Periodic Review Report (January 1, 2015 – December 31, 2015)

STANTON CLEANERS

NYSDEC Site Number 130072

Work Assignment # D007625-06

March 2, 2016

Prepared for
New York State Department of Environmental Conservation

625 Broadway
Albany, NY 12233

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details **Box 1**

Site No. 130072

Site Name Stanton Cleaners

Site Address: 110 Cutter Mill Road Zip Code: 11021
City/Town: Great Neck
County: Nassau
Site Acreage: 0.4

Reporting Period: December 31, 2014 to December 31, 2015

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

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

_____ _____
Signature of Standby Consultant/Contractor Date

SITE NO. 130072 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
2-376-8	Alan Greenburg	Monitoring Plan Site Management Plan O&M Plan

EPA ROD calls for groundwater use restrictions.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
2-376-8	Groundwater Treatment System Vapor Mitigation Air Sparging/Soil Vapor Extraction

-Groundwater Extraction and Treatment System
-Operation of the Source Control SVE System, including vapor-phase discharge treatment as necessary
-A groundwater monitoring well network currently includes fifteen (15) observation wells.

Box 5

Periodic Review Report (PRR) Certification Statements

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

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

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

YES	NO
X	

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

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

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

   (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES	NO
X	

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

_____ _____

Signature of Standby Consultant/Contractor Date

Box 6

IC/EC CERTIFICATIONS

Professional Engineer Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Erich Zimmerman at HDR
print name

One International Blvd., 10th floor

Mahwah, NJ 07495
(print business address),

am certifying as a Professional Engineer.

Signature of Professional Engineer

(Required for PE)

3/2/16
Date

STANTON CLEANERS

(NYSDEC Site Number 130072)

January 1, 2015 – December 31, 2015

NYSDEC STANDBY ENGINEERING CONTRACT

Work Assignment #D007625-06

PREPARED FOR

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

625 BROADWAY

ALBANY, NEW YORK 12233

Prepared by

16 Corporate Woods

Albany, NY 12211

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ACRONYMS AND ABBREVIATIONS

1,1,1-TCA	1,1,1-trichloroethane
1,1-DCE	1,1-dichloroethene
AS/SVE	air sparge/soil vapor extraction
Bgs	below ground surface
cVOC	chlorinated volatile organic compound
EDD	electronic data deliverable
GAC	granular activated carbon
GPM	gallons per minute
GWE&TS	groundwater extraction and treatment system
HDR	Henningson, Durham & Richardson Architecture and Engineering, PC.
MW	monitoring well
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	operation and maintenance
PCE	tetrachloroethene
ppb	parts per billion
PRP	potentially responsible party
RI	remedial investigation
ROD	record of decision
SG	soil gas
SPDES	State Pollution Detection and Elimination System
SVE	soil vapor extraction
SVI	soil vapor intrusion
TCL	target compound list
UGA	upper glacial aquifer
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WAGNN	Water Authority of Great Neck North
µg/l	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

1.0 Executive Summary

The Stanton Cleaners Area Groundwater Contamination Site (the Site) in Great Neck, NY is currently listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 4 (NYSDEC Site#130072). This designation is for sites that are properly closed but require continued site management until the remedial objectives are achieved. As a result of the dry cleaning operations on the site, tetrachloroethene (PCE) migrated from the site's subsurface soils into the indoor air environments of the surrounding buildings and into the groundwater beneath the site. In 1983 approximately 20 cubic yards of contaminated soil were removed from the site. In 1986 NYSDEC funded the construction of an air stripper treatment system for the Water Authority of Great Neck North (WAGNN) water supply wells located ~1000 feet down gradient of the site. In 2001 EPA installed an active sub slab depressurization system (SSDS) on a school adjacent to the site, and completed construction of the currently operating air sparge/soil vapor extraction (AS/SVE) system and the groundwater extract and treat system (GWE&TS).

The remedial program at the Site has been effective in reducing contamination in the groundwater on and off site and in the soil vapor on and off site. Samples from the GWE&TS groundwater Influent and effluent were collected in April, May, June, July, August, September, and October of 2015. The concentration of PCE from the influent ranged between 6.1 µg/l (October 2015) to 10 µg/l (May and August 2015), 1.1-5 µg/l above the groundwater standard of 5 µg/l. Samples collected during 2015 in April and July from the influent to the SVE system showed the concentration of soil vapor to be approximately 678 $\mu g/m^3$ in a sample collected on April 17, 2015 after the GWE&TS and AS/SVE systems had been down for maintenance for 2.5 months, and restarted on March 23, 2015. A sample collected on July 17, 2015 showed the concentration of PCE in the influent sample to be 4.88 $\mu g/m^3$ after the GWE&TS had been running since March 23, 2015.The apparent influence on the soil vapor concentrations as a result of the GWE&TS operation will be evaluated during future efforts to optimize the remedial system. It is possible that the operation of the GWE&TS results in hydraulic isolation of certain portions of the aquifer where residual contamination is still present. Although the exact mechanism remains unknown at this time it appears that when the GWE&TS is not operating contamination is mobilized to the vapor phase.

At this time, the on-going activities at the Site are in compliance with the major elements of the Site Management Plan including the on-going monitoring program and system operation and maintenance. The institutional and engineering controls are in place and unchanged since the NYSDEC assumed responsibility for the Site and the existing controls remain protective of public health and the environment.

HDR recommends continuation of the current site management program. The noted concentrations of PCE in the groundwater and soil vapor samples collected as part of the monitoring program indicate that it is not appropriate at this time to modify or discontinue the site management activities. The next PRR will be submitted in January 2017.

2.0 Site Overview

2.1 Site Location and Current Use

The Stanton Cleaners Area Groundwater Contamination Site is located at 110 Cutter Mill Road in Great Neck, Nassau County, New York (Figure 1). The Stanton Cleaners property is approximately ¼ acre in size and includes a two-story building in which a dry-cleaning business operates and an adjacent one-story boiler/storage building as well as a two-story treatment building. During an inspection in 2014 the DEC verified that the facility terminated the use of a fourth generation PCE dry cleaning machine and had surrendered their Air Facility Registration. The Site is bordered by an adjacent empty lot which formerly contained an indoor tennis facility, as well as by a synagogue and school facility. The surrounding area is largely urbanized with various mixed uses with residential areas on the side streets and commercial buildings along the main roadways. The entire area is serviced by public water and sewer with WAGNN being the primary water supplier. Three WAGNN public water supply wells are located approximately 1000 feet west (downgradient) of the Site. Two of these wells are approximately 145 ft deep and the third well is 434 ft deep. The two 145 ft deep wells are designated as PW-2A (N-12796) and PW-9 (N-4388) and both are completed in the deeper portion of the upper glacial aquifer (UGA). The third deep well (currently out of service) is designated as PW-11 and is completed in the Lloyd Aquifer which is not believed to be impacted by the Site. The treatment system on the WAGNN supply wells is currently in operation and VOC contamination has been reduced to below federal and state drinking water standards. Raw untreated groundwater pumped from well 2A regularly exceeded drinking water standards based on analytical sampling data provided by WAGNN during 2015.

2.2 Remedial Program

Improper handling and disposal of spent dry cleaning solvents, including PCE, resulted in the release of hazardous substances at the Site. PCE migrated from the Site's subsurface soils into the indoor air environments of the surrounding buildings and into groundwater beneath the Site, resulting in a significant threat to human health. Remedial measures at the Site began as early as 1983 and a brief chronological summary of the activities is outlined below.

- 1983: Approximately 20 cubic yards of PCE-contaminated soil was removed from behind the Stanton Cleaners property
- 1989: A GWE&TS was installed by the potentially responsible party (PRP). The system performed poorly and was abandoned shortly after.
- 1993: The Site was listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 2 site.
- 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 Nation Priorities List (NPL), a Record of Decision (ROD) was finalized, and Site formally added to the NPL in May 1999.

- 2001: The USEPA completed the construction and installation of a SVE system and a GWE&TS on the property to address and contain the on-site source of contamination.
- 2002: Two 500 gallon underground PCE storage tanks were removed.
- 2008: The first five year review of the Site was conducted by the USEPA. The review concluded that the remedy was in place and functioning as intended. The review did not identify any significant issues that required attention.
- 2011: Stanton Cleaners was reclassified from a Class 2 to a Class 4 Inactive Hazardous Waste Site.
- 2012: The USEPA completed construction and installation of a complementary groundwater air sparge system and began its operation in March 2012.
- 2013: The second five year USEPA review was initiated in December 2013 and Finalized in 2014.
- 2015: USEPA representatives met with NYSDEC representatives in July to review RAO progress and discuss future plans.

2.3 Site Cleanup Objectives

Media	Standards, Criteria, & Guidance	Results
Groundwater	NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	PCE detected in the influent GW samples at 6.1-10 µg/l, exceeds the 5 µg/l standard. PCE in the groundwater may be staying the same rather than continuing to decrease, Remedial Action Objectives (RAO's) are to decrease concentrations below GW standards. A remedial optimization investigation is scheduled for 2016 to address progress toward RAOs.
Soil	Environmental Conservation Law (ECL) 6 NYCRR Part 375-6: Remedial Program Soil Cleanup Objectives	No soil samples collected during this period.

Soil Vapor	New York State Department of Heath Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York.	PCE was detected at 0.61 µg/M^3

The cleanup goal for the remedy is to restore the Site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the Site through the proper application of scientific and engineering principles. The criteria for Site closure will be determined by the NYSDEC based on the future monitoring data.

3.0 Remedy Performance, Effectiveness, and Protectiveness

3.1 Groundwater Extraction and Treatment System Performance, Effectiveness and Protectiveness

The GWE&TS treated and discharged 22,222,643 gallons from January 1, 2015 through December 31, 2015. The system was not operational for approximately 3 months at the beginning of the year and for approximately 1 month at the end of the year due to GWE&TS maintenance issues. The average flow rate during the operational periods was approximately 59.9 GPM. The system has treated a total of 342,872,013 gallons since startup in November 2001 through December 31, 2015.

Currently EPA-EXT-02 is the only extraction well pumping at the Site; it is located at the corner of Cutter Mill Road and Ascot Road (Figure 2). Four other extraction wells still exist onsite (EPA-EXT-01, EPA-EXT-03, EPA-EXT-04R, and ST-IW-01), however they are not operational and are considered part of the on-going groundwater monitoring network.

Figure 3 is a graph of the PCE detected in the influent samples collected during this period. The system does not appear to show a decrease in the amount of PCE in the groundwater over the reporting period. The concentration of PCE ranged from 6.1 µg/l to 10 µg/l over the reporting period, with the lowest concentration occurring in the October sample, collected after the system had been running for nearly 7 months.

The system appears to be performing its function and is protective of human health by decreasing the concentration of PCE in the groundwater on and off site. Table 1, below, shows the approximate cumulative mass of PCE removed by the system based on average pumping rate data and influent concentrations. The average flow rate is multiplied by the number of days and the cVOC concentration (from monthly O&M samples) in order to obtain the mass of cVOC which is removed each month. The cumulative total is tracked in the rightmost column. During 2015 1.24 lbs of cVOCs were calculated to have been recovered by GWE&TS operation.

Table 1

Summary of GWE&TS Mass Removal					
			CVOC Concentration in Influent	Monthly CVOC Mass	Cumulative Mass Removed
Date	Days	Average Flow Rate (GPM)	PCE (ug/L)	PCE (Ib/Month)	PCE (Ib)
January-15	0	60.68	0	0.00	3.06
February-15	0	60.06	0	0.00	3.06
March-15	9	59.38	0	0.00	3.06
			Quarter Total	0.00	
April-15	30	59.78	8.1	0.17	3.24
May-15	31	59.61	10	0.22	3.45
June-15	30	59.94	8.1	0.11	3.57
			Quarter Total	0.50	
July-15	31	59.44	8.8	0.18	3.75
August-15	31	59.71	10	0.22	3.97
September-15	30	60.54	9.8	0.21	4.18
			Quarter Total	0.62	
October-15	31	60.95	6.1	0.12	4.30
November-15	30	59.98	0	0.00	4.30
December-15	10	59.88	0	0.00	4.30
			Quarter Total	0.12	

Note: The zero measurements for cVOC in influent are when the system is down for repairs and influent samples were not collected. The system was running during the month of November but failed during the O&M site visit on 11-30-15, therefore a sample was not collected during November.

3.2 Soil Vapor Extraction System Performance, Effectiveness, and Protectiveness.

Air monitoring of the AS/SVE is performed on a monthly basis when the system is running. It includes monitoring for 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 as specified in the O&M Manual. Air monitoring is performed at the following locations:

- Combined SVE – influent (pre-treatment);
- Post vapor phase carbon vessel – SVE air discharge, effluent (post treatment);
- SVE wells EPA-SVE-1 through EPA-SVE-3.

Figure 4 provides a summary of the estimated mass recovery of the SVE system during the period beginning January 2015 and ending December, 31 2015 based on VOC concentrations measured using a photoionization detector (PID), and when PID readings are not available analytical sampling data is used if available. The calculation assumes that PCE is the bulk of the VOC detected in PID readings obtained at the Site. This assumption is justified in that over 98% of the contaminant detected in influent SVE samples is PCE. This system operated in March through November of 2015. The system was not operable during January, February, and much of March, and December of 2015.. During the last half of 2015 the flow meter communication issue with the system-monitoring software (Lookout) was resolved so that the actual flow rate is recorded by the software, and therefore volume calculations, and flow rates in the second half of the year are a more reliable representation of system performance.

The system has removed approximately 21.7 lbs. of cVOCs during the reporting period. The system, when operational, appears to be performing its function effectively and is protective of human health by decreasing the concentration of site related cVOCs in the soil and soil vapor. The mass removal associated with the SVE system is significantly more than was removed by the GWE&TS, which is another possible indicator that residual contamination remains in the vadose zone or the immediate vicinity of the water table.

4.0 IC/EC Plan Compliance Report

4.1 IC/EC Requirements and Compliance

The institutional controls required for this site includes a groundwater use restriction to insure that exposure to potentially contaminated groundwater is avoided. Although a specific deed restriction or easement regarding groundwater use is not in place for this site the local regulations and municipal code prohibit drilling, digging, or tapping into the local aquifer without having first obtained a permit. The USEPA has determined that this is an adequate groundwater use restriction and no further ICs are necessary to safeguard public health.

The engineering controls at the site include the following:

- Groundwater extraction and treatment system- This system captures and treats the most contaminated groundwater associated at the Site. The groundwater concentrations have been significantly reduced by its continued operation.
- Vapor mitigation- Soil vapor is being mitigated onsite via the SVE.
- AS/SVE- The AS system installed in 2012 serves to reduce the groundwater concentrations in the immediate vicinity of the well while the SVE captures and treats contaminated soil vapor onsite. The soil vapor concentrations have been substantially reduced.

4.2 IC/EC Certification

The NYSDEC approved IC/EC certification form certified by a New York State licensed professional engineer is being submitted along with this report.

5.0 MONITORING PLAN COMPLIANCE REPORT

5.1 Components of the Monitoring Plan

The following table summarizes the components of the monitoring plan.

Monitoring Plan		
Frequency	**Groundwater**	**Soil Vapor**
Monthly	GWE&TS influent and effluent is sampled and tested for VOCs A network of 16 wells are monitored for water level	SVE influent is monitored using a PID at multiple SVE Monitoring Ports located on the system
Quarterly	None – see monthly monitoring	SVE influent and effluent are sampled and tested for VOCs
Semi-Annually	Fifteen wells in the monitoring well network are sampled and tested for VOCs	Neighboring property Long Island Hebrew Academy (LIHA) is sampled and tested, as directed, for contaminants in indoor air via Compendium Method TO-15
Annually	The system discharge point into the city sewer is sampled and tested for compliance with SPDES Equivalency Parameters	None

5.2 Monitoring Completed During Reporting Period

The following table shows actual sampling completed at the Site between January 2015 and December 2015.

Monitoring Completed during January 2015-December 2015 period								
	GW Influent	GW Effluent	SVE Influent	SVE Effluent	Water Level Gauge	Process Air Stream Monitor	SVI Sampling	MW Sampling
January								
February								
March						X		
April	X	X	X	X	X	X		
May	X	X			X	X	X	X
June	X	X			X	X		
July	X	X	X	X	X	X		
August	X	X			X	X		
September	X	X			X	X		
October	X	X			X	X		
November					X			
December								

5.3 Comparison with Remedial Objectives:

5.3.1 Groundwater

PCE is detected in the influent groundwater samples taken at the Site, detected concentrations range from <6.1 µg/l to 10 µg/l. All Seven of the monthly samples collected during the reporting period exceed the standard of 5 µg/l. Figure 3 shows the concentration of PCE in influent samples between January 2015 and December 2015. During the 2015 period, a decrease in PCE concentration does not appear to occur. A remedial optimization investigation is scheduled for 2016 to address progress toward the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. The remedial objective is to treat the groundwater and remove contaminants to below the water quality standard.

PCE is detected above the standard in groundwater samples collected in three of the monitoring wells located southwest and west of the site (ST-MW-18, ST-MW-15 and ST-MW-19). Values range from 8.4 µg/l to 67 µg/l in these two wells, respectively. Four other wells (MW-23, CL-4D, CL-4S, and MW-27) sampled during the sampling event also had detection of PCE, but the detections were reported below the 5 µg/l standard, with values ranging from 1 to 2.2 µg/l.

5.3.2 Soil

No soil samples were collected during this period. Clean up objectives at the site would be to ensure that soil contamination is at or below Environmental Conservation Law (ECL) 6 NYCRR Part 375-6: Remedial Program Soil Cleanup Objectives. Confirmatory soil sampling would be required once the active remedial measures are deemed complete.

5.3.3 Vapor

Influent to the SVE system is screened during each monthly visit using a handheld PID which measures VOC concentrations in parts per million (ppm). These readings are used under the assumption that the bulk of VOCs entering the system is PCE (this assumption is supported by analytical data) and these readings are tracked on Figure 4 along with the mass recovery of the SVE system.

Quarterly influent and effluent samples are collected from the SVE system and analyzed using USEPA TO-15. Samples were collected for only two quarters this year due to system downtime interfering with the sampling schedule. The first sample collected in April contained 678 µg/m^3 and the second sample, collected in July had 4.88 µg/m^3. The SVE influent samples continue to illustrate that the SVE system is working to mitigate potential exposure to soil vapor on and offsite. The exact mechanisms in the subsurface that would result in mobilization of the contamination to the vapor phase while the GWE&TS is not operating are not known at this time. It is possible that the contamination is isolated in a particular area or perhaps sorbed and immobile while the system is in long term operation. Only after the system is shutdown does the contamination become mobile to the vapor phase.

The New York State Department of Health Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York does not offer specific standard concentrations for evaluating indoor air impacts associated with vapor intrusion. The sampling (May 26, 2015) showed that the site-related contaminant PCE was detected in the air of the LIHA building at concentrations of 0.61 µg/m^3 and 0.54 µg/m^3(duplicate canister) while the SVE system was operational. The 2013 sampling did not detect PCE in the in-door air and NYSDOH guidance for the levels measured in 2014 and 2015 indicate that the SVE system must continue in operation to reduce the possibility of exposure.

5.4 Monitoring Deficiencies

During the review and certification period associated with this report deficiencies in the Monitoring Program have been encountered. These deficiencies are largely associated with the fact that the system is likely reaching the end of its useful lifespan. These deficiencies did not have a significant impact on the systems ability to perform as designed or expected. A significant period (approximately 4 months) of system downtime was experienced during this reporting period due to system repairs and frozen pipes. During this certification period, performance has improved relative to 2014. During the times where the system was down some monitoring activities could not be performed.

The first and last quarter quarterly SVE influent and effluent samples were not collected in 2015 because the GWE&TS went down unexpectedly and the monitoring programs were suspended during those times that is was down. The SVE system continued to operate while the GWE&TS was down if possible.

The GWE&T system was not operational from January through March 24, 2015. No groundwater influent and effluent samples were collected for January, February, March, November, and December.

5.5 Conclusions and Recommendations for Changes

The monitoring plan is effective and provides for an adequate amount of data collection to evaluate the system performance, no changes are recommended. Should the future in-door air sampling at the LIHA indicate that the SVE system is not eliminating that potential exposure route additional investigations maybe required to identify the source of the noted PCE in soil vapor.

The remedial effectiveness is adequate in controlling the remaining contamination on-site, some of the down gradient monitoring wells still exhibit elevated levels of PCE but the overall trend since 2011 has been toward slowly decreasing concentrations. Recommend continuing operation of the remedial systems to prevent further offsite migration, as well as system optimization based on the 2016 investigation results.

6.0 O&M PLAN COMPLIANCE REPORT

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

- Monthly system checks of the GWE&TS, and the AS/SVE system;
- Semi-annual granular activated carbon (GAC) change out on GWE&TS and SVE systems (if necessary);
- Annual SPDES sampling event; and
- A Periodic Review Report will be issued annually.

During the review and certification period associated with this report, the system ran for much of the year without interruption. Significant improvement was noted from previous years in totally system operation. Some downtime (nearly 3 months) was encountered at the beginning of the year due to a leak inside the treatment building which required that the system be shut down. When the system was shut down, some of the pipes were frozen and burst which caused the extended down time. The system experienced some electrical problems at the end of November and the system was down for approximately 1 month. During the times where the system was down certain O&M activities and system performance readings were not conducted as outlined in the O&M Plan.

7.0 CONCLUSIONS & RECOMMENDATIONS

7.1 Compliance with SMP

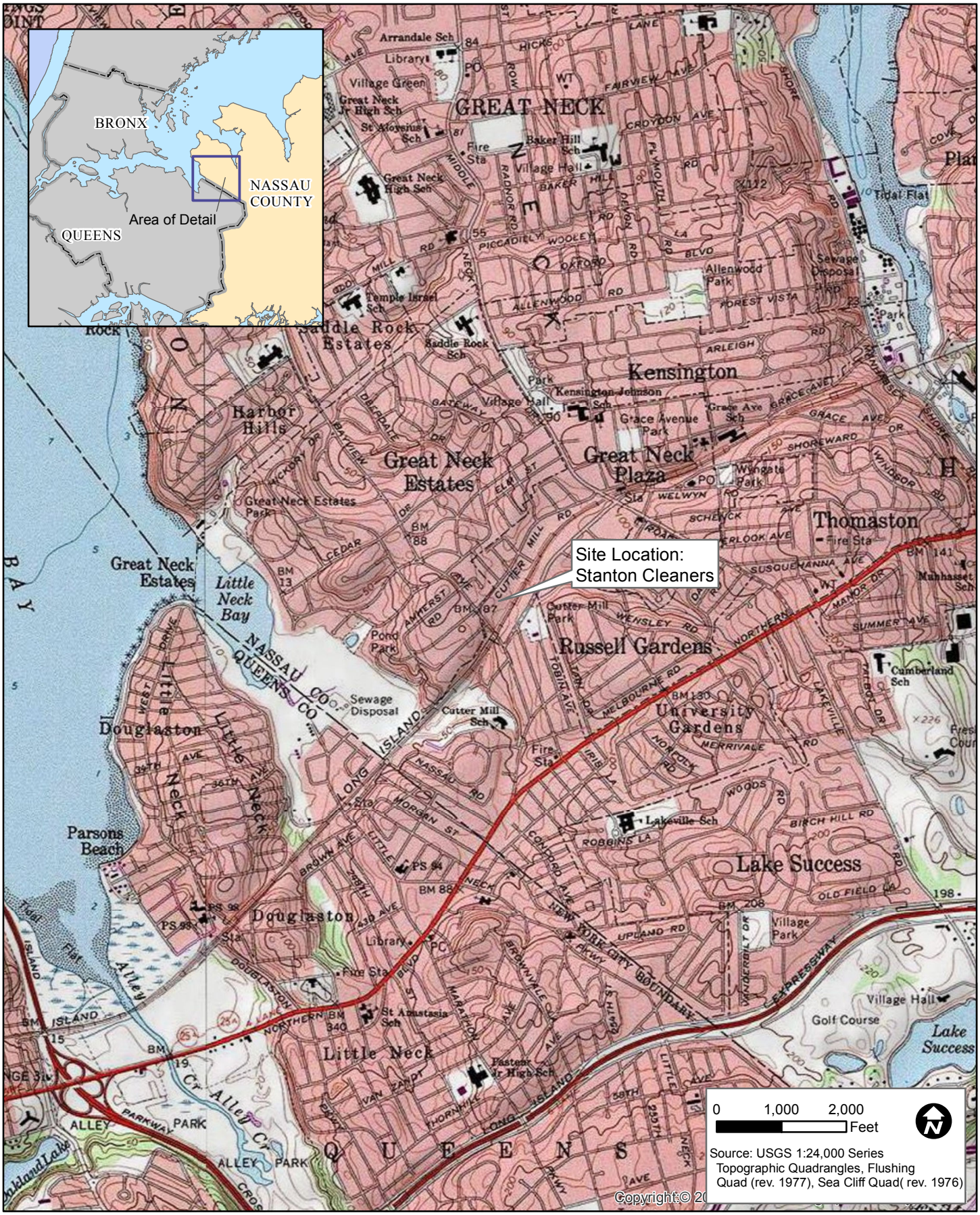
Based on the activities associated with the SMP the major elements of the plan were met during the reporting period. The engineering controls at the site include a groundwater treatment system and an AS/SVE system. These systems are designed to contain the off-site migration of VOC-contaminated vapors and groundwater. The GWE&TS's primary responsibilities include the pumping and treatment of groundwater. The AS/SVE system's responsibilities include the treatment of high VOC source areas, the containment of off-site migration of contaminated soil vapors, and the extraction and treatment of the contaminants of concern contained in the soil vapor. When these systems are operational the contamination is contained to within the immediate vicinity of the Site.

7.2 Effectiveness of the Remedy

Data collected during the reporting period indicates that the remedy is effective for both remediating the source of the contamination and protecting human health by reducing the amount of contamination in the environment surrounding the site.

7.3 Future PRR Submittals

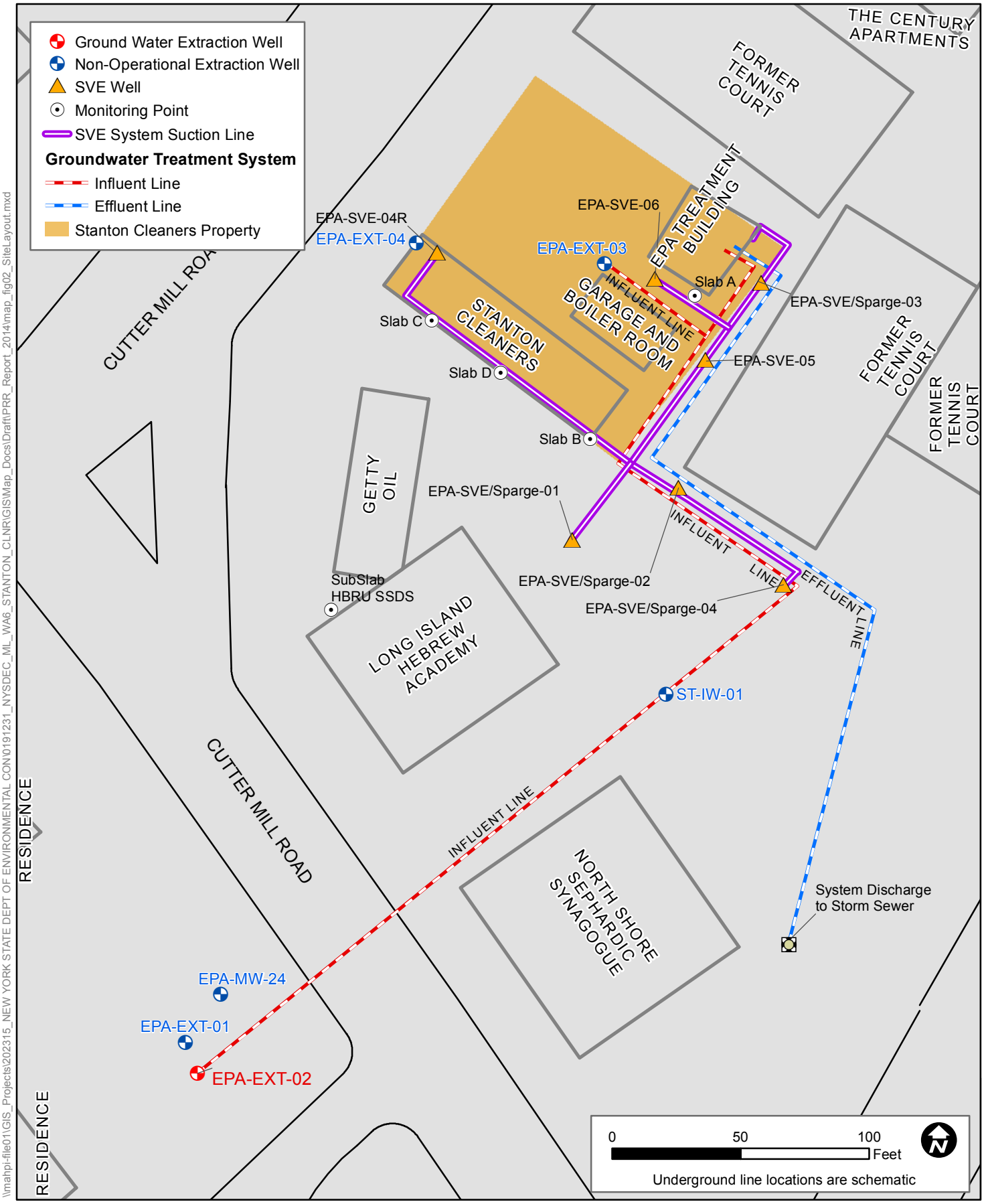
The next Periodic Review Report covering the reporting period from January 1, 2016 to December 31, 2016 will be submitted by January 30, 2017.



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

Figure 1

February 18, 2016



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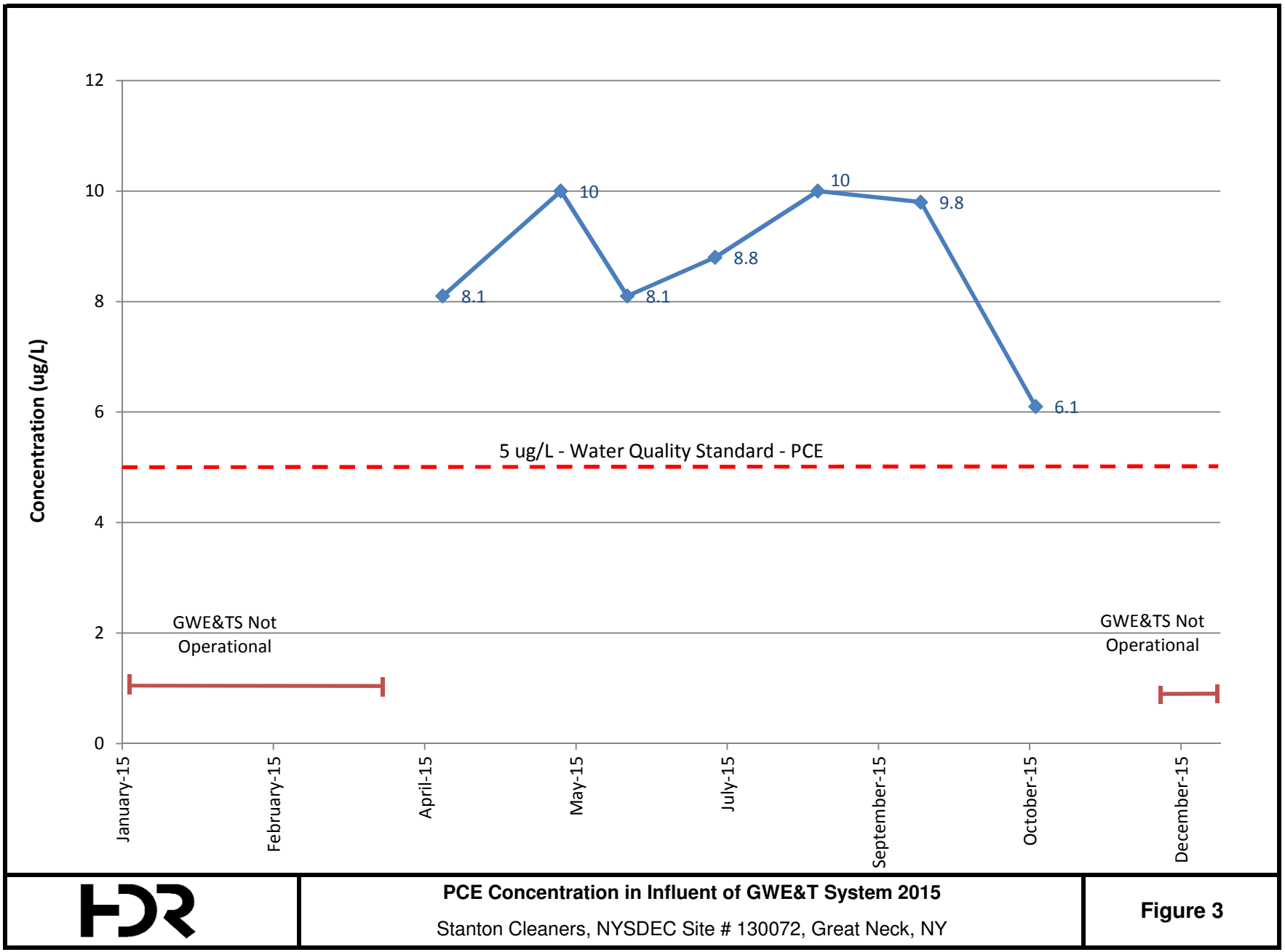
Site Layout
Stanton Cleaners
NYSDEC Site # 130072
Great Neck-North Hempstead, New York

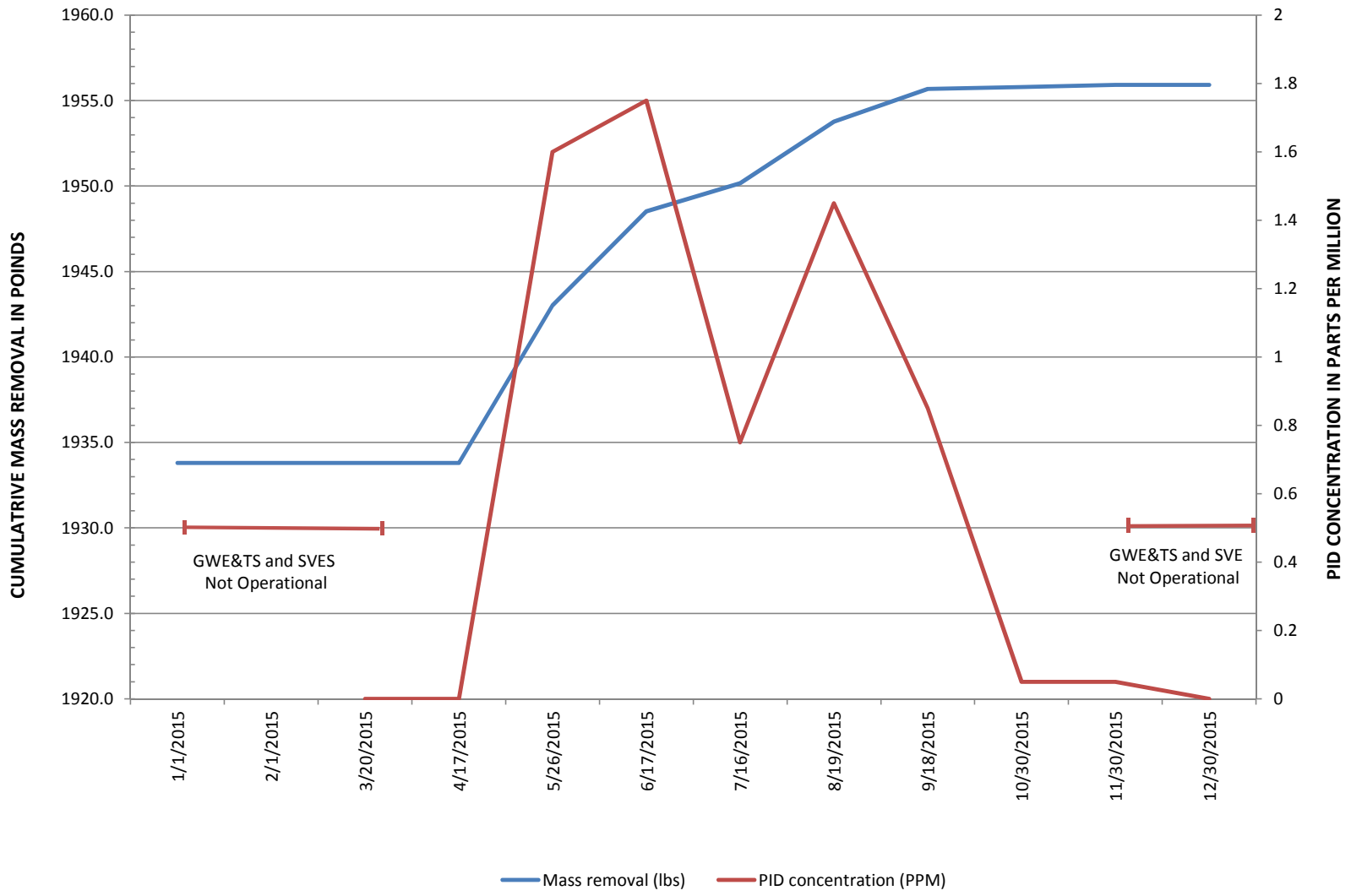
Figure 2



PCE Concentration in Influent of GWE&T System 2015

Stanton Cleaners, NYSDEC Site # 130072, Great Neck, NY

Figure 3



PCE Mass Removal by SVE System Jan 2015 - Dec 2015

Stanton Cleaners, NYSDEC Site # 130072, Great Neck, NY

Figure 4