1,2-Dichloroethene	U	U	U	UJ	UJ	UJ	5
Trans-1,3-Dichloropropene	U	U	U	UJ	UJ	UJ	0.4
Trichloroethylene	U	U	U	1.3 J	4.7 J	4.8 J	5
Trichlorofluoromethane	U	U	U	UJ	UJ	UJ	5
Vinyl Chloride	U	U	U	UJ	UJ	UJ	2
Xylenes, Total	U	U	U	UJ	UJ	UJ	5
Total Volatile Compounds	5.54	6.9	9.2	29.45	36.28	32.49	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	EEE	EEE	EEE	EEE	EEE	EEE	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/13/2018	9/13/2018	9/13/2018	9/13/2018	9/13/2018	9/13/2018	
Start depth (BLS)	75	65	55	45	35	25	
End depth (BLS)	75	65	55	45	35	25	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	5
1,1,1-Trichloroethane	U	U	U	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	1
1,1-Dichloroethane	U	U	U	U	U	U	5
1,1-Dichloroethene	U	U	U	U	U	U	5
1,2,4-Trichlorobenzene	U	U	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U	0.04
1,2-Dibromoethane	U	U	U	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	U	U	U	3
1,2-Dichloroethane	U	U	U	U	U	U	0.6
1,2-Dichloropropane	U	U	U	U	U	U	1
1,3-Dichlorobenzene	U	U	U	U	U	U	3
1,4-Dichlorobenzene	U	U	U	U	U	U	3
2-Hexanone	U	U	U	U	U	U	50
Acetone	4 J	11	9.2 J	6.3 J	5.6 J	6.2 J	50
Benzene	U	U	U	U	U	U	1
Bromodichloromethane	U	U	U	U	U	U	50
Bromoform	U	U	U	U	U	U	50
Bromomethane	U	U	U	U	U	U	5
Carbon Disulfide	U	0.33 J	U	U	U	U	60
Carbon Tetrachloride	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	U	U	U	5
Chloroethane	U	U	U	U	U	U	5
Chloroform	U	U	U	U	U	U	7
Chloromethane	U	U	U	U	U	U	5
Cis-1,2-Dichloroethylene	U	U	U	U	U	U	5
Cis-1,3-Dichloropropene	U	U	U	U	U	U	0.4
Cyclohexane	U	U	U	U	U	U	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	EEE	EEE	EEE	EEE	EEE	EEE	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/13/2018	9/13/2018	9/13/2018	9/13/2018	9/13/2018	9/13/2018	
Start depth (BLS)	75	65	55	45	35	25	
End depth (BLS)	75	65	55	45	35	25	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	U	U	U	50
Dichlorodifluoromethane	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	5
Isopropylbenzene	U	U	U	U	U	U	5
Methyl Acetate	U	U	U	U	U	U	--
Methyl Ethyl Ketone	U	3.1 J	U	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	5
Tert-Butyl Methyl Ether	U	U	U	U	U	U	10
Tetrachloroethylene	U	U	U	U	U	U	5
Toluene	U	U	U	U	U	U	5
Trans-1,2-Dichloroethene	U	U	U	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	U	U	U	0.4
Trichloroethylene	U	U	U	U	U	U	5
Trichlorofluoromethane	U	U	U	U	U	U	5
Vinyl Chloride	U	U	U	U	U	U	2
Xylenes, Total	U	U	U	U	U	U	5
Total Volatile Compounds	4	14.43	9.2	6.3	5.6	6.2	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	III	III	III	III	III	III	III	III	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	
Start depth (BLS)	95	85	75	65	55	45	35	25	
End depth (BLS)	95	85	75	65	55	45	35	25	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS									
1,1,2-Trichloro-1,2,2-trifluoroethane	UJ	U	U	UJ	U	U	U	U	5
1,1,1-Trichloroethane	UJ	U	U	UJ	U	U	U	U	5
1,1,2,2-Tetrachloroethane	UJ	U	U	UJ	U	U	U	U	5
1,1,2-Trichloroethane	UJ	U	U	UJ	U	U	U	U	1
1,1-Dichloroethane	UJ	U	U	UJ	U	U	U	U	5
1,1-Dichloroethene	UJ	U	U	UJ	U	U	U	U	5
1,2,4-Trichlorobenzene	UJ	U	U	UJ	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	UJ	U	U	UJ	U	U	U	U	0.04
1,2-Dibromoethane	UJ	U	U	UJ	U	U	U	U	0.0006
1,2-Dichlorobenzene	UJ	U	U	UJ	U	U	U	U	3
1,2-Dichloroethane	UJ	U	U	UJ	U	U	U	U	0.6
1,2-Dichloropropane	UJ	U	U	UJ	U	U	U	U	1
1,3-Dichlorobenzene	UJ	U	U	UJ	U	U	U	U	3
1,4-Dichlorobenzene	UJ	U	U	UJ	U	U	U	U	3
2-Hexanone	UJ	U	U	UJ	U	U	U	U	50
Acetone	UBJ	UBJ	UBJ	UBJ	UBJ	UBJ	UBJ	U	50
Benzene	UBJ	U	U	UJ	U	U	U	U	1
Bromodichloromethane	UJ	U	U	UJ	U	U	U	U	50
Bromoform	UJ	U	U	UJ	U	U	U	U	50
Bromomethane	UJ	U	U	UJ	U	U	U	U	5
Carbon Disulfide	UJ	0.25 J	U	UJ	U	U	U	U	60
Carbon Tetrachloride	UJ	U	U	UJ	U	U	U	U	5
Chlorobenzene	UJ	U	U	UJ	U	U	U	U	5
Chloroethane	UJ	U	U	UJ	U	U	U	U	5
Chloroform	UJ	0.34 J	U	UJ	U	1.1	U	U	7
Chloromethane	UJ	U	U	UJ	U	U	U	U	5
Cis-1,2-Dichloroethylene	UJ	***5.4***	1.4	3.7 J	2	1.3	U	U	5
Cis-1,3-Dichloropropene	UJ	U	U	UJ	U	U	U	U	0.4
Cyclohexane	UJ	U	U	UJ	U	U	U	U	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	III	III	III	III	III	III	III	III	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	
Start depth (BLS)	95	85	75	65	55	45	35	25	
End depth (BLS)	95	85	75	65	55	45	35	25	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	UJ	U	U	UJ	U	U	U	U	50
Dichlorodifluoromethane	UJ	U	U	UJ	U	U	U	U	5
Ethylbenzene	UJ	U	U	UJ	U	U	U	U	5
Isopropylbenzene	UJ	U	U	UJ	U	U	U	U	5
Methyl Acetate	UJ	U	U	UJ	U	U	U	U	--
Methyl Ethyl Ketone	UBJ	UBJ	UBJ	UJ	UBJ	UBJ	UBJ	U	50
Methyl Isobutyl Ketone	UJ	U	U	UJ	U	U	U	U	--
Methylcyclohexane	UJ	U	U	UJ	U	U	U	U	--
Methylene Chloride	UJ	U	U	UJ	U	U	U	U	5
Styrene	UJ	U	U	UJ	U	U	U	U	5
Tert-Butyl Methyl Ether	UJ	U	U	UJ	U	U	U	U	10
Tetrachloroethylene	UJ	3.4	0.84 J	1.5 J	1.3	1.1	U	U	5
Toluene	1.1 J	U	U	UJ	U	U	U	U	5
Trans-1,2-Dichloroethene	UJ	U	U	UJ	U	U	U	U	5
Trans-1,3-Dichloropropene	UJ	U	U	UJ	U	U	U	U	0.4
Trichloroethylene	UJ	1.8	0.65 J	UJ	0.89 J	0.59 J	U	U	5
Trichlorofluoromethane	UJ	U	U	UJ	U	U	U	U	5
Vinyl Chloride	UJ	U	U	UJ	U	U	U	U	2
Xylenes, Total	UJ	U	U	UJ	U	U	U	U	5
Total Volatile Compounds	1.1	11.19	2.89	5.2	4.19	4.09	0	0	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	RRR	RRR	RRR	RRR	SSS	SSS	SSS	SSS	SSS	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	
Start depth (BLS)	65	55	45	35	95	85	75	65	55	
End depth (BLS)	65	55	45	35	95	85	75	65	55	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS										
1,1,2-Trichloro-1,2,2-trifluoroethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
1,1,1-Trichloroethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
1,1,2,2-Tetrachloroethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
1,1,2-Trichloroethane	UJ	UJ	U	UJ	U	U	UJ	U	U	1
1,1-Dichloroethane	UJ	UJ	U	UJ	0.66 J	1.8 J	1.1 J	U	U	5
1,1-Dichloroethene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
1,2,4-Trichlorobenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
1,2-Dibromo-3-Chloropropane	UJ	UJ	U	UJ	U	U	UJ	U	U	0.04
1,2-Dibromoethane	UJ	UJ	U	UJ	U	U	UJ	U	U	0.0006
1,2-Dichlorobenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	3
1,2-Dichloroethane	UJ	UJ	U	UJ	U	0.21 J	UJ	U	U	0.6
1,2-Dichloropropane	UJ	UJ	U	UJ	U	U	UJ	U	U	1
1,3-Dichlorobenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	3
1,4-Dichlorobenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	3
2-Hexanone	UJ	UJ	U	UJ	U	U	UJ	U	U	50
Acetone	UBJ	UBJ	UBJ	UBJ	UBJ	UBJ	UBJ	U	U	50
Benzene	UBJ	UJ	U	UJ	U	U	UJ	U	U	1
Bromodichloromethane	UJ	UJ	U	UJ	U	U	UJ	U	U	50
Bromoform	UJ	UJ	U	UJ	U	U	UJ	U	U	50
Bromomethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Carbon Disulfide	UJ	0.36 J	0.34 J	UJ	U	2.2	UJ	U	0.21 J	60
Carbon Tetrachloride	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Chlorobenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Chloroethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Chloroform	UJ	UJ	U	UJ	U	U	UJ	***9.9***	0.56 J	7
Chloromethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Cis-1,2-Dichloroethylene	UJ	2.9 J	3.7	UJ	***7.3***	***12***	3.3 J	***10***	***6.6***	5
Cis-1,3-Dichloropropene	UJ	UJ	U	UJ	U	U	UJ	U	U	0.4
Cyclohexane	UJ	UJ	U	UJ	U	U	UJ	U	U	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	RRR	RRR	RRR	RRR	SSS	SSS	SSS	SSS	SSS	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/19/2018	9/19/2018	9/19/2018	9/19/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	9/20/2018	
Start depth (BLS)	65	55	45	35	95	85	75	65	55	
End depth (BLS)	65	55	45	35	95	85	75	65	55	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	UJ	UJ	U	UJ	U	U	UJ	U	U	50
Dichlorodifluoromethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Ethylbenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Isopropylbenzene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Methyl Acetate	UJ	UJ	U	UJ	U	U	UJ	U	U	--
Methyl Ethyl Ketone	UBJ	UJ	UBJ	UBJ	UBJ	UBJ	UBJ	U	U	50
Methyl Isobutyl Ketone	UJ	UJ	U	UJ	U	U	UJ	U	U	--
Methylcyclohexane	UJ	UJ	U	UJ	U	U	UJ	U	U	--
Methylene Chloride	0.87 J	0.45 J	U	UJ	U	U	UJ	U	U	5
Styrene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Tert-Butyl Methyl Ether	UJ	UJ	0.29 J	UJ	4.6	1.6	2.3 J	U	U	10
Tetrachloroethylene	UJ	1.3 J	2.7	0.77 J	4.6	1.4	0.45 J	***6.4***	***5.9***	5
Toluene	1.3 J	0.55 J	U	UJ	U	U	0.52 J	U	U	5
Trans-1,2-Dichloroethene	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Trans-1,3-Dichloropropene	UJ	UJ	U	UJ	U	U	UJ	U	U	0.4
Trichloroethylene	UJ	1.1 J	1.8	UJ	2.5	0.89 J	UJ	4.9	3.9	5
Trichlorofluoromethane	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Vinyl Chloride	UJ	UJ	U	UJ	U	U	UJ	U	U	2
Xylenes, Total	UJ	UJ	U	UJ	U	U	UJ	U	U	5
Total Volatile Compounds	2.17	6.66	8.83	0.77	19.66	20.1	7.67	31.2	17.17	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

D&B ENGINEERS AND ARCHITECTS, P.C.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	DT1G	DT1G	DT1G	DT1F	DT1F	DT1F	DT2C	DT2C	DT2C	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/21/2018	9/21/2018	9/21/2018	9/24/2018	9/24/2018	9/24/2018	9/21/2018	9/21/2018	9/21/2018	
Start depth (BLS)	95	85	75	65	55	45	75	65	55	
End depth (BLS)	95	85	75	65	55	45	75	65	55	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS										
1,1,2-Trichloro-1,2,2-trifluoroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
1,1,1-Trichloroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
1,1,2,2-Tetrachloroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
1,1,2-Trichloroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	1
1,1-Dichloroethane	0.53 J	UJ	UJ	U	U	U	0.63 J	UJ	UJ	5
1,1-Dichloroethene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
1,2,4-Trichlorobenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
1,2-Dibromo-3-Chloropropane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	0.04
1,2-Dibromoethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	0.0006
1,2-Dichlorobenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	3
1,2-Dichloroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	0.6
1,2-Dichloropropane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	1
1,3-Dichlorobenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	3
1,4-Dichlorobenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	3
2-Hexanone	UJ	UJ	UJ	U	U	U	U	UJ	UJ	50
Acetone	UBJ	UBJ	UBJ	3.1 J	3.6 J	3.3 J	UBJ	UBJ	UBJ	50
Benzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	1
Bromodichloromethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	50
Bromoform	UJ	UJ	UJ	U	U	U	U	UJ	UJ	50
Bromomethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Carbon Disulfide	0.25 J	0.76 J	0.4 J	U	U	U	U	2.9 J	UJ	60
Carbon Tetrachloride	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Chlorobenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Chloroethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Chloroform	UJ	UJ	UJ	U	U	U	U	UJ	0.42 J	7
Chloromethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Cis-1,2-Dichloroethylene	2.8 J	2.6 J	2.1 J	U	U	U	4.6	4.1 J	UJ	5
Cis-1,3-Dichloropropene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	0.4
Cyclohexane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	DT1G	DT1G	DT1G	DT1F	DT1F	DT1F	DT2C	DT2C	DT2C	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/21/2018	9/21/2018	9/21/2018	9/24/2018	9/24/2018	9/24/2018	9/21/2018	9/21/2018	9/21/2018	
Start depth (BLS)	95	85	75	65	55	45	75	65	55	
End depth (BLS)	95	85	75	65	55	45	75	65	55	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	50
Dichlorodifluoromethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Ethylbenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Isopropylbenzene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Methyl Acetate	UJ	UJ	UJ	U	U	U	U	UJ	UJ	--
Methyl Ethyl Ketone	UJ	UJ	UJ	U	U	U	U	UJ	UJ	50
Methyl Isobutyl Ketone	UJ	UJ	UJ	U	U	U	U	UJ	UJ	--
Methylcyclohexane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	--
Methylene Chloride	UJ	1.3 J	UJ	U	U	U	U	UJ	UJ	5
Styrene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Tert-Butyl Methyl Ether	0.87 J	0.48 J	UJ	U	U	U	6.7	4.8 J	0.6 J	10
Tetrachloroethylene	**54 J**	**29 J**	**8.5 J**	**11 J**	0.62 J	U	0.78 J	2.4 J	UJ	5
Toluene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Trans-1,2-Dichloroethene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Trans-1,3-Dichloropropene	UJ	UJ	UJ	U	U	U	U	UJ	UJ	0.4
Trichloroethylene	3.1 J	2.3 J	2.1 J	3.3 J	U	U	5	1.9 J	UJ	5
Trichlorofluoromethane	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Vinyl Chloride	UJ	UJ	UJ	U	U	U	U	UJ	UJ	2
Xylenes, Total	UJ	UJ	UJ	U	U	U	U	UJ	UJ	5
Total Volatile Compounds	61.55	36.44	13.1	17.4	4.22	3.3	17.71	16.1	1.02	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	
Start depth (BLS)	85	75	65	55	45	35	25	15	
End depth (BLS)	85	75	65	55	45	35	25	15	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
VOLATILE ORGANIC COMPOUNDS									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	U	U	U	U	U	U	U	5
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	1
1,1-Dichloroethane	1.8 J	1.5 J	0.96 J	U	U	U	U	U	5
1,1-Dichloroethene	0.37 J	0.43 J	0.47 J	U	U	U	U	U	5
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5
1,2-Dibromo-3-Chloropropane	U	U	U	U	U	U	U	U	0.04
1,2-Dibromoethane	U	U	U	U	U	U	U	U	0.0006
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	3
1,2-Dichloroethane	0.23 J	U	U	U	U	U	U	U	0.6
1,2-Dichloropropane	U	U	U	U	U	U	U	U	1
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	3
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	3
2-Hexanone	U	U	U	U	U	U	U	U	50
Acetone	3.8 J	U	3.3 J	U	3.4 J	3.7 J	U	U	50
Benzene	U	U	U	U	U	U	U	U	1
Bromodichloromethane	U	U	U	U	U	U	U	U	50
Bromoform	U	U	U	U	U	U	U	U	50
Bromomethane	U	U	U	U	U	U	U	U	5
Carbon Disulfide	0.49 J	U	0.26 J	U	U	U	U	U	60
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5
Chlorobenzene	U	U	U	0.99 J	U	U	U	U	5
Chloroethane	U	U	U	U	U	U	U	U	5
Chloroform	U	U	U	U	U	U	U	U	7
Chloromethane	U	U	U	U	U	U	U	U	5
Cis-1,2-Dichloroethylene	***6.2 J***	***59 J***	***59 J***	***24 J***	2 J	0.93 J	***27 J***	0.92 J	5
Cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	0.4
Cyclohexane	U	U	U	U	U	U	U	U	--

See next page for footnotes.

Table 4
Wantagh Cleaners OU2 Site
Off-Site Discrete Depth Groundwater Sample Results
Volatile Organic Compounds

Sample ID	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	DT2E	NYSDEC Class GA Standard or Guidance Value ug/l
Sampling Date	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	9/25/2018	
Start depth (BLS)	85	75	65	55	45	35	25	15	
End depth (BLS)	85	75	65	55	45	35	25	15	
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Dibromochloromethane	U	U	U	U	U	U	U	U	50
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5
Ethylbenzene	U	U	U	U	U	U	U	U	5
Isopropylbenzene	U	U	U	U	U	U	U	U	5
Methyl Acetate	U	U	U	U	U	U	U	U	--
Methyl Ethyl Ketone	U	U	U	U	U	U	U	U	50
Methyl Isobutyl Ketone	U	U	U	U	U	U	U	U	--
Methylcyclohexane	U	U	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	U	U	U	5
Styrene	U	U	U	U	U	U	U	U	5
Tert-Butyl Methyl Ether	1.9 J	***15 J***	***22 J***	5 J	0.53 J	0.27 J	0.17 J	U	10
Tetrachloroethylene	***37 J***	***39 J***	***64 J***	***44 J***	2.8 J	0.84 J	1.2 J	U	5
Toluene	U	U	U	U	U	U	U	U	5
Trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	0.4
Trichloroethylene	2.1 J	***11 J***	***19 J***	***9.8 J***	0.7 J	U	3.7 J	U	5
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5
Vinyl Chloride	U	U	0.91 J	U	U	U	U	U	2
Xylenes, Total	U	U	U	U	U	U	U	U	5
Total Volatile Compounds	53.89	125.93	169.9	83.79	9.43	5.74	32.07	0.92	--

Footnotes/Qualifiers:

BLS: Below land surface
ug/l: Micrograms per liter
--: No standard
U: Analyzed for but not detected
J: Estimated value or limit
D: Dilution

Exceeds Class GA Standard or Guidance Value

D&B ENGINEERS AND ARCHITECTS, P.C.

Table 5
Wantagh Cleaners OU2 Site
TPCCC Vapor Intrusion Samples
Volatile Organic Compounds (VOCs)

Sample ID	BASEMENT	C-1	C-2	C-3	OFFICE	SV-1	SV-2	OUTSIDE	NYSDOH Air Guideline Value (ug/m3)
Sampling Date	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	
Units	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	--
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58 J	U	0.49 J	U	U	0.56 J	0.44 J	0.51 J	--
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	--
1,1-Dichloroethane	U	U	U	U	U	U	U	U	--
1,1-Dichloroethene	U	U	U	U	U	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	--
1,2,4-Trimethylbenzene	0.7 J	U	0.99	U	U	9.7	1.1	0.43 J	--
1,2-Dibromoethane (Ethylene Dibromide)	U	U	U	U	U	U	U	U	--
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	--
1,2-Dichloroethane	U	U	0.72 J	1.5 J	4.6	U	U	U	--
1,2-Dichloropropane	U	U	U	U	U	U	U	U	--
1,2-Dichlorotetrafluoroethane	U	U	U	U	U	U	U	U	--
1,3,5-Trimethylbenzene (Mesitylene)	U	U	0.31 J	U	U	1.4	0.3 J	U	--
1,3-Butadiene	U	U	U	U	U	U	U	U	--
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	--
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	--
1,4-Dioxane (P-Dioxane)	U	U	U	U	U	U	U	U	--
2,2,4-Trimethylpentane	1.2	U	2.7	1 J	U	U	U	0.72 J	--
2-Chlorotoluene	U	U	U	U	U	U	U	U	--
2-Hexanone	U	U	U	U	U	U	U	U	--
4-Ethyltoluene	U	U	0.43 J	U	U	3	U	U	--
Acetone	13	56	39	100	180	26	8.4 J	12 J	--
Allyl Chloride (3-Chloropropene)	U	U	U	U	U	U	U	U	--
Benzene	1.4	1.7 J	1.7	0.91 J	1.1 J	U	U	1.1	--
Benzyl Chloride	U	U	U	U	U	U	U	U	--
Bromodichloromethane	U	U	U	U	U	U	U	U	--
Bromoethene	U	U	U	U	U	U	U	U	--
Bromoform	U	U	U	U	U	U	U	U	--
Bromomethane	U	U	U	U	U	U	U	U	--
Butane	12	200	25	34	71	U	U	7	--
Carbon Disulfide	U	16	1 J	U	7.9	5.7	1.5 J	U	--
Carbon Tetrachloride	0.62	U	0.42	0.43	U	0.32	U	0.39	--
Chlorobenzene	U	U	U	U	U	U	U	U	--
Chlorodifluoromethane	1.6 J	U	4.6	2.2 J	U	U	U	1.4 J	--
Chloroethane	U	U	U	U	U	U	U	U	--
Chloroform	4.4	2.1 J	1.9	1.7 J	1.7 J	69	4.3	U	--
Chloromethane	1.1	U	2.1	1.3 J	U	0.66 J	U	0.98 J	--
Cis-1,2-Dichloroethylene	U	U	U	U	U	U	U	U	--
Cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	--
Cyclohexane	0.47 J	U	0.62 J	U	U	U	U	0.25 J	--
Cymene	U	U	U	U	U	U	U	U	--
Dibromochloromethane	U	U	U	U	U	U	U	U	--
Dichlorodifluoromethane	3	U	2.7	2.6 J	U	2.8	2.3 J	2.5	--
Dichloroethylenes	U	U	U	U	U	U	U	U	--
Ethylbenzene	0.52 J	U	0.72 J	U	U	0.45 J	U	0.42 J	--
Hexachlorobutadiene	U	U	U	U	U	U	U	U	--
Isopropanol	U	28 J	49	23 J	21 J	U	U	U	--
Isopropylbenzene (Cumene)	U	U	U	U	U	0.5 J	U	U	--
M,P-Xylenes	1.7 J	1.4 J	2.3	U	2.6 J	1 J	0.62 J	1.3 J	--
Methyl Ethyl Ketone (2-Butanone)	1.4 J	3.2 J	1.7	1.4 J	4 J	4	1.7	1.8	--

See next page for footnotes.

Table 5
Wantagh Cleaners OU2 Site
TPCCC Vapor Intrusion Samples
Volatile Organic Compounds (VOCs)

Sample ID	BASEMENT	C-1	C-2	C-3	OFFICE	SV-1	SV-2	OUTSIDE	NYSDOH Air Guideline Value (ug/m3)
Sampling Date	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	
Units	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	
VOCs continued									
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	U	U	U	U	U	U	U	U	--
Methyl Methacrylate	U	U	U	U	U	U	U	U	--
Methylene Chloride	U	U	U	U	U	1 J	U	U	60
Naphthalene	U	U	U	U	U	6.4	U	U	--
N-Butylbenzene	U	U	U	U	U	U	U	U	--
N-Heptane	1.5	5.7	55	8.7	19	U	U	0.58 J	--
N-Hexane	1.2	U	1.9	1.4	U	0.64 J	U	0.9	--
N-Propylbenzene	U	U	U	U	U	2.1	U	U	--
O-Xylene (1,2-Dimethylbenzene)	0.7 J	U	0.88	U	U	2.1	0.39 J	0.53 J	--
Sec-Butylbenzene	U	U	U	U	U	1.6	U	U	--
Styrene	U	U	U	U	U	U	U	U	--
T-Butylbenzene	U	U	U	U	U	U	U	U	--
Tert-Butyl Alcohol	U	U	U	U	U	U	U	U	--
Tert-Butyl Methyl Ether	U	U	U	U	U	U	U	U	--
Tetrachloroethylene(PCE)	0.54 J	U	0.58 J	0.48 J	U	2.8	3	0.35 J	30
Tetrahydrofuran	U	U	U	U	U	U	U	U	--
Toluene	3.1	3.1	4.9	3.2	4.1	0.67 J	0.67 J	2.4	--
Trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	--
Trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	--
Trichloroethylene (TCE)	U	U	U	U	U	U	U	U	2
Trichlorofluoromethane	1.4	U	1.7	1.6 J	1.6 J	1.4	1.2	1.2	--
Vinyl Chloride	U	U	U	U	U	U	U	U	--
Xylenes, Total	2.3 J	U	3.1	U	2.6 J	3.2	0.99 J	1.8 J	--

Qualifiers:
U: Analyzed but not detected
J: Estimated value

Notes:
ug/m^3: Micrograms per cubic meter
-- : No AGV established by NYSDOH
Bold: Indicates exceedance of NYSDOH AGV
Green Highlight: Indicates no additional actions are recommended to address human exposures per the NYSDOH Soil Vapor / Indoor Air Matricies, May 2017.

Table 6
Wantagh Cleaners OU2 Site
SVE Pilot Test Vapor Sample
Volatile Organic Compounds (VOCs)

Sample ID	SVE EFFLUENT
Sampling Date	10/03/18
Units	ug/m^3
1,1,1-Trichloroethane	U
1,1,2,2-Tetrachloroethane	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	U
1,1,2-Trichloroethane	U
1,1-Dichloroethane	U
1,1-Dichloroethene	U
1,2,4-Trichlorobenzene	U
1,2,4-Trimethylbenzene	U
1,2-Dibromoethane (Ethylene Dibromide)	U
1,2-Dichlorobenzene	U
1,2-Dichloroethane	U
1,2-Dichloropropane	U
1,2-Dichlorotetrafluoroethane	U
1,3,5-Trimethylbenzene (Mesitylene)	U
1,3-Butadiene	U
1,3-Dichlorobenzene	U
1,4-Dichlorobenzene	U
1,4-Dioxane (P-Dioxane)	U
2,2,4-Trimethylpentane	U
2-Chlorotoluene	U
2-Hexanone	U
4-Ethyltoluene	U
Acetone	U
Allyl Chloride (3-Chloropropene)	U
Benzene	U
Benzyl Chloride	U
Bromodichloromethane	U
Bromoethene	U
Bromoform	U
Bromomethane	U
Butane	590
Carbon Disulfide	U
Carbon Tetrachloride	U
Chlorobenzene	U
Chlorodifluoromethane	U
Chloroethane	U
Chloroform	350
Chloromethane	U
Cis-1,2-Dichloroethylene	7,700
Cis-1,3-Dichloropropene	U
Cyclohexane	U
Cymene	U
Dibromochloromethane	U
Dichlorodifluoromethane	U
Dichloroethylenes	7,800
Ethylbenzene	U
Hexachlorobutadiene	U
Isopropanol	U
Isopropylbenzene (Cumene)	U
M,P-Xylenes	U
Methyl Ethyl Ketone (2-Butanone)	U

See next page for footnotes.

Table 6
Wantagh Cleaners OU2 Site
SVE Pilot Test Vapor Sample
Volatile Organic Compounds (VOCs)

Sample ID	SVE EFFLUENT	
Sampling Date	10/03/18	
Units	ug/m^3	
VOCs continued		
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		U
Methyl Methacrylate		U
Methylene Chloride		U
Naphthalene		U
N-Butylbenzene		U
N-Heptane		U
N-Hexane		U
N-Propylbenzene		U
O-Xylene (1,2-Dimethylbenzene)		U
Sec-Butylbenzene		U
Styrene		U
T-Butylbenzene		U
Tert-Butyl Alcohol		U
Tert-Butyl Methyl Ether		U
Tetrachloroethylene(PCE)	110,000	D
Tetrahydrofuran		U
Toluene	78	J
Trans-1,2-Dichloroethene	260	
Trans-1,3-Dichloropropene		U
Trichloroethylene (TCE)	12,000	
Trichlorofluoromethane		U
Vinyl Chloride	150	
Xylenes, Total		U
Total Volatile Organic Compounds	138,928	ug/m3
AVERAGE AIR DISCHARGE FLOW RATE (CF	40	CFM
TOTAL VOC DISCHARGE RATE (lbs/hr)	2.08E-02	lbs/hr

Qualifiers:

U: Analyzed but not detected

J: Estimated value

D: Dilution

Notes:

ug/m^3: Micrograms per cubic meter

CFM: Cubic feet per minute

APPENDIX D

INDOOR AIR QUALITY QUESTIONNAIRE

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Tara Judge Date/Time Prepared 11/19/18

Preparer's Affiliation D & B Phone No. 516-364-9890

Purpose of Investigation Soil vapor Study

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: McCabe First Name: Timora (director)

Address: 3510 Old Jerusalem Rd, Wantagh, NY

County: Nassau

Home Phone: _____ Office Phone: 516-520 7721

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y (N)

Last Name: Weible First Name: Leslie

Address: Same as above

County: "

Home Phone: " Office Phone: "

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential (School) Commercial/Multi-use
Industrial Church Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) School / Day Care

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age 1876

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Air conditioning for all 3 classrooms are each window units

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with paint	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y (N)			
k. Water in sump?	Y / (N) / not applicable			

Basement/Lowest level depth below grade: ~ 8 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other_____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y (N)

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

N/A

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom (Almost Never)

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Storage
1st Floor	Classroom, bathrooms, office
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y (N)

b. Does the garage have a separate heating unit? Y (N) (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N (NA) Please specify_____

d. Has the building ever had a fire? Y (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y (N) Where?_____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? Childrens crafts

g. Is there smoking in the building? Y (N) How frequently?_____

h. Have cleaning products been used recently? (Y) N When & Type? Lysol / Simple Green

i. Have cosmetic products been used recently? Y (N) When & Type?_____

j. Has painting/staining been done in the last 6 months? Y (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y (N) Where & When? _____

l. Have air fresheners been used recently? (Y) N When & Type? Glade Aerosol

m. Is there a kitchen exhaust fan? Y (N) If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? roof

o. Is there a clothes dryer? Y (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? N/A

Are there odors in the building? Y (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) (No)
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: N/A

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

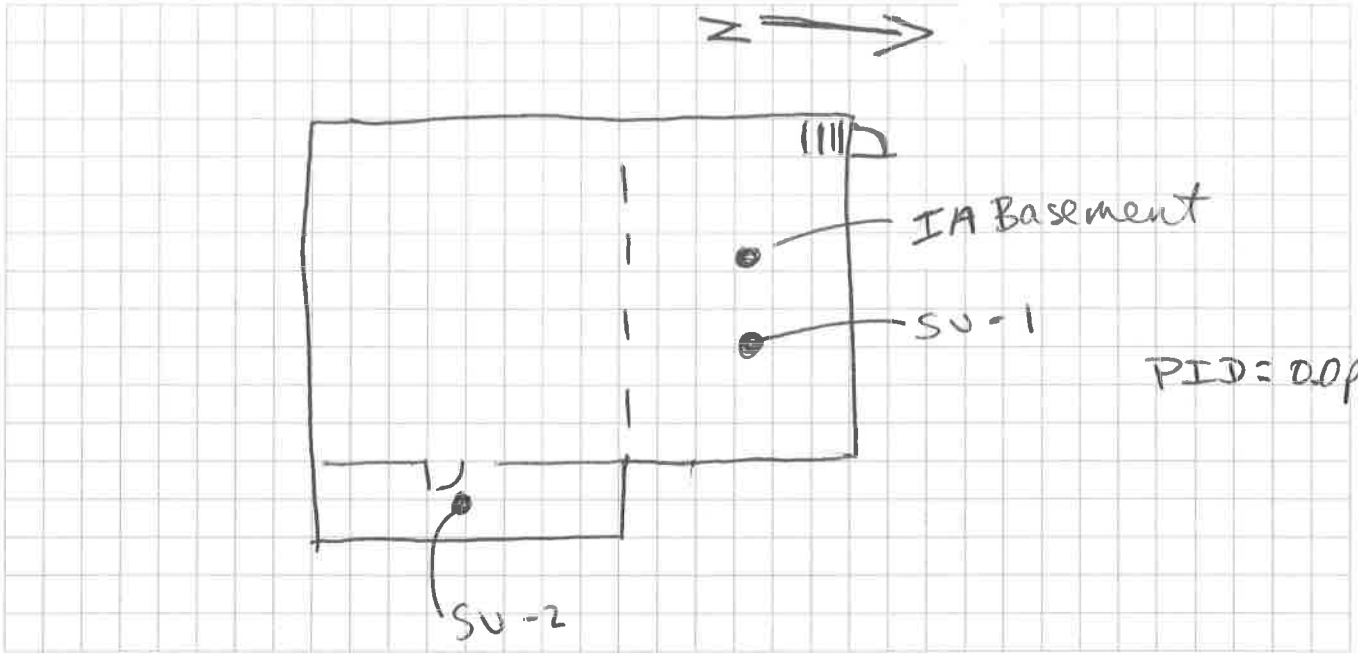
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

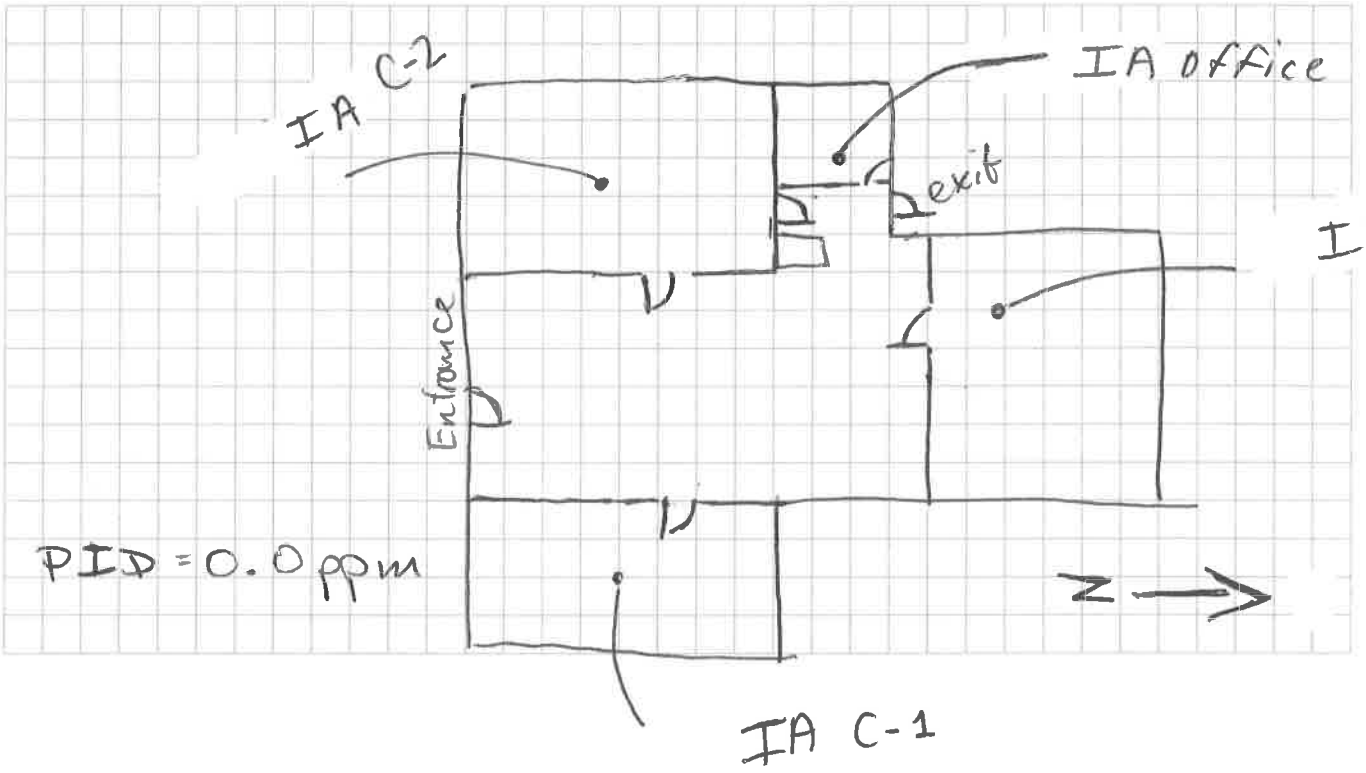
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



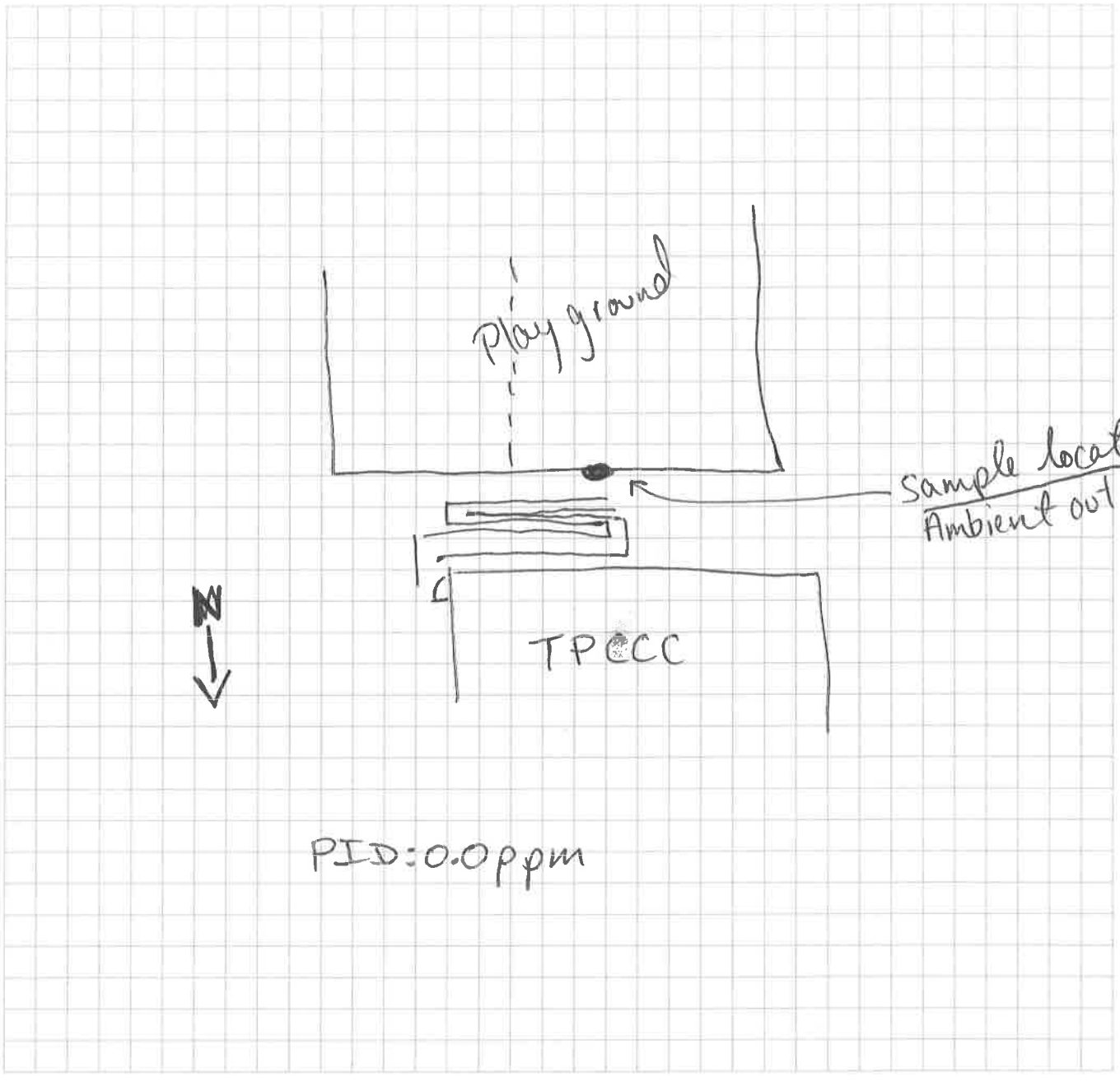
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Background = 0.0 ppb

	Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units) ppb	Photo ** Y / N
(6)	Basement	Odor bandisinfectant	1 QT	new to used	see pictures	0.0	Y
(1)	"	Lysol (All purpose)	QT	new	see pictures	0.0	Y
(1)	"	Plastic Lysol spray	32oz	used	"	0.0	Y
(3)	"	Clorox Bleach	3.5 L	(1) used (2) new	"	0.0	Y
(1)	"	Zep Commercial Glass Cleaners	19 oz	used	"	0.0	Y
(2)	"	Coloration Glue	1 Gal	used & new	"	0.0	Y
(1)	"	Elmers Glue	1 Gal	new	"	0.0	N
(1)	"	Snow Spray	2 oz	used	"	0.0	Y
(6)	"	Finger paint (washable)	16 oz	used	"	0.0	Y
(17)	"	Color paints (coloration)	1 Gal	used to new	"	0.0	Y
(1)	"	Deck Paint	5 Gal	used	"	0.0	Y
(1)	"	Spray Paint 'Krylon'	12 oz	used	"	0.0	N
(1)	"	Spray Paint Valspar	12 oz	used	"	0.0	N
(5)	"	Paint Cans	1 Gal	used	— —	0.0	N
(1)	office	White-out	20 mL	used	— -	0.0	N
(1)	"	Glade - air fresh	6 oz	used	— —	0.0	N
(8)	Classroom 1	washable paint	16 oz	used	— —	0.0	N
(15)	"	Do-a-Dot-Arts (markers)	2.5 oz	used	— —	0.0	N
(1)	"	Lysol	16 oz	used	— —	0.0	Y

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

	Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
(1)	C/Ass1	Simple Green	32oz	used	see picture	0.6	Y
(1)	"	Clorox Bleach	32oz	used	"	0.0	Y
(1)	"	Glade Spray	8oz	used	"	0.0	Y
(7)	Class3	Bingo markers	2.8oz	U	"	0.0	Y
(4)	"	Glue Elmers	12oz	U	"	0.0	Y
(3)	"	washable paints	1.0Gal	U	"	0.0	Y
(5)	"	washable paint	16oz	U	—	0.0	N
(1)	"	Simple Green	32oz	U	—	0.0	N
(2)	"	Lysol spray	19oz	U	—	0.0	N
(1)	"	Glade	8oz	U	—	0.0	N
(1)	"	Lysol	16oz	U	—	0.0	N
(1)	Class2	Glue	Gal	U	—	0.0	N
(10)	"	Bingo markers	2.8oz	U	—	0.0	N
(1)	"	white out	20ml	U	—	0.0	N
(1)	"	Glade	16oz	U	—	0.0	N
(2)	"	Simple Green	32oz	U	—	0.0	N
(1)	"	Bleach	Gal	U	—	0.0	N
(1)	"	Lysol	12.5	U	—	0.0	N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

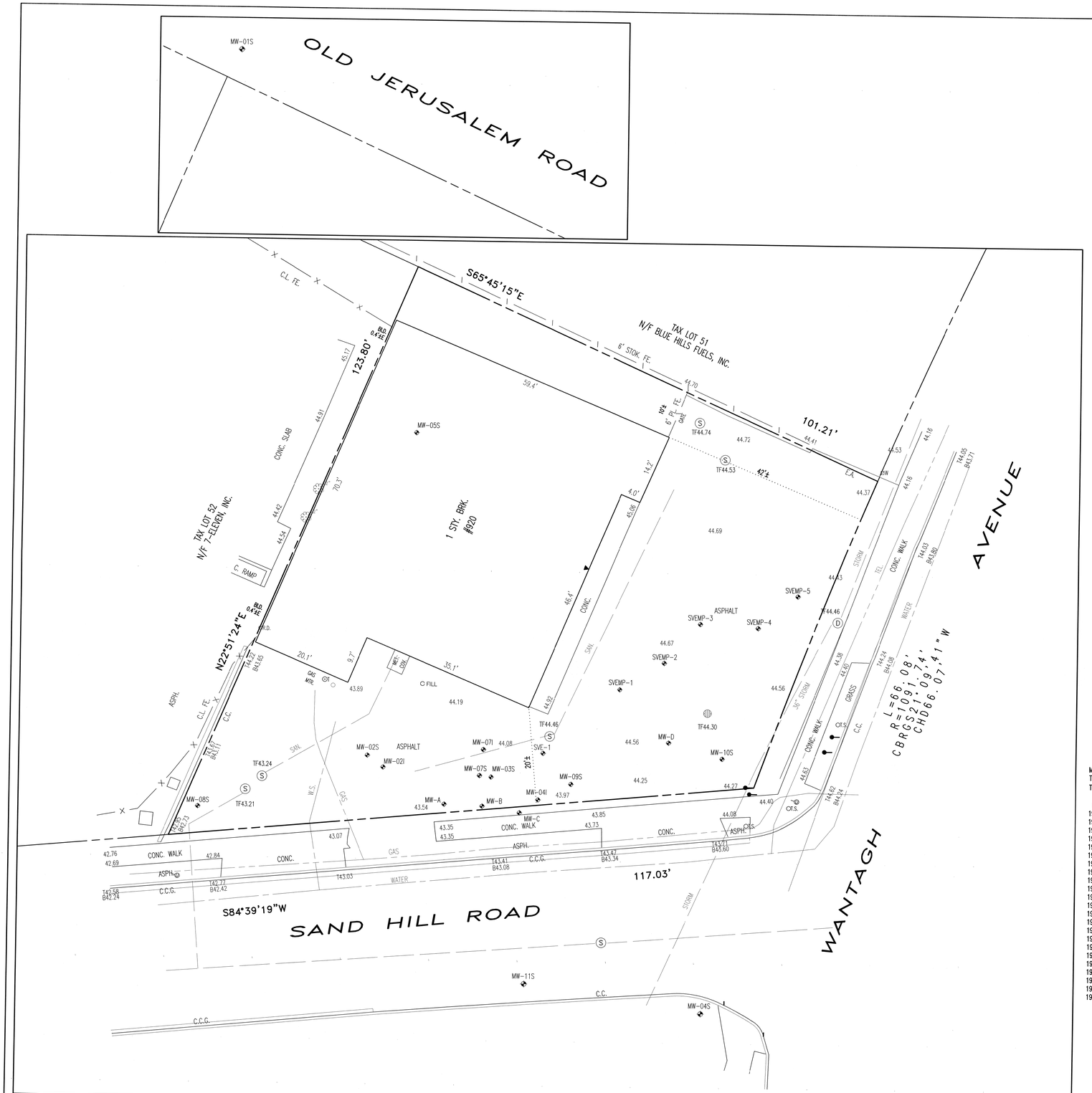
List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
(2) Hall supply closet	Lysol	12.5oz	new	--	0.0	~~N~~ Y
(1) "	Real Kill Wasp-Hornet Spray	15oz	used	see picture	0.0	Y
(1) "	Resolve stain carpet	22oz	"	"	0.0	Y
(1) "	Resolve carpet foam	22oz	"	"	0.0	Y
(5) "	paint / primers	1Gal	"	"	0.0	Y
(1) "	simple green	32oz	"	"	0.0	Y
(1) "	Bleach	1Gal	"	"	0.0	Y
(1) "	Quick shine floor finish	27oz	"	"	0.0	Y

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX E

SITE SURVEY



METES AND BOUNDS AND ENVIRONMENTAL EASEMENT LEGAL DESCRIPTION

ALL that certain plot, piece or parcel of land, situate, lying and being in Wantagh, Town of Hempstead, County of Nassau, and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the northerly side of Sand Hill Road with the northwesterly side of Wantagh Avenue. RUNNING THENCE from said point of BEGINNING the following courses;
Westerly along said northerly side of Sand Hill Road,
South 84 degrees 39 minutes 19 seconds West, 117.03 feet to a point. Thence,
North 22 degrees 51 minutes 24 seconds East, 123.80 feet; thence,
South 65 degrees 45 minutes 15 seconds East, 101.21 feet to said northwesterly side of Wantagh Avenue. Thence southwesterly along said line along a curve bearing to the left with a radius of 1091.74 feet, arc length of 66.08 feet, with a chord bearing of South 21 degrees 09 minutes 41 seconds West and chord length of 66.07 feet to the point or place of BEGINNING.
Said parcel having an area of 9,701 Square Feet, or 0.223 Acres more of less.

LEGEND

- SANITARY MANHOLE
- DRAINAGE MANHOLE
- WATER MANHOLE
- GAS MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- UNKNOWN MANHOLE
- FIRE DEPT. MANHOLE
- WATER VALVE
- GAS VALVE
- FIRE HYDRANT
- SIA. FIRE DEPT. CONN.
- T.C.B. TRAFFIC SIGNAL CONTROL BOX
- E.M.B. ELECTRIC BOX
- STEEL UTILITY POLE W/LITE & HIGH TENSION WIRES
- WOOD UTILITY POLE
- WOOD UTILITY POLE WITH LIGHT
- GUY WIRE
- DRAINAGE INLETS
- YARD DRAIN
- CURB INLET
- PROPERTY LINE SUBJECT
- TAX LOT LINE
- FILED MAP LOT LINE
- FILED MAP LOT NUMBER (472)
- PST. POST
- I.P. IRON PIPE
- MON. MONUMENT FOUND
- REBAR REBAR FOUND
- O.T.S. TRAFFIC SIGN
- SIGN
- SEWER/DRAINAGE LINE
- ELECTRIC LINE OVERHEAD (UNLESS OTHER WISE NOTED: BUR. ELEC.
- GAS LINE
- WATER LINE
- TREE(CALIPER)
- D.C. DEPRESSED CURB
- CURB LINES
- C.C.(CONC. CURB)
- C.C.G.(INTEGRAL CONC. CURB & GUTTER)
- STN. C. (STONE CURB)
- BL. STN. C. (BLUE STONE CURB)
- B.B.C. OR B.B.(BELGIUM BLK. CURB)
- F.C.C. (FLUSH CONC. CURB)
- A.C.(ASPH. CURB)
- DYS.(DBL. YEL. LINE) SWL(SOLID WHITE LINE) PAINTED LINES (ROADWAY MARKINGS)
- (STOP LINE)
- 11.3 DENOTES SPOT ELEVATION
- MONITORING WELL

NOTES:
-UTILITIES SHOWN ARE PER FIELD OBSERVATIONS, PARTIAL MARKOUTS AND AVAILABLE RECORDS AND ARE NOT GUARANTEED.
- ELEVATIONS REFER NAVD88 DATUM
- COORDINATES REFER TO NAD83 (UZONE)

0 10 20 30

SCALE 1"=10'

MW-COORDINATES/ELEVATIONS (NAD83/NAVD88)
TF DENOTES TOP CASING ELEVATION
TP DENOTES TOP OF PIPE ELEVATION (NORTH SIDE)

Northing(Y)	Easting(X)	Elev(TF)	Elev(TP)	Description
195260.6930	1121154.7420	44.30	43.84	MW-SVE1
195251.3830	1121153.8510	43.80	43.56	MW-04I
195248.7580	1121150.1970	43.56		MW-C
195249.9730	1121142.7160	43.61		MW-B
195256.0750	1121142.1200	43.76	43.42	MW-07S
195255.8230	1121144.4600	43.77	43.41	MW-03S
195261.2770	1121142.8190	44.03	43.75	MW-07I
195263.0960	1121179.7520	44.51		MW-D
195254.5720	1121160.4050	44.07	43.80	MW-09S
195250.2670	1121135.1710	43.44		MW-A
195259.8410	1121119.7730	43.57	43.33	MW-02S
195257.5080	1121122.9190	43.52	43.22	MW-02I
195260.0030	1121190.4720	44.46	44.20	MW-10S
195324.3500	1121128.5870	45.51	45.26	MW-05S
195209.0760	1121186.8840	44.39	44.06	MW-04S
195214.6010	1121151.5850	43.47	43.14	MW-11S
195567.9940	1121131.6940	43.85	43.60	MW-01S
195292.5700	1121205.0420	44.54	44.30	MW-SVEMP-5
195286.2850	1121197.2480	44.58	44.25	MW-SVEMP-4
195286.7450	1121185.7310	44.68	44.38	MW-SVEMP-3
195278.8900	1121178.6660	44.62	44.46	MW-SVEMP-2
195273.6350	1121169.7690	44.76	44.58	MW-SVEMP-1
195249.2500	1121086.1050	43.17	42.85	MW-08S

NOTE:
-THIS SURVEY IS FOR MUNICIPAL PURPOSES ONLY NOT INTENDED FOR TITLE CONVEYANCE.
-ELEVATIONS REFER TO NAVD88 VERTICAL DATUM
-COORDINATES REFER TO NAD83 (UZONE)

"This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov"

R:/12589/12589-920-WANTAGH.DWG

SURVEY OF
PROPERTY
SITUATE AT
920 WANTAGH AVENUE
WANTAGH
TOWN OF HEMPSTEAD
NASSAU COUNTY, NEW YORK
SCALE 1"=10' SEPTEMBER 19, 2018

JOB NO. 12589
REVISIONS:
9/25/18
10/1/18
10/6/18 ADD TP ELEV'S

N.C.T.M. SEC. 51 BLK. 374 LOT 53

AMERICAN ENGINEERING & LAND SURVEYING P.C.
1171 old country road – ste. 6
plainview, ny 11803
tel: 516.454.7500
fax: 516.822.2743
www.aelandsurveying.com
STEPHEN G. RAVN, P.E., L.S. (L.S. NO. 49664)

APPENDIX F

DATA VALIDATION CHECKLISTS

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 12 & 13, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 12 Field Duplicate/ 0 Trip Blank/ 1 Field Blank/ 0
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C
Laboratory Report No:	480-141888 Date: 9/28/18

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:480-141888
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
XX (85)	480-141888-1	9/12/2018		X			
XX (75)	480-141888-2	9/12/2018		X			
XX (65)	480-141888-3	9/12/2018		X			
YY (30)	480-141888-4	9/13/2018		X			
YY (25)	480-141888-5	9/13/2018		X			
YY (20)	480-141888-6	9/13/2018		X			
EEE (75)	480-141888-7	9/13/2018		X			
EEE (65)	480-141888-8	9/13/2018		X			
EEE (55)	480-141888-9	9/13/2018		X			
EEE (45)	480-141888-10	9/13/2018		X			
EEE (35)	480-141888-11	9/13/2018		X			
EEE (25)	480-141888-12	9/13/2018		X			
TRIP BLANK	480-141888-13	9/13/2018		X			

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X	X		
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
C. Field blanks					X
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X		X	
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	

VOCs - volatile organic compounds
%D - percent difference
RRF - relative response factor
%R - percent recovery
%RSD - percent relative standard deviation
RPD - relative percent difference

Comments:
Performance was acceptable, with the following exception:

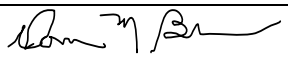
1. The following samples had significant headspace XX(85), XX(75) and XX(65) and sample XX(85) also had pH greater than 2. All VOC results were qualified as estimated (J/UJ) based on significant headspace in samples XX(85), XX(75) and XX(65).

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers: 480-141888

Sample ID	Analyte(s),	Qualifier	Reason(s),
VOCs			
XX(85), XX(75) and XX(65)	All VOC	J/UJ	Significant headspace in samples

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/2/2019
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 17-21, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 23 Field Duplicate/ 0 Trip Blank/ 1 Field Blank/ 0
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C
Laboratory Report No:	480-142369 Date:10/4/18

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:480-142369
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
TRIP BLANK	480-142369-1	9/17/2018		X			
RRR (65)	480-142369-2	9/19/2018		X			
RRR (55)	480-142369-3	9/19/2018		X			
RRR (45)	480-142369-4	9/19/2018		X			
RRR (35)	480-142369-5	9/19/2018		X			
III (95)	480-142369-6	9/20/2018		X			
III (85)	480-142369-7	9/20/2018		X			
III (75)	480-142369-8	9/20/2018		X			
III (65)	480-142369-9	9/20/2018		X			
III (55)	480-142369-10	9/20/2018		X			
III (45)	480-142369-11	9/20/2018		X			
III (35)	480-142369-12	9/20/2018		X			
III (25)	480-142369-13	9/20/2018		X			
SSS (95)	480-142369-14	9/20/2018		X			
SSS (85)	480-142369-15	9/20/2018		X			
SSS (75)	480-142369-16	9/20/2018		X			
SSS (65)	480-142369-17	9/20/2018		X			
SSS (55)	480-142369-18	9/20/2018		X			
DT1G (95)	480-142369-19	9/21/2018		X			
DT1G (85)	480-142369-20	9/21/2018		X			
DT1G (75)	480-142369-21	9/21/2018		X			
DT2C (75)	480-142369-22	9/21/2018		X			
DT2C (65)	480-142369-23	9/21/2018		X			
DT2C (55)	480-142369-24	9/21/2018		X			

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X	X		
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X	X		
C. Field blanks					X
3. Matrix spike (MS) %R		X	X		
4. Matrix spike duplicate (MSD) %R		X	X		
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X		X	
7. Surrogate spike recoveries		X	X		
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable, with the following exception:

1. The following samples had significant headspace DT1G (95), DT1G (85), DT1G (75), DT2C (65), DT2C (55), RRR (65) and III (95) and samples III (65), DT1G (85), RRR (65), RRR (55), RRR (35), III (95) and SSS (75) had pH greater than 2. All VOC results were qualified as estimated (J/UJ) in samples DT1G (95), DT1G (85), DT1G (75), DT2C (65), DT2C (55), RRR (65), RRR (55), RRR (35), III (95), III (65), and SSS (75).

2B. 2-Butanone, acetone and benzene were detected in the TRIP BLANK. The following were qualified as non-detect (UB): 2-butanone in samples RRR (65), RRR (45), RRR (35), III (95), III (85), III (75), III (55), III (45), III (35), SSS (95), SSS (85) and SSS (75); acetone in samples RRR (65), RRR (55), RRR (45), RRR (35), III (95), III (85), III (75), III (65), III (55), III (45), III (35), SSS (95), SSS (85), SSS (75), DT1G (95), DT1G (85), DT1G (75), DT2C (75), DT2C (65) and DT2C (55); benzene in samples RRR (65) and III (95).

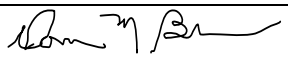
3&4. The %Rs were above the QC limits in the MS and MSD for 1,1,1-trichloroethane, 1,2-dichloroethane, bromodichloromethane, dibromochloromethane, dichlorodifluoromethane, and trichlorofluoromethane associated with all samples except DT1G (75) III (65) SSS (85) and 1,1-dichloroethane, bromomethane, chloroethane, chloromethane and vinyl chloride associated with samples DT1G (75), III (65) and SSS (85). 1,1-Dichloroethane was qualified as estimated (J) in sample SSS (85).

7. Surrogate recovery for 1,2-dichloroethane-d4 was above the QC limit in sample DT2C (55), no associated compounds were detected above the reporting limit in the sample therefore qualification of the data was not necessary.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY **Laboratory Numbers: 480-142369**

Sample ID	Analyte(s),	Qualifier	Reason(s),
VOCs			
DT1G (95), DT1G (85), DT1G (75), DT2C (65), DT2C (55), RRR (65), RRR (55), RRR (35), III (95), III (65), and SSS (75)	All VOC	J/UJ	Samples had significant headspace and/or pH greater than 2
RRR (65), RRR (45), RRR (35), III (95), III (85), III (75), III (55), III (45), III (35), SSS (95), SSS (85) and SSS (75)	2-Butanone	UB	Detected in the TRIP BLANK
RRR (65), RRR (55), RRR (45), RRR (35), III (95), III (85), III (75), III (65), III (55), III (45), III (35), SSS (95), SSS (85), SSS (75), DT1G (95), DT1G (85), DT1G (75), DT2C (75), DT2C (65) and DT2C (55)	Acetone		
RRR (65) and III (95)	Benzene		
SSS (85)	1,1-Dichloroethane	J	The %R was above the QC limit in the MS and MSD

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/7/19
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 24, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 7 Field Duplicates/ 1 Trip Blanks / 0 Field Blanks/ 1
Analyzing Laboratory:	TestAmerica Laboratories, Amherst, NY
Analyses:	1,4-Dioxane: by method 8270D SIM
Laboratory Report No:	480-142737 Date:10/15/2018

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers: 480-142737
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				PFAs	1,4-Dioxane	PCB	MET	MISC
MW-07I	480-142737-1	9/24/2018			X			
MW-07S	480-142737-2	9/24/2018			X			
MW-05S	480-142737-3	9/24/2018			X			
MW-09S	480-142737-4	9/24/2018			X			
MW-08S	480-142737-5	9/24/2018			X			
MW-10S	480-142737-6	9/24/2018			X			
MW-11S	480-142737-7	9/24/2018			X			

ORGANIC ANALYSES
PFAs and 1,4-Dioxane

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times					
2. Blanks					
A. Method blank					
B. Trip blanks					
C. Field blank					
3. Matrix spike (MS) %R					
4. Matrix spike duplicate (MSD) %R					
5. MS/MSD precision (RPD)					
6. Laboratory control sample (LCS) %R					
7. Surrogate spike or isotope dilution recoveries					
8. Instrument performance check					
9. Internal standard retention times and areas					
10. Initial calibration RRF's and %RSD's					
11. Continuing calibration RRF's and %D's					
12. Transcriptions – quant report vs. Form I					
13. Field duplicates RPD					

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable except the following:

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:480-142737

Sample ID	Analyte(s)	Qualifier	Reason(s)
1,4-Dioxane			
This data not used samples resampled			

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/17/2018
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 24-26, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 13 Field Duplicate/ 0 Trip Blank/ 1 Field Blank/ 0
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C
Laboratory Report No:	480-142708 Date:10/15/18

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:480-142708
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
MW-07I	480-142708-1	9/24/2018		X			
MW-07S	480-142708-2	9/24/2018		X			
MW-05S	480-142708-3	9/24/2018		X			
MW-09S	480-142708-4	9/24/2018		X			
MW-08S	480-142708-5	9/24/2018		X			
MW-10S	480-142708-6	9/24/2018		X			
MW-02I	480-142708-7	9/26/2018		X			
MW-11S	480-142708-8	9/26/2018		X			
MW-04S	480-142708-9	9/26/2018		X			
MW-04I	480-142708-10	9/26/2018		X			
MW-03S	480-142708-11	9/26/2018		X			
MW-01S	480-142708-12	9/26/2018		X			
MW-02S	480-142708-13	9/26/2018		X			
TRIP BLANK	480-142708-14	9/26/2018		X			

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X	X		
C. Field blanks					X
3. Matrix spike (MS) %R		X	X		
4. Matrix spike duplicate (MSD) %R		X	X		
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R and RPD		X	X		
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable, with the following exception:

2B. Methylene Chloride and xylene were detected in the TRIP BLANK. They were not detected in the associated samples therefore qualification of the data was not necessary.

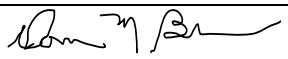
3,4&6. The %Rs were above the QC limit for 1,1-dichloroethane, chloroethane, chloromethane and vinyl chloride in the MS and/or MSD. The %R was above the QC limit for chloromethane in the LCS. The only compound detected in the associated samples was vinyl chloride in sample MW-07S which was qualified as estimated (J).

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers: 480-142708

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
MW-07S	Vinyl chloride	J	The %Ra were above the QC limit in the MS and MSD

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/20/18
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 24 & 25, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 19 Field Duplicate/ 0 Trip Blank/ 1 Field Blank/ 0
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C
Laboratory Report No:	480-142747 Date: 10/16/18

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:480-142747
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
TRIP BLANK-92418	480-142747-1	9/24/2018		X			
DT1F (65)	480-142747-2	9/24/2018		X			
DT1F (55)	480-142747-3	9/24/2018		X			
DT1F (45)	480-142747-4	9/24/2018		X			
DT2E (85)	480-142747-5	9/25/2018		X			
DT2E (75)	480-142747-6	9/25/2018		X			
DT2E (65)	480-142747-7	9/25/2018		X			
DT2E (55)	480-142747-8	9/25/2018		X			
DT2E (45)	480-142747-9	9/25/2018		X			
DT2E (35)	480-142747-10	9/25/2018		X			
DT2E (25)	480-142747-11	9/25/2018		X			
DT2E (15)	480-142747-12	9/25/2018		X			
QR (25)	480-142747-13	9/25/2018		X			
QR (20)	480-142747-14	9/25/2018		X			
QR (15)	480-142747-15	9/25/2018		X			
O (25)	480-142747-16	9/25/2018		X			
O (20)	480-142747-17	9/25/2018		X			
O (20)	480-142747-18	9/25/2018		X			
O (15)	480-142747-19	9/25/2018		X			
U (25)	480-142747-20	9/25/2018		X			

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
C. Field blanks					X
3. Matrix spike (MS) %R		X	X		
4. Matrix spike duplicate (MSD) %R		X	X		
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X	X		
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	

VOCs - volatile organic compounds
%D - percent difference
RRF - relative response factor
%R - percent recovery
%RSD - percent relative standard deviation
RPD - relative percent difference

Comments:
Performance was acceptable, with the following exception:

3,4&6. The following results had the %R above the QC limits in the MS, MSD and or LCS: 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dibromoethane, 1,2-dichloropropane, bromomethane, carbon tetrachloride, chlorobenzene, cis-1,2-dichloroethene, dibromochloromethane, methyl tert-butyl ether, tetrachloroethene, trans-1,2-dichloroethene, trichloroethene and vinyl chloride.

The following results were above the reporting limit and were qualified as estimated (J): tetrachloroethene in samples DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), QR (15), O (25), O (20) and O (15); trichloroethene in samples DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (25), QR (25), QR (20), O (25), O (20) and O (15); 1,1-dichloroethane in samples DT2E (85) and DT2E (75); cis-1,2-dichloroethene in samples DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), O (25), O (20) and O (15); methyl tert-butyl ether in samples DT2E (85), DT2E (75), DT2E (65) and DT2E (55); trans-1,2-dichloroethene in samples QR (25) and O (20); and vinyl chloride in sample O (20).

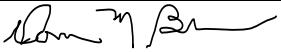
12. Cis-1,2-dichloroethene exceeded the calibration range in sample O (20) and was reanalyzed at a secondary dilution. The secondary dilution was reported for cis-1,2-dichloroethene (D) in sample O (20).

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers: 480-142747

Sample ID	Analyte(s),	Qualifier	Reason(s),
VOCs			
DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), QR (15), O (25), O (20) and O (15)	Tetrachloroethene	J	%R above the QC limits in the MS, MSD and or LCS
DT1F (65), DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (25), QR (25), QR (20), O (25), O (20) and O (15)	Trichloroethene		
DT2E (85) and DT2E (75)	1,1-Dichloroethane		
DT2E (85), DT2E (75), DT2E (65), DT2E (55), DT2E (45), DT2E (25), QR (25), QR (20), O (25), 0 (20) and O (15)	Cis-1,2-dichloroethene		
DT2E (85), DT2E (75), DT2E (65) and DT2E (55)	Methyl tert-butyl ether		
QR (25) and O (20)	Trans-1,2-dichloroethene		
O (20)	Vinyl chloride		
O (20)	Cis-1,2-dichloroethene	D	Exceeded the calibration range and was reanalyzed and reported from a secondary dilution

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/2/19
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	September 24-26, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 7 Field Duplicate/ 1 Trip Blank/ 0 Field Blank/ 1
Analyzing Laboratory:	TestAmerica, Laboratories, Sacramento, CA
Analyses:	Per-and Polyfluoroalkyl Substances (PFAS): by EPA 537 (modified) by CA
Laboratory Report No:	320-43822 Date:10/25/18

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:320-43822
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis			
				VOC	1,4-Dioxane	PFAS	MISC
MW-07I	320-43822-1	9/24/2018				X	
MW-07S	320-43822-2	9/24/2018				X	
MW-05S	320-43822-3	9/24/2018				X	
MW-09S	320-43822-4	9/24/2018				X	
MW-08S	320-43822-5	9/24/2018				X	
MW-10S	320-43822-6	9/24/2018				X	
MW-11S	320-43822-7	9/26/2018				X	
Blind Duplicate	320-43822-8	9/26/2018	MW-08S			X	
Equipment blank	320-43822-9	9/26/2018				X	

ORGANIC ANALYSES
PFAS

	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X	X		
B. Trip blanks					X
C. Field blanks		X	X		
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R and RPD		X		X	
7. Surrogate spike recoveries		X	X		
8. Internal standard retention times and areas		X		X	
9. Initial calibration RRF's and %RSD's		X			
10. Continuing calibration RRF's and %D's		X			
11. Transcriptions – quant report vs. Form I		X		X	
12. Field Blind Duplicate		X		X	

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable, with the following exception:

2. Perfluorohexanesulfonic acid (PFHxS) was detected in the Equipment Blank and method blanks. Perfluorohexanesulfonic acid (PFHxS) was qualified as non-detect (UB) in samples MW-07I, MW-08S and MW-09S. The "B" qualifier was removed from samples Blind Duplicate, MW-05S, MW-11S, MW-07S and MW-10S because the results were more than ten times that found in the blank.

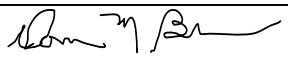
7. The surrogate M2-6:2 FTS was above the QC limit for samples MW-07S, MW-08S, MW-10S, MW-11S and Blind Duplicate. The associated result was not detected above the reporting limit in any of the associated samples therefore qualification of the data was not necessary.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers: 320-43822

Sample ID	Analyte(s)	Qualifier	Reason(s)
PFA			
MW-07I, MW-08S and MW-09S	Perfluorohexanesulfonic acid (PFHxS)	UB	Detected in the Equipment Blank and method blanks
	Perfluorohexanesulfonic acid (PFHxS)	B removed	More than ten times that found in the blank

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/17/18
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA REVIEW CHECK LIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	October 3, 2018
Matrix/Number of Samples:	Air/ 1 (SVE-Effluent)
Analyzing Laboratory:	TestAmerica Laboratories, South Burlington, VT
Analyses:	Volatile Organic Compounds (VOCs): TO15
Laboratory Report No:	200-45587 Date: 10/15/18

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Method blanks		X		X	
3. Laboratory Control Sample (LCS) %R		X		X	
4. Instrument Performance Check		X		X	
5. Internal standard retention times and areas		X		X	
6. Initial calibration RRF's		X		X	
7. Continuing calibration RRF's and %D's		X		X	
8. Field duplicates RPD					X

VOCs - volatile organic compounds %D - percent difference RRF - relative response factor
%R - percent recovery RPD - relative percent difference

Comments:
Performance was acceptable with the following exception:

12. Tetrachloroethene exceeded the calibration range in SVE-Effluent and was reanalyzed at a secondary dilution. The secondary dilution was reported for tetrachloroethene (D) in SVE-Effluent.

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/2/2019
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	October 30, 2018
Sample Team:	Tara Judge
Matrix/Number of Samples:	Water/ 7 Field Duplicates/ 0 Trip Blanks / 0 Field Blanks/ 0
Analyzing Laboratory:	TestAmerica Laboratories, Buffalo, NY
Analyses:	1,4-Dioxane: by method 8270D SIM
Laboratory Report No:	460-168374 Date:11/16/2018

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers: 460-168374
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				PFAs	1,4-Dioxane	PCB	MET	MISC
MW-05S	460-168374-1	10/30/2018			X			
MW-08S	460-168374-2	10/30/2018			X			
MW-07I	460-168374-3	10/30/2018			X			
MW-07S	460-168374-4	10/30/2018			X			
MW-11S	460-168374-5	10/30/2018			X			
MW-09S	460-168374-6	10/30/2018			X			
MW-10S	460-168374-7	10/30/2018			X			

ORGANIC ANALYSES
1,4-Dioxane

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Method blank		X		X	
B. Trip blanks					X
C. Field blank					X
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X		X	
7. Surrogate spike or isotope dilution recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	
13. Field duplicates RPD					X

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable except the following:

12. An "E" flag was generated based upon the bias corrected on the recovery of the 1,4-dioxane-d8 isotope in samples MW-08S, MW-11S and MW-09S. The "E" qualifier was removed from samples MW-08S, MW-11S and MW-09S and 1,4-dioxane was qualified as estimated (J).

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:460-168374

Sample ID	Analyte(s)	Qualifier	Reason(s)
1,4-Dioxane			
MW-08S, MW-11S and MW-09S	1,4-Dioxane	J	An "E" flag was generated based upon the bias corrected on the recovery of the 1,4-dioxane-d8 isotope and it was removed

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 12/17/2018
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA REVIEW CHECK LIST

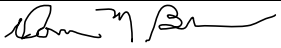
Project Name:	Wantagh Cleaners
Project Number:	3150-40
Sample Date(s):	November 19, 2018
Matrix/Number of Samples:	Air/ 8 (Outside, C-1, C-2, C-3, OFFICE, BASEMENT, SV-1 and SV-2)
Analyzing Laboratory:	TestAmerica Laboratories, South Burlington, VT
Analyses:	Volatile Organic Compounds (VOCs): TO15
Laboratory Report No:	200-46352 Date: 12/14/18

ORGANIC ANALYSES
VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Method blanks		X		X	
3. Laboratory Control Sample (LCS) %R		X		X	
4. Instrument Performance Check		X		X	
5. Internal standard retention times and areas		X		X	
6. Initial calibration RRF's		X		X	
7. Continuing calibration RRF's and %D's		X		X	
8. Field duplicates RPD					X

VOCs - volatile organic compounds %D - percent difference RRF - relative response factor
%R - percent recovery RPD - relative percent difference

Comments:
Performance was acceptable.

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/7/2019
VALIDATION PERFORMED BY SIGNATURE:	

APPENDIX G

SOIL VAPOR EXTRACTION EVALUATION

Summary of Soil Vapor Extraction System Evaluation Data
Wantagh Cleaners Site
920 Wantagh Avenue
Wantagh, New York

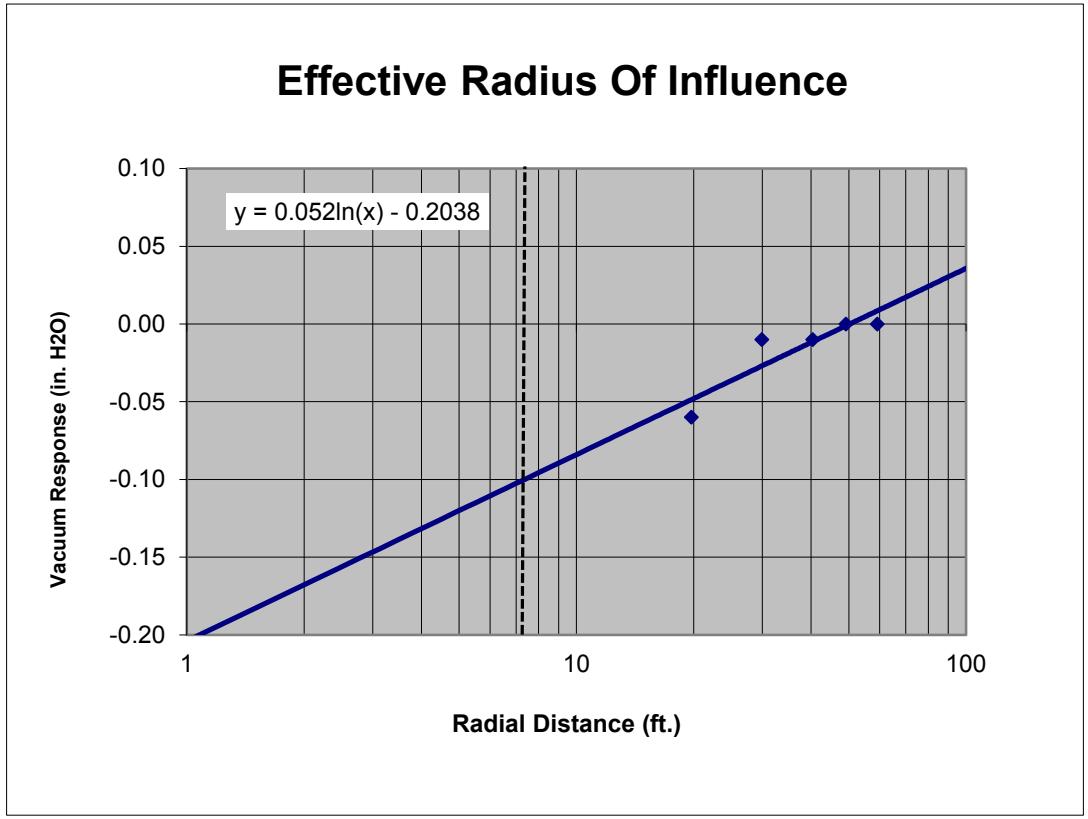
Depth Interval (ft. bgs):	3 to 10
Test Date:	10/3/2018
Performed By:	D&B
Extraction Well:	SVE-1 Pilot Well
Test Duration (min.):	60
Wellhead Vacuum ("H2O):	-1.3
Vapor Discharge Flow (scfm):	20

SVE Design Data

Radial Distance (ft.)	Vacuum Response 20 scfm
19.7	-0.06
29.9	-0.01
40.4	-0.01
49.1	0.00
59.1	0.00

Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
7.36	-1.3	20

Response:	-0.1
Slope:	0.052
Intercept	0.2038



Summary of Soil Vapor Extraction System Evaluation Data
Wantagh Cleaners Site
920 Wantagh Avenue
Wantagh, New York

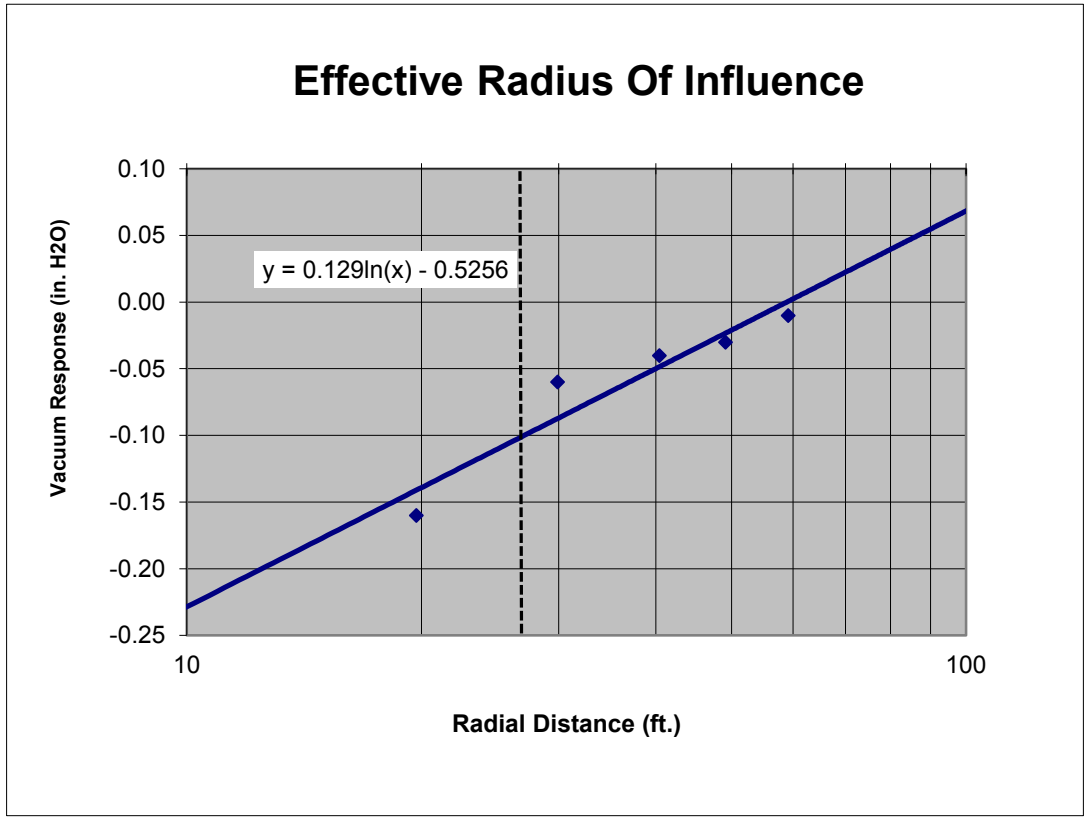
Depth Interval (ft. bgs):	3 to 10
Test Date:	10/3/2018
Performed By:	D&B
Extraction Well:	SVE-1 Pilot Well
Test Duration (min.):	60
Wellhead Vacuum ("H2O):	-2.1
Vapor Discharge Flow (scfm):	40

SVE Design Data

Radial Distance (ft.)	Vacuum Response 40 scfm
19.7	-0.16
29.9	-0.06
40.4	-0.04
49.1	-0.03
59.1	-0.01

Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
27.09	-2.1	40

Response:	-0.1
Slope:	0.129
Intercept	0.5256



Summary of Soil Vapor Extraction System Evaluation Data
Wantagh Cleaners Site
920 Wantagh Avenue
Wantagh, New York

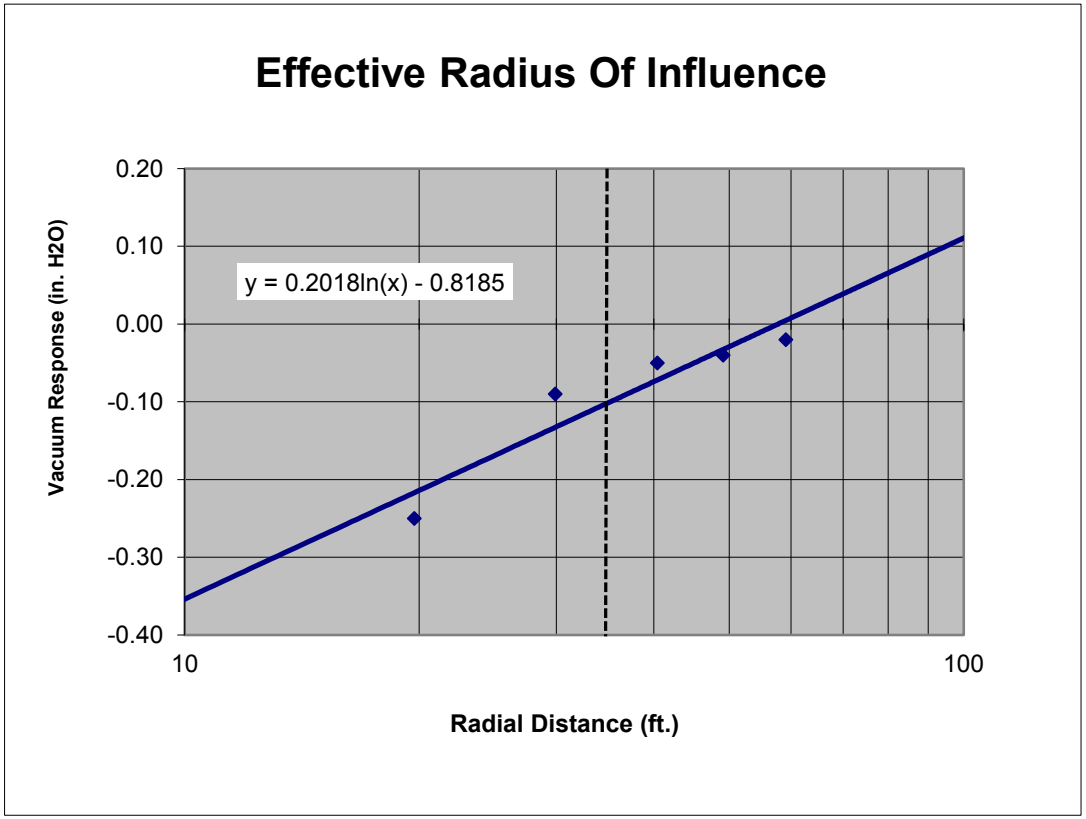
Depth Interval (ft. bgs):	3 to 10
Test Date:	10/3/2018
Performed By:	D&B
Extraction Well:	SVE-1 Pilot Well
Test Duration (min.):	60
Wellhead Vacuum ("H2O):	-4.7
Vapor Discharge Flow (scfm):	60

SVE Design Data

Radial Distance (ft.)	Vacuum Response 60 scfm
19.7	-0.25
29.9	-0.09
40.4	-0.05
49.1	-0.04
59.1	-0.02

Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
35.18	-4.7	60

Response:	-0.1
Slope:	0.2018
Intercept	0.8185



Summary of Soil Vapor Extraction System Evaluation Data
Wantagh Cleaners Site
920 Wantagh Avenue
Wantagh, New York

Depth Interval (ft. bgs):	3 to 10
Test Date:	10/3/2018
Performed By:	D&B
Extraction Well:	SVE-1 Pilot Well
Test Duration (min.):	60
Wellhead Vacuum ("H2O):	-7.6
Vapor Discharge Flow (scfm):	80

SVE Design Data

Radial Distance (ft.)	Vacuum Response 80 scfm
19.7	-0.39
29.9	-0.14
40.4	-0.09
49.1	-0.07
59.1	-0.04

Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
42.97	-7.6	80

Response:	-0.1
Slope:	0.3049
Intercept	1.2466

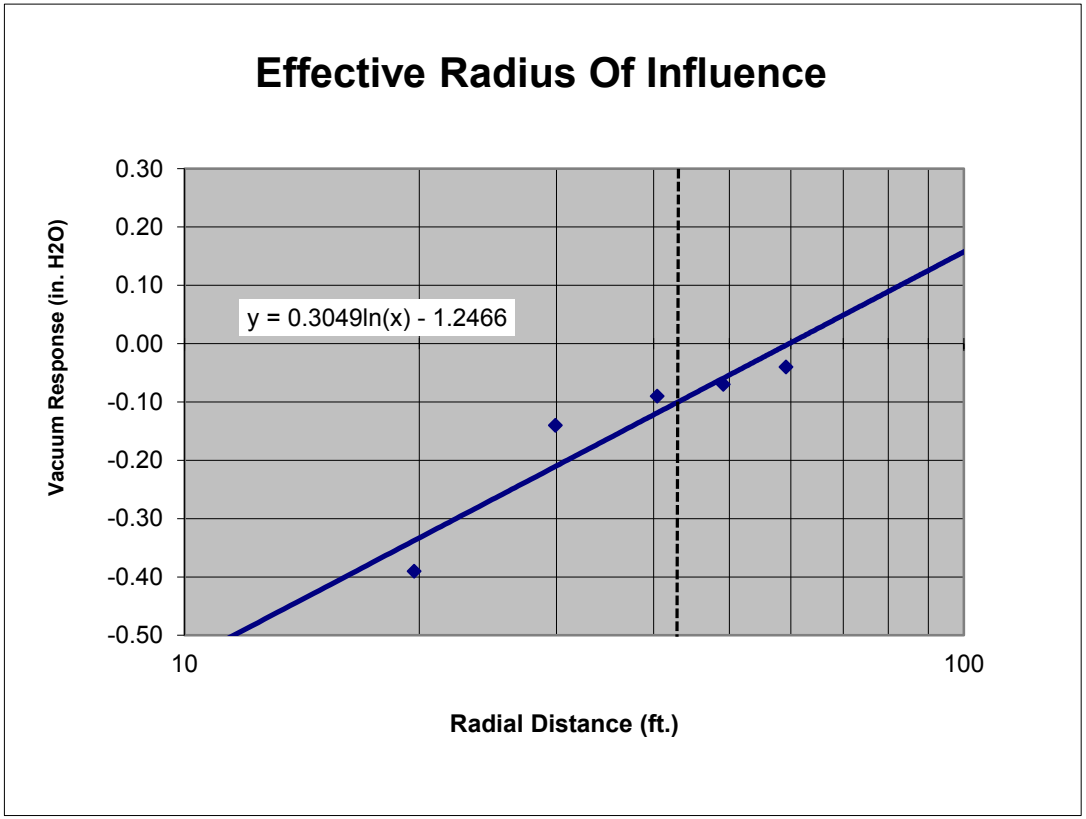


TABLE 1
WANTAGH CLEANERS OU2 SITE
SVE PILOT TEST DATA
OCTOBER 2018

	Monitoring Point	SVEMP-1	SVEMP-2	SVEMP-3	SVEMP-4	SVEMP-5	MW-02S	MW-03S	MW-05S	MW-07S	MW-08S	MW-09S	MW-10S	
	Total Depth (feet bgs)	**10.00**	**10.15**	**10.25**	**10.25**	**10.30**	**25.43**	**25.35**	**16.95**	**19.27**	**17.67**	**18.67**	**18.40**	
	Radial Distance from SVE-1 Well (feet)	**19.7**	**29.9**	**40.4**	**49.1**	**59.1**	**34.5**	**10.5**	**65.5**	**12.6**	**68.2**	**8.4**	**35.9**	
Initial PID (ppm)	39.4	49.4	19.1	63.1	16.4	12.0	3.2	2.3	550.0	2.3	5.5	36.0	28.1	
Time	**Applied System Flow at PSTS Well (SCFM/in. H_2O)**	**Vacuum Reading (in. H_2O)**												**Exhaust PID (ppm)**
	Test 1 : 20 CFM													
10:25	20.5 / -0.9	-0.06	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.12	0.00	24.1
10:45	21.1 / -1.1	-0.07	-0.02	-0.01	-0.01	-0.01	0.00	0.00	0.00	-0.05	0.00	-0.13	-0.01	24.0
11:05	20.8 / -1.1	-0.06	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.14	-0.02	23.0
11:23	20.0 / -1.3	-0.06	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.14	-0.02	22.5
	Test 2 : 40 CFM													
11:40	40.52 / -2.5	-0.17	-0.07	-0.05	-0.02	-0.03	0.00	0.00	0.00	0.00	0.00	-0.32	-0.05	24.6
12:00	49.71 / -2.2	-0.16	-0.05	-0.03	-0.02	-0.01	0.00	0.00	0.00	0.00	-0.01	-0.31	-0.03	25.2
12:15	40.64 / -2.2	-0.15	-0.05	-0.05	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	-0.32	-0.04	24.3
12:35	43.46 / -2.1	-0.16	-0.06	-0.04	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	-0.31	-0.03	21.5
	Test 3 : 60 CFM													
13:00	60.75 / -4.4	-0.24	-0.08	-0.05	-0.04	-0.02	0.00	0.00	0.00	0.00	-0.01	-0.47	-0.05	20.0
13:25	60.23 / -4.2	-0.25	-0.11	-0.07	-0.06	-0.04	0.00	0.00	0.00	-0.01	-0.01	-0.50	-0.06	25.2
13:40	59.64 / -4.7	-0.24	-0.10	-0.06	-0.06	-0.03	0.00	0.00	0.00	-0.03	-0.01	-0.50	-0.07	26.2
14:00	59.56 / -4.7	-0.25	-0.09	-0.05	-0.04	-0.02	0.00	0.00	0.00	-0.03	0.00	-0.47	-0.05	27.1
	Test 4 : 80 CFM													
14:25	82.21 / -7.6	-0.40	-0.15	-0.10	-0.08	-0.05	-0.01	0.00	-0.01	-0.01	-0.01	-0.74	-0.10	28.4
14:45	80.72 / -7.4	-0.39	-0.15	-0.09	-0.07	-0.05	0.00	0.00	0.00	-0.01	-0.01	-0.74	-0.09	29.2
15:00	81.26 / -7.3	-0.36	-0.11	-0.06	-0.04	-0.02	0.00	0.00	0.00	0.00	0.00	-0.72	-0.05	29.0
15:20	79.98 / -7.6	-0.39	-0.14	-0.09	-0.07	-0.04	0.00	0.00	0.00	0.00	-0.01	-0.74	-0.08	27.2

Notes

ft bgs: Feet below ground surface
SVE: Soil Vapor Extraction
SCFM: Standard cubic feet per minute
in. H_20: Inches of water
PID: Photoionization detector
ppm: Parts per million

TABLE 1
WANTAGH CLEANERS OU2 SITE
SVE PILOT TEST DATA
OCTOBER 2018

	Monitoring Point	**VP-1**	**VP-2**	**VP-3**	**VP-4**	**VP-5**	
	Total Depth (ft bgs)	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	
	Radial Distance from SVE-1 Well (feet)	**10.5**	**18.9**	**28.3**	**37.7**	**49.8**	
Initial PID (ppm)	39.4	260.0	5.0	3.0	3.1	1.3	
Time	**Applied System Flow at SVE-1 Well (SCFM/in. H_2O)**	**Vacuum Reading (in. H_2O)**					**Exhaust PID (ppm)**
	Test 1 : 20 CFM						
10:25	20.5 / -0.9	0.00	0.00	0.00	0.00	0.00	24.1
10:45	21.1 / -1.1	0.00	0.00	0.00	0.00	0.00	24.0
11:05	20.8 / -1.1	0.00	0.00	0.00	0.00	0.00	23.0
11:23	20.0 / -1.3	0.00	0.00	0.00	0.00	0.00	22.5
	Test 2 : 40 CFM						
11:40	40.52 / -2.5	-0.01	0.00	0.00	0.00	0.00	24.6
12:00	49.71 / -2.2	0.00	0.00	0.00	0.00	0.00	25.2
12:15	40.64 / -2.2	0.00	0.00	0.00	0.00	0.00	24.3
12:35	43.46 / -2.1	-0.01	-0.01	0.00	0.00	0.00	21.5
	Test 3 : 60 CFM						
13:00	60.75 / -4.4	0.00	0.00	0.00	0.00	0.00	20.0
13:25	60.23 / -4.2	-0.02	0.00	0.00	0.00	0.00	25.2
13:40	59.64 / -4.7	0.00	0.00	0.00	0.00	0.00	26.2
14:00	59.56 / -4.7	-0.01	0.00	0.00	0.00	0.00	27.1
	Test 4 : 80 CFM						
14:25	82.21 / -7.6	0.00	0.00	0.00	-0.01	-0.01	28.4
14:45	80.72 / -7.4	0.00	0.00	0.00	0.00	0.00	29.2
15:00	81.26 / -7.3	0.00	0.00	0.00	0.00	0.00	29.0
15:20	79.98 / -7.6	0.00	0.00	0.00	0.00	0.00	27.2

Notes

ft bgs: Feet below ground surface
SVE: Soil Vapor Extraction
SCFM: Standard cubic feet per minute
in. H_20: Inches of water
PID: Photoionization detector
ppm: Parts per million