Quarterly Operation and Maintenance Report – 2Q2018

Stanton Cleaners

NYSDEC Site No: 130072

110 Cuttermill Road, Great Neck, New York

Work Assignment # D007625-06

February 3, 2020

Prepared for:

New York State Department of Environmental Conservation

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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ACRONYMS AND ABBREVIATIONS

AS	Air Sparge
ASP	Analytical Services Protocol
bgs	below ground surface
CAP	Contractor's Application for Payment
cfm	cubic feet per minute
COC	contaminant of concern
DUSR	data usability summary report
DVS	Data Validation Services
ECL	Environmental Conservation Law
EFF	Effluent
GAC	Granular Activated Carbon
gpm	gallons per minute
GWE&T	Groundwater Extraction and Treatment
GWQS	Groundwater Quality Standard
HC	Hampton Clarke
HDR	Henningson, Durham & Richardson Architecture and Engineering, P.C.
INF	influent
LIHA	Long Island Hebrew Academy
lbs	pounds
LEL	lower explosive limit
LGAC	liquid phase granular activated carbon
ND	non-detect
ng/L	nanograms per liter
NPL	National Priorities List
NYCRR	New York Codes of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operations and Maintenance
PCE	tetrachloroethene
PES	Preferred Environmental Services
PFC	perfluorinated compounds
PFOA	perfuorooctanoic acid
PFOS	perfluorooctane sulfonic acid
PID	photo-ionization detector
PRP	Potentially Responsible Party

ACRONYMS AND ABBREVIATIONS (CONT.)

PRR	Periodic Review Report
RAO	Remedial Action Objective
ROD	Record of Decision
RSO	Remedial System Optimization
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objective
SPDES	State Pollutant Discharge Elimination System
SSDS	sub-slab depressurization system
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TA	Test America
TCL	Target Compound List
TICs	Tentatively Identified Compounds
UGA	Upper Glacial Aquifer
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WA	Work Assignment
WAGNN	Water Authority of Great Neck North

1.0 INTRODUCTION

As part of on-going remediation system operations and maintenance (O&M) and monitoring at the Stanton Cleaners groundwater contamination site located in Great Neck, New York (NYSDEC Site#130072), the New York State Department of Environmental Conservation (NYSDEC) has assigned site management tasks to Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) under Standby Engineering Contract D007625. The site is currently listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 4. This designation is for properly closed sites but requires continued management until remedial objectives are achieved. From 2001 to 2012, the United States Environmental Protection Agency (USEPA) oversaw the O&M and site management, with the NYSDEC resuming responsibility in 2012.

The on-going site management was assigned to HDR (D007625-06) in August 2012. This work assignment (WA) includes the following tasks:

- Task 1 – Project Scoping
- Task 2 – Site Management Plan
- Task 3 – O&M
- Task 4 – Monitoring and Reporting
- Task 5 – Periodic Review
- Task 6 – Remedial System Optimization (RSO)

This quarterly O&M Report (Task 4) summarizes the O&M and monitoring activities completed during the second quarter of 2018 (April through June 2018). This report provides a description of the work performed throughout the reporting period and includes all relevant data and performance monitoring documentation.

2.0 BACKGROUND

2.1 Site Location and Current Use

The site's physical address is 110 Cutter Mill Road in Great Neck, New York. The property is approximately ¼ acre in size and includes a vacant two-story building (formerly the Stanton Cleaners building), a one-story boiler/storage building, and the two-story groundwater extraction and treatment (GWE&T)/soil vapor extraction (SVE) system building. The site is bordered to the north and east by empty lots (former indoor tennis facility), to the south by a Sunoco gasoline fueling station and the Long Island Hebrew Academy (LIHA), and to the west by Cutter Mill Road. The surrounding area is largely urbanized and consists of various mixed uses with residential areas on side streets and commercial buildings along the main roadways. The entire area is serviced by public water and sewer with Water Authority of Great Neck North (WAGNN) as the primary water supplier. A United States Geological Survey (USGS) 7.5-minute map showing the site's location is provided on Figure 1.

As mentioned above, the Stanton Cleaners building is currently vacant. During a 2014 inspection, the NYSDEC verified that the facility terminated the use of a fourth generation tetrachloroethene (PCE) dry cleaning machine and surrendered their Air Facility Registration. In February 2017, the dry cleaning machinery was removed from the property and operations were moved to another location.

Three WAGNN public water supply wells are located approximately 1,000 feet west (downgradient) of the site. Two of these wells are approximately 145 feet deep and the third well is 434 feet deep. The two 145-foot deep wells, designated as PW-2A (N-12796) and PW-9 (N-4388), are screened within a deeper portion of the Upper Glacial Aquifer (UGA). The third 434-foot deep well, designated as PW-11, is within the Lloyd Aquifer and not believed to be impacted by the site. In October 2015, well PW-11 was taken out of service and replaced by well PW-11A in April 2017.

The WAGNN supply well treatment system is currently in operation and influent (INF) volatile organic compound (VOC) concentrations are treated to below federal and state drinking water standards. WAGNN analytical data provided to the NYSDEC indicates that PCE concentrations in raw water samples collected from PW-2A (down gradient of Stanton Cleaners site) periodically exceed its respective NYSDEC Groundwater Quality Standard (GWQS) of 5 micrograms per liter (µg/L).

2.1 Site Geology

Long Island's geology is composed of a sequence of unconsolidated glacial, lacustrine, deltaic, and marine deposits of clay, silt, and gravel that range in age from the Upper Cretaceous to Pleistocene epochs. These deposits overlay a Precambrian to Paleozoic crystalline bedrock. In Nassau County, where the site is located, the unconsolidated deposit thickness is approximately 500 feet.

Underlying the site, the UGA is subdivided into shallow, intermediate, and deep zones. For on-going site management, this naming convention is maintained such that all data collected is consistent with the *April*

2004 Final Hydrogeologic Investigation Report- Operable Unit 1 and *Final Capture Zone Analysis Report*. The shallow UGA consists of orange brown, poorly to well graded outwash sands and till of generally high permeability. The intermediate zone, at the water table's vicinity (depth between 50 to 60 feet below ground surface (bgs)), consists of a light grey to white fine grained micaceous silty sand and clay. The intermediate zone then transitions with depth into the North Shore confining unit, which separates the shallow-intermediate and deep zones. The confining unit consists of fine grained deposits and is described as light brown clay, light gray clayey silts, and silty clay. The finer grained materials are likely marine or post-glacial lake deposits which, in some areas of the site, overlie the deeper UGA. The deep UGA zone is generally a thin deposit of outwash sands and gravels that represent possible infilling of low lying areas during an interglacial stage.

Previous site investigations have shown that only the UGA has been impacted and groundwater PCE concentrations have declined significantly over time. The site groundwater levels are impacted by the pumping stress associated with the WAGNN pumping wells, with the most pronounced impacts in the UGA intermediate and deep zones.

2.2 Remedial History

Improper handling and disposal of spent dry cleaning solvents, including PCE, has resulted in hazardous substance releases at the site. As a result, PCE migrated from the underlying subsurface soils to surrounding indoor air and groundwater environments, producing significant threats to human health. Site remedial activities began in 1983 and are briefly summarized below.

- 1983 – Approximately 20 cubic yards of PCE-contaminated soil was removed from behind the Stanton Cleaners property
- 1986 – The NYSDEC funded construction of an air stripper treatment system for the WAGNN water supply wells.
- 1989 - A GWE&T system was installed by the potentially responsible party (PRP). The system performed poorly and was abandoned shortly thereafter.
- 1993 – The site was listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 2.
- 1998 – A new air stripper treatment system for the site-impacted WAGNN water supply wells was installed.
- 1998/1999 – USEPA assistance was requested; the site was proposed for addition to the National Priorities List (NPL); a Record of Decision (ROD) was finalized. The site was formally added to the NPL in May 1999.
- 2001 – The USEPA completed the installation of the dual GWE&T/SVE system on the property to address and contain the on-site contamination source. Additionally, the USEPA installed a sub-slab depressurization system (SSDS) on the LIHA.

- 2002 – Two 250-gallon PCE and one 500-gallon oil underground storage tanks (UST) were removed.
- 2008 – The USEPA conducted the first five-year site review. The review concluded that the remedy was in place and functioning as intended and did not identify significant issues requiring attention.
- 2011 – The site was reclassified from a Class 2 to a Class 4 Inactive Hazardous Waste site.
- 2012 – The USEPA completed the installation of a groundwater air sparge (AS) system and began operations in March. Additionally, the USEPA removed the LIHA SSDS prior to the NYSDEC assuming O&M in November.
- 2013 – The USEPA conducted the second five-year review in December.
- 2014 – Due to an air compressor oil leak, the AS system was shut down. The AS component of the groundwater system was removed from service such that the remaining remedial system consists of GWE&T and SVE. In February, snow and ice on the roof collapsed the gutter system, pulling the electrical service drop from the building. As a result, extensive downtime occurred due the electrical system damage and subsequent repairs.
- 2015 – In July, USEPA representatives met with NYSDEC representatives to review remedial action objective (RAO) progress and discuss site management program plans.
- 2016 – Significant downtime to the SVE system (approximately 10 months) occurred due to needed repairs for the blower. Repairs were delayed for administrative reasons during the Amendment 1 approval process.
- 2017 – The NYSDEC completed an RSO investigation from November 2016 through February 2017 to evaluate subsurface soil and the local aquifer in the vicinity of EPA-EXT-02. Additionally, the Stanton Cleaners building was vacated, with all associated equipment and operations removed from the site.

2.3 Site Cleanup Objectives

The site cleanup objective is, to the extent feasible, restore the impacted media to pre-disposal conditions. Closure criterion will be determined by the NYSDEC based on the future monitoring data. The Standards, Criteria, and Guidance (SCGs) currently used for the various sample media are summarized below.

- Soil – NYSDEC Environmental Conservation Law (*ECL*) *6 New York Code of Rules and Regulations (NYCRR) Part 375-6: Remedial Program Soil Cleanup Objectives (SCOs).*
- Groundwater - NYSDEC *Technical and Operational Guidance Series (TOGS) 1.1.1. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*.
- Soil Vapor - New York State Department of Health (NYSDOH) *Final Guidance for Evaluating Soil Vapor Intrusion (SVI) in the State of New York.*

3.0 OPERATIONS AND MAINTENANCE PROGRAM

The on-going O&M program at the Stanton Cleaners site includes the following:

- Monthly operational checks of the GWE&T and SVE systems;
- Monthly water level monitoring;
- Monthly influent (INF)/effluent (EFF) sampling of the GWE&T system;
- Quarterly INF/EFF sampling of the SVE system; Annual, or as needed, granular activated carbon (GAC) change outs on the GWE&T and SVE systems; and
- Annual State Pollutant Discharge Elimination System (SPDES) sampling of the GWE&T system EFF.

This report is a summary of all second quarter 2018 activities (April through June). Daily reports summarizing the activities completed for that day are in Appendix A.

3.1 Groundwater Extraction and Treatment System Operations and Maintenance

Currently EPA-EXT-02, located at the corner of Cutter Mill and Ascot Roads, is the only operational extraction well. Four additional extraction wells (EPA-EXT-01, EPA-EXT-03, EPA-EXT-04R, and ST-IW-01) are not operational and were formerly included in the groundwater monitoring well network. The locations of the five extractions wells are shown on Figure 2.

A summary of the second quarter 2018 GWE&T system mass removed, including average monthly flow rates, total and cumulative flow, PCE influent concentration and mass removal rate is provided in Table 1. Performance monitoring logs including the monthly O&M reports and Lookout® operational data is provided in Appendices B and C, respectively.

From April 1 through June 30, 2018, the GWE&T system treated and discharged a total of 7,420,093 gallons with an average flow rate of 56.91 gallons per minute (gpm). Since initial startup in November 2001, the GWE&T system has treated an approximate total of 410,044,841 gallons. Monthly flow rates and cumulative discharge amounts are calculated utilizing the continuous four-hour data logging software, Lookout®, located on the site computer and accessed remotely.

As a result of second quarter 2018 operations, approximately 0.27 pounds (lbs) of PCE were removed in the liquid phase, totaling 8.27 lbs since the NYSDEC assumed O&M in 2013. To calculate monthly PCE mass removed, the average flow rate is multiplied by the number of operational days and the PCE concentration (from monthly O&M samples).

3.1.1 Groundwater Extraction and Treatment System Influent/Effluent Sampling

Sampling of the GWE&T system INF and EFF is performed monthly to monitor plant efficiency and determine whether liquid GAC (LGAC) breakthrough has occurred. All collected samples are submitted to Hampton Clarke Analytical and Field Services of Fairfield, New Jersey (HC) for the analysis of target compound list (TCL) VOCs and tentatively identified compounds (TICs) by USEPA Method 624. As a result of the laboratory analysis, PCE was detected in each of the 2 monthly INF samples and ranged in concentration from 6.2 (May) to 6.3 micrograms per liter (µg/L) (April). Detected PCE concentrations in the 2 monthly INF samples exceeded the NYSDEC GWQS of 5 µg/L in April and May. No VOCs were detected in any monthly EFF sample collected for analysis. Samples were not collected in June 2018. A summary of the second quarter 2018 GWE&T system INF/EFF analytical results is provided in Table 2. A graph showing the GWE&T system influent PCE concentrations from 2003 through the second quarter of 2018 is provided on Figure 3.

3.1.2 Groundwater Extraction and Treatment System Annual SPDES Sampling

Sampling of the GWE&T system EFF is performed annually to verify that discharge parameters do not exceed the SPDES permit equivalency. The results of the groundwater treatment system compliance sampling are summarized in Table 5. The annual SPDES sample was collected on May 25, 2018. The NYSDEC SPDES permit equivalent criteria were met for groundwater effluent discharges to groundwater for all criteria.

3.2 Soil Vapor Extraction System Operations and Maintenance

Air monitoring of the SVE system is performed on a monthly basis. In accordance with the *2012 O&M Manual*, monthly SVE system performance monitoring includes the collection of the following parameters: VOCs, carbon monoxide, oxygen, lower explosive limit (LEL), hydrogen sulfide, air velocity in cubic feet per minute (cfm), temperature, relative humidity, dew point, and vacuum pressure. Air monitoring is performed at the following locations:

- SVE wells: EPA-SVE-1 (shallow), EPA-SVE-1 (medium), EPA-SVE-2 (shallow), EPA-SVE-2 (medium), EPA-SVE-3A, EPA-SVE-3B, and SS-A
- SVE-Influent, SVE-1 Combined, SVE-2 Combined: Sampling ports on SVE influent lines, prior to blower and vapor phase carbon
- Post-Blower Pre-Carbon: Prior to vapor phase carbon treatment, post blower
- Post-VGAC – Post vapor phase treated effluent (quarterly as needed to evaluate carbon breakthrough)

As a result of the second quarter 2018 SVE system operations (April through June), approximately 33 lbs. of VOCs have been removed through the vapor phase. SVE mass removal rates are calculated utilizing total VOC measurements via a photo-ionization detector (PID). Since the start of operations in September 2003, the SVE system is estimated to have removed an approximately 2,068 lbs. of PCE. Graphs showing the

cumulative PCE mass removed over the past year and since September 2003 can be found on Figures 4 and 5, respectively. Monthly performance monitoring logs including both the AS and SVE systems can be found in Appendices D and E, respectively.

Figure 5 uses the PID measurements obtained during monitoring to estimate the mass recovery of the SVE system over the life of the system. When applicable, measurement of the SVE influent from a more robust source, such as sample collection via summa canister and laboratory analysis is used instead of a PID measurement. Calculation assumes that PCE is the bulk of the VOC detected in PID readings attained at the site.

Quarterly, 1-liter SUMMA canister influent and effluent samples are collected. During this quarter, samples were not collected from the influent and effluent ports.

4.0 MONITORING PROGRAM

The on-going Monitoring program at the Stanton Cleaners site includes the following:

- Quarterly O&M reports;
- Semi-annual groundwater sampling; and
- Semi-annual SVI sampling at the LIHA

4.1 Plume Perimeter Monitoring

Groundwater level measurements are obtained from both onsite and offsite wells once a month in order to evaluate capture zones(s) around groundwater extractions well EPA-EXT-02. The monitoring well network and well monitoring schedule are provided as Figures 6 and 7, respectively.

Water level measurements were collected during the April through June 2018 monthly O&M visits at 17 of the 18 on and off-site monitoring wells. Well number EPA-MW-22 is under a clothing bin and is inaccessible. The location and number of monitoring wells was previously determined by the USEPA based on the 2014 *Final Capture Zone Analysis Report*. Potentiometric surface maps for the shallow, intermediate, and deep UGA, based on the June 2018 values, can be found on Figures 8, 9, and 10, respectively. Groundwater level measurements for this quarter are provided in Appendix F.

The groundwater flow directions in the shallow and deep UGA resemble those measured previously for the site. In each of the contour maps, groundwater generally appears to flow to the southwest. A downward component of flow is also apparent when comparing the shallow, intermediate, and deep groundwater contours. A noticeable depression in the shallow water table (Figure 8) is centered around extraction well, EPA-EXT-02. The intermediate and deep UGA flow directions are to the southwest (Figures 9 and 10). During the February 2017 RSO aquifer test, it was found that the entire site falls within the capture zones of the public water supply wells, which strongly influence flow.

4.2 Groundwater Sampling

Routine semi-annual groundwater samples were collected during this quarter. The next routine semi-annual groundwater sampling event is scheduled for the fourth quarter of 2018.

Preferred Environmental Services collected a round of monitoring well samples on May 24-25, 2018. These samples were collected using the low-flow method. Samples were shipped to Hampton Clarke Laboratory of Fairfield, NJ. Sampling results are presented in Table 3. Three of the seven wells sampled contained measurable quantities of VOCs. However, none of these detections exceeded the Class GA Standards. PCE was detected in EPA-CL-4D and ST-MW-20, at concentrations of 1.3 µg/l and 1.2 µg/l respectively. EPA-CL-4S contained cis-1,2-DCE at 1.3 µg/l and TCE at 2.2 µg/l. All of these wells are located downgradient of the site.

A comparison of the 2018Q2 semi-annual groundwater-sampling event to the 2017Q2 semi-annual groundwater-sampling event shows comparable levels of contaminants at the three wells with detections (EPA-CL-4D, EPA-CL-4S and ST-MW-20). However, as only 7 of the 15 wells were sampled during this event, a true comparison cannot be made.

Groundwater sampling parameter logs can be found in Appendix G.

4.3 Indoor Air Quality Sampling

Routine semi-annual indoor air quality samples were collected from the LIHA building during this quarter. The next routine semi-annual indoor air quality sampling event is scheduled for the fourth quarter of 2018.

On May 24, 2018, one indoor air sample (basement level) and one duplicate indoor air sample were collected from the LIHA building using 6-liter Summa® canisters, equipped with 24-hour flow controllers, and submitted to Chemtech of Mountainside, New Jersey (Chemtech) for the analysis of VOCs by USEPA Method TO-15. Laboratory deliverables were in accordance with NYSDEC Analytical Services Protocol (ASP) Category B and subjected to data validation by HDR's independent contract validator, Data Validation Services of North Creek, New York (DVS). A copy of the LIHA indoor air sampling questionnaire and DVS' data usability summary report (DUSR) can be found in Appendix H and I, respectively.

As indicated by the laboratory analytical results, site contaminants of concern (COCs) are below threshold action levels as described by the NYSDOH soil vapor/indoor air decision matrices A, B, and C (May 2017 amendment). A summary of the LIHA air sampling analytical results can be found on Table 4.

4.4 Water Authority of Great Neck North Public Supply Well Monitoring

On a periodic basis, WAGNN personnel collect raw and treated water samples from each of its public supply wells (PW-2A, PW-6, PW-9, and PW-11A) and submits for the analysis of various compounds, including site specific chlorinated VOCs. It should be noted that PW-11 was permanently removed from service on October 19, 2016 and abandoned in March 2017. A new location, PW-11A, was installed during that time and began operation in April 2017.

In the analytical data provided by WAGNN for this quarter, the highest PCE concentration in any pre-treatment sample occurred on April 11, 2018 in PW-2A at a concentration of 5.6 µg/L. All post-treatment samples were non-detect (ND) for PCE. A graph showing the contaminants of concern (COCs) concentrations in the WAGNN wells over time can be found on Figure 11.

5.0 MAINTENANCE ISSUES AND RECOMMENDED SOLUTIONS

Based on the site visits and data collected during this period, HDR has identified maintenance issues and the recommendations relative to those findings can be found below.

1. GWTS influent piping leak from location of previous repair (Preferred Environmental Services repaired)
2. Barrier protecting exterior carbon vessel struck by vehicle and not properly anchored (no repairs recommended)
3. Gutter fell from the roof (no repairs proposed, per DEC directive)
4. GWTS offline during 6/28/18 site visit (Delta to be informed)

Unless otherwise noted, HDR has requested approval to proceed with our recommendations as outlined above and future quarterly reports will document how the maintenance issues were addressed.

5.1 Downtime Summary

During this quarterly monitoring period, most system components were found to be operational. During the June 28, 2018 O&M event/site visit, the GWTS was found to be offline. The shutdown cause was not able to be determined. Based on the downloaded Lookout® data, no water discharges were recorded from June 26, 2018 through the end of the month (6/30/18) – 5 days total.

6.0 FUTURE ACTIVITIES

Upcoming maintenance and monitoring activities at the site includes the following:

- Routine monthly O&M activities will continue.
- Semi-annual groundwater sampling is scheduled to be completed during the fourth quarter of 2018.
- Semi-annual indoor air sampling is scheduled to be completed during the fourth quarter of 2018.

7.0 PROGRESS TOWARD CLEANUP OBJECTIVES

As a result of ongoing GWE&T and SVE system operations during the second quarter of 2018, a total of 0.37 and 33.1 lbs. of VOCs have been removed in liquid and vapor phases, respectively. The total cost incurred in association with operation of these remedial system operations and subsequent site monitoring during this past quarter was $30.046.17 (see quarterly cost summary below). During this quarter, the cost of both liquid and vapor phase VOC removal was $897.70 per pound. Note that the cost per VOC pound removed is based on spending associated with WA D007625-06 Tasks 1 (Project Scoping), 2 (Site Management Plan), 3 (O&M), 4 (Monitoring and Reporting), and 5 (Periodic Review). Costs associated with Task 6 (RSO) are not included. Specific cost details can be found on HDR's Contractor's Application for Payments (CAPs) for this period.

Progress continues toward achieving the site cleanup objectives. An overall bulk reduction in the groundwater contaminant concentration has been achieved, but groundwater concentrations still exceed applicable goals. The SVE system continues to remove VOCs in the vapor phase, as determined by PID readings and flow measurements. Operation of the SVE system should continue until the cost per pound of VOC removed exceeds that which is determined efficient, or if asymptotic conditions have been reached.

Quarterly Cost Summary							
PERIOD	COST ($)	Total VOCS Measured at SVE (lbs.)	Total VOCs Measured at GWE&TS (lbs.)	Quarterly Sum ($)		Total VOCs Removed (lbs.)	Cost per Pound
3/31/2018 - 4/28/2018	$ 7,519.48						
4/29/2018 - 6/30/2018	$ 22,526.69	33.1	0.37	$ 30,046.17		33.5	$ 897.70

Table 1
Groundwater Extraction and Treatment System
PCE Mass Removal Summary - April through June 2018
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Rd., Great Neck, NY

Quarter No.	Date	Average Monthly Flow Rate (GPM)	Total Flow (gal/month)	Cumulative Flow (gal)	INF PCE Concentration (µg/L)	PCE Mass Removal Rate (lbs/Month)	Cumulative PCE Mass Removed (lbs)
2	April-18	60.47	2.570E+06	4.054E+08	6.3	0.14	8.14
	May-18	58.09	2.550E+06	4.080E+08	6.2	0.13	8.27
	June-18	58.17	2.043E+06	4.100E+08	NS	-	8.27
					Quarter Total	**0.27**	NA

Notes
GPM : gallons per minute
gal/month : gallons per month
INF : Influent
PCE : tetrachloroethene
µg/L : micrograms per liter
lbs/month : pounds per month
NA : Not applicable
NS : No sample

Table 2
Groundwater Extraction and Treatment System
Influent and Effluent Analytical Results - April through June 2018
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Rd., Great Neck, NY

	Sample Location:	INF-GW	EFF-GW	INF-GW	EFF-GW	INF-GW	EFF-GW
	Sample Date:	4/26/2018	4/26/2018	5/24/2018	5/24/2018	6/28/2018	6/28/2018
Analyte	**GWQS (µg/L)**	**Results (µg/L)**					
Total TICs	NS	ND	ND	ND	ND	NC	NC
1,1,1-Trichloroethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,1,2,2-Tetrachloroethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,1,2-Trichloroethane	1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,1-Dichloroethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,1-Dichloroethene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2,3-Trichlorobenzene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2,4-Trichlorobenzene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2-Dibromo-3-chloropropane (DBCP)	0.04	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2-Dibromoethane (Ethylene dibromide)	0.0006	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2-Dichlorobenzene	3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,2-Dichloroethane	0.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NC	NC
1,2-Dichloropropane	1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,3-Dichlorobenzene	3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,4-Dichlorobenzene	3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
1,4-Dioxane	NA	ND (50)	ND (50)	ND (50)	ND (50)	NC	NC
2-Butanone	50	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
2-Hexanone	50*	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
4-Methyl-2-Pentanone	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Acetone	50	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	NC	NC
Benzene	1	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NC	NC
Bromochloromethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Bromodichloromethane	50*	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Bromoform	50*	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Bromomethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Carbon Disulfide	60*	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Carbon Tetrachloride	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Chlorobenzene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Chlorodibromomethane	50	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Chloroethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Chloroform	7	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Chloromethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Cis-1,2-Dichloroethene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Cis-1,3-Dichloropropene	0.4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Cyclohexane	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Dichlorodifluoromethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Dichloromethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Ethylbenzene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Freon 113	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Isopropyl benzene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
m,p-Xylene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Methyl acetate	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Methyl T-Butyl Ether (MTBE)	10*	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NC	NC
Methylcyclohexane	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC

Table 2
Groundwater Extraction and Treatment System
Influent and Effluent Analytical Results - April through June 2018
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Rd., Great Neck, NY

	Sample Location:	INF-GW	EFF-GW	INF-GW	EFF-GW	INF-GW	EFF-GW
	Sample Date:	4/26/2018	4/26/2018	5/24/2018	5/24/2018	6/28/2018	6/28/2018
Analyte	**GWQS (µg/L)**	**Results (µg/L)**					
O-Xylene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Styrene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Tetrachloroethene	5	**6.3**	ND (1.0)	**6.2**	ND (1.0)	NC	NC
Toluene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Total Xylenes	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Trans-1,2-Dichloroethene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Trans-1,3-Dichloropropene	0.4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Trichloroethylene	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Trichlorofluoromethane	5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC
Vinyl Chloride	2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NC	NC

Notes:

GWQS	: NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, *Table 1 - NYS Ambient Water Quality Standards and Guidance Values (Class GA)*
NYSDEC	: New York State Department of Environmental Conservation
NS	: No Standard
NA	: Not Applicable
ND (#)	: Not Detected at the indicated laboratory run limit
NC	: Sample not collected
TICs	: Tentatively Identified Compounds
J	: Estimated value
Bold	: Detected concentration exceeds its respective GWQS
*	: Denotes a guidance value
INF	: Influent
EFF	: Effluent
µg/L	: micrograms per liter

Table 3
Summary of Semi-Annual Groundwater Analytical Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

			Sample ID	EPA-CL-4D _20180525		EPA-CL-4S _20180525		EPA-MW-11D _20180525		EPA-MW-27 _20180525		ST-MW-14 _20180525		ST-MW-17 _20180525		ST-MW-20 _20180525	
			Sample Location	CL-4D		CL-4S		EPA-MW-11D		EPA-MW-27		ST-MW-14		ST-MW-17		ST-MW-20	
			Date	5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018	
Analyte	**CAS Number**	**NYSDEC Guidance**		**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
1,1,1-Trichloroethane	71-55-6	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,1,2,2-Tetrachloroethane	79-34-5	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,1,2-Trichloroethane	79-00-5	1		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,1-Dichloroethane	75-34-3	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,1-Dichloroethene	75-35-4	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2,3-Trichlorobenzene	87-61-6	NS		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2,4-Trichlorobenzene	120-82-1	NS		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.04		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.0006		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2-Dichlorobenzene	95-50-1	3		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,2-Dichloroethane	107-06-2	0.6		*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*
1,2-Dichloropropane	78-87-5	1		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,3-Dichlorobenzene	541-73-1	3		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,4-Dichlorobenzene	106-46-7	3		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
1,4-Dioxane	123-91-1	NS		*50.0*	*U*	*50.0*	*U*	*50.0*	*U*	*50.0*	*U*	*50.0*	*U*	*50.0*	*U*	*50.0*	*U*
2-Butanone	78-93-3	50		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
2-Hexanone	591-78-6	50		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
4-Methyl-2-Pentanone	108-10-1	NS		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Acetone	67-64-1	50		*5.0*	*U*	*5.0*	*U*	*5.0*	*U*	*5.0*	*U*	*5.0*	*U*	*5.0*	*U*	*5.0*	*U*
Benzene	71-43-2	1		*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*
Bromochloromethane	74-97-5	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Bromodichloromethane	75-27-4	50		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Bromoform	75-25-2	50		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Bromomethane	74-83-9	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Carbon Disulfide	75-15-0	60		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Carbon Tetrachloride	56-23-5	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Chlorobenzene	108-90-7	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Chlorodibromomethane	124-48-1	50		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Chloroethane	75-00-3	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Chloroform	67-66-3	7		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Chloromethane	74-87-3	5		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Cis-1,2-Dichloroethene	156-59-2	5		*1.0*	*U*	1.7		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Cis-1,3-Dichloropropene	10061-01-5	NS		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Cyclohexane	110-82-7	NS		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*

Table 3
Summary of Semi-Annual Groundwater Analytical Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

		Sample ID	EPA-CL-4D _20180525		EPA-CL-4S _20180525		EPA-MW-11D _20180525		EPA-MW-27 _20180525		ST-MW-14 _20180525		ST-MW-17 _20180525		ST-MW-20 _20180525	
		Sample Location	CL-4D		CL-4S		EPA-MW-11D		EPA-MW-27		ST-MW-14		ST-MW-17		ST-MW-20	
		Date	5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018		5/25/2018	
Analyte	**CAS Number**	**NYSDEC Guidance**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Dichlorodifluoromethane	75-71-8	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Dichloromethane	75-09-2	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Ethylbenzene	100-41-4	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Freon 113	76-13-1	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Isopropyl benzene	98-82-8	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
m,p-Xylene	136777-61-2	NS	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Methyl acetate	79-20-9	NS	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Methyl T-Butyl Ether (MTBE)	1634-04-4	10	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*	*0.5*	*U*
Methylcyclohexane	108-87-2	NS	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
O-Xylene	95-47-6	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Styrene	100-42-5	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Tetrachloroethene	127-18-4	5	1.3		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	1.2	
Toluene	108-88-3	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Total Xylenes	1330-20-7	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Trans-1,2-Dichloroethene	156-60-5	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Trans-1,3-Dichloropropene	10061-02-6	NS	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Trichloroethylene	79-01-6	5	*1.0*	*U*	2.2		*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Trichlorofluoromethane	75-69-4	5	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*
Vinyl Chloride	75-01-4	2	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*	*1.0*	*U*

Notes:
All sample results and NYSDEC guidance values are reported in ug/l
All sample analytical results are compared to Part 703.5 - Water Quality Standards Surface and Ground Water
µg/l: : micrograms per liter
NYSDEC: : New York State Department of Environmental Conservation
Q : Qualifier
U : indicates the compound was not detected above the MDL
MDL : method detection limit
NS : no standard
Shaded : the result was not detected above the MDL
Bold : the result exceeded the NYSDEC Criteria

Table 4
Summary of LIHA Indoor Air Sampling Analytical Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

				Sample ID	**LIHA-IA1-20180525**		**LIHA-IA1-DUP-20180525**	
				Sample Location	**LIHA-IA1**		**LIHA-IA1**	
				Date	**5/25/2018**		**5/25/2018**	
Analyte	**CAS Number**	**NYSDOH Decision Matrices A, B, C Indoor Air Concentration**			**Result**	**Q**	**Result**	**Q**
1,1,1-Trichloroethane (111-TCA)	71-55-6	<3	3 to <10	10 and above	*0.16*	*U*	*0.16*	*U*
1,1,2,2-Tetrachloroethane	79-34-5	-	-	-	*3.43*	*U*	*3.43*	*U*
1,1,2-Trichloroethane	79-00-5	-	-	-	*2.73*	*U*	*2.73*	*U*
1,1-Dichloroethane	75-34-3	-	-	-	*2.02*	*U*	*2.02*	*U*
1,1-Dichloroethene (11-DCE)	75-35-4	<0.2	0.2 to <1	1 and above	*1.98*	*U*	*1.98*	*U*
1,2,4-Trichlorobenzene	120-82-1	-	-	-	*3.71*	*U*	*3.71*	*U*
1,2,4-Trimethylbenzene	95-63-6	-	-	-	2.31	J	3.39	
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	-	-	-	*3.84*	*U*	*3.84*	*U*
1,2-Dichlorobenzene	95-50-1	-	-	-	*3.01*	*U*	*3.01*	*U*
1,2-Dichloroethane	107-06-2	-	-	-	*2.02*	*U*	*2.02*	*U*
1,2-Dichloropropane	78-87-5	-	-	-	*2.31*	*U*	*2.31*	*U*
1,2-Dichlorotetrafluoroethane	76-14-2	-	-	-	*3.49*	*U*	*3.49*	*U*
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	-	-	-	0.93	J	1.33	J
1,3-Butadiene	106-99-0	-	-	-	*1.11*	*U*	*1.11*	*U*
1,3-Dichlorobenzene	541-73-1	-	-	-	*3.01*	*U*	*3.01*	*U*
1,4-Dichlorobenzene	106-46-7	-	-	-	*3.01*	*U*	*3.01*	*U*
1,4-Dioxane	123-91-1	-	-	-	*1.8*	*U*	*1.8*	*U*
2,2,4-Trimethylpentane	540-84-1	-	-	-	7.01	J	15.9	J
2-Butanone (MEK)	78-93-3	-	-	-	1.45	J	2.15	
2-Chlorotoluene	95-49-8	-	-	-	*2.59*	*U*	*2.59*	*U*
4-Ethyltoluene	622-96-8	-	-	-	*2.46*	*U*	0.98	J
4-Methyl-2-Pentanone	108-10-1	-	-	-	*2.05*	*U*	*2.05*	*U*
Acetone	67-64-1	-	-	-	24.2	B	29.5	B
Allyl Chloride (3-Chloropropene)	107-05-1	-	-	-	*1.57*	*U*	*1.57*	*U*
Benzene	71-43-2	-	-	-	2.33		3.19	
Bromodichloromethane	75-27-4	-	-	-	*3.35*	*U*	*3.35*	*U*
Bromoform	75-25-2	-	-	-	*5.17*	*U*	*5.17*	*U*
Bromomethane	74-83-9	-	-	-	*1.94*	*U*	*1.94*	*U*
Carbon Disulfide	75-15-0	-	-	-	*1.56*	*U*	0.44	J
Carbon Tetrachloride	56-23-5	<0.2	0.2 to <1	1 and above	**0.5**		**0.44**	
Chlorobenzene	108-90-7	-	-	-	*2.3*	*U*	*2.3*	*U*
Chlorodibromomethane	124-48-1	-	-	-	*4.26*	*U*	*4.26*	*U*
Chloroethane	75-00-3	-	-	-	*1.32*	*U*	*1.32*	*U*
Chloroform	67-66-3	-	-	-	1.27	J	2.3	J
Chloromethane	74-87-3	-	-	-	1.18		1.26	
Cis-1,2-Dichloroethene (c12-DCE)	156-59-2	<0.2	0.2 to <1	1 and above	*1.98*	*U*	*1.98*	*U*
Cis-1,3-Dichloropropene	10061-01-5	-	-	-	*2.27*	*U*	*2.27*	*U*
Cyclohexane	110-82-7	-	-	-	*1.72*	*U*	1.69	J
Dichlorodifluoromethane	75-71-8	-	-	-	0.94	J	2.32	J
Dichloromethane	75-09-2	<3	3 to <10	10 and above	*7.64*	*U*	*6.6*	*U*
Ethylbenzene	100-41-4	-	-	-	0.91	J	2	J
Freon 113	76-13-1	-	-	-	*3.83*	*U*	*3.83*	*U*
Hexachlorobutadiene	87-68-3	-	-	-	*5.33*	*U*	*5.33*	*U*
m,p-Xylene	179601-23-1	-	-	-	2.78	J	6.95	
Methyl Methacrylate	80-62-6	-	-	-	*2.05*	*U*	*2.05*	*U*
Methyl T-Butyl Ether (MTBE)	1634-04-4	-	-	-	*1.8*	*U*	*1.8*	*U*
Naphthalene	91-20-3	-	-	-	*2.62*	*UJ*	*2.62*	*UJ*
N-Heptane	142-82-5	-	-	-	2.66	J	6.15	J
N-Hexane	110-54-3	-	-	-	9.87	NJ	16.6	NJ
O-Xylene	95-47-6	-	-	-	1.13	J	2.91	

Table 4
Summary of LIHA Indoor Air Sampling Analytical Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

				Sample ID	**LIHA-IA1-20180525**		**LIHA-IA1-DUP-20180525**	
				Sample Location	**LIHA-IA1**		**LIHA-IA1**	
				Date	**5/25/2018**		**5/25/2018**	
Analyte	**CAS Number**	**NYSDOH Decision Matrices A, B, C Indoor Air Concentration**			**Result**	**Q**	**Result**	**Q**
Styrene	100-42-5	-	-	-	2.64		4.09	
Tert-Butyl Alcohol	75-65-0	-	-	-	*1.52*	*U*	*1.52*	*U*
Tetrachloroethene (PCE)	127-18-4	<3	3 to <10	10 and above	0.81		0.88	
Tetrahydrofuran	109-99-9	-	-	-	*1.47*	*U*	*1.47*	*U*
Toluene	108-88-3	-	-	-	20	J	39.6	J
Trans-1,2-Dichloroethene	156-60-5	-	-	-	*1.98*	*U*	*1.98*	*U*
Trans-1,3-Dichloropropene	10061-02-6	-	-	-	*2.27*	*U*	*2.27*	*U*
Trichloroethylene (TCE)	79-01-6	<0.2	0.2 to <1	1 and above	*0.16*	*U*	*0.16*	*U*
Trichlorofluoromethane	75-69-4	-	-	-	1.18	J	1.12	J
Vinyl Bromide	593-60-2	-	-	-	*2.19*	*U*	*2.19*	*U*
Vinyl Chloride	75-01-4	<0.2	-	0.2 and above	*0.08*	*U*	*0.08*	*U*

Notes:
All sample results and NYSDOH guidance values are reported in µg/m3
All sample analytical results are compared to October 2006 and May 2017 NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Matrices A, B, and C
Outdoor air sample results from OA-1 are not compared to the NYSDOH Decision Matrices

µg/m3: : micrograms per cubic meter
NYSDOH: : New York State Department of Health
Q : Qualifier
J : indicates an estimated value
N : indicates presumptive evidence of the compound
B : Indicates the analyte was detected in the blank and the sample
U : indicates the compound was not detected at the indicated MDL
MDL : minimum detection limit
Shaded : the result was not detected but the MDL exceeds at least one concentration range of the decision matrix
Bold : the result was detected within concentration range 2 of the decision matrix
Bold/Italic : the results exceeds concentration range 3 of the decision matrix

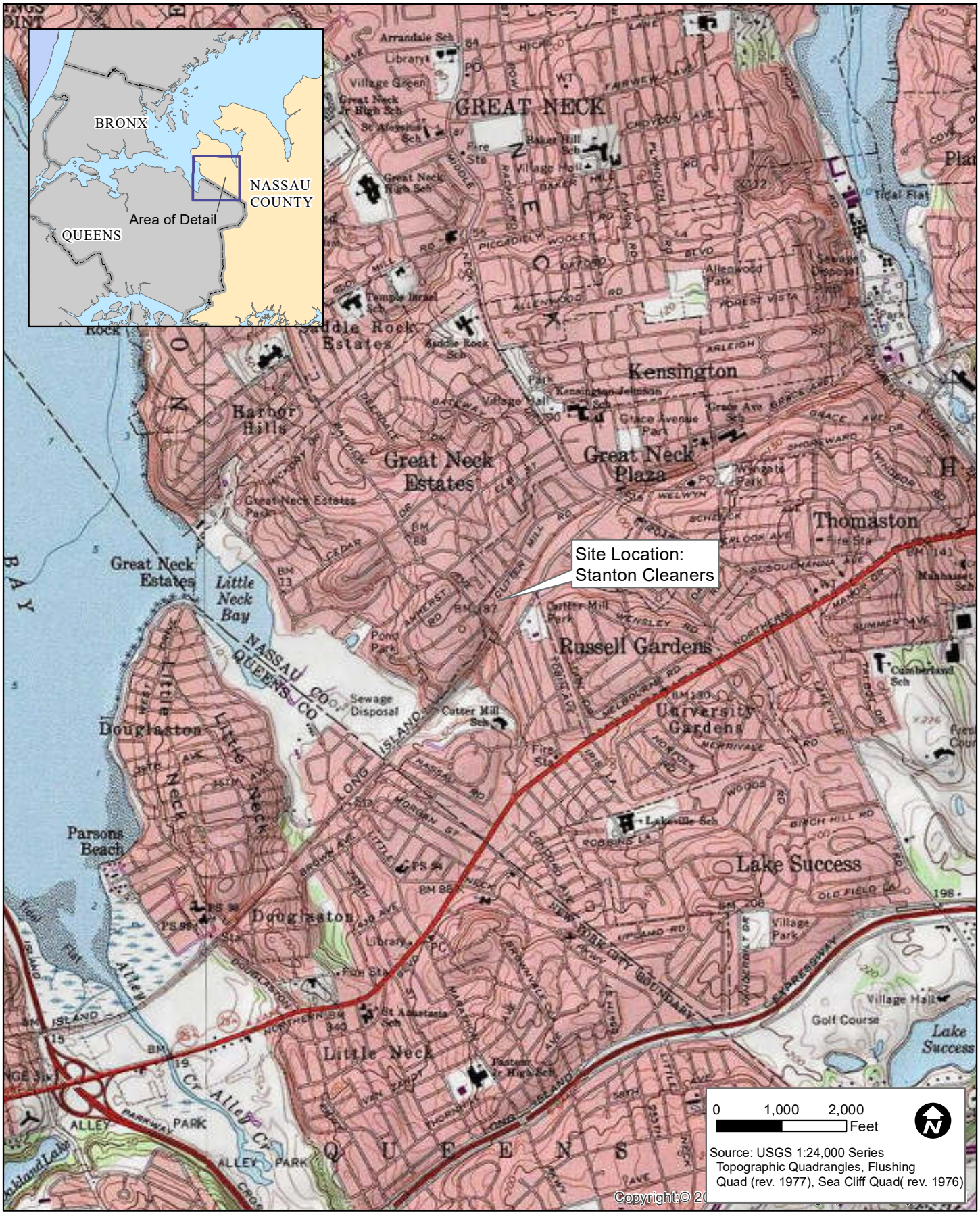
Table 5
Summary of Annual State Pollutant Discharge Elimination System (SPDES) Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

		Sample ID	SW-CB-1 _20180525	
		Sample Location	CB-1	
		Date	5/25/2018	
Analyte	CAS Number	NYSDEC Guidance	Result	Q
VOCs				
1,1,1-Trichloroethane	71-55-6	5	*1.0*	*U*
1,1,2,2-Tetrachloroethane	79-34-5	5	*1.0*	*U*
1,1,2-Trichloroethane	79-00-5	1	*1.0*	*U*
1,1-Dichloroethane	75-34-3	5	*1.0*	*U*
1,1-Dichloroethene	75-35-4	5	*1.0*	*U*
1,2,3-Trichlorobenzene	87-61-6	5	*1.0*	*U*
1,2,4-Trichlorobenzene	120-82-1	5	*1.0*	*U*
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.04	*1.0*	*U*
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.0006	*1.0*	*U*
1,2-Dichlorobenzene	95-50-1	3	*1.0*	*U*
1,2-Dichloroethane	107-06-2	0.6	*0.5*	*U*
1,2-Dichloropropane	78-87-5	1	*1.0*	*U*
1,3-Dichlorobenzene	541-73-1	3	*1.0*	*U*
1,4-Dichlorobenzene	106-46-7	3	*1.0*	*U*
1,4-Dioxane	123-91-1	1	*50*	*U*
2-Butanone	78-93-3	50	*1.0*	*U*
2-Hexanone	591-78-6	50	*1.0*	*U*
4-Methyl-2-Pentanone	108-10-1	NS	*1.0*	*U*
Acetone	67-64-1	50	*5.0*	*U*
Benzene	71-43-2	1	*0.5*	*U*
Bromochloromethane	74-97-5	5	*1.0*	*U*
Bromodichloromethane	75-27-4	50	*1.0*	*U*
Bromoform	75-25-2	50	*1.0*	*U*
Bromomethane	74-83-9	5	*1.0*	*U*
Carbon Disulfide	75-15-0	60	*1.0*	*U*
Carbon Tetrachloride	56-23-5	5	*1.0*	*U*
Chlorobenzene	108-90-7	5	*1.0*	*U*
Chlorodibromomethane	124-48-1	50	*1.0*	*U*
Chloroethane	75-00-3	5	*1.0*	*U*
Chloroform	67-66-3	7	*1.0*	*U*
Chloromethane	74-87-3	5	*1.0*	*U*
Cis-1,2-Dichloroethene	156-59-2	5	*1.0*	*U*
Cis-1,3-Dichloropropene	10061-01-5	NS	*1.0*	*U*
Cyclohexane	110-82-7	NS	*1.0*	*U*
Dichlorodifluoromethane	75-71-8	5	*1.0*	*U*
Dichloromethane	75-09-2	5	*1.0*	*U*
Ethylbenzene	100-41-4	5	*1.0*	*U*
Freon 113	76-13-1	5	*1.0*	*U*
Isopropyl benzene	98-82-8	5	*1.0*	*U*
m,p-Xylene	136777-61-2	NS	*1.0*	*U*
Methyl acetate	79-20-9	NS	*1.0*	*U*
Methyl T-Butyl Ether (MTBE)	1634-04-4	10	*0.5*	*U*
Methylcyclohexane	108-87-2	NS	*1.0*	*U*
O-Xylene	95-47-6	5	*1.0*	*U*
Styrene	100-42-5	5	*1.0*	*U*
Tetrachloroethene	127-18-4	5	*1.0*	*U*
Toluene	108-88-3	5	*1.0*	*U*
Total Xylenes	1330-20-7	5	*1.0*	*U*
Trans-1,2-Dichloroethene	156-60-5	5	*1.0*	*U*
Trans-1,3-Dichloropropene	10061-02-6	NS	*1.0*	*U*

Table 5
Summary of Annual State Pollutant Discharge Elimination System (SPDES) Results
Stanton Cleaners - NYSDEC Site# 130072
110 Cuttermill Road, Great Neck, NY

		Sample ID	SW-CB-1 _20180525	
		Sample Location	CB-1	
		Date	5/25/2018	
Analyte	CAS Number	NYSDEC Guidance	Result	Q
Trichloroethylene	79-01-6	5	*1.0*	*U*
Trichlorofluoromethane	75-69-4	5	*1.0*	*U*
Vinyl Chloride	75-01-4	2	*1.0*	*U*
PCBs				
Aroclor 1016	12674-11-2	NS	*0.25*	*U*
Aroclor 1221	11104-28-2	NS	*0.25*	*U*
Aroclor 1232	11141-16-5	NS	*0.25*	*U*
Aroclor 1242	53469-21-9	NS	*0.25*	*U*
Aroclor 1248	12672-29-6	NS	*0.25*	*U*
Aroclor 1254	11097-69-1	NS	*0.25*	*U*
Aroclor 1260	11096-82-5	NS	*0.25*	*U*
Aroclor 1262	37324-23-5	NS	*0.25*	*U*
Aroclor 1268	11100-14-4	NS	*0.25*	*U*
Total PCBs	1336-36-3	0.09	*0.25*	*U*

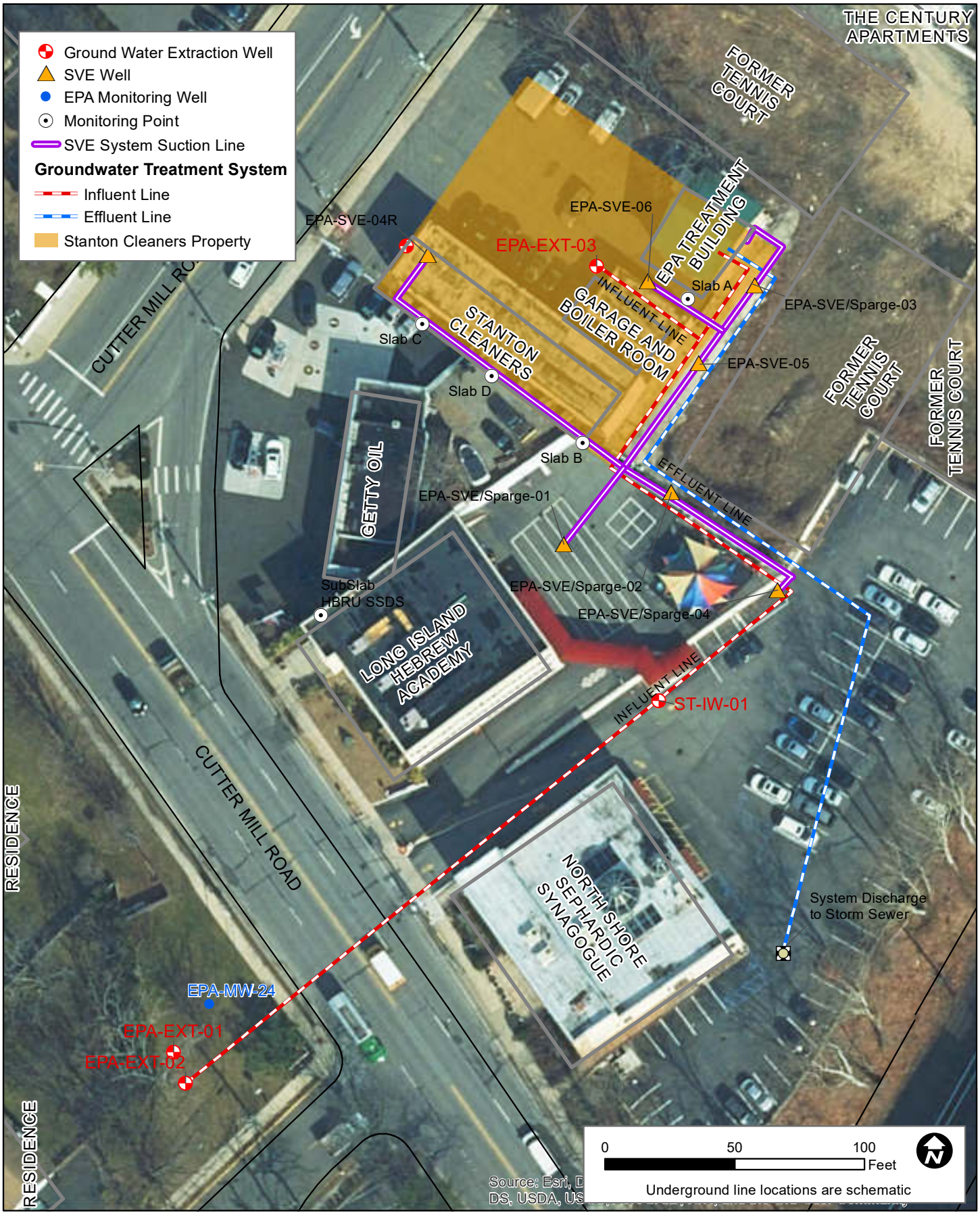
Notes:
All sample results and NYSDEC guidance values are reported in ug/l
All sample analytical results are compared to Part 703.5 - Water Quality Standards Surface and Ground Water
µg/l: : micrograms per liter
NYSDEC: : New York State Department of Environmental Conservation
Q : Qualifier
U : indicates the compound was not detected above the MDL
MDL : method detection limit
NS : no standard
Shaded : the result was not detected above the MDL
Bold : the result exceeded the NYSDEC Criteria



Site Location
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 1

June 29, 2018

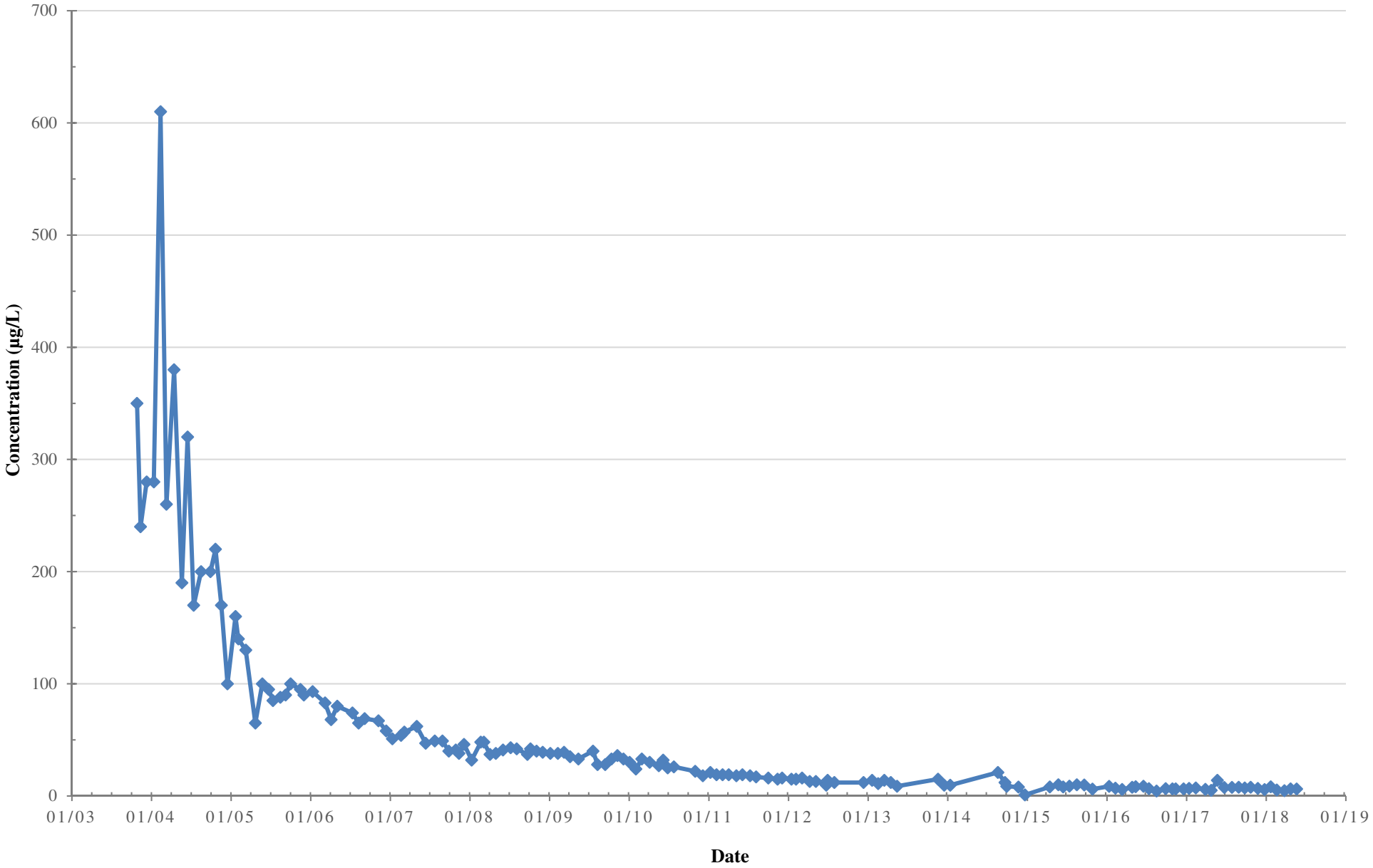


Site Layout
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 2

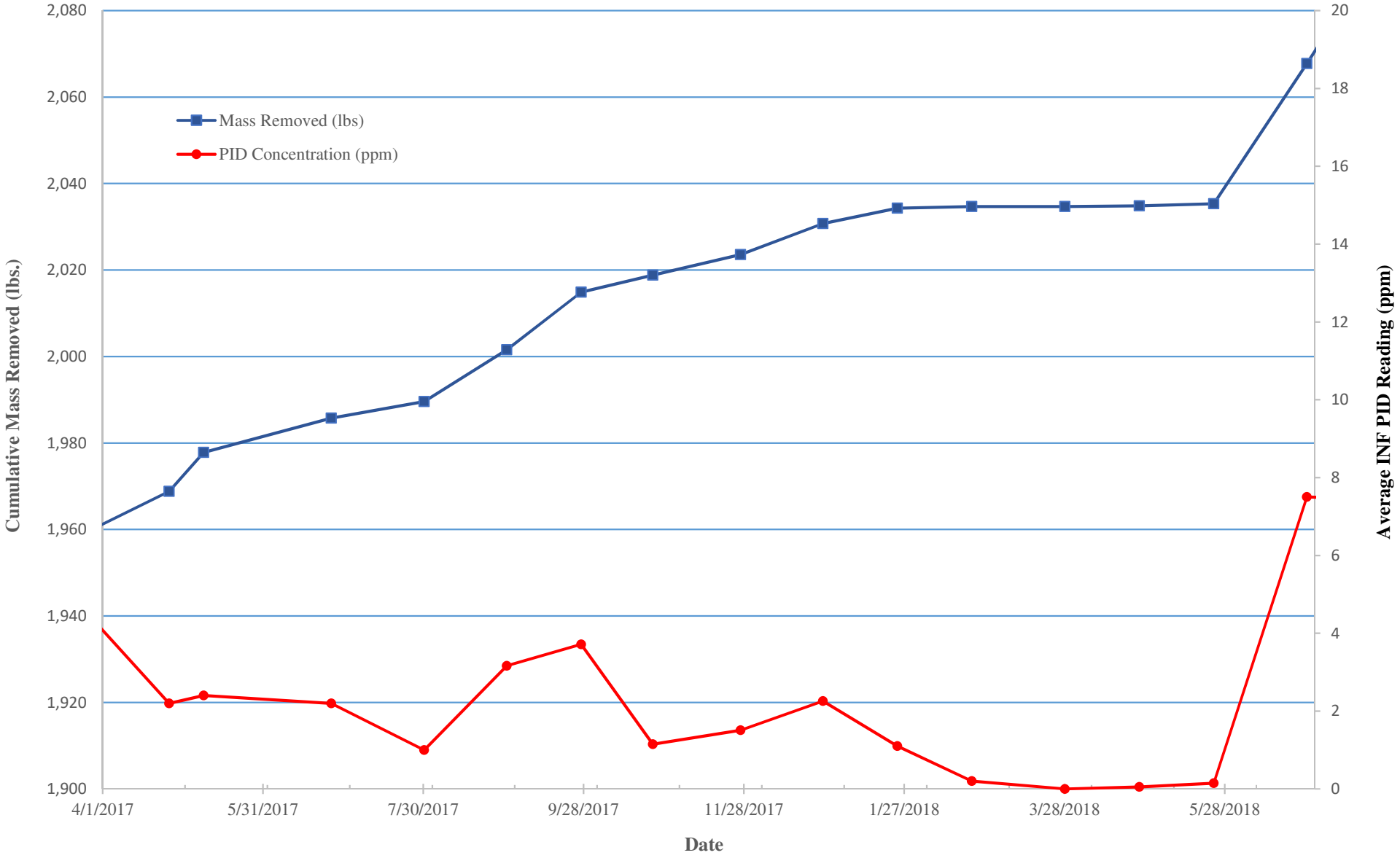
June 29, 2018

Figure 3
GWE&T System Influent PCE Concentrations - 2003-2018
Stanton Cleaners
110 Cuttermill Road, Great Neck, NY



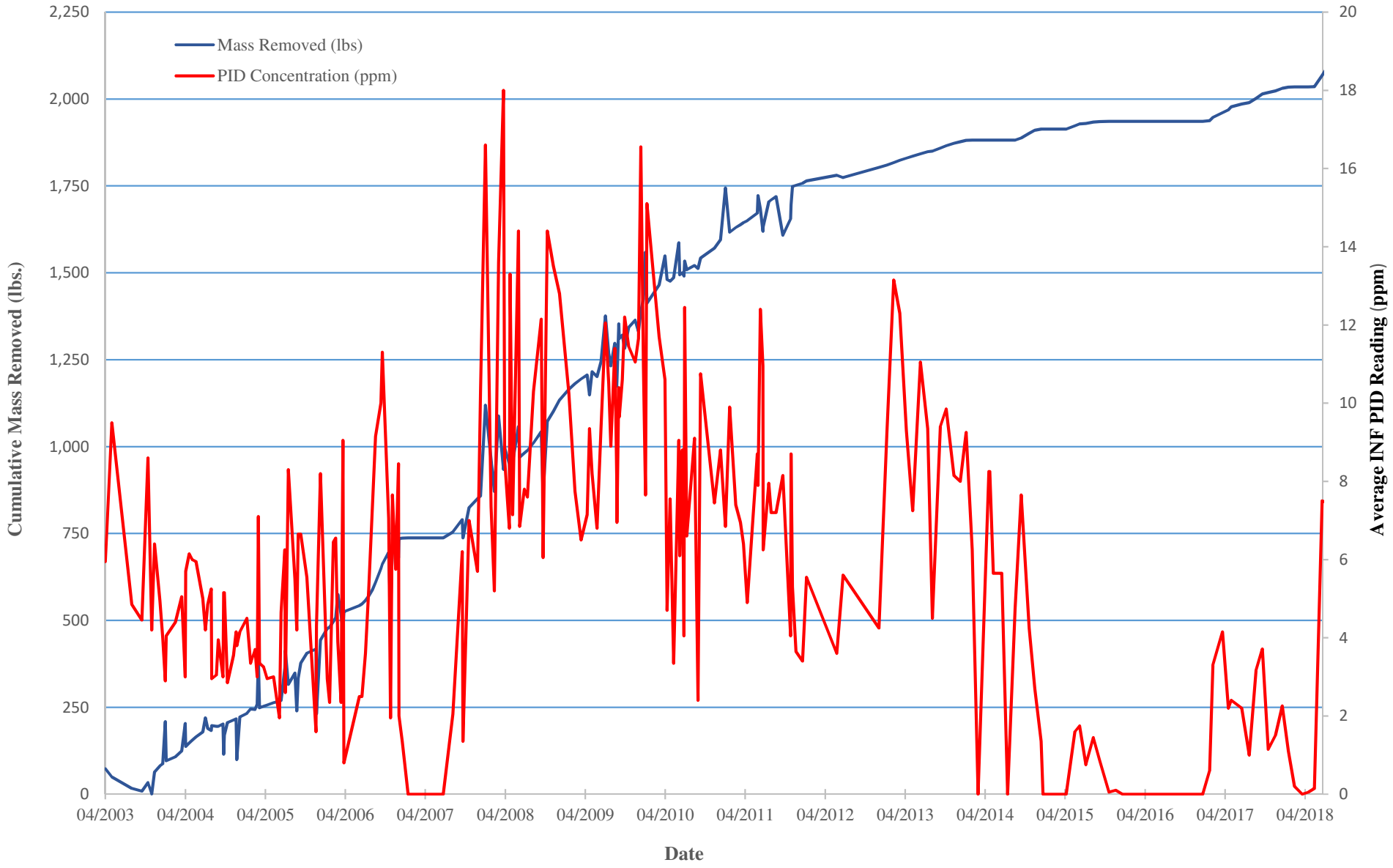
NYSDEC Site No: 130072
Standby Contract: D007625-06

Figure 4
SVE System Annual Cumulative PCE Mass Removal
Stanton Cleaners
110 Cuttermill Road, Great Neck, NY

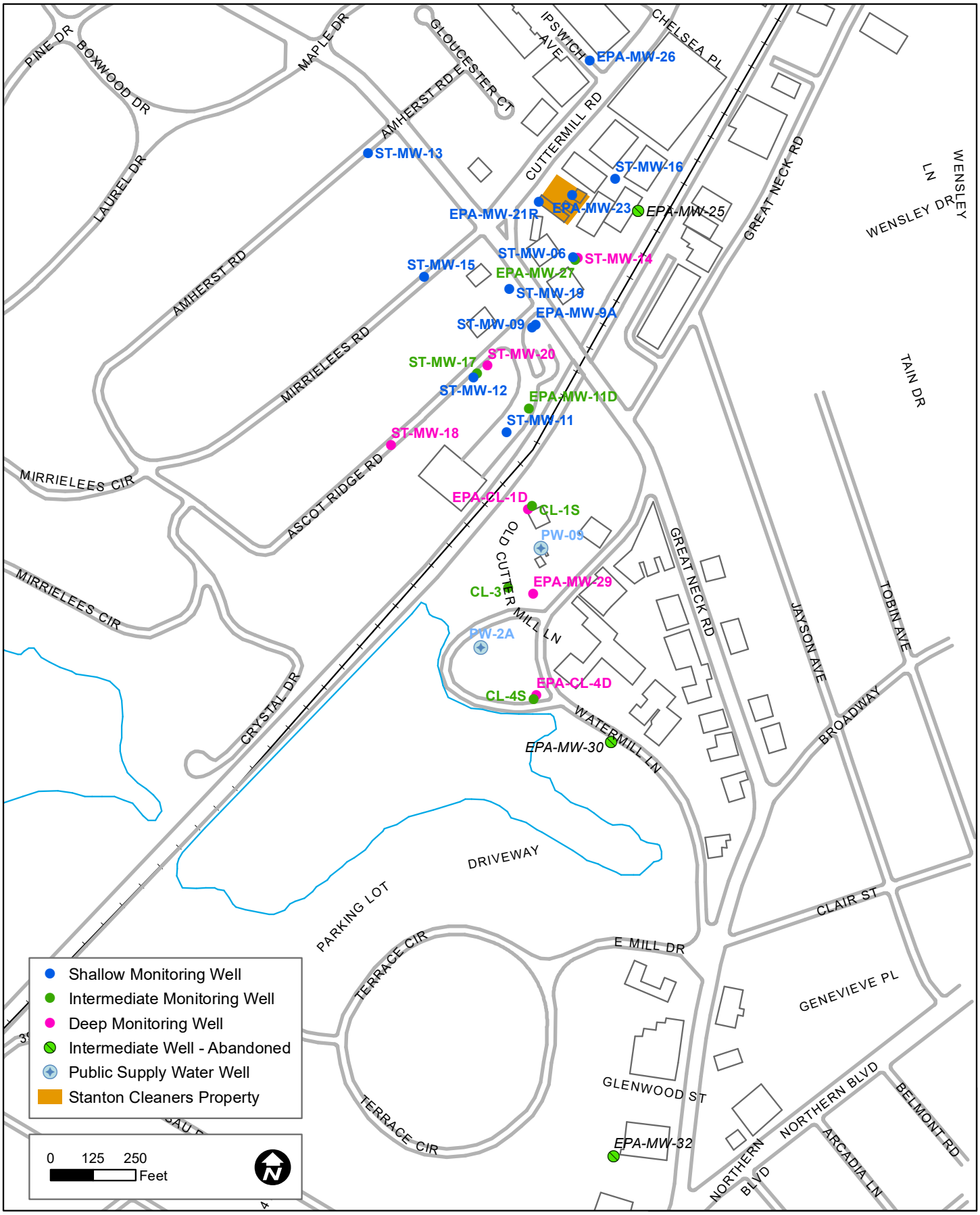


NYSDEC Site No: 130072
Standby Contract: D007625-06

Figure 5
SVE System Cumulative PCE Mass Removal
Stanton Cleaners
110 Cuttermill Road, Great Neck, NY



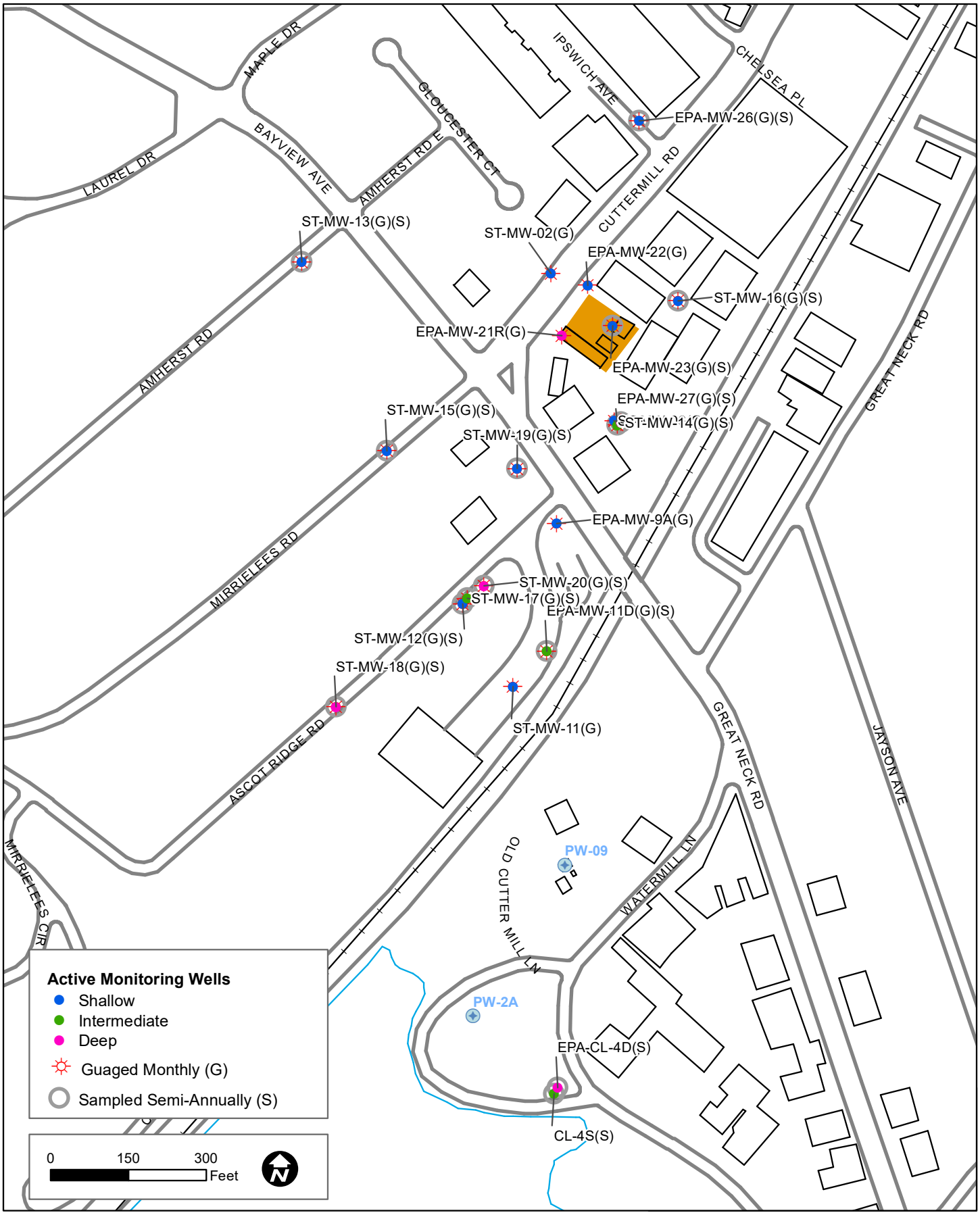
NYSDEC Site No: 130072
Standby Contract: D007625-06



Monitoring Well Network
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 6

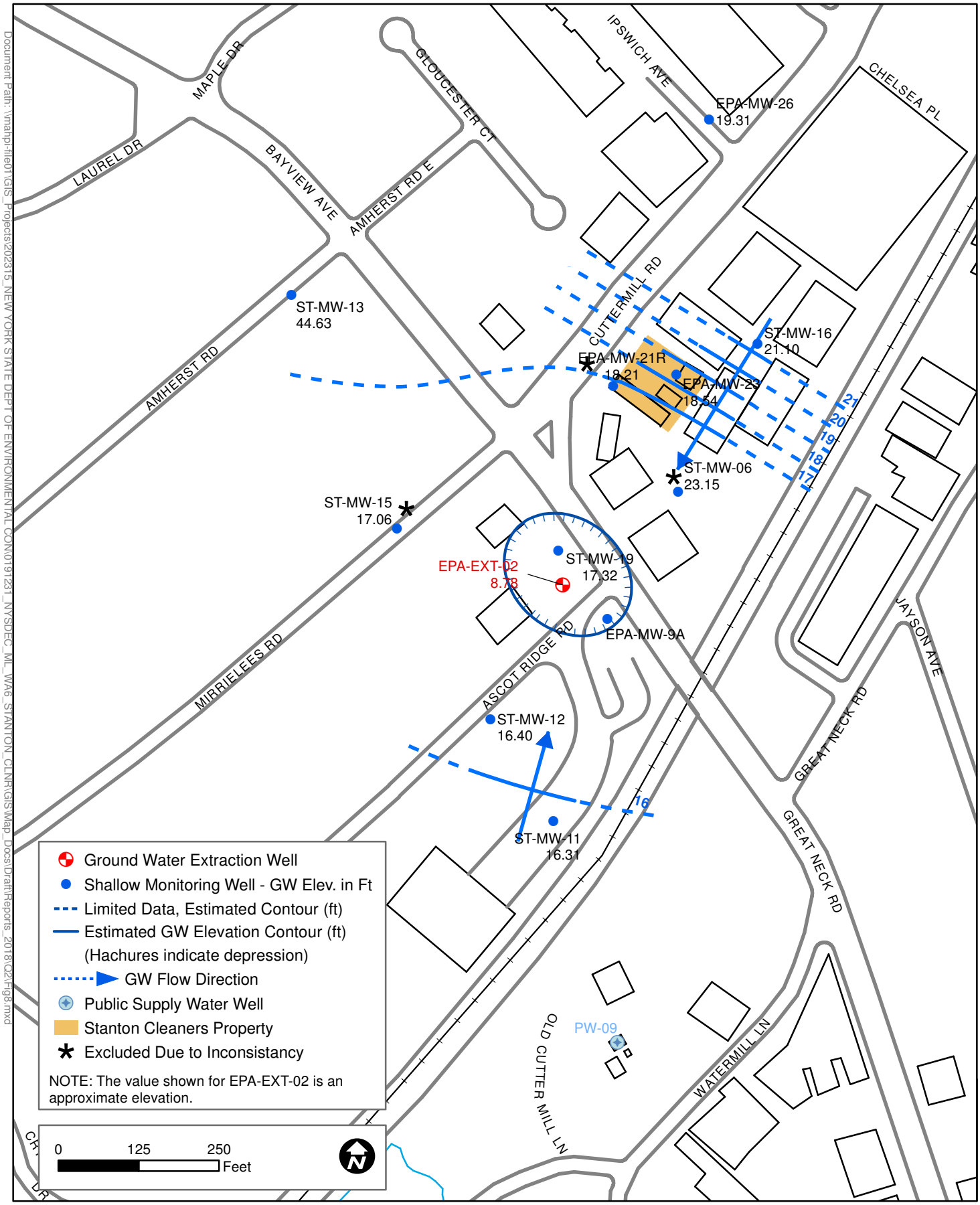
June 29, 2018



Well Monitoring Schedule
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 7

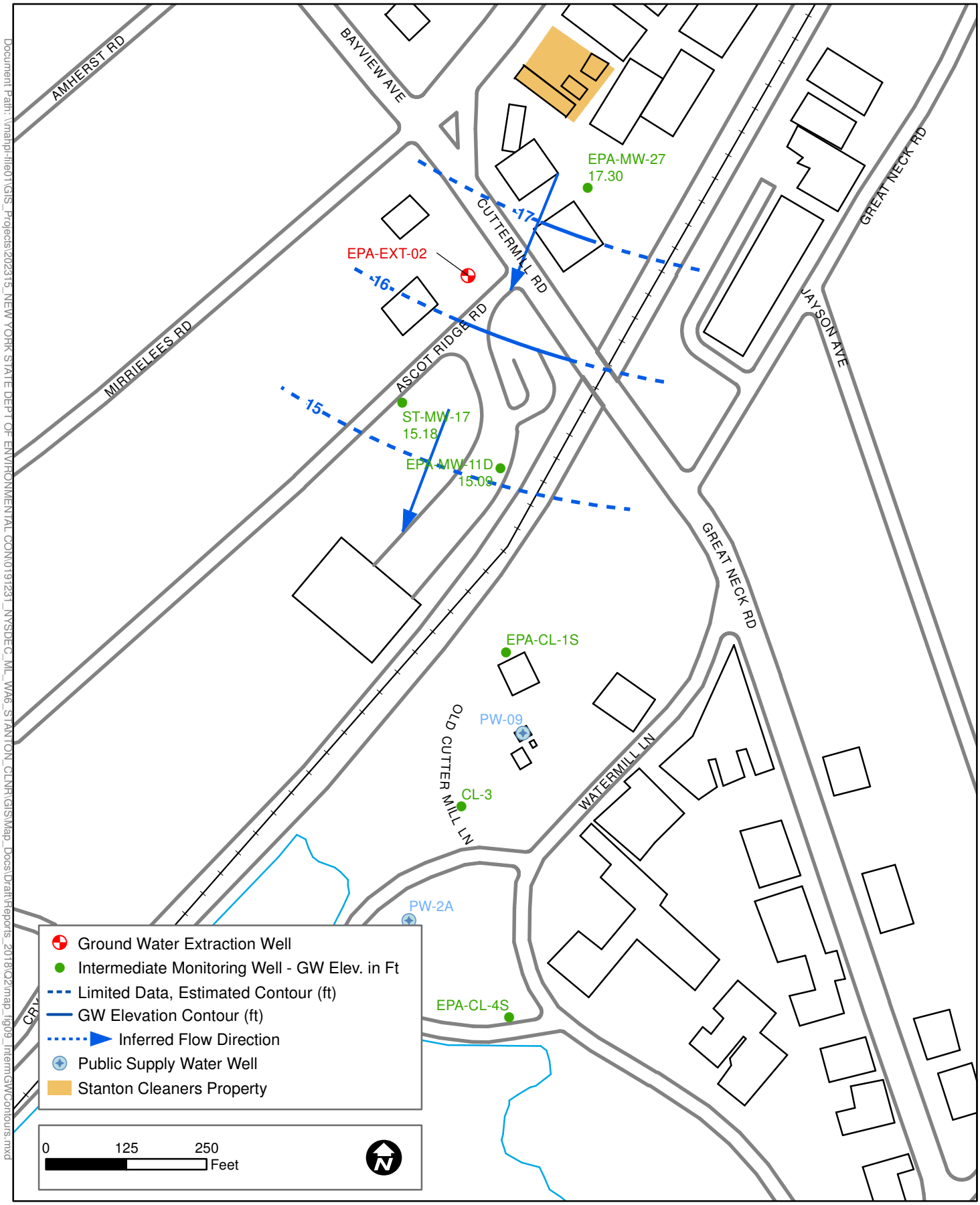
June 29, 2018



Shallow Ground Water Elevations (June 28, 2018)
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 8

June 29, 2018



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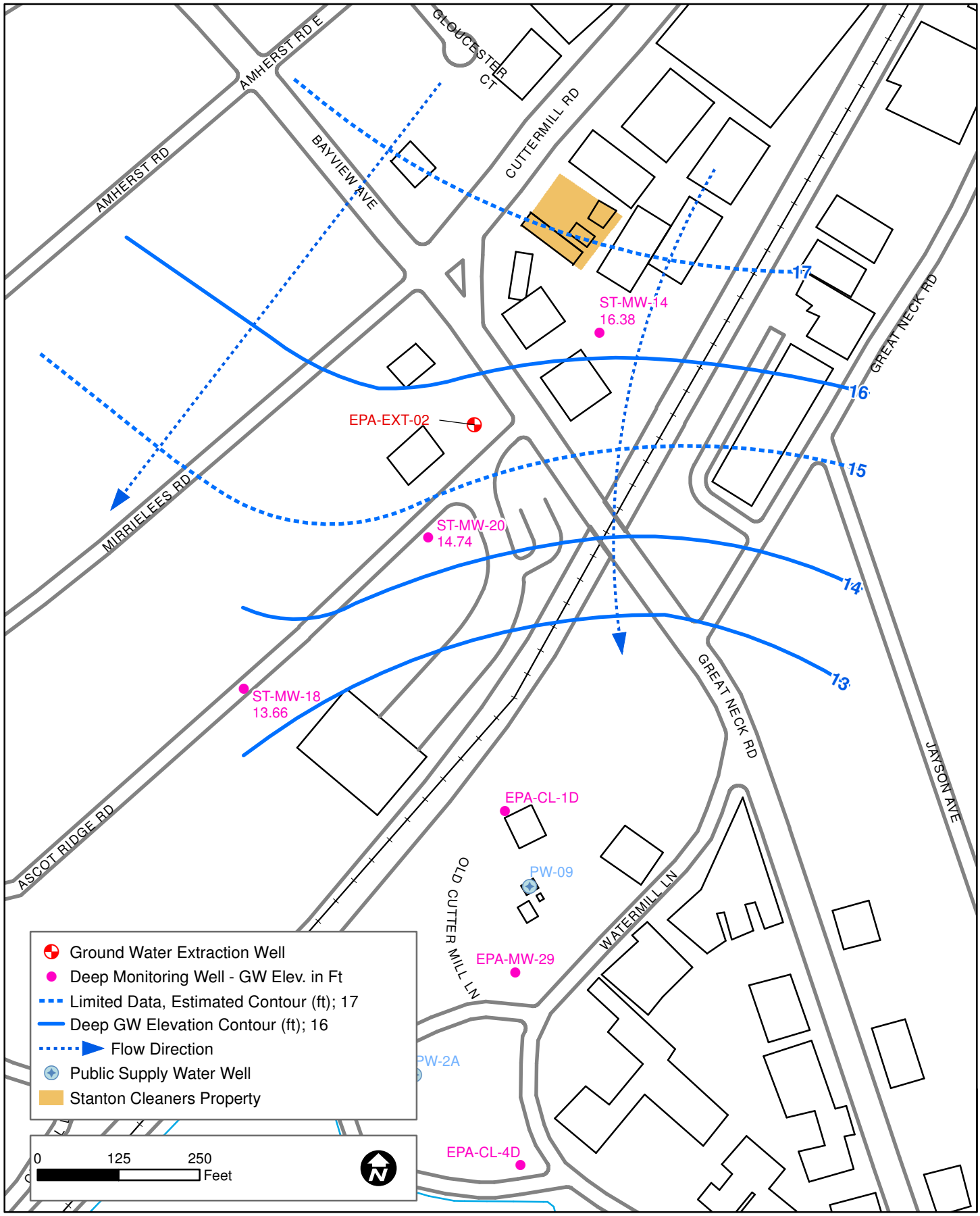
Intermediate Ground Water Elevations (June 28, 2018)
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 9

June 29, 2018

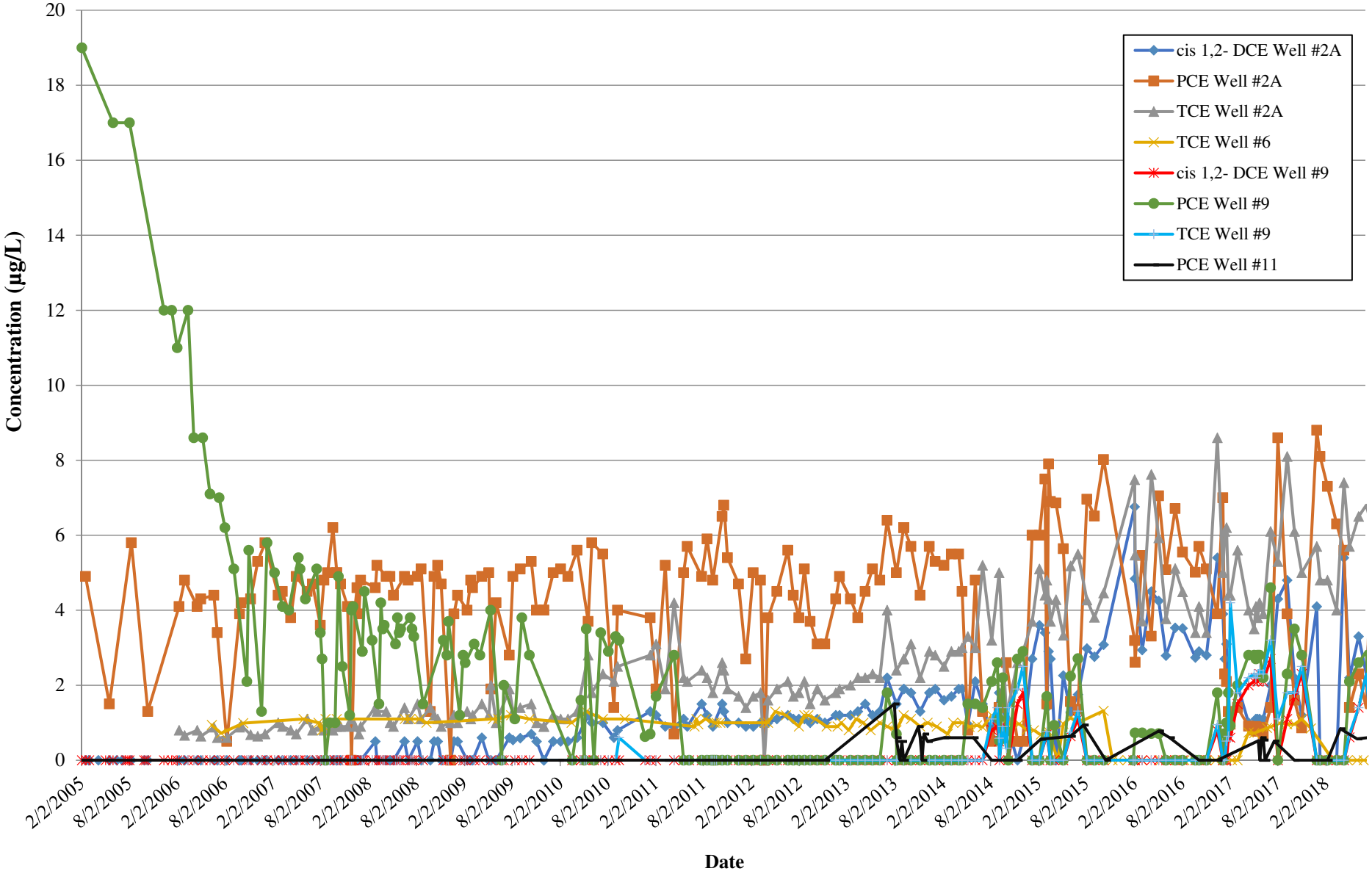


Deep Ground Water Elevations (June 28, 2018)
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

Figure 10

June 29, 2018

Figure 11
Contaminants of Concern in WAGNN Wells
Stanton Cleaners
110 Cuttermill Road, Great Neck, NY



Appendix A

Daily Reports

Project: Stanton Cleaners - Site Management
Contractors: HDR and Preferred Environmental Services

HDR Job No:
Site No:
HDR Project Manager: Michael Lehtinen

HDR
16 Corporate Woods Blvd
Albany, NY 12211
Telephone: 518.937.9500

DAILY REPORT

Day:	S	M	T	W	TH	F	S

Date: 4/26/2018
REPORT No.
PAGE No. 1

PREPARED BY: Daniel Prisco-Buxbaum TITLE: Site Rep.

WEATHER	Bright Sun	Partly Cloudy	Overcast	Rain	Clear
TEMP	To 32	32-50	50-70	70-85	85 and up
WIND	Light	Moderate	High		
HUMIDITY	Dry	Moderate	Humid		
WIND DIR	NE	NW	SE	SW	
	N	S	E	W	

AVERAGE FIELD FORCE

Name of Contractor	Title	Hours Worked	Remarks
Edward Combs	Technician	9:10 - 15:45	Preferred
Daniel Prisco-Buxbaum		8:40 - 10:00	

VISITORS

Name	Time (From - To)	Representing	Remarks

EQUIPMENT AT THE SITE

I = Idle W = Working

1. Camera - W	3. Five Gas Meter - W	5. Diaphragm Sampling Pump - W	
2. VelociCalc - TSI 8386 - W	4. 100-ft Solinst - W	6. Tedlar Bag + Tubing - W	

OPERATION & MAINTENANCE ACTIVITIES

HDR/Preferred Site Representative: Edward Combs - Preferred

8:40 - Preferred (DPB) on site. SVE and GWTS system online upon arrival. Air Sparge remains offline. Identified active drip from GWTS Influent Piping from location of previous repair. In addition, it was discovered that one of the barriers protecting the exterior carbon vessel associated with the SVE system had been struck by a vehicle and was no longer properly anchored. Finally, the hanging section of gutter along the northeastern-facing side of the building was observed to have finally fallen from the roof.
9:10 - Preferred (EC) on site.
9:15 - Monthly O&M started. Collected system readings.
9:20 - SVE Blower taken offline for routine maintenance.
9:30 - Pine Environmental delivered rental equipment for O&M activities.
9:40 - Minor repairs made to SVE-1 Combined piping.
10:00 - Preferred (DPB) off-site.
10:10 - Oil change performed on blower. 6.0 oz oil replaced.
10:20 - Greased blower bearings.
10:25 - SVE Blower brought back online.
10:30 - Collected instrument readings from SVE sample ports.
11:30 - Collected influent groundwater sample INF-GW-042618.
11:40 - Collected effluent groundwater sample EFF-GW-042618.
11:55 - Finished collecting system readings.
12:40 - Performed monitoring well gauging under task 4.
14:45 - 15:30 - General Housekeeping performed around treatment building.
15:45 - Preferred (EC) off-site. Treatment building secured.

[x] - Designates report is continued on additional pages

HDR/Preferred Site Representative: **Edward Combs (Preferred)**

Project Manager: **M. Lehtinen**

Project: Stanton Cleaners - Site Management
Contractors: HDR and Preferred Environmental Services

HDR Job No:
Site No:
HDR Project Manager: Michael Lehtinen

HDR
16 Corporate Woods Blvd
Albany, NY 12211
Telephone: 518.937.9500

DAILY REPORT

Day:	S	M	T	W	TH	F	S

Date: 5/24/2018
REPORT No.
PAGE No. 1

PREPARED BY: Daniel Prisco-Buxbaum TITLE: Site Rep.

WEATHER	Bright Sun	Partly Cloudy	Overcast	Rain	Clear
TEMP	To 32	32-50	50-70	70-85	85 and up
WIND	Light	Moderate	High		
HUMIDITY	Dry	Moderate	Humid		
WIND DIR	NE	NW	SE	SW	
	N	S	E	W	

AVERAGE FIELD FORCE

Name of Contractor	Title	Hours Worked	Remarks
Daniel Prisco-Buxbaum	Technician	8:00 - 15:30	Preferred
Matthew Hartman	Technician	8:00 - 15:30	Preferred

VISITORS

Name	Time (From - To)	Representing	Remarks

EQUIPMENT AT THE SITE

I = Idle W = Working

1. Camera - W	3. Five Gas Meter - W	5. Diaphragm Sampling Pump - W	
2. VelociCalc - TSI 8386 - W	4. 100-ft Solinst - W	6. Tedlar Bag + Tubing - W	

OPERATION & MAINTENANCE ACTIVITIES

HDR/Preferred Site Representative: Daniel Prisco-Buxbaum - Preferred
8:00 - Preferred (DPB and MH) on site. SVE and GWTS system online upon arrival. Air Sparge remains offline.
8:05 - Started Sem-Annual Groundwater Sampling Event Activities (to be continued through 5/25/18).
10:00 - Monthly O&M started. Collected system readings.
10:10 - Collected influent groundwater sample INF-GW-052418.
10:15 - Collected effluent groundwater sample EFF-GW-052418.
11:55 - SVE Blower taken offline for routine maintenance.
12:00 - Oil change performed on blower. 6.0 oz oil replaced.
12:10 - Greased blower bearings.
12:13 - SVE Blower brought back online.
12:15 - Collected instrument readings from SVE sample ports.
12:45 - Performed monitoring well gauging under task 4 throughout the day during groundwater sampling activities
15:30 - Preferred (DPB and MH) off-site. Treatment building secured.

[ ] - Designates report is continued on additional pages

HDR/Preferred Site Representative: **Daniel Prisco-Buxbaum (Preferred)** Project Manager: **M. Lehtinen**

Project: Stanton Cleaners - Site Management
Contractors: HDR and Preferred Environmental Services

HDR Job No:
Site No:
HDR Project Manager: Michael Lehtinen

HDR
16 Corporate Woods Blvd
Albany, NY 12211
Telephone: 518.937.9500

DAILY REPORT

Day:	S	M	T	W	TH	F	S

Date: 6/28/2018
REPORT No.
PAGE No. 1

PREPARED BY: Daniel Prisco-Buxbaum TITLE: Site Rep.

WEATHER	Bright Sun	Partly Cloudy	Overcast	Rain	Clear
TEMP	To 32	32-50	50-70	70-85	85 and up
WIND	Light	Moderate	High		
HUMIDITY	Dry	Moderate	Humid		
WIND DIR	NE	NW	SE	SW	
	N	S	E	W	

AVERAGE FIELD FORCE

Name of Contractor	Title	Hours Worked	Remarks
Daniel Prisco-Buxbaum	Technician	8:00 - 14:45	Preferred

VISITORS

Name	Time (From - To)	Representing	Remarks

EQUIPMENT AT THE SITE

I = Idle W = Working

1. Camera - W	3. Five Gas Meter - W	5. Diaphragm Sampling Pump - W	
2. VelociCalc - TSI 8386 - W	4. 100-ft Solinst - W	6. Tedlar Bag + Tubing - W	

OPERATION & MAINTENANCE ACTIVITIES

HDR/Preferred Site Representative: Daniel Prisco-Buxbaum - Preferred
8:00 - Preferred (DPB) on site. SVE blower online, GWTS offline.
8:00 - 8:45 - Troubleshooting GWTS. Unable to restart system; informed M. Lehtinen who indicated he would be contacting Delta Well and Pump.
8:45 - SVE blower offline for maitenance, changed 6oz. of oil, greased blower bearings.
9:15 -SVE blower back online.
9:20 - Collected system readings.
9:35- Collected SVE port readings w/instruments.
10:30 - 11:30 - Monitoring well gauging (Task 4).
11:30- Performed weed removal and general housekeeping
14:00 - Inspected SVE piping "SVE-1 Shallow", "SVE-1 Medium" and "SVE-1 Combined" for cracks or penetrations and re-taped connections where applicable. No noticable increases in flow.
14:45 - DPB off-site. Treatment building secured.

[x] - Designates report is continued on additional pages

HDR/Preferred Site Representative: **Daniel Prisco-Buxbaum (Preferred)** Project Manager: **M. Lehtinen**

Additional Site Visits – 2018Q2

May 24 & 25, 2018 – Semi-annual sample collection.

Appendix B

Groundwater Treatment System Operation & Maintenance Datalogs

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly O&M Data Log

Date: 4/26/2018

Data from Computer Display Screen:

Pump	Flow	Valve open
RW-2	61 GPM	100%

Total Gallons Treated:	402,501,788	
Discharge Rate:	0 GPM	
Discharge Conductivity:	0	
Discharge pH:	5.6	
SVE Air Flow Rate:	157 CFM	(160 CFM at meter)

Visual Digital Readouts from Catwalk:

Discharge pH:	4.91
Discharge Temp:	18ºC
Discharge Conductivity:	-1.5

Flow meter reading:

Flow Rate:	60 GPM
Total gallons: 9,424,500 gallons	meter display in 100 of gallons

Effluent flow meter reading:

Flow Rate:	2,540 GPH
Total gallons:	1,450,825.7

Weather:
60ºF, Clear, Moderate Humidity, Northwest wind

Notes:
* Meter malfunctioning
** Computer screen not working. Unable to collect readings from the computer
Digital reading output for Discharge Rate and Total gallons on flow meter
GPM- Gallons Per Minute
CFM- Cubic Feet Per Minute

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly O&M Data Log

Date: 5/24/2018

Data from Computer Display Screen:

Pump	Flow	Valve open
RW-2	59 GPM	100%

Total Gallons Treated:	404,801,178	
Discharge Rate:	0 GPM	
Discharge Conductivity:	0	
Discharge pH:	5.6	
SVE Air Flow Rate:	199 CFM	(200 CFM at meter)

Visual Digital Readouts from Catwalk:

Discharge pH:	4.91
Discharge Temp:	20ºC
Discharge Conductivity:	-1.4

Flow meter reading:

Flow Rate:	60 GPM
Total gallons: 1,770,400 gallons	meter display in 100 of gallons

Effluent flow meter reading:

Flow Rate:	2,533 GPH
Total gallons:	3,344,092.6

Weather:
78ºF, Bright Sun, Low Humidity, Light Northwest Wind

Notes:
* Meter malfunctioning
** Computer screen not working. Unable to collect readings from the computer
Digital reading output for Discharge Rate and Total gallons on flow meter
GPM- Gallons Per Minute
CFM- Cubic Feet Per Minute

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly O&M Data Log

Date: 6/28/2018

Data from Computer Display Screen:

Pump	Flow	Valve open
RW-2	0** GPM	100%

Total Gallons Treated:	407,526,109	
Discharge Rate:	0 GPM*	
Discharge Conductivity:	0*	
Discharge pH:	5.6*	
SVE Air Flow Rate:	199 CFM	(190 CFM at meter)

Visual Digital Readouts from Catwalk:

Discharge pH:	5.02**
Discharge Temp:	27ºC**
Discharge Conductivity:	-1.1**

Flow meter reading:

Flow Rate:	0 GPM**
Total gallons: 4,583,000 gallons	meter display in 100 of gallons

Effluent flow meter reading:

Flow Rate:	0 GPH**
Total gallons:	5,771,975.9

Weather:
72ºF, Rain, Humid, Southwest wind

Notes:
* Meter Malfunctioning
** GWTS offline
GPM- Gallons Per Minute
CFM- Cubic Feet Per Minute

Appendix C

Lookout Operational Data Logs

Stanton Cleaners Groundwater Contamination Site - April 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/1/2018 0:00	60	402849678.5	155
4/1/2018 4:00	61	402864088	156
4/1/2018 8:00	60	402878427.7	156
4/1/2018 12:00	57	402892470.3	155
4/1/2018 16:00	60	402906408.7	156
4/1/2018 20:00	57	402920380.4	157
4/2/2018 0:00	62	402934486.5	156
4/2/2018 4:00	61	402948878.1	156
4/2/2018 8:00	63	402963605	157
4/2/2018 12:00	61	402978236.9	156
4/2/2018 16:00	61	402992524.8	155
4/2/2018 20:00	61	403006997.4	156
4/3/2018 0:00	63	403021876.1	156
4/3/2018 4:00	65	403037134.3	156
4/3/2018 8:00	62	403052334	153
4/3/2018 12:00	65	403067321	152
4/3/2018 16:00	62	403082144.2	157
4/3/2018 20:00	65	403096902.6	165
4/4/2018 0:00	60	403111669	179
4/4/2018 4:00	63	403126383.8	165
4/4/2018 8:00	59	403140885.2	165
4/4/2018 12:00	58	403154969.7	165
4/4/2018 16:00	58	403168995.1	164
4/4/2018 20:00	59	403183266.4	163
4/5/2018 0:00	62	403198072.4	164
4/5/2018 4:00	64	403213475.4	166
4/5/2018 8:00	67	403229023.9	162
4/5/2018 12:00	64	403244055.2	165
4/5/2018 16:00	60	403258600.6	167
4/5/2018 20:00	64	403273345.6	166
4/6/2018 0:00	65	403288537.9	161
4/6/2018 4:00	66	403303995.7	163
4/6/2018 8:00	64	403319442.3	165
4/6/2018 12:00	60	403334417.8	166
4/6/2018 16:00	60	403348574.4	166
4/6/2018 20:00	59	403362666.2	165
4/7/2018 0:00	61	403376875.1	166
4/7/2018 4:00	63	403391349	165
4/7/2018 8:00	60	403406054.8	166
4/7/2018 12:00	58	403420432	162
4/7/2018 16:00	59	403434524.9	165

Stanton Cleaners Groundwater Contamination Site - April 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/7/2018 20:00	60	403448803.4	164
4/8/2018 0:00	61	403463563.2	164
4/8/2018 4:00	68	403478836.7	165
4/8/2018 8:00	62	403494313.1	166
4/8/2018 12:00	63	403509174.5	163
4/8/2018 16:00	63	403523729.9	160
4/8/2018 20:00	66	403538660.9	162
4/9/2018 0:00	67	403554068.5	164
4/9/2018 4:00	67	403569824.3	165
4/9/2018 8:00	66	403585317.3	165
4/9/2018 12:00	60	403599907.7	165
4/9/2018 16:00	62	403614210.2	166
4/9/2018 20:00	63	403628826.3	162
4/10/2018 0:00	63	403643596.4	165
4/10/2018 4:00	62	403658488.1	166
4/10/2018 8:00	62	403673319.9	166
4/10/2018 12:00	61	403687716.5	163
4/10/2018 16:00	60	403701908.3	163
4/10/2018 20:00	61	403716384.8	165
4/11/2018 0:00	67	403731350.5	159
4/11/2018 4:00	65	403746778.7	164
4/11/2018 8:00	64	403761781	165
4/11/2018 12:00	58	403776012.7	164
4/11/2018 16:00	61	403790073.3	165
4/11/2018 20:00	60	403804366.4	165
4/12/2018 0:00	62	403818920.6	164
4/12/2018 4:00	64	403833581.6	162
4/12/2018 8:00	60	403847816.4	166
4/12/2018 12:00	57	403861761.2	165
4/12/2018 16:00	56	403875668.4	162
4/12/2018 20:00	58	403889639.5	162
4/13/2018 0:00	60	403903690.2	165
4/13/2018 4:00	57	403917696.5	196
4/13/2018 8:00	58	403931600	196
4/13/2018 12:00	59	403945457.4	200
4/13/2018 16:00	59	403959299.8	193
4/13/2018 20:00	58	403973149.1	196
4/14/2018 0:00	59	403987022.7	165
4/14/2018 4:00	59	404000898.7	199
4/14/2018 8:00	58	404014802.9	201
4/14/2018 12:00	58	404028712.1	200

Stanton Cleaners Groundwater Contamination Site - April 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/14/2018 16:00	58	404042649.5	194
4/14/2018 20:00	61	404056613.8	165
4/15/2018 0:00	59	404070562.6	165
4/15/2018 4:00	61	404084588.8	162
4/15/2018 8:00	59	404098732.4	162
4/15/2018 12:00	62	404113074.4	163
4/15/2018 16:00	63	404127652.4	166
4/15/2018 20:00	62	404142466.5	165
4/16/2018 0:00	64	404157469.5	166
4/16/2018 4:00	61	404172467.7	161
4/16/2018 8:00	59	404187071.1	194
4/16/2018 12:00	61	404201149.9	189
4/16/2018 16:00	62	404215135.8	193
4/16/2018 20:00	57	404229153.7	184
4/17/2018 0:00	61	404243370.4	178
4/17/2018 4:00	63	404257815.2	166
4/17/2018 8:00	60	404272132.1	165
4/17/2018 12:00	60	404286416.5	166
4/17/2018 16:00	60	404300899.5	165
4/17/2018 20:00	62	404315679.3	161
4/18/2018 0:00	66	404330793.7	166
4/18/2018 4:00	62	404346003.7	165
4/18/2018 8:00	62	404360768	165
4/18/2018 12:00	59	404374880.8	165
4/18/2018 16:00	57	404388865	164
4/18/2018 20:00	59	404402907.2	166
4/19/2018 0:00	59	404417063	165
4/19/2018 4:00	60	404431386.2	165
4/19/2018 8:00	59	404445689	165
4/19/2018 12:00	60	404459933.8	164
4/19/2018 16:00	61	404474465.2	165
4/19/2018 20:00	63	404489434.4	163
4/20/2018 0:00	65	404504797.7	164
4/20/2018 4:00	64	404520266.6	162
4/20/2018 8:00	61	404535308.9	161
4/20/2018 12:00	59	404549584.2	163
4/20/2018 16:00	59	404563795.4	165
4/20/2018 20:00	64	404578404.5	165
4/21/2018 0:00	65	404593416.4	165
4/21/2018 4:00	62	404608414.2	165
4/21/2018 8:00	61	404622851.8	165

Stanton Cleaners Groundwater Contamination Site - April 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/21/2018 12:00	57	404636853.1	162
4/21/2018 16:00	58	404650801.1	167
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/1/2018 0:00	60	402849678.5	155
4/1/2018 4:00	61	402864088	156
4/1/2018 8:00	60	402878427.7	156
4/1/2018 12:00	57	402892470.3	155
4/1/2018 16:00	60	402906408.7	156
4/1/2018 20:00	57	402920380.4	157
4/2/2018 0:00	62	402934486.5	156
4/2/2018 4:00	61	402948878.1	156
4/2/2018 8:00	63	402963605	157
4/2/2018 12:00	61	402978236.9	156
4/2/2018 16:00	61	402992524.8	155
4/2/2018 20:00	61	403006997.4	156
4/3/2018 0:00	63	403021876.1	156
4/3/2018 4:00	65	403037134.3	156
4/3/2018 8:00	62	403052334	153
4/3/2018 12:00	65	403067321	152
4/3/2018 16:00	62	403082144.2	157
4/3/2018 20:00	65	403096902.6	165
4/4/2018 0:00	60	403111669	179
4/4/2018 4:00	63	403126383.8	165
4/4/2018 8:00	59	403140885.2	165
4/4/2018 12:00	58	403154969.7	165
4/4/2018 16:00	58	403168995.1	164
4/4/2018 20:00	59	403183266.4	163
4/5/2018 0:00	62	403198072.4	164
4/5/2018 4:00	64	403213475.4	166
4/5/2018 8:00	67	403229023.9	162
4/5/2018 12:00	64	403244055.2	165
4/5/2018 16:00	60	403258600.6	167
4/5/2018 20:00	64	403273345.6	166
4/6/2018 0:00	65	403288537.9	161
4/6/2018 4:00	66	403303995.7	163
4/6/2018 8:00	64	403319442.3	165
4/6/2018 12:00	60	403334417.8	166
4/6/2018 16:00	60	403348574.4	166
4/6/2018 20:00	59	403362666.2	165

Stanton Cleaners Groundwater Contamination Site - April 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
4/28/2018 8:00	57	405209910.9	194
4/28/2018 12:00	59	405223809.9	192
4/28/2018 16:00	57	405237693.3	156
4/28/2018 20:00	60	405251621.5	151
4/29/2018 0:00	58	405265542.6	150
4/29/2018 4:00	58	405279449.8	156
4/29/2018 8:00	57	405293348.9	152
4/29/2018 12:00	60	405307253.6	154
4/29/2018 16:00	59	405321197.4	157
4/29/2018 20:00	60	405335227.8	154
4/30/2018 0:00	58	405349348.3	155
4/30/2018 4:00	61	405363434.1	156
4/30/2018 8:00	58	405377487.5	156
4/30/2018 12:00	58	405391498.7	157
4/30/2018 16:00	58	405405544.2	157
4/30/2018 20:00	62	405419706.4	157

Stanton Cleaners Groundwater Contamination Site - May 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
5/1/2018 0:00	61	405433851.3	196
5/1/2018 4:00	60	405447826.8	198
5/1/2018 8:00	57	405461728.8	199
5/1/2018 12:00	58	405475611.5	196
5/1/2018 16:00	59	405489493	193
5/1/2018 20:00	57	405503383.1	156
5/2/2018 0:00	58	405517252.3	201
5/2/2018 4:00	57	405531100.7	202
5/2/2018 8:00	58	405544937.6	202
5/2/2018 12:00	56	405558766.7	200
5/2/2018 16:00	57	405572594.2	201
5/2/2018 20:00	58	405586442.5	198
5/3/2018 0:00	58	405600271.2	203
5/3/2018 4:00	58	405614091.6	205
5/3/2018 8:00	60	405627899.1	203
5/3/2018 12:00	58	405641682.3	204
5/3/2018 16:00	58	405655492.9	200
5/3/2018 20:00	59	405669288.1	198
5/4/2018 0:00	57	405683086.4	201
5/4/2018 4:00	57	405696871.4	197
5/4/2018 8:00	58	405710657.9	203
5/4/2018 12:00	60	405724454.6	202
5/4/2018 16:00	59	405738259.2	200
5/4/2018 20:00	56	405752066.4	194
5/5/2018 0:00	61	405765884.2	199
5/5/2018 4:00	57	405779717.2	199
5/5/2018 8:00	60	405793539.1	201
5/5/2018 12:00	57	405807340.7	199
5/5/2018 16:00	58	405821170	194
5/5/2018 20:00	57	405835003.7	194
5/6/2018 0:00	59	405848827.8	197
5/6/2018 4:00	59	405862678.1	196
5/6/2018 8:00	59	405876551.2	198
5/6/2018 12:00	58	405890413	194
5/6/2018 16:00	60	405904280.4	196
5/6/2018 20:00	59	405918155.7	156
5/7/2018 0:00	60	405932000.9	199
5/7/2018 4:00	58	405945815.3	200
5/7/2018 8:00	59	405959629.6	198
5/7/2018 12:00	57	405973458.5	198
5/7/2018 16:00	58	405987304.6	156

Stanton Cleaners Groundwater Contamination Site - May 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
5/7/2018 20:00	58	406001158.3	159
5/8/2018 0:00	58	406015000.4	199
5/8/2018 4:00	58	406028832.3	200
5/8/2018 8:00	57	406042656.4	200
5/8/2018 12:00	60	406056481.1	198
5/8/2018 16:00	56	406070331.1	194
5/8/2018 20:00	59	406084171.5	196
5/9/2018 0:00	59	406098012.8	200
5/9/2018 4:00	57	406111837.9	199
5/9/2018 8:00	58	406125656.4	198
5/9/2018 12:00	58	406139482.8	198
5/9/2018 16:00	58	406153317.2	193
5/9/2018 20:00	58	406167145.7	197
5/10/2018 0:00	60	406180976.7	199
5/10/2018 4:00	59	406194813.2	197
5/10/2018 8:00	58	406208646.8	199
5/10/2018 12:00	59	406222476.5	198
5/10/2018 16:00	57	406236319.7	196
5/10/2018 20:00	59	406250158.9	194
5/11/2018 0:00	61	406263995.8	200
5/11/2018 4:00	59	406277813.6	198
5/11/2018 8:00	57	406291627.6	197
5/11/2018 12:00	58	406305435.3	199
5/11/2018 16:00	59	406319273.1	196
5/11/2018 20:00	56	406333114.7	152
5/12/2018 0:00	58	406346958.1	197
5/12/2018 4:00	59	406360810.2	197
5/12/2018 8:00	57	406374663.3	195
5/12/2018 12:00	60	406388515.6	154
5/12/2018 16:00	57	406402391.6	156
5/12/2018 20:00	57	406416259	157
5/13/2018 0:00	60	406430131.1	154
5/13/2018 4:00	57	406444014.3	155
5/13/2018 8:00	59	406457892.2	152
5/13/2018 12:00	58	406471789.4	157
5/13/2018 16:00	61	406485687	152
5/13/2018 20:00	58	406499579.3	157
5/14/2018 0:00	60	406513440.9	199
5/14/2018 4:00	58	406527262.7	200
5/14/2018 8:00	59	406541064.1	198
5/14/2018 12:00	58	406554899.1	197

Stanton Cleaners Groundwater Contamination Site - May 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
5/14/2018 16:00	58	406568741.6	197
5/14/2018 20:00	57	406582568.3	200
5/15/2018 0:00	58	406596382.6	202
5/15/2018 4:00	59	406610188.3	202
5/15/2018 8:00	57	406623985.9	199
5/15/2018 12:00	58	406637781.8	198
5/15/2018 16:00	58	406651559.9	194
5/15/2018 20:00	59	406665335.6	194
5/16/2018 0:00	57	406679106.6	198
5/16/2018 4:00	57	406692874.6	197
5/16/2018 8:00	59	406706659.8	198
5/16/2018 12:00	60	406720468.4	197
5/16/2018 16:00	58	406734307.7	195
5/16/2018 20:00	58	406748150.4	196
5/17/2018 0:00	58	406761974.6	197
5/17/2018 4:00	59	406775778.6	201
5/17/2018 8:00	58	406789577.6	193
5/17/2018 12:00	57	406803370	198
5/17/2018 16:00	58	406817155	199
5/17/2018 20:00	57	406830941.4	158
5/18/2018 0:00	58	406844764.2	197
5/18/2018 4:00	57	406858602.6	198
5/18/2018 8:00	57	406872420.8	195
5/18/2018 12:00	59	406886238.3	157
5/18/2018 16:00	59	406900076	157
5/18/2018 20:00	59	406913940.4	154
5/19/2018 0:00	59	406927813.5	157
5/19/2018 4:00	61	406941655.5	156
5/19/2018 8:00	57	406955471.5	157
5/19/2018 12:00	59	406969277.1	157
5/19/2018 16:00	58	406983101.4	197
5/19/2018 20:00	60	406996905.7	199
5/20/2018 0:00	56	407010697	201
5/20/2018 4:00	58	407024466.5	200
5/20/2018 8:00	58	407038233	196
5/20/2018 12:00	58	407051998.9	198
5/20/2018 16:00	58	407065771.3	195
5/20/2018 20:00	61	407079528.2	198
5/21/2018 0:00	60	407093264.3	201
5/21/2018 4:00	58	407106978.8	202
5/21/2018 8:00	58	407120676.7	192

Stanton Cleaners Groundwater Contamination Site - May 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
5/21/2018 12:00	58	407134394.3	195
5/21/2018 16:00	57	407148120.6	197
5/21/2018 20:00	58	407161862	195
5/22/2018 0:00	57	407175615.2	196
5/22/2018 4:00	56	407189383.5	193
5/22/2018 8:00	57	407203147	192
5/22/2018 12:00	57	407216922.4	197
5/22/2018 16:00	57	407230707.5	194
5/22/2018 20:00	58	407244493	198
5/23/2018 0:00	56	407258294.8	196
5/23/2018 4:00	56	407272092.5	200
5/23/2018 8:00	59	407285838.3	195
5/23/2018 12:00	58	407299600.7	198
5/23/2018 16:00	58	407313337.6	195
5/23/2018 20:00	58	407327071	195
5/24/2018 0:00	59	407340805.7	202
5/24/2018 4:00	59	407354510.8	201
5/24/2018 8:00	57	407368196.9	198
5/24/2018 12:00	60	407381901.8	198
5/24/2018 16:00	58	407395591.2	197
5/24/2018 20:00	58	407409271.2	200
5/25/2018 0:00	58	407422946.8	200
5/25/2018 4:00	58	407436632.5	199
5/25/2018 8:00	58	407450304.5	202
5/25/2018 12:00	58	407463973.8	197
5/25/2018 16:00	56	407477622.5	202
5/25/2018 20:00	56	407491268	203
5/26/2018 0:00	56	407504904.8	205
5/26/2018 4:00	58	407518539.7	202
5/26/2018 8:00	56	407532183.4	201
5/26/2018 12:00	58	407545841.1	201
5/26/2018 16:00	58	407559472.3	197
5/26/2018 20:00	57	407573108.3	198
5/27/2018 0:00	58	407586769.1	195
5/27/2018 4:00	58	407600445	194
5/27/2018 8:00	58	407614135	194
5/27/2018 12:00	58	407627834.4	156
5/27/2018 16:00	58	407641522.3	153
5/27/2018 20:00	57	407655212.7	197
5/28/2018 0:00	58	407668892.6	199
5/28/2018 4:00	60	407682566	197

Stanton Cleaners Groundwater Contamination Site - May 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
5/28/2018 8:00	57	407696245.3	198
5/28/2018 12:00	59	407709924.6	196
5/28/2018 16:00	57	407723593.4	198
5/28/2018 20:00	59	407737258.4	199
5/29/2018 0:00	56	407750915.5	202
5/29/2018 4:00	57	407764561.7	197
5/29/2018 8:00	58	407778208	198
5/29/2018 12:00	57	407791880	196
5/29/2018 16:00	57	407805542.3	198
5/29/2018 20:00	57	407819210	202
5/30/2018 0:00	60	407832866.4	202
5/30/2018 4:00	58	407846529.5	194
5/30/2018 8:00	56	407860197.3	196
5/30/2018 12:00	57	407873882.8	198
5/30/2018 16:00	60	407887575.8	199
5/30/2018 20:00	58	407901260.5	198
5/31/2018 0:00	59	407914952.5	198
5/31/2018 4:00	58	407928639.1	198
5/31/2018 8:00	58	407942330.6	198
5/31/2018 12:00	57	407956032.5	197
5/31/2018 16:00	57	407969726.3	198
5/31/2018 20:00	59	407983424.7	203

Stanton Cleaners Groundwater Contamination Site - June 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
6/1/2018 0:00	60	407997123.1	198
6/1/2018 4:00	57	408010793.6	197
6/1/2018 8:00	59	408024452.2	194
6/1/2018 12:00	60	408038120.4	199
6/1/2018 16:00	58	408051812	203
6/1/2018 20:00	58	408065467.4	198
6/2/2018 0:00	58	408079113.2	203
6/2/2018 4:00	58	408092749.1	201
6/2/2018 8:00	57	408106328.4	200
6/2/2018 12:00	56	408119898.4	194
6/2/2018 16:00	57	408133475.6	199
6/2/2018 20:00	56	408147093.5	197
6/3/2018 0:00	57	408160771.6	197
6/3/2018 4:00	59	408174477.4	197
6/3/2018 8:00	59	408188196.4	153
6/3/2018 12:00	60	408201927.7	152
6/3/2018 16:00	60	408215703.8	197
6/3/2018 20:00	56	408229420.2	199
6/4/2018 0:00	57	408243108.7	199
6/4/2018 4:00	58	408256811.1	197
6/4/2018 8:00	59	408270517.1	197
6/4/2018 12:00	57	408284235.4	193
6/4/2018 16:00	57	408297944.3	193
6/4/2018 20:00	59	408311650.1	199
6/5/2018 0:00	60	408325357.8	196
6/5/2018 4:00	59	408339077.3	195
6/5/2018 8:00	58	408352811.9	194
6/5/2018 12:00	59	408366524.5	197
6/5/2018 16:00	58	408380231.7	200
6/5/2018 20:00	58	408393950.8	200
6/6/2018 0:00	57	408407667.2	193
6/6/2018 4:00	57	408421367.1	198
6/6/2018 8:00	58	408435096.7	194
6/6/2018 12:00	57	408448843.4	190
6/6/2018 16:00	58	408462580.3	199
6/6/2018 20:00	60	408476313.2	201
6/7/2018 0:00	58	408490041.9	199
6/7/2018 4:00	59	408503797.7	195
6/7/2018 8:00	61	408517570.4	196
6/7/2018 12:00	59	408531333.4	194
6/7/2018 16:00	58	408545086.7	203

Stanton Cleaners Groundwater Contamination Site - June 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
6/7/2018 20:00	58	408558838.6	201
6/8/2018 0:00	60	408572567.1	201
6/8/2018 4:00	58	408586276.9	197
6/8/2018 8:00	57	408600006.8	199
6/8/2018 12:00	58	408613729.5	200
6/8/2018 16:00	57	408627457	204
6/8/2018 20:00	58	408641178.2	203
6/9/2018 0:00	57	408654875.2	201
6/9/2018 4:00	60	408668573.2	201
6/9/2018 8:00	58	408682290.8	201
6/9/2018 12:00	57	408696019.9	196
6/9/2018 16:00	60	408709737.5	200
6/9/2018 20:00	57	408723477.4	200
6/10/2018 0:00	60	408737194.4	200
6/10/2018 4:00	58	408750914.5	199
6/10/2018 8:00	57	408764651.2	196
6/10/2018 12:00	60	408778375.6	200
6/10/2018 16:00	60	408792100.6	202
6/10/2018 20:00	59	408805828.1	197
6/11/2018 0:00	56	408819546.5	200
6/11/2018 4:00	60	408833269.8	197
6/11/2018 8:00	60	408847010.1	196
6/11/2018 12:00	58	408860814.3	198
6/11/2018 16:00	57	408874540.1	202
6/11/2018 20:00	60	408888261.6	201
6/12/2018 0:00	58	408901963.2	199
6/12/2018 4:00	57	408915680.4	199
6/12/2018 8:00	58	408929411.9	199
6/12/2018 12:00	58	408943126.2	196
6/12/2018 16:00	56	408956833.8	197
6/12/2018 20:00	57	408970543.1	196
6/13/2018 0:00	59	408984258.1	197
6/13/2018 4:00	58	408997977.8	199
6/13/2018 8:00	58	409011699.6	195
6/13/2018 12:00	60	409025407.4	198
6/13/2018 16:00	58	409039132.6	202
6/13/2018 20:00	60	409052836.6	203
6/14/2018 0:00	57	409066539.9	201
6/14/2018 4:00	57	409080244.6	197
6/14/2018 8:00	57	409093941.3	199
6/14/2018 12:00	60	409107627.3	201

Stanton Cleaners Groundwater Contamination Site - June 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
6/14/2018 16:00	58	409121307.4	202
6/14/2018 20:00	58	409135002.7	201
6/15/2018 0:00	60	409148698.1	200
6/15/2018 4:00	58	409162404.8	197
6/15/2018 8:00	57	409176133.5	200
6/15/2018 12:00	57	409189849.6	204
6/15/2018 16:00	57	409203572	203
6/15/2018 20:00	60	409217292.2	203
6/16/2018 0:00	57	409230986.2	200
6/16/2018 4:00	58	409244719.7	197
6/16/2018 8:00	60	409258451.3	196
6/16/2018 12:00	58	409272172.9	206
6/16/2018 16:00	59	409285891.6	201
6/16/2018 20:00	58	409299614.4	204
6/17/2018 0:00	58	409313325.2	201
6/17/2018 4:00	56	409327045.7	197
6/17/2018 8:00	57	409340759.9	202
6/17/2018 12:00	59	409354469.4	203
6/17/2018 16:00	58	409368171.8	205
6/17/2018 20:00	58	409381873.9	201
6/18/2018 0:00	59	409395584.5	200
6/18/2018 4:00	59	409409299.4	204
6/18/2018 8:00	58	409423015.8	203
6/18/2018 12:00	60	409436711.9	203
6/18/2018 16:00	58	409450390.2	204
6/18/2018 20:00	58	409464070	203
6/19/2018 0:00	57	409477759	198
6/19/2018 4:00	58	409491482.6	199
6/19/2018 8:00	59	409505226.8	201
6/19/2018 12:00	59	409518940.9	204
6/19/2018 16:00	57	409532640.4	200
6/19/2018 20:00	58	409546311.1	200
6/20/2018 0:00	57	409559984.6	202
6/20/2018 4:00	60	409573658.7	199
6/20/2018 8:00	56	409587341.4	199
6/20/2018 12:00	58	409601047	204
6/20/2018 16:00	58	409614761.6	204
6/20/2018 20:00	59	409628443	204
6/21/2018 0:00	58	409642136.2	203
6/21/2018 4:00	60	409655847.1	200
6/21/2018 8:00	57	409669544.2	202

Stanton Cleaners Groundwater Contamination Site - June 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
6/21/2018 12:00	56	409683232.4	202
6/21/2018 16:00	58	409696933.1	204
6/21/2018 20:00	56	409710642.2	200
6/22/2018 0:00	58	409724342.6	200
6/22/2018 4:00	58	409738058.5	199
6/22/2018 8:00	58	409751808.9	195
6/22/2018 12:00	60	409765534.9	198
6/22/2018 16:00	60	409779262.3	199
6/22/2018 20:00	57	409793008.2	199
6/23/2018 0:00	60	409806777.8	197
6/23/2018 4:00	59	409820604.6	194
6/23/2018 8:00	59	409834458.4	197
6/23/2018 12:00	58	409848187.7	203
6/23/2018 16:00	57	409861889.4	200
6/23/2018 20:00	57	409875597.3	203
6/24/2018 0:00	57	409889295.1	199
6/24/2018 4:00	56	409902987.1	200
6/24/2018 8:00	58	409916673.2	204
6/24/2018 12:00	57	409930359.9	204
6/24/2018 16:00	57	409944063.5	203
6/24/2018 20:00	60	409957754.8	203
6/25/2018 0:00	59	409971475.4	199
6/25/2018 4:00	56	409985203.5	196
6/25/2018 8:00	60	409998969.7	204
6/25/2018 12:00	59	410012698.8	202
6/25/2018 16:00	60	410026429.8	203
6/25/2018 20:00	58	410040143.6	197
6/26/2018 0:00	0	410044840.8	200
6/26/2018 4:00	0	410044840.8	200
6/26/2018 8:00	0	410044841.4	203
6/26/2018 12:00	0	410044841.4	201
6/26/2018 16:00	0	410044841.4	200
6/26/2018 20:00	0	410044841.4	202
6/27/2018 0:00	0	410044841.4	203
6/27/2018 4:00	0	410044841.4	202
6/27/2018 8:00	0	410044841.4	204
6/27/2018 12:00	0	410044841.4	206
6/27/2018 16:00	0	410044841.4	202
6/27/2018 20:00	0	410044841.4	205
6/28/2018 0:00	0	410044841.4	201
6/28/2018 4:00	0	410044841.4	205

Stanton Cleaners Groundwater Contamination Site - June 2018 - Operational Data			
Time	Recovery Well 3 Flow (GPM)	Total Gallons Discharged	SVE Air Flow
6/28/2018 8:00	0	410044841.4	209
6/28/2018 12:00	0	410044841.4	209
6/28/2018 16:00	0	410044841.4	210
6/28/2018 20:00	0	410044841.4	207
6/29/2018 0:00	0	410044841.4	203
6/29/2018 4:00	0	410044841.4	207
6/29/2018 8:00	0	410044841.4	209
6/29/2018 12:00	0	410044841.4	206
6/29/2018 16:00	0	410044841.4	212
6/29/2018 20:00	0	410044841.4	205
6/30/2018 0:00	0	410044841.4	208
6/30/2018 4:00	0	410044841.4	207
6/30/2018 8:00	0	410044841.4	210
6/30/2018 12:00	0	410044841.4	214
6/30/2018 16:00	0	410044841.4	213
6/30/2018 20:00	0	410044841.4	207

Appendix D

Air Sparge System Monitoring Logs

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Air Sparge System
O&M Data Log

Date: 4/26/2018

Readings at Well	
Near Well Head Bladder	N/A*

Treatment Room Readings	
SCFM	N/A* PSI
psi-1	N/A* PSI
psi-2	N/A* PSI
psi-3	N/A* PSI
P_1	N/A* PSI
P_2	N/A* PSI
P_3	N/A* PSI

System Readings	
Temp.	N/A* ºF
EN-37-1	N/A* bar
K/O Tank	N/A* PSI

Notes:
***Air readings could not be collected due to the Air Sparge System being offline.**

*Air Sparge System offline
SCFM- Standard Cubic Feet per Minute
psi- pounds per square inch

Locations:
Near Well Head- psi gauge at corner of New Stanton Cleaners Building
Bladder- psi gauge at well head
SCFM- gauge in treatment room (first gauge when looking at wall from left to right)
psi-1 - 2nd gauge attached to line on wall when looking left to right
psi-2 - 3rd gauge
psi-3- 4th gauge
P_1- influent relief valve
P_2- adjacent to catwalk
P_3- on top of carbon tank
Temp.- from compressor screen display
EN-37-1- gauge on compressor
K/O Tank- gauge on knockout tank

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Air Sparge System
O&M Data Log

Date: 5/24/2018

Readings at Well	
Near Well Head Bladder	N/A*

Treatment Room Readings	
SCFM	N/A* PSI
psi-1	N/A* PSI
psi-2	N/A* PSI
psi-3	N/A* PSI
P_1	N/A* PSI
P_2	N/A* PSI
P_3	N/A* PSI

System Readings	
Temp.	N/A* ºF
EN-37-1	N/A* bar
K/O Tank	N/A* PSI

Notes:
***Air readings could not be collected due to the Air Sparge System being offline.**

*Air Sparge System offline
SCFM- Standard Cubic Feet per Minute
psi- pounds per square inch

Locations:
Near Well Head- psi gauge at corner of New Stanton Cleaners Building
Bladder- psi gauge at well head
SCFM- gauge in treatment room (first gauge when looking at wall from left to right)
psi-1 - 2nd gauge attached to line on wall when looking left to right
psi-2 - 3rd gauge
psi-3- 4th gauge
P_1- influent relief valve
P_2- adjacent to catwalk
P_3- on top of carbon tank
Temp.- from compressor screen display
EN-37-1- gauge on compressor
K/O Tank- gauge on knockout tank

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE
Air Sparge System
O&M Data Log

Date: 6/28/2018

Readings at Well	
Near Well Head Bladder	N/A*

Treatment Room Readings	
SCFM	N/A* PSI
psi-1	N/A* PSI
psi-2	N/A* PSI
psi-3	N/A* PSI
P_1	N/A* PSI
P_2	N/A* PSI
P_3	N/A* PSI

System Readings	
Temp.	N/A* ºF
EN-37-1	N/A* bar
K/O Tank	N/A* PSI

Notes:
***Air readings could not be collected due to the Air Sparge System being offline.**

*Air Sparge System offline
SCFM- Standard Cubic Feet per Minute
psi- pounds per square inch

Locations:
Near Well Head- psi gauge at corner of New Stanton Cleaners Building
Bladder- psi gauge at well head
SCFM- gauge in treatment room (first gauge when looking at wall from left to right)
psi-1 - 2nd gauge attached to line on wall when looking left to right
psi-2 - 3rd gauge
psi-3- 4th gauge
P_1- influent relief valve
P_2- adjacent to catwalk
P_3- on top of carbon tank
Temp.- from compressor screen display
EN-37-1- gauge on compressor
K/O Tank- gauge on knockout tank

Appendix E

Soil Vapor Extraction System Air Monitoring Logs

STANTON CLEANERS AREA GROUNDWATEF
CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly Air Monitoring Log

Date: 4/26/2018
Project #

		FID	MultiRAE Plus PGM-50					VelociCalc Plus				
	Pipe ID	VOC	VOC	CO	Oxygen	LEL	H2S	Temp.	Vac. Pre.	%RH	Dew pt.	Flow
SVE-Influent	5.709	N/A	0.1	0.0	20.9	0.0	0.0	68.0	**	43.5	45.2	121.46
Post- Blower Pre-Carbon*	5.706	N/A	1.5	0.0	20.9	0.0	0.0	75.5	1.256	52.7	57.6	329.48
EPA-SVE-1 (shallow)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	78.2	**	28.6	44.6	150.42
EPA-SVE-1 (medium)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	72.5	**	36.3	44.0	102.36
EPA-SVE-2 (shallow)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	80.4	-0.016	33.3	48.9	4.09
EPA-SVE-2 (medium)	1.913	N/A	0.2	0.0	20.9	0.0	0.0	80.1	-2.430	32.8	49.7	47.21
SS-A	1.913	N/A	0.0	0.0	20.9	0.0	0.0	76.7	-11.530	29.0	42.1	-201.85
SVE-3A	1.913	N/A	0.0	0.0	20.9	0.0	0.0	81.2	**	30.6	46.4	203.03
SVE-3B	1.913	N/A	0.0	0.0	20.9	0.0	0.0	80.1	**	32.5	47.3	156.16
SVE-1 Combined	1.913	N/A	0.1	0.0	20.9	0.0	0.0	77.6	**	33.7	46.6	151.32
SVE-2 Combined	1.913	N/A	0.0	0.0	20.9	0.0	0.0	81.3	-11.343	30.5	46.2	65.71
Background		N/A	0.0	0.0	20.9	0.0	0.0	66.0	NA	41.3	41.7	NA

Notes:
***SVE-Effluent relabeled as "Post-Blower Pre-Carbon Sampling Location"**
Dew Point data
unavailable, an alternate
velocicalc

Equipment calibrated by: **Edward Combs**
Air readings collected by: **Edward Combs**

Notes:
****Maxed out reading on meter**
***** Did not collect readings due to SVE system being offline**
FID: Flame Ionization Detector
VOC: Volatile Organic Compounds (in parts per million)
CO: Carbon Monoxide
LEL: Lower Explosive Limit
H2S: Hydrogen Sulfide
Temperature: Measured in Degrees Fahrenheit
Vacuum Pressure: measured in inches of water (in/H2O)
%RH: relative humidity
Dew Pt.: dew point in degrees Fahrenheit
Flow: measured in cubic feet per minute (CFM)

AS: Air Stripper
SVE: Soil Vapor Extraction System

	Prior to 10/3/05	After 10/3/05
SVE 1	shallow on	shallow and medium on
SVE 2	shallow on	shallow on
SVE 3	shallow on	shallow on
SVE 4	off	off
EPA-SVE-04R/SSB(A)	on	on
SS-A	on	on
SS-B(B)	on	off
SS-B(C)	on	on
L1	on	off
L2	on	off

Comments:
New SVE well EPA-EXT-04 online since 11/4/04
LIHA sub-slab system was removed by the EPA from service in the Fall of 2012.
N/A- Not Available

STANTON CLEANERS AREA GROUNDWATEF
CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly Air Monitoring Log

Date: 5/24/2018
Project #

		FID	MultiRAE Plus PGM-50					VelociCalc Plus				
	Pipe ID	VOC	VOC	CO	Oxygen	LEL	H2S	Temp.	Vac. Pre.	%RH	Dew pt.	Flow
SVE-Influent	5.709	N/A	0.2	0.0	20.9	0.0	0.0	86.2	**	22.6	60.4	**
Post- Blower Pre-Carbon*	5.706	N/A	0.1	0.0	20.9	0.0	0.0	109.4	1.069	22.8	60.8	213.66
EPA-SVE-1 (shallow)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	84.3	**	20.4	40.5	38.84
EPA-SVE-1 (medium)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	79.5	**	23.7	40.6	12.37
EPA-SVE-2 (shallow)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	86.1	-0.585	32.4	53.6	1.11
EPA-SVE-2 (medium)	1.913	N/A	0.0	0.0	20.9	0.0	0.0	84.7	-2.279	29.7	52.3	36.22
SS-A	1.913	N/A	0.1	0.0	20.9	0.0	0.0	80.1	-14.343	22.8	38.2	64.86
SVE-3A	1.913	N/A	0.0	0.0	20.9	0.0	0.0	88.9	**	20.1	44.7	**
SVE-3B	1.913	N/A	0.2	0.0	20.9	0.0	0.0	87.6	-14.718	18.3	38.4	168.77
SVE-1 Combined	1.913	N/A	0.0	0.0	20.9	0.0	0.0	81.3	**	21.2	48.7	41.68
SVE-2 Combined	1.913	N/A	0.0	0.0	20.9	0.0	0.0	84.2	-11.407	18.4	37.7	85.13
Background		N/A	0.0	0.0	20.9	0.0	0.0	79.7	NA	43.3	55.5	NA

Notes:
***SVE-Effluent relabeled as "Post-Blower Pre-Carbon Sampling Location"**
Dew Point data
unavailable, an alternate
velocicalc

Equipment calibrated by: **Daniel Prisco-Buxbaum**
Air readings collected by: **Daniel Prisco-Buxbaum**

Notes:
****Maxed out reading on meter**
***** Did not collect readings due to SVE system being offline**
FID: Flame Ionization Detector
VOC: Volatile Organic Compounds (in parts per million)
CO: Carbon Monoxide
LEL: Lower Explosive Limit
H2S: Hydrogen Sulfide
Temperature: Measured in Degrees Fahrenheit
Vacuum Pressure: measured in inches of water (in/H2O)
%RH: relative humidity
Dew Pt.: dew point in degrees Fahrenheit
Flow: measured in cubic feet per minute (CFM)

AS: Air Stripper
SVE: Soil Vapor Extraction System

	Prior to 10/3/05	After 10/3/05
SVE 1	shallow on	shallow and medium on
SVE 2	shallow on	shallow on
SVE 3	shallow on	shallow on
SVE 4	off	off
EPA-SVE-04R/SSB(A)	on	on
SS-A	on	on
SS-B(B)	on	off
SS-B(C)	on	on
L1	on	off
L2	on	off

Comments:
New SVE well EPA-EXT-04 online since 11/4/04
LIHA sub-slab system was removed by the EPA from service in the Fall of 2012.
N/A- Not Available

STANTON CLEANERS AREA GROUNDWATEF
CONTAMINATION SITE
Soil-Vapor Extraction and Pump and Treat System
Monthly Air Monitoring Log

Date: 6/28/2018
Project #

		FID	MultiRAE Plus PGM-50					VelociCalc Plus				
	Pipe ID	VOC	VOC	CO	Oxygen	LEL	H2S	Temp.	Vac. Pre.	%RH	Dew pt.	Flow
SVE-Influent	5.709	N/A	14.8*	0.0	20.9	0.0	0.0	78.6	***	96.5	73.8	***
Post- Blower Pre-Carbon***	5.706	N/A	3.4*	0.0	20.9	0.0	0.0	112.9	1.083	94.3	72.9	219.44
EPA-SVE-1 (shallow)	1.913	N/A	3.8*	0.0	20.9	0.0	0.0	74.9	***	86.0	71.7	27.27
EPA-SVE-1 (medium)	1.913	N/A	4.2*	0.0	20.9	0.0	0.0	73.8	***	91.5	72.6	15.34
EPA-SVE-2 (shallow)	1.913	N/A	3.7*	0.0	20.9	0.0	0.0	68.2	-0.545	96.6	62.7	1.24
EPA-SVE-2 (medium)	1.913	N/A	3.9*	0.0	20.9	0.0	0.0	73.1	-2.031	90.5	71.5	35.65
SS-A	1.913	N/A	3.9*	0.0	20.9	0.0	0.0	73.7	***	91.3	69.6	81.12
SVE-3A	1.913	N/A	6.6*	0.0	20.9	0.0	0.0	74.8	***	91.1	71.2	***
SVE-3B	1.913	N/A	7.1*	0.0	20.9	0.0	0.0	75.4	***	92.7	71.5	***
SVE-1 Combined	1.913	N/A	3.2*	0.0	20.9	0.0	0.0	74.6	***	96.4	71.3	42.35
SVE-2 Combined	1.913	N/A	3.6*	0.0	20.9	0.0	0.0	74.5	***	95.8	70.9	66.73
Background		N/A	3.7*	0.0	20.9	0.0	0.0	72.6	N/A	97.4	68.7	N/A

Notes:
*** VOC readings likely affected by moisture due to rain, despite attaching a moisture filter to the 5-gas meter.**

Equipment calibrated by: **Daniel Prisco-Buxbaum**
Air readings collected by: **Daniel Prisco-Buxbaum**

Notes:
****SVE-Effluent relabeled as "Post-Blower Pre-Carbon" Sampling Location**
*****Maxed out reading on meter**
FID: Flame Ionization Detector
VOC: Volatile Organic Compounds (in parts per million)
CO: Carbon Monoxide
LEL: Lower Explosive Limit
H2S: Hydrogen Sulfide
Temperature: Measured in Degrees Fahrenheit
Vacuum Pressure: measured in inches of water (in/H2O)
%RH: relative humidity
Dew Pt.: dew point in degrees Fahrenheit
Flow: measured in cubic feet per minute (CFM)

AS: Air Stripper
SVE: Soil Vapor Extraction System

	Prior to 10/3/05	After 10/3/05
SVE 1	shallow on	shallow and medium on
SVE 2	shallow on	shallow on
SVE 3	shallow on	shallow on
SVE 4	off	off
EPA-SVE-04R/SSB(A)	on	on
SS-A	on	on
SS-B(B)	on	off
SS-B(C)	on	on
L1	on	off
L2	on	off

Comments:
New SVE well EPA-EXT-04 online since 11/4/04
LIHA sub-slab system was removed by the EPA from service in the Fall of 2012.
N/A- Not Available

Appendix F

Monthly Groundwater Level Measurements

WATER LEVEL DATA SUMMARY

PROJECT: Stanton Cleaners
LOCATION: Great Neck, NY
CLIENT: HDR
SURVEY DATUM: ft msl
MEASURING DEVICE: Solinst Water Level Indicator

JOB NUMBER:
DATE: 4/26/2018
MEASURED BY: EC

WELL NUMBER	MEASURING POINT		Time	DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
	Description	Elevation (FT)				
EPA-MW-11D	ft BTOC	74.63	14:04	58.35	16.28	4" well in p-lot by med sports bldg.
EPA-MW-21-R	ft BTOC	84.13	13:13	65.76	18.37	Getty Gas Station well
EPA-MW-22	ft BTOC	82.20	_____	____	N/A	Under clothing bin- SC p-lot
EPA-MW-23	ft BTOC	82.83	12:50	63.81	19.02	In front of treatment bldg.
EPA-MW-27	ft BTOC	69.32	14:29	50.97	18.35	LIHA PL
ST-MW-06	ft BTOC	69.83	14:31	45.19	24.64	LIHA PL 4"
ST-MW-09A	ft BTOC	78.13	13:59	63.08	15.05	P-lot across from triangle park
ST-MW-11	ft BTOC	75.25	14:08	58.84	16.41	p-lot by entrance to med sports bldg.
ST-MW-12	ft BTOC	87.20	13:43	70.30	16.90	In front of apartment bldg.
ST-MW-14	ft BTOC	69.73	14:26	55.43	14.30	LIHA PL
ST-MW-16	ft BTOC	75.78	13:10	54.38	21.40	Other side treatment bldg. near fence
ST-MW-17	ft BTOC	86.53	13:40	69.86	16.67	In front of apartment bldg.
ST-MW-19	ft BTOC	82.50	13:32	65.92	16.58	Triangle park well
ST-MW-20	ft BTOC	84.53	13:37	71.39	13.14	Near apartment bldg.
EPA-MW-26	ft BTOC	78.37	13:05	58.71	N/A	Ipswich Ave.
ST-MW-15	ft BTOC	90.13	13:27	72.93	N/A	Mirreless Rd
ST-MW-13	ft BTOC	130.95	13:20	85.64	45.31	Amherst Rd
ST-MW-18	ft BTOC	84.40	13:46	71.91	12.49	Ascot Ridge (past apt bldg)

Notes:

WATER LEVEL DATA SUMMARY

PROJECT: Stanton Cleaners
LOCATION: Great Neck, NY
CLIENT: HDR
SURVEY DATUM: ft msl
MEASURING DEVICE: Solinst Water Level Indicator

JOB NUMBER:
DATE: 5/24/2018
MEASURED BY: DPB

WELL NUMBER	MEASURING POINT		Time	DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
	Description	Elevation (FT)				
EPA-MW-11D	ft BTOC	74.63	11:15	59.54	15.09	4" well in p-lot by med sports bldg.
EPA-MW-21-R	ft BTOC	84.13	12:30	67.24	16.89	Getty Gas Station well
EPA-MW-22	ft BTOC	82.20	_____	____	N/A	Under clothing bin- SC p-lot
EPA-MW-23	ft BTOC	82.83	11:00	64.26	18.57	In front of treatment bldg.
EPA-MW-27	ft BTOC	69.32	9:53	52.02	17.30	LIHA PL
ST-MW-06	ft BTOC	69.83	12:15	47.35	22.48	LIHA PL 4"
ST-MW-09A	ft BTOC	78.13	12:10	65.42	12.71	P-lot across from triangle park
ST-MW-11	ft BTOC	75.25	11:12	59.73	15.52	p-lot by entrance to med sports bldg.
ST-MW-12	ft BTOC	87.20	14:25	70.24	16.96	In front of apartment bldg.
ST-MW-14	ft BTOC	69.73	9:50	59.80	9.93	LIHA PL
ST-MW-16	ft BTOC	75.78	9:55	54.52	21.26	Other side treatment bldg. near fence
ST-MW-17	ft BTOC	86.53	8:50	71.35	15.18	In front of apartment bldg.
ST-MW-19	ft BTOC	82.50	13:15	66.24	16.26	Triangle park well
ST-MW-20	ft BTOC	84.53	8:55	77.08	7.45	Near apartment bldg.
EPA-MW-26	ft BTOC	78.37	9:00	59.14	N/A	Ipswich Ave.
ST-MW-15	ft BTOC	90.13	13:25	73.03	N/A	Mirreless Rd
ST-MW-13	ft BTOC	130.95	12:00	86.15	44.80	Amherst Rd
ST-MW-18	ft BTOC	84.40	14:45	71.16	13.24	Ascot Ridge (past apt bldg)

Notes:
ST-MW-09A PVC cap which was stuck on well was freed, enabling Preferred to collect measurements as normal.

WATER LEVEL DATA SUMMARY

PROJECT: Stanton Cleaners
LOCATION: Great Neck, NY
CLIENT: HDR
SURVEY DATUM: ft msl
MEASURING DEVICE: Solinst Water Level Indicator

JOB NUMBER:
DATE: 6/28/2018
MEASURED BY: DPB

WELL NUMBER	MEASURING POINT		Time	DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
	Description	Elevation (FT)				
EPA-MW-11D	ft BTOC	74.63	11:12	57.92	16.71	4" well in p-lot by med sports bldg.
EPA-MW-21-R	ft BTOC	84.13	11:27	65.92	18.21	Getty Gas Station well
EPA-MW-22	ft BTOC	82.20	_____	____	N/A	Under clothing bin- SC p-lot
EPA-MW-23	ft BTOC	82.83	10:45	64.29	18.54	In front of treatment bldg.
EPA-MW-27	ft BTOC	69.32	11:21	50.96	18.36	LIHA PL
ST-MW-06	ft BTOC	69.83	11:23	46.68	23.15	LIHA PL 4"
ST-MW-09A	ft BTOC	78.13	11:17	62.84	15.29	P-lot across from triangle park
ST-MW-11	ft BTOC	75.25	11:14	58.94	16.31	p-lot by entrance to med sports bldg.
ST-MW-12	ft BTOC	87.20	11:07	70.80	16.40	In front of apartment bldg.
ST-MW-14	ft BTOC	69.73	11:20	53.35	16.38	LIHA PL
ST-MW-16	ft BTOC	75.78	10:48	54.68	21.10	Other side treatment bldg. near fence
ST-MW-17	ft BTOC	86.53	11:08	69.96	16.57	In front of apartment bldg.
ST-MW-19	ft BTOC	82.50	11:02	65.18	17.32	Triangle park well
ST-MW-20	ft BTOC	84.53	11:09	69.79	14.74	Near apartment bldg.
EPA-MW-26	ft BTOC	78.37	10:51	59.06	N/A	Ipswich Ave.
ST-MW-15	ft BTOC	90.13	10:59	73.07	N/A	Mirreless Rd
ST-MW-13	ft BTOC	130.95	10:56	86.32	44.63	Amherst Rd
ST-MW-18	ft BTOC	84.40	11:05	70.74	13.66	Ascot Ridge (past apt bldg)

Notes:
ST-MW-09A PVC cap which was stuck on well was freed, enabling Preferred to collect measurements as normal.

Appendix G

Groundwater Sampling Parameters Logs

Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York
Semi-Annual Monitoring Well Sampling Event Report May 2018

Field Analysis													
MW #	Date	Time	Volume Purged	pH	Conductivity	Water Temperature °C	Turbidity	DO	ORP	TDS	Water Level	Flow Rate	Sample Time
EPA-CL-4S	5/25/18	7:58	0.25	7.95	0.200	17.00	4.3	6.66	84	0.129	25.32	0.25	8:20
		8:03	0.5	7.23	0.198	17.20	0.0	5.73	119	0.129	↓		
		8:08	0.75	6.95	0.198	17.14	0.0	5.03	141	0.129	26.12		
		8:13	1.0	6.84	0.198	17.11	0.0	4.80	149	0.129	↓		
		8:18	1.25	6.84	0.198	17.13	0.0	4.82	148	0.129	27.46	↓	
EPA-CL-4D	5/25/18	7:50	0.25	8.52	0.241	16.39	40.7	5.77	119	0.167	4.64	0.25	8:17
		7:55	0.5	6.63	0.338	16.26	57.8	5.11	145	0.221	↓		
		8:00	0.75	6.51	0.358	16.42	39.9	4.77	148	0.233	6.03		
		8:05	1.0	6.49	0.364	16.61	29.8	4.49	154	0.237	↓		
		8:10	1.25	6.49	0.369	16.36	21.5	4.59	158	0.240	8.12		
		8:15	1.5	6.49	0.371	16.41	21.2	4.57	156	0.241	↓	↓	
EPA-MW 11 D	5/25/18	11:15	0.25	6.82	0.663	17.78	75.1	11.49	123	0.436	59.41	0.25	11:38
		11:20	0.5	6.32	0.667	17.03	44.1	9.95	106	0.427	↓		
		11:25	0.75	6.15	0.675	17.48	7.0	8.83	95.4	0.432	60.28		
		11:30	1.0	6.03	0.676	17.66	5.1	8.79	94.9	0.431	↓		
		11:35	1.25	6.17	0.675	17.70	0.0	8.38	90.8	0.432	61.11	↓	
EPA- MW 26	5/24/18	9:00	0.25	6.69	0.714	19.33	0.0*	15.58	104	0.456	59.14	.25 gpm	9:27
		9:05	0.5	6.44	0.746	19.51	529	9.89	118	0.510	↓		
		9:10	0.75	6.42	0.771	19.85	225	9.05	102	0.490	58.92		
		9:15	1.0	6.41	0.763	19.85	122	8.53	96.2	0.487	↓		
		9:20	1.25	6.41	0.758	19.99	72.8	8.16	92.1	0.486	58.76		
		9:25	1.5	6.41	0.761	20.02	68.7	7.83	93.6	0.487	↓	↓	

Notes:

All water quality readings taken using a U-52 HORIBA water quality meter attached to a flow through cell. Readings taken initially and every five minutes during low flow pumping

Water levels taken using a Solinst water level meter (Model 101)

Flow rate taken using a marked graduated beaker and stop watch. Volume purged represents gallons.

Temperature is measured in degrees Celsius

Conductivity is measured in milliSiemens per centimeter (mS/cm)

Turbidity is measured in nephelometric turbidity units (NTU). 1000* = Turbidity greater than 1000 NTU.

Dissolved Oxygen (DO) is measured in milligrams per liter (mg/L)

Oxidation Reduction Potential (ORP)

Total Dissolved Solids (TDS) is measured in grams per liter (g/L)

* over 1,000 NTU shows up as 0.0 NTU

Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York
Semi-Annual Monitoring Well Sampling Event Report May 2018

MW #	Date	Time	Volume Purged	pH	Conductivity	Water Temperature	Turbidity	DO	ORP	TDS	Water Level	Flow Rate	Sample Time
ST- MW 12	5/24/18	14:25	0.25	6.18	1.40	18.50	0.0*	9.74	106.2	0.912	70.24	0.25	14:53
		14:30	0.5	6.01	1.45	19.09	304	9.30	103.6	0.931	↓	↓	
		14:35	0.75	6.00	1.45	19.10	224	9.29	103.7	0.931	70.46		
		14:40	1.0	5.99	1.46	19.11	200	9.12	101.8	0.932	↓		
		14:45	1.25	5.98	1.46	19.15	133	9.16	102.9	0.934	70.05		
		14:50	1.5	6.00	1.46	19.22	128	9.04	101.4	0.934	↓	↓	
ST- MW 13	5/24/18	12:00	0.25	6.45	0.843	19.50	0.0*	6.74	76.1	0.539	86.15	0.25	12:27
		12:05	0.5	6.44	0.840	19.35	0.0*	6.83	76.2	0.535	↓	↓	
		12:10	0.75	6.41	0.808	19.19	76.1	6.41	71.5	0.516	86.91		
		12:15	1.0	6.39	0.801	19.21	67.9	6.40	71.4	0.514	↓		
		12:20	1.25	6.36	0.770	19.17	9.8	6.33	70.4	0.492	87.26		
		12:25	1.5	6.34	0.753	19.14	8.1	6.30	70.8	0.482	↓	↓	
ST- MW 14	5/25/18	9:55	0.25	6.65	0.356	17.43	0.0	7.73	83.5	0.233	59.90	0.25	10:16
		10:00	0.5	6.61	0.357	17.66	0.0	7.39	79.4	0.232	↓	↓	
		10:05	0.75	6.56	0.357	17.73	0.0	7.31	79.1	0.232	59.97		
		10:10	1.0	6.58	0.357	17.70	0.0	7.21	78.9	0.232	↓		
		10:15	1.25	6.58	0.357	17.71	0.0	7.19	79.0	0.232	60.43	↓	
		~~10:20~~	~~1.5~~										
ST- MW 15	5/24/18	13:25	0.25	7.41	0.419	21.92	232	3.61	32	0.273	73.03	0.25	13:53
		13:30	0.5	6.69	0.635	19.55	11.9	5.82	83	0.408	↓		
		13:35	0.75	6.66	0.637	20.00	0.0	5.71	119	0.408	73.44		
		13:40	1.0	6.64	0.640	20.02	0.0	5.52	135	0.410	↓		
		13:45	1.25	6.63	0.641	20.04	0.0	5.57	137	0.409	73.92		
		13:50	1.5	6.63	0.640	20.02	0.0	5.53	142	0.410	↓	↓	

Notes:

All water quality readings taken using a U-52 HORIBA water quality meter attached to a flow through cell. Readings taken initially and every five minutes during low flow pumping

Water levels taken using a Solinst water level meter (Model 101)

Flow rate taken using a marked graduated beaker and stop watch. Volume purged represents gallons.

Temperature is measured in degrees Celsius

Conductivity is measured in milliSiemens per centimeter (mS/cm)

Turbidity is measured in nephelometric turbidity units (NTU). 1000* = Turbidity greater than 1000 NTU.

Dissolved Oxygen (DO) is measured in milligrams per liter (mg/L)

Oxidation Reduction Potential (ORP)

Total Dissolved Solids (TDS) is measured in grams per liter (g/L)

Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York
Semi-Annual Monitoring Well Sampling Event Report May 2018

MW #	Date	Time	Volume Purged	pH	Conductivity	Water Temperature	Turbidity	DO	ORP	TDS	Water Level	Flow Rate	Sample Time
EPA- MW 23	5/24/18	11:00	0.25	6.57	0.751	18.66	0.0*	4.85	53.3	0.492	64.26	0.25	11:30
		11:05	0.5	6.57	0.772	18.34	0.0*	4.45	49.0	0.492	↓	↓	
		11:10	0.75	6.52	0.744	19.28	153	4.10	46.1	0.510	65.09		
		11:15	1.0	6.51	0.800	19.47	50.7	4.08	45.2	0.514	↓		
		11:20	1.25	6.52	0.802	19.40	21.0	4.14	46.4	0.513	66.72		
		11:25	1.5	6.51	0.805	19.36	9.4	4.06	45.4	0.515	↓	↓	
ST- MW 20	5/25/18	8:55	0.25	6.68	0.575	22.49	311	8.03	198	0.377	77.08	0.25	9:13
		9:00	0.5	6.43	0.590	19.39	0.9	9.01	186	0.588	↓		
		9:05	0.75	6.46	0.569	20.17	0.8	8.47	187	0.362	78.63	↓	
		9:10	1.0	6.45	0.567	20.12	0.0	8.46	186	0.362	↓		
EPA- MW 27	5/25/18	9:55	0.25	6.39	0.566	17.73	0.0	9.75	103.6	0.362	52.02	0.25	10:17
		10:00	0.5	6.34	0.566	15.00	0.0	9.18	100.0	0.362	↓		
		10:05	0.75	6.32	0.565	18.04	0.0	8.91	97.2	0.361	54.91		
		10:10	1.0	6.34	0.566	17.93	3.9	8.65	94.1	0.363	↓		
		10:15	1.25	6.33	0.567	17.89	0.0	8.65	96.3	0.364	54.63	↓	
		~~10:20~~	~~1.5~~										

Notes:

All water quality readings taken using a U-52 HORIBA water quality meter attached to a flow through cell. Readings taken initially and every five minutes during low flow pumping

Water levels taken using a Solinst water level meter (Model 101)

Flow rate taken using a marked graduated beaker and stop watch. Volume purged represents gallons.

Temperature is measured in degrees Celsius

Conductivity is measured in milliSiemens per centimeter (mS/cm)

Turbidity is measured in nephelometric turbidity units (NTU). 1000* = Turbidity greater than 1000 NTU.

Dissolved Oxygen (DO) is measured in milligrams per liter (mg/L)

Oxidation Reduction Potential (ORP)

Total Dissolved Solids (TDS) is measured in grams per liter (g/L)

Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York
Semi-Annual Monitoring Well Sampling Event Report May 2018

MW #	Date	Time	Volume Purged	pH	Conductivity	Water Temperature	Turbidity	DO	ORP	TDS	Water Level	Flow Rate	Sample Time
ST- MW 16	5/24/18	9:55	1.25	6.74	0.621	20.61	0.0*	9.63	108	0.407	54.52	0.25	10:27
		10:00	0.5	6.72	0.643	21.11	549	8.41	97.2	0.412	↓		
		10:05	0.75	6.72	0.645	20.81	236	8.29	95.1	0.413	55.43		
		10:10	1.00	6.70	0.648	20.70	37.8	7.94	91.1	0.415	↓		
		10:15	1.25	6.69	0.649	20.64	33.6	7.94	91.1	0.416	56.27		
		10:20	1.50	6.69	0.650	20.54	11.6	7.82	89.3	0.416	↓		
		10:25	1.75	6.69	0.651	20.65	10.1	7.8	89.2	0.417	58.18	↓	
ST- MW 17	5/25/18	8:50	0.25	6.33	0.504	17.72	0.0*	8.51	91.2	0.331	71.35	0.25	9:17
		8:55	0.5	6.27	0.524	17.49	0.0*	8.07	87.3	0.336	↓		
		9:00	0.75	6.25	0.526	17.86	0.0*	7.99	87.3	0.337	72.21		
		9:05	1.0	6.23	0.523	18.15	0.0*	8.03	87.8	0.335	↓		
		9:10	1.25	6.22	0.524	18.16	754	7.79	85.5	0.335	73.42		
		9:15	1.5	6.25	0.526	18.15	1000	7.92	86.4	0.337	↓	↓	
ST- MW 18	5/24/18	14:45	0.25	11.19	0.532	29.69	119	6.89	44	0.374	71.16	0.25	15:12
		14:50	0.5	11:52	0.597	19.77	15.8	6.90	26	0.382	↓		
		14:55	0.75	11:52	0.603	19.99	14.8	6.81	18	0.386	72.81		
		15:00	1.0	11:52	0.605	20.04	12.2	6.79	15	0.387	↓		
		15:05	1.25	11:52	0.606	20.08	6.6	6.77	14	0.388	73.42		
		15:10	1.5	11:52	0.606	20.09	5.9	6.77	14	0.388	↓	↓	
ST- MW 19	5/24/18	1:15	0.25	6.69	0.676	19.16	398	5.83	63.1	0.440	66.24	0.25	13:42
		1:20	0.5	6.36	0.658	20.00	83.9	3.44	39.1	0.422	↓		
		1:25	0.75	6.35	0.690	20.13	34.1	3.09	34.8	0.442	66.91		
		1:30	1.0	6.31	0.695	20.20	23.1	2.91	30.7	0.460	↓		
		1:35	1.25	6.29	0.701	20.19	8.1	2.90	29.9	0.461	67.82		
		1:40	1.50	6.35	0.693	20.20	5.6	2.72	30.9	0.444	↓	↓	

Notes:

All water quality readings taken using a U-52 HORIBA water quality meter attached to a flow through cell. Readings taken initially and every five minutes during low flow pumping

Water levels taken using a Solinst water level meter (Model 101)

Flow rate taken using a marked graduated beaker and stop watch. Volume purged represents gallons.

Temperature is measured in degrees Celsius

Conductivity is measured in milliSiemens per centimeter (mS/cm)

Turbidity is measured in nephelometric turbidity units (NTU). 1000* = Turbidity greater than 1000 NTU.

Dissolved Oxygen (DO) is measured in milligrams per liter (mg/L)

Oxidation Reduction Potential (ORP)

Total Dissolved Solids (TDS) is measured in grams per liter (g/L)

Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Stanton Cleaners Site Code: Operable Unit:

Building Code: Building Name: Long Island Hebrew Academy

Address: 122 Cutter Mill Road Apt/Suite No: 3A

City: Great Neck State: NY Zip: 11021 County: Nassau

Contact Information

Preparer's Name: Dan Prisco-Buxbaum Phone No: 516-564-1100

Preparer's Affiliation: Preferred Environmental Services Company Code:

Purpose of Investigation: Indoor Air Sampling Date of Inspection: May 24, 2018

Contact Name: Sharyn Blaustein Affiliation: TENANT

Phone No: 516-466-3656 Alt. Phone No: rosel@LIHAGH.org Email: morahsorae@LIHAGH.org

Number of Occupants (total): 180 Number of Children: 160

☐ Occupant Interviewed? ☐ Owner Occupied? ☐ Owner Interviewed?

Owner Name (if different): North Shore Sephardic Synagogue Owner Phone: 516-482-4228

Owner Mailing Address: 130 Cutter Mill Road, Great neck NY

Building Details

Bldg Type (Res/Com/Ind/Mixed): COMMERCIAL/MIXED Bldg Size (S/M/L): MEDIUM

If Commercial or Industrial Facility, Select Operations: SCHOOL

If Residential Select Structure Type:

Number of Floors: 3 Approx. Year Construction: 1960 ☒ Building Insulated? ☐ Attached Garage?

Describe Overall Building 'Tightness' and Airflows(e.g., results of smoke tests):

Foundation Description

Foundation Type: BASEMENT Foundation Depth (bgs): Unit: FEET

Foundation Floor Material: POURED CONCRETE

Foundation Wall Material: POURED CONCRETE

Foundation Floor Thickness: Foundation Wall Thickness: Unit: INCHES

☐ Floor penetrations? Describe Floor Penetrations: NA

☐ Wall penetrations? Describe Wall Penetrations: NA

Basement is: FINISHED Basement is: DRY ☐ Sumps/Drains? Water In Sump?: NO

Describe Foundation Condition (cracks, seepage, etc.) :

☐ Radon Mitigation System Installed? ☐ VOC Mitigation System Installed? ☐ Mitigation System On?

Heating/Cooling/Ventilation Systems

Heating System: FORCED AIR Heat Fuel Type: OIL ☒ Central A/C Present?

Vented Appliances

Water Heater Fuel Type: GAS Clothes Dryer Fuel Type:

Water Htr Vent Location: Dryer Vent Location:

Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

PRODUCT INVENTORY

Building Name: Long Island Hebrew Academy Bldg Code: Date: 5/24/2018

Bldg Address: 122 Cutter Mill Road Apt/Suite No: 3A

Bldg City/State/Zip: Great Neck NY, 11021

Make and Model of PID: MiniRae 2000 Date of Calibration: May 24, 2018

Location	Product Name/Description	Size (oz)	Condition *	Chemical Ingredients	PID Reading	COC Y/N?
Maintenance (	ECP Clear View Glass Cleaner	1 Gal	U	Isopropyl Alcohol	0.0	☐
Maintenance (	DAP Acrylic Latex Caulk	10.0 fl oz	UO	Petroleum Distillates	0.0	☐
Maintenance (	Rust-oleum	12 oz.(3)	U	Acetone, Xylene	0.0	☐
Maintenance (	Miniwax Wood Finish	1 Gal	U	Alliphatic hydrocarbons	0.0	☐
Maintenance (	ECP Heavy Duty Stripper	32 oz. (1)	UO	2-Butoxyethanol, 2-Aminoethanol	0.0	☐
Maintenance (	Hi-Valu Bleach	1 Gal	U	Sodium Hypochlorite	0.0	☐
Maintenance (	Windex Advanced Multi-Surfac	1.34 Gal	U	2-Hexoxyethanol, Isoproanolamine, Sodium Dodecylbenzene Sulfonate, Lauramine Oxide, Ammonium Hydroxide	0.0	☐
Maintenance (	Ridgeway's Crystal Clear		U	Isopropyl Alcohol, Ammonium Hydroxide, Dodecylbenzene Sulfonic Acid	**0.0**	☐
Maintenance (	NCL Trigger	1 qt.	U	Sodium Hypochlorite	0.0	☐
Maintenance (	Lysol Disinfectant Spray	19 oz.	U	Alkyl Dimethyl Benzyl Ammonium Saccharinate, Ethanol	0.0	☐
Maintenance (	Behr Premium Plus Paint & Prin	1 Gal (3)	U	Petroleum Distilates	0.0	☐
						☐
						☐
						☐
						☐
						☐

* 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.

Product Inventory Complete? Yes Were there any elevated PID readings taken on site? No ☐ Products with COC?

Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Site Name: Stanton Cleaners Site Code: Operable Unit:

Building Code: Building Name: Long Island Hebrew Academy

Address: 122 Cutter Mill Road Apt/Suite No: 3A

City: Great Neck State: NY Zip: 11021 County: Nassau

Factors Affecting Indoor Air Quailty

Frequency Basement/Lowest Level is Occupied?: FULL TIME Floor Material: LINOLEUM/VINYL

☒ Inhabited? ☐ HVAC System On? ☒ Bathroom Exhaust Fan? ☐ Kitchen Exhaust Fan?

Alternate Heat Source: NONE ☐ Is there smoking in the building?

☐ Air Fresheners? Description/Location of Air Freshener:

☒ Cleaning Products Used Recently?: Description of Cleaning Products: Windex, Lysol

☐ Cosmetic Products Used Recently?: Description of Cosmetic Products:

☐ New Carpet or Furniture? Location of New Carpet/Furniture:

☐ Recent Dry Cleaning? Location of Recently Dry Cleaned Fabrics:

☐ Recent Painting/Staining? Location of New Painting:

☐ Solvent or Chemical Odors? Describe Odors (if any):

☐ Do Any Occupants Use Solvents At Work? If So, List Solvents Used:

☒ Recent Pesticide/Rodenticide? Description of Last Use: 1 every 3 months

Describe Any Household Activities (chemical use,/storage, unvented appliances, hobbies, etc.) That May Affect Indoor Air Quality:

Cleaning products used daily to clean the floor.

☐ Any Prior Testing For Radon? If So, When?:

☐ Any Prior Testing For VOCs? If So, When?:

Sampling Conditions

Weather Conditions: SUNNY Outdoor Temperature: 80 °F

Current Building Use: SCHOOL Barometric Pressure: in(hg)

Product Inventory Complete? Yes ☐ Building Questionnaire Completed?

Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

Building Code: _____ Address: 122 Cutter Mill Road 3A Great Neck , NY 11021

Sampling Information

Sampler Name(s): Dan Prisco-Buxbaum

Sampler Company Code: _____

Sample Collection Date: May 24, 2018

Date Samples Sent To Lab: May 24, 2018

Sample Chain of Custody Number: _____

Outdoor Air Sample Location ID: _____

SUMMA Canister Information

Sample ID:	LIHA-IA1	LIHA-IA1-DUP			
Location Code:					
Location Type:	BASEMENT	BASEMENT			
Canister ID:	10323	10409			
Regulator ID:	10778	10501			
Matrix:	Indoor Air	Indoor Air			
Sampling Method:	SUMMA AIR SAMPLI	SUMMA AIR SA			

Sampling Area Info

Slab Thickness (inches):					
Sub-Slab Material:					
Sub-Slab Moisture:					
Seal Type:					
Seal Adequate?:	☐	☐	☐	☐	☐

Sample Times and Vacuum Readings

Sample Start Date/Time:	5/24/18 11:15	5/24/18 11:1			
Vacuum Gauge Start:	-30	-30			
Sample End Date/Time:	5/25/18 10:15	5/25/18 10:1			
Vacuum Gauge End:	-8	-6.5			
Sample Duration (hrs):	23	23			
Vacuum Gauge Unit:	in(hg)	in(hg)			

Sample QA/QC Readings

Vapor Port Purge:	☐	☐	☐	☐	☐
Purge PID Reading:					
Purge PID Unit:					
Tracer Test Pass:	☐	☐	☐	☐	☐

Sample start and end times should be entered using the following format: MM/DD/YYYY HH:MM

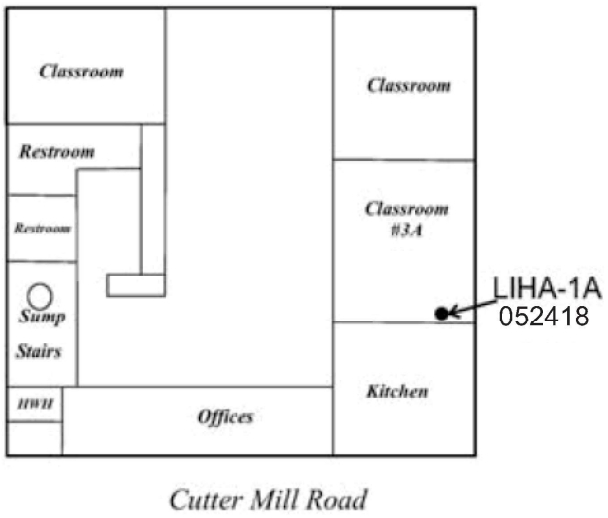
Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

LOWEST BUILDING LEVEL LAYOUT SKETCH

Please click the box with the blue border below to upload a sketch of the lowest building level .
The sketch should be in a standard image format (.jpg, .png, .tiff)

Clear Image



Design Sketch

Design Sketch Guidelines and Recommended Symbology

- Identify and label the locations of all sub-slab, indoor air, and outdoor air samples on the layout sketch.
- Measure the distance of all sample locations from identifiable features, and include on the layout sketch.
- Identify room use (bedroom, living room, den, kitchen, etc.) on the layout sket
- Identify the locations of the following features on the layout sketch, using the appropriate symbols:

B or **F**	Boiler or Furnace	o	Other floor or wall penetrations (label appropriately)
HW	Hot Water Heater	**xxxxxxx**	Perimeter Drains (draw inside or outside outer walls as appropriate)
FP	Fireplaces	**######**	Areas of broken-up concrete
WS	Wood Stoves	● SS-1	Location & label of sub-slab samples
W/D	Washer / Dryer	● IA-1	Location & label of indoor air samples
S	Sumps	● OA-1	Location & label of outdoor air samples
@	Floor Drains	● PFET-1	Location and label of any pressure field test holes.

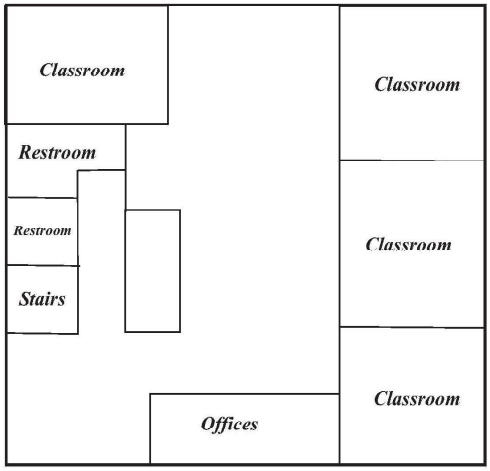
Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

FIRST FLOOR BUILDING LAYOUT SKETCH

Please click the box with the blue border below to upload a sketch of the first floor of the building.
The sketch should be in a standard image format (.jpg, .png, .tiff)

Clear Image



Design Sketch

Design Sketch Guidelines and Recommended Symbology

- Identify and label the locations of all sub-slab, indoor air, and outdoor air samples on the layout sketch.
- Measure the distance of all sample locations from identifiable features, and include on the layout sketch.
- Identify room use (bedroom, living room, den, kitchen, etc.) on the layout sket
- Identify the locations of the following features on the layout sketch, using the appropriate symbols:

B or **F**	Boiler or Furnace	o	Other floor or wall penetrations (label appropriately)
HW	Hot Water Heater	**xxxxxxx**	Perimeter Drains (draw inside or outside outer walls as appropriate)
FP	Fireplaces	**######**	Areas of broken-up concrete
WS	Wood Stoves	● SS-1	Location & label of sub-slab samples
W/D	Washer / Dryer	● IA-1	Location & label of indoor air samples
S	Sumps	● OA-1	Location & label of outdoor air samples
@	Floor Drains	● PFET-1	Location and label of any pressure field test holes.

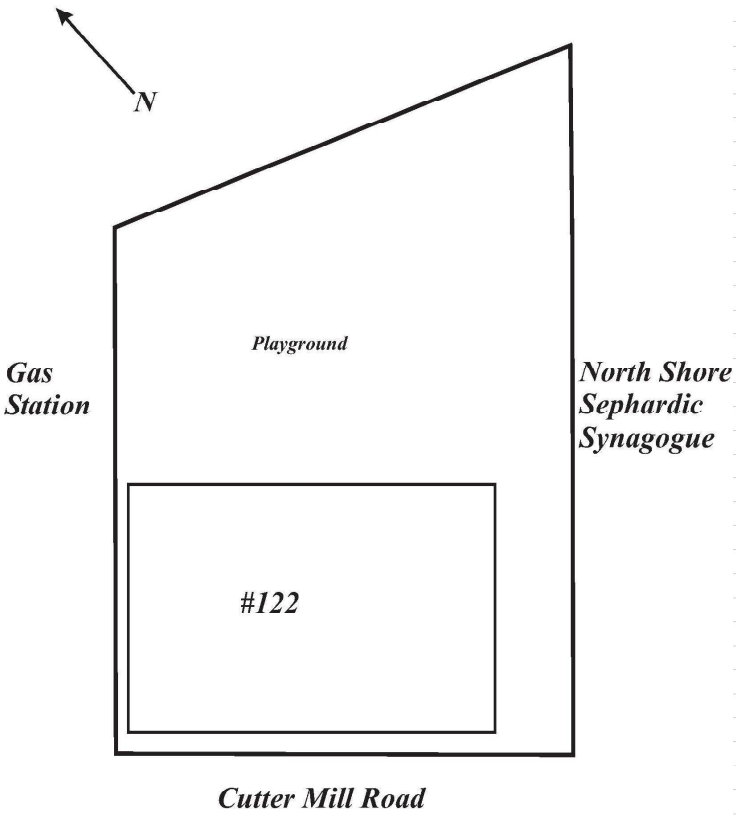
Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

OUTDOOR PLOT LAYOUT SKETCH

Please click the box with the blue border below to upload a sketch of the outdoor plot of the building as well as the surrounding area. The sketch should be in a standard image format (.jpg, .png, .tiff)

Clear Image



Design Sketch

Design Sketch Guidelines and Recommended Symbology

- Identify and label the locations of all sub-slab, indoor air, and outdoor air samples on the layout sketch.
- Measure the distance of all sample locations from identifiable features, and include on the layout sketch.
- Identify room use (bedroom, living room, den, kitchen, etc.) on the layout sket
- Identify the locations of the following features on the layout sketch, using the appropriate symbols:

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S	Sumps	● OA-1	Location & label of outdoor air samples
@	Floor Drains	● PFET-1	Location and label of any pressure field test holes.

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
harry@frontiernet.net

January 29, 2020

Christine Weaver
HDR
1 International Blvd
Mahwah, NJ 07495

RE: Validation of the Stanton Cleaners Site Analytical Laboratory Data
Data Usability Summary Report (DUSR)
Chemtech SDG No. J3193

Dear Ms. Zurlo:

Review has been completed for the data package generated by Chemtech Laboratories that pertains to air samples collected 05/24/18 and 05/25/18 at the Stanton Cleaners site. One 6 L summa canister and its field duplicate were processed for volatiles analytes by USEPA method TO-15.

The data package submitted by the laboratory contains full deliverables for validation. This usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. The reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, with guidance from the USEPA national and regional validation documents, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

* Data Completeness
* Case Narrative
* Custody Documentation
* Holding Times
* Internal Standard Recoveries
* Method and Canister Blanks
* Field Duplicate Correlation
* Laboratory Control Samples (LCSs)
* Instrumental Tunes
* Initial and Continuing Calibration Standards
* Method Compliance
* Sample Result Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with project requirements.

In summary, all sample results are usable either as reported or with minor qualification.

Accuracy, precision, data completeness, representativeness, comparability, and sensitivity are acceptable.

Validation qualifier definitions and sample identifications are attached to this text, and should be reviewed in conjunction with this report. Also attached is the laboratory EQuIS file, with validation qualifiers applied in red.

Volatile Analyses by EPA TO-15

The field duplicate of LIHA-IA-1-052518 shows the following correlations that fall outside validation guidelines, results for which have been qualified as estimated in that parent sample and its duplicate: heptane, 2,2,4-trimethylpehntane, toluene, and hexane

The laboratory duplicate of LIHA-IA-1-052518 shows correlations within validation guidelines.

The detected results for hexane in the sample and field duplicate are qualified as tentative in identification and estimated in value due to poor mass spectral quality.

The detections of methylene chloride in the sample and field duplicate are considered external contamination and edited to reflect non-detection due to presence in the associated method blank.

LCS recoveries are compliant, with the exception of that for dichlorofluoromethane (65%). The results for that compound are therefore qualified as estimated in the project samples.

The results for dichlorodifluoromethane and naphthalene are qualified as estimated, due to outlying linearity (31%RSD and 35%RSD) in the initial calibration standards. It is noted that numerous instrument responses for detected analytes were manually integrated, with no subsequent fit value.

Holding times and instrument tunes meet requirements.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Judy Harry

Att: Validation Qualifier Definitions
Sample Identifications
Qualified Client EDDs

VALIDATION DATA QUALIFIER DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
J-	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
UJ	The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NJ	The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
EMPC	The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

Sample Summaries

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Cover Page

Order ID : J3193

Project ID : Stanton Air

Client : HDR, Inc.

Lab Sample Number	Client Sample Number
J3193-01	LIHA-IA1-052518
J3193-02	LIHA-IA1-DUP-052518

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

APPROVED Date: 6/11/2018

By Mildred V Reyes, QAQC Supervisor at 4:04 pm, Jun 12, 2018

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012