HIP CLEANERS (ROCHDALE VILLAGE MALL #2)

QUEENS COUNTY

QUEENS, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C241166

Prepared for:

Rochdale Village, Inc.

169-55 136th Avenue

Queens, NY 11434

Prepared by:

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TENEN ENVIRONMENTAL

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Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

DECEMBER 2023

CERTIFICATION STATEMENT

I Matthew M. Carroll certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

_____ P.E.

12/29/2023_____DATE

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List of Acronyms

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Greenhouse Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P.E. or PE	Professional Engineer
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision

RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification: C241166, HIP Cleaners (Rochdale Village Mall #2)

Institutional Controls:	1. The property may be used commercial use;
	2. Environmental Easement;
	3. All ECs must be inspected at a frequency and in a manner defined in the SMP.
Engineering Controls:	1. Cover system
	2. Sub-slab Depressurization System (SSDS)
	3. Soil Vapor Extraction System (SVE)

Inspections:	Frequency
1. Cover inspection	Annually
2. SSDS, including alarm system test	Quarterly
3. SVE	Quarterly
4. Inspect SVE piping to confirm operation of appropriate valves and perform alarm system test	Quarterly
Monitoring:	
1. Groundwater monitoring wells HIP-GW-1, HIP-GW-3S and HIP-GW-7	Quarterly
2. Pressure extension test for SSDS and SVE system to ensure design goals are being met	Quarterly
3. Effluent sample of SVE system	Startup
Maintenance:	
1. Cover System	As needed

2. SVE/SVE Blower maintenance	As needed
3. SSDS valves and alarms	As needed
Reporting:	
1. Groundwater Monitoring (to be provided with Periodic Review Report)	Annually with quarterly summaries
2. SSDS and SVE pressure monitoring (to be provided with Periodic Review Report)	Annually
3. Periodic Review Report	Annually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the HIP Cleaners site located in Queens, New York (hereinafter referred to as the "Site"). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C241166, which is administered by New York State Department of Environmental Conservation (NYSDEC or Department).

Rochdale Village, Inc. (Participant) entered into a Brownfield Cleanup Agreement (BCA) on February 13, 2015 with the NYSDEC to remediate the site. A figure showing the site location and boundaries of this site is provided in Figure 1. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix 1.

Based on the elevated off-Site indoor air and sub-slab soil vapor concentrations, the Participant has installed an active sub-slab depressurization system (SSDS) as an Interim Remedial Measure (IRM) beneath the entire foot print of Rochdale Village Mall #2, outside of the Site footprint. The IRM Work Plan was approved by NYSDEC on August 17, 2017. The remainder of the Site remedy was completed in accordance with the approved Remedial Action Work Plan (RAWP) dated May 26, 2020. This SMP addresses the site management practices required for both on- and off-site engineering controls. The off-Site IRM and on-Site remedial action were implemented concurrently.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Queens County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site and off-site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required

by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC); and

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the BCA (Index #C241166-10-14; Site #C241166) for the site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix 2 of this SMP.

This SMP was prepared by Matthew M. Carroll, PE and Tenen Environmental, LLC, on behalf of Rochdale Village, Inc., in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated June 2023, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions and Alterations

Revisions and alterations to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP or request revisions from the remedial party. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. All approved alterations must conform with Article 145 Section 7209 of the Education Law regarding the application of professional seals and alterations. For example, any changes to as-built drawings must be stamped by a New York State Professional Engineer. In accordance with the Environmental Easement for the site, the NYSDEC project manager will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

1. 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.
2. 7-day advance notice of any field activity associated with the remedial program.
3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan. If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

8. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the BCA, and all approved work plans and reports, including this SMP.

9. Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 on the following page includes contact information for the above notifications. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix 2.

Table 1: Notifications*

Name	**Contact Information**	**Required Notification****
Erick Bower, NYSDEC Project Manager	(518) 402-9824 Erick.bower@dec.ny.gov	All Notifications
Jane O'Connell, Regional Remediation Engineer	(718) 482-4599, jane.oconnell@dec.ny.gov	All Notifications
Kelly A. Lewandowski, P.E., Chief, Site Control Section	(518) 402-9543, kelly.lewandowski@dec.ny.gov	Notifications 1 and 8
Anthony Perretta, NYSDOH Project Manager	(518) 402-7860, anthony.perretta@health.ny.gov	Notifications 4, 6, and 7

* Note: Notifications are subject to change and will be updated as necessary.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in Queens, Queens County, New York and is identified as a portion of Block 12495 and Lot 2 on the New York City Tax Map (see Figure 1). The site is an approximately 0.0642-acre area. The Site is located within the Rochdale Village Mall (Mall #2), part of a larger community development and housing complex known as Rochdale Village. Rochdale Mall #2 is a one-story retail and office building (approximately 50,000 gross square feet) with associated parking. Rochdale Village complex is bounded by Baisley Boulevard, Bedell Street, 137th Avenue and Guy R. Brewer Boulevard. Mall #2 is located in the southeast corner of Rochdale Village with associated parking spaces fronting 137th Avenue.

The boundaries of the site are more fully described in Appendix 1 –Environmental Easement. The owner(s) of the site parcel(s) at the time of issuance of this SMP is/are:

Rochdale Village, Inc.
169-55 137th Avenue
Queens, NY 11434

The operator(s) of the site parcel(s) at the time of issuance of this SMP is/are:

New HIP Cleaner, Inc.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: a a one-story commercial space located within a larger one-story building. The Site is zoned for residential uses with a commercial overlay

(R6 and C2-2) and is currently utilized for dry cleaning services. Site occupants include the New HIP Cleaner dry cleaner.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial and residential properties. The Site sits within the Rochdale Village Mall #2, which includes multiple commercial use spaces. The surrounding areas include a school (PS 80, Thurgood Marshall), residential building and parking area to the east; the Rochdale Community Center to the north; a parking area and residential buildings to the west; and, a public library and residences to the south.

2.2.2 Geology

The Site is underlain by historic fill material (silty sands mixed with anthropogenic materials) and fine to medium sand and silts to a depth of approximately ten feet below grade (ft-bg). The lithology below the shallow soils consists of medium to coarse grain sand and gravel to depths of up to 50 ft-bg. One soil boring was advanced to 50 ft-bg to investigate the potential presence of a confining layer; no clay layer was encountered. The approximate depth to bedrock (Ravenswood Granodiorite) is 800 ft-bg.

Site specific boring logs are provided in Appendix 3.

2.2.3 Hydrogeology

Groundwater was encountered between 6.48 to 8.25 feet below grade. The groundwater flow direction measured in the most recent rounds of gauging is generally to the northeast.

The groundwater flow direction is shown in Figure 3. Groundwater elevation data is provided in Table 10. Groundwater monitoring well construction logs are provided in Appendix 3.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

In 2010, a Phase I Environmental Site Assessment (ESA) for the Site was performed in accordance with ASTM E-1527-05, Standard Practice for Environmental Site Assessments. The Phase I ESA addressed the entire village community, of which the Site is only a portion. Based on a review of the Phase I ESA, the historic and present uses of the Site as a dry cleaner were identified as a recognized environmental condition (REC). Based on the information included in the ESA, the duration of the dry cleaning activities was approximately 43 years. HIP Cleaners was identified as a Small Quantity Generator of Hazardous Wastes on the regulatory database, with no violations. At least one, and potentially two, underground storage tanks (USTs) were identified at the rear of the property. The assumed tank(s) capacity was approximately 275-gallons. No documentation or additional information was provided regarding the tank(s).

Several environmental investigations have been conducted at the Rochdale Village Community, including the Site, and are summarized in the following reports:

- *Phase I Environmental Site Assessment, Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, May 25, 2010, GRS Group*
- *Phase II Environmental Assessment Limited Subsurface Investigation, Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, September 17, 2010, GRS Group*
- *Soil Vapor Investigation, HIP Cleaners, 169-47 137th Avenue, Queens, NY, 11434, December 2013, Jet Environmental*
- *Remedial Investigation Report (RIR), HIP Cleaners, 169-55 137th Avenue, Queens, NY, 11434, January 2019, Tenen Environmental*

- *Supplemental Remedial Investigation, HIP Cleaners Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, December 2016, Tenen Environmental*
- *Final Engineering Report, HIP Cleaner, Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, December 2023, Tenen Environmental*

The following summary of the findings was provided in the RIR:

Remedial Investigation, HIP Cleaners Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, November 2015, Tenen Environmental

In November 2015 Tenen conducted a soil, groundwater, sub-slab and soil vapor remedial investigation at the Site in order to horizontally and vertically delineate the nature and extent of chlorinated solvent impacts at the Site and surrounding commercial and residential spaces with respect to the known location of PCE dry cleaning equipment. The methodology and results of the RI are summarized below.

Soil. A total of five soil borings (two interior and three exterior) were advanced at the Site. Interior soil borings were installed using a 420M Geoprobe® unit; off-site soil borings were installed using a hollow-stem auger (HSA) drill rig. The two interior shallow soil borings were advanced within the Site building footprint at locations adjacent and crossgradient of the location of PCE storage areas and PCE-containing dry cleaning equipment. Three shallow and two deep exterior soil borings were advanced to delineate known impacts to the north, east and west of the Site. Shallow soil borings were advanced to approximately seven feet below the water table; one deep soil boring (HIP-SB-3D) was advanced to a depth of 50 ft-bg to determine if a confining layer exists within this interval. No confining layer was encountered; therefore, the second deep boring was advance to the depth of 35 ft-bg. Within each boring, a soil sample from each of the following intervals was collected and analyzed: two feet below grade, from the zone of highest suspected contamination (if present), the next apparent non-impacted zone, from the water table interface, and from the terminal depth of the boring.

A photoionization detector (PID) was used to screen the soil borings; elevated field readings [max 277 parts per million (ppm)] were detected in boring HIP-SB-1 from the 4-6 ft-bgs interval, near the dry cleaning equipment. The soil analytical results were

compared to the NYSDEC Unrestricted Use, Restricted-Commercial Use and Protection of Groundwater Soil Cleanup Objectives (SCOs) provided in 6 NYCRR Part 375. PCE was detected above Unrestricted and Protection of Groundwater SCOs at 79 milligrams per kilogram (mg/kg) within the shallow interval at HIP-SB1 (0-2 feet); the highest PID reading in this interval was 67 ppm. PCE was detected within the shallow and deep intervals at several exterior soil boring locations; however, there were no detections above the Unrestricted Use SCOs. Several pesticides were detected, largely in the shallow intervals, above Unrestricted Use SCOs including: 4,4'-DDT, 4,4'-DDE and 4,4'-DDD. Two polychlorinated biphenyls (PCBs), (Aroclor 1254 and 1260) were detected at HIP-SB-2D at shallow and deep intervals at elevated levels above Unrestricted, Protection of Groundwater, and Commercial Use SCOs. Metals detected above SCOs include barium, manganese, nickel and zinc.

Groundwater. Three boring locations were converted to permanent groundwater wells (including two cluster wells). One interior shallow groundwater well (HIP-GW-1) was advanced at soil boring location HIP-SB-1. Cluster wells at locations HIP-SB-2 and HIP-SB-3 included co-located shallow and deep wells to evaluate the horizontal and vertical extent of contamination in groundwater. Groundwater samples were collected from all wells (five in total). Groundwater results were compared to the NYSDEC Division of Water TOGS Class GA Water Quality Standards and Guidance Values (Class GA Standards). PCE was detected above the Class GA Standard of 5 micrograms per liter (ug/L) in all three shallow wells at concentrations ranging from 13 ug/L at HIP-GW-2S to 52 ug/L at HIP-GW-1. PCE was detected below the Class GA standard in both deep wells. The highest PCE detection (52 ug/L) was at HIP-GW-1, adjacent to the approximate location of the dry cleaning equipment and corresponding with the location of the highest detections in soil. Total iron was detected in both the shallow and deep intervals at location HIP-GW2 with a maximum concentration in the deep interval of 1,440 ug/L above the Class GA standard of 600 ug/L.

All monitoring wells were surveyed and groundwater was measured to be flowing in a southerly direction. Groundwater elevations ranged from approximately 7.41 to 7.67 ft.

Soil Vapor. On- and off-site soil vapor points were installed to confirm and delineate previously identified impacts. Sub-slab and soil vapor concentrations were compared to ambient air concentrations (HIP-AA), collected upwind of the Site. One on-site interior sub-slab soil vapor point (HIP-SS-1) was installed in the vicinity of the dry cleaning machine. PCE was detected at this location at a concentration of 417,000 micrograms per cubic meter (ug/m^3) above the ambient air concentration of 4.24 ug/m^3. Three soil vapor sample points were advanced within the courtyard canopy area at Rochdale Mall #2. PCE was not detected at the two exterior locations closest to the Site (HIP-SV-1 and HIP-SV-2); however, it was detected at HIP-SV-3 at a concentration of 1,340 ug/m^3. Five off-site sub-slab points were installed at a depth of six inches below the slab. PCE was detected in all sub-slab points at elevated concentrations above those detected in ambient air. Detected concentrations ranged from 110 ug/m^3 (HIP-SS-4) in the commercial space across the courtyard to 800,000 ug/m^3 (HIP-SS-3) in the adjacent commercial store. Trichloroethane (TCE) was detected in several sub-slab samples including on-site and off-site commercial spaces. The highest TCE concentration was identified within the adjacent commercial space at HIP-SS-3 with a concentration of 2,790 ug/m^3. Several petroleum-related compounds were detected at HIP-SS-4, likely attributable to off-site sources.

Supplemental Remedial Investigation, HIP Cleaners Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, December 2016, Tenen Environmental

In December 2016 Tenen conducted a soil, groundwater, indoor air and soil vapor supplemental remedial investigation at the Site in order to horizontally delineate the nature and extent of chlorinated solvent impacts with respect to the surrounding commercial and residential spaces. The methodology and results of the Supplemental RI (SRI) are summarized below.

Soil. One shallow exterior soil boring was advanced using a HAS drill rig at a location adjacent to the office spaces located within the surrounding area. Soil boring HIP-SB-6 was advance to approximately seven feet below the water table. A soil sample from each of the following intervals was collected and analyzed: two feet below grade,

from the zone of highest suspected contamination (if present), the next apparent non-impacted zone, from the water table interface, and from the terminal depth of the boring.

Soil samples were analyzed for TCL VOCs plus 10 TICs. The soil analytical results were compared to the NYSDEC Unrestricted Use, Restricted-Commercial Use and Protection of Groundwater Soil Cleanup Objectives (SCOs) provided in 6 NYCRR Part 375. No VOCs were detected above Unrestricted, Protection of Groundwater, and Commercial Use SCOs.

Groundwater. One shallow soil boring (HIP-SB-6) was converted to a permanent groundwater well. Sample HIP-GW-6 was analyzed for TCL VOCs plus 10 TICs to evaluate horizontal cVOC contamination in the direction of the neighboring office spaces. Groundwater results were compared to the NYSDEC Division of Water TOGS Class GA Water Quality Standards and Guidance Values (Class GA Standards). PCE was detected below the Class GA Standard at a concentration of 4.4 ug/L; however, PCE was detected in the duplicate sample from this location at a concentration of 6 ug/L, above the Class GA Standard. No other VOCs were detected above Class GA Standards.

The groundwater monitoring well was surveyed and groundwater was measured to be flowing in a southerly direction. The groundwater elevation was measured to be approximately 8.28 ft.

Soil Vapor. Three off-site soil vapor points were installed at intermediate depths to investigate the potential presence of chlorinated solvents with respect to the surrounding neighborhood. Soil vapor point HIP-SV-4 was advanced to delineate contaminants adjacent to the office spaces located approximately 85-feet to the north. PCE was detected at this location with a concentration of 4.75 ug/m^3 above the ambient air concentration of 4.24 ug/m^3. The contaminant 1,2,4-trichlorobenzene, a derivative of benzene, was detected at this location with a concentration of 33 ug/m^3 above the ambient air concentration of 1.48 ug/m^3. Soil vapor point HIP-SV-5 was advanced to delineate contaminants adjacent to the residential building located approximately 500-feet to the west. No VOCs were detected at this location above ambient air concentrations. Soil vapor point HIP-SV-6 was advanced to delineate contaminants

adjacent to the public school located approximately 265-feet to the east. PCE was not detected above ambient air concentrations at this location.

One indoor air sample was collected off-site as part of the SRI. The highest 2015 RI PCE level (800,000 ug/m^3) in sub-slab vapor was identified at off-Site soil vapor point HIP-SS-3. The indoor air sample was collected in the vicinity of this location during the SRI. This indoor air sample identified PCE at a concentration of 37.10 ug/m^3; TCE was detected at a low concentration (0.274 ug/m^3). The commercial space is currently used as an active nail salon, with various inventory including ethanols, ethyl acetate and acetone. Ethanol was detected in indoor air at a concentration of 9,070 ug/m^3 above the ambient air concentration of 4.11 ug/m^3.

Final Engineering Report

A Final Engineering Report (FER), dated December 2023, was prepared by Tenen Environmental. The FER documents the remedial activities at the Site that were conducted in accordance with the NYSDEC-approved IRM Work Plan (2017) and the RAWP (May 2020) (collectively the Remedial Action).

Four engineering controls (ECs) are currently being utilized at the Site and will be implemented under this SMP:

1. Active Sub-Slab Depressurization System (SSDS);

2. Soil Vapor Extraction (SVE) System;

3. Cover System, and;

4. In-situ Chemical Oxidation (ISCO) groundwater treatment and continued groundwater monitoring.

Institutional Controls (ICs) are required to manage remaining contamination on and off-Site and to ensure the ECs remain protective of human health and the environment. The ICs consist of two elements, designed to ensure continual and proper management of remaining contamination in perpetuity:

1. An Environmental Easement, and;

2. A Site Management Plan.

The ECs and ICs are discussed in detail in Section 3.0 of this SMP.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated May 4, 2020, are as follows:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.5 Remaining Contamination

2.5.1 Soil

The historic fill and soil at the Site meet the Commercial Use SCOs. Commercial Use SCOs are appropriate given the intended future use of the Site. Some impacts above Protection of Groundwater SCOs within the top fifteen feet will remain in place to be treated with a soil vapor extraction (SVE) system. PCE, detected at a maximum concentration of 79 mg/kg, above the Protection of Groundwater SCO of 1.3 mg/kg was left in place. No excavation was completed during implementation of the remedial action, with the exception of minor excavation in support of the sub-slab depressurization system (SSDS) and trenching to support the SVE point system components. Soil contaminant conditions were investigated during the remedial investigation completed by GRS Group and Tenen and documented in Tenen's RIR.

All remaining soil samples met the Commercial Use SCOs. The design goal of the SVE system is to decrease the concentrations of PCE to below the Protection of Groundwater SCO. This table shows the results of PCE only, which is the contaminant of concern, in the on-Site borings adjacent to the former dry cleaning equipment, exceeding the Protection of Groundwater SCO.

Table 2: Remaining Soil Sample Exceedances

Sample ID:	NY-CSCO	NY-PGWSCO	HIP/SB1 (0-2)
Collection Date:			11/2/2015
Tetrachloroethene	150	1.3	79

Notes:
All concentrations are in mg/kg
NY-PGWSCO = 6 NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective
NY-CSCO = 6 NYCRR Part 375 Commercial Use Soil Cleanup Objective
Cells highlighted in yellow indicate concentrations above the NY-PGWSCO

Table 2 and Figure 4 summarize the results of all soil samples collected that exceed the Unrestricted Use SCOs, Protection of Groundwater SCOs and the Commercial Use SCOs at the site after completion of remedial action.

2.5.2 Groundwater

As documented in Tenen's RIR, one volatile organic compound and several metals were detected in groundwater samples. PCE was detected in five of the seven groundwater monitoring wells above the Class GA Standard of 5 ug/L. PCE was detected at concentrations ranging from 0.5 ug/L in HIP-GW-2D to 52 ug/L in HIP-GW-1.

Several naturally occurring metals, including iron, magnesium, manganese and sodium. The shallow groundwater well HIP-GW-2S exhibited the highest concentrations of total metals above the Class GA Standards, including total aluminum (41,300 ug/L above the Class GA Standard of 2,000 ug/L), chromium (177.2 ug/L above the Class GA Standard of 200 ug/L), iron, (52,400 ug/L above the Class GA Standard of 600 ug/L), lead (52.2 ug/L above the Class GA Standard of 50 ug/L) and thallium (1.5 ug/L above the Class GA Standard of 0.5 ug/L).

Dissolved iron was detected at a maximum concentration of 6,200 ug/L above the Class GA Standard of 600 ug/L in HIP-GW-3D, and at lower levels in HIP-GW-2S (0.7 ug/L above the Class GA Standard of 0.5 ug/L).

Contamination will remain in the groundwater; however, the bulk of the cVOC contaminant mass is continuing to be treated. An in-situ chemical oxidation (ISCO) candle was installed within the groundwater well corresponding to the highest concentration of PCE, HIP-GW-1. The ISCO candle will remain in the well to complete treatment in order to break down remaining contaminants into less toxic compounds.

PCE was detected at a maximum concentration of 52 ug/L in the shallow on-site well, HIP-GW-1, located adjacent to the former dry cleaning equipment. This location corresponds with the location of the highest PCE concentrations in soil.

The design goal is to decrease the concentrations of PCE to below the Class GA Standard. Baseline groundwater contaminant conditions were completed prior to the remedy and are shown in Table 3. Two rounds of post-remedial groundwater sampling was completed for the on-site well (HIP-GW-1) to ensure the effectiveness of the remedial action. This groundwater well was sampled during the RI on November 20, 2015, July 22, 2021, June 2, 2023 and September 12, 2023, and analyzed for VOCs only. Results are shown in Table 3.

Table 3: Remaining Groundwater Exceedances[1]

Sample ID:	Class GA Standard	HIP-GW-1	HIP-GW-1	HIP-GW-1	HIP-GW-1
Collection Date:		11/20/2015	7/22/21	6/2/23	9/12/23
Tetrachloroethene	5	52	21	32	41

Notes:
All concentrations are in ug/l
Class GA Standard = New York TOGS 1.1.1 Groundwater Effluent Limitations criteria reflects all addendum to criteria through June 2004
Cells highlighted in yellow indicate concentrations above the NY-TOGS-GA
[1]This table shows the results for PCE only.

Post-remedial groundwater sampling indicates that the remedial action has been effective in reducing the contaminant of concern, PCE, in the on-site well with the highest levels of contamination. PCE levels have reduced from 52 ug/l in November 2015 to 32 ug/l in June 2023. The design goal is to decrease the concentrations of PCE to below the Class GA Standard of 5 ug/l, and it is expected that PCE will continue to decrease in concentration levels. Groundwater monitoring will be completed in accordance with this SMP.

As stated above, the ISCO candle will remain in the well to complete treatment in order to break down remaining contaminants into less toxic compounds, until otherwise approved by the NYSDEC.

Table 3 and Figure 5 summarize the results of all samples of groundwater that exceed the SCGs after completion of the remedial action.

2.5.3 Soil Vapor

Contamination remains in the soil vapor; however, the bulk of the cVOC contaminant mass is being treated. Remaining soil vapor contamination on-site and at off-site locations within Rochdale Village Mall #2 will be addressed by the operation of a SSDS and SVE system. Four SVE wells were installed on-Site at the location with remaining soil PCE contamination, further discussed in Section 3.3.3 of this SMP. Soil

vapor sampling was completed during the Remedial Investigation phase of this project; results are included in Table 11. Soil vapor, indoor air and outdoor ambient air will be sampled prior to shut down of the systems. The frequency of sampling will be discussed in a Sampling Plan submitted to NYSDEC and NYSDOH for review and approval prior to sampling.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix 4 for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC project manager.

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to commercial or industrial uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 2. These ICs are:.

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

- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the site are prohibited; and
- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

3.3 Engineering Controls

3.3.1 Cover

Exposure to remaining contamination at the site is prevented by a cover system placed over the site. This cover system is comprised of 4 to 6 inches of concrete building slab. Figure 7 presents the location of the cover system. The Excavation Work Plan (EWP) provided in Appendix 4 outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix 7. Any breach of the site's cover system must be overseen by a Professional Engineer (PE) who is licensed and registered in New York State or a qualified person who directly reports to a PE who is licensed and registered in New York State.

3.3.2 Combined On- and Off-Site Sub-slab Depressurization System (SSDS)

To mitigate the potential for vapor intrusion, an active SSDS was installed both on-site and and in the off-site commercial spaces within Rochdale Village Mall #2. The SSDS design for the off-site SSDS was approved in the IRM Work Plan dated August 2017. The SSDS/SVE system design for the on-site SSDS was approved in the RAWP dated May

2020. The off-Site IRM and on-Site remedial action were implemented concurrently. The final SSDS blower was installed in August 2019.

The SSDS, consists of eleven suction pits installed beneath the building slab, each connected to a fan on the roof via cast iron piping. Cast iron was utilized due to fire department requirements for exterior piping. To create the suction pits, the existing slab was saw cut and the underlying soil was removed to a depth of at least 18 inches. The void space was lined with geotextile fabric and a layer of ¾" clean stone aggregate.

The overall goal of the system is to create a pressure differential of -0.02 inches of water column (in-wc) between the at-grade building and sub-slab environment; however, differential pressure readings above -0.004 in-wc are considered acceptable. An alarm system was installed that will notify the building management if a drop in pressure occurs, which indicates that the system is not operating as designed. The system has been designed in general conformance with the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH Soil Vapor Guidance), including Section 4.2.2, *System-specific Recommendations*. The exhaust locations meet the requirements of the NYSDOH Soil Vapor Guidance, and are located two feet above the access roof level and at least 25 feet away from adjoining buildings and HVAC intakes.

A blower test was performed for the off-site SSDS on August 12, 2019. A blower test was performed for the on-Site SSDS and SVE system on October 29, 2021. Based on the sizing tests, Table 4 below, indicates the fans that were installed in order to meet design goals. Installed fans were manufactured by Atlantic Blowers; all fans were equipped with a weather-proof enclosure.

Table 4: Fan Specifications

Suction Pit #	Design Requirements		Fan Make/Model	
	CFM	in-wc		
1	177	-11.25	Atlantic Blowers	AB-500
2	144	-4.97	Atlantic Blowers	AB-300
3	147	-26.44	Atlantic Blowers	AB-602
4	151	-29.06	Atlantic Blowers	AB-602
5	149	-31.37	Atlantic Blowers	AB-500
6	148	-26.75	Atlantic Blowers	AB-602
7	186	-15.66	Atlantic Blowers	AB-500
8	29	-5.72	Atlantic Blowers	AB-90
9	21	-9.68	Atlantic Blowers	AB-80
10	164	-35.45	Atlantic Blowers	AB-500
11	84	-28.61	Atlantic Blowers	AB-300

Notes: Fan specification sheets are included in Appendix 9

The system was started up on August 12, 2019 and a pressure field extension test was completed to ensure design goals were being met. The pressure field extension test results are shown below in Table 5. As noted above, the performance goal of the sub-slab vapor mitigation system was to depressurize below the slab to at least -0.02 in-wc; however, differential pressure readings above -0.004 in-wc were considered acceptable. Results of the communication test indicate that all soil vapor monitoring points pass the performance criteria as included in the approved RAWP. The SSDS vacuum was balanced to incorporate the SVE wellpoints; once the SVE system is no longer required, the SSDS will be rebalanced to increase the pressure of the SSDS. Locations of the monitoring points are shown in Figure 6.

Table 5: SSDS Monitoring Point Communication Test Results

Monitoring Point	Pressure (in-wc)
PM-1 (HIP Cleaners)	-0.012
PM-2 (HIP Cleaners)	-0.017
PM-3 (Nail Salon)	-0.037
PM-4 (Drugstore)	-0.518
PM-5 (Bank)	-0.041
PM-6 (Deli)	-0.006

Procedures for operating and maintaining the SSDS are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). As built drawings, signed and sealed by a professional engineer, are included in Appendix 9 – Operations and Maintenance Manual. Figure 6 shows the location of the ECs for the site.

3.3.3 Soil Vapor Extraction (SVE) System

The objective of the SVE system is to remove PCE from the soil above the water table; the system will also address PCE in soil vapor and prevent off-Site migration of soil vapor in coordination with the off-site active SSDS. This was accomplished by installing three extraction wells in the PCE source area and applying a vacuum. Four four-inch vertical SVE wells were constructed of five and a half feet of slotted (0.020 inch) schedule 40 PVC screen. The extraction wells were installed to a depth of five and a half ft-bg using hand tools due to overhead constraints. The extraction wells were connected below grade by four-inch PVC piping. Trenching was completed to accommodate the connections. The trenching was completed by removing the existing concrete slab and removing the underlying soil to a depth of six-inches below grade. Upon completion of the SVE piping network, ¾-inch clean stone was aggregate was backfilled around the piping and a four-inch concrete slab was reinstalled to seal the trench. The excavated soil was containerized and disposed of off-site in accordance with appropriate local, state, and federal regulations. The extraction wells were plumbed to a six-inch cast iron riser, independent from the on-site SSDS. The discharge location for the blower is located on the building roof, consistent with NYSDEC DAR-1 guidance.

An Interim Remedial Measures Work Plan (IRMWP) letter report dated March 2017 was submitted to NYSDEC for approval of the SVE design. On August 17, 2017, NYSDEC approved the work plan. Copies of NYSDEC correspondence and the SVE Performance Letter Report are included in the Final Engineering Report.

SVE performance testing included the screening of existing pressure monitoring locations in the soil along the outer periphery of the known areas on contamination exceeding the Protection of Groundwater SCO for PCE, to be treated by the extraction

wells. This is shown as PM-1 and PM-2 in Figure 6. Vacuum readings of -0.07 in-wc and -0.04 in-wc, respectively, were considered an acceptable value in accordance with the Environmental Protection Agency's (EPA) "*Soil Vapor Extraction Technology Reference Handbook, February 1991*."

A blower test was performed for the on-Site SVE system on October 29, 2021 to size the blower. Based on the sizing test, a RemediVac® SVE system with a full enclosure and a 2.1 kW regenerative vacuum pump was installed in order to meet design goals. The SVE system shed and blower were installed in December 2022.

The system start-up was completed on January 23, 2023. After the start-up, one effluent sample was collected for laboratory analysis of VOCs by EPA Method TO-15 from the effluent discharge line. The vapor effluent sample was collected in a 2.3-liter Summa Canister in accordance with the NYSDOH Soil Vapor Sampling Guidelines. The vapor sample was sent to a New York State certified laboratory where it was analyzed for the presence of VOCs using EPA Method TO-15. Contaminant air concentration modeling using USEPA's AERSCREEN software was completed to assess off-site impacts. Predicted impacts will be compared to guideline concentrations and this comparison will be used to determine the appropriate Environmental Rating and, if needed, the degree of control required for the acceptable operation of the source of PCE. In accordance with the regulatory requirements of the air toxics control program 6 NYCRR Part 212, the degree of air cleaning required for sources of toxic air contaminants is based on an Environmental Rating assigned by a DEC permit engineer. Ratings are based on a contaminant's toxicity (high, moderate or low), predicted offsite air concentrations, the proximity of ambient impacts to neighboring communities, existing background concentrations and the potential future growth of the impacted area. Based on the analytical results, air cleaning was not required for the system. In accordance with 6 NYCRR Part 212-2.2 Table 2, the maximum allowable emission rate for PCE is 1,000 pounds per year (lb/yr) (or 2.74 lb/day). A discussion of the calculations is included in the Final Engineering Report.

Table 6: SVE Monitoring Point Communication Test Results

Monitoring Location	Pressure (in-wc)
PM-1	-0.07
PM-2	-0.04

Procedures for operating and maintaining the SSDS and SVE systems are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). As-built drawings, signed and sealed by a PE who is licensed and registered in New York State, are included in Appendix 9 – Operations and Maintenance Manual. Figure 6 shows the location of the ECs for the site.

3.3.4 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10. Unless waived by the NYSDEC, confirmation samples of applicable environmental media are required before terminating any remedial actions at the site. Confirmation samples require Category B deliverables and a Data Usability Summary Report (DUSR).

As discussed below, the NYSDEC may approve termination of a groundwater monitoring program. When a remedial party receives this approval, the remedial party will decommission all site-related monitoring, injection and recovery wells as per the NYSDEC CP-43 policy.

The remedial party will also conduct any needed site restoration activities, such as asphalt patching and decommissioning treatment system equipment. In addition, the

remedial party will conduct any necessary restoration of vegetation coverage, trees and wetlands, and will comply with NYSDEC and United States Army Corps of Engineers regulations and guidance. Also, the remedial party will ensure that no ongoing erosion is occurring on the site.

3.3.4.1 - Cover

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

3.3.4.2 - Sub-Slab Depressurization (SSD) System

The SSDS will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH project managers. If monitoring data indicates that the SSD system may no longer be required, a proposal to discontinue the SSD system will be submitted by the remedial party to the NYSDEC and NYSDOH project managers.

3.3.4.3 – Soil Vapor Extraction (SVE) System

The SVE system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SVE system may no longer be required, a proposal to discontinue the system will be submitted by the remedial party. Conditions that may warrant discontinuing the SVE system include contaminant concentrations in groundwater and/or soil that: (1) reach levels that are consistently below ambient water quality standards or the site SCGs, as appropriate; (2) have become asymptotic to a low level over an extended period of time, as accepted by the NYSDEC; or (3) the NYSDEC has determined that the SVE system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

3.3.4.4 - In-Situ Chemical Oxidation (ISCO) Technology

Groundwater monitoring activities to assess ISCO treatment will continue, as determined by the NYSDEC project manager in consultation with NYSDOH project manager, until residual groundwater concentrations are found to be consistently below ambient water quality standards or the site SCGs, or have become asymptotic at an acceptable level over an extended period. If monitoring data indicates that monitoring may no longer be required, a proposal to discontinue the remedy will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC project manager. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional injections, source removal, treatment and/or control measures will be evaluated. The location of the ISCO treatment well is shown on Figure 8.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC project manager. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Assurance Project Plan provided in Appendix 6.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and

- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site – wide Inspection

Site-wide inspections will be performed at a minimum of once per year. These periodic inspections must be conducted when the ground surface is visible (i.e. no snow cover). Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix 8 – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 days of the event that includes a summary of actions taken, or to be taken,

and the potential impact to the environment and the public. The remedial party will submit follow-up status reports to the NYSDEC within 45 days of the event on actions taken to respond to any emergency event requiring ongoing responsive action, describing and documenting actions taken to restore the effectiveness of the ECs.

4.3 Treatment System Monitoring and Sampling

4.3.1 Remedial System Monitoring

Monitoring of the cover, SSDS and SVE system will be performed on a routine basis, as identified in Table 7 Remedial System Monitoring Requirements and Schedule (see below). The monitoring of remedial systems must be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager. A visual inspection of the complete system will be conducted during each monitoring event. Unscheduled inspections and/or sampling may take place when a suspected failure of the cover, SSDS and SVE system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Cover, SSDS and/or SVE system components to be monitored include, but are not limited to, the components included in Table 7 below.

Table 7 – Remedial System Monitoring Requirements and Schedule

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
SSDS Vacuum Blowers	Pressure readings at twelve monitoring points	Design goal of ≤ -0.02 in-wc; ≤ -0.004 in-wc acceptable	Annually
	Alarm system test	Pass/fail	Quarterly
SVE Vacuum Blower	Pressure readings at one monitoring point	Design goal of ≤ -0.1 in-wc	Annually
	Alarm system test	Pass/fail	Quarterly

SSDS Piping	Visual inspection of the SSDS mechanical and above grade piping components	N/A	Quarterly
SVE Piping	Visual inspection of the SVE mechanical and above grade piping components.	N/A	Quarterly
Cover System	Visual inspection of concrete floors and slabs for perforations, cracking or degradation	N/A	Annually

A complete list of components to be inspected is provided in the Inspection Checklist, provided in Appendix 8 - Site Management Forms. If any equipment readings are not within their specified operation range, any equipment is observed to be malfunctioning or the system is not performing within specifications; maintenance and repair, as per the Operation and Maintenance Plan, is required immediately.

4.3.2 Remedial System Sampling

Sampling locations, required analytical parameters and schedule are provided in Table 8 – Remedial System Sampling Requirements and Schedule below. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

Table 8 – Remedial System Sampling Requirements and Schedule

Sampling Location	**Analytical Parameters**	**Schedule**
	VOCs (EPA TO-15)	
Blower Effluent Sample	X	At start-up and restart of the SVE system

In the event that the SVE system requires a system restart, an effluent sample will be collected.

Detailed sample collection and analytical procedures and protocols are provided in Appendix 6 – Quality Assurance Project Plan.

The remedial party will properly dispose of any and all wastes generated by the remedial system at off-site disposal facilities according to local, state and federal laws and regulations. Wastes will be tested before disposal to comply with the permit conditions of the disposal facility. Wastes generated at this site may include: spent activated carbon.

4.4 Post-Remediation Media Monitoring and Sampling

Samples shall be collected from the Site groundwater monitoring network on a quarterly basis. Sampling locations, required analytical parameters and schedule are provided in Table 9 – Remedial System Sampling Requirements and Schedule below. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

Table 9 – Post Remediation Sampling Requirements and Schedule

Sampling Location	Analytical Parameters	Schedule
Monitoring Wells: HIP-GW-1, HIP-GW-3S, HIP-GW-6, HIP-GW-7	VOCs (EPA Method 8260C)	Quarterly
Subsurface Soil Location	VOCs (EPA Method 8260C)	Prior to petition shut down of SVE
Indoor air, soil vapor, outdoor air	VOCs (EPA TO-15)	Prior to petition shut down of SVE
Indoor air	VOCs (EPA TO-15)	First heating season following startup

Detailed sample collection and analytical procedures and protocols are provided in Appendix 6 – Quality Assurance Project Plan.

4.4.1 Soil Sampling

The design goal of the SVE is to decrease PCE and its associated degradation compound concentrations to below the Protection of Groundwater SCO. Soil sampling will be performed once, at a minimum, to assess the quality of the soil, specifically the presence of remaining PCE contamination, prior to petitioning shut down of the SVE system.

On-site soil sampling will be completed across the Site at multiple locations and depths to determine the efficacy of the SVE system. Proposed soil sample locations and soil boring depths will be provided in a written workplan to the Department for approval prior to completion of any work. Modification of sampling locations and frequencies will be as determined by the Department.

The soil boring samples will be analyzed for VOCs by an ELAP-certified laboratory. Results will be compared to the Protection of Groundwater SCO, as defined by 6 NYCRR Part 375-6.8. The SVE system will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH. In the event that soil sampling data indicates that the SVE system may no longer be required, a proposal to discontinue the SVE system will be submitted by the remedial party to the NYSDEC and NYSDOH.

The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Deliverables for the soil sampling program are specified in Section 7.0 – Reporting Requirements.

4.4.2 Groundwater Sampling

Groundwater monitoring will be performed quarterly to assess the performance of the remedy. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the site. The network of on-site and off-site wells has been designed based on the following criteria:

- Site wells are located upgradient, in the source area and downgradient of the site;
- Site wells are located for appropriate triangulation of the groundwater flow; and,
- Site wells are screened approximately seven feet into the groundwater across the water table in order to maximize yield.

Table 10 summarizes the wells' identification numbers, as well as the purpose, location, depths, diameter and screened intervals of the wells. As part of the groundwater monitoring, 1 upgradient well , 1 on-site well and 1 downgradient well are sampled to evaluate the effectiveness of the remedial system. The remedial party will measure depth to the water table for each monitoring well in the network before sampling.

Table 10 – Monitoring Well Construction Details

Monitoring Well ID	Well Location and Current Status	Coordinates (longitude/ latitude)	Well Diameter (inches)	Elevation (NAVD88)			
				Top of Outer Casing at Surface	Top of PVC	Screen Top	Screen Bottom
HIP-GW-1	On-Site Source Area; Existing	(40.673812, -73.770879)	1	15.52	15.05	8.52	-1.48
HIP-GW-2S	Off-Site Upgradient; Existing	(40.673856, -73.770860)	2	15.67	15.26	9.17	-0.83
HIP-GW-2D	Off-Site Upgradient; Existing	(40.673877, -73.770849)	2	15.53	15.07	-14.47	-19.47
HIP-GW-3S	Off-Site Upgradient; Existing	(40.673854, -73.771037)	2	15.07	14.75	9.57	-0.43

HIP-GW-3D	Off-Site Upgradient; Existing	(40.673875, -73.771026)	2	15.03	14.64	-14.97	-19.97
HIP-GW-6	Off-Site Upgradient; Existing	(40.673987, -73,770754)	2	16.79	16.53	9.29	-0.71
HIP-GW-7	Off-Site Downgradient; Existing	(40.673719, -73.771104)	2	14.88	14.53	9.88	-0.12

Monitoring well construction logs are included in Appendix 3 of this document.

Site monitoring well locations are illustrated on Figure 3 and were installed and documented in Tenen's Remedial Investigation Report; no new groundwater wells are proposed for installation. Groundwater gauging data indicates the groundwater generally flows to the east.

Groundwater samples will collected on a quarterly basis from monitoring wells HIP-GW-1, HIP-GW-3S, HIP-GW-6 and HIP-GW-7. Samples will be analyzed for the following by an ELAP certified laboratory:

- VOCs (EPA Method 8260)

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC project manager will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC project manager. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well

Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC project manager.

The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.4.3 Soil Vapor Intrusion Sampling

Soil vapor intrusion sampling will be performed prior to shutdown of the systems. to assess the performance of the remedy. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

The network of on-site soil vapor intrusion sample locations has been designed, to assess on-site conditions, based on the following criteria:

- One on-site indoor air sample and one outdoor air sample will be collected during the heating season, and;
- Samples will sent to an ELAP-certified laboratory for analysis and analyzed for TO-15 VOCs.

The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Deliverables for the soil vapor intrusion sampling program are specified in Section 7.0 – Reporting Requirements.

4.4.4 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix 8 - Site Management Forms. Other observations (e.g.,

groundwater monitoring well integrity) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in the site-specific QAPP provided as Appendix 6 of this document.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

This Operation and Maintenance Plan provides a brief description of the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the site to operate and maintain the cover, SSDS and SVE systems;
- Will be updated periodically to reflect changes in site conditions or the manner in which the cover, SSDS and SVE systems are operated and maintained.

Further detail regarding the Operation and Maintenance of the SSDS and the SVE system is provided in Appendix 9 - Operation and Maintenance Manual. A copy of this Operation and Maintenance Manual, along with the complete SMP, is to be maintained at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of this SMP.

5.2 Remedial System (or other Engineering Control) Performance Criteria

The site cover, SSDS and SVE system performance criteria are specified in Table 6 (Section 4.3.1) of this SMP.

5.3 Operation and Maintenance of Sub-slab Depressurization System

The following sections provide a description of the operations and maintenance of the SSDS. Cut-sheets and as-built drawings for the SSDS are provided in Appendix 9 - Operations and Maintenance Manual.

5.3.1 System Start-Up and Testing

After the depressurization system was installed, the following was completed:

1. Visual inspection of building slabs for any cracks or holes. If any were identified, they were sealed using caulk.
2. Blowers were turned on.
3. After allowing appropriate time for the blower and system to equilibrate, sub-slab pressure was measured at six monitoring points (both on-site and off-site) to ensure that the goal of -0.02 in-wc has been achieved.
4. Verification that the system alarms are functioning was completed by disconnecting pressure tubing hookup and noting that all alarms are operational.

Start-up communication testing results are shown in Table 4 of this SMP.

The system testing described above will be conducted if, in the course of the SSDS lifetime, the system goes down or significant changes are made to the system and the system must be restarted.

5.3.2 Routine System Operation and Maintenance

The long-term operation and maintenance program described below shall continue throughout the life cycle of the SSDS to ensure a proper working order. The long-term operation and maintenance program for the major SSDS components includes manufacturer's recommendations for the replacement of SSDS components if any of the components fail, inspection procedures, an operation schedule, typical routine maintenance activities and schedules, and troubleshooting.

5.3.3 Non-Routine Operation and Maintenance

Common troubleshooting tips that can be followed if the vacuum switch/alarm will not indicate a vacuum or is sluggish include the following:

- The pressure ports (high or low) are not hooked up correctly;
- The fittings or sensing lines are blocked, pinched or leaking;
- The cover is loose;

- The pressure sensor is improperly located;
- The ambient temperature is too low (below 20-deg C)

Table 7 provides a summary and schedule of routine maintenance.

5.3.4 System Monitoring Devices and Alarms

The SSDS has a warning device to indicate that the system is not operating properly. In the event that warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SSDS will be restarted. Operational problems will be noted in the Periodic Review Report to be prepared for that reporting period.

The alarm system, described below, shall run continuously and only be disconnected for routine maintenance and inspection activities or replacement. Each riser pipe is equipped with the following:

- Dwyer Series BDPA Adjustable Differential Pressure Alarm (Model: BDPA-03-2N)

The Dwyer Series BDPA Adjustable Differential Pressure Alarm (Model: BDPA-03-2N) includes a scaled adjustment knob to allow changes to the switching pressure to be made without a pressure gauge; the product is an SPDT pressure switch and alarm combination. The alarm is wired to send a signal remotely to the Rochdale Village building management system. In case there is a need to relocate a switch/alarm, the new location shall ensure that the switch/alarm remains in close proximity to the riser pipes and is installed under the supervision of the Remedial Engineer. If the device is not indicating a vacuum while the SSDS is on, staff trained to perform inspections will make sure that the tubing connected to the riser pipe is connected to the low pressure port. High pressure ports on the vacuum switch/alarm are vented to atmosphere.

The vacuum switch/alarm does not require lubrication or periodic servicing. Each vacuum switch/alarm is connected to a low voltage transformer for power, and barring a power outage, routine checkups will not be required. Repairs or alterations made to the vacuum switches by others will void the unit's warranty. The vacuum switches are factory

calibrated and cannot be recalibrated in the field. The installation and operating instructions for the vacuum alarm/monitor have been included in Appendix 9.

When testing the vacuum alarms, the tubing that connects the vacuum alarms to the riser pipe shall be disconnected and the low set point raised above the current reading. If the vacuum alarms are powered at the time of disconnecting the tubing from the riser pipe, the alarms will go off. The alarms should go back on-line when the tubing is reconnected to the riser pipe. If the system is in alarm when there is a vacuum present in the riser pipe, inspect the tubing and riser pipe tap to ensure that there are no blockages. If there is a blockage in either the tubing or the riser pipe tap, remove the blockage and retest the vacuum alarm/monitor.

The SSDS fans shall operate continuously and only be turned off for routine maintenance and inspection activities or replacement. The SSDS fans shall not be left on the system piping without electrical power for more than 48 hours due to possible fan failure that could result from this non-operational storage. The SSDS fan units do not require periodic servicing and should be returned to the manufacturer or supplier for service. Repairs or alterations made to the SSDS fan units by others will void the unit's warranty. The installation and operating instructions for the SSDS fan units have been included in Appendix 9.

Inspections of the SSDS components shall include the following:

- Observe visible components (fan, vacuum switch/alarm, tubing, riser pipe, etc.) for physical wear, damage and operational issues, and replace as necessary;
- Remove any blockages in vacuum switch/alarm tubing and riser pipe taps;
- Verify operation of vacuum switch/alarm by disconnecting tubing from riser pipe and noting if the system goes into alarm mode;
- Inspect riser pipe penetrations in concrete slab for proper seal;
- Inspect riser pipe connections at fan for leaks and tightness;
- Inspect power to fan by operating dedicated switch.

A copy of an Operations and Maintenance (O&M) Plan specific to the system components is provided in Appendix 9, which will provide further detail on the above.

5.3.5 Fire Safety

All electrical components of the SSDS were installed in accordance with NYC Department of Buildings (DOB) electrical code. The SSDS control boxes containing the electrical panels meet the local NY State and national electric codes and a fire extinguisher is located in the vicinity of the control boxes. All above ground piping inside of the building is cast iron, in accordance with the NYC fire code.

The remedial party will conduct an annual facility walk with the local fire chief and/or fire suppression team. The site walk will allow for the addition of the facility to any local preplanning efforts. The NYSDEC project manager will be provided with the local fire chief's/fire suppression team's recommendations as soon as they become available. Following review, the NYSDEC project manager may direct the remedial party to implement the recommendations and/or revise the SMP.

5.4 Operation and Maintenance of Soil Vapor Extraction System

The following sections provide a description of the operations and maintenance of the SVE. As-built drawings for the SVE are provided in Appendix 9 - Operations and Maintenance Manual.

5.4.1 System Start-Up and Testing

After the SVE system was installed, the following was completed:

1. Visual inspection of building slabs for any cracks or holes. If any were identified, they were sealed using caulk.
2. Turn on the blower.
3. Allow fifteen minutes for blower and system to equilibrate.
4. Measurement of the pressure within the outer periphery at monitoring points around the extraction well. A vacuum reading of -0.07 and -0.04 in-wc induced in the monitoring points are considered acceptable values.

Start-up communication testing results are shown in Table 6 of this SMP.

The system testing described above will be conducted if, in the course of the SVE system lifetime, the system goes down or significant changes are made to the system and the system must be restarted.

5.4.2 Routine System Operation and Maintenance

The long-term operation and maintenance program described below shall continue throughout the life cycle of the SVE to ensure a proper working order. The long-term operation and maintenance program for the major SVE components includes manufacturer's recommendations for the replacement of SVE components if any of the components fail, inspection procedures, an operation schedule, typical routine maintenance activities and schedules, and troubleshooting

5.4.3 Non-Routine Operation and Maintenance

Common troubleshooting tips that can be followed if the vacuum switch/alarm will not indicate a vacuum or is sluggish include the following:

- The pressure ports (high or low) are not hooked up correctly;
- The fittings or sensing lines are blocked, pinched or leaking;
- The cover is loose;
- The pressure sensor is improperly located;
- The ambient temperature is too low (below 20-deg C)

Table 7 provides a summary and schedule of routine maintenance.

5.4.4 System Monitoring Devices and Alarms

The SVE system has a warning device to indicate that the system is not operating properly. The SVE system is equipped with a system fault notification system that allows for telemetric access to the system control panel. The relay logic control system will send

cellular and e-mail notifications to the remedial party in the event of an alarm or system input changes.

In the event that warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SVE system will be restarted. Operational problems will be noted in the Periodic Review Report to be prepared for that reporting period.

5.4.5 Fire Safety

All electrical components of the SVE system were installed in accordance with NYC Department of Buildings (DOB) electrical code. The SSDS control boxes containing the electrical panels meet the local NY State and national electric codes and a fire extinguisher is located in the system shed. All above ground piping inside of the building is cast iron, in accordance with the NYC fire code.

The remedial party will conduct an annual facility walk with the local fire chief and/or fire suppression team. The site walk will allow for the addition of the facility to any local preplanning efforts. The NYSDEC project manager will be provided with the local fire chief's/fire suppression team's recommendations as soon as they become available. Following review, the NYSDEC project manager may direct the remedial party to implement the recommendations and/or revise the SMP.

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the

impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a summary of vulnerability assessments that will be conducted for the site during periodic assessments, and briefly summarizes the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding.

Flood Plain: The Federal Emergency Management Agency (FEMA) flood insurance rate map for the Site (Map Number 3604970242F) indicates that the Site and surrounding area is not located within the 0.2% annual chance floodplain (500-year flood).

Site Drainage and Storm Water Management: The Site occupies less than one acre of land and a permit for storm water discharges is not required.

Erosion: No evidence of erosion has been observed at the Site and the Site cover will not be affected by stormwater.

High Wind: There are no remedial systems susceptible to high wind damage present at the Site.

Electricity: The SSDS and SVE system would be susceptible to power loss and/or dips/surges in voltage during severe weather events, including lightning strikes, and the associated impact on Site equipment and operations.

Spill/Contaminant Release: The SSDS and SVE system are not susceptible to a spill or other contaminant release due to storm-related damage caused by flooding, erosion, high winds, loss of power etc.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the

SMP provides a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

6.2.1 Timing of Green Remediation Evaluations

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the NYSDEC project manager feels appropriate, e.g. during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

6.2.2. Remedial Systems

Remedial systems will be operated properly considering the current site conditions to conserve materials and resources to the greatest extent possible. Consideration will be given to operating rates and use of reagents and consumables. Spent materials will be sent for recycling, as appropriate.

6.2.3 Building Operations

Structures including buildings and sheds will be operated and maintained to provide for the most efficient operation of the remedy, while minimizing energy, waste generation and water consumption.

6.2.4 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site, use of consumables in relation to visiting the Site in order to conduct system checks and/or collect samples, and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or

means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

6.2.5 Metrics and Reporting

As discussed in Section 7.0 and as shown in Appendix 8 – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits. A set of metrics has been developed.

6.3 Remedial System Optimization

A Remedial System Optimization (RSO) study will be conducted any time that the NYSDEC project manager or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Soil vapor intrusion has not been mitigated accordingly after indoor air sampling is completed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;

- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

7.0. REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix 8. These forms are subject to NYSDEC revision. All site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 12 and summarized in the Periodic Review Report.

Table 12: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
1. Groundwater Monitoring (to be provided with Periodic Review Report)	Annually; Quarterly Summaries by Tenen Environmental, LLC
2. SSDS and SVE pressure monitoring (to be provided with Periodic Review Report)	Annually
3. Periodic Review Report	Annually, or as otherwise determined by the NYSDEC

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;

- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;

- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the NYSDEC project manager beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix 1 -Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections, fire inspections and severe condition inspections, if applicable.
- Description of any change of use, import of materials, or excavation that occurred during the certifying period.

- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.

- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.

- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These tables and figures will include a presentation of past data as part of an evaluation of contaminant concentration trends, including but not limited to:
  - Trend monitoring graphs that present groundwater contaminant levels from before the start of the remedy implementation to the most current sampling data;
  - Trend monitoring graphs depicting system influent analytical data on a per event and cumulative basis;
  - O&M data summary tables;
  - A current plume map for sites with remaining groundwater contamination; and
  - A groundwater elevation contour map for each gauging event.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.

- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific Remedial Action Work Plan (RAWP), ROD or Decision Document;
  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;

- Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan;
- An evaluation of trends in contaminant levels in the affected media to determine if the remedy continues to be effective in achieving remedial goals as specified by the RAWP, ROD or Decision Document; and
- The overall performance and effectiveness of the remedy.

- A performance summary for all treatment systems at the site during the calendar year, including information such as:
  - The number of days the system operated for the reporting period;
  - The average, high, and low flows per day;
  - The contaminant mass removed and the cost per pound of mass removed during the certification period and during the life of the treatment system;
  - A description of breakdowns and/or repairs along with an explanation for any significant downtime;
  - A description of the resolution of performance problems;
  - Alarm conditions;
  - Trends in equipment failure;
  - A summary of the performance, effluent and/or effectiveness monitoring; and
  - Comments, conclusions, and recommendations based on data evaluation. Recommendations must address how receptors would be impacted. Recommendations can include:
    - Proposals to address efficiency and costs such as: instituting remote operation, system changes to decrease maintenance costs and downtime, and system changes to decrease energy use; and
    - Proposals to modify or shut down a treatment system due to remediation completion, system performance or changed conditions. System shutdowns are addressed in Section 6.4 of DER-10.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional as defined in 6 NYCRR Part 375 or Professional Engineer licensed to practice and registered in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *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 in this report is accurate and complete.*

I certify that all information and statements in this certification form 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, Matthew M. Carroll , of 1085 Sackett Avenue, Bronx, NY 10461, am certifying as Owner's Designated Site Representative for the site."

I certify that the New York State Education Department has granted a Certificate of Authorization to provide Professional Engineering services to the firm that prepared this Periodic Review Report.

For BCP projects, every five years the following certification will be added:

- *The assumptions made in the qualitative exposure assessment remain valid.*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The Periodic Review Report may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control or failure to conduct site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC project manager.

7.4 Remedial System Optimization Report

If an RSO is to be performed (see Section 6.3), upon completion of an RSO, an RSO report must be submitted to the NYSDEC project manager for approval. A general outline for the RSO report is provided in Appendix 10. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager.

8.0 REFERENCES

6 NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

Phase I Environmental Site Assessment, Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, May 25, 2010, GRS Group

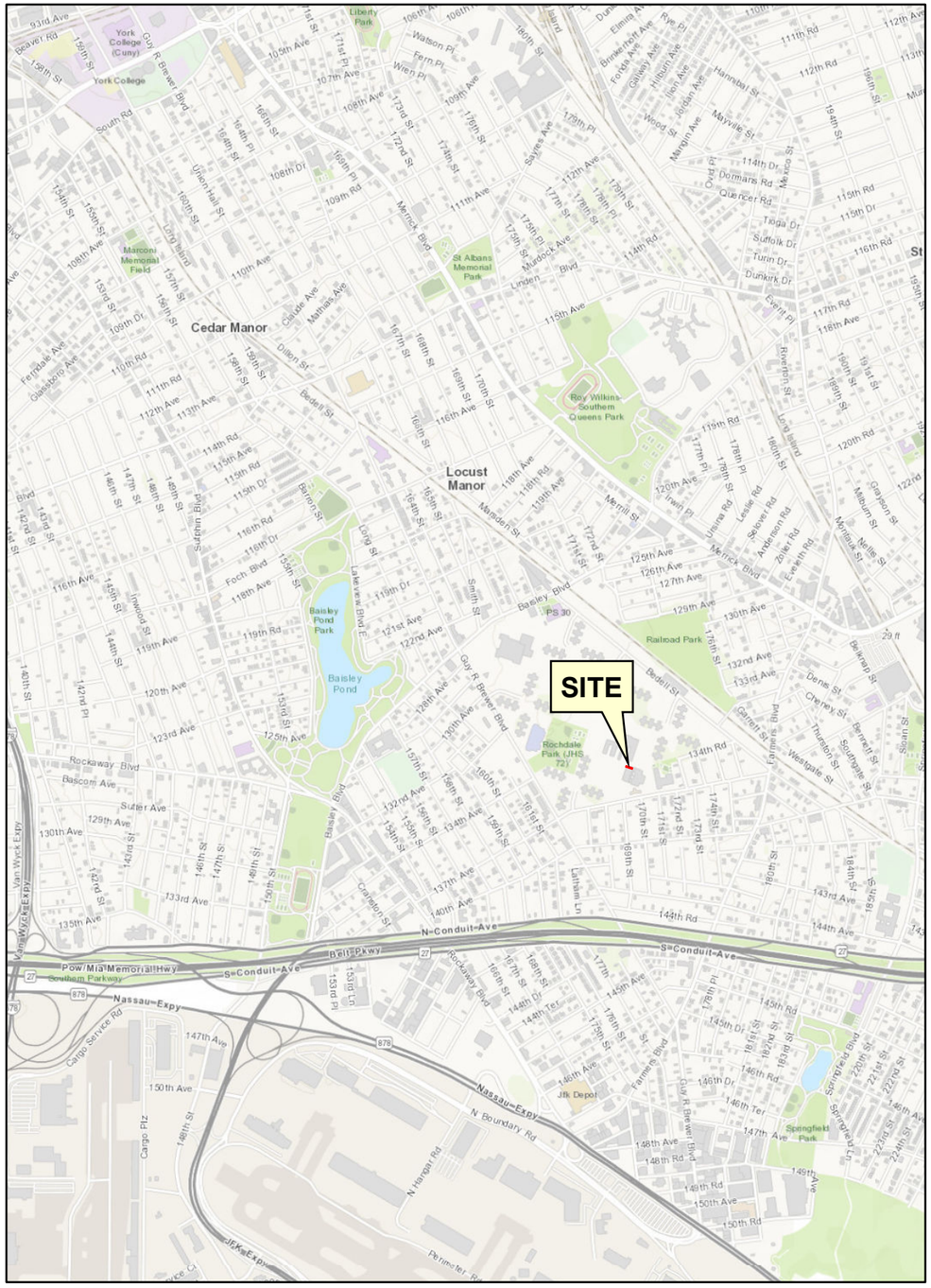
Phase II Environmental Assessment Limited Subsurface Investigation, Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, September 17, 2010, GRS Group

Soil Vapor Investigation, HIP Cleaners, 169-47 137th Avenue, Queens, NY, 11434, December 2013, Jet Environmental

Remedial Investigation Report (RIR), HIP Cleaners, 169-55 137th Avenue, Queens, NY, 11434, January 2019, Tenen Environmental

Supplemental Remedial Investigation, HIP Cleaners Rochdale Village, 169-55 137th Avenue, Queens, NY 11434, December 2016, Tenen Environmental

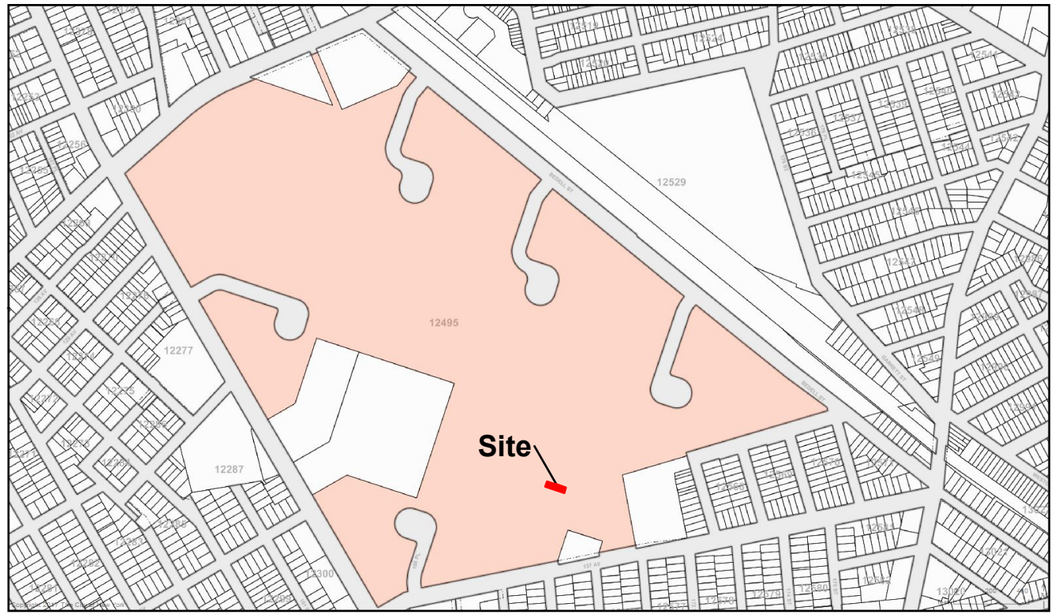
FIGURES



Basemap: ESRI, World Topo Map
USGS Jamaica, NY Quandrangle

Site Location

0 1,000 2,000 4,000 Feet



http://gis.nyc.gov/taxmap/map.htm

Department of Finance Digital Tax Map

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Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
NYC Department of City Planning, Information Technology Division

Department of City Planning MapPLUTO - 2016 v2

0 400 800 1,600 Feet

HIP Cleaners
Rochdale Village
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Client

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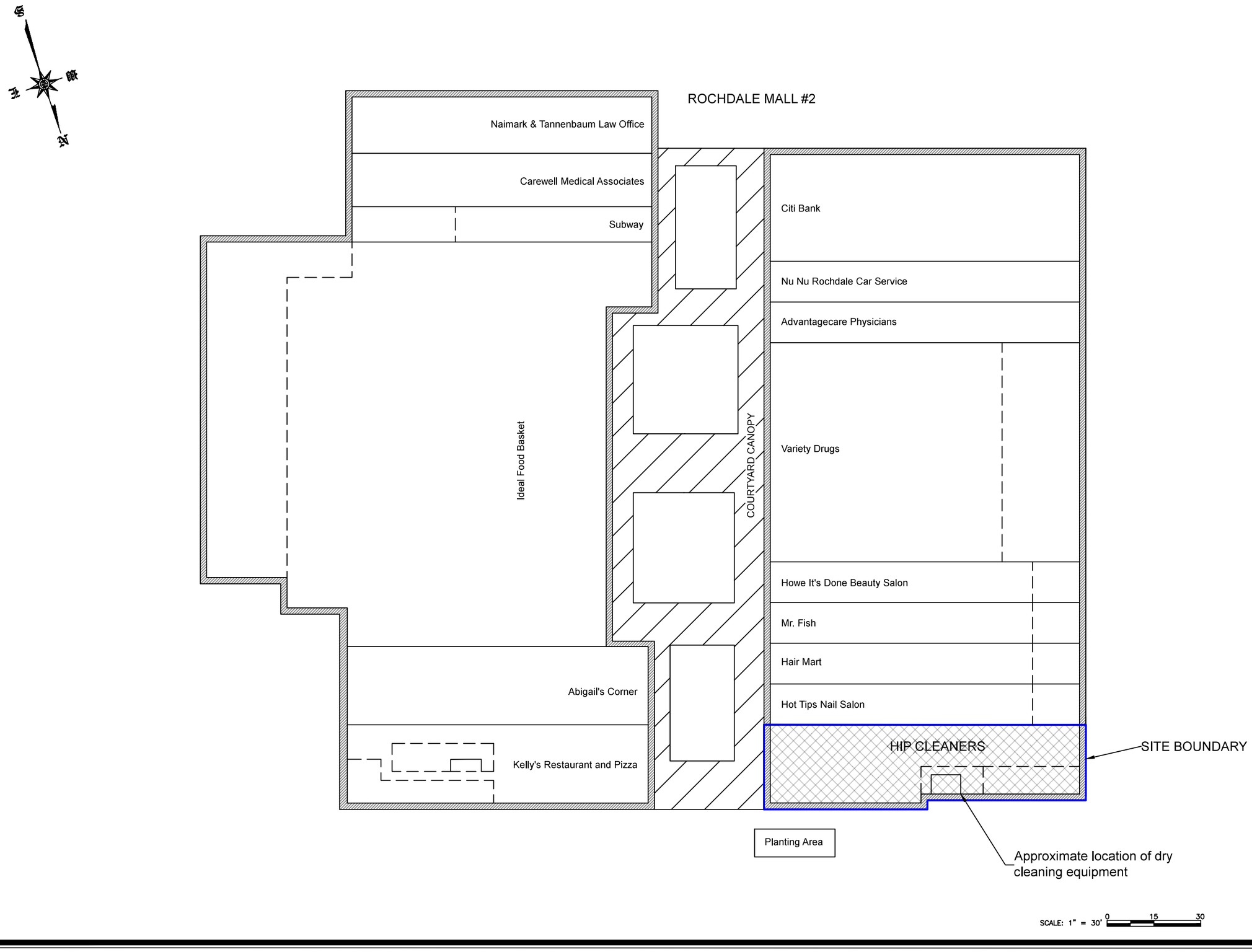
Drawn By	Checked By	Date	Scale
LM	KM	November 2017	As Noted

Drawing Title: **Site Location Map**

Drawing No: **Figure 1**



CLIENT

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CONSULTANT

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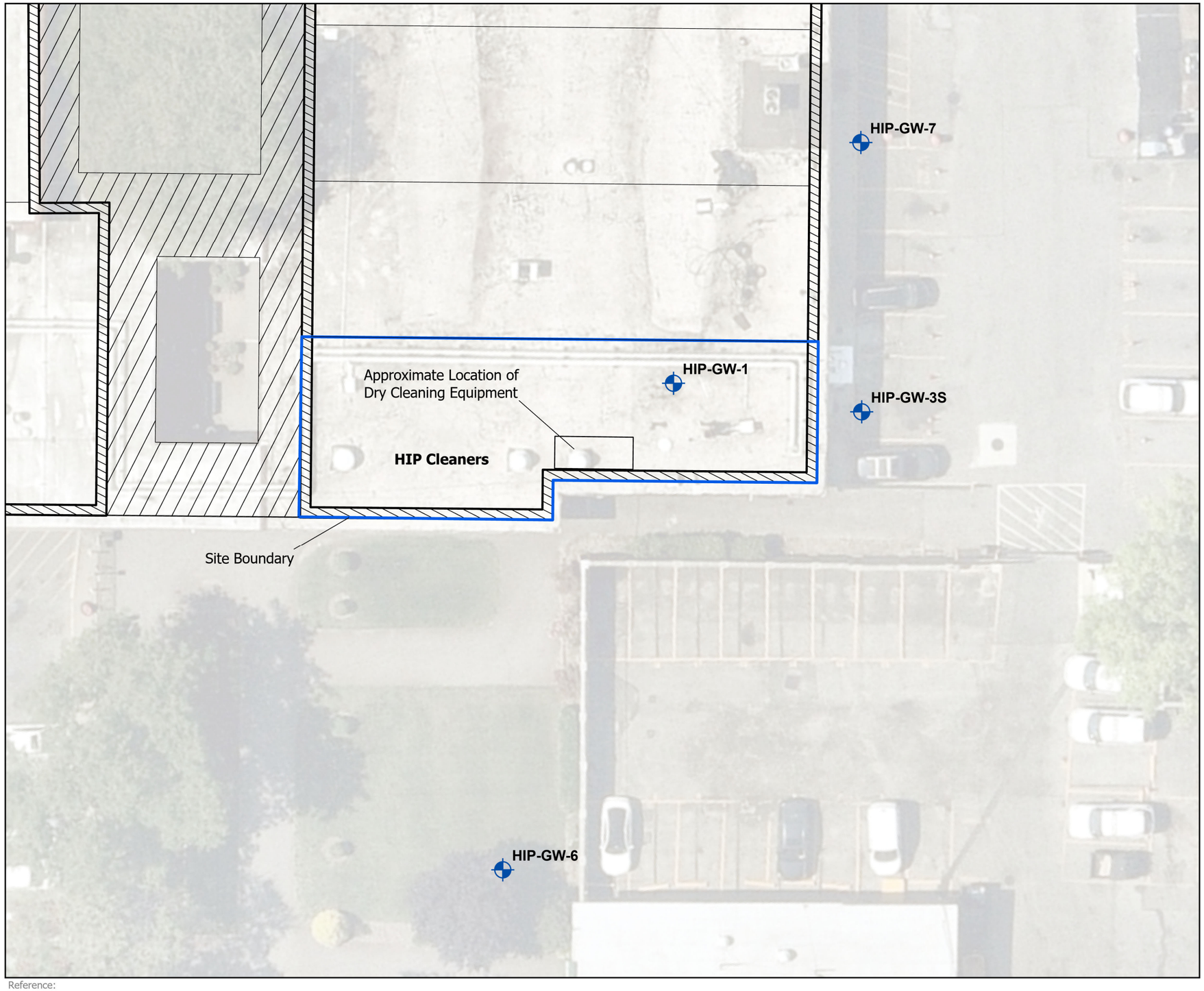
KM	MC	MARCH 2016	AS NOTED

DRAWING TITLE: FIGURE 2

DRAWING NO.: SITE LAYOUT



General Groundwater
Flow Direction

Legend

Permanent Groundwater
Monitoring Well

0 10 20 40 Feet

Reference:
Nearmap Aerial 5/28/2023
Well Locations: Donald R. Stedge, P.L.S., Environmental Easement Prepared for HIP Cleaners Rochdale Village, 8/29/18

HIP Cleaners
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Jamaica, Queens

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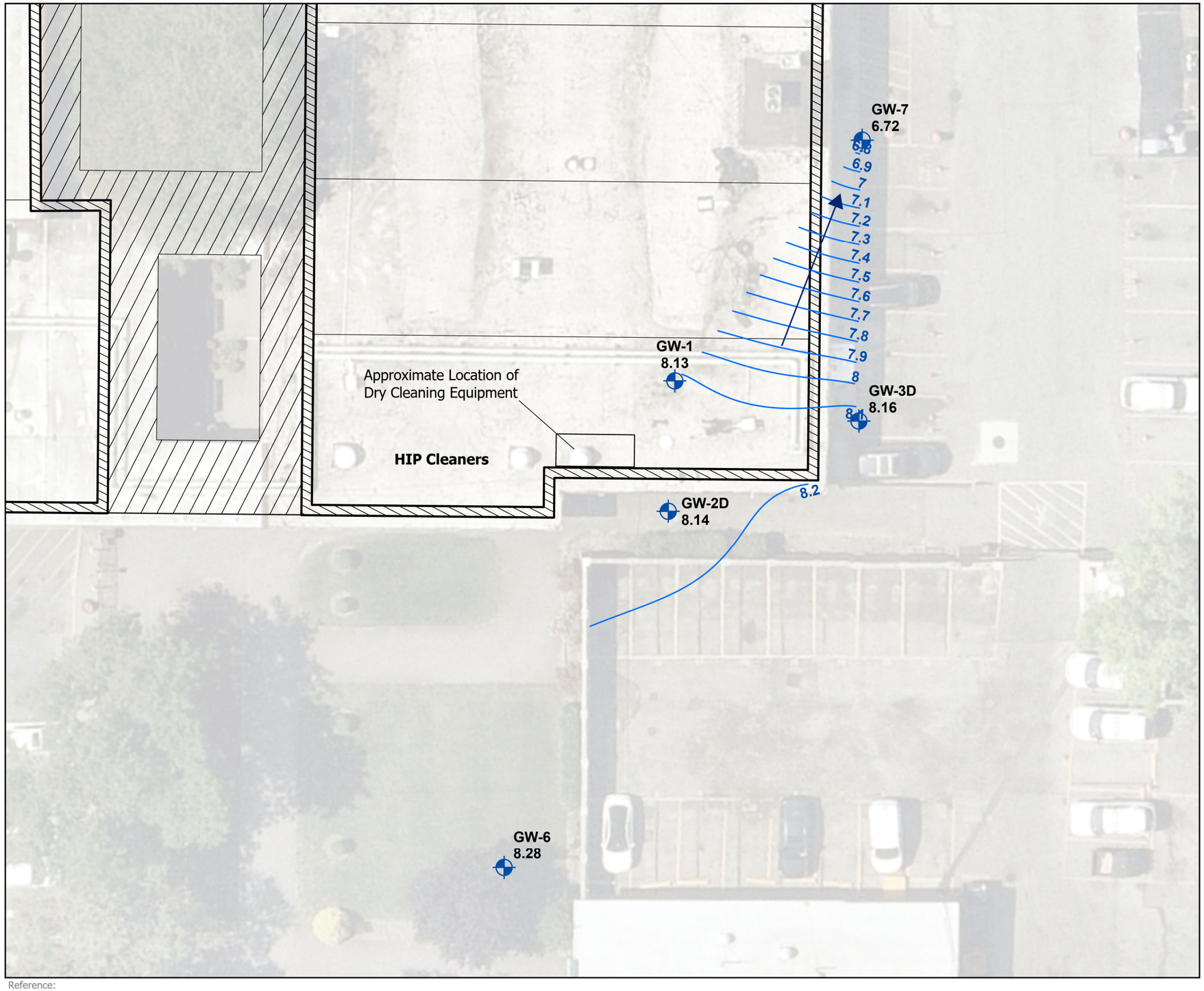
Drawn By	Checked By	Date	Scale
LM	CZ	December 2023	As Noted

Drawing Title: Post Remedial Groundwater Locations

Drawing No.: Figure 3



Reference:
Nearmap Aerial 5/28/2023
Well Locations: Donald R. Stedge, P.L.S., Environmental Easement Prepared for HIP Cleaners Rochdale Village, 8/29/18

General Groundwater
Flow Direction

Legend

Permanent Groundwater
Monitoring Well

Feet
0 10 20 40

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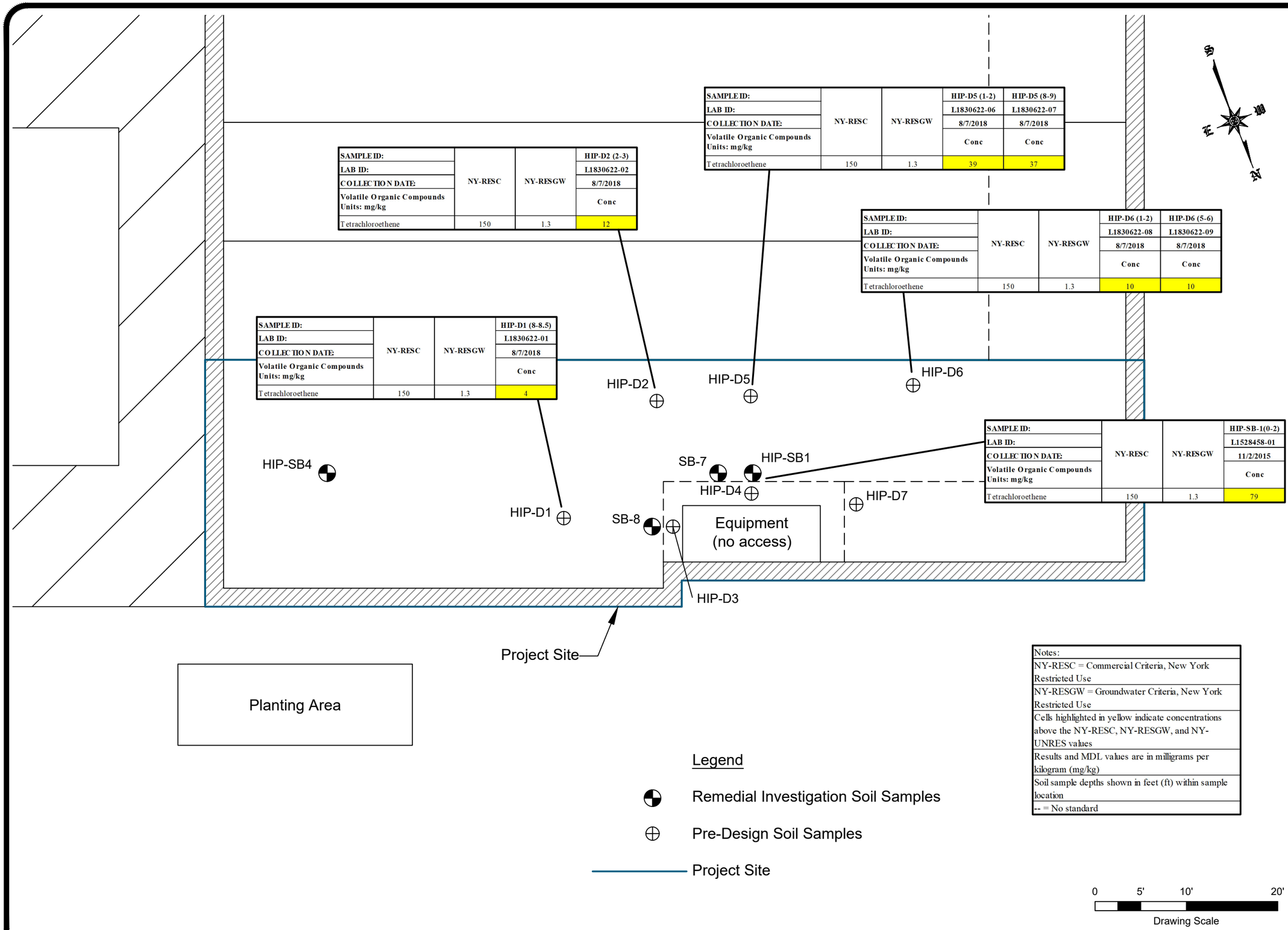
LM	CZ	December 2023	As Noted

Drawing Title: Groundwater Flow Map

Drawing No.: Figure 3A



SAMPLE ID:	NY-RESC	NY-RESGW	HIP-D2 (2-3)
LAB ID:			L1830622-02
COLLECTION DATE:			8/7/2018
Volatile Organic Compounds Units: mg/kg			Conc
Tetrachloroethene	150	1.3	12

SAMPLE ID:	NY-RESC	NY-RESGW	HIP-D5 (1-2)	HIP-D5 (8-9)
LAB ID:			L1830622-06	L1830622-07
COLLECTION DATE:			8/7/2018	8/7/2018
Volatile Organic Compounds Units: mg/kg			Conc	Conc
Tetrachloroethene	150	1.3	39	37

SAMPLE ID:	NY-RESC	NY-RESGW	HIP-D6 (1-2)	HIP-D6 (5-6)
LAB ID:			L1830622-08	L1830622-09
COLLECTION DATE:			8/7/2018	8/7/2018
Volatile Organic Compounds Units: mg/kg			Conc	Conc
Tetrachloroethene	150	1.3	10	10

SAMPLE ID:	NY-RESC	NY-RESGW	HIP-D1 (8-8.5)
LAB ID:			L1830622-01
COLLECTION DATE:			8/7/2018
Volatile Organic Compounds Units: mg/kg			Conc
Tetrachloroethene	150	1.3	4

SAMPLE ID:	NY-RESC	NY-RESGW	HIP-SB-1(0-2)
LAB ID:			L1528458-01
COLLECTION DATE:			11/2/2015
Volatile Organic Compounds Units: mg/kg			Conc
Tetrachloroethene	150	1.3	79

Notes:
NY-RESC = Commercial Criteria, New York Restricted Use
NY-RESGW = Groundwater Criteria, New York Restricted Use
Cells highlighted in yellow indicate concentrations above the NY-RESC, NY-RESGW, and NY-UNRES values
Results and MDL values are in milligrams per kilogram (mg/kg)
Soil sample depths shown in feet (ft) within sample location
-- = No standard

SITE

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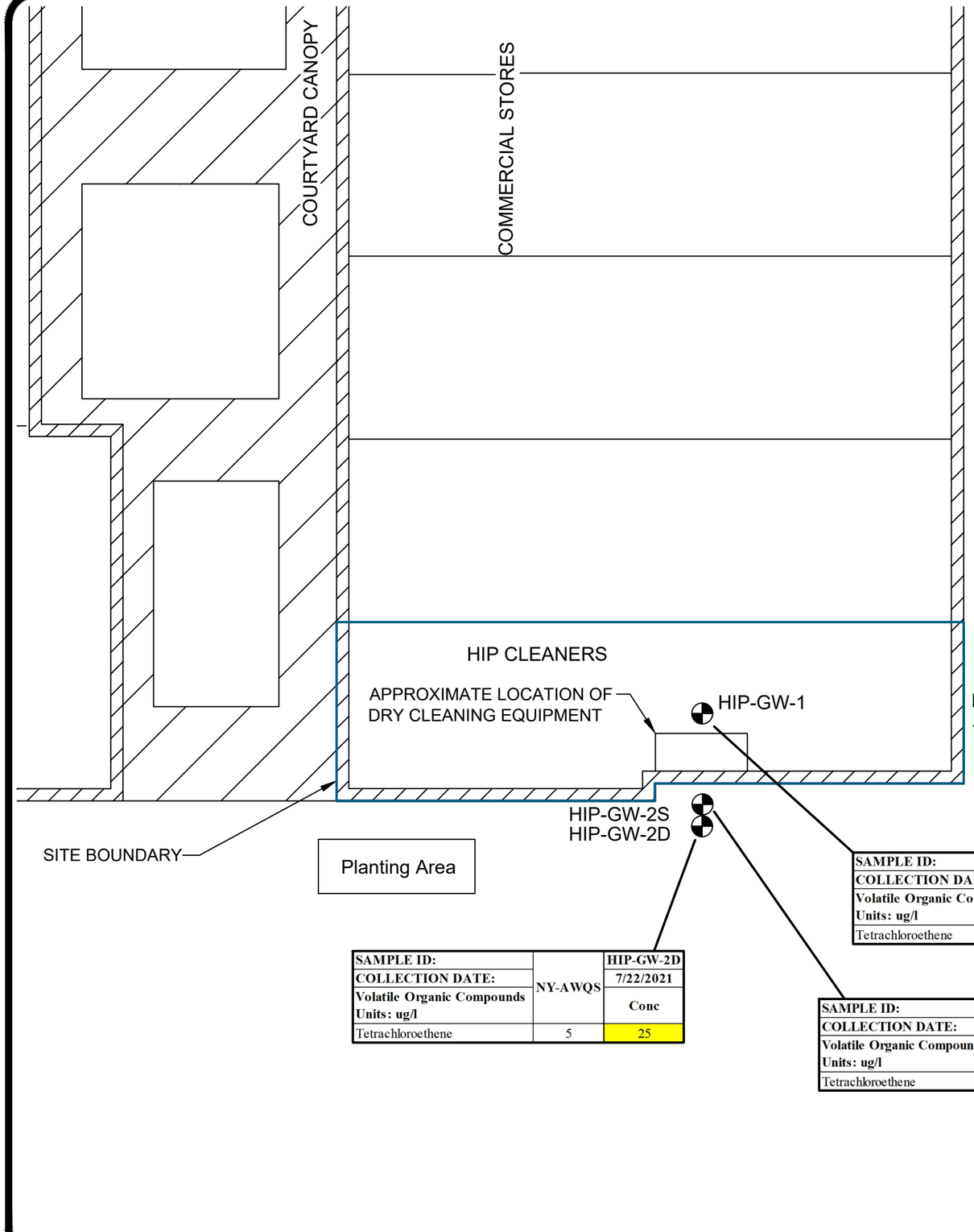
DRAWING TITLE: Summary of PCE in Soil

DRAWING NO.: Figure 4



LEGEND

Permanent Groundwater Monitoring Well

Notes:
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Cells highlighted in yellow indicate concentrations above NY-AWQS

SAMPLE ID:	NY-AWQS	HIP-GW-7
COLLECTION DATE:		8/15/2018
Volatile Organic Compounds Units: ug/l		Conc
Tetrachloroethene	5	14

SAMPLE ID:	NY-AWQS	HIP-GW-3S	HIP-GW-3S	HIP-GW-3S
COLLECTION DATE:		11/18/2015	8/15/2018	7/22/2021
Volatile Organic Compounds Units: ug/l		Conc	Conc	Conc
Tetrachloroethene	5	20	6.6	13

SAMPLE ID:	NY-AWQS	HIP-GW-1	HIP-GW-1	HIP-GW-1	HIP-GW-1 DUP
COLLECTION DATE:		11/20/2015	8/15/2015	7/22/2021	7/22/2021
Volatile Organic Compounds Units: ug/l		Conc	Conc	Conc	Conc
Tetrachloroethene	5	52	26	21	25

SAMPLE ID:	NY-AWQS	HIP-GW-2D
COLLECTION DATE:		7/22/2021
Volatile Organic Compounds Units: ug/l		Conc
Tetrachloroethene	5	25

SAMPLE ID:	NY-AWQS	HIP-GW-2S	HIP-GW-2S
COLLECTION DATE:		11/20/2015	7/22/2021
Volatile Organic Compounds Units: ug/l		Conc	Conc
Tetrachloroethene	5	13	31

GENERAL GROUNDWATER FLOW DIRECTION

0 10' 20' 40'

Drawing Scale

HIP Cleaners
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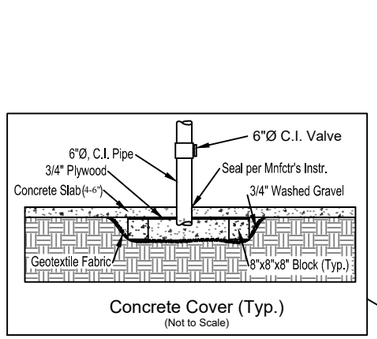
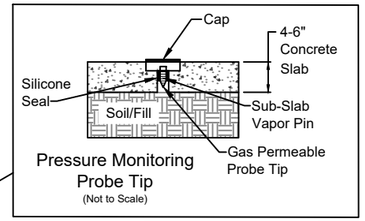
DRAWING TITLE: Summary of PCE in Groundwater

DRAWING NO. Figure 5



Concrete Cover (Typ.)
(Not to Scale)



Pressure Monitoring Probe Tip
(Not to Scale)

ROCHDALE MALL #2

Dunkin Donuts

Carewell Medical Associates

Restaurant

PM-7

Ideal Food Basket

COURTYARD CANOPY

PM-5

Citi Bank

Nu Nu Rochdale Car Service

Advantagecare Physicians

PM-4

Variety Drugs

Monitoring Point	Pressure (in-wc)
PM-5 (Bank)	-0.041

Monitoring Point	Pressure (in-wc)
PM-4 (Drugstore)	-0.518

Monitoring Point	Pressure (in-wc)
PM-3 (Nail Salon)	-0.037

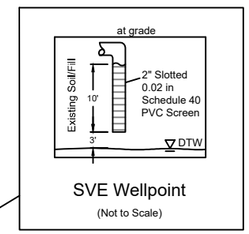
Howe It's Done Beauty Salon

PM-3

Mr. Fish

Hair Mart

Nail Salon



SVE Wellpoint
(Not to Scale)

Monitoring Point	Pressure (in-wc) SSDS - 8/12/19	Pressure (in-wc) SVE - 1/23/23
PM-1 (HIP Cleaners)	-0.012	-0.07

Monitoring Point	Pressure (in-wc)
PM-6 (Deli)	-0.006

Abigail's Corner

PM-6

Kelly's Restaurant and Pizza

PM-1

HIP CLEANERS

PM-2

Monitoring Point	Pressure (in-wc) SSDS - 8/12/19	Pressure (in-wc) SVE - 1/23/23
PM-2 (HIP Cleaners)	-0.017	-0.04

Planting Area

Approximate location of dry cleaning equipment

SITE BOUNDARY

0 15' 30' 60'

Drawing Scale

SVE Well (Vertical)

Pressure Response Monitoring Location

Suction Pit (Typ.)

Notes:
in-wc = inches of water column
SSDS = sub-slab depressurization system
SVE = soil vapor extraction system

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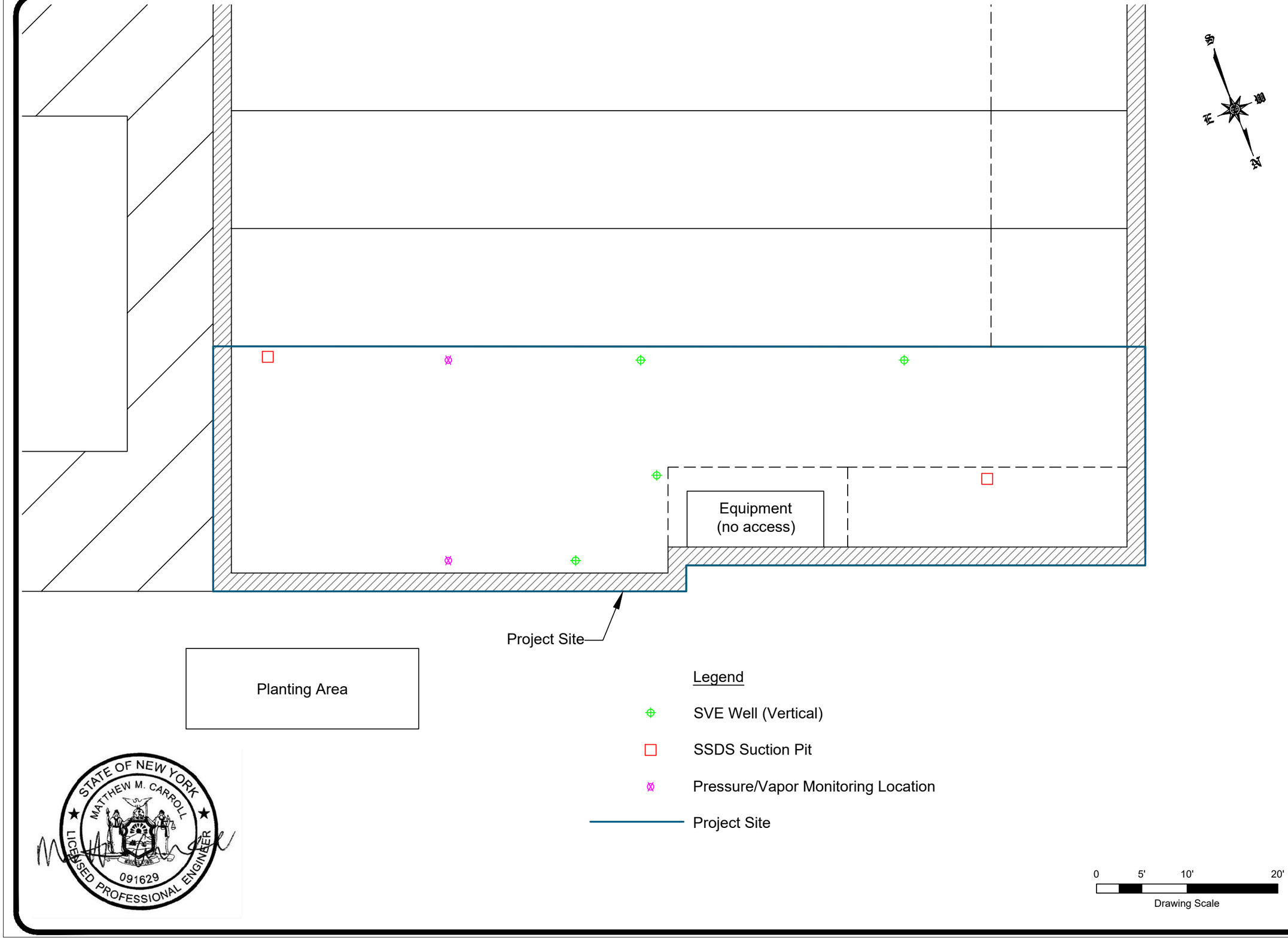
DRAWING TITLE: SSDS and SVE Pressure Monitoring

DRAWING NO.: Figure 6



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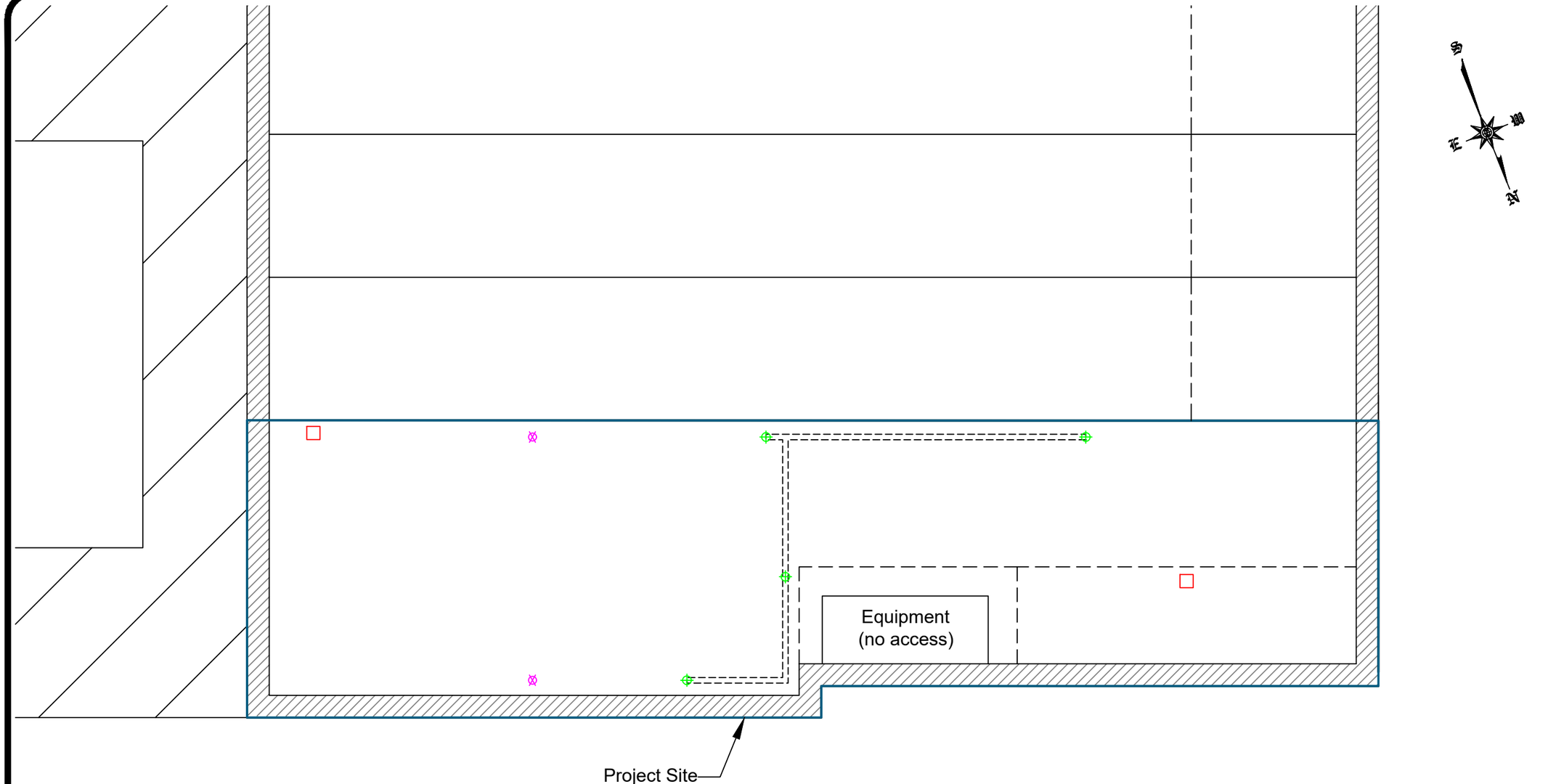
DRAWING TITLE: SVE and SSDS Layout

DRAWING NO.: Figure 6a



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DRAWING TITLE: Trench Layout

DRAWING NO.: Figure 6b

Legend

Extent of Concrete Cover System - 4 to 6 Inches Thick

Project Site

0 5' 10' 20'

Drawing Scale

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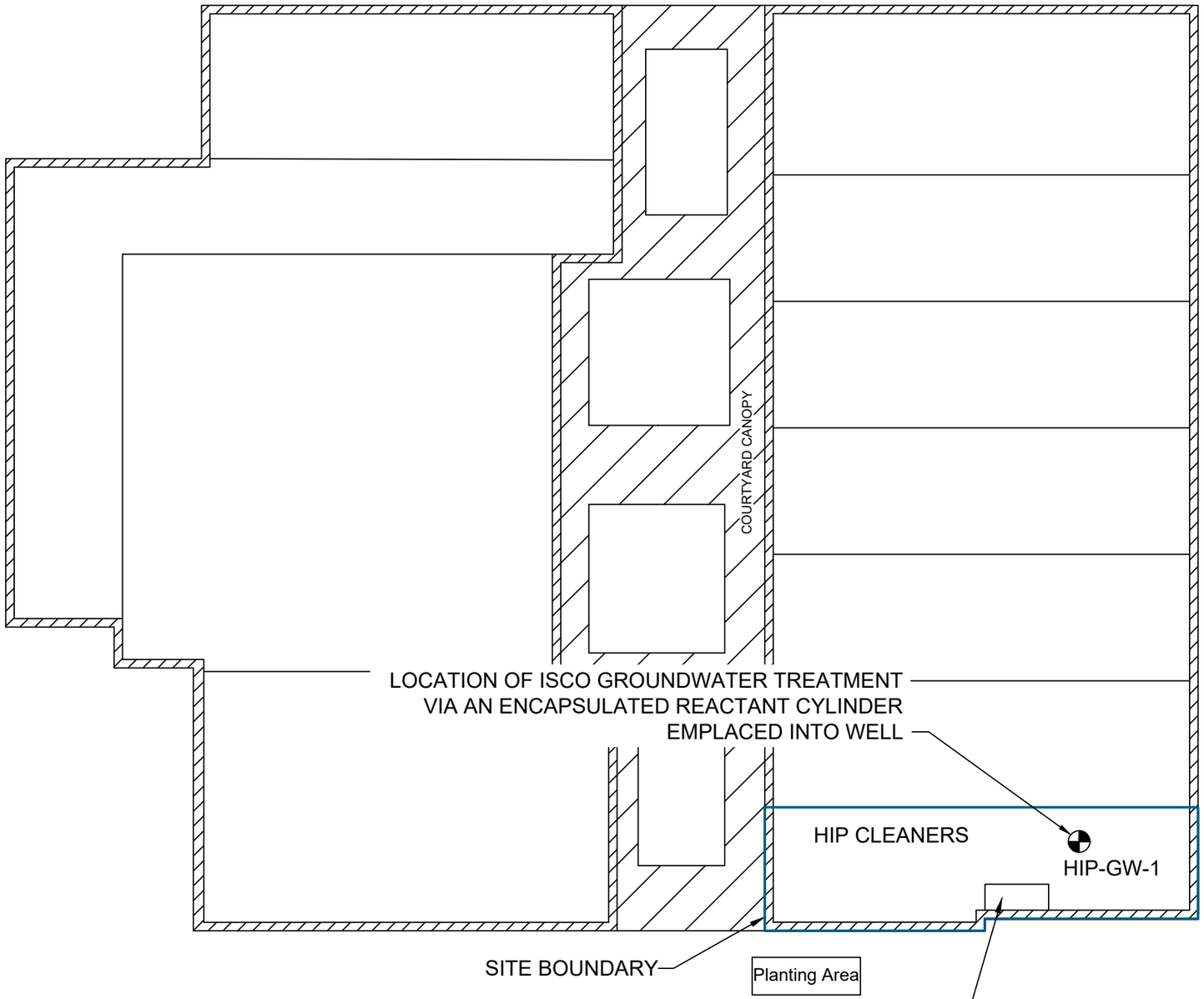
DRAWING TITLE: Extent of Concrete Cover System

DRAWING NO. Figure 7



LEGEND

PERMANENT GROUNDWATER MONITORING WELL

GENERAL GROUNDWATER FLOW DIRECTION

0 15' 30' 60'

Drawing Scale

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DRAWING TITLE: ISCO Treatment

DRAWING NO.: Figure 8

TABLES

Table 1: Notifications*

Name	**Contact Information**	**Required Notification****
Erick Bower, NYSDEC Project Manager	(518) 402-9824 Erick.bower@dec.ny.gov	All Notifications
Jane O'Connell, Regional Remediation Engineer	(718) 482-4599, jane.oconnell@dec.ny.gov	All Notifications
Kelly A. Lewandowski, P.E., Chief, Site Control Section	(518) 402-9543, kelly.lewandowski@dec.ny.gov	Notifications 1 and 8
Anthony Perretta, NYSDOH Project Manager	(518) 402-7860, anthony.perretta@health.ny.gov	Notifications 4, 6, and 7

* Note: Notifications are subject to change and will be updated as necessary.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

Table 2: Remaining Soil Sample Exceedances

Sample ID:	NY-CSCO	NY-PGWSCO	HIP/SB1 (0-2)
Collection Date:			11/2/2015
Tetrachloroethene	150	1.3	79

Notes:
All concentrations are in mg/kg
NY-PGWSCO = 6 NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective
NY-CSCO = 6 NYCRR Part 375 Commercial Use Soil Cleanup Objective
Cells highlighted in yellow indicate concentrations above the NY-PGWSCO

Table 3: Remaining Groundwater Exceedances[1]

Sample ID:	Class GA Standard	HIP-GW-1	HIP-GW-1	HIP-GW-1	HIP-GW-1
Collection Date:		11/20/2015	7/22/21	6/2/23	9/12/23
Tetrachloroethene	5	52	21	32	41

Notes:
All concentrations are in ug/l
Class GA Standard = New York TOGS 1.1.1 Groundwater Effluent Limitations criteria reflects all addendum to criteria through June 2004
Cells highlighted in yellow indicate concentrations above the NY-TOGS-GA
[1]This table shows the results for PCE only.

Table 4: Fan Specifications

Suction Pit #	Design Requirements		Fan Make/Model	
	CFM	in-wc		
1	177	-11.25	Atlantic Blowers	AB-500
2	144	-4.97	Atlantic Blowers	AB-300
3	147	-26.44	Atlantic Blowers	AB-602
4	151	-29.06	Atlantic Blowers	AB-602
5	149	-31.37	Atlantic Blowers	AB-500
6	148	-26.75	Atlantic Blowers	AB-602
7	186	-15.66	Atlantic Blowers	AB-500
8	29	-5.72	Atlantic Blowers	AB-90
9	21	-9.68	Atlantic Blowers	AB-80
10	164	-35.45	Atlantic Blowers	AB-500
11	84	-28.61	Atlantic Blowers	AB-300

Table 5: SSDS Monitoring Point Communication Test Results

Monitoring Point	Pressure (in-wc)
PM-1 (HIP Cleaners)	-0.012
PM-2 (HIP Cleaners)	-0.017
PM-3 (Nail Salon)	-0.037
PM-4 (Drugstore)	-0.518
PM-5 (Bank)	-0.041
PM-6 (Deli)	-0.006

Table 6: SVE Monitoring Point Communication Test Results

Monitoring Location	Pressure (in-wc)
PM-1	-0.07
PM-2	-0.04

Table 7 – Remedial System Monitoring Requirements and Schedule

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
SSDS Vacuum Blowers	Pressure readings at twelve monitoring points	Design goal of ≤ -0.02 in-wc; ≤ -0.004 in-wc acceptable	Annually
	Alarm system test	Pass/fail	Quarterly
SVE Vacuum Blower	Pressure readings at one monitoring point	Design goal of ≤ -0.1 in-wc	Annually
	Alarm system test	Pass/fail	Quarterly
SSDS Piping	Visual inspection of the SSDS mechanical and above grade piping components	N/A	Quarterly
SVE Piping	Visual inspection of the SVE mechanical and above grade piping components.	N/A	Quarterly
Cover System	Visual inspection of concrete floors and slabs for perforations, cracking or degradation	N/A	Annually

Table 8 – Remedial System Sampling Requirements and Schedule

Sampling Location	Analytical Parameters	Schedule
	VOCs (EPA TO-15)	
Blower Effluent Sample	X	At start-up and restart of the SSDS/SVE system

Table 9 – Post Remediation Sampling Requirements and Schedule

Sampling Location	Analytical Parameters	Schedule
Monitoring Wells: HIP-GW-1, HIP-GW-3S, HIP-GW-6, HIP-GW-7	VOCs (EPA Method 8260C)	Quarterly
Subsurface Soil Location	VOCs (EPA Method 8260C)	Prior to petition shut down of SVE
Indoor air, soil vapor, outdoor air	VOCs (EPA TO-15)	Prior to petition shut down of SVE
Indoor air	VOCs (EPA TO-15)	First heating season following startup

Table 10 – Monitoring Well Construction Details

Monitoring Well ID	Well Location and Current Status	Coordinates (longitude/ latitude)	Well Diameter (inches)	Elevation (NAVD88)			
				Top of Outer Casing at Surface	Top of PVC	Screen Top	Screen Bottom
HIP-GW-1	On-Site Source Area; Existing	(40.673812, -73.770879)	1	15.52	15.05	8.52	-1.48
HIP-GW-2S	Off-Site Upgradient; Existing	(40.673856, -73.770860)	2	15.67	15.26	9.17	-0.83
HIP-GW-2D	Off-Site Upgradient; Existing	(40.673877, -73.770849)	2	15.53	15.07	-14.47	-19.47
HIP-GW-3S	Off-Site Upgradient; Existing	(40.673854, -73.771037)	2	15.07	14.75	9.57	-0.43
HIP-GW-3D	Off-Site Upgradient; Existing	(40.673875, -73.771026)	2	15.03	14.64	-14.97	-19.97
HIP-GW-6	Off-Site Upgradient; Existing	(40.673987, -73,770754)	2	16.79	16.53	9.29	-0.71
HIP-GW-7	Off-Site Downgradient; Existing	(40.673719, -73.771104)	2	14.88	14.53	9.88	-0.12

Table 11 - Volatile Organic Compounds in Soil Vapor Compared to NYSDOH Air Guidance Values
HIP Cleaners - Rochdale Village
Tenen Environmental

SAMPLE ID:	NYSDOH Matrix	NYSDOH Air Guidance Value	HIP-SV-1		HIP-SV-2		HIP-SV-3		HIP-SV-4		HIP-SV-5		HIP-SV-6		HIP-SS-1		HIP-SS-2		HIP-SS-3		HIP-SS-4		HIP-SS-5		HIP-SS-6		HIP-IA-1	
LAB ID:			L1530845-01		L1530845-02		L1531046-01		L1642601-02		L1642601-03		L1642601-01		L1530845-07		L1530845-03		L1530845-04		L1530845-05		L1530845-06		L1530845-08		L1642440-01	
COLLECTION DATE:			11/23/2015		11/23/2015		11/24/2015		12/30/2016		12/30/2016		12/30/2016		11/23/2015		11/23/2015		11/23/2015		11/23/2015		11/23/2015		11/23/2015		12/28/2016	
Volatile Organic Compounds **Units: ug/m3**			Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
Dichlorodifluoromethane		--	2.03		1.93		3.61		2.43		9.89	U	2.5		448	U	4.94	U	668	U	3.36		93.5	U	325	U	3.05	
Chloromethane		--	0.413	U	0.76		1.03	U	0.413	U	4.13	U	0.413	U	187	U	2.07	U	279	U	0.413	U	39	U	136	U	1.15	
Freon-114		--	1.4	U	1.4	U	3.49	U	1.4	U	14	U	1.4	U	634	U	6.99	U	944	U	1.4	U	132	U	460	U	1.4	U
Vinyl chloride	C	--	0.511	U	0.511	U	1.28	U	0.511	U	5.11	U	0.511	U	232	U	2.56	U	345	U	0.511	U	48.3	U	168	U	0.051	U
1,3-Butadiene		--	0.442	U	0.442	U	1.11	U	1.62		4.42	U	0.442	U	201	U	2.21	U	299	U	0.442	U	41.8	U	146	U	0.442	U
Bromomethane		--	0.777	U	0.777	U	1.94	U	0.777	U	7.77	U	0.777	U	352	U	3.88	U	524	U	0.777	U	73.4	U	256	U	0.777	U
Chloroethane		--	0.528	U	0.528	U	1.32	U	0.528	U	5.28	U	0.528	U	239	U	2.64	U	356	U	0.528	U	49.9	U	174	U	2.16	
Ethanol		--	125		138		58		55.2		94.2	U	40.5		4940		228		6820		198		1050		3430		124	
Vinyl bromide		--	0.874	U	0.874	U	2.19	U	0.874	U	8.74	U	0.874	U	397	U	4.37	U	590	U	0.874		82.6	U	288	U	0.874	U
Acetone		--	15.4		24.5		25.2		28.7		23.8	U	109		1080	U	109		1600	U	57		225	U	782	U	9070	E
Trichlorofluoromethane		--	1.39		1.3		262		1.74		2350		2.28		510	U	5.62	U	759	U	4.66		106	U	370	U	1.6	
Isopropanol		--	23.2		34.4		3.07	U	1.23	U	12.3	U	1.23	U	558	U	97.6		828	U	121		116	U	403	U	1420	E
1,1-Dichloroethene	A	--	0.793	U	0.793	U	1.98	U	0.793	U	7.93	U	0.793	U	360	U	3.96	U	535	U	0.793	U	74.9	U	261	U	0.079	U
Tertiary butyl Alcohol		--	1.52	U	13.9		3.79	U	1.52	U	15.2	U	1.52	U	688	U	7.58	U	1020	U	2.41		143	U	497	U	1.52	U
Methylene chloride	B	60	1.74	U	1.74	U	4.34	U	1.74	U	17.4	U	1.74	U	789	U	8.69	U	1170	U	1.74	U	164	U	570	U	1.74	U
3-Chloropropene		--	0.626	U	0.626	U	1.57	U	0.626	U	6.26	U	0.626	U	284	U	3.13	U	423	U	0.626	U	59.2	U	206	U	0.626	U
Carbon disulfide		--	0.623	U	0.623	U	1.56	U	0.623	U	6.23	U	0.623	U	282	U	3.11	U	420	U	0.623	U	58.9	U	205	U	0.623	U
Freon-113		--	1.53	U	1.53	U	3.83	U	1.53	U	15.3	U	1.53	U	695	U	7.66	U	1030	U	1.53	U	145	U	504	U	1.53	U
trans-1,2-Dichloroethene		--	0.793	U	0.793	U	1.98	U	0.793	U	7.93	U	0.793	U	360	U	3.96	U	535	U	0.793	U	74.9	U	261	U	0.793	U
1,1-Dichloroethane		--	0.809	U	0.809	U	2.02	U	0.809	U	8.09	U	0.809	U	367	U	4.05	U	546	U	0.809	U	76.5	U	266	U	0.809	U
Methyl tert butyl ether		--	0.721	U	0.721	U	1.8	U	0.721	U	7.21	U	0.721	U	327	U	3.61	U	487	U	0.721	U	68.1	U	237	U	0.721	U
2-Butanone		--	1.47	U	2.38		3.69	U	8.02		14.7	U	29.5		669	U	7.37	U	994	U	3.83		140	U	484	U	1.79	
cis-1,2-Dichloroethene	A	--	0.793	U	0.793	U	1.98	U	0.793	U	7.93	U	0.793	U	360	U	3.96	U	535	U	0.793	U	74.9	U	261	U	0.079	U
Ethyl Acetate		--	1.8	U	1.8	U	4.5	U	1.8	U	18	U	1.8	U	818	U	9.01	U	1210	U	2.42		170	U	591	U	443	E
Chloroform		--	0.977	U	3.76		21.5		0.977	U	9.77	U	0.977	U	443	U	11.7		659	U	1.04		92.3	U	321	U	1.27	
Tetrahydrofuran		--	1.47	U	1.47	U	3.69	U	1.47	U	14.7	U	1.47	U	669	U	7.37	U	994	U	1.47	U	140	U	484	U	1.47	U
1,2-Dichloroethane		--	0.809	U	0.809	U	2.02	U	0.809	U	8.09	U	0.809	U	367	U	4.05	U	546	U	0.809	U	76.5	U	266	U	0.809	U
n-Hexane		--	0.705	U	0.705	U	1.76	U	3.19		7.05	U	3.46		320	U	3.52	U	476	U	0.705	U	66.6	U	232	U	0.705	U
1,1,1-Trichloroethane	B	--	1.09	U	1.09	U	2.73	U	1.09	U	10.9	U	1.09	U	495	U	5.46	U	737	U	1.09	U	103	U	359	U	0.109	U
Benzene		--	1.92		27.9		2.23		4.54		6.39	U	4.06		290	U	3.19	U	431	U	1.15		60.4	U	210	U	0.639	U
Carbon tetrachloride	A	--	1.26	U	1.26	U	3.15	U	1.26	U	12.6	U	1.26	U	571	U	6.29	U	849	U	1.26	U	119	U	414	U	0.635	
Cyclohexane		--	0.688	U	10.4		1.72	U	1.15		6.88	U	1.23		312	U	3.44	U	465	U	0.688	U	65.1	U	226	U	0.688	U
1,2-Dichloropropane		--	0.924	U	0.924	U	2.31	U	0.924	U	9.24	U	0.924	U	419	U	4.62	U	624	U	0.924	U	87.3	U	304	U	0.924	U
Bromodichloromethane		--	1.34	U	1.34	U	3.35	U	1.34	U	13.4	U	1.34	U	608	U	6.7	U	904	U	1.34	U	127	U	441	U	1.34	U
1,4-Dioxane		--	0.721	U	0.721	U	1.8	U	0.721	U	7.21	U	0.721	U	327	U	3.6	U	486	U	0.721	U	68.1	U	237	U	0.721	U
Trichloroethene	A	2	1.07	U	1.07	U	2.69	U	1.07	U	10.7	U	1.07	U	1240		5.37		2790		1.07	U	215		354	U	0.274	
2,2,4-Trimethylpentane		--	0.934	U	0.934	U	2.34	U	1.7		9.34	U	1.56		424	U	4.67	U	631	U	0.934	U	88.3	U	307	U	0.934	U
Heptane		--	0.82	U	0.82	U	2.05	U	1.3		8.2	U	1.16		372	U	4.1	U	553	U	1.4		77.5	U	270	U	0.861	
cis-1,3-Dichloropropene		--	0.908	U	0.908	U	2.27	U	0.908	U	9.08	U	0.908	U	412	U	4.54	U	613	U	0.908	U	85.8	U	299	U	0.908	U
4-Methyl-2-pentanone		--	2.05	U	2.05	U	5.12	U	2.05	U	20.5	U	2.05	U	930	U	10.2	U	1380	U	2.05	U	194	U	672	U	2.05	U
trans-1,3-Dichloropropene		--	0.908	U	0.908	U	2.27	U	0.908	U	9.08	U	0.908	U	412	U	4.54	U	613	U	0.908	U	85.8	U	299	U	0.908	U
1,1,2-Trichloroethane		--	1.09	U	1.09	U	2.73	U	1.09	U	10.9	U	1.09	U	495	U	5.46	U	737	U	1.09	U	103	U	359	U	1.09	U
Toluene		--	2.17		2.46		3.96		8.89		7.54	U	6.14		342	U	7.01		509	U	5.58		71.2	U	248	U	3.36	
2-Hexanone		--	0.82	U	0.82	U	2.05	U	0.82	U	8.2	U	0.82	U	372	U	4.1	U	553	U	0.82	U	77.5	U	270	U	0.82	U
Dibromochloromethane		--	1.7	U	1.7	U	4.26	U	1.7	U	17	U	1.7	U	773	U	8.52	U	1150	U	1.7	U	161	U	561	U	1.7	U
1,2-Dibromoethane		--	1.54	U	1.54	U	3.84	U	1.54	U	15.4	U	1.54	U	697	U	7.69	U	1040	U	1.54	U	145	U	506	U	1.54	U
Tetrachloroethene	B	30	1.36	U	1.36	U	1340		4.75		13.6	U	1.36	U	403000		2340		780000		110		40600		157000		37.1	
Chlorobenzene		--	0.921	U	0.921	U	2.3	U	0.921	U	9.21	U	0.921	U	418	U	4.61	U	622	U	0.921	U	87	U	303	U	0.921	U
Ethylbenzene		--	10.4		0.869	U	3.97		0.869	U	8.69	U	0.869	U	394	U	19.8		586	U	19.5		82.1	U	286	U	0.869	U
p/m-Xylene		--	54.7		1.74	U	18.5		1.98		17.4	U	1.75		786	U	92.5		1170	U	96.4		164	U	573	U	1.74	U
Bromoform		--	2.07	U	2.07	U	5.17	U	2.07	U	20.7	U	2.07	U	938	U	10.3	U	1400	U	2.07	U	195	U	680	U	2.07	U
Styrene		--	0.852	U	0.852	U	2.13	U	0.852	U	8.52	U	0.852	U	386	U	4.26	U	575	U	1.65		80.5	U	280	U	0.852	U
1,1,2,2-Tetrachloroethane		--	1.37	U	1.37	U	3.43	U	1.37	U	13.7	U	1.37	U	623	U	6.87	U	927	U	1.37	U	130	U	452	U	1.37	U
o-Xylene		--	23.5		0.869	U	8.77		0.869	U	8.69	U	0.869	U	394	U	41.6		586	U	44.7		82.1	U	286	U	0.869	U
4-Ethyltoluene		--	1.07		0.983	U	2.46	U	0.983	U	9.83	U	0.983	U	446	U	4.92	U	664	U	2.95		92.9	U	323	U	0.983	U
1,3,5-Trimethylbenzene		--	1.52		0.983	U	2.46	U	0.983	U	9.83	U	0.983	U	446	U	4.92	U	664	U	3.71		92.9	U	323	U	0.983	U
1,2,4-Trimethylbenzene		--	4.64		0.983	U	2.62		1.03		9.83	U	0.983	U	446	U	10.5		664	U	12.7		92.9	U	323	U	0.983	U
Benzyl chloride		--	1.04	U	1.04	U	2.59	U	1.04	U	10.4	U	1.04	U	470	U	5.18	U	699	U	1.04	U	97.9	U	341	U	1.04	U
1,3-Dichlorobenzene		--	2.93		1.2	U	3.01	U	1.2	U	12	U	1.2	U	545	U	6.01	U	812	U	1.2	U	114	U	396	U	1.2	U
1,4-Dichlorobenzene		--	1.2	U	1.2	U	3.01	U	1.2	U	12	U	1.2	U	545	U	6.01	U	812	U	1.2	U	114	U	396	U	1.2	U
1,2-Dichlorobenzene		--	1.2	U	1.2	U	3.01	U	1.2	U	12	U	1.2	U	545	U	6.01	U	812	U	1.2	U	114	U	396	U	1.2	U
1,2,4-Trichlorobenzene		--	1.48	U	1.48	U	3.71	U	33		14.8	U	1.48	U	673	U	7.42	U	1000	U	1.48	U	140	U	488	U	1.48	U
Hexachlorobutadiene		--	2.13	U	2.13	U	5.33	U	2.13	U	21.3	U	2.13	U	967	U	10.7	U	1440	U	2.13	U	202	U	702	U	2.13	U

Notes:
NYSDOH AGV = New York State Department of Health Air Guidance Values
NYSDOH AGV values from NYSDOH Soil Vapor Guidance Values, May 2017
Matrix actions are described in the report narrative and the NYSDOH Soil Vapor Guidance, May 2017
Cells highlighted in yellow indicate concentrations above NYSDOH Air Guidance Values
RL = Reporting Limit
Qual = Laboratory Data Qualifier
For U qualified entries, the RL is shown
U = not detected at or above the RL
Results and RL values are in micrograms per cubic meter (ug/m^3)

Table 12: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
1. Groundwater Monitoring (to be provided with Periodic Review Report)	Annually; Quarterly Summaries by Tenen Environmental, LLC
2. SSDS and SVE pressure monitoring (to be provided with Periodic Review Report)	Annually
3. Periodic Review Report	Annually, or as otherwise determined by the NYSDEC

*** The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.**

APPENDIX 1 – ENVIRONMENTAL EASEMENT

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument. The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2019111400632001001E6EBA

RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 10**

Document ID: 2019111400632001 Document Date: 11-01-2019 Preparation Date: 11-14-2019
Document Type: EASEMENT
Document Page Count: 9

PRESENTER:	**RETURN TO:**
WHITEMAN OSTERMAN & HANNA LLP 1 COMMERCE PLZ ALBANY, NY 12260	WHITEMAN OSTERMAN & HANNA LLP 1 COMMERCE PLZ ALBANY, NY 12260

PROPERTY DATA

Borough	Block	Lot	Unit	Address
QUEENS	12495	2	Partial Lot	163-15 BAISLEY BOULEVARD

Property Type: COMMERCIAL REAL ESTATE Easement

CROSS REFERENCE DATA

CRFN_____ *or* DocumentID_____ *or* _____ Year____ Reel____ Page_____ *or* File Number_____

PARTIES

GRANTOR/SELLER:	**GRANTEE/BUYER:**
ROCHDALE VILLAGE, INC 169-55 137TH AVE JAMAICA, NY 11434-4517	NYS DEC 625 BROADWAY ALBANY, NY 12233-5500

FEES AND TAXES

Mortgage :		
Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00
Recording Fee:	$	82.00
Affidavit Fee:	$	0.00

Filing Fee:	$	100.00
NYC Real Property Transfer Tax:	$	0.00
NYS Real Estate Transfer Tax:	$	0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded/Filed 11-20-2019 14:39
City Register File No.(CRFN): **2019000379283**

City Register Official Signature

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 1st day of November, 2019 between Owner(s), Rochdale Village, Inc., having an office at 169- 55 137th Avenue, Jamaica, New York 11434, County of Queens, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 163-15 Baisley Boulevard in the City of New York, County of Queens and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 12495 Lot 2, being a portion of the property conveyed to Grantor by deed dated July 13, 1960 and recorded in the City Register of the City of New York in Reel and Page 7259/475. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.0618 +/- acres, and is hereinafter more fully described in the Land Title Survey dated August 11, 2016 and last revised September 3, 2019 prepared by Donald R. Stedge, L.L.S., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C241166-10-14, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her 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

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C241166
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and

communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Rochdale Village, Inc.:

By: _____

Print Name: Jean Randolph President

Title: President Date: 10-18-19

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Queens)

On the 18th day of October, in the year 20 19, before me, the undersigned, personally appeared Jean Randolph Castro, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Lorraine Kirkpatrick
Notary Public - State of New York

LORRAINE KIRKPATRICK
Notary Public - State of New York
NO. 01KI6364649
Qualified in Nassau County
My Commission Expires Sep 18, 2021

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 1st day of November, in the year 2019, before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2020

SCHEDULE "A" PROPERTY DESCRIPTION

Environmental Easement Metes and Bounds Description

ALL THAT CERTAIN PLOT, piece or parcel of land, situate, lying and being in the Borough and County of Queens, City and State of New York; being more particularly bounded and described as follows:

BEGINNING at the northeasterly corner of the building currently located at 169-47 137th Street, said point being designated with coordinate North 184,836.62, East 1,047,864.58 according to the New York State Coordinate System, North American Datum 1983, Long Island Zone; running thence the following courses and distances:

1.) Along the easterly face of the building currently located at 169-47 137th Street, South 18°- 31'- 32" West, a distance of 26.50 feet to a point designated with coordinate North 184,811.50, East 1,047,856.16; thence

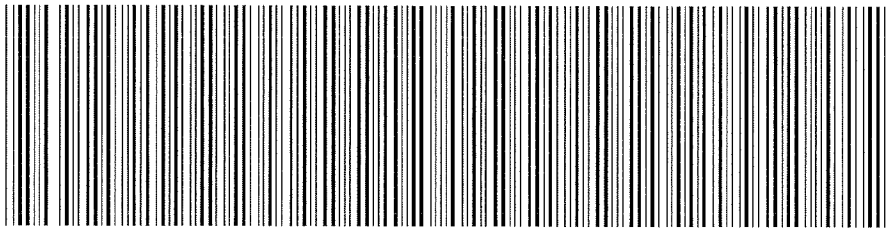
2.) Through the approximate center of the partition wall between 169-47 137th Street and the unit to the south, North 71°- 28'- 28" West, a distance of 101.60 feet to a point designated with coordinate North 184,843.78, East 1,047,759.83; thence

3.) Along the westerly face of the building, North 18°- 31'- 32" East, a distance of 26.50 feet to the northwesterly corner of the building to a point designated with coordinate North 184,868.91, East 1,047,768.25; thence

4.) Along the northerly face of the building, South 71°-28'- 28" East, a distance of 101.60 feet to the place or point of beginning.

Containing 2,692 square feet or 0.0618 acre of land, more or less.

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER



2019111400632001001SA03B

SUPPORTING DOCUMENT COVER PAGE **PAGE 1 OF 1**

Document ID: 2019111400632001 Document Date: 11-01-2019 Preparation Date: 11-14-2019
Document Type: EASEMENT

ASSOCIATED TAX FORM ID: 2019062100299

SUPPORTING DOCUMENTS SUBMITTED:

	Page Count
RP - 5217 REAL PROPERTY TRANSFER REPORT	3

NEW YORK CITY DEPARTMENT OF FINANCE

NYC - RPT
Department of Finance

REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

▲ DO NOT WRITE IN THIS SPACE ▲
FOR OFFICE USE ONLY

GRANTOR

● Name ROCHDALE VILLAGE, INC

● Grantor is a(n): (check one) ☐ individual ☐ partnership ☑ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other

Telephone Number

● Permanent mailing address after transfer (number and street) 169-55 137TH AVE

● City and State JAMAICA, NY

Zip Code 11434-4517

● Single member's name if grantor is a single member LLC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 13-1929042

SINGLE MEMBER EIN OR SSN

GRANTEE

● Name NYS DEC

● Grantee is a(n): (check one) ☐ individual ☐ partnership ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☑ other GOVERNMENT ENTITY

Telephone Number

● Permanent mailing address after transfer (number and street) 625 BROADWAY

● City and State ALBANY, NY

Zip Code 12233-5500

● Single member's name if grantee is a single member LLC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 14-6013200

SINGLE MEMBER EIN OR SSN

PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

● Address (number and street)	Apt. No.	Borough	Block	Lot	# of Floors	Square Feet	● Assessed Value of Property
163-15 BAISLEY BOULEVARD		QUEENS	12495	2	14	6,940,450	201,301,200.00

● DATE OF TRANSFER TO GRANTEE: 11/1/2019

● PERCENTAGE OF INTEREST TRANSFERRED: 0 %

CONDITION OF TRANSFER. See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules of this return. Additionally, Schedules1 and 2 **must** be completed for all transfers.

a. ☐ ..... Arms length transfer
b. ☐ ..... Transfer in exercise of option to purchase
c. ☐ ..... Transfer from cooperative sponsor to cooperative corporation
d. ☐ ..... Transfer by referee or receiver (complete Schedule A)
e. ☐ ..... Transfer pursuant to marital settlement agreement or divorce decree (complete Schedule I)
f. ☐ ..... Deed in lieu of foreclosure (complete Schedule C)
g. ☐ ..... Transfer pursuant to liquidation of an entity (complete Schedule D)
h. ☐ ..... Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E)
i. ☐ ..... Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐ ..... Gift transfer not subject to indebtedness
k. ☐ ..... Gift transfer subject to indebtedness
l. ☐ ..... Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F)
m. ☐ ..... Transfer to a governmental body
n. ☐ ..... Correction deed
o. ☐ ..... Transfer by or to a tax exempt organization (complete Schedule G)
p. ☐ ..... Transfer of property partly within and partly without NYC
q. ☐ ..... Transfer of successful bid pursuant to foreclosure
r. ☐ ..... Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐ ..... Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M)
t. ☐ ..... Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R)
u. ☐ ..... Other transfer in connection with financing (describe): _____
v. ☐ ..... A grant or assignment of a leasehold interest in a tax-free NY area
w. ☐ ..... Transfer to an HDFC or an entity controlled by an HDFC. (Complete Schedule L)
x. ..... Reserved
y. ..... Reserved
z. ☑ ..... Other (describe) DEC EASEMENT

20190621002991O102

● TYPE OF PROPERTY (✓)	● TYPE OF INTEREST (✓)
a. ☐ ..... 1-3 family house b. ☐ ..... Individual residential condominium unit c. ☐ ..... Individual cooperative apartment d. ☐ ..... Commercial condominium unit e. ☐ ..... Commercial cooperative f. ☐ ..... Apartment building g. ☐ ..... Office building h. ☐ ..... Industrial building i. ☐ ..... Utility j. ☑ ..... OTHER. (describe): COMMERCIAL REAL ESTATE	Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer. REC. / NON REC. a. ☐ ..... Fee ..... ☐ b. ☐ ..... Leasehold Grant ..... ☐ c. ☐ ..... Leasehold Assignment or Surrender ..... ☐ d. ☐ ..... Easement ..... ☑ e. ☐ ..... Subterranean Rights ..... ☐ f. ☐ ..... Development Rights ..... ☐ g. ☐ ..... Stock ..... ☐ h. ☐ ..... Partnership Interest ..... ☐ i. ☐ ..... OTHER. (describe): ..... ☐

SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 12. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

1. Cash	1.	0 00
2. Purchase money mortgage	2.	0 00
3. Unpaid principal of pre-existing mortgage(s)	3.	0 00
4. Accrued interest on pre-existing mortgage(s)	4.	0 00
5. Accrued real estate taxes	5.	0 00
6. Amounts of other liens on property	6.	0 00
7. Value of shares of stock or of partnership interest received	7.	0 00
8. Value of real or personal property received in exchange	8.	0 00
9. Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee	9.	0 00
10. Other (describe):	10.	0 00
11. **TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions)	11.	$ 0 00

See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.

SCHEDULE 2 - COMPUTATION OF TAX

A. **Payment**	Pay amount shown on line 15 - *See Instructions*	Payment Enclosed

1. Total Consideration (from line 11, above)	1.	0 00
2. Excludable liens (see instructions)	2.	0 00
3. Consideration (line 1 less line 2)	3.	0 00
4. Tax Rate (see instructions)	4.	0 %
5. HDFC Exemption (see Schedule L, line 15)	5.	0 00
6. Consideration less HDFC Exemption (line 3 less line 5)	6.	0 00
7. Percentage change in beneficial ownership (see instructions)	7.	100 %
8 Taxable consideration (multiply line 6 by line 7)	8.	0 00
9. Tax (multiply line 8 by line 4)	9.	0 00
10. Credit (see instructions)	10.	0 00
11. Transfer tax previously paid (see Schedule L, line 18)	11.	0 00
12. Tax due (line 9 less line 10 and 11) (if the result is negative, enter zero)	12.	0 00
13. Interest (see instructions)	13.	0 00
14. Penalty (see instructions)	14.	0 00
15. **Total Tax Due** (add lines 12, 13 and 14)	15.	$ 0 00

2019062100299101O2

GRANTOR'S ATTORNEY ▼

Name of Attorney	WHITEMAN OSTERMAN & HANNA LLP	Telephone Number	(518) 478-7600
Address (number and street)	ONE COMMERCE PLAZA	City and State	ALBANY, NY
		Zip Code	12260
EMPLOYER IDENTIFICATION NUMBER	-	OR SOCIAL SECURITY NUMBER	- -

GRANTEE'S ATTORNEY ▼

Name of Attorney	OFFICE OF GENERAL COUNSEL	Telephone Number	(518) 402-9553
Address (number and street)	NYS DEC 625 BROADWAY	City and State	ALBANY, NY
		Zip Code	12233-5500
EMPLOYER IDENTIFICATION NUMBER	-	OR SOCIAL SECURITY NUMBER	- -

CERTIFICATION ▼

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

GRANTOR

Sworn to and subscribed to before me on this 25 day of JUNE, 2019.

13-1929042
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

ROCHDALE VILLAGE, INC
Name of Grantor

Lance Ashby-Williams
Signature of Notary

Jean Randolph-Castro
Signature of Grantor

Notary's stamp or seal

LANCE ASHBY-WILLIAMS
NOTARY PUBLIC-STATE OF NEW YORK
No. 01AS6357294
Qualified In Nassau County
My Commission Expires 04-17-2021

GRANTEE

Sworn to and subscribed to before me on this 29th day of October 2019.

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

NYS DEC
Name of Grantee

Colleen A. McCarthy
Signature of Notary

Signature of Grantee NYSDEC Attorney

Notary's stamp or seal

COLLEEN A. McCARTHY
Notary Public, State of New York
Qualified In Albany County
No. 02MC5046480
Commission Expires July 17, 2021

2019062100299101

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2019111400632001001149BA

REAL PROPERTY TRANSFER TAX COVER PAGE **PAGE 1 OF 1**

Document ID: 2019111400632001 Document Date: 11-01-2019 Preparation Date: 11-14-2019
Document Type: EASEMENT

PARTIES

FIRST GRANTOR/SELLER:	**FIRST GRANTEE/BUYER:**
ROCHDALE VILLAGE, INC	NYS DEC
169-55 137TH AVE	625 BROADWAY
JAMAICA, NY 11434-4517	ALBANY, NY 12233-5500

ASSOCIATED TAX FORM ID: 201906210029910102

RPTT SUPPORTING DOCUMENTS SUBMITTED:

Page Count

AFFIDAVIT OF COMPLIANCE
WITH SMOKE DETECTOR REQUIREMENT FOR ONE- AND TWO-FAMILY DWELLINGS

State of New York }
County of } **SS.:**

The undersigned, being duly sworn, depose and say under penalty of perjury that they are the grantor and grantee of the real property or of the cooperative shares in a cooperative corporation owning real property located at

163-15 BAISLEY BOULEVARD , ,
Street Address Unit/Apt.

QUEENS New York, 12495 2 (the "Premises");
Borough **Block** **Lot**

That the Premises is a one or two family dwelling, or a cooperative apartment or condominium unit in a one- or two-family dwelling, and that installed in the Premises is an approved and operational smoke detecting device in compliance with the provisions of Article 6 of Subchapter 17 of Chapter 1 of Title 27 of the Administrative Code of the City of New York concerning smoke detecting devices;

That they make affidavit in compliance with New York City Administrative Code Section 11-2105 (g). (The signatures of at least one grantor and one grantee are required, and must be notarized).

Name of Grantor (Type or Print)	**Name of Grantee** (Type or Print)
Signature of Grantor	**Signature of Grantee**
Sworn to before me	**Sworn to before me**
this _____ **day of** _____ **20** ____	**this** _____ **day of** _____ **20** ____

These statements are made with the knowledge that a willfully false representation is unlawful and is punishable as a crime of perjury under Article 210 of the Penal Law.

NEW YORK CITY REAL PROPERTY TRANSFER TAX RETURNS FILED ON OR AFTER FEBRUARY 6th, 1990, WITH RESPECT TO THE CONVEYANCE OF A ONE- OR TWO-FAMILY DWELLING, OR A COOPERATIVE APARTMENT OR A CONDOMINIUM UNIT IN A ONE- OR TWO-FAMILY DWELLING, WILL NOT BE ACCEPTED FOR FILING UNLESS ACCOMPANIED BY THIS AFFIDAVIT.

The City of New York
Department of Environmental Protection
Bureau of Customer Services
59-17 Junction Boulevard
Flushing, NY 11373-5108

Customer Registration Form for Water and Sewer Billing

Property and Owner Information:

(1) **Property receiving service: BOROUGH: QUEENS** **BLOCK: 12495** **LOT: 2**

(2) **Property Address: 163-15 BAISLEY BOULEVARD, QUEENS, NY 11434**

(3) **Owner's Name:** **NYS DEC**

Additional Name:

Affirmation:

☑ Your water & sewer bills will be sent to the property address shown above.

Customer Billing Information:

Please Note:

A. Water and sewer charges are the legal responsibility of the owner of a property receiving water and/or sewer service. The owner's responsibility to pay such charges is not affected by any lease, license or other arrangement, or any assignment of responsibility for payment of such charges. Water and sewer charges constitute a lien on the property until paid. In addition to legal action against the owner, a failure to pay such charges when due may result in foreclosure of the lien by the City of New York, the property being placed in a lien sale by the City or Service Termination.

B. Original bills for water and/or sewer service will be mailed to the owner, **at the property address or to an alternate mailing address**. DEP will provide a duplicate copy of bills to one other party (such as a managing agent), however, any failure or delay by DEP in providing duplicate copies of bills shall in no way relieve the owner from his/her liability to pay all outstanding water and sewer charges. Contact DEP at (718) 595-7000 during business hours or visit www.nyc.gov/dep to provide us with the other party's information.

Owner's Approval:

The undersigned certifies that he/she/it is the owner of the property receiving service referenced above; that he/she/it has read and understands Paragraphs A & B under the section captioned "Customer Billing Information"; and that the information supplied by the undersigned on this form is true and complete to the best of his/her/its knowledge.

Print Name of Owner:

Signature: _____ Date (mm/dd/yyyy)

Name and Title of Person Signing for Owner, if applicable:

Department of
Housing Preservation
& Development
nyc.gov/hpd

THE CITY OF NEW YORK
DEPARTMENT OF HOUSING PRESERVATION AND DEVELOPMENT

AFFIDAVIT IN LIEU OF REGISTRATION STATEMENT

County of _____) SS.:

State of New York)
ROCHDALE VILLAGE, INC, being duly sworn, deposes and says:

1) I am personally familiar with the real property known by the street address of (insert street address): 163-15 BAISLEY BOULEVARD Block 12495, Lot 2, and make this Affidavit as (describe capacity in which affidavit is made) PRESIDENT in connection with a deed/~~lease/memorandum of lease~~ (delete inapplicable description) which transfers an interest in the above real property, that is dated 11/1/2019, and is between ROCHDALE VILLAGE, INC and NYS DEC.

2) The statements made in the Affidavit are true of my own knowledge, and I submit this Affidavit in order that this Instrument be accepted for recording without being accompanied by a registration statement, as such is defined by Article 2 of Subchapter 4 of Chapter 2 of Title 27 of the Administrative Code of the City of New York.

3) Exemption from registration is claimed because the Instrument affects neither (a) an entire multiple dwelling as such is defined by §27-2004(a)(7) of Article 1 of Subchapter 1, of Chapter 2 of Title 27 of the Administrative Code of the City of New York and New York State Multiple Dwelling Law §4(7) nor (b) a private dwelling as such is defined by §27-2004 (a) (4) of Article 1 of Subchapter 1 of Chapter 2 of Title 27 of the Administrative Code of the City of New York and of the New York State Multiple Dwelling Law §4(6) that is required to register pursuant to, Article 2 of Subchapter 4 of Chapter 2 of Title 27 of the Administrative Code of the City of New York. The Instrument does not affect a multiple dwelling because it affects the following (check applicable item):

- ☑ a commercial building
- ☐ a one-or two family dwelling whose owner or a family member resides in the dwelling
- ☐ a condominium unit in a multiple dwelling
- ☐ cooperative corporation shares relating to a single residential unit in a multiple dwelling
- ☐ mineral, gas, water, air or other similar rights not affecting a multiple dwelling
- ☐ lease of commercial space in a multiple dwelling
- ☐ vacant land

4) I am aware that this Affidavit is required by law to be submitted in order that the Instrument be recorded or accepted for recording without being accompanied by a registration statement. I am aware that any false statements made in this Affidavit may be punishable as a felony or misdemeanor under Penal Law Article 210 or as an offense under Administrative Code of the City of New York §10-154.

Sworn To Before Me This

_____Day of _____

_____
Notary Public

_____
Signature

169-55 137TH AVE
JAMAICA, NY 11434-4517
Address _____

Telephone # 999-999-9999

NEW YORK CITY DEPARTMENT OF FINANCE

NYC - RPT
Department of Finance

REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

▲ DO NOT WRITE IN THIS SPACE ▲
FOR OFFICE USE ONLY

GRANTOR

● Name ROCHDALE VILLAGE, INC

● Grantor is a(n): (check one) ☐individual ☐partnership ☑corporation ☐single member LLC ☐multiple member LLC (see instructions) ☐other

Telephone Number

● Permanent mailing address after transfer (number and street) 169-55 137TH AVE

● City and State JAMAICA, NY

Zip Code 11434-4517

● Single member's name if grantor is a single member LLC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 13-1929042

SINGLE MEMBER EIN OR SSN

GRANTEE

● Name NYS DEC

● Grantee is a(n): (check one) ☐individual ☐partnership ☐corporation ☐single member LLC ☐multiple member LLC (see instructions) ☑other GOVERNMENT ENTITY

Telephone Number

● Permanent mailing address after transfer (number and street) 625 BROADWAY

● City and State ALBANY, NY

Zip Code 12233-5500

● Single member's name if grantee is a single member LLC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 14-6013200

SINGLE MEMBER EIN OR SSN

PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

● Address (number and street)	Apt. No.	Borough	Block	Lot	# of Floors	Square Feet	● Assessed Value of Property
163-15 BAISLEY BOULEVARD		QUEENS	12495	2	14	6,940,450	201,301,200.00

● DATE OF TRANSFER TO GRANTEE: 11/1/2019

● PERCENTAGE OF INTEREST TRANSFERRED: 0 %

CONDITION OF TRANSFER. See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules of this return. Additionally, Schedules1 and 2 **must** be completed for all transfers.

a. ☐..... Arms length transfer
b. ☐..... Transfer in exercise of option to purchase
c. ☐..... Transfer from cooperative sponsor to cooperative corporation
d. ☐..... Transfer by referee or receiver (complete Schedule A)
e. ☐..... Transfer pursuant to marital settlement agreement or divorce decree (complete Schedule I)
f. ☐..... Deed in lieu of foreclosure (complete Schedule C)
g. ☐..... Transfer pursuant to liquidation of an entity (complete Schedule D)
h. ☐..... Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E)
i. ☐..... Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐..... Gift transfer not subject to indebtedness
k. ☐..... Gift transfer subject to indebtedness
l. ☐..... Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F)
m. ☐..... Transfer to a governmental body
n. ☐..... Correction deed
o. ☐..... Transfer by or to a tax exempt organization (complete Schedule G)
p. ☐..... Transfer of property partly within and partly without NYC
q. ☐..... Transfer of successful bid pursuant to foreclosure
r. ☐..... Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐..... Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M)
t. ☐..... Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R)
u. ☐..... Other transfer in connection with financing (describe): _____
v. ☐.....A grant or assignment of a leasehold interest in a tax-free NY area
w. ☐..... Transfer to an HDFC or an entity controlled by an HDFC. (Complete Schedule L)
x. .....Reserved
y. .....Reserved
z. ☑..... Other (describe) DEC EASEMENT

2019062100299101O2

TYPE OF PROPERTY (✓)

a. ☐ ..... 1-3 family house
b. ☐ ..... Individual residential condominium unit
c. ☐ ..... Individual cooperative apartment
d. ☐ ..... Commercial condominium unit
e. ☐ ..... Commercial cooperative
f. ☐ ..... Apartment building
g. ☐ ..... Office building
h. ☐ ..... Industrial building
i. ☐ ..... Utility
j. ☑ ..... OTHER. (describe): COMMERCIAL REAL ESTATE

TYPE OF INTEREST (✓)

Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer.

	REC.		NON REC.
a.	☐	Fee	☐
b.	☐	Leasehold Grant	☐
c.	☐	Leasehold Assignment or Surrender	☐
d.	☐	Easement	☑
e.	☐	Subterranean Rights	☐
f.	☐	Development Rights	☐
g.	☐	Stock	☐
h.	☐	Partnership Interest	☐
i.	☐	OTHER. (describe):	☐

SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 12. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

1. Cash	1.	0 00
2. Purchase money mortgage	2.	0 00
3. Unpaid principal of pre-existing mortgage(s)	3.	0 00
4. Accrued interest on pre-existing mortgage(s)	4.	0 00
5. Accrued real estate taxes	5.	0 00
6. Amounts of other liens on property	6.	0 00
7. Value of shares of stock or of partnership interest received	7.	0 00
8. Value of real or personal property received in exchange	8.	0 00
9. Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee	9.	0 00
10. Other (describe):	10.	0 00
11. **TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions)	11.	$ 0 00

See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.

SCHEDULE 2 - COMPUTATION OF TAX

A. **Payment**	Pay amount shown on line 15 - *See Instructions*	Payment Enclosed

1. Total Consideration (from line 11, above)	1.	0 00
2. Excludable liens (see instructions)	2.	0 00
3. Consideration (line 1 less line 2)	3.	0 00
4. Tax Rate (see instructions)	4.	0 %
5. HDFC Exemption (see Schedule L, line 15)	5.	0 00
6. Consideration less HDFC Exemption (line 3 less line 5)	6.	0 00
7. Percentage change in beneficial ownership (see instructions)	7.	100 %
8 Taxable consideration (multiply line 6 by line 7)	8.	0 00
9. Tax (multiply line 8 by line 4)	9.	0 00
10. Credit (see instructions)	10.	0 00
11. Transfer tax previously paid (see Schedule L, line 18)	11.	0 00
12. Tax due (line 9 less line 10 and 11) (if the result is negative, enter zero)	12.	0 00
13. Interest (see instructions)	13.	0 00
14. Penalty (see instructions)	14.	0 00
15. **Total Tax Due** (add lines 12, 13 and 14)	15.	$ 0 00

GRANTOR'S ATTORNEY

Name of Attorney		Telephone Number
	WHITEMAN OSTERMAN & HANNA LLP	(518) 478-7600
Address (number and street)	**City and State**	**Zip Code**
ONE COMMERCE PLAZA	ALBANY, NY	12260
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER

GRANTEE'S ATTORNEY

Name of Attorney		Telephone Number
	OFFICE OF GENERAL COUNSEL	(518) 402-9553
Address (number and street)	**City and State**	**Zip Code**
NYS DEC 625 BROADWAY	ALBANY, NY	12233-5500
EMPLOYER IDENTIFICATION NUMBER	OR	SOCIAL SECURITY NUMBER

CERTIFICATION

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

GRANTOR

Sworn to and subscribed to

before me on this _____ day

of _____, _____.

Signature of Notary

Notary's stamp or seal

13-1929042
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

ROCHDALE VILLAGE, INC
Name of Grantor

Signature of Grantor

GRANTEE

Sworn to and subscribed to

before me on this _____ day

of _____, _____.

Signature of Notary

Notary's stamp or seal

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

NYS DEC
Name of Grantee

Signature of Grantee

2019062100299101

NEW YORK CITY DEPARTMENT OF FINANCE

NYC - RPT

Department of Finance

REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

▲ DO NOT WRITE IN THIS SPACE ▲
FOR OFFICE USE ONLY

GRANTOR

● Name ROCHDALE VILLAGE, INC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 13-1929042

● Grantor is a(n): (check one) ☐ individual ☐ partnership ☑ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☐ other

Telephone Number

● Permanent mailing address after transfer (number and street) 169-55 137TH AVE

● City and State JAMAICA, NY

Zip Code 11434-4517

● Single member's name if grantor is a single member LLC

SINGLE MEMBER EIN OR SSN

GRANTEE

● Name NYS DEC

SOCIAL SECURITY NUMBER

OR

EMPLOYER IDENTIFICATION NUMBER 14-6013200

● Grantee is a(n): (check one) ☐ individual ☐ partnership ☐ corporation ☐ single member LLC ☐ multiple member LLC (see instructions) ☑ other GOVERNMENT ENTITY

Telephone Number

● Permanent mailing address after transfer (number and street) 625 BROADWAY

● City and State ALBANY, NY

Zip Code 12233-5500

● Single member's name if grantee is a single member LLC

SINGLE MEMBER EIN OR SSN

PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

● Address (number and street)	Apt. No.	Borough	Block	Lot	# of Floors	Square Feet	● Assessed Value of Property
163-15 BAISLEY BOULEVARD		QUEENS	12495	2	14	6,940,450	201,301,200.00

● DATE OF TRANSFER TO GRANTEE: 11/1/2019

● PERCENTAGE OF INTEREST TRANSFERRED: 0 %

CONDITION OF TRANSFER. See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules of this return. Additionally, Schedules1 and 2 **must** be completed for all transfers.

a. ☐ ..... Arms length transfer
b. ☐ ..... Transfer in exercise of option to purchase
c. ☐ ..... Transfer from cooperative sponsor to cooperative corporation
d. ☐ ..... Transfer by referee or receiver (complete Schedule A)
e. ☐ ..... Transfer pursuant to marital settlement agreement or divorce decree (complete Schedule I)
f. ☐ ..... Deed in lieu of foreclosure (complete Schedule C)
g. ☐ ..... Transfer pursuant to liquidation of an entity (complete Schedule D)
h. ☐ ..... Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E)
i. ☐ ..... Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐ ..... Gift transfer not subject to indebtedness
k. ☐ ..... Gift transfer subject to indebtedness
l. ☐ ..... Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F)
m. ☐ ..... Transfer to a governmental body
n. ☐ ..... Correction deed
o. ☐ ..... Transfer by or to a tax exempt organization (complete Schedule G)
p. ☐ ..... Transfer of property partly within and partly without NYC
q. ☐ ..... Transfer of successful bid pursuant to foreclosure
r. ☐ ..... Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐ ..... Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M)
t. ☐ ..... Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R)
u. ☐ ..... Other transfer in connection with financing (describe): _____
v. ☐ ..... A grant or assignment of a leasehold interest in a tax-free NY area
w. ☐ ..... Transfer to an HDFC or an entity controlled by an HDFC. (Complete Schedule L)
x. ..... Reserved
y. ..... Reserved
z. ☑ ..... Other (describe) DEC EASEMENT

2019062100299101O2

● TYPE OF PROPERTY (✓)

a. ☐ ..... 1-3 family house
b. ☐ ..... Individual residential condominium unit
c. ☐ ..... Individual cooperative apartment
d. ☐ ..... Commercial condominium unit
e. ☐ ..... Commercial cooperative
f. ☐ ..... Apartment building
g. ☐ ..... Office building
h. ☐ ..... Industrial building
i. ☐ ..... Utility
j. ☑ ..... OTHER. (describe):
COMMERCIAL REAL ESTATE

● TYPE OF INTEREST (✓)

Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer.

	REC.		NON REC.
a.	☐	Fee	☐
b.	☐	Leasehold Grant	☐
c.	☐	Leasehold Assignment or Surrender	☐
d.	☐	Easement	☑
e.	☐	Subterranean Rights	☐
f.	☐	Development Rights	☐
g.	☐	Stock	☐
h.	☐	Partnership Interest	☐
i.	☐	OTHER. (describe):	☐

SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 12. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

1.	Cash	1.	0 00
2.	Purchase money mortgage	2.	0 00
3.	Unpaid principal of pre-existing mortgage(s)	3.	0 00
4.	Accrued interest on pre-existing mortgage(s)	4.	0 00
5.	Accrued real estate taxes	5.	0 00
6.	Amounts of other liens on property	6.	0 00
7.	Value of shares of stock or of partnership interest received	7.	0 00
8.	Value of real or personal property received in exchange	8.	0 00
9.	Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee	9.	0 00
10.	Other (describe):	10.	0 00
11.	**TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions)	11.	$ 0 00

See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.

SCHEDULE 2 - COMPUTATION OF TAX

A. **Payment**	Pay amount shown on line 15 - *See Instructions*	Payment Enclosed	
1.	Total Consideration (from line 11, above)	1.	0 00
2.	Excludable liens (see instructions)	2.	0 00
3.	Consideration (line 1 less line 2)	3.	0 00
4.	Tax Rate (see instructions)	4.	0 %
5.	HDFC Exemption (see Schedule L, line 15)	5.	0 00
6.	Consideration less HDFC Exemption (line 3 less line 5)	6.	0 00
7.	Percentage change in beneficial ownership (see instructions)	7.	100 %
8	Taxable consideration (multiply line 6 by line 7)	8.	0 00
9.	Tax (multiply line 8 by line 4)	9.	0 00
10.	Credit (see instructions)	10.	0 00
11.	Transfer tax previously paid (see Schedule L, line 18)	11.	0 00
12.	Tax due (line 9 less line 10 and 11) (if the result is negative, enter zero)	12.	0 00
13.	Interest (see instructions)	13.	0 00
14.	Penalty (see instructions)	14.	0 00
15.	**Total Tax Due** (add lines 12, 13 and 14)	15.	$ 0 00

2019062100299101O2

GRANTOR'S ATTORNEY ▼

Name of Attorney	WHITEMAN OSTERMAN & HANNA LLP	Telephone Number	(518) 478-7600
Address (number and street)	ONE COMMERCE PLAZA	City and State	ALBANY, NY
		Zip Code	12260
EMPLOYER IDENTIFICATION NUMBER	-	OR SOCIAL SECURITY NUMBER	- -

GRANTEE'S ATTORNEY ▼

Name of Attorney	OFFICE OF GENERAL COUNSEL	Telephone Number	(518) 402-9553
Address (number and street)	NYS DEC 625 BROADWAY	City and State	ALBANY, NY
		Zip Code	12233-5500
EMPLOYER IDENTIFICATION NUMBER	-	OR SOCIAL SECURITY NUMBER	- -

CERTIFICATION ▼

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

GRANTOR

Sworn to and subscribed to before me on this 25 day of JUNE, 2019.

13-1929042
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

ROCHDALE VILLAGE, INC
Name of Grantor

Lance Ashby-Williams
Signature of Notary

Jean Randolph-Castro
Signature of Grantor

Notary's stamp or seal

LANCE ASHBY-WILLIAMS
NOTARY PUBLIC-STATE OF NEW YORK
No. 01AS6357294
Qualified In Nassau County
My Commission Expires 04-17-2021

GRANTEE

Sworn to and subscribed to before me on this 29th day of October 2019.

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

NYS DEC
Name of Grantee

Colleen A. McCarthy
Signature of Notary

Jennifer Andrews NYSDEC Attorney
Signature of Grantee

Notary's stamp or seal

COLLEEN A. McCARTHY
Notary Public, State of New York
Qualified in Albany County
No. 02MC5046480
Commission Expires July 7, 2021

2019062100299101

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

2019111400632001001248FA

REAL ESTATE TRANSFER TAX COVER PAGE **PAGE 1 OF 1**

Document ID: 2019111400632001 Document Date: 11-01-2019 Preparation Date: 11-14-2019
Document Type: EASEMENT

PARTIES

FIRST GRANTOR/SELLER:	**FIRST GRANTEE/BUYER:**
ROCHDALE VILLAGE, INC	NYS DEC
169-55 137TH AVE	625 BROADWAY
JAMAICA, NY 11434-4517	ALBANY, NY 12233-5500

ASSOCIATED TAX FORM ID: 201906210029930102

RETT SUPPORTING DOCUMENTS SUBMITTED:

Page Count

TP-584-NYC (7/19)

Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax for the Conveyance of Real Property Located in New York City

Recording office time stamp

See Form TP-584-NYC-I, Instructions for Form TP-584-NYC, *before completing this form. Print or type.*

Schedule A – Information relating to conveyance

Grantor/Transferor

☐ Individual
☑ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☐ Other

Name *(if individual, last, first, middle initial)* (☐ *mark an X if more than one grantor*): ROCHDALE VILLAGE, INC

Social Security number

Mailing address: 169-55 137TH AVE

Social Security number

City	State	ZIP code	EIN
JAMAICA	NY	11434-4517	13 1929042

Single member's name if grantor is a single member LLC *(see instructions)*

Single member EIN or SSN

Grantee/Transferee

☐ Individual
☐ Corporation
☐ Partnership
☐ Estate/Trust
☐ Single member LLC
☑ Other

Name *(if individual, last, first, middle initial)* (☐ *mark an X if more than one grantee*): NYS DEC

Social Security number

Mailing address: 625 BROADWAY

Social Security number

City	State	ZIP code	EIN
ALBANY	NY	12233-5500	14 6013200

Single member's name if grantee is a single member LLC *(see instructions)*

Single member EIN or SSN

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
4 - 12495 2 -	650000	163-15 BAISLEY BOULEVARD	NEW YORK	QUEENS

Type of property conveyed *(mark an X in applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☑ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other _____

Date of conveyance: 11 (month) 1 (day) 2019 (year)

☐ Contract executed on or before April 1, 2019 *(see instructions)*

Percentage of real property conveyed which is residential real property 0 % *(see instructions)*

Condition of conveyance *(mark all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____%)
c. ☐ Transfer of a controlling interest (state percentage transferred _____%)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☑ Conveyance of an easement
p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part 4)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☑ Other *(describe)* DEC EASEMENT

For recording officer's use	Amount received Schedule B, Part 1 $ Schedule B, Part 2 $ Schedule B, Part 3 $	Date received	Transaction number

2019062100299301O2

GRID NORTH-NYSPCS-NAD 83
LONG ISLAND ZONE

N

METES AND BOUNDS DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK; BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEASTERLY CORNER OF THE BUILDING CURRENTLY LOCATED AT 169-47 137th STREET, SAID POINT BEING DESIGNATED WITH COORDINATE NORTH 184,836.62, EAST 1,047,864.58 ACCORDING TO THE NEW YORK STATE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983, LONG ISLAND ZONE; RUNNING THENCE THE FOLLOWING COURSES AND DISTANCES:

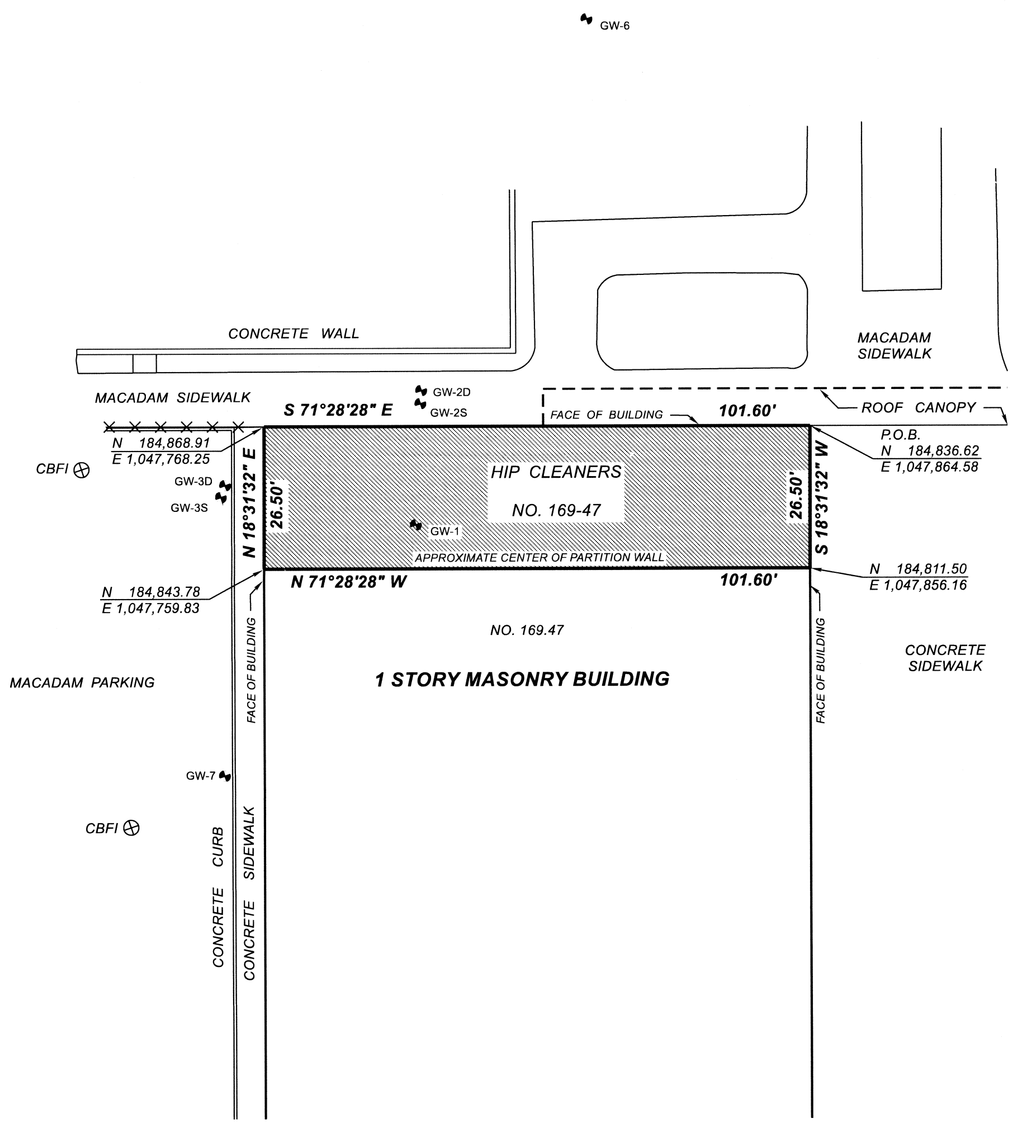
1.) ALONG THE EASTERLY FACE OF THE BUILDING CURRENTLY LOCATED AT 169-47 137th STREET, SOUTH 18°- 31'- 32" WEST, A DISTANCE OF 26.50 FEET TO A POINT DESIGNATED WITH COORDINATE NORTH 184,811.50, EAST 1,047,856.16; THENCE

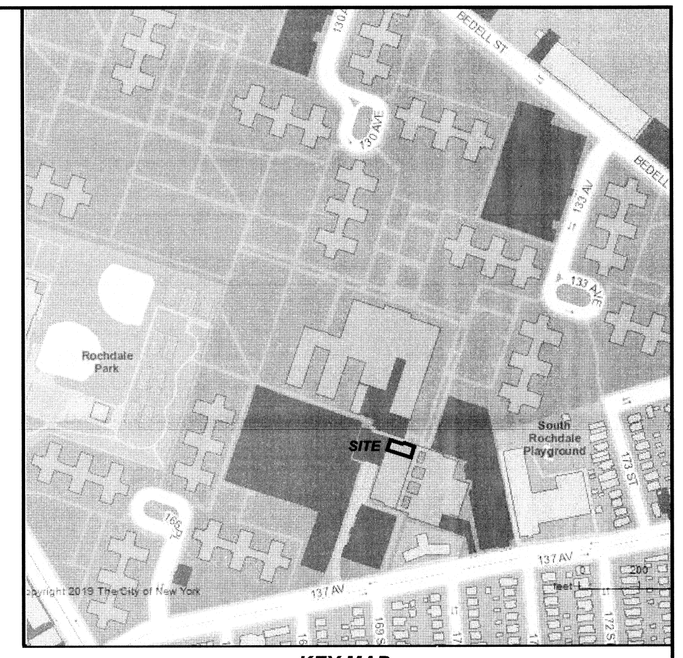
2.) THROUGH THE APPROXIMATE CENTER OF THE PARTITION WALL BETWEEN 169-47 137th STREET AND THE UNIT TO THE SOUTH, NORTH 71°- 28'- 28" WEST, A DISTANCE OF 101.60 FEET TO A POINT DESIGNATED WITH COORDINATE NORTH 184,843.78, EAST 1,047,759.83; THENCE

3.) ALONG THE WESTERLY FACE OF THE BUILDING, NORTH 18°- 31'- 32" EAST, A DISTANCE OF 26.50 FEET TO THE NORTHWESTERLY CORNER OF THE BUILDING TO A POINT DESIGNATED WITH COORDINATE NORTH 184,868.91, EAST 1,047,768.25; THENCE

4.) ALONG THE NORTHERLY FACE OF THE BUILDING, SOUTH 71°-28'- 28" EAST, A DISTANCE OF 101.60 FEET TO THE PLACE OR POINT OF BEGINNING.

CONTAINING 2,692 SQUARE FEET OR 0.0618 ACRE OF LAND, MORE OR LESS.





KEY MAP

WELL ELEVATION TABLE

	ELEVATIONS	
WELL I.D.	TOP OF CASING	TOP OF PVC
GW-1	15.52	15.05
GW-2D	15.53	15.07
GW-2S	15.67	15.26
GW-3D	15.03	14.64
GW-3S	15.07	14.76
GW-6	16.79	16.53
GW-7	14.88	14.53

LEGEND	
⊕	CBFI-CATCHBASIN FIELD INLET
↯	MONITORING WELL

NOTES:

-DATES OF FIELD SURVEY: DECEMBER 4, 2015 AND JULY 15, 2016

-GW-6 SURVEYED DECEMBER 30, 2016

-HORIZONTAL DATUM: NAD 83- LONG ISLAND ZONE- FROM GPS OBSERVATIONS

-VERTICAL DATUM: NAVD 88 FROM GPS OBSERVATIONS

-TAX LOT: PORTION OF BLOCK 12495 LOT 2

-PORTION OF PROPERTY CONVEYED TO ROCHDALE VILAGE, INC. BY DEED DATED 7/13/60 RECORDED IN DEED LIBER 7259 PAGE 475

-AREA: 2,692 S.F. = 0.0618 ACRE

-UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S EMBOSSED SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW

-ONLY COPIES OF THIS MAP BEARING THE LICENSED LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID, TRUE COPIES

-UNDERGROUND UTILITIES SUCH AS SEWERAGE DISPOSAL SYSTEMS, DRAINAGE, WATER, GAS, AND/OR ELECTRIC LINES, ETC..., ARE NOT SHOWN AND ARE NOT CERTIED TO

-GW-7 SURVEYED AUGUST 29, 2018

-THERE ARE NO PONDS, LAKES, SPRINGS, RIVERS OR NATURAL WATER BOUNDARY BORDERING ON OR RUNNING THROUGH THE SURVEYED PROPERTY

20' 0 20' 40'
SCALE: 1" = 20'

0 20 Ft/in 80'
Centimeters Meters = CM/100
SCALE: 1 CM = 2.40 METERS

I HEREBY CERTIFY TO THE PARTIES LISTED BELOW THAT THIS MAP IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON JULY 15, 2016 AND WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.

-NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STATE OF NEW YORK
DONALD R. STEDGE
049759
LICENSED LAND SURVEYOR

DONALD R. STEDGE, L.S., N.Y.S. LIC. NO. 49759

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@dec.ny.gov

REVISIONS
12/30/16- GW-6 LOCATION AND ELEVATIONS, NOTES
8/29/18- GW-7 LOCATION AND ELEVATIONS, NOTES
6/13/19- AREA, DEED REFERENCE, WATER BOUNDARY NOTE
7/3/19- KEY MAP, PAGE 2, ORIGINAL DESCRIPTION
9/3/19- COORDINATES, DESCRIPTION

ENVIRONMENTAL EASEMENT PREPARED FOR

HIP CLEANERS
ROCHDALE VILLAGE

169-47 137th STREET
JAMAICA

QUEENS COUNTY — NEW YORK
SCALE: 1" = 20' — AUGUST 11, 2016

DONALD R. STEDGE, P.L.S.
112 MURRAY AVENUE
GOSHEN, NY 10924
(845) 325-9734

PG. 1/2

JOB NO. 1485B

Traverse PC

ORIGINAL RECORD DECRIPTION

All those certain plots, pieces or parcels of land, situate, lying and being in the Fourth Ward, of the Borough of Queens, in the City of New York, County of Queens, City and State of New York, bounded and described as follows according to the meridian of the Topographical Bureau of the Borough of Queens, as follows:

PARCEL A

BEGINNING at the corner formed by the intersection of the northeasterly side of New York Blvd., 80 feet wide, with the southeasterly side of Baisley Blvd., 80 feet wide;
running thence along the southeasterly side of Baisley Blvd. the following four courses and distances:
1. North 19 degrees 41 minutes 20 seconds East 478.80 feet to a point of curve;
2. Northerly along a curve bearing to the right having a radius of 774.966 feet a distance of 243.35 feet to a point;
3. North 37 degrees 40 minutes 50 seconds East 809.54 feet to a point;
4. North 31 degrees 37 minutes 30 seconds East 146.10 feet to the land of the Long Island Railroad Company;
thence South 79 degrees 51 minutes 20 seconds East along the land of the Long Island Railroad Company 2,656.20 feet to the westerly extremity of Parcel 356 on Right of Way Map 346 acquired by The People of the State of New York in proceeding No. 1560 Elimination of Grade Crossing, Long Island Railroad (Montauk Division) Jamaica to Rosedale, County of Queens;
thence South 77 degrees 12 minutes 47 seconds East along the said parcel acquired by The People of the State of New York 130.14 feet to a point;
thence South 79 degrees 51 minutes 20 seconds East and still along said parcel acquired by The People of the State of New York 548.92 feet;
thence South 44 degrees 37 minutes 19 seconds West 272.44 feet;
thence North 44 degrees 55 minutes 38 seconds West 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 200 feet;
thence South 44 degrees 55 minutes 38 seconds East 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 160 feet;
thence North 44 degrees 55 minutes 38 seconds West 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 100 feet;
thence South 44 degrees 55 minutes 38 seconds East 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 160 feet;
thence North 44 degrees 55 minutes 38 seconds West 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 100 feet;
thence South 44 degrees 55 minutes 38 seconds East 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 60 feet;
thence North 44 degrees 55 minutes 38 seconds West 6 feet;
thence South 44 degrees 37 minutes 19 seconds West 90.62 feet;
thence South 40 degrees 06 minutes 35 seconds East 348.44 feet to the northwesterly side of 137th Avenue, 80 feet wide;
thence South 49 degrees 31 minutes 52 seconds West along the northwesterly side of 137th Avenue 1,516.67 feet to a point;
thence South 30 degrees 42 minutes 20 seconds West, still along the northwesterly side of 137th Avenue 172.96 feet to the corner formed by the intersection of the northwesterly side of 137th Avenue with the northeasterly side of New York Blvd.;
thence along the northeasterly side of New York Blvd. the two following courses and distances:
1. North 59 degrees 17 minutes 40 seconds West 877.95 feet to a point;
2. North 59 degrees 10 minutes 59 seconds West 1,806.40 feet to the corner formed by the intersection of the northeasterly side of New York Blvd. with the southeasterly side of Baisley Blvd. at the place or point of beginning.

PARCEL B

BEGINNING at the corner formed by the intersection of the easterly side of 131st Avenue, 50 feet wide, with the northerly side of 161st Street, 50 feet wide;
running thence North 14 degrees 24 minutes 57 seconds East along the easterly side of 131st Avenue 252.31 feet;
thence North 44 degrees 26 minutes 07 seconds West crossing 131st Avenue 161 feet;
thence North 35 degrees 39 minutes 45 seconds East 23.15 feet to the southwesterly side of New York Boulevard, 80 feet wide;
thence South 59 degrees 10 minutes 59 seconds East along the southwesterly side of New York Boulevard 416.07 feet to the center line of 132nd Avenue, 60 feet wide
thence South 14 degrees 25 minutes 47 seconds West along the center line of 132nd Avenue 240.81 feet to the easterly prolongation of the northerly side of 161st Street;
thence North 75 degrees 35 minutes 03 seconds West along the easterly prolongation of the northerly side of 161st Street and along the northerly side of 161st Street 270.01 feet to the corner formed by the intersection of the northerly side of 161st Street with the easterly side of 131st Avenue, at the place or point of beginning.

PARCEL C

BEGINNING at the corner formed by the intersection of the southeasterly side of 137th Avenue, 80 feet wide, with the northeasterly side of New York Blvd., 80 feet wide;
running thence North 30 degrees 42 minutes 20 seconds East along the southeasterly side of 137th Avenue, 156.87 feet;
thence South 58 degrees 09 minutes 26 seconds East 203.53 feet to a point;
thence South 58 degrees 19 minutes 04 seconds East 6.53 feet;
thence South 52 degrees 04 minutes 04 seconds West 5.35 feet;
thence South 58 degrees 49 minutes 46 seconds East 263.86 feet;
thence North 56 degrees 03 minutes 18 seconds East 2.95 feet;
thence South 58 degrees 19 minutes 04 seconds East 0.87 of a foot to the northwesterly side of 140th Avenue, 50 feet wide;
thence South 54 degrees 25 minutes 44 seconds West along the northwesterly side of 140th Avenue 161.93 feet to the corner formed by the intersection of the northwesterly side of 140th Avenue with the northeasterly side of New York Blvd.;
thence North 59 degrees 17 minutes 40 seconds West along the northeasterly side of New York Blvd. 408.89 feet to the corner formed by the intersection of the northeasterly side of New York Blvd. with the southeasterly side of 137th Avenue, at the place or point of beginning.

PARCEL D

BEGINNING at the corner formed by the intersection of the westerly side of 129th Avenue, 60 feet wide, with the southwesterly side of 172nd Street, 30 feet wide;
running thence South 10 degrees 08 minutes 40 seconds West along the westerly side of 129th Avenue, 52.12 feet to the northerly line of Parcel 290 on Right of Way Map 280 acquired by the People of the State of New York in Proceeding No. 1560 Elimination of Grade Crossing, Long Island Railroad (Montauk Division), Jamaica to Rosedale, County of Queens;
thence along said parcel acquired by the People of the State of New York the following three courses and distances:
1.) North 79 degrees 51 minutes 20 seconds West 206 feet to a point;
2.) North 78 degrees 49 minutes 28 seconds West 500.08 feet to a point;
3.) North 79 degrees 51 minutes 20 seconds West 178.42 feet to the easterly side of Baisley Blvd. 80 feet wide;
thence along the easterly side of Baisley Blvd. the following two courses and distances
1.) North 31 degrees 37 minutes 30 seconds East 481.11 feet to a point;
2.) North 17 degrees 42 minutes 18 seconds East 28.73 feet to the corner formed by the intersection of the easterly side of Baisley Blvd. with the southwesterly side of 172nd Street, 30 feet wide;
thence South 37 degrees 41 minutes 00 seconds East and part of the distance along the southwesterly side of 172nd Street 255.79 feet;
thence North 45 degrees 36 minutes 15 seconds East 124.40 feet to southwesterly side of 172nd Street
thence South 40 degrees 32 minutes 10 seconds East along the southwesterly side of 172nd Street 572.32 feet to the corner formed by the intersection of the southwesterly side of 172nd Street with the westerly side of 129th Avenue, at the place or point of beginning.

PARCEL E

BEGINNING at a point on the southeasterly side of 128th Avenue, 50 feet wide, distant 158 feet northeasterly from the corner formed by the intersection of the southeasterly side of 128th Avenue with the northeasterly side of 174th Place, 50 feet wide;
running thence North 48 degrees 15 minutes 05 seconds East along the southeasterly side of 128th Avenue 70 feet;
thence South 41 degrees 44 minutes 55 seconds East 107 feet to the southerly boundary line of "Map of South Jamaica Place";
thence North 42 degrees 39 minutes 25 seconds East along the southerly boundary line of "Map of South Jamaica Place" 379.81 feet;
thence North 41 degrees 44 minutes 55 seconds West 69.97 feet to the southeasterly side of 128th Avenue;
thence North 48 degrees 15 minutes 05 seconds East along the southeasterly side of 128th Avenue 71.71 feet to the corner formed by the intersection of the southeasterly side of 128th Avenue with the southwesterly side of Maetrich St., 50 feet wide;
thence South 30 degrees 40 minutes 55 seconds East along the southwesterly side of Maetrich St. 150.66 feet to the corner formed by the intersection of the southwesterly side of Maetrich St. with the northwesterly side of 129th Avenue, 60 feet wide;
thence South 43 degrees 39 minutes 35 seconds West along the northwesterly side of 129th Avenue 79.82 feet to a point;
thence South 48 degrees 51 minutes 25 seconds West still along the northwesterly side of 129th Avenue 569.26 feet to the corner formed by the intersection of the northwesterly side of 129th Avenue with the northeasterly side of 174th Place;
thence North 41 degrees 44 minutes 55 seconds West along the northeasterly side of 174th Place 19.10 feet to the southerly boundary line of "Map of South Jamaica Place";
thence North 42 degrees 46 minutes 42 seconds East along the southerly boundary line of "Map of South Jamaica Place" 88.40 feet to a point;
thence North 42 degrees 39 minutes 25 seconds East still along the southerly boundary line of said map 70.34 feet;
thence North 41 degrees 44 minutes 55 seconds West 113.85 feet to the southeasterly side of 128th Avenue, at the place or point of beginning.

PARCEL F

BEGINNING at the corner formed by the intersection of the southeasterly side of 129th Avenue, 60 feet wide, with the westerly side of Maetrich St., 50 feet wide;
running thence South 16 degrees 18 minutes 45 seconds East along the westerly side of Maetrich Street 98.36 feet;
thence South 43 degrees 13 minutes 44 seconds West 20.27 feet;
thence South 23 degrees 02 minutes 50 seconds East 179.31 feet;
thence North 43 degrees 39 minutes 35 seconds East 22.74 feet to the southwesterly side of 176th Street, 50 feet wide;
thence South 46 degrees 20 minutes 25 seconds East along the southwesterly side of 176th Street 100 feet;
thence South 43 degrees 39 minutes 35 seconds West 65.84 feet;
thence South 23 degrees 02 minutes 50 seconds East 27.50 feet;
thence South 24 degrees 18 minutes 50 seconds East 328.73 feet to the southwesterly prolongation of the southeasterly side of 131st Avenue, 50 feet wide;
thence North 43 degrees 39 minutes 35 seconds East crossing 176th Street and along the southwesterly prolongation of the southeasterly side of 131st Avenue and along the southeasterly side of 131st Avenue 699.94 feet;
thence South 46 degrees 20 minutes 25 seconds East 91 feet;
thence North 43 degrees 39 minutes 35 seconds East 29.37 feet;
thence South 15 degrees 49 minutes 40 seconds West 19.28 feet;
thence South 43 degrees 39 minutes 35 seconds West 302.77 feet;
thence South 46 degrees 20 minutes 25 seconds East 100 feet to a point in 132nd Avenue, 50 feet wide;
thence South 10 degrees 25 minutes 40 seconds West crossing 132nd Avenue 74.81 feet to the southeasterly side of 132nd Avenue;
thence North 43 degrees 39 minutes 35 seconds East along the southeasterly side of 132nd Avenue, 39.05 feet;
thence South 46 degrees 20 minutes 25 seconds East 92.40 feet;
thence South 43 degrees 29 minutes 25 seconds West 11.80 feet;
thence South 46 degrees 30 minutes 51 seconds East 110 feet to the northwesterly side of 133rd Avenue, 50 feet wide;
thence South 43 degrees 29 minutes 09 seconds West along the northwesterly side of 133rd Avenue and the southwesterly prolongation thereof and crossing Garret Street, 50 feet wide, 153.86 feet to the southerly side of Garret Street;
thence South 70 degrees 41 minutes 31 seconds East along the southerly side of Garret Street 54.81 feet to the southwesterly prolongation of the southeasterly side of 133rd Avenue;
thence North 43 degrees 29 minutes 09 seconds East along the southwesterly prolongation of the southeasterly side of 133rd Avenue and along the southeasterly side of 133rd Avenue 131.19 feet;
thence South 46 degrees 20 minutes 25 seconds East 110.80 feet;
thence South 43 degrees 39 minutes 35 seconds West and again crossing Garret Street 81.22 feet to the southerly side of Garret Street;
thence South 70 degrees 41 minutes 31 seconds East along the southerly side of Garret Street 93.59 feet;
thence South 79 degrees 20 minutes 15 seconds West 298.38 feet;
thence North 10 degrees 39 minutes 45 seconds West 16 feet;
thence South 83 degrees 00 minutes 00 seconds West 239.95 feet;
thence North 80 degrees 32 minutes 38 seconds West 1,349.10 feet to the easterly side of 129th Avenue;
thence North 10 degrees 08 minutes 40 seconds East along the easterly side of 129th Avenue 23.23 feet to the southeasterly side of 129th Avenue;
thence North 48 degrees 51 minutes 25 seconds East along the southeasterly side of 129th Avenue 1,084.28 feet to a point;
thence North 43 degrees 39 minutes 35 seconds East still along the southeasterly side of 129th Avenue 63.66 feet to the corner formed by the intersection of the southeasterly side of 129th Avenue with the westerly side of Maetrich Street, at the place or point of beginning

ENVIRONMENTAL EASEMENT PREPARED FOR

HIP CLEANERS
ROCHDALE VILLAGE

169-47 137th STREET
JAMAICA

QUEENS COUNTY — NEW YORK
SCALE: 1" = 20' — JULY 3, 2019

DONALD R. STEDGE, P.L.S.
112 MURRAY AVENUE
GOSHEN, NY 10924
(845) 325-9734

PG. 2/2

JOB NO. 1485B

APPENDIX 2 – LIST OF SITE CONTACTS

Name	Phone/Email Address
Matthew Carroll, P.E.; Remedial Engineer	(646) 606-2332, mcarroll@tenen-env.com
Sondra Martinkat; NYSDEC Project Manager	(518) 402-9767, sondra.martinkat@dec.ny.gov
Jane O'Connell; Regional Remediation Engineer	(718) 482-4599, jane.oconnell@dec.ny.gov
Anthony Perretta; NYSDOH Project Manager	(518) 402-7860, beei@health.ny.gov
Kelly A. Lewandowski, P.E.; Chief, Site Control Section	(518) 402-9543, kelly.lewandowski@dec.ny.gov
Scott Fein, Whiteman Osterman & Hanna LLP	(518) 487-7730, SFein@woh.com
Claude Laborde, as Agent	(718) 276-5700, claborde@rochdalevillage.com

APPENDIX 3 – SOIL BORING AND MONITORING WELL CONSTRUCTION LOGS

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL		**Boring No.**	**HIP-SB-1/GW-1**
		Sheet:	**1 OF 1**
Site:	**HIP Cleaners**	**Drilling Method:**	Geoprobe
Date:	**11/2/2015**	**Soil Sampling Method:**	Acetate liners
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	Zebra Environmental

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
1	59.7	67%	HIP-SB-1(0-2)	0-3: FILL (silty sand, coal fragments, red brick fragments)
2	67.7			3-4: SAA FILL (red brick fragments, tan fine sand and gravel)
3				4-5: Fine to medium grain sand with trace of silt
4	277	67%	HIP-SB-1(4-6)	
5				
6	35.7			5-6: SAA
7		50%		6-9: Orange brown medium to coarse grain sand
8	50.5			
9	0.2			9-10: Fine grain sand, trace of silt, wet
10		100%	HIP-SB-1(10-11)	
11	0.0			10-12: SAA
12				12-15: Coarse grain sand with gravel, wet
13	0.0	100%		
14			HIP-SB-1(13-15)	**EOB - 15 ft-bg.**
15				

Notes:

DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL

		Boring No.	**HIP-SB-2D**
		Sheet:	**1 OF 2**
Site:	**HIP Cleaners**	**Drilling Method:**	Hollow Stem Auger
Date:	**11/11/2015**	**Soil Sampling Method:**	Split Spoon
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner**	**Driller :**	General Borings

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
1				0-1: Asphalt 1-3: FILL (brick, concrete, cobbles, sand) 3-5: FILL (silty sand and brick fragments)
2	0.0	25%		
3				
4	0.0	90%		
5				
6	0.0	17%		5-7: Concrete 7-9: 4" concrete, remaining coarse grain sand and gravel
7				
8	0.0	90%		
9				
10	0.0	100%	HIP-SB-2D(9-11)	9-11: Medium to coarse grain sand and gravel 11-13: SAA
11				
12	0.0	100%		
13				
14				
15				
16	0.0	50%		15-17: SAA
17				
18				
19				
20				

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL		**Boring No.**	**HIP-SB-2D**
		Sheet:	**2 OF 2**
Site:	**HIP Cleaners**	**Drilling Method:**	Hollow Stem Auger
Date:	**11/11/2015**	**Soil Sampling Method:**	Split Spoon
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner**	**Driller :**	General Borings

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
21	0.0	90%		20-22: SAA
22				
23				
24				
25	0.0	90%		25-27: SAA
26				
27				
28				
29				
30		0%		30-32: No recovery
31				33-35: SAA
32				
33				**EOB - 35 ft-bg.**
34	0.0	25%	HIP-SB-2D(33-35)	
35				

Notes:
DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL

		Boring No.	**HIP-SB-3D**
		Sheet:	**1 OF 2**
Site:	**HIP Cleaners**	**Drilling Method:**	Hollow Stem Auger
Date:	**11/5/2015**	**Soil Sampling Method:**	Split Spoon
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	General Borings

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
1				0-1: Second asphalt layer
2	1.9	50%	HIP-SB-3D(1-3)	1-3: FILL (ash, coal fragments, silty sand)
3				3-5: FILL (sandy silt)
4	1.8	50%		
5				
6	3.5	60%		5-7: Yellow fine to medium grain sand and silt
7				7-9: Fine to medium grain sand and silt, wet
8	0.3	60%		9-10: Grey medium to coarse grain sand and gravel
9			HIP-SB-3D(9-11)	
10	0.4	70%		
11				10-13: SAA
12	0.2	100%		13-15: Grey coarse grain sand with gravel
13				
14	0.3	100%		
15				
16	0.2	50%		15-17: SAA
17				17-19: No recovery
18		0%		19-20: Grey coarse grain sand with gravel
19				
20	0.2	50%		
21				20-21: SAA
22				
23				
24				
25				

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL		**Boring No.**	**HIP-SB-3D**
		Sheet:	**2 OF 2**
Site:	**HIP Cleaners**	**Drilling Method:**	Geoprobe
Date:	**11/5/15**	**Soil Sampling Method:**	Acetate liners
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	Zebra Environmental

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
26		50%		25-27: SAA
27				
28				
29				
30		50%		30-32: SAA
31				
32				
33				
34				
35	0.0	50%		35-37: SAA
36				
37				
38				
39				
40	0.0	25%		40-42: SAA
41				
42				
43				
44				
45	0.0	100%		45-47: SAA
46				
47				48-50: SAA
48				**EOB - 50 ft-bg.**
49	0.0	100%	HIP-SB-3D(48-50)	
50				

Notes:
DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL

		Boring No.	**HIP-SB-4**
		Sheet:	**1 OF 1**
Site:	**HIP Cleaners**	**Drilling Method:**	Geoprobe
Date:	**11/2/2015**	**Soil Sampling Method:**	Acetate liners
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	Zebra Environmental

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
1	0.0	67%	HIP-SB-4(0-2)	0-3: Fine to medium grain sand, trace of gravel and silt
2				
3				3-5: FILL (medium to coarse grain sand, trace gravel)
4		100%		
5				
6				5-6: SAA
7		100%		6-7: FILL (dark black ash)
8	0.0			7-9: Dense grey clay, switcht to grey sand, some organic matter
9				9-10: Fine to medium grey sand
10	0.0	100%	HIP-SB-4(9-11)	
11	0.0			10-12: SAA
12				12-15: Fine to medium gray sand, trace silt, to tan fine to medium grain sand, trace gravel
13		100%		
14	0.0			**EOB - 15 ft-bg.**
15			HIP-SB-4(13-15)	

Notes:

DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

Appendix 1 - Lithologic Logs
HIP Cleaners - Rochdale Village, Jamaica, NY

TENEN ENVIRONMENTAL

		Boring No.	**HIP-SB-5**
		Sheet:	**1 OF 1**
Site:	**HIP Cleaners**	**Drilling Method:**	Hollow Stem Auger
Date:	**11/5/2015**	**Soil Sampling Method:**	Split Spoon
Weather:	**Clear, 65 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	General Borings

Depth (feet)	PID Reading (ppm)	% Recovery	Soil Samples	Soil Description
1				0-1: Second asphalt layer
2	0.0	80%	HIP-SB-5(1-3)	1-3: FILL (brown and grey sand and silt with cobbles)
3				3-5: SAA
4	0.0	80%		
5				
6	0.0	80%		5-7: Brown fine grain sand and silt
7				7-9: SAA, asphalt at 8 ft.
8	0.0	80%		
9				
10	0.0	80%	HIP-SB-5(9-11)	9-11: SAA, wet at 9 ft.
11				
12	0.0	80%	HIP-SB-5(11-13) MS/MSD	11-13: SAA
13				13-15: Orange coarse grain sand, trace of gravel
14	0.0	80%	HIP-SB-5(13-15)	**EOB - 15 ft-bg.**
15				

Notes ***HIP-SB-5(1-3)DUP**

DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

TENEN ENVIRONMENTAL

		Boring No.	**HP-SB-6**
		Sheet:	**1 OF 1**
Site:	**HIP Cleaners**	**Drilling Method:**	Geoprobe
Date:	**12/20/2016**	**Soil Sampling Method:**	Acetate liners
Weather:	**Clear, 20 degrees F**		
Observer:	**M. Ahmed, K. Meisner, C. Zaccheo**	**Driller :**	Zebra Environmental

Depth (feet)	PID Reading (ppm)	Soil Samples	Soil Description
1 - 2	0.4	HP-SB-6(0-2)	0-2: Brown medium grain sand
3 - 4 - 5			
6 - 7	0.0		5-7: Orange medium to fine grain sand, some silt
8 - 9	0.0		7-9: SAA to coarse grain sand
10			
11 - 12	0.0	HP-SB-6 (10-12)	10-12: Orange coarse grain sand, some silt, wet
13 - 14 - 15 - 16			
17 - 18	0.0	HP-SB-6(16-18)	16-18: Orange coarse grain sand with some silt, wet **EOB - 18 ft-bg.**

Notes

DTW - Depth to Water
EOB - End of Boring
ft-bg - Feet Below Grade
PID - Photoionization Detector
SAA - Same as Above
NR - not recorded

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	11/20/15
Well No.	HIP GW-1	Sample ID	HIP GW-1

Well Diameter	1 inches	Depth to Water	6.92	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	15.05	ft
Headspace PID	44.2 ppm	GW Elevation	8.13	ft
Weather	Clear, 50 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	6 gallons

Time	Temperature deg-C	pH SU	ORP mV	Conductivity mS/cm	Turbidity NTU	Dissolved Oxygen mg/L	Total Dissolved Solids ppm
0930	20.67	6.42	67	1.85	0.0	1.31	1.20
0940	21.58	6.43	43	1.94	0.0	0.0	1.24
0950	21.69	6.43	34	1.94	946	0.0	1.24
1000	21.73	6.43	30	1.91	656	0.0	1.20
1010	21.25	6.42	27	1.89	574	0.0	1.21

Notes:

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	11/20/15
Well No.	HIP GW-2S	Sample ID	HIP GW-2S

Well Diameter	2 inches	Depth to Water	7.13	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	15.07	ft
Headspace PID	0.0 ppm	GW Elevation	7.94	ft
Weather	Clear, 50 deg F			

Pump	Bladder
Water Quality Meter	Horiba U-52
Total Volume Purged	6 gallons

Time	Temperature deg-C	pH SU	ORP mV	Conductivity mS/cm	Turbidity NTU	Dissolved Oxygen mg/L	Total Dissolved Solids ppm
1030	20.15	6.45	89	2.30	0.0	0.31	1.53
1040	20.34	6.38	97	2.29	820	0.00	1.47
1050	20.36	6.37	102	2.30	447	0.00	1.48
1100	20.42	6.39	106	2.30	175	0.00	1.47
1110	20.42	6.38	108	2.32	101	0.00	1.49
1120	20.43	6.38	110	2.34	28	0.00	1.50

Notes:

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	11/20/15
Well No.	HIP GW-2D	Sample ID	HIP GW-2D

Well Diameter	2 inches	Depth to Water	6.93	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	15.26	ft
Headspace PID	0.0 ppm	GW Elevation	8.33	ft
Weather	Clear, 50 deg F			

Pump	Bladder
Water Quality Meter	Horiba U-52
Total Volume Purged	gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1120	19.62	6.08	108	0.382	75.3	0.00	0.229
1130	19.4	6.01	57	0.382	75.2	0.00	0.249
1140	19.37	5.99	49	0.393	67.8	0.00	0.255
1150	19.39	6.00	46	0.393	26.8	0.00	0.256

Notes:

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	11/18/15
Well No.	HIP GW-3S	Sample ID	HIP GW-3S

Well Diameter	2 inches	Depth to Water	6.63	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	14.76	ft
Headspace PID	10.8 ppm	GW Elevation	8.13	ft
Weather	Sunny, 60 deg F			

Pump	Bladder
Water Quality Meter	Horiba U-52
Total Volume Purged	7 gallons

Time	Temperature deg-C	pH SU	ORP mV	Conductivity mS/cm	Turbidity NTU	Dissolved Oxygen mg/L	Total Dissolved Solids ppm
1045	19.12	6.37	184	0.774	0.0	8.56	0.444
1055	20.34	6.56	177	0.727	0.0	7.93	0.466
1105	20.48	6.56	178	0.700	0.0	7.32	0.443
1115	20.73	6.52	176	0.681	935	7.06	0.435
1125	20.71	6.49	172	0.691	564	6.45	0.428
1135	20.15	6.53	166	0.667	413	6.16	0.426
1145	20.83	6.8	165	0.631	229	5.66	0.403
1155	20.89	6.47	162	0.633	128	5.47	0.405
1205	20.99	6.46	161	0.663	66	5.99	0.425
1215	20.80	6.46	161	0.665	54	4.7	0.426
1225	20.80	6.46	160	0.671	52	4.53	0.421
1235	20.83	6.44	160	0.678	57	4.54	0.441

Notes:

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	11/18/15
Well No.	HIP GW-3D	Sample ID	HIP GW-3D

Well Diameter	2 inches	Depth to Water	6.48	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	14.64	ft
Headspace PID	0.0 ppm	GW Elevation	8.16	ft
Weather	Sunny, 60 deg F			

Pump	Bladder
Water Quality Meter	Horiba U-52
Total Volume Purged	4 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1410	20.75	6.85	160	0.223	52.7	4.93	0.144
1420	20.71	6.70	160	0.228	40.9	2.67	0.142
1440	20.11	6.61	154	0.221	90.9	2.25	0.194
1450	19.97	6.03	3	0.352	219	0.00	0.224
1500	19.90	6.05	3	0.354	222	0.00	0.230
1510	19.78	6.03	-7	0.358	208	0.00	0.233
1520	19.74	6.04	-14	0.360	190	0.00	0.234

Notes:

Appendix 4: Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	12/28/16
Well No.	HIP GW-6	Sample ID	HIP GW-6

Well Diameter	2 inches	Depth to Water	8.25	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	16.53	ft
Headspace PID	551.0 ppm	GW Elevation	8.28	ft
Weather	Sunny, 60 deg F			

Pump	Bladder
Water Quality Meter	Horiba U-52
Total Volume Purged	4 gallons

Time	Temperature deg-C	pH SU	ORP mV	Conductivity mS/cm	Turbidity NTU	Dissolved Oxygen mg/L	Total Dissolved Solids ppm
1030	14.65	6.69	156	0.753	800.0	7.25	0.482
1040	15.55	6.55	168	0.757	363.0	3.97	0.485
1050	15.67	6.58	169	0.763	221.0	3.89	0.488
1100	15.7	6.59	170	0.77	127	4.44	0.493
1110	15.71	6.6	168	0.776	103	3.87	0.499
1145	15.77	6.62	163	0.794	83	4.57	0.508
1155	15.77	6.62	165	0.797	82	4.00	0.510
1205	15.77	6.62	165	0.794	89	3.87	0.509

Notes:

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	7/22/2021
Well No.	HIP GW-1	Sample ID	HIP GW-1

Well Diameter	1 inches	Depth to Water		ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	26.3 ppm	GW Elevation	22.25	ft
Weather	Clear, 90 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
900	19.61	8.78	38	1.290	0	12.21	0.801
910	19.17	6.56	95	1.16	701.0	7.56	0.743
920	19.15	6.31	107	1.16	166.0	5.16	0.741
930	19.15	6.25	111	1.15	29.6	3.63	0.737
940	19.13	6.24	112	1.15	11.5	2.71	0.737

Note: HIP_GW_1 was collected at 0950 and HIP_GW_1_DUP was collected at 0955

Depth to water not available; The interface probe was bent and therefore not able to be inserted into the well.

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	6/2/2023
Well No.	HIP GW-1	Sample ID	HIP GW-1

Well Diameter	1 inches	Depth to Water	7.54	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	26.3 ppm	GW Elevation	14.71	ft
Weather	Clear, 70 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1300	19.41	7.36	245	2.31	45.6	8.04	1.48
1310	19.25	7.23	250	2.31	50.5	3.76	1.48
1320	19.24	7.14	254	2.31	55.5	1.80	1.48
1330	18.81	6.99	209	2.31	12.0	0.00	1.48
1340	20.01	6.97	270	2.26	9.60	0.00	1.44
1350	18.85	7.01	271	2.35	7.60	0.05	1.50

Note: HIP_GW_1 was collected at 1355 and HIP_GW_1_DUP was collected at 1400

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	7/22/2021
Well No.	HIP-GW-2S	Sample ID	HIP-GW-2S

Well Diameter	1 inches	Depth to Water	8.81	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	0.0 ppm	GW Elevation	13.44	ft
Weather	Clear, 90 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1138	20	6.19	94	1.330	7	2.25	0.857
1148	19.68	6.16	106	1.33	1.8	0.00	0.852
1158	19.71	6.15	112	1.34	0.0	0.00	0.850

Note: HIP_GW_2S was collected at 1200

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	7/22/2021
Well No.	HIP GW-2D	Sample ID	HIP-GW-2D

Well Diameter	1 inches	Depth to Water	7.59	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	4.4 ppm	GW Elevation	14.66	ft
Weather	Clear, 90 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1030	20.33	6.07	42	0.964	124	1.71	0.617
1040	21.19	5.74	49	0.96	55.2	0.15	0.615
1050	20.76	5.70	50	0.943	55.3	0.00	0.604
1100	20.60	5.69	50	0.953	42.1	0.00	0.610

Note: HIP_GW_2D was collected at 1105

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	7/22/2021
Well No.	HIP-GW-3S	Sample ID	HIP-GW-3S

Well Diameter	1 inches	Depth to Water	7.32	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	23.8 ppm	GW Elevation	14.93	ft
Weather	Clear, 90 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1245	26.41	6.37	131	2.410	33	5.43	1.560
1255	21.82	6.33	135	2.59	2.3	1.26	1.650
1305	21.60	6.32	134	2.5	0.0	0.67	1.600

Note: HIP_GW_3S was collected at 1310

Purge Logs
HIP Cleaners- Rochdale Village

GROUNDWATER SAMPLING LOG

Site Name	Rochdale Cleaners - HIP	Date	7/22/2021
Well No.	HIP GW-3D	Sample ID	HIP-GW-3D

Well Diameter	1 inches	Depth to Water	7.18	ft-bg
Well Screen Interval	10 ft-bg	TOC Elevation	22.25	ft
Headspace PID	0.0 ppm	GW Elevation	15.07	ft
Weather	Clear, 90 deg F			

Pump	Peristaltic
Water Quality Meter	Horiba U-52
Total Volume Purged	3 gallons

Time	Temperature	pH	ORP	Conductivity	Turbidity	Dissolved Oxygen	Total Dissolved Solids
	deg-C	SU	mV	mS/cm	NTU	mg/L	ppm
1340	22.51	6.7	-11	0.668	21	11.25	0.407
1350	20.66	6.74	47	0.29	6.2	7.40	0.194
1400	20.30	6.18	-27	0.486	19.6	5.83	0.319

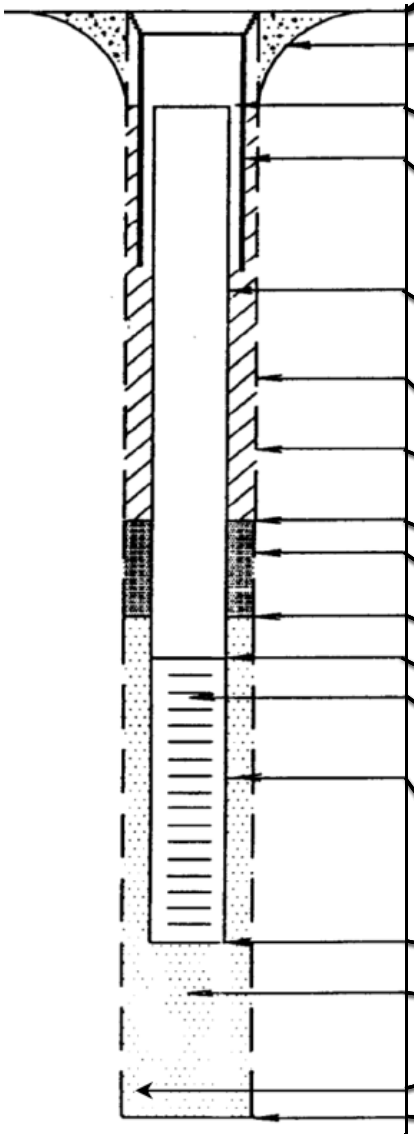
Note: HIP_GW_3D was collected at 1405

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-1**
Field Geologist:	K. Meisner, C. Zaccheo	Date Started:	11/2/15
Driller:	Zebra Environmental	Date Completed:	11/2/15
Drilling Method:	Geoprobe	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 65 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-1
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	15.52
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.47
Elevation of Top of Riser Pipe	15.05
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	1
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	3
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	N
Depth of Top of Seal (ft-bg)	5.5
Elevation of Top of Seal	10.02
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	N
Depth of Top of Filter Pack (ft-bg)	6
Depth of Top of Screen (ft-bg)	7
Elevation of Top of Screen	8.52
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	1
Slot Size of Screen (in)	0.02
Length of Screen (ft)	10
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	17
Elevation of Bottom of Screen	-1.48
Depth of Bottom of Filter Pack (ft-bg)	17
Elevation of Bottom of Filter Pack	-1.48
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	17
Elevation of Bottom of Hole	-1.48

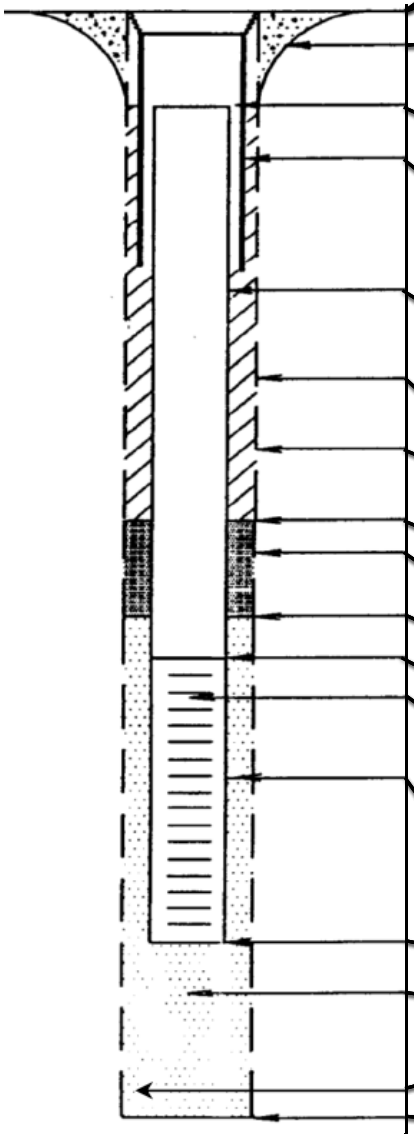
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-2S**
Field Geologist:	K. Meisner	Date Started:	11/11/15
Driller:	General Borings	Date Completed:	11/11/15
Drilling Method:	Hollow Stem Auger	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 65 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-2D
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	15.67
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.41
Elevation of Top of Riser Pipe	15.26
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	8
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	Y
Depth of Top of Seal (ft-bg)	4.5
Elevation of Top of Seal	11.17
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	6
Depth of Top of Screen (ft-bg)	6.5
Elevation of Top of Screen	9.17
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	10
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	16.5
Elevation of Bottom of Screen	-0.83
Depth of Bottom of Filter Pack (ft-bg)	16.5
Elevation of Bottom of Filter Pack	-0.83
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	16.5
Elevation of Bottom of Hole	-0.83

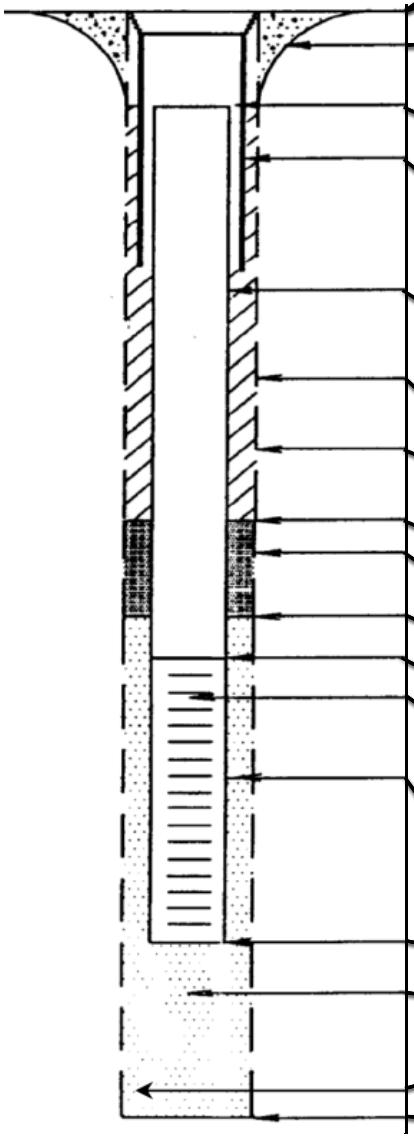
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-2D**
Field Geologist:	K. Meisner	Date Started:	11/11/15
Driller:	General Borings	Date Completed:	11/11/15
Drilling Method:	Hollow Stem Auger	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 65 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-2D
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	15.53
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.46
Elevation of Top of Riser Pipe	15.07
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	8
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	Y
Depth of Top of Seal (ft-bg)	28
Elevation of Top of Seal	-12.47
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	29.5
Depth of Top of Screen (ft-bg)	30
Elevation of Top of Screen	-14.47
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	5
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	35
Elevation of Bottom of Screen	-19.47
Depth of Bottom of Filter Pack (ft-bg)	35
Elevation of Bottom of Filter Pack	-19.47
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	35
Elevation of Bottom of Hole	-19.47

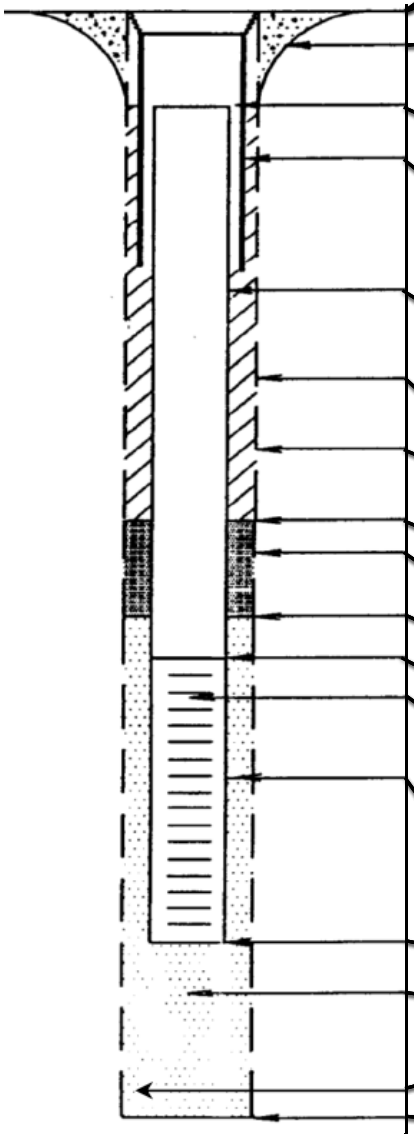
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-3S**
Field Geologist:	K. Meisner, C. Zaccheo	Date Started:	11/5/15
Driller:	General Borings	Date Completed:	11/5/15
Drilling Method:	Hollow Stem Auger	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 65 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-3D
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	15.07
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.31
Elevation of Top of Riser Pipe	14.76
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	8
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	Y
Depth of Top of Seal (ft-bg)	3.5
Elevation of Top of Seal	11.57
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	5
Depth of Top of Screen (ft-bg)	5.5
Elevation of Top of Screen	9.57
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	10
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	15.5
Elevation of Bottom of Screen	-0.43
Depth of Bottom of Filter Pack (ft-bg)	15.5
Elevation of Bottom of Filter Pack	-0.43
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	15.5
Elevation of Bottom of Hole	-0.43

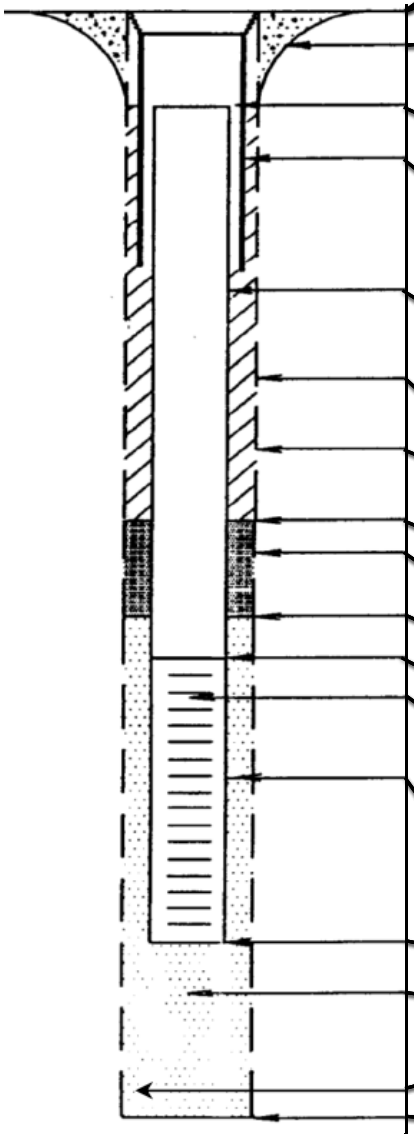
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-3D**
Field Geologist:	K. Meisner	Date Started:	11/5/15
Driller:	General Borings	Date Completed:	11/5/15
Drilling Method:	Hollow Stem Auger	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 65 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-2D
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	15.03
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.39
Elevation of Top of Riser Pipe	14.64
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	8
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	Y
Depth of Top of Seal (ft-bg)	28
Elevation of Top of Seal	-12.97
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	29.5
Depth of Top of Screen (ft-bg)	30
Elevation of Top of Screen	-14.97
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	5
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	35
Elevation of Bottom of Screen	-19.97
Depth of Bottom of Filter Pack (ft-bg)	35
Elevation of Bottom of Filter Pack	-19.97
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	35
Elevation of Bottom of Hole	-19.97

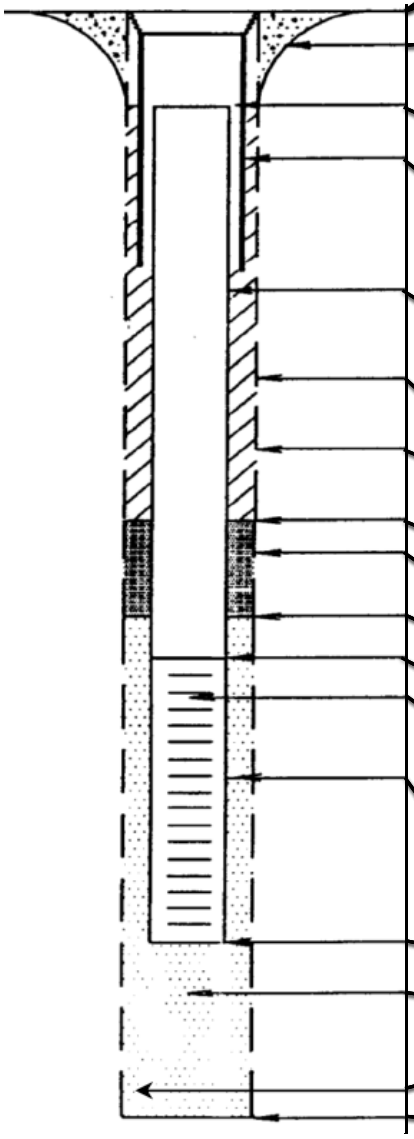
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number:**	**GW-6**
Field Geologist:	K. Meisner, C. Zaccheo	Date Started:	12/20/16
Driller:	Zebra Environmental	Date Completed:	12/20/16
Drilling Method:	Geoprobe	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	Clear, 20 degrees F
Sump Installed? (Y/N)	N	Boring Number:	SB-6
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	16.79
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.26
Elevation of Top of Riser Pipe	16.53
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	3
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	N
Depth of Top of Seal (ft-bg)	5.5
Elevation of Top of Seal	11.29
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	7
Depth of Top of Screen (ft-bg)	7.5
Elevation of Top of Screen	9.29
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	10
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	17.5
Elevation of Bottom of Screen	-0.71
Depth of Bottom of Filter Pack (ft-bg)	17.5
Elevation of Bottom of Filter Pack	-0.71
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	17.5
Elevation of Bottom of Hole	-0.71

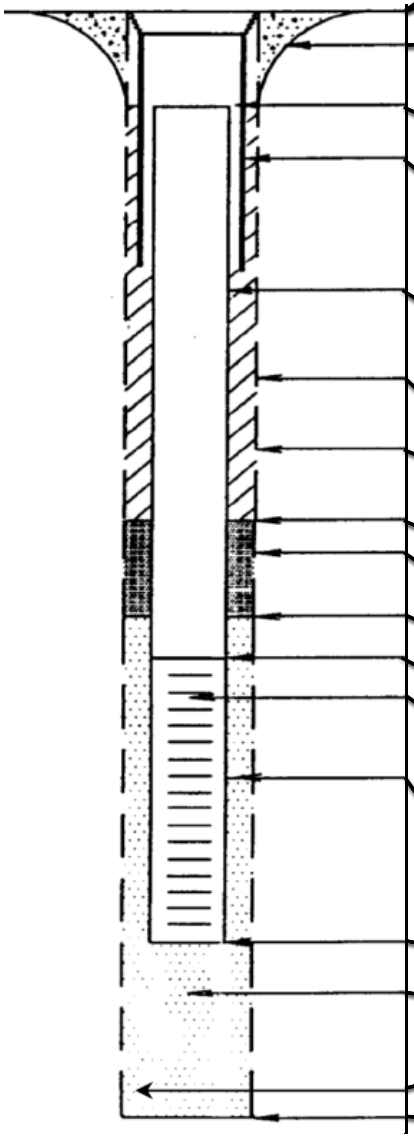
Comments:

TENEN ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

Monitoring Well Construction Diagram (Flush Mount)

Project:	HIP Cleaners (C241166)	**Well Number: GW-7**	
Field Geologist:	K. Meisner, C. Zaccheo	Date Started:	8/9/18
Driller:	Cascade	Date Completed:	8/9/18
Drilling Method:	Geoprobe	Elevation Datum:	NAVD88
Development Method:	Peristaltic Pump	Weather:	P. Cloudy, 90 degrees F
Sump Installed? (Y/N)	N	Boring Number:	N/A direct drop
Sump Length (Ft):	N/A		



Ground Surface	Concrete
Elevation of Top of Surface Casing	14.88
Type of Surface Plug	Concrete
Depth of Surface Plug (ft-bgs)	1
Diameter of Surface Plug (ft)	0.83
Riser Pipe	
Depth of Top of Riser Pipe (ft-bg)	0.35
Elevation of Top of Riser Pipe	14.53
I.D. of Surface Casing (in)	8
Type of Surface Casing	Manhole cover
Depth of Surface Casing (ft-bg)	1.00
I.D. of Riser (in)	2
Type of Riser	Schedule 40 PVC
Borehole Diameter (in)	3
Type of Backfill	Clean Sand
Backfill - Tremied? (Y/N)	N
Depth of Top of Seal (ft-bg)	3
Elevation of Top of Seal	11.88
Type of Seal	Bentonite Pellets
Seal - Tremied? (Y/N)	Y
Depth of Top of Filter Pack (ft-bg)	4.5
Depth of Top of Screen (ft-bg)	5
Elevation of Top of Screen	9.88
Type of Screen	Schedule 40 PVC
I.D. of Screen (in)	2
Slot Size of Screen (in)	0.02
Length of Screen (ft)	10
Type of Filter Pack	Sand
Filter Pack - Tremied? (Y/N)	N
Depth of Bottom of Screen (ft-bg)	15
Elevation of Bottom of Screen	-0.12
Depth of Bottom of Filter Pack (ft-bg)	15
Elevation of Bottom of Filter Pack	-0.12
Type of Backfill Below Filter Pack	N/A
Depth of Bottom of Hole (ft-bg)	15
Elevation of Bottom of Hole	-0.12

Comments:

APPENDIX 4 – EXCAVATION WORK PLAN (EWP)

4-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the site's cover system, the site owner or their representative will notify the NYSDEC contacts listed in the table below. Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix 2.

Table 1: Notifications*

Sondra Martinkat; NYSDEC Project Manager	(518) 402-9767, sondra.martinkat@dec.ny.gov
Jane O'Connell, Regional Remediation Engineer	(718) 482-4599, jane.oconnell@dec.ny.gov
Kelly A. Lewandowski, P.E., Chief, Site Control Section	(518)402-9543, kelly.lewandowski@dec.ny.gov
Anthony Perretta; NYSDOH Project Manager	(518) 402-7860, beei@health.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated, any modifications of truck routes, and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of

concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work, and submittals (e.g., reports) to the NYSDEC documenting the completed intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP, 29 CFR 1910.120 and 29 CFR 1926 Subpart P;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix 7 of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

The NYSDEC project manager will review the notification and may impose additional requirements for the excavation that are not listed in this EWP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

4-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination) or a breach of the cover system. A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 2-7 of this Appendix.

4-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

4-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment

to the planned work under this SMP is posed by utilities or easements on the site. A site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Trucks transporting contaminated soil must have either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides.

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

4-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows: Exiting the service parking area behind HIP cleaners, bearing right and continuing east on 137th Avenue. Trucks will continue north on Guy R Brewer Boulevard to the Van Wyck Expressway. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

4-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project

manager. Unregulated off-site management of materials from this site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (e.g. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C&D debris recovery facility). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include, but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 360-15 registered or permitted facility).

4-7 MATERIALS REUSE ON-SITE

The qualified environmental professional, as defined in 6 NYCRR Part 375, will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material (i.e. contaminated) does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within the cover system or within landscaping berms. Contaminated on-site material may only be used beneath the site cover as backfill for subsurface utility lines with prior approval from the DEC project manager.

Proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling

frequency. The analytical results of soil/fill material testing must meet the site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents listed, and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances April 2023 guidance values. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on-site will be segregated and staged as described in Sections X-2 and X-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of site excavation activities and proximity to nearby site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

4-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed off-site at a permitted facility in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

4-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the RAWP The existing cover system is comprised of a four to six-inch concrete building slab. The demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

4-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, other environmental remediation sites, or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) and DER-10 Appendix 5 for commercial or industrial use. Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 1 of the RAWP. Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

4-11 STORMWATER POLLUTION PREVENTION

Erosion and sediment control countermeasures will be implemented in accordance with city and state regulations; however, the Site is less than one acre and therefore a Stormwater Pollution Prevention Plan (SWPPP) is not required.

4-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. The NYSDEC project manager will be promptly notified of the discovery.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals, TCL volatiles and semi-volatiles (including 1,4-dioxane), TCL pesticides and PCBs, and PFAS], unless the site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project

manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

4-13 COMMUNITY AIR MONITORING PLAN

Air sampling stations based on generally prevailing wind conditions will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and a downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

4-13A: Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 part-per-million, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any

unusual background readings should be discussed with NYSDOH prior to commencement of the work.

- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 micrograms per cubic meter, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 micrograms per cubic meter or less at the monitoring point.

- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

4-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors on-Site and off-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the

excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

4-15 DUST CONTROL PLAN

Particulate monitoring must be conducted according to the Community Air Monitoring Plan (CAMP) provided in Appendix 10. If particulate levels at the site exceed the thresholds listed in the CAMP or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the site.

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

4-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX 5
RESPONSIBILITIES of
OWNER and REMEDIAL PARTY

Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the HIP Rochdale Cleaners site (the "site"), number C241166, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:
Rochdale Village, Inc.
169-55 137th Avenue
Queens, New York 11434
(the "owner").

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Rochdale Village, Inc.
169-55 137th Avenue
Queens, New York 11434

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow

the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. If damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3-Notifications.

6) If some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3- Notifications and coordinate the performance of necessary corrective actions with the RP.

7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 1.3 of the SMP. A change of use includes, but is not limited to, any activity that may increase direct human or environmental exposure (e.g., day care, school or park). A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8) The owner will maintain the cover, SSDS and SVE system on behalf of the RP. The RP remains ultimately responsible for maintaining the engineering controls.

9) Until such time as the NYSDEC deems the vapor mitigation system unnecessary, the owner shall operate the system, pay for the utilities for the system's operation, and report any maintenance issues to the RP and the NYSDEC.

11) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3-Notifications of the SMP.

7) The RP is responsible for the proper maintenance of any installed vapor intrusion mitigation systems associated with the site, as required in Appendix 9 (Operation, Monitoring and Maintenance Manual) of the SMP.

8) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

9) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the NYSDEC project manager to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

APPENDIX 6 – QUALITY ASSURANCE PROJECT PLAN

Appendix C
Quality Assurance Project Plan

for
HIP Cleaners (Rochdale Village Mall #2)
Site Management Plan

169-47 137th Avenue, Queens
Block 12495, portion of Lot 2
BCP Site # C241166

Submitted to:
New York State Department of Environmental Conservation
Remedial Bureau B, Section C
Division of Environmental Remediation
625 Broadway, Albany, NY 12233-7016

Prepared for:

Rochdale Village, Inc.
169-55 137th Avenue
Queens, New York 11434

Prepared by:

TENEN ENVIRONMENTAL
121 West 27th Street, Suite 702
New York, NY 10001

December 2023

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1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) has been developed for the Site Management Plan (SMP) prepared for HIP Cleaners (the Site).

The Site is located at 165-50 Baisley Boulevard, in the Jamaica neighborhood of Queens, NY. The Site is currently vacant; the previous occupant, a dry cleaner (JS Cleaners), ceased operations in January 2017. The Site is located within the Rochdale Village Mall (Mall #1), part of a larger community development and housing complex known as Rochdale Village.

The HIP Cleaners (the Site) is located in the Rochdale Village Mall #2 at 169-47 137th Avenue in the Jamaica Section of Queens, New York. The HIP Cleaners is an active dry cleaning facility, located in a 3,330 square foot (sf) retail space within a strip mall in Rochdale Village community. Rochdale Village community is a 115-acre area, which includes twenty 14-story residential apartment buildings with associated management office, power plant, community center, maintenance and public safety building, two retail malls (Mall #1 and #2), medical offices, gasoline station, open space and parking areas. HIP Cleaners is the leaseholder for the current tenant space and has conducted dry cleaning operations at the Site since 1967.

1.1 Project Scope and QAPP Objective

The proposed scope of work includes the following:

- Quarterly collection of groundwater samples for VOCs;
- Collection of groundwater samples once every three years for emerging contaminants;
- Quarterly sub-slab depressurization system (SSDS) and soil vapor extraction (SVE) system pressure point monitoring;
- Indoor air sampling; and,
- Collection of one effluent air sample.

The objective of the QAPP is to detail the policies, organization, objectives, functional activities and specific quality assurance/quality control activities designed to achieve the data quality goals or objectives of the Remedial Investigation Work Plan. This QAPP addresses how the acquisition and handling of samples and the review and reporting of data will be documented for quality control (QC) purposes. Specifically, this QAPP addresses the following:

- The procedures to be used to collect, preserve, package, and transport samples;
- Field data collection and record keeping;
- Data management;
- Chain-of-custody procedures; and,
- Determination of precision, accuracy, completeness, representativeness, decision rules, comparability and level of quality control effort.

2.0 PROJECT ORGANIZATION

The personnel detailed are responsible for the implementation of the QAPP. Tenen Environmental, LLC (Tenen) will implement the RIWP on behalf of Rochdale Village (the Participant) once it has been approved by the New York State Department of Environmental Conservation (NYSDEC).

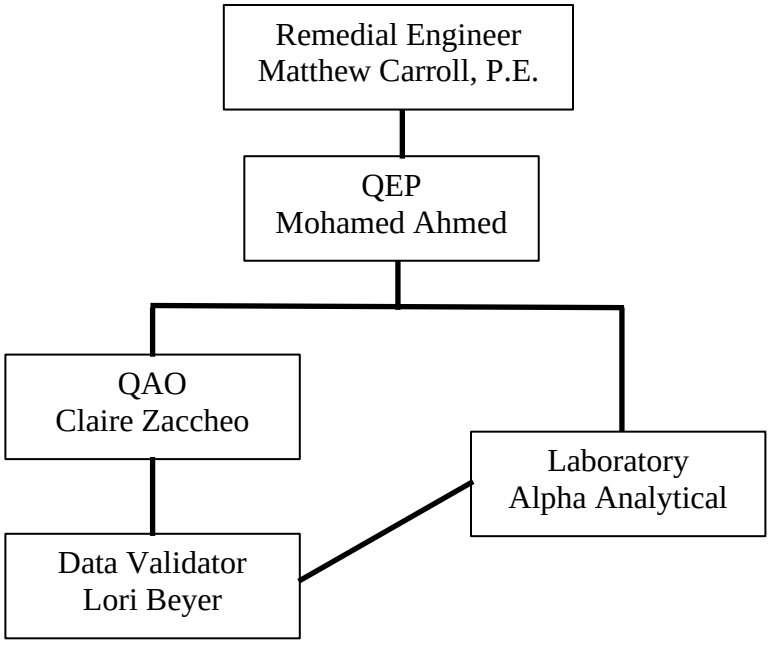
The Remedial Engineer for the project will be Mr. Matthew Carroll, P.E. Mr. Carroll is an environmental engineer experienced in all aspects of site assessment and development and implementation of remedial strategies. His experience involves projects from inception through investigation, remediation and closure. His expertise includes soil, soil vapor and groundwater remediation; remedial selection and design; field/health and safety oversight and preparation of work plans and reports to satisfy the requirements of various regulatory agencies. Mr. Carroll received his Bachelor of Engineering from Stevens Institute of Technology and Bachelor of Science in Chemistry from New York University and is a New York State professional engineer; his resume is included in Appendix A.

The Project Manager and Qualified Environmental Professional (QEP) will be Mohamed Ahmed, Ph.D., CPG, principal at Tenen. Dr. Ahmed is a certified professional geologist with over 20 years of experience in the New York City metropolitan area. He has designed and implemented subsurface investigations and is proficient in groundwater modeling, design of groundwater treatment systems, and soil remediation. He has managed numerous projects focused on compliance with the requirements of the New York State Brownfield Cleanup Program and spills programs and the New York City E-designation program. Dr. Ahmed also has extensive experience in conducting regulatory negotiations with the New York State Department of Environmental Conservation, the New York City Department of Environmental Protection, the NYC Office of Housing Preservation and Development, and the Mayor's Office of Environmental Remediation. Dr. Ahmed holds advanced degrees in geology and Earth and Environmental Sciences from Brooklyn College and the Graduate Center of the City University of New York; his resume is included in Appendix A.

The Quality Assurance Officer will be Ms. Claire Zaccheo. Ms. Zaccheo is an environmental engineer experienced in development and implementation of site investigations and remedial strategies. Her expertise includes soil, soil vapor and groundwater sampling; air monitoring and remedial oversight, soil and groundwater remediation; operation and maintenance of remedial systems; field safety oversight; data analysis and preparation and implementation of work plans and reports to satisfy regulatory requirements under the New York City Mayor's Office of Environmental Remedial (OER) and New York State Department of Environmental Conservation (NYSDEC) programs. Ms. Zaccheo holds a Bachelor of Science in Environmental Engineering and a Master of Science in Environmental Engineering from Manhattan College. Her resume is included in Appendix A.

In addition, Tenen will utilize laboratory services (Alpha Laboratories of Westborough, MA) and data validation (L.A.B. Validation Corp., East Northport, New York). The resume for the DUSR preparer, Ms. Lori A. Beyer is included in Appendix A.

An organization chart for the implementation of the Site Characterization Work Plan and QAPP is below.



3.0 SAMPLING AND DECONTAMINATION PROCEDURES

A detailed description of the procedures to be used during this program for collection of the effluent air and groundwater samples is provided below. Proposed sample locations are shown on Figure 5 of the Site Management Plan (SMP). An Analytical Methods/Quality Assurance Summary is provided in Table 1, included in Section 3.11.

3.1 Level of Effort for QC Samples

Field blank, trip blank, field duplicate and matrix spike (MS) / matrix spike duplicate (MSD) samples will be analyzed to assess the quality of the data resulting from the field sampling and analytical programs. Each type of QC sample is discussed below.

- Field and trip blanks consisting of distilled water will be submitted to the analytical laboratories to provide the means to assess the quality of the data resulting from the field-sampling program. Field (equipment) blank samples are analyzed to check for procedural chemical constituents that may cause sample contamination. Trip blanks are used to assess the potential for contamination of samples due to contaminant migration during sample shipment and storage.

- Duplicate samples are analyzed to check for sampling and analytical reproducibility.

- MS/MSD samples provide information about the effect of the sample matrix on the digestion and measurement methodology.

The general level of QC effort will be one field duplicate and one field blank (when non-dedicated equipment is used) for every 20 or fewer investigative samples of a given matrix. Additional sample volume will also be provided to the laboratory to allow one site-specific MS/MSD for every 20 or fewer investigative samples of a given matrix. One trip blank will be included along with each sample delivery group of volatile organic compound (VOC) samples.

The analytical laboratory, Alpha Analytical, is certified under the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) as LabIDs 11148 and 11627. NYSDEC Analytical Services Protocol (ASP) Category B deliverables will be prepared by the laboratory.

3.2 Sample Handling

Samples will either be picked up by the laboratory, delivered to the laboratory in person by the sampler, or transported to the laboratory by overnight courier. All samples will be shipped to the laboratory to arrive within 48 hours after collection, and the laboratory will adhere to the analytical holding times for these analyses, as listed in the current version of the New York State ASP.

3.3 Custody Procedures

Sample custody will be controlled and maintained through the chain-of-custody procedures. The chain of custody is the means by which the possession and handling of samples is tracked from the site to the laboratory. Sample containers will be cleaned and preserved at the laboratory before shipment to the Site. The following sections (Sections 3.4 and 3.5) describe procedures for maintaining sample custody from the time samples are collected to the time they are received by the analytical laboratory.

3.4 Sample Storage

Samples will be stored in secure, limited-access areas. Walk-in coolers or refrigerators will be maintained at 4°C, or 2°C, or as required by the applicable regulatory program. The temperatures of all refrigerated storage areas are monitored and recorded a minimum of once per day. Deviations of temperature from the applicable range require corrective action, including moving samples to another storage location, if necessary.

3.5 Sample Custody

Sample custody is defined by this QAPP as the following:

- The sample is in someone's actual possession;
- The sample is in someone's view after being in his or her physical possession;
- The sample was in someone's possession and then locked, sealed, or secured in a manner that prevents unsuspected tampering; or,
- The sample is placed in a designated and secured area.

Samples will be removed from storage areas by the sample custodian or laboratory personnel and transported to secure laboratory areas for analysis. Access to the laboratory and sample storage areas is restricted to laboratory personnel and escorted visitors only; all areas of the laboratory are therefore considered secure.

Laboratory documentation used to establish chain of custody and sample identification may include the following:

- Field chains of custody or other paperwork that arrives with the sample;
- Laboratory chain of custody;
- Sample labels or tags attached to each sample container;
- Sample custody seals;
- Sample preparation logs (i.e., extraction and digestion information) recorded in hardbound laboratory books, filled out in legible handwriting, and signed and dated by the chemist;
- Sample analysis logs (e.g., metals, GC/MS, etc.) information recorded in hardbound laboratory books that are filled out in legible handwriting, and signed and dated by the chemist;
- Sample storage log (same as the laboratory chain of custody); and,

- Sample disposition log, which documents sample disposal by a contracted waste disposal company.

3.6 Sample Tracking

All samples will be maintained in the appropriate coolers prior to and after analysis. Laboratory analysts will remove and return their samples, as needed. Samples that require internal chain of custody procedures will be relinquished to the analysts by the sample custodians. The analyst and sample custodian will sign the original chain of custody relinquishing custody of the samples from the sample custodian to the analyst. When the samples are returned, the analyst will sign the original chain of custody returning sample custody to the sample custodian. Sample extracts will be relinquished to the instrumentation analysts by the preparatory analysts. Each preparation department will track internal chain of custody through their logbooks/spreadsheets.

Any change in the sample during the time of custody will be noted on the chain of custody (e.g., sample breakage or depletion).

3.7 Groundwater Sampling

Prior to sample collection, static water levels will be measured and recorded from all monitoring wells. Monitoring wells will also be gauged for the presence of dense non-aqueous phase liquid (DNAPL). In the event that DNAPL is detected, Tenen will record the thickness and will not collect a sample. If DNAPL is not detected, Tenen will purge and sample monitoring wells using low-flow/minimal drawdown purge and sample collection procedures (bladder pump system). Prior to sample collection, groundwater will be evacuated from each well at a low-flow rate (typically less than 0.1 L/min). Field measurements for pH, temperature, turbidity, dissolved oxygen, specific conductance, oxidation-reduction potential and water level, as well as visual and olfactory field observations, will be periodically recorded and monitored for stabilization. Purging will be considered complete when pH, specific conductivity, dissolved oxygen and temperature stabilize and when turbidity measurements fall below 50 Nephelometric Turbidity Units (NTU) or become stable above 50 NTU.

Stability is defined as variation between field measurements of 10 percent or less and no overall upward or downward trend in the measurements. Upon stabilization of field parameters, groundwater samples will be collected and analyzed as discussed below.

Wells will be purged and sampled using dedicated pump tubing following low-flow/minimal drawdown purge and sample collection procedures, as described above. The pump will be decontaminated between samples and a dedicated bladder will be used.

Groundwater samples will be collected through dedicated tubing. Prior to, and immediately following collection of groundwater samples, field measurements for pH, specific conductance, temperature, dissolved oxygen, turbidity and depth-to-water, as well as visual and olfactory field observations will be recorded. All collected groundwater samples will be placed in pre-cleaned,

pre-preserved laboratory provided sample bottles, cooled to 4 degrees-C in the field, and transported under chain-of-custody command to the designated laboratory for analysis.

All groundwater samples will be analyzed for the following with a Category B deliverable data package:

- TCL VOCs by EPA Method 8260C.

3.8 Soil Sampling

Soil samples will be collected using a core drill, a hand auger and hand tools. Soil from grade to terminal depth of each boring will be scanned for VOCs using a photoionization device (PID) and geologically described using the Unified Soil Classification System. All descriptions and observations of soil conditions will be documented in a field book.

For each boring, a soil sample will be collected from varying intervals determined by the Department to assess the effectiveness of the SVE system.

All collected samples will be collected in pre-cleaned, pre-preserved laboratory provided sample bottles, cool to 4 degrees Celsius in the field, and transported under chain-of-custody command to the designated laboratory for analysis.

All soil samples will be analyzed for the following with a Category B deliverable data package:

- TCL VOCs by EPA Method 8260C.

3.9 Effluent Air Sampling

One effluent air sample will be collected in accordance with regulatory guidance. The sample will be collected at the effluent stack of the SVE system.

The effluent air will be first screened for VOCs using a PID.

The sample will be collected in a laboratory-supplied 2.7-liter canister using a two-hour regulator. The sampling flow rate will not exceed 0.2 liters per minute (L/min). A slight vacuum will be left in the Summa® canister at the end of sampling to documented that the canister did not leak during transit. If no vacuum remains in the canister, the canister will not be sent to the laboratory for analysis, and the sample will be re-collected. The sample will be analyzed for VOCs using EPA Method TO-15.

A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, identity of samplers, sampling methods and devices, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone and chain of custody.

3.10 Indoor Air Sampling

Four indoor air samples will be collected in accordance with regulatory guidance. One sample will be collected inside HIP Cleaners; the remaining three will be collected throughout the Rochdale Village Mall #2.

The samples will be collected in a laboratory-supplied eight-liter canister using an eight-hour regulator. The sampling flow rate will not exceed 0.2 liters per minute (L/min). A slight vacuum will be left in the Summa® canister at the end of sampling to documented that the canister did not leak during transit. If no vacuum remains in the canister, the canister will not be sent to the laboratory for analysis, and the sample will be re-collected. The sample will be analyzed for VOCs using EPA Method TO-15.

3.11 Analytical Methods/Quality Assurance Summary Table

A summary of the analytical methods and quality assurance methods are included in Table 1, below.

Table 1
Analytical Methods/Quality Assurance Summary

Matrix	Proposed Samples	QA/QC Samples				Total # Samples	Analytical Parameter	Method	Preservative	Holding Time	Container
		TB	FB	DUP	MS/MSD						
Groundwater	3	1	1	1	1	7	VOCs	8260C	Cool to 4°C HCL	14 days to analysis	(3) 40 mL clear glass vials
Soil	5*	1	1	1	1	9*	VOCs	8260C	Cool to 4°C HCL		(3) EnCore samplers or (1) 2-oz glass jar
Effluent Air	1	No QA/QC samples				1	VOCs	TO-15	None		2.7-L Summa
Indoor Air	4	No QA/QC samples				1	VOCs	TO-15	None		6-L Summa

*To be determined based on field conditions and a proposed work plan.
TB – Trip Blank
FB – Field Blank
DUP – Duplicate
°C – degrees Celsius
mL – milliliter
L – liter

3.12 Decontamination

Where possible, samples will be collected using new, dedicated sampling equipment so that decontamination is not required. All non-dedicated sampling equipment will have a final rinse with deionized water. Decontamination water will be collected and disposed as investigation-derived waste (IDW).

3.13 Data Review and Reporting

The NYSDEC ASP Category B data package will be validated by an independent data validation subconsultant and a DUSR summarizing the results of the data validation process will be prepared. All reported analytical results will be qualified as necessary by the data validation and will be reviewed and compared against background concentrations and/or applicable New York State criteria:

Groundwater – Class GA groundwater standards and guidance values for groundwater as listed in NYSDEC Technical and Operations Guidance Series (TOGS) 1.1.1; and,
Effluent Air – NYSDOH Air Guidance Values (AGVs) and Matrices, as applicable.

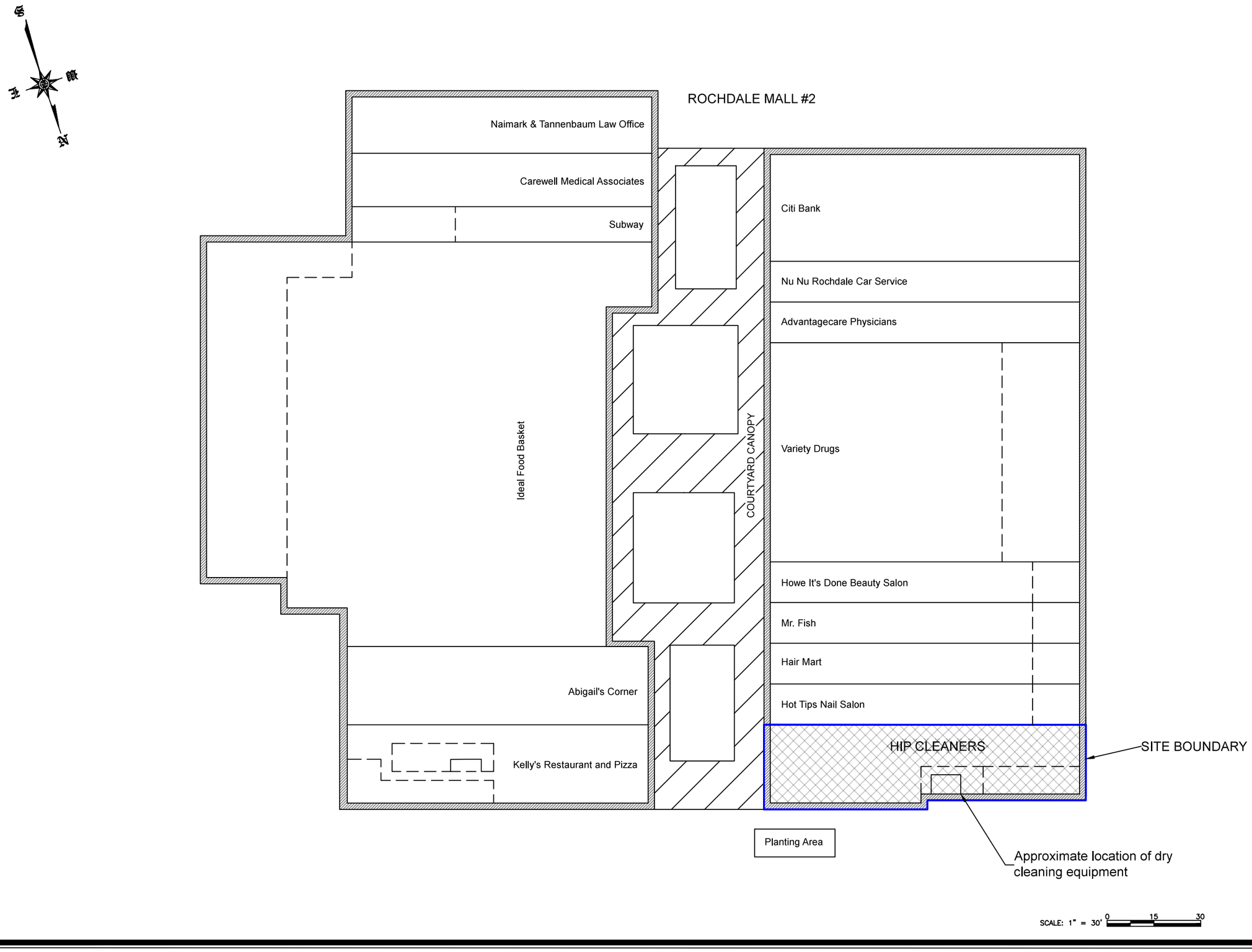
Based on the selected VOC analysis method for soil, the following qualifiers will be employed:

- "JL" for results less than 200 micrograms per kilogram (ug/kg); and,
- "UJL" for non detect results.

These are meant to indicate that the results are biased low in both cases. All Part 375 Commercial Use soil cleanup objectives (SCOs) for VOCs are greater than 200 ug/kg.

Following receipt of preliminary laboratory results and groundwater flow direction is determined from the survey of three permanent monitoring wells, additional monitoring wells will be proposed to delineate groundwater contamination further away from the impacted area. A report documenting the Site Management Plan will be prepared and will describe Site conditions and document applicable observations made during the sample collection. In addition, the report will include a description of the sampling procedures, tabulated sample results and an assessment of the data and conclusions. The laboratory data packages, DUSR, and field notes will be included in the report as appendices. All data will also be submitted electronically to NYSDEC via the Environmental Information Management System (EIMS) in EqUIS format.

Figures



CLIENT

HIP Cleaners
Rochdale Village
BCP # C241166
169-47 137th Avenue
Jamaica, Queens

CONSULTANT

TENEN ENVIRONMENTAL

TENEN ENVIRONMENTAL, LLC
121 West 27th Street
Suite 702
New York, NY 10001
O: 646-606-2332
F: 646-606-2379

DRAWN BY	CHECKED BY	DATE	SCALE:
KM	MC	MARCH 2016	AS NOTED

DRAWING TITLE: FIGURE 2

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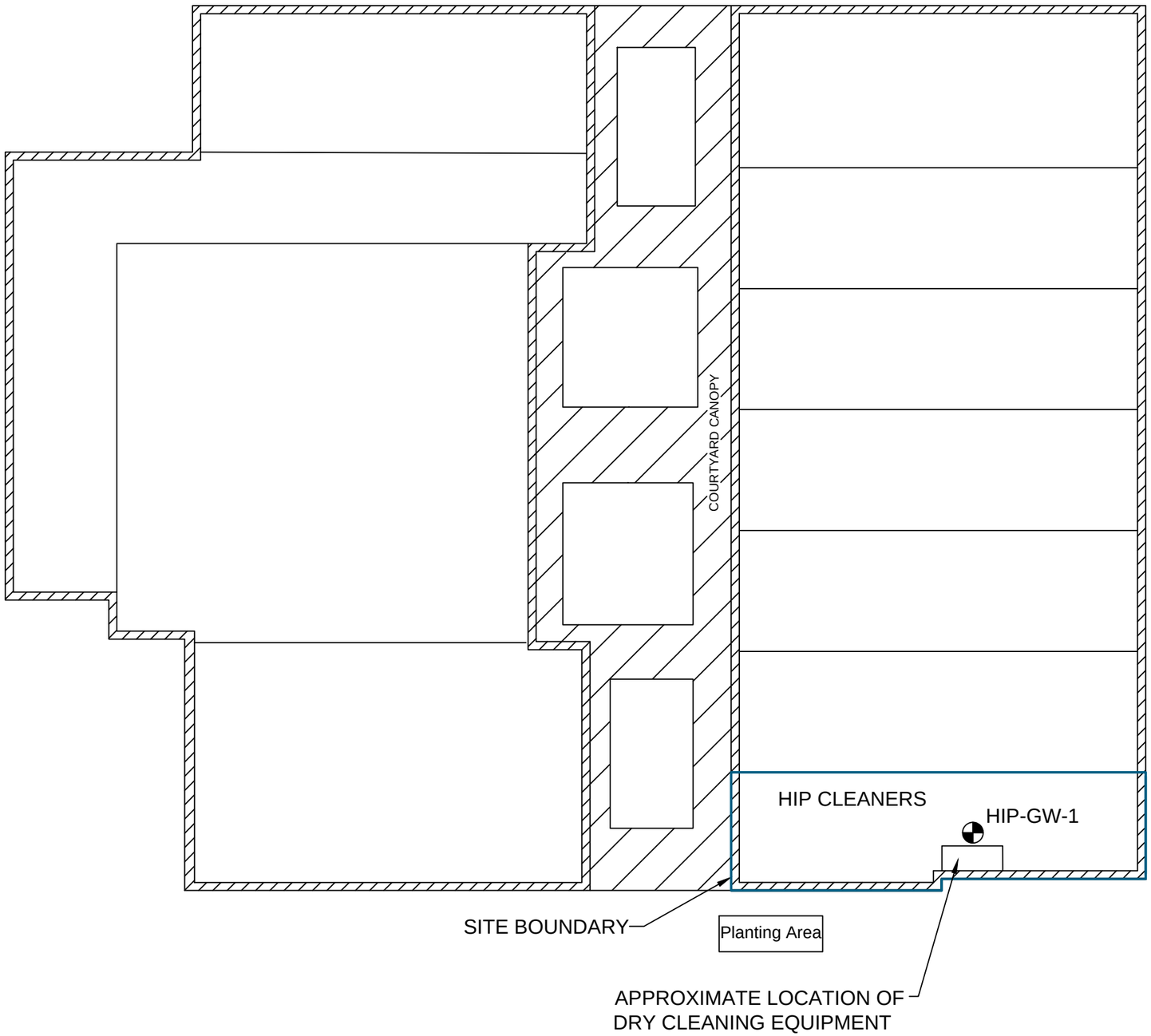

LEGEND

PERMANENT GROUNDWATER MONITORING WELL

GENERAL GROUNDWATER FLOW DIRECTION

0 15' 30' 60'

Drawing Scale

SITE

HIP Cleaners
Rochdale Village
169-47 137th Avenue
Jamaica, Queens

CONSULTANT

TENEN ENVIRONMENTAL

TENEN ENVIRONMENTAL, LLC
121 West 27th Street
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LM	KM	October 2019	As Noted

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Post Remedial Groundwater Locations

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Figure 3

Appendix A

Resumes

Matthew Carroll, P.E.
Environmental Engineer/Principal

Experience Summary

Matthew Carroll is an environmental engineer experienced in all aspects of site assessment and development and implementation of remedial strategies. He has managed projects from inception through investigation, remediation and closure. His expertise includes soil, soil gas, and groundwater remediation, preparation of cost estimates, remedial alternative selection and design, soil characterization for disposal, field safety oversight, and preparation of work plans and reports to satisfy New York and New Jersey state requirements, and New York City "e" designation and restrictive declarations. Mr. Carroll's project management experience includes past management of a New York City School Construction Authority hazardous materials contract. He is responsible for all engineering work performed by Tenen and is currently the project manager and remedial engineer for several New York State Brownfield Cleanup Program sites.

Selected Project Experience

470 Kent Avenue, Brooklyn
As project manager, supported the client in due diligence and transactional activities, including a Phase I ESA, preliminary site investigation, and remedial cost estimate; preparation of BCP application and remedial investigation work plan. The former manufactured gas plant, sugar refinery and lumberyard will be developed as a mixed-use project with market rate and affordable housing and public waterfront access. As remedial engineer, will be responsible for development of remedial alternatives and oversight and certification of all remedial activities.

500 Exterior Street, Bronx
Designed and implemented the investigation of this former lumberyard and auto repair shop that will be redeveloped as mixed use development with an affordable housing component; prepared BCP application and subsequent work plans and reports. Designed a remedial strategy incorporating both interim remedial measures (IRMs) and remediation during the development phase.

Gateway Elton I and II, Brooklyn
Conducted soil disposal characterization, prepared Remedial Action Work Plans and designed methane mitigation systems for two phases of a nine-building residential development and commercial space; prepared and oversaw implementation of a Stormwater Pollution Prevention Plan during construction and prepared and certified the remedial closure reports for the project.

Affordable Housing Development, Rye, NY
Consultant to the City of Rye on environmental issues pertaining to a county-owned development site slated for an afford senior housing; reviewed environmental documentation for the project and prepared summary memorandum for City Council review; recommended engineering controls to address potential exposure to petroleum constituents, presented report findings at public meetings and currently providing ongoing environmental support during project implementation.

Queens West Development BCP Site, Long Island City, New York
Assistant Project Manager for two developers involved in the site.

- Responsible for oversight of remediation under the New York State Brownfield Cleanup Program
- Technical review of work plans and reports and coordination of the Applicant's investigation and oversight efforts
- Provided input for mass calculations and well placement for an in-situ oxidation remedy implemented on a proposed development parcel and within a City street
- Conducted technical review of work pertaining to a former refinery. Documents reviewed included work plans for characterization and contaminant delineation; pilot test (chemical oxidation); remediation (excavation and groundwater treatment). Managed field personnel conducting full time oversight and prepared progress summaries for distribution to project team
- Following implementation of remedial action, implemented the Site Management Plan and installation/design of engineering controls (SSDS, vapor barrier/concrete slab, NAPL recovery). Also responsible for coordination with NYSDEC

Brownfield Cleanup Program Redevelopment Sites – West Side, New York City
Managed remediation of a development consisting of four parcels being addressed under one or more State and city regulatory programs (NYS Brownfield Cleanup Program, NYS Spills, and NYC "e" designation program). Remediation includes soil removal, screening and disposal; treatment of groundwater during construction dewatering and implementation of a worker health and safety plan and community air monitoring plan (HASP/CAMP)

Managed an additional BCP site, supported the Applicant in coordination with MTA to create station access for the planned No. 7 subway extension; also provided support the client in coordination with Amtrak to obtain access for remedial activities on the portion of the site that is within an Amtrak easement. The site will eventually be used for construction of a mixed-use high-rise building.

BCP Site, Downtown Brooklyn, New York
Performed investigation on off-site properties and designed an SSDS for an adjacent building, retrofitting the system within the constraints of the existing structure; coordinated the installation of the indoor HVAC controls and vapor barrier; provided input to the design of a SVE system to address soil vapor issues on the site.

West Chelsea Brownfield Cleanup Program Site
Designed an in-situ remediation program and sub-slab depressurization system to address contamination remaining under the High Line Viaduct; SSDS design included specification of sub-grade components, fan modeling and selection, identifying exhaust location within building constraints and performance modeling; prepared the Operations Maintenance and Monitoring Plan and Site Management Plan sections pertaining to the SSDS.

Historic Creosote Spill Remediation – Queens, New York – New York State Voluntary Cleanup Program
Modeled contamination volume and extent and prepared mass estimates of historic fill constituents and creosote-related contamination; designed a soil vapor extraction (SVE) and dewatering system to address historic creosote release both above and below static

water table; coordinated with the Metropolitan Transit Authority and prepared drawings to secure approval to drill in the area of MTA subway tunnels.

NYSDEC Spill Site– Far West Side, Manhattan
Provided support to client during negotiations with a major oil company regarding allocation of remedial costs. Worked with client's attorney to develop a regulatory strategy to address the client's obligations under the NYSDEC Spills Program and the New York City "e" designation requirements.

Affordable Housing Site, Brooklyn, New York
Modified prior work plans for soil, soil vapor and groundwater investigation to address requirements for site entry into the New York City Brownfield Cleanup Program. Prepared technical basis for use of prior data previously disallowed by OER. Currently conducting site investigation.

New York City School Construction Authority Hazardous Materials Contract
Provided work scopes and cost estimates, managed and implemented concurrent projects, including Phase I site assessments, Phase II soil, groundwater and soil gas investigations, review of contractor bid documents, preparation of SEQR documents, specifications and field oversight for above- and underground storage tank removal, and emergency response and spill control.

Former Manufacturing Facility, Hoboken, New Jersey
Evaluated site investigation data to support a revision of the current property use to unrestricted; modified the John & Ettinger vapor intrusion model to apply the model to a site-specific, mixed use commercial/residential development; implemented a Remedial Action Work Plan that included the characterization, removal and separation of 9,500 cubic yards of historic fill; designed and implemented a groundwater characterization/delineation program using a real-time Triad approach; designed and implemented an innovative chemical oxidation technology for the property.

F**ormer Varnish Manufacturer – Newark, New Jersey**
Prepared a Phase I environmental site assessment; implemented soil and groundwater sampling to assess presence of petroleum and chlorinated compounds; prepared alternate cost remediation scenarios for settlement purposes and implemented a groundwater investigation plan, including pump tests and piezometer installation to assess the effect of subsurface utilities and unique drainage pathways upon contaminant transport.

Education and Certifications

Professional Engineer, New York
Bachelor of Engineering, Environmental; Stevens Institute of Technology, 2002
Bachelor of Science, Chemistry, New York University, 2002
Technical and Regulatory Training in Underground Storage Tanks, Cook College, Rutgers University, 2006

Mohamed Ahmed, Ph.D., C.P.G.
Sr. Geologist/Principal

Experience Summary

Mohamed Ahmed is a certified professional geologist with nearly 23 years of experience in the New York City metropolitan area. He has designed and implemented subsurface investigations and is proficient in groundwater modeling, design of groundwater treatment systems and soil remediation. He has managed numerous projects focused on compliance with the New York State Brownfield Cleanup and Spills programs and the New York City "e" designation program. Dr. Ahmed also has extensive experience in conducting regulatory negotiations with the New York State Department of Environmental Conservation, the NYC Office of Housing Preservation and Development, and the Mayor's Office of Environmental Remediation.

Selected Project Experience

Willoughby Square, Downtown Brooklyn
As Project Manager, directs all regulatory interaction and investigation on this joint public-private sector redevelopment that will include a public park and four-level underground parking garage. Prepared the remedial investigation work plan and remedial action work plan, conducted investigation activities and waste characterization, and negotiated with the NYC Department of Environmental Protection and the Mayor's Office of Environmental Remediation to transition the site into the NYC Voluntary Cleanup Program.

School Facility, Borough Park, Brooklyn
Managed all regulatory agency coordination, work plan and report preparation and remedial oversight; worked with OER to determine measures to retroactively address the hazardous materials and air quality E-designations on a previously constructed school building and prepared supporting documentation to justify the use of electrical units rather than natural gas.

LGA Hotel Site, East Elmhurst, Queens
Project manager for all work conducted at this former gasoline service station which is being remediated under the NYS Brownfield Cleanup Program; technical oversight of work plans, reports, and design and implementation of field and soil disposal characterization.

436 10th Avenue, Manhattan
As project manager and technical lead, assisted client in developing remedial cost estimates used for property transaction, developed regulatory strategy to address NYS Spills and NYC E-designation requirements, and currently overseeing remedial activities which include removal and disposal of petroleum-contaminated bedrock and dewatering and disposal of impacted groundwater.

Brownfield Cleanup Program Site, Downtown Brooklyn
Managed investigation and remediation under the BCP program for a proposed mixed-use development; designed the remedial investigation and prepared the remedial action work plan which includes an SVE system monitored natural attenuation. Prepared remedial cost

estimates for several scenarios. The project will include a 53-story mixed-use structure and parking garage.

Queens West Development, Long Island City
Directed project team and subcontractors for soil investigation/remediation studies on multiple properties; provided technical support for negotiations with NYSDEC during investigation and remediation.

Former Creosote Site, Long Island City
Designed and implemented a complex investigation to assess the nature and extent of historic creosote contamination at this former industrial site; conducted studies to optimize recovery of LNAPL and DNAPL and developed strategies using bioremediation and natural attenuation in conjunction with conventional remedial approaches. Performed pilot tests for soil vapor extraction system design and coordinated with NYSDEC and NYSDOH to implement sub-slab soil vapor sampling.

NYSDEC Spill Site – Far West Side, Manhattan
Developed a detailed remedial cost estimate for to support client negotiations with a major oil company. The estimate included costs pertaining to: chipping, removal and disposal of petroleum-impacted bedrock; removal/disposal of recycled concrete; costs for dewatering and disposal of impacted groundwater during construction; and design and installation of a vapor barrier below the redevelopment.

Active Industrial Facility, Newburgh, New York
Designed remedial investigation of soil and groundwater contaminated with trichloroethane; performed soil vapor pilot test and pump test to aid in design of soil and groundwater remediation alternatives; conducted sub-slab vapor sampling in accordance with NYSDOH guidance.

Former Dry Cleaning Facility, New York City
Conducted soil and groundwater investigations, designed and installed a soil vapor extraction system and performed extensive testing of indoor air. Negotiated the scope of the RI and IRM with NYSDEC.

Waterfront Redevelopment, Yonkers, NY
Designed and performed geophysics survey of six parcels to determine locations of subsurface features; supervised test pit excavation to confirm geophysics results and evaluate and classify soil conditions prior to development activities.

Prince's Point, Staten Island, New York
Performed soil, groundwater and sediment sampling to delineate the extent of contamination; used field-screening techniques to control analytical costs and supervised soil excavation and disposal.

Apartment Complex, New York City, New York
Coordinated with Con Edison, the owner of the adjacent property and NYSDEC to determine oil recovery protocol; assessed hydrogeological conditions and conducted pilot tests to design cost-effective recovery system; designed and supervised installation of recovery system.

Publications

"Impact of Toxic Waste Dumping on the Submarine Environment: A Case Study from the New York Bight". Northeastern Geology and Environmental Sciences, V. 21, No. 12, p. 102-120. (With G. Friedman)

Metals Fluxes Across the Water/Sediment Interface and the Influence of pH. Northeastern Geology and Environmental Sciences, in press. (With G. Friedman)

"Water and Organic Waste Near Dumping Ground in the New York Bight". International Journal of Coal Geology, volume 43. (With G. Friedman)

Education and Certifications

Ph.D., Earth and Environmental Sciences, Graduate Center of the City of New York (2001)
M.Ph., Earth and Environmental Sciences, City University of New York (1998)
M.A. Geology, Brooklyn College (1993)
B.S. Geology, Alexandria University, Egypt (1982)

American Institute of Professional Geologists, Certified Professional Geologist, 1997-2015

Claire Zaccheo
Environmental Engineer/Project Manager

Experience Summary

Claire Zaccheo is an environmental engineer experienced in development and implementation of site investigations and remedial strategies. Her expertise includes soil, soil vapor and groundwater sampling; air monitoring and remedial oversight, soil and groundwater remediation; field safety oversight; data analysis and preparation and implementation of work plans and reports to satisfy regulatory requirements under the New York City Mayor's Office of Environmental Remedial (OER) and New York State Department of Environmental Conservation (NYSDEC) programs. Ms. Zaccheo's project management experience includes ongoing coordination of Tenen quarterly groundwater monitoring and soil vapor and indoor air sampling, development and implementation of site investigations conducted under the OER "E" Designation and Voluntary Cleanup Programs and the NYSDEC Brownfield Cleanup Program, day-to-day management of remedial oversight activities, and management of a groundwater remediation system at a New York City federal Superfund site.

Selected Project Experience

Federal Superfund Site Remediation, Brooklyn, New York
Project Engineer

- Responsible for overseeing and coordinating implementation of operation and maintenance (O&M) of a dual-phase extraction system and groundwater treatment system under the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) at a Superfund Site in Brooklyn, New York.
- Technical review and analysis of O&M data.
- Provided input and technical analysis of air, water and soil mass calculations and analytical data.
- Development of work plans and reports in compliance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) equivalency Permit.

500 Exterior Street, Bronx, New York
Project Engineer

- Responsible for implementation of Remedial Investigation, including soil boring, monitoring well and soil vapor point installation at NYS BCP site.
- Responsible for data analysis and reporting remedial investigation results and developing a Remedial Action Work Plan for site development as part of the NYSBCP.
- Responsible for daily coordination with field staff and daily reporting to the NYS Department of Environmental Conservation (DEC) project manager during implementation of the remedial action.
- Development of Final Engineering Report (FER) to obtain a BCP Certificate of Closure at the completion of remedial activities.

Gotham Center Redevelopment Site, Queens, New York
Project Engineer

- Completed oversight of monitoring well installation and soil characterization sampling for a redevelopment project.
- Developed remedial strategy in compliance with NYC E-designation requirements and NYS Spills requirements, which included removal and disposal of soil, application of chemical oxidants and installation of a vapor barrier.
- Managed field staff, completed daily reporting and coordinated with NYC Office of Environmental Remediation (OER) project manager.
- Completed documentation required for Spill closure and E-designation Notice of Satisfaction

LaGuardia Hotel Redevelopment Project, East Elmhurst, New York
Project Engineer

- Responsible for overseeing soil boring installation at NYS Brownfield Cleanup Program (BCP) site.
- Performed soil characterization and sampling for soil/fill disposal classification.
- Responsible for data analysis and reporting for soil disposal as part of the redevelopment plan as part of the BCP.

Hunters Point Dewatering, Queens, New York
Project Engineer

- Assisted in obtaining a Long Island Well Permit Equivalency for a NYS BCP redevelopment project. Responsibilities included determination of daily allowable flowrate and dewatering system design in compliance with the NYSDEC guidelines.

Cadman Plaza West Redevelopment Project, Brooklyn, New York
Project Engineer

- Completed oversight of a monitoring well installation and soil characterization and sampling for a redevelopment project. Performed data analysis of laboratory results and reporting.

West 28th Street Redevelopment Project, Manhattan, New York
Project Engineer

- Performed soil, soil vapor and groundwater sampling during the remedial investigation in order to aid in developing a remedial strategy with NYC OER.
- Performed soil characterization sampling for soil/fill disposal classification.
- Performed data analysis of laboratory results and reporting.
- Responsible for management of field staff, completed daily reporting and coordinated with the NYC OER project manager.

Rochdale Village Remediation, Queens, New York
Project Engineer/Project Manager

- Responsible for overseeing soil boring, soil vapor point and monitoring well installation at NYS Brownfield Cleanup Program (BCP) site.
- Responsible for data analysis and reporting as part of the redevelopment plan as part of the BCP.
- Completed soil vapor, indoor air and groundwater monitoring.
- Completed pressure monitoring, operation and maintenance on the sub slab depressurization systems (SSDSs).
- Completed blower testing for the soi vapor extraction (SVE) system.
- Responsible for coordination with the client representative and the NYSDEC Project Manager as part of the BCP.

Education and Certifications

Bachelor of Science, Environmental Engineering: Manhattan College, 2011
Masters of Science, Environmental Engineering: Manhattan College, 2014

Hazardous Waste Operations and Emergency Responses (HAZWOPER) 40 Hour
HAZWOPER Site Supervisor
OSHA 30 Hour
Storm Water Pollution Prevention Planning (SWPPP) – Erosion and Sediment Control

Professional Associations

National Groundwater Association (NGWA)

First place recipient of the 2014 New York Water Environmental Association's Annual Conference University Forum for research paper entitled "The Kinetics of Glycerol Acclimated Biomass in Separate Centrate Treatment"

APPENDIX 7 – HEALTH AND SAFETY PLAN

Construction Health and Safety Plan

for
HIP Cleaners- Rochdale Village
Site Management Plan

165-50 Baisley Boulevard, Jamaica
Block 12495, portion of Lot 2
BCP Site # C241166

Submitted to:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A
625 Broadway, 12th Floor
Albany, NY 12233-7016

Prepared for:
Rochdale Village, Inc.
169-55 137th Avenue
Queens, New York 11434

Prepared by:
TENEN ENVIRONMENTAL
121 West 27th Street, Suite 702
New York, NY 10001

July 2023

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1.0 INTRODUCTION

This Construction Health and Safety Plan (CHASP) has been prepared in conformance with the Occupational Safety and Health Administration (OSHA) standards and guidance that govern site investigation activities, other applicable regulations, and Tenen Environmental LLC (Tenen) health and safety policies and procedures. The purpose of this CHASP is the protection of Tenen field personnel and others during the implementation of the Site Management Plan (SMP).

The HIP Cleaners (the Site) is located in the Rochdale Village Mall #2 at 169-47 137th Avenue in the Jamaica Section of Queens, New York. The HIP Cleaners is an active dry cleaning facility, located in a 3,330 square foot (sf) retail space within a strip mall in Rochdale Village community. Rochdale Village community is a 115-acre area, which includes twenty 14-story residential apartment buildings with associated management office, power plant, community center, maintenance and public safety building, two retail malls (Mall #1 and #2), medical offices, gasoline station, open space and parking areas. HIP Cleaners is the leaseholder for the current tenant space and has conducted dry cleaning operations at the Site since 1967.

1.1 Scope of HASP

This HASP includes safety procedures to be used by Tenen staff during the following activities:

- Collection of groundwater samples;
- Installation of groundwater well;
- In-situ chemical oxidation treatment;
- Installation of on-site sub-slab depressurization system (SSDS);
- Installation of soil vapor extraction (SVE) system;

Subcontractors will ensure that performance of the work is in compliance with this CHASP and applicable laws and regulations.

2.0 PROJECT SAFETY AUTHORITY

The following personnel are responsible for project health and safety under this HASP.

- Project Manager, Matthew Carroll
- Health and Safety Officer (HSO), Mohamed Ahmed

In addition, each individual working at the Site will be responsible for compliance with this CHASP and general safe working practices. All Site workers will have the authority to stop work if a potentially hazardous situation or event is observed.

2.1 Designated Personnel

The Project Manager is responsible for the overall operation of the project, including compliance with the HASP and general safe work practices. The Project Manager may also act as the Health and Safety Officer (HSO) for this project.

Tenen will appoint one of its on-site personnel as the on-site HSO. This individual will be responsible for the implementation of the HASP. The HSO will have a 4-year college degree in occupational safety or a related science/engineering field, and at least two (2) years of experience in implementation of air monitoring and hazardous materials sampling programs. The HSO will have completed a 40-hour training course that meets OSHA requirements of 29 CFR Part 1910, Occupational Safety and Health Standards.

The HSO will be present on-site during all field operations involving drilling or other subsurface disturbance, and will be responsible for all health and safety activities and the delegation of duties to the field crew. The HSO has stop-work authorization, which he/she will execute on his/her determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation. If the HSO must be absent from the field, a replacement who is familiar with the Construction Health and Safety Plan, air monitoring and personnel protective equipment (PPE) will be designated.

3.0 HAZARD ASSESSMENT AND CONTROL MEASURES

Known previous and current uses of the site include operations that used chlorinated solvents.

A Remedial Investigation Report (RIR) dated March 1, 2017, was prepared by Tenen Environmental LLC (Tenen).

The investigation consisted of installation of soil borings and collection of soil samples, installation and sampling of groundwater monitoring wells, installation and sampling of soil vapor points and sampling of indoor and ambient air. Based on the results of the RI and previous investigations, the following summary has been prepared:

Site History

- A dry cleaning facility has occupied the Site property for a period of approximately 43 years. HIP Cleaners was identified as a Small Quantity Generator of Hazardous Wastes on the regulatory database, with no violations. At least one, and potentially two, USTs were identified at the rear of the property. The assumed tank(s) capacity was approximately 275-gallons. No petroleum-related impacts were detected in soil within this area.

Geology/Hydrogeology

- Based on boring logs, the Site is underlain by historic fill material (silty sands mixed with anthropogenic materials) and fine to medium sand and silts to a depth of approximately ten ft-bg, above medium to coarse grain sand and gravel to depths of up to 50 ft-bg. Soil boring HIP-SB-3D was advanced to a depth of 50 ft-bg to investigate the presence of a confining layer; no clay layer was encountered. The approximate depth to bedrock (Ravenswood Granodiorite) is 800 ft-bg.
- Groundwater was encountered between 6.48 to 8.25 ft-bg. The measured groundwater flow direction for the most recent sampling event is toward the northeast, consistent with the overall northerly flow of groundwater beneath the Site.

Chlorinated Solvents

- PCE was detected in soil above the Protection of Groundwater SCO of 1.3 mg/kg in soil samples within the shallow interval in the area adjacent to the location of the dry cleaning equipment, at a maximum concentration of 79 mg/kg.
- PCE was detected in groundwater at concentrations of up to 52 ug/L in shallow samples, above the Class GA Standard, with lower concentrations detected at downgradient locations. The highest concentration was in the sample collected on-Site near the former dry cleaner.
- PCE was the only VOC detected in groundwater and soil samples above regulatory levels, with the exception of metals in groundwater.
- PCE was detected in sub-slab, soil vapor and indoor air at concentrations above those detected in the ambient air. PCE was detected in the sub-slab soil vapor at concentrations up to 1,140,000 ug/m^3. TCE was detected in sub-slab at concentrations up to 2,790 ug/m^3.

- PCE was detected in soil vapor at lower concentrations outside of Mall #2's footprint, specifically at locations in the direction of the neighboring public school, residential building and office spaces.

Historic Fill-Related Impacts

- One pesticide was detected in the fill material at concentrations above the Unrestricted Use SCOs.

Qualitative Environmental Assessment

- The following potential exposure routes were identified: direct contact with surface soils, inhalation and incidental ingestion, ingestion of groundwater, direct contact with groundwater and inhalation of vapors.
- Potential impacts from these exposure routes can be mitigated through the implementation of HASP and CAMP during ground-intrusive activities and installation of an SSDS.

3.1 Human Exposure Pathways

The media of concern at the Site include potentially-impacted soil, groundwater and soil vapor. Potential exposure pathways include dermal contact, incidental ingestion and inhalation of vapors. The risk of dermal contact and incidental ingestion will be minimized through general safe work practices, a personal hygiene program and the use of PPE. The risk of inhalation will be minimized through the use of an air monitoring program for VOCs and particulates.

3.2 Chemical Hazards

Based on historic uses, the following contaminants of concern are present in media that will be encountered during the implementation of the RAWP:

Chlorinated Solvents

- Tetrachloroethylene (PCE)
- Trichloroethene (TCE)

SVOCs

- Polycyclic Aromatic Hydrocarbons (PAHs)

Metals

- Iron
- Manganese

Material Safety Data Sheets (MSDSs) for each contaminant of concern are included in Appendix C. All personnel are required to review the MSDSs included in this HASP.

3.3 Physical Hazards

The physical hazards associated with the field activities likely present a greater risk of injury than the chemical constituents at the Site. Activities within the scope of this project shall comply

with New York State and Federal OSHA construction safety standards.

Head Trauma
To minimize the potential for head injuries, field personnel will be required to wear National Institutes of Occupational Safety and Health (NIOSH)-approved hard hats during field activities. Hats must be worn properly and not altered in any way that would decrease the degree of protection provided.

Foot Trauma
To avoid foot injuries, field personnel will be required to wear steel-toed safety shoes while field activities are being performed. To afford maximum protection, all safety shoes must meet American National Standards Institute (ANSI) standards.

Eye Trauma
Field personnel will be required to wear eye protection (safety glasses with side shields) while field activities are being performed to prevent eye injuries caused by contact with chemical or physical agents.

Noise Exposure
Field personnel will be required to wear hearing protection (ear plugs or muffs) in high noise areas (noise from heavy equipment) while field activities are being performed.

Buried Utilities and Overhead Power Lines
Boring locations will be cleared by an underground utility locator service. In addition, prior to intrusive activities, the drilling subcontractor will contact the One Call Center to arrange for a utility mark-out, in accordance with New York State requirements. Protection from overhead power lines will be accomplished by maintaining safe distances of at least 15 feet at all times.

Thermal Stress
The effects of ambient temperature can cause physical discomfort, personal injury, and increase the probability of accidents. In addition, heat stress due to lack of body ventilation caused by protective clothing is an important consideration. Heat-related illnesses commonly consist of heat stroke and heat exhaustion.

The symptoms of heat stroke include: sudden onset; change in behavior; confusion; dry, hot and flushed skin; dilated pupils; fast pulse rate; body temperature reaching 105° or more; and/or, deep breathing later followed by shallow breathing.

The symptoms of heat exhaustion include: weak pulse; general weakness and fatigue; rapid shallow breathing; cold, pale and clammy skin; nausea or headache; profuse perspiration; unconsciousness; and/or, appearance of having fainted.

Heat-stress monitoring will be conducted if air temperatures exceed 70 degrees Fahrenheit. The initial work period will be set at 2 hours. Each worker will check his/her pulse at the wrist for 30 seconds early in each rest period. If the pulse rate exceeds 110 beats per minute, the next work period will be shortened by one-third.

One or more of the following precautions will reduce the risk of heat stress on the Site:

- Provide plenty of liquids to replace lost body fluids; water, electrolytic drinks, or both will be made available to minimize the risk of dehydration and heat stress
- Establish a work schedule that will provide appropriate rest periods
- Establish work regimens consistent with the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines
- Provide adequate employee training on the causes of heat stress and preventive measures

In the highly unlikely event of extreme low temperatures, reasonable precautions will be made to avoid risks associated with low temperature exposure.

Traffic

Field activities will occur near public roadways. As a result, vehicular traffic will be a potential hazard during these activities and control of these areas will be established using barricades or traffic cones. Additional staff will be assigned, as warranted, for the sole purpose of coordinating traffic. Personnel will also be required to wear high-visibility traffic vests while working in the vicinity of the public roadways and local requirements for lane closure will be observed as needed. All work in public rights-of-way will be coordinated with local authorities and will adhere to their requirements for working in traffic zones.

Hazardous Weather Conditions

All Site workers will be made aware of hazardous weather conditions, specifically including extreme heat, and will be requested to take the precautions described herein to avoid adverse health risks. All workers are encouraged to take reasonable, common sense precautions to avoid potential injury associated with possible rain or high wind, sleet, snow or freezing.

Slip, Trip and Fall

Areas at the Site may be slippery from mud or water. Care should be taken by all Site workers to avoid slip, trip, and fall hazards. Workers shall not enter areas that do not have adequate lighting. Additional portable lighting will be provided at the discretion of the HSO.

Biological Hazards

Drugs and alcohol are prohibited from the Site. Any on-site personnel violating this requirement will be immediately expelled from the site.

Any worker or oversight personnel with a medical condition that may require attention must inform the HSO of such condition. The HSO will describe appropriate measures to be taken if the individual should become symptomatic.

Due to the Site location in an urban area, it is highly unlikely that poisonous snakes, spiders, plants and insects will be encountered. However, other animals (dogs, cats, etc.) may be encountered and care should be taken to avoid contact.

4.0 AIR MONITORING

Air quality monitoring equipment will be used during all work activities to measure total organic vapors. A PID (to monitor total volatile organic concentrations) will be used during on-site

activities. The equipment will be calibrated daily and the results noted in the project field book. A background level will be established, at a minimum, on a daily basis, and recorded in the field book. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shut down.
4. All 15-minute readings must be recorded. Instantaneous readings, if any, used for decision purposes should also be recorded.

During soil boring and sampling outside the mall buildings, particulate monitoring will be performed using a real-time particulate monitor that will monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols
Size range: <0.1 to 10 microns
Sensitivity: 0.001 mg/m3
Range: 0.001 to 10 mg/m3
Overall Accuracy: ±10% as compared to gravimetric analysis of stearic acid or reference dust.

Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. The action level will be established at 150 ug/m^3 over the integrated period not to exceed 15 minutes.

5.0 PERSONAL PROTECTIVE EQUIPMENT

The personal protection equipment required for various kinds of site investigation tasks is based on 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, "General Description and Discussion of the Levels of Protection and Protective Gear."

Tenen field personnel and other site personnel will wear Level D personal protective equipment. During activities such as drilling, well installation, or sampling, where there is a chance of contact with contaminated materials, modified Level D equipment will be worn. The protection will be upgraded to Level C if warranted by the results of the air monitoring. A description of the personnel protective equipment for Levels D and C is provided below.

Level D
Respiratory Protection: None
Protective Clothing: Hard hat, steel-toed shoes, long pants, nitrile gloves

Modified Level D
Respiratory Protection: None
Protective Clothing: Hard hat, steel-toed shoes, coveralls/tyvek, nitrile gloves

Level C
Respiratory Protection: Air purifying respirator with organic vapor cartridges and filters.
Protective Clothing: Same as modified Level D

6.0 EXPOSURE MONITORING

Selective monitoring of workers in the exclusion area may be conducted, as determined by the HSO, if sources of hazardous materials are identified. Personal monitoring may be conducted in the breathing zone at the discretion of the Project Manager or HSO and, if workers are wearing respiratory protective equipment, outside the face-piece.

7.0 SITE ACCESS

Access to the Site during the investigation will be controlled by the Project Manager or HSO. Unauthorized personnel will not be allowed access to the sampling areas.

8.0 WORK AREAS

During any activities involving drilling or other subsurface disturbance, the work area must be divided into various zones to prevent the spread of contamination, clarify the type of protective equipment needed, and provide an area for decontamination.

The Exclusion Zone is defined as the area where potentially contaminated materials are generated as the result of drilling, sampling, or similar activities. The Contamination Reduction Zone (CRZ) is the area where decontamination procedures take place and is located adjacent to the Exclusion Zone. The Support Zone is the area where support facilities such as vehicles, a field phone, fire extinguisher and/or first aid supplies are located. The emergency staging area (part of the Support Zone) is the area where all Site workers will assemble in the event of an emergency. These zones shall be designated daily, depending on that day's activities. All field personnel will be informed of the location of these zones before work begins.

Control measures such as "Caution" tape and traffic cones will be placed around the perimeter of the work area when work is being done in the areas of concern (i.e., areas with exposed soil) to prevent unnecessary access.

9.0 DECONTAMINATION PROCEDURES

Personnel Decontamination
Personnel decontamination (decon), if deemed necessary by the HSO, will take place in the designated decontamination area delineated for each sampling location. Personnel decontamination will consist of the following steps:

- Soap and potable water wash and potable water rinse of gloves;
- Tyvek removal;
- Glove removal;
- Disposable clothing removal; and
- Field wash of hands and face.

Equipment Decontamination
Sampling equipment, such as split-spoons and bailers, will be decontaminated in accordance with U.S. Environmental Protection Agency methodologies, as described in the work plan.

Disposal of Materials
Purged well water, water used to decontaminate any equipment and well cuttings will be containerized and disposed off-site in accordance with federal, state and local regulations.

10.0 GENERAL SAFE WORK PRACTICES

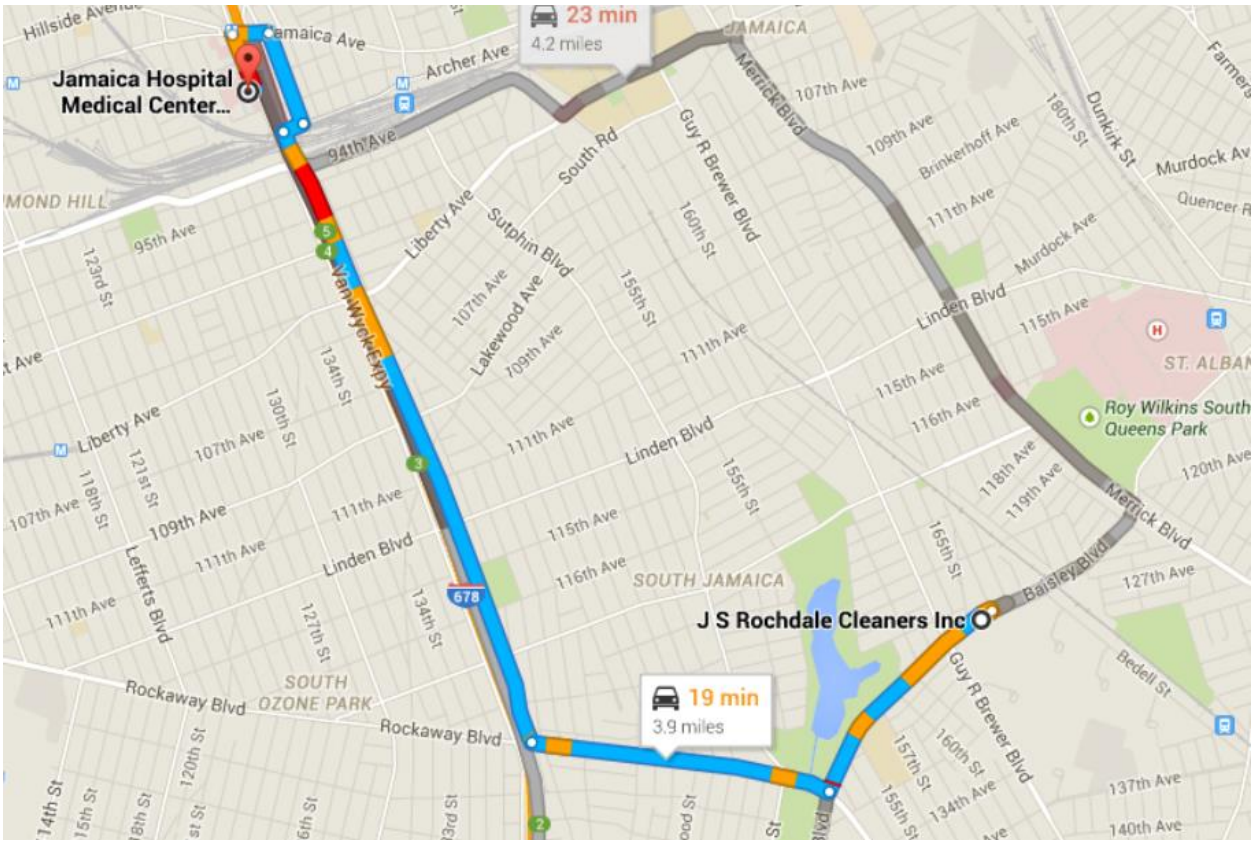
To protect the health and safety of the field personnel, all field personnel will adhere to the guidelines listed below during activities involving subsurface disturbance.

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited, except in designated areas on the site. These areas will be designated by the HSO.
- Workers must wash their hands and face thoroughly on leaving the work area and before eating, drinking, or any other such activity. The workers should shower as soon as possible after leaving the site.
- Removal of potential contamination from PPE and equipment by blowing, shaking or any means that may disperse materials into the air is prohibited.
- Contact with contaminated or suspected surfaces should be avoided.
- The buddy system should always be used; each buddy should watch for signs of fatigue, exposure, and heat stress.
- Personnel will be cautioned to inform each other of symptoms of chemical exposure such as headache, dizziness, nausea, and irritation of the respiratory tract and heat stress.
- No excessive facial hair that interferes with a satisfactory fit of the face-piece of the respirator to the face will be allowed on personnel required to wear respiratory protective equipment.
- On-site personnel will be thoroughly briefed about the anticipated hazards, equipment requirements, safety practices, emergency procedures, and communications methods.

11.0 EMERGENCY PROCEDURES

The field crew will be equipped with emergency equipment, such as a first aid kit and disposable eye washes. In the case of a medical emergency, the HSO will determine the nature of the emergency and will have someone call for an ambulance, if needed. If the nature of the injury is not serious—i.e., the person can be moved without expert emergency medical personnel—onsite personnel should drive him to a hospital. **The nearest emergency room is at Jamaica Hospital Medical Center located at 8900 VanWyck Expressway, Queens, NY 11418. Their phone number is (718) 206-6000.** The route to the hospital is shown and detailed on the next page.

11.1 Route to Hospital



Driving directions to **Jamaica Hospital Medical Center** from **165-50 Baisley Bloulevard, Queens, New York.**

Driving Directions

1. Head northeast on Baisley Blvd toward 166th St (456 feet).

2. Make a U-turn at 167th St (0.7 mile).

3. Turn right onto Rockaway Blvd (0.8 mile).

4. Turn right onto Van Wyck Blvd (2.1 mile).

5. Turn left onto Jamaica Ave (253 feet).

6. Turn left at the 1st cross street onto Van Wyck Blvd.

7. Destination will be on the right.

11.2 Emergency Contacts

There will be an on-site field phone. Emergency and contact telephone numbers are listed below:

Table 1 – Emergency Contacts

Ambulance	911
Emergency Room	(718) 963-8000
NYSDEC Spill Hotline	(800) 457-7362
NYSDEC Manager, Sondra Martinkat	(718) 482-4891
Tenen QEP, Mohamed Ahmed	(917) 612-6018
On-site Field Phone, Matthew Carroll	(646) 827-1061
Client representative, Claude Laborde	(347) 729-6553

12.0 TRAINING

All personnel performing the field activities involving hazardous waste, as determined by 40 CFR 262.11 and ECL 27-0903 or a "source area," as determined by DER-10 1.3(b)70, will have received the initial safety training required by 29 CFR, 1910.120. Current refresher training status also will be required for all personnel engaged in field activities.

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety. All field personnel must attend a training program covering the following areas:

- potential hazards that may be encountered;
- the knowledge and skills necessary for them to perform the work with minimal risk to health and safety;
- the purpose and limitations of safety equipment; and
- protocols to enable field personnel to safely avoid or escape from emergencies.

Each member of the field crew will be instructed in the above objectives before he/she goes onto the site. The HSO will be responsible for conducting the training program.

13.0 MEDICAL SURVEILLANCE

All Tenen and subcontractor personnel performing field work involving subsurface disturbance involving hazardous waste, as determined by 40 CFR 262.11 and ECL 27-0903 or a "source area," as determined by DER-10 1.3(b)70, at the site are required to have passed a complete medical surveillance examination in accordance with 29 CFR 1910.120 (f). The medical examination for Tenen employees will, at a minimum, be provided annually and upon termination of hazardous waste site work.

Appendix A

Acknowledgement of HASP

ACKNOWLEDGMENT OF HASP

Below is an affidavit that must be signed by all Tenen Environmental employees who enter the site. A copy of the HASP must be on-site at all times and will be kept by the HSO.

AFFIDAVIT

I have read the Construction Health and Safety Plan (CHASP) for the JS Cleaners Site in Queens, NY. I agree to conduct all on-site work in accordance with the requirements set forth in this HASP and understand that failure to comply with this HASP could lead to my removal from the site.

Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____

Appendix B

Injury Reporting Form (OSHA Form 300)

Appendix C

Material Safety Data Sheets (MSDS)

New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX 8 -
SITE MANAGEMENT FORMS

HIP Cleaners

Site Management - Monthly Inspection Checklist

Engineering Controls	Condition	No	Yes	Deficiencies (if any):
Sub-slab Depressurization System (SSDS)	Has piping been inspected to confirm operation of appropriate valves			
Soil Vapor Extraction (SVE) System	Has piping been inspected to confirm operation of appropriate valves			
SVE and SSDS	Have alarms been tested to ensure proper operation?			

Comments/Notes: _____

Name of inspector: _____

Signature of inspector: _____

Date of inspection: _____

HIP Cleaners
Site Management - Inspection Form

Engineering Controls	Condition	Field Notes/Observations:
Sub-slab Depressurization (SSD) and Soil Vapor Extraction (SVE) System	Observe visible components (fan, vacuum alarm/monitor, vacuum gauge,tubing, riser pipe, etc.) for physical wear, damage and operational issues, and replace as necessary	
	Remove any blockages in vacuum monitor and gauge tubing and riser pipe taps	
	Verify operation of vacuum monitor by disconnecting tubing from riser pipe and noting if the building notification system goes into alarm mode	
	Verify operation of vacuum gauge by disconnecting tubing from riser pipe and noting if the indicator moves to zero (check high and low pressure ports to see if they are plugged correctly)	
	Inspect riser pipe penetrations in concrete slab for proper seal	
	Inspect riser pipe connections at fan for leaks and tightness	
	Inspect power to fan by operating dedicated switch	
Site Cover (annual)	Visual inspection of concrete floors and perforations through floor for cracking or degradation	

Name of inspector: _____

Signature of inspector: _____

Date of inspection: _____

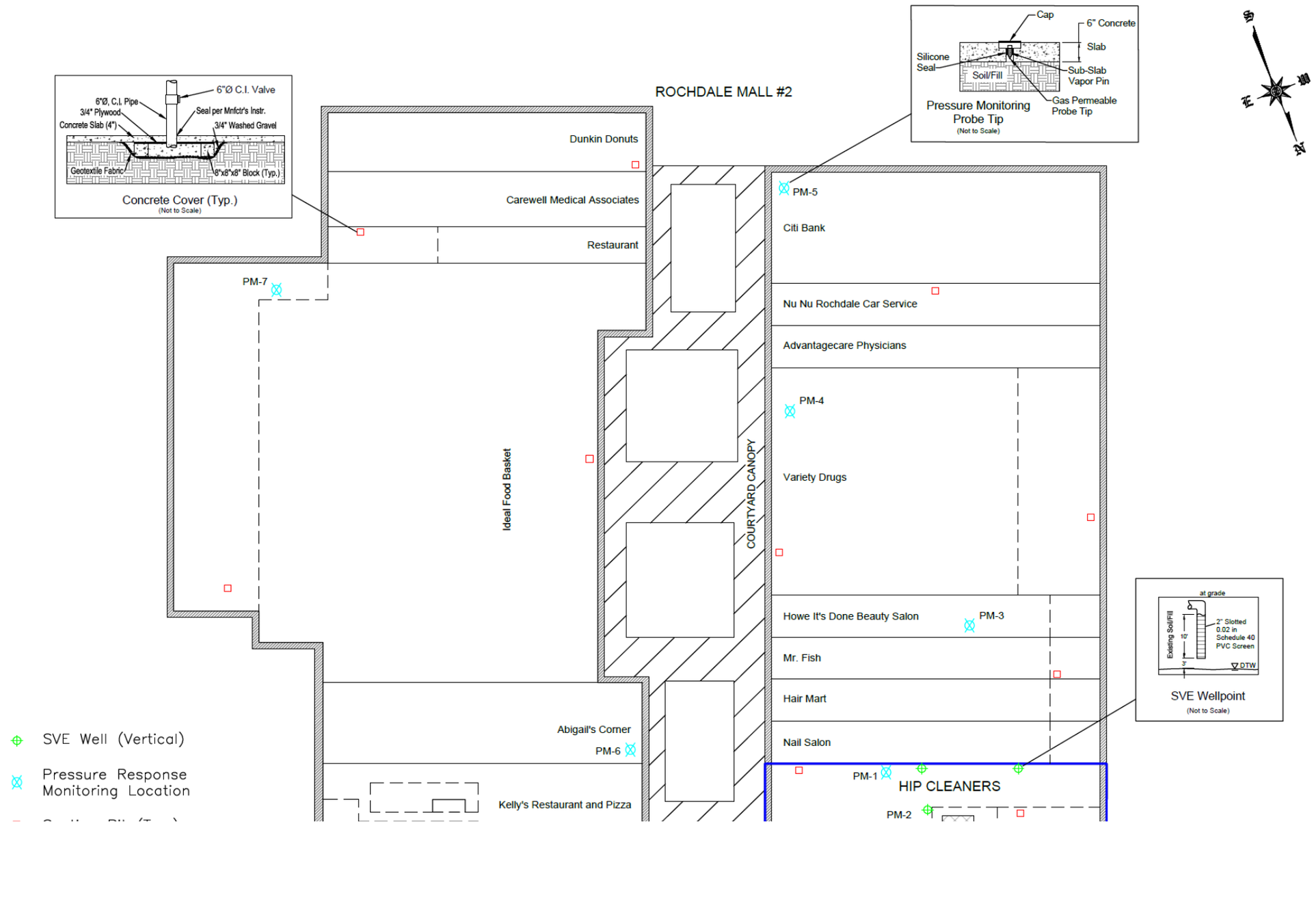
HIP Cleaners
Site Management - Inspection Form

Name of inspector: _____

Signature of inspector: _____

Date of inspection: _____

Pressure Field Extension Testing	
PM-1	in-wc
PM-2	in-wc
PM-3	in-wc
PM-4	in-wc
PM-5	in-wc
PM-6	in-wc
PM-7	in-wc



Summary of Green Remediation Metrics for Site Management

Site Name: _____ Site Code: _____
Address: _____ City: _____
State: _____ Zip Code: _____ County: _____

Initial Report Period (Start Date of period covered by the Initial Report submittal)
Start Date: _____

Current Reporting Period
Reporting Period From: _____ To: _____

Contact Information
Preparer's Name: _____ Phone No.: _____
Preparer's Affiliation: _____

I. Energy Usage: Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

	Current Reporting Period	**Total to Date**
Fuel Type 1 (e.g. natural gas (cf))		
Fuel Type 2 (e.g. fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g. solar, wind)		
Other energy sources (e.g. geothermal, solar thermal (Btu))		

Provide a description of all energy usage reduction programs for the site in the space provided on Page 3.

II. Solid Waste Generation: Quantify the management of solid waste generated on-site.

	Current Reporting Period (tons)	**Total to Date (tons)**
Total waste generated on-site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-site to landfills		
Transported off-site to other disposal facilities		
Transported off-site for recycling/reuse		
Reused on-site		

Provide a description of any implemented waste reduction programs for the site in the space provided on Page 3.

III. Transportation/Shipping: Quantify the distances travelled for delivery of supplies, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period (miles)	**Total to Date (miles)**
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service		
Waste Removal/Hauling		

Provide a description of all mileage reduction programs for the site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the site.

IV. Water Usage: Quantify the volume of water used on-site from various sources.

	Current Reporting Period (gallons)	**Total to Date (gallons)**
Total quantity of water used on-site		
Of that total amount, provide quantity:		
Public potable water supply usage		
Surface water usage		
On-site groundwater usage		
Collected or diverted storm water usage		

Provide a description of any implemented water consumption reduction programs for the site in the space provided on Page 3.

V. Land Use and Ecosystems: Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	**Total to Date (acres)**
Land disturbed		
Land restored		

Provide a description of any implemented land restoration/green infrastructure programs for the site in the space provided on Page 3.

Description of green remediation programs reported above (Attach additional sheets if needed)
Energy Usage:
Waste Generation:
Transportation/Shipping:
Water usage:
Land Use and Ecosystems:
Other:

CONTRACTOR CERTIFICATION
I, _____ (**Name**) do hereby certify that I am _____ (**Title**) of _____ (**Contractor Name**), which is responsible for the work documented on this form. According to my knowledge and belief, all of the information provided in this form is accurate and the site management program complies with the DER-10, DER-31, and CP-49 policies. _____ **Date** **Contractor**

APPENDIX 9 - O&M MANUAL

OPERATIONS, MAINTENANCE & MONITORING (OM&M) PLAN

SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS) and SOIL VAPOR EXTRACTION (SVE) SYSTEM

for
HIP Cleaners (Rochdale Village Mall #2) Remedial Action Work Plan

169-47 137th Street, Queens
Block 12495, portion of Lot 2
BCP Site # C241166

Submitted to:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B
625 Broadway, 12th Floor
Albany, NY 12233-7016

Prepared for:
Rochdale Village, Inc.
169-55 137th Avenue
Queens, New York 11434

Prepared by:
TENEN ENVIRONMENTAL
121 West 27th Street, Suite 702
New York, NY 10001

July 2023

OPERATIONS, MAINTENANCE AND MONITORING (OM&M) PLAN

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APPENDICES

OPERATIONS, MAINTENANCE AND MONITORING (OM&M) PLAN

1.0 INTRODUCTION

This Operations, Maintenance and Monitoring (OM&M) Plan has been developed to detail the engineering controls (ECs) implemented as part of the Remedial Action Work Plan prepared for JS Cleaners (the Site).

The HIP Cleaners (the Site) is located in the Rochdale Village Mall #2 at 169-47 137th Avenue in the Jamaica Section of Queens, New York. The HIP Cleaners is an active dry cleaning facility, located in a 3,330 square foot (sf) retail space within a strip mall in Rochdale Village community. Rochdale Village community is a 115-acre area, which includes twenty 14-story residential apartment buildings with associated management office, power plant, community center, maintenance and public safety building, two retail malls (Mall #1 and #2), medical offices, gasoline station, open space and parking areas. HIP Cleaners is the leaseholder for the current tenant space and has conducted dry cleaning operations at the Site since 1967.

1.1 Background

Environmental investigations at the Site have documented elevated concentrations of chlorinated solvents in the sub-slab soil vapor and soil. There is the potential for an indoor air intrusion condition.

In order to address the potential for indoor air quality impacts from the soil and sub-slab soil vapor, an active sub-slab depressurization system (SSDS) and soil vapor extraction system (SVE) has been designed and will be incorporated into the current building plan.

1.2 Summary of Engineering Controls (ECs)

Engineering Controls (ECs) to address residual contamination through physical protective measures at the Site have been incorporated to ensure that the Site remains protective of public health and the environment.

A sub-slab depressurization system (SSDS) has been installed below the current slab within Mall #2. This SSDS system will extend to the Site. The principal components of the SSDS are a layer of gravel beneath the basement slab, two suction pits within the gravel layer, solid-construction piping from each suction pit to an exterior suction fan on the roof and monitoring points through the basement slab. The goal of the system is to create a pressure differential of at least -0.002 inches of water column (in-wc) between the at grade floor and sub-slab environments. A visual and audible alarm will be installed in the basement to notify the building management if the pressure at the suction fan has dropped below 50% of the start-up pressure. The system was designed in general accordance with NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH Soil Vapor Guidance).

Addtionally, a soil vapor extraction (SVE) system has been installed to treat impacts in the soil below HIP Cleaners. A minimum of four vertical SVE wells will be installed around the areas of documented PCE contamination to approximately three feet above the depth of groundwater, to be determined in field. The SVE system is designed to treat the on-site soil, incorporating an assumed radius of influence (ROI) across the Site. Given the assumed soil permeability of historic fill and no intervals of varying permeabilities, a maximum ROI of 25 feet is proposed. Pressure/vapor monitoring locations will be installed at assumed ROI extents. A vacuum reading of 0.1 in-wc induced at these locations will be considered an acceptable value indicating that the vacuum is being appropriately induced within the extraction wells. The SVE layouts and details are included on drawings X-100 through X-103, included in Appendix A-1.

The extraction wells are connected with PVC piping via trenching. Above grade cast iron piping is routed to the back of the building and connected to a vacuum blower. A blower test was completed to appropriately size the fan. The SVE exhaust stream was sampled following system start up and air cleaning requirements was designed subsequent to sample analysis.

2.0 Engineering Control Operations

Four permanent ECs are incorporated into the building as part of this IRM Work Plan to address potential soil vapor intrusion at the Site. The ECs are:

- an active sub-slab depressurization system (SSDS);
- a soil vapor extraction system;
- a composite cover system; and,
- post-remedial groundwater monitoring.

General design drawings and specifications are included in the Appendices.

2.1 Sub-Slab Depressurization System (SSDS)

The SSDS will reduce the potential for soil vapor migration into the building. The SSDS will be inspected at specific intervals as defined in this OM&M.

2.2 Soil Vapor Extraction (SVE) System

The SVE system will treat the remaining chlorinated volatile impacts in the soil. The SVE will be inspected at specific intervals as defined in this OM&M.

2.3 Composite Cover System

Exposure to soil, groundwater, and soil vapor would be prevented by a composite cover system that will be maintained the Site. The composite cover system will be the existing concrete building slab.

2.4 Groundwater Monitoring

Long-term monitoring (eight quarterly events) of the groundwater will be conducted to confirm groundwater concentrations. All quarterly monitoring samples will be analyzed for VOCs.

While post-remedial groundwater monitoring is part of the selected remedy, it is presented as an EC because it will continue after the Final Engineering Report (FER) and Site Management Plan (SMP) are submitted.

3.0 Routine Maintenance and Monitoring

EC inspections will be performed by a person knowledgeable with the mechanical systems present in the building and familiar with the property and may include a building or property superintendent.

3.1 EC Inspection Frequency

Site inspection and certification for performance of the active SSDS will be performed on a schedule detailed in the Final Engineering Report (FER) and reported in a Periodic Review Report (PRR).

3.2 EC Inspection Components

The EC inspections will evaluate the following:

- continued performance of ECs as designed;
- compliance with this SMP;
- continued achievement of remedial performance criteria;
- accuracy and completeness of Site records;
- necessity for any changes to the remedial systems; and
- general Site conditions at the time of inspection.

In the event of an emergency, such as a natural disaster or an unforeseen failure of any of the ECs, an inspection of the ECs will be conducted by a Qualified Environmental Professional (QEP), as defined by NYSDEC.

3.3 EC Inspections

3.3.1 Sub-Slab Depressurization System (SSDS)

EC inspections of the SSDS components shall include the following:

- Observe visible components (fan, vacuum alarm/monitor, vacuum gauge, tubing, riser pipe, etc.) for physical wear, damage and operational issues, and replace as necessary;
- Remove any blockages in vacuum monitor and gauge tubing and riser pipe taps;
- Verify operation of vacuum monitor by disconnecting tubing from riser pipe and noting if the building notification system goes into alarm mode;
- Verify operation of vacuum gauge by disconnecting tubing from riser pipe and noting if the indicator moves to zero (check high and low pressure ports to see if they are plugged correctly);
- Inspect riser pipe penetrations in concrete slab for proper seal;
- Inspect riser pipe connections at fan for leaks and tightness;
- Inspect condition of muffler (if installed) at end of outlet pipe; and
- Inspect power to fan by operating dedicated switch.

3.3.2 SVE System

EC inspections of the SVE system components shall include the following:

- Observe visible components (fan, vacuum alarm/monitor, vacuum gauge, tubing, riser pipe, air cleaning filters etc.) for physical wear, damage and operational issues, and replace as necessary;
- Remove any blockages in vacuum monitor and gauge tubing and riser pipe taps;
- Verify operation of vacuum monitor by disconnecting tubing from riser pipe and noting if the building notification system goes into alarm mode;
- Verify operation of vacuum gauge by disconnecting tubing from riser pipe and noting if the indicator moves to zero (check high and low pressure ports to see if they are plugged correctly);
- Inspect riser pipe penetrations in concrete slab for proper seal;
- Inspect riser pipe connections at fan for leaks and tightness;
- Inspect air cleaning (if required) for operational issues;
- Inspect condition of muffler (if installed) at end of outlet pipe; and
- Inspect power to fan by operating dedicated switch.

3.3.3 Composite Cover System

EC inspections of the composite cover shall include observations of the concrete building slab if present. The composite cover will be inspected for cracks, holes or other openings that will provide access to the soil/fill below the cover. If any cracks, holes or other openings are observed in the composite cover during the EC inspection, the inspector will make a recommendation that such cracks, holes or openings be immediately filled and/or sealed as necessary.

3.4 Inspection Reporting

EC inspections will be performed by a person with knowledge of the mechanical systems present in the building and familiar with the property. Inspection results will be reported to NYSDEC in a PRR.

3.5 Certifications

The results of the EC inspections will be certified at the time of the inspection and the signed certifications included in the PRR.

The Inspection Certification will certify whether:

- on-site ECs are unchanged from the previous certification;
- on-site ECs remain in-place and effective;
- on-site ECs are performing as designed; and
- anything has occurred that would impair the ability of the controls to protect public health and the environment.

4.0 EMERGENCY CONTACT NUMBERS

In the event of any emergency condition pertaining to any EC, the current Owner's representative(s) should contact the appropriate parties from the contact list below. Prompt contact should also be made to a Qualified Environmental Professional (QEP), as defined by NYSDEC. These emergency contact lists must be maintained in an easily accessible location at the Site.

Emergency Contact Numbers

Contact	Number
Medical, Fire and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Project Contact Numbers

Contact	Number
Matthew Carroll Tenen Environmental	(646) 606-2332

Appendix A

Sub-Slab Depressurization System and Soil Vapor Extraction System

Appendix A-1

SSDS and SVE Design – As-Built

ROCHDALE MALL #2

(Vacant)

6–in ø
C.I. Pipe
(strapped to ceiling)
Slope pipe @ 2% (Typ.)

Carewell Medical Associates

Subway

Citi Bank

Nu Nu Rochdale Car Service

Advantagecare Physicians

Variety Drugs

Howe It's Done Beauty Salon

Mr. Fish

Hair Mart

(Vacant)

Ideal Food Basket

COURTYARD CANOPY

Abigail's Corner

Kelly's Restaurant and Pizza

HIP CLEANERS

Site to be depressurized under alternate work plan

SVE Effluent Air Cleaning Room

Approximate location of dry cleaning equipment

Planting Area

SITE BOUNDARY

Suction Pit (below)

6–in ø PVC Riser to Roof

Alarm

Piping shown as 6–in ø C.I. Pipe (strapped to ceiling) Slope pipe @ 2% to pit (Typ.)

SCALE: 1" = 30' 0 15 30

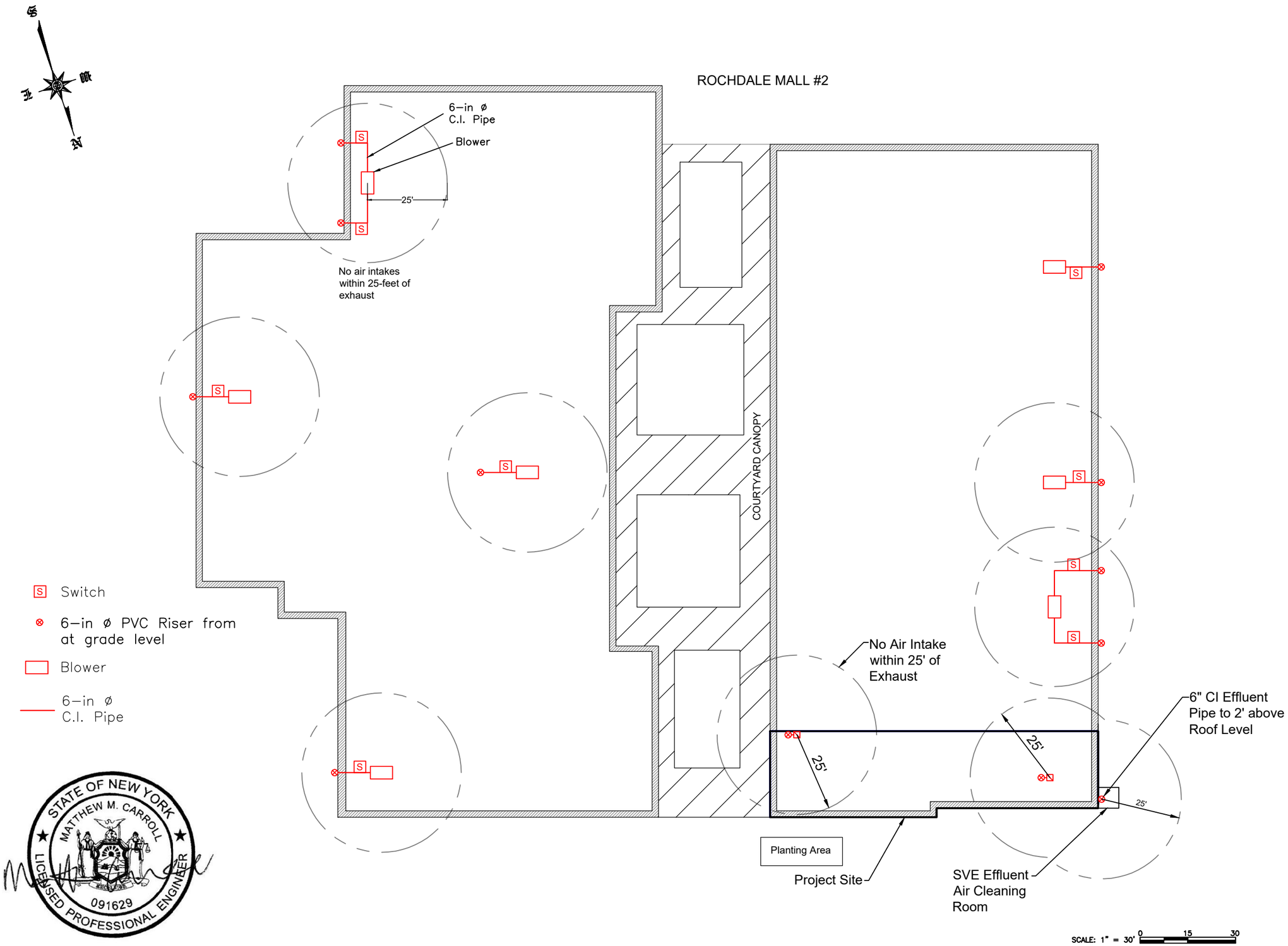
CLIENT
HIP Cleaners
Rochdale Village
BCP # C241166
169-47 137th Avenue
Jamaica, Queens

CONSULTANT
TENEN ENVIRONMENTAL
TENEN ENVIRONMENTAL, LLC
121 West 27th Street
Suite 702
New York, NY 10001
O: 646-606-2332
F: 646-606-2379

DRAWN BY	CHECKED BY	DATE	SCALE:
LM	AP	December 2023	AS NOTED

DRAWING TITLE: SSDS AT-GRADE LAYOUT

DRAWING NO. X-101



STATE OF NEW YORK
MATTHEW M. CARROLL
091629
LICENSED PROFESSIONAL ENGINEER

CLIENT
HIP Cleaners
Rochdale Village
BCP # C241166
169-47 137th Avenue
Jamaica, Queens

CONSULTANT
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TENEN ENVIRONMENTAL, LLC
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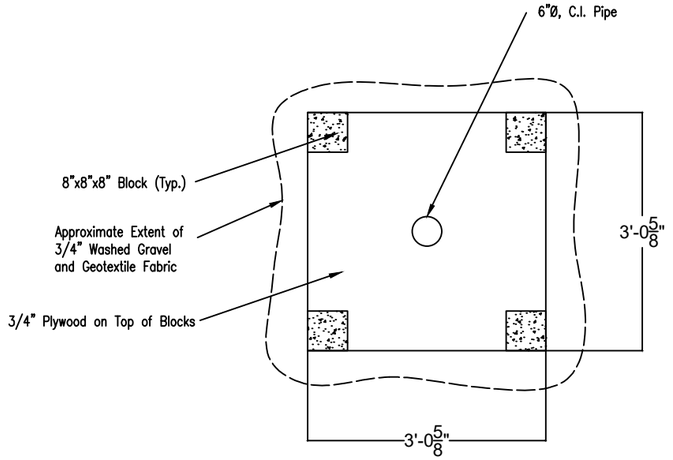
DRAWN BY	CHECKED BY	DATE	SCALE:
LM	AP	December 2023	AS NOTED

DRAWING TITLE: SSDS ROOF LAYOUT

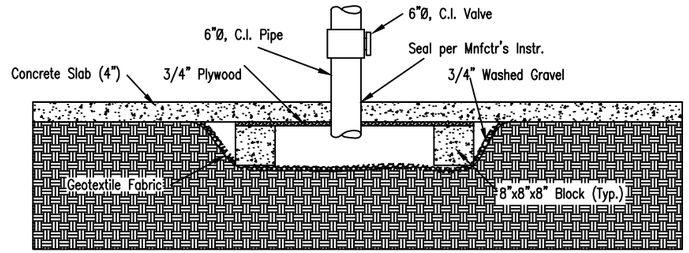
DRAWING NO. X-102

1



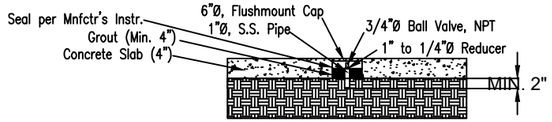
Suction Pit – Plan View

2



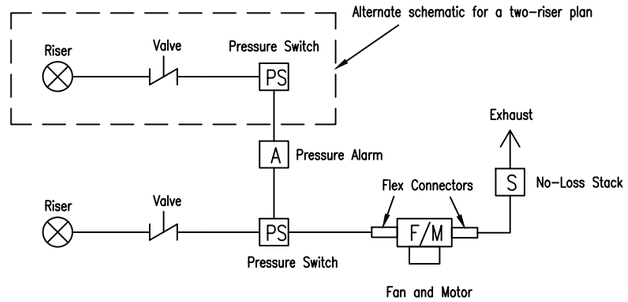
Suction Pit – Section View

3



Sub-Slab Depressurization Monitoring Point – Side View

4



Sub-Slab Depressurization System – Schematic from Riser to Exhaust Location

CLIENT
HIP Cleaners
Rochdale Village
BCP # C241166
169-47 137th Avenue
Jamaica, Queens

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DRAWN BY: LM
CHECKED BY: AP
DATE: December 2023
SCALE: AS NOTED

DRAWING TITLE: SSDS Details
DRAWING NO.: X-103

Appendix A-2

SSDS and SVE Operation – Routine Operating Procedures

Sub-Slab Depressurization System (SSDS) and Soil Vapor Extraction (SVE)

Routine Operating Procedures

The long-term operation and maintenance program described below shall continue throughout the life cycle of the sub-slab depressurization system (SSDS) and soil vapor extraction (SVE) system to ensure a proper working order. The long-term operation and maintenance program for the major SSDS and SVE components includes manufacturer's recommendations for the reinstallation of SSDS and SVE components if modifications to the existing system need to be made, inspection procedures, an operation schedule, typical routine maintenance activities and schedules, and troubleshooting. Refer to Section 3.3.3 for an overall inspection procedure of the SSDS.

The alarm system, described below, shall run continuously and only be disconnected for routine maintenance and inspection activities or replacement. The system includes the following:

- vacuum gauge/switch (Ashcroft pressure switch, watertight enclosure, product model B4-24-B-000-NEG50"H20
- building alarm system, activated through network interface device (NID) box

In case there is a need to relocate the vacuum gauge/switch, the new location shall ensure that the vacuum gauge/switch remains in close proximity to the riser pipe and is installed correctly. If the vacuum gauge is not indicating a vacuum while the SSDS and SVE are on, make sure that the tubing connected to the riser pipe is connected to the low pressure port. High pressure ports on the vacuum gauge/switch should be vented to atmosphere.

The vacuum gauge/switch does not require lubrication or periodic servicing. The vacuum gauge is not field serviceable and should be returned to the manufacturer or supplier if repair is needed. Repairs or alterations made to the vacuum gauge/switch by others will void the unit's warranty. The vacuum gauge/switch is factory calibrated and cannot be recalibrated in the field. The installation and operating instructions for the vacuum alarm/monitor have been included in Appendix A-3.

When testing the vacuum alarm/monitor, the tubing that connects the vacuum alarm/monitor to the riser pipe shall be disconnected and the low set point raised above the current reading. If the vacuum alarm/monitor is powered at the time of disconnecting the tubing from the riser pipe, the building system will go into alarm. The building system should go back on-line when the tubing is reconnected to the riser pipe. If the building system is in alarm when there is a vacuum present in the riser pipe, inspect the tubing and riser pipe tap to ensure that there are no blockages. If there is a blockage in either the tubing or the riser pipe tap, remove the blockage and retest the vacuum alarm/monitor.

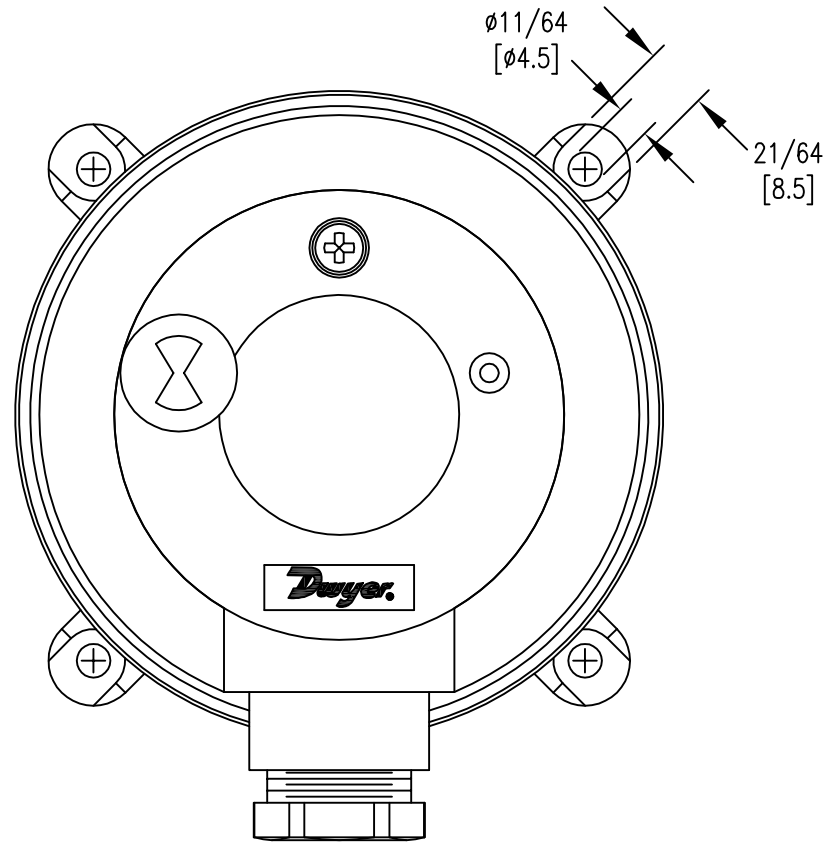
Common troubleshooting tips that can be followed if the vacuum gauge/switch will not indicate a vacuum or is sluggish include the following:

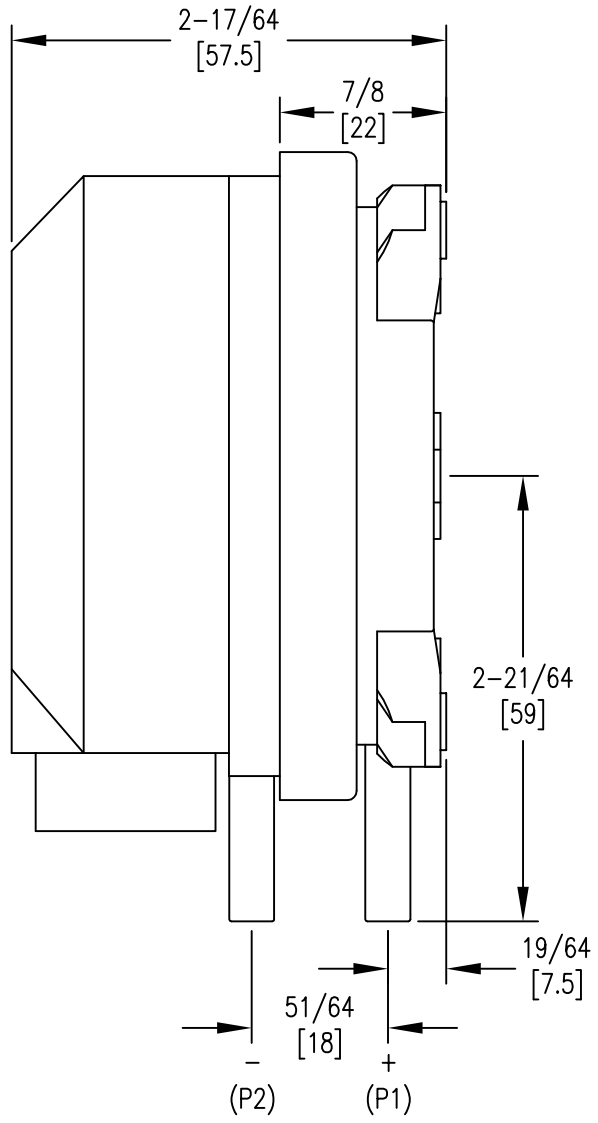
- The pressure ports (high or low) are not hooked up correctly;
- The fittings or sensing lines are blocked, pinched or leaking;
- The cover is loose;
- The pressure sensor is improperly located;
- The ambient temperature is too low (below 20ºC).

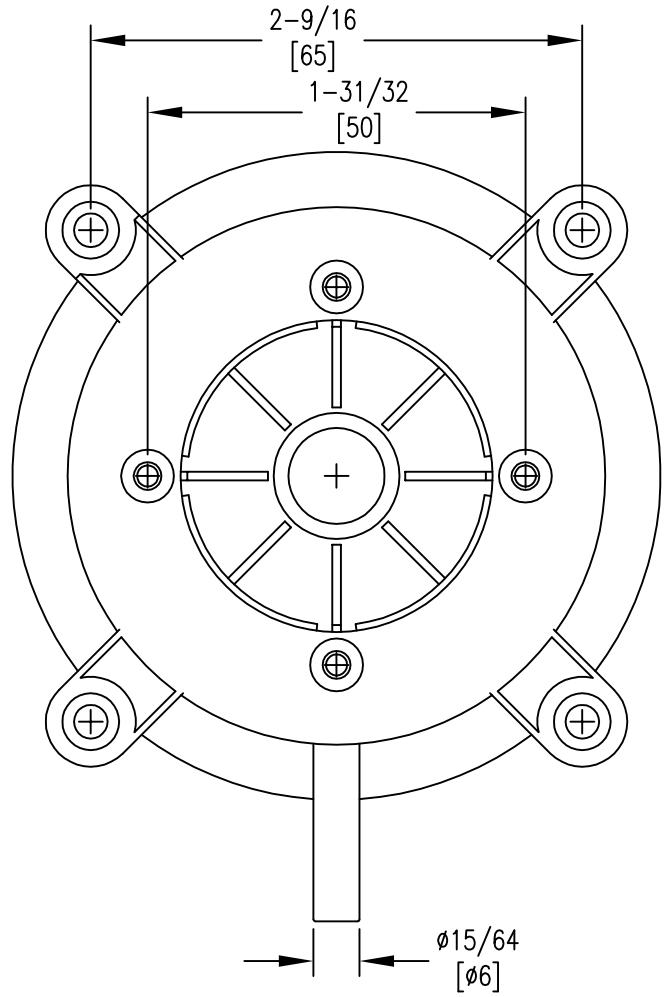
The Industrial Plastic Fan direct-drive suction fan model 180 (CDD180) with a 1 horsepower Premium Efficiency BALDOR motor shall operate continuously and only be turned off for routine maintenance and inspection activities or replacement. The SSDS fan and motor shall not be left on the system piping without electrical power for more than 48 hours due to possible fan failure that could result from this non-operational storage. The SSDS fan unit does not require periodic servicing and should be returned to the manufacturer or supplier for service. Repairs or alterations made to the SSDS fan unit by others will void the unit's warranty. The installation and operating instructions for the SSDS fan unit have been included in Appendix A-4.

Appendix A-3

SSDS and SVE Vacuum Gauge and Switch – Installation and Operating Instructions







Ⓒ = CRITICAL DIMENSION
STANDARD TOLERANCES UNLESS NOTED:
ALL DECIMAL DIMENSIONS ± .005
ALL ANGLES ± 1°

SCALE 1:1

NO.	CHANGES	BY/DATE

DATE
DWN BY
CHKD
APPD

NAME
BDPA
BATTERY POWERED
ADJUSTABLE DIFFERENTIAL
PRESSURE SWITCH
ACAD2002

MATERIAL
FINISH

DWYER INSTRUMENTS, INC.
MICHIGAN CITY, INDIANA 46360 U.S.A.

FR. NO.

Appendix A-4

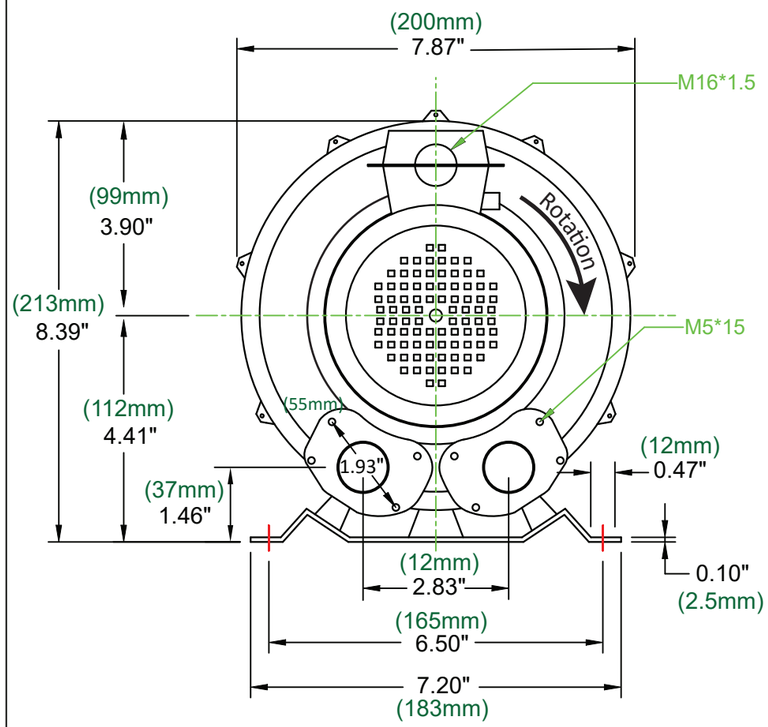
SSDS and SVE Fan and Motor – Installation and Operating Instructions

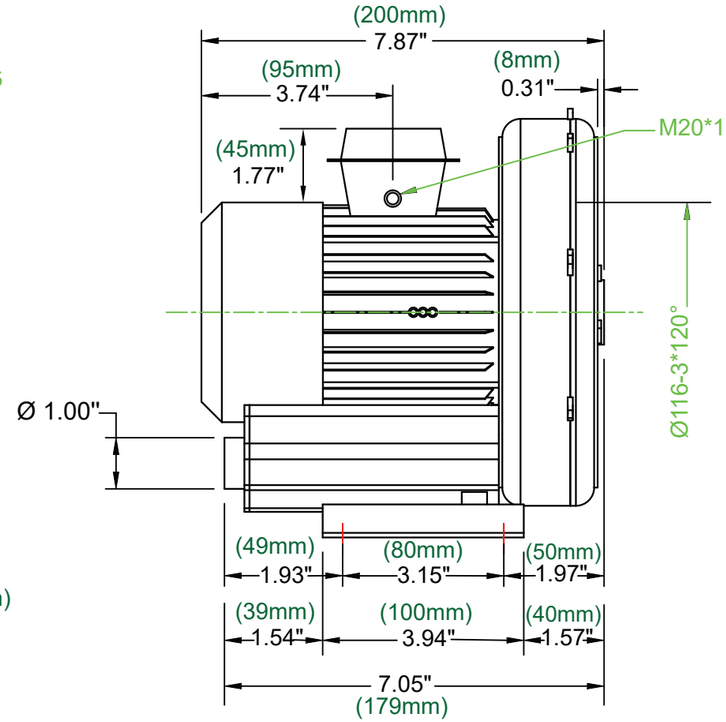
atlantic blowers

Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-90	A12	60Hz	0.24	0.33	35	44	29	55	1.00"	220-275/380-480	1.6Δ/0.9Y	12
			50Hz	0.21	0.28	29	31	20	52		200-240/345-415	1.4Δ/0.85Y	

**Sound db measured at 3ft.

MODEL NO. : AB-90 SINGLE STAGE



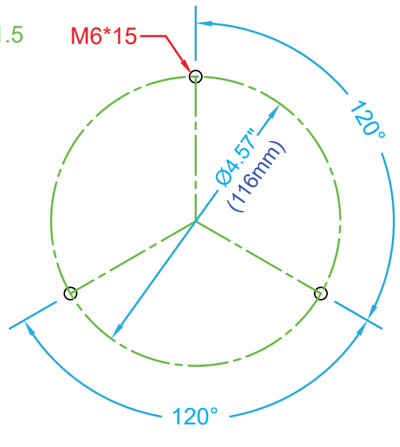


Key

60Hz

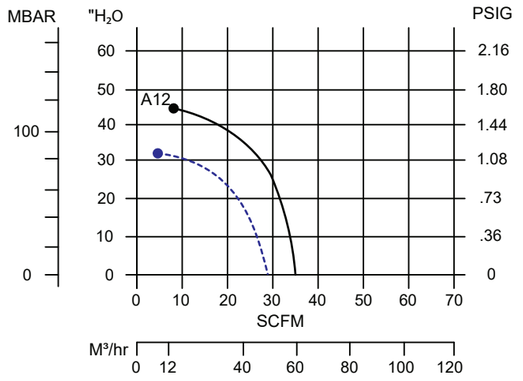
50Hz

Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity



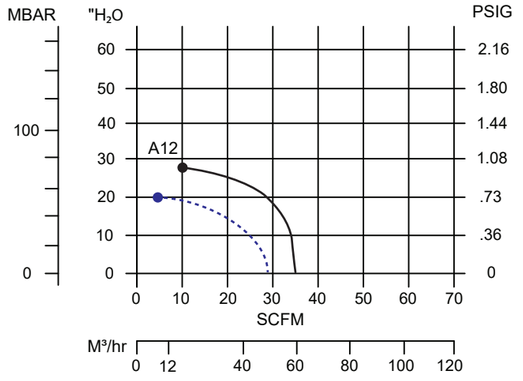
Pressure Performance Curve

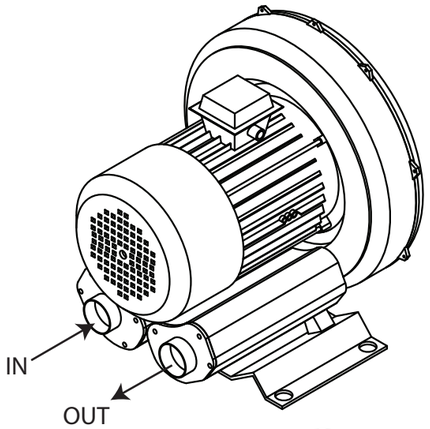
3 Phase

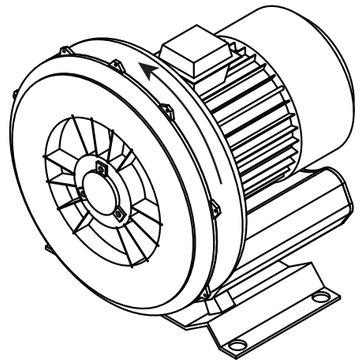


Vacuum Performance Curve

3 Phase

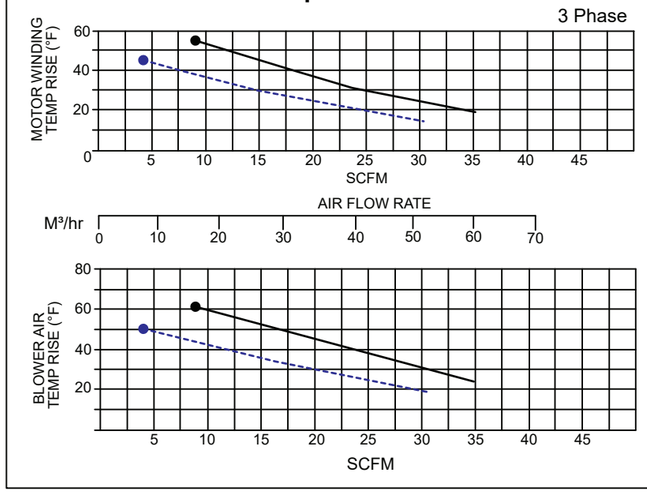






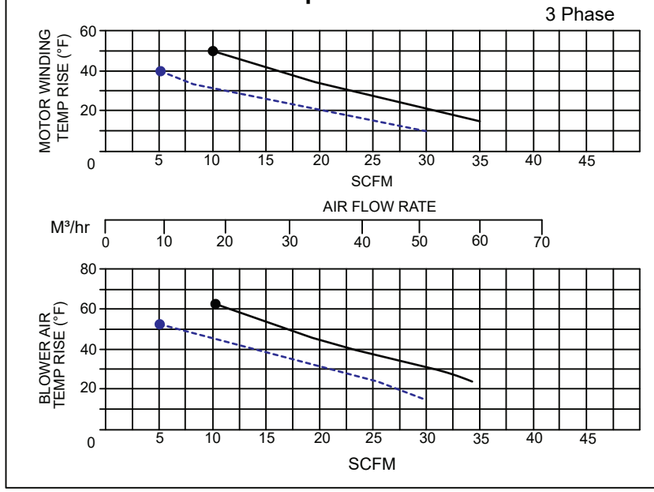
Pressure -Temperature Rise Curve

3 Phase



Vacuum -Temperature Rise Curve

3 Phase



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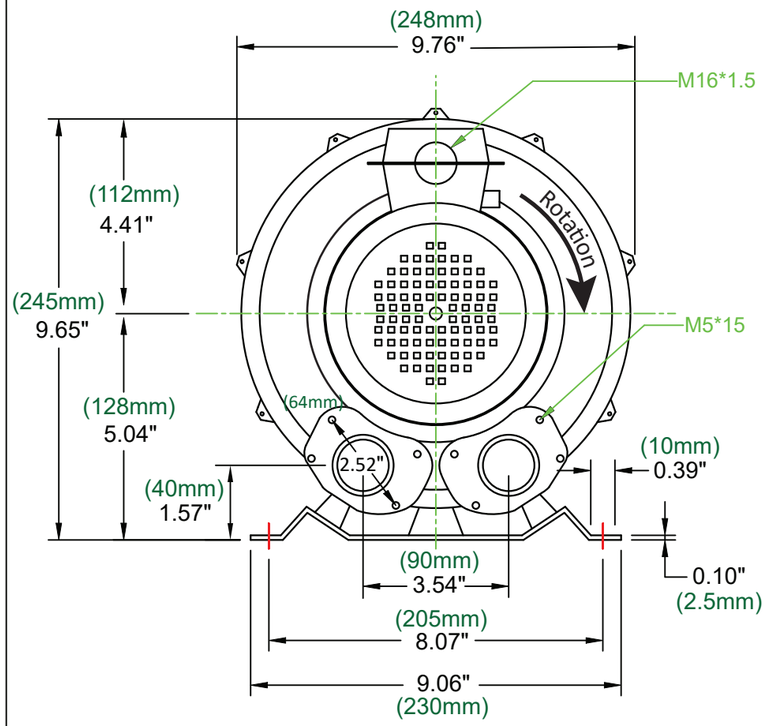
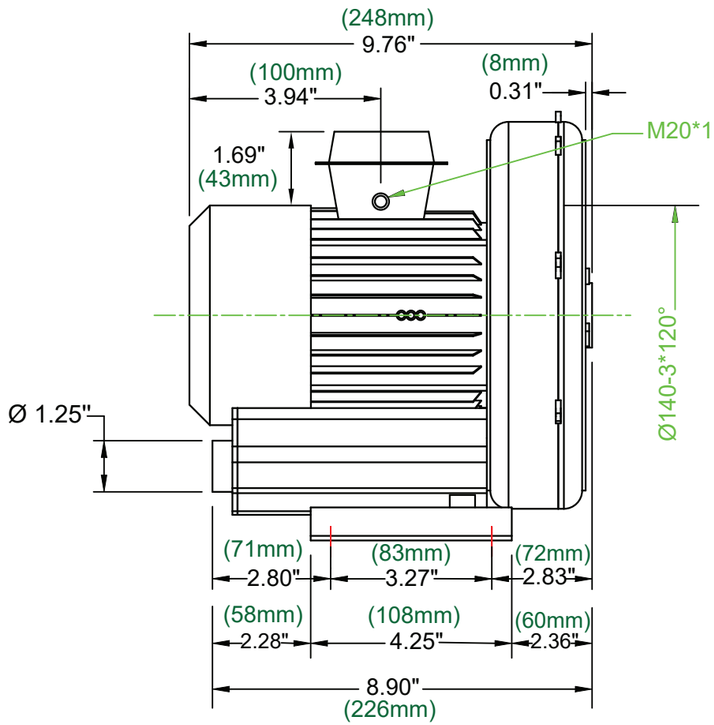
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-100	A13	60Hz	0.5	0.67	64	64	60	61	1.25"	220-275/380-480	2.3Δ/1.3Y	24
			50Hz	0.4	0.54	53	44	42	58		200-240/345-415	2.2Δ/1.3Y	

**Sound db measured at 3ft.

MODEL NO. : AB-100 SINGLE STAGE



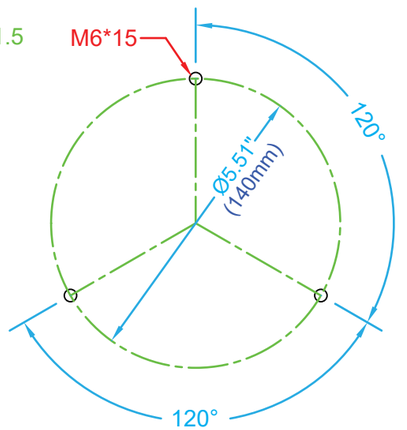


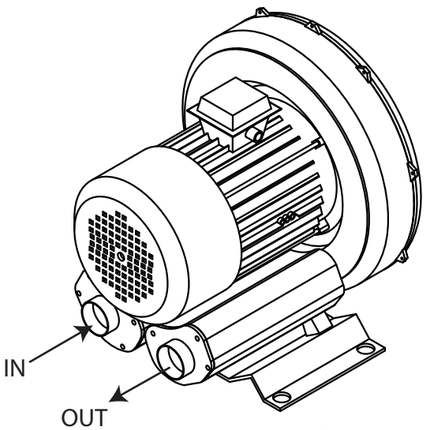
Key

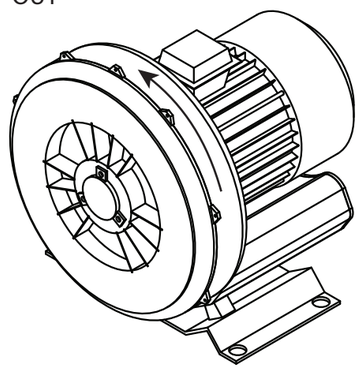
60Hz

50Hz

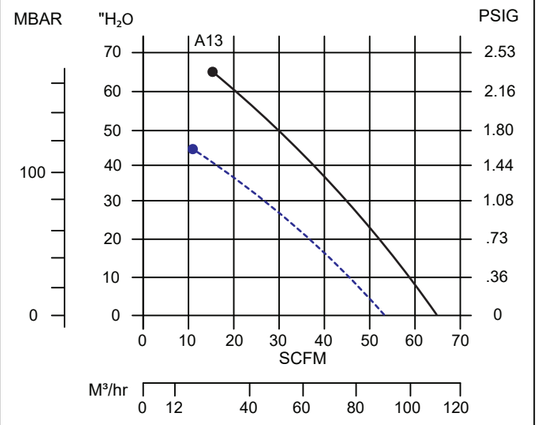
Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity



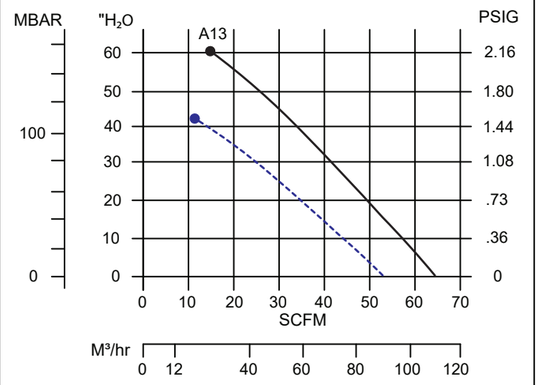




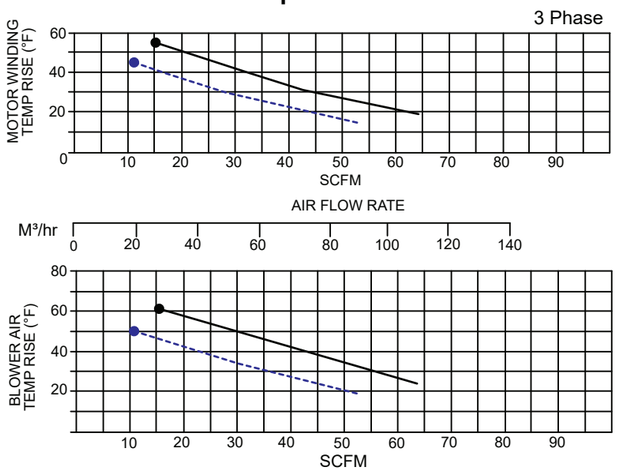
Pressure Performance Curve



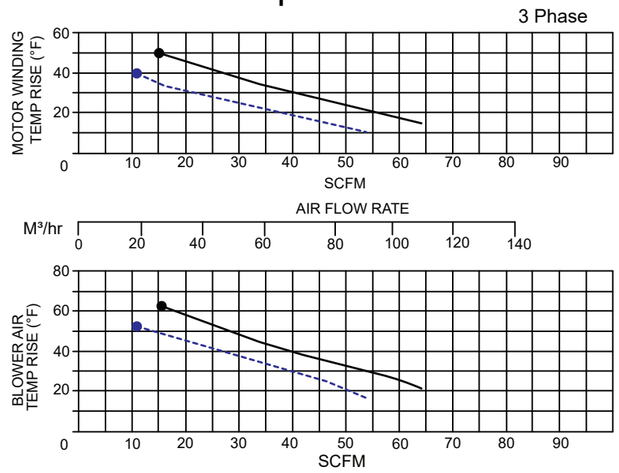
Vacuum Performance Curve



Pressure -Temperature Rise Curve



Vacuum -Temperature Rise Curve



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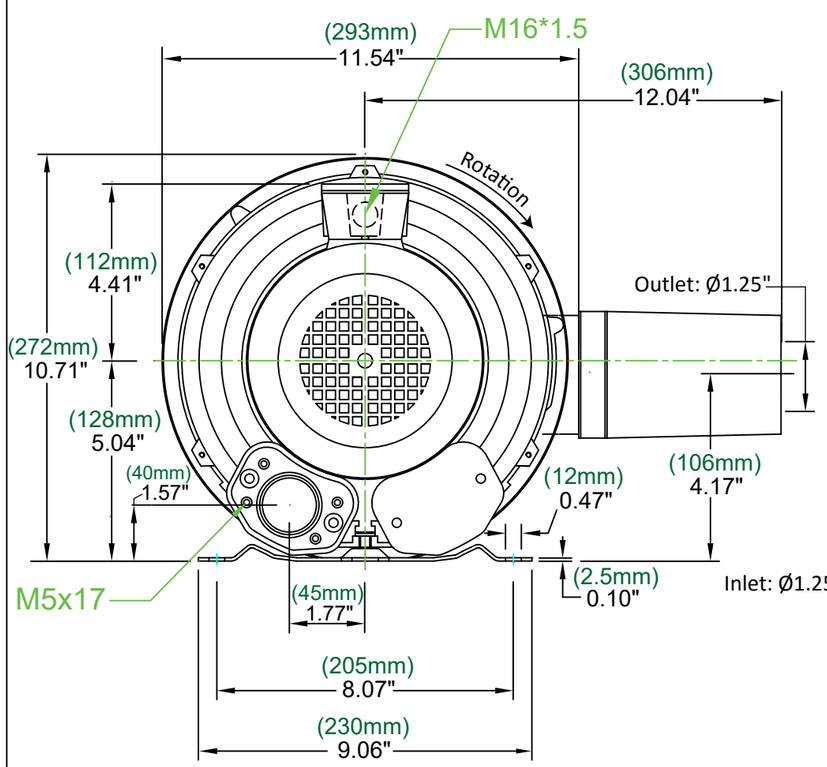
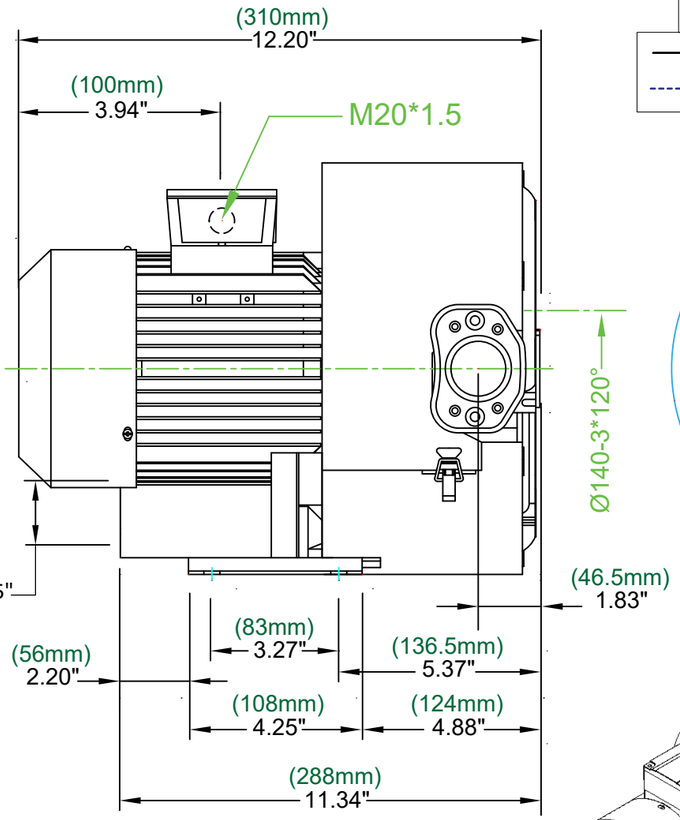
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Max Vacuum ("H_2O)	Sound Level (dB)	Inlet/Outlet Diameter (Inches)	Voltage	Current (A)	Weight (lbs)
1	AB-102/1	A100	60Hz	0.40	0.50	58	59	40	68	1.25"	110-120/220-240	7.8Δ/3.9Y	34
			50Hz	0.33	0.42	48	41	28	64		100-120/200-240	6.5Δ/3.3Y	

**Sound db measured at 3ft.

MODEL NO. : AB-102/1 DOUBLE STAGE



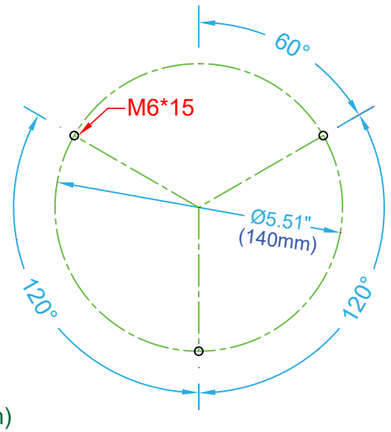


Key

60Hz

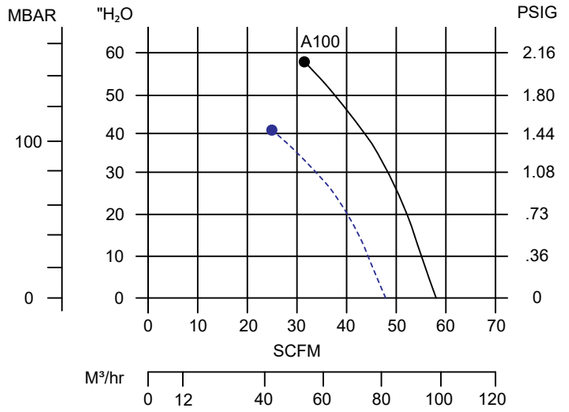
50Hz

Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity



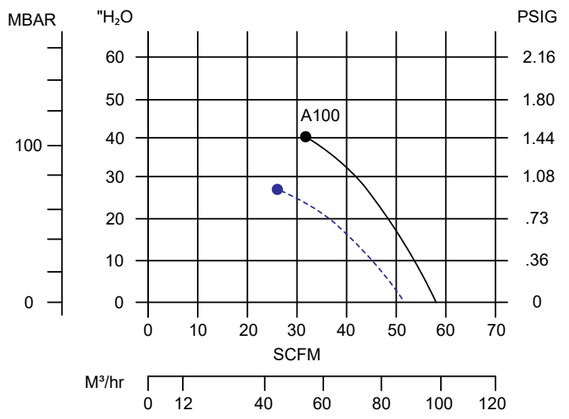
Pressure Performance Curve

1 Phase



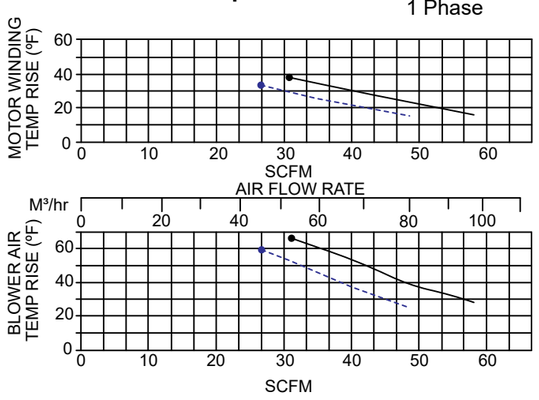
Vacuum Performance Curve

1 Phase



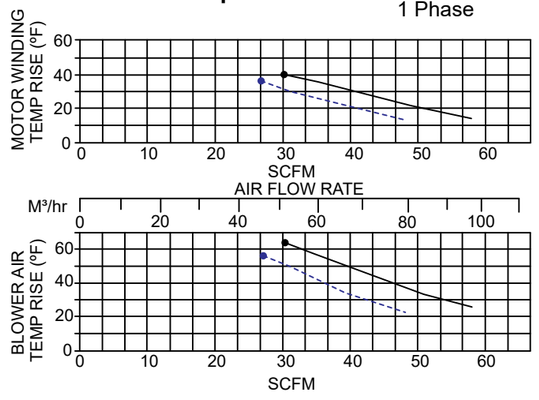
Pressure -Temperature Rise Curve

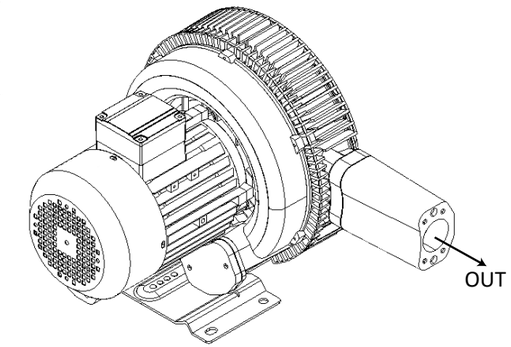
1 Phase

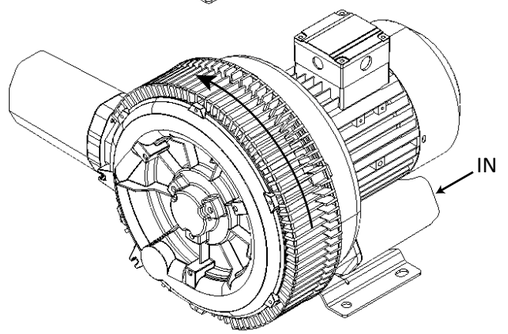


Vacuum -Temperature Rise Curve

1 Phase







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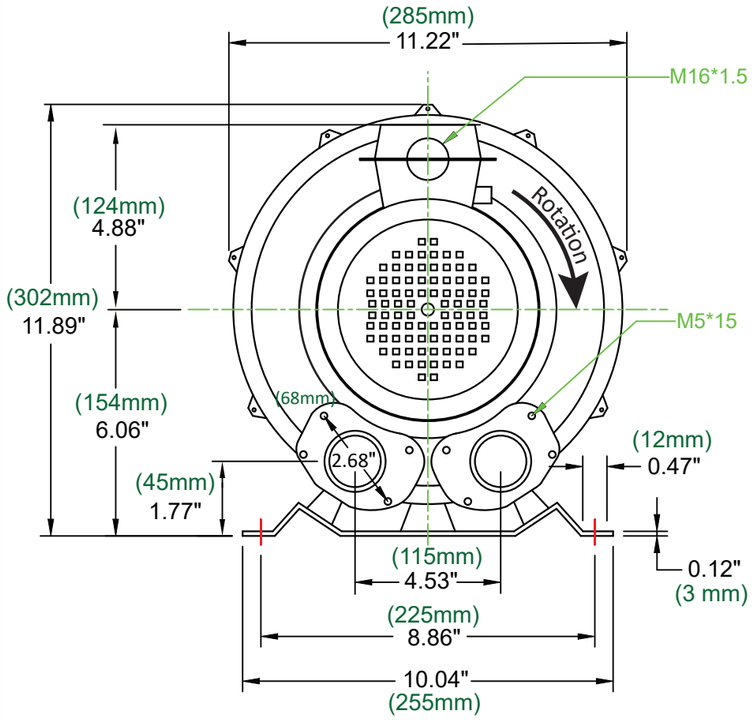
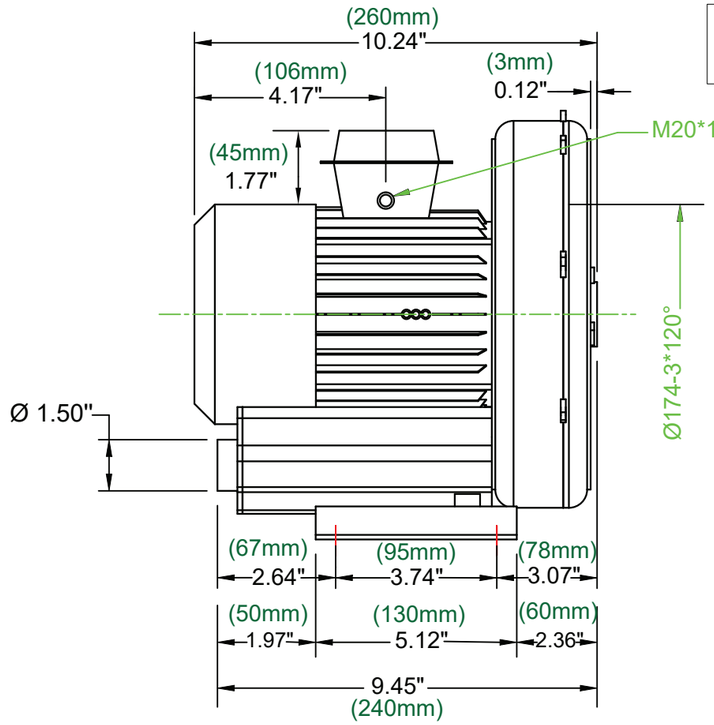
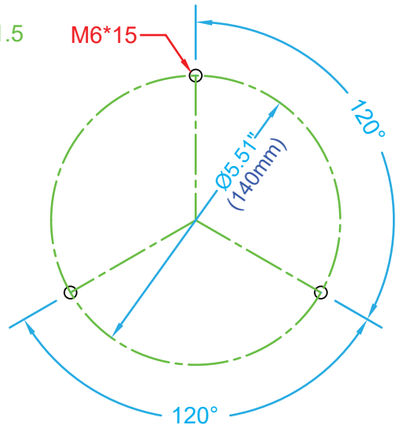
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-200	A14	60Hz	0.93	1.25	110	60	60	64	1.50"	220-275/380-480	3.9Δ/2.3Y	35
			50Hz	0.75	1.00	92	42	42	61		200-240/345-415	3.7Δ/2.1Y	

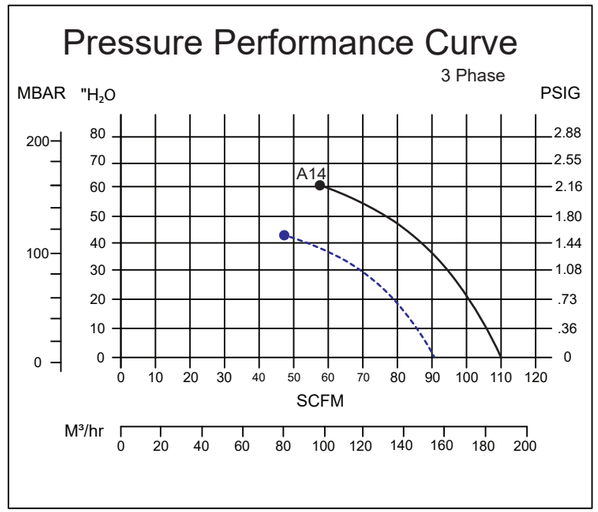
**Sound db measured at 3ft.

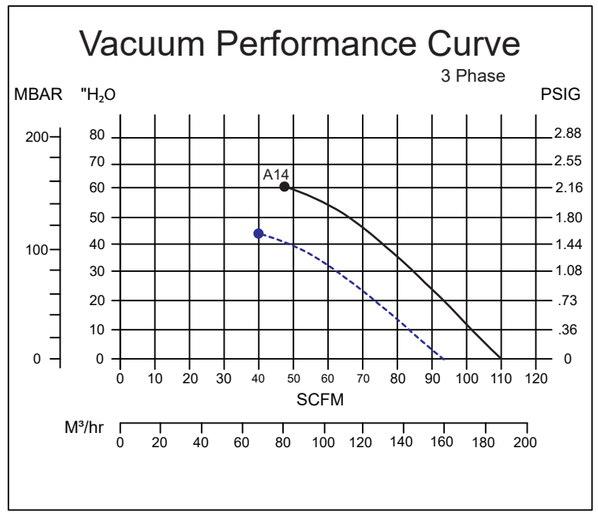
MODEL NO. : AB-200 SINGLE STAGE

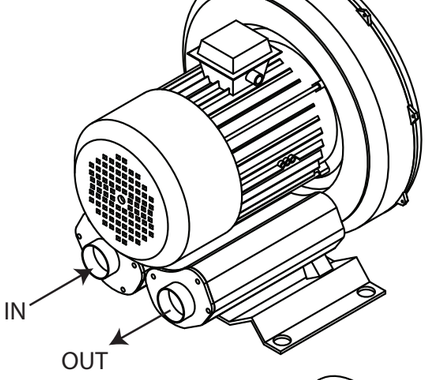


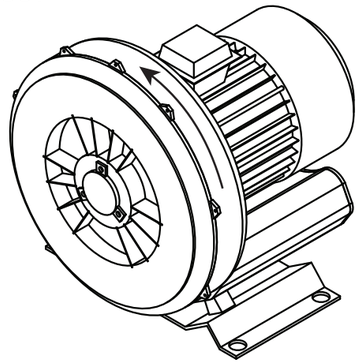


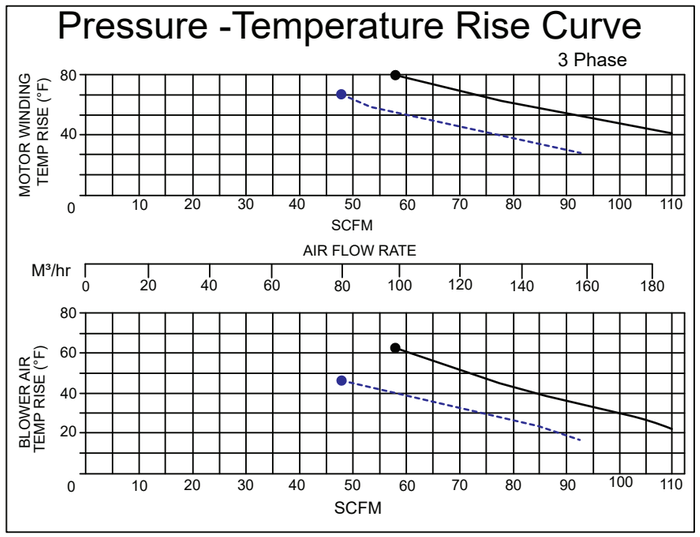


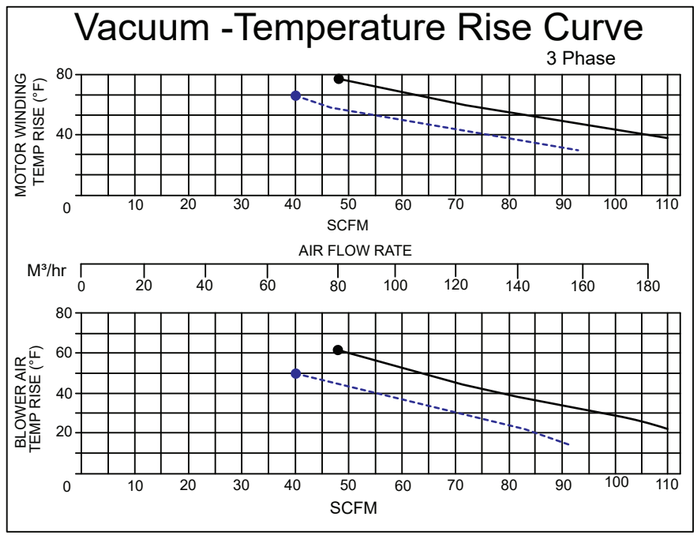












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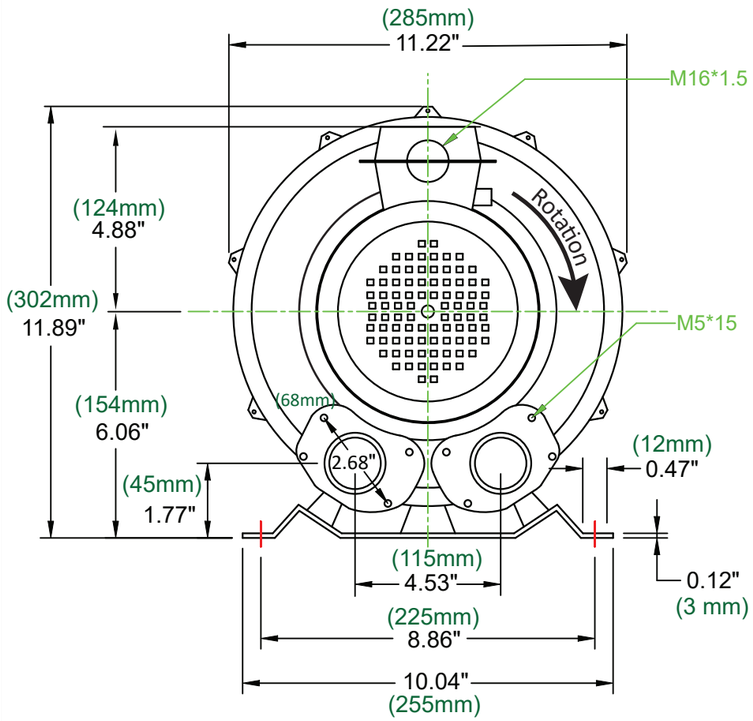
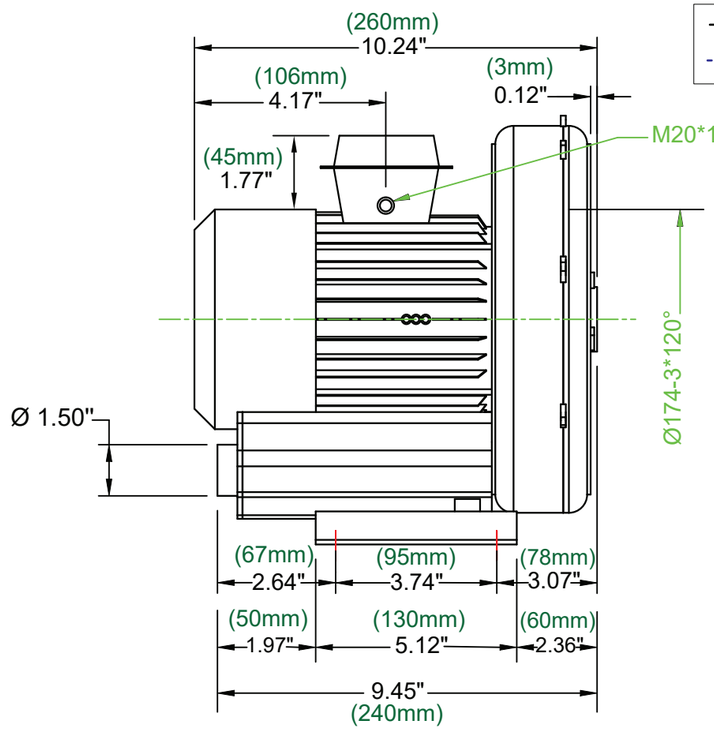
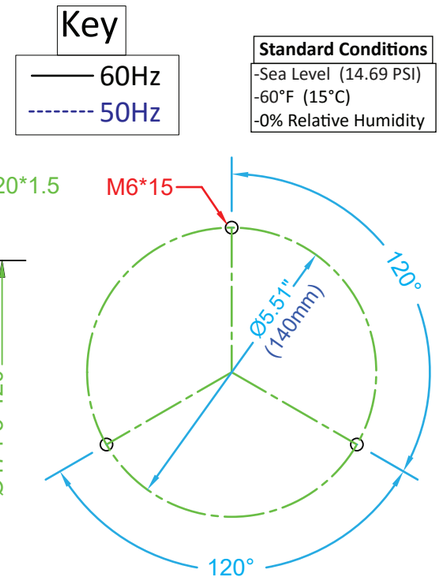
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
1	AB-201	A5	60Hz	0.75	1.00	110	56	56	64	1.50"	110-120/220-240	13.0Δ/6.5Y	35
			50Hz	0.62	0.83	92	39	39	61		100-120/200-240	10.1Δ/5.4Y	

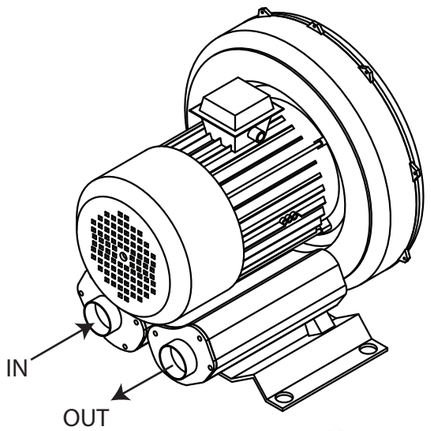
MODEL NO. : AB-201 SINGLE STAGE

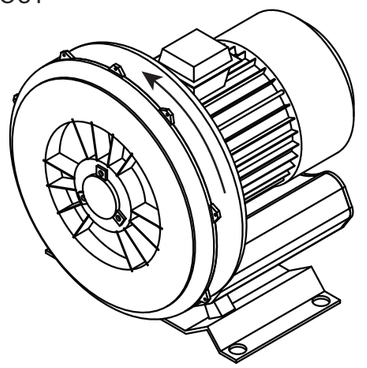
**Sound db measured at 3ft.



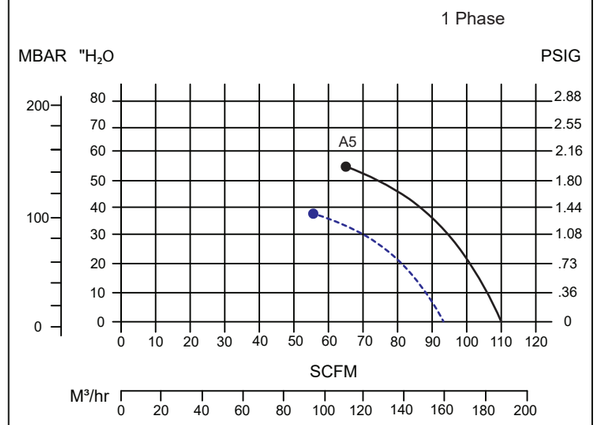




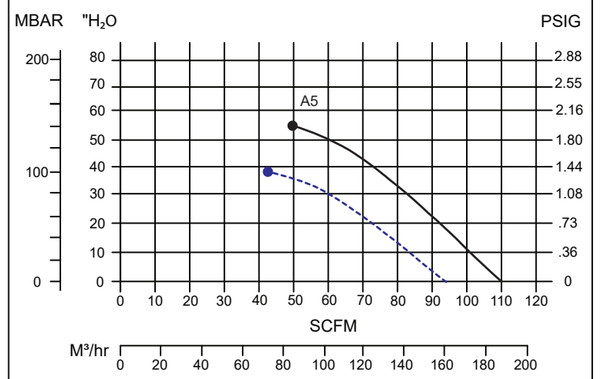




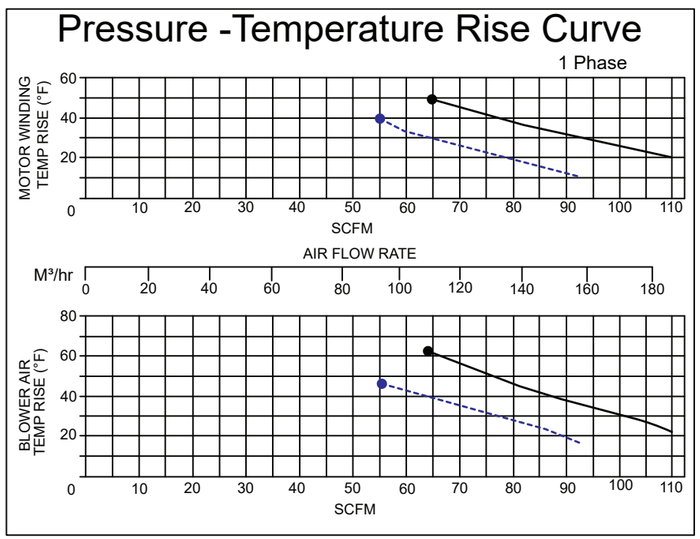
Pressure Performance Curve



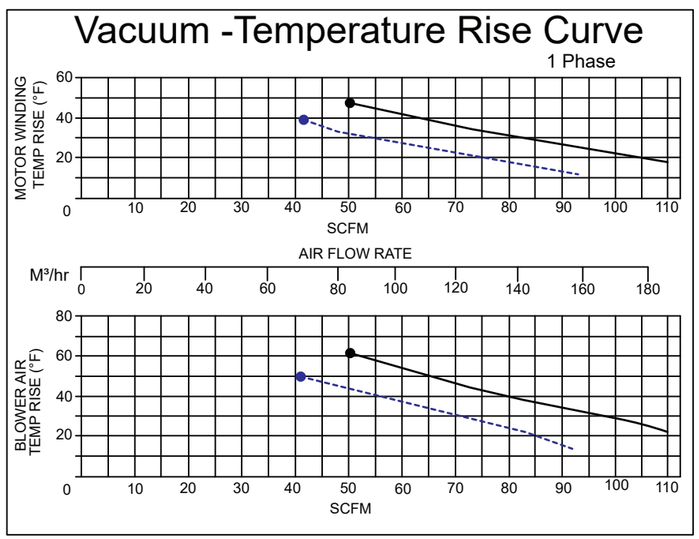
Vacuum Performance Curve



Pressure -Temperature Rise Curve



Vacuum -Temperature Rise Curve



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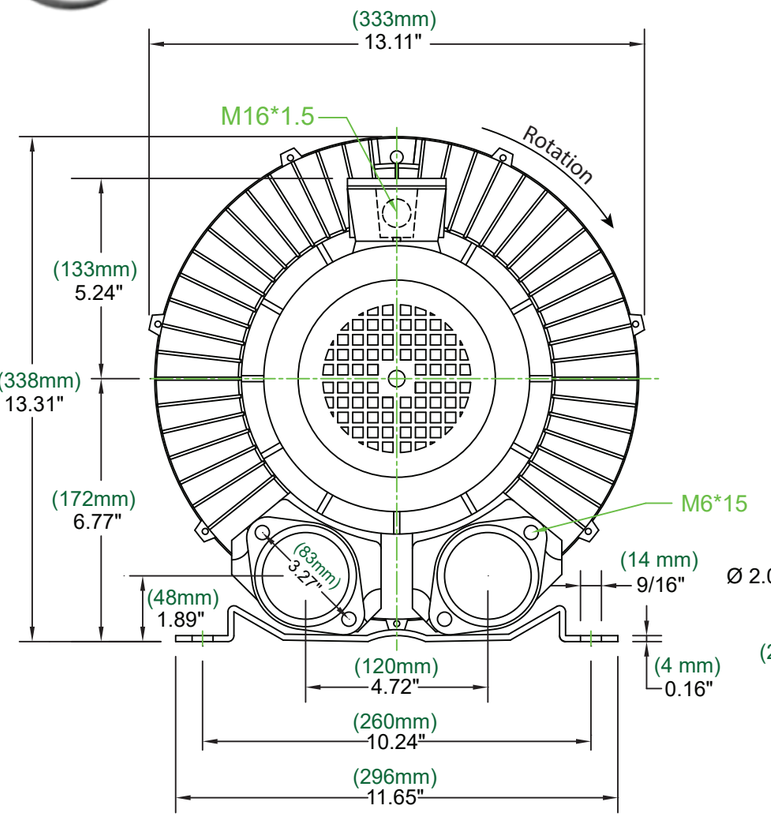
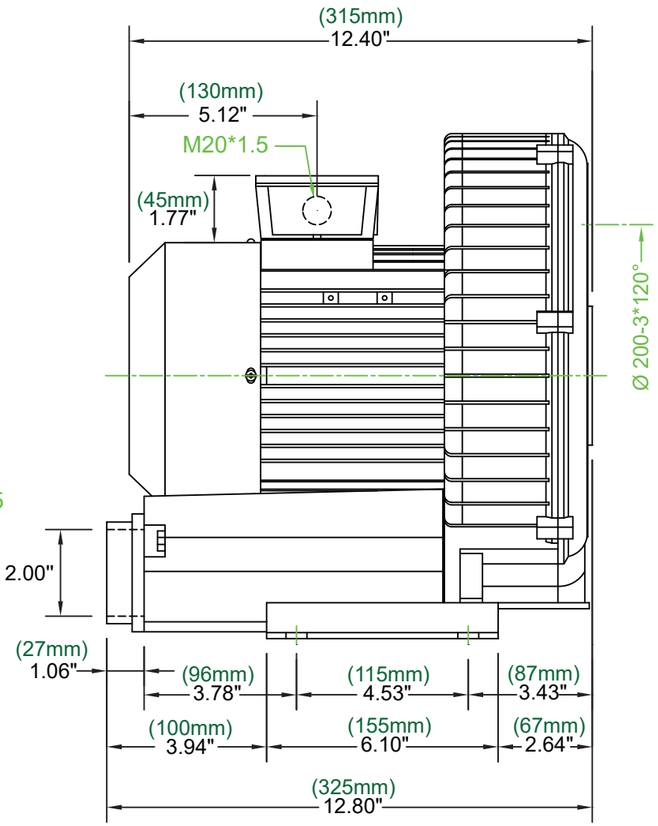
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-300	A15	60Hz	1.50	2.00	155	79	68	70	2.00"	220-275/380-480	6.0Δ/3.5Y	55
			50Hz	1.30	1.75	130	55	47	67		200-240/345-415	5.7Δ/3.3Y	

**Sound db measured at 3ft.

MODEL NO. : AB-300 SINGLE STAGE



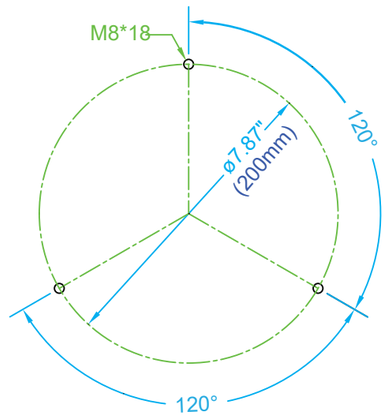


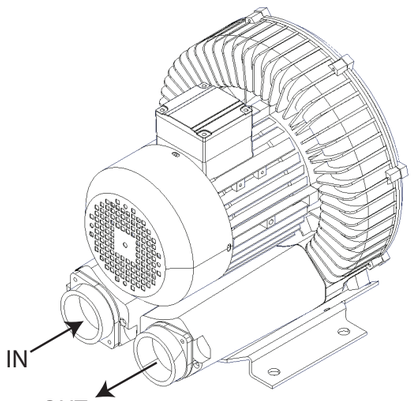
Key

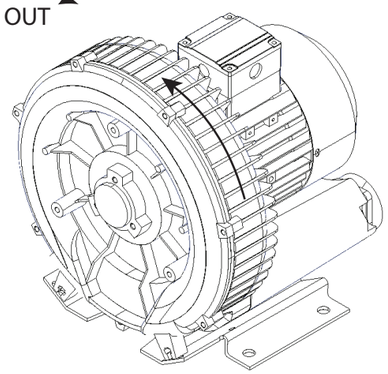
60Hz

50Hz

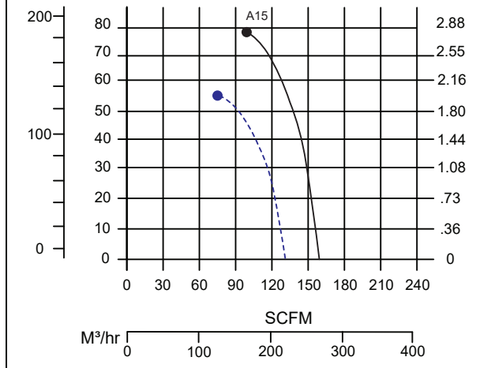
Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity



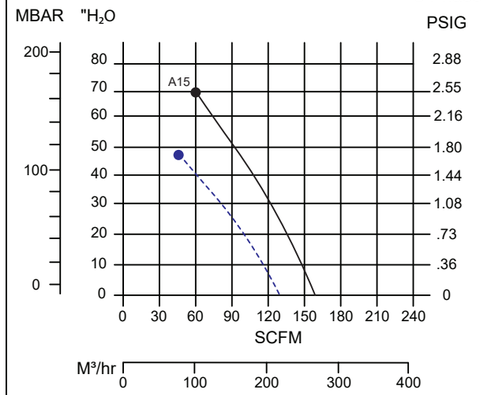




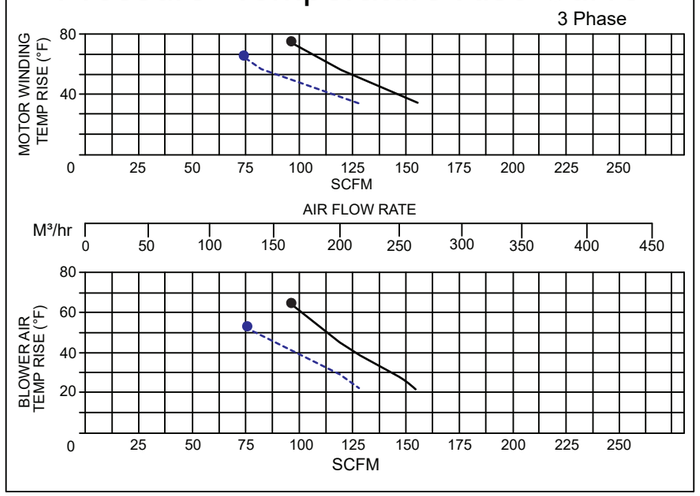
Pressure Performance Curve



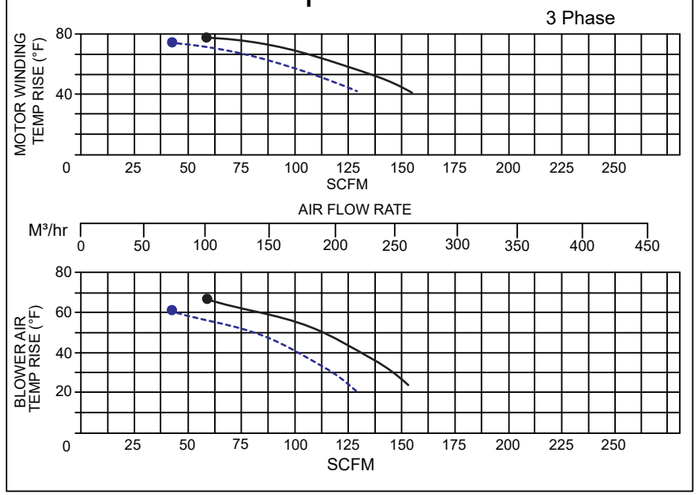
Vacuum Performance Curve



Pressure -Temperature Rise Curve



Vacuum -Temperature Rise Curve



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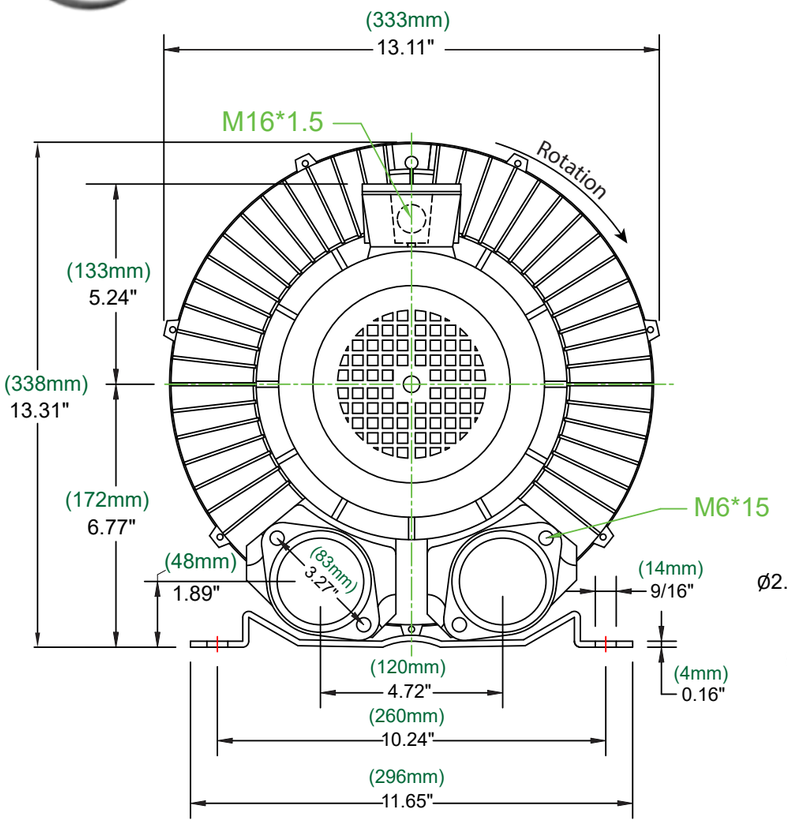
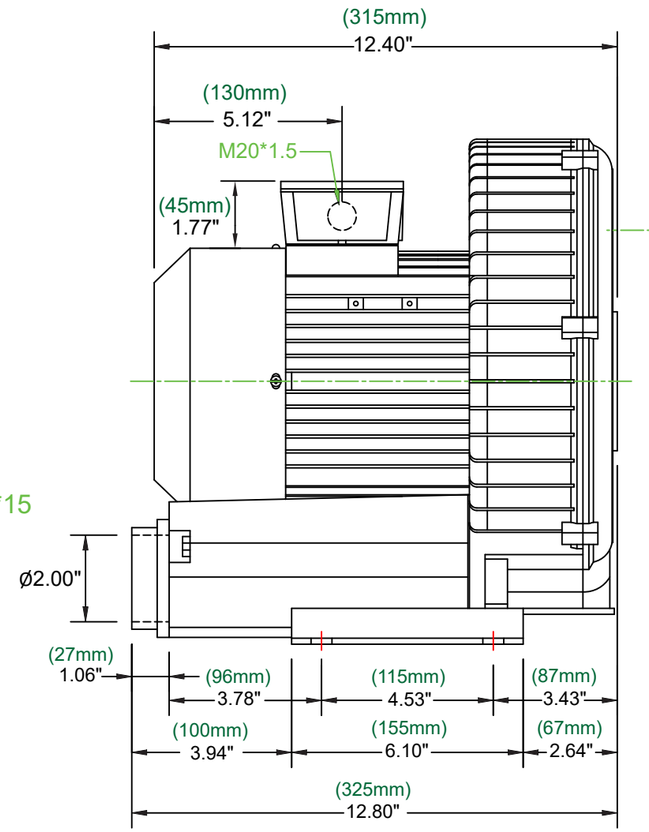
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
1	AB-401	A7	60Hz	2.20	3.00	155	110	79	75	2.00"	110-120/220-240	30.0Δ/15.0Y	58
			50Hz	1.82	2.50	130	76	55	70		100-120/200-240	24.9Δ/12.5Y	

**Sound db measured at 3 ft.

MODEL NO. : AB-401 SINGLE STAGE



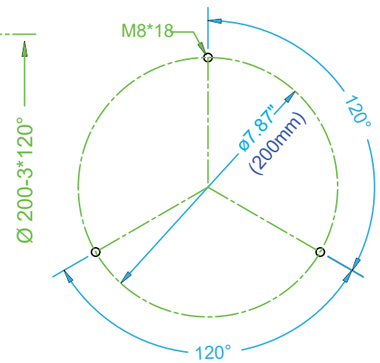


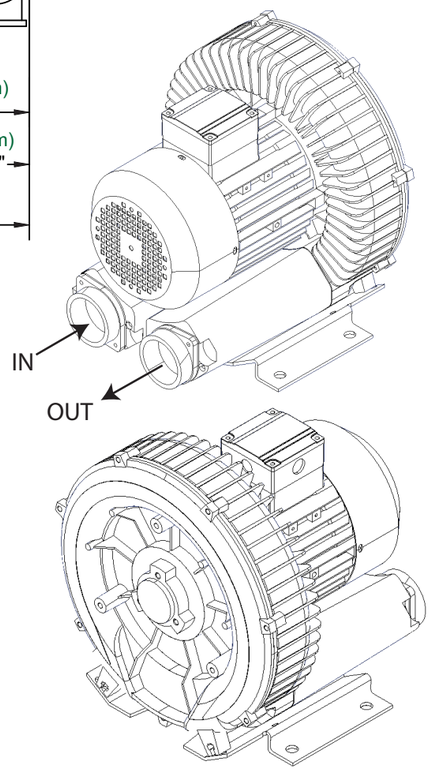
Key

60Hz

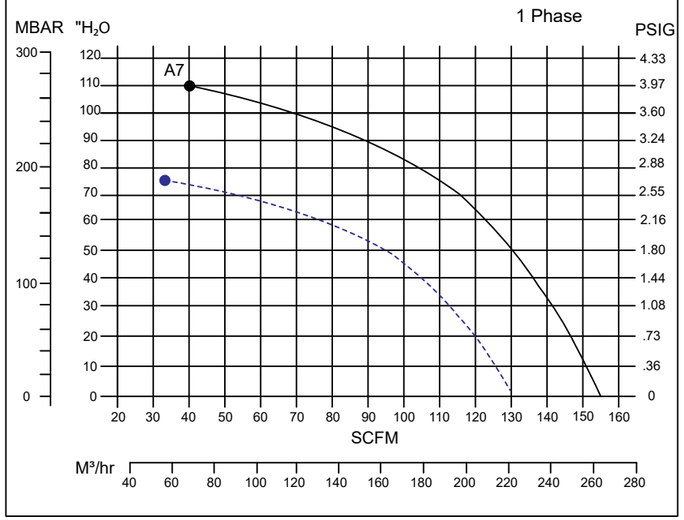
50Hz

Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity

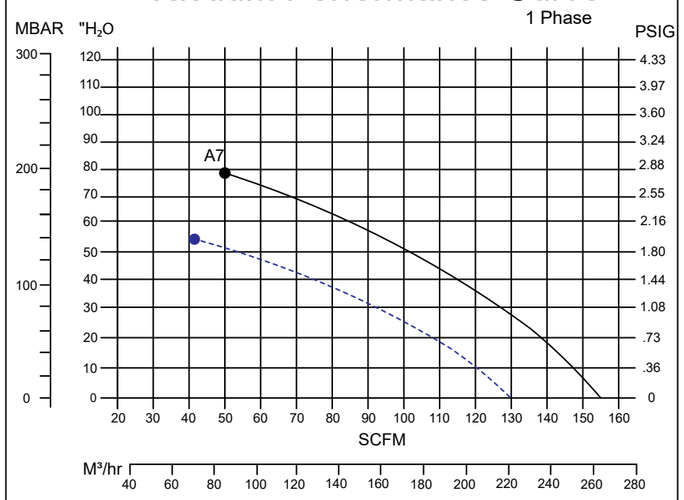




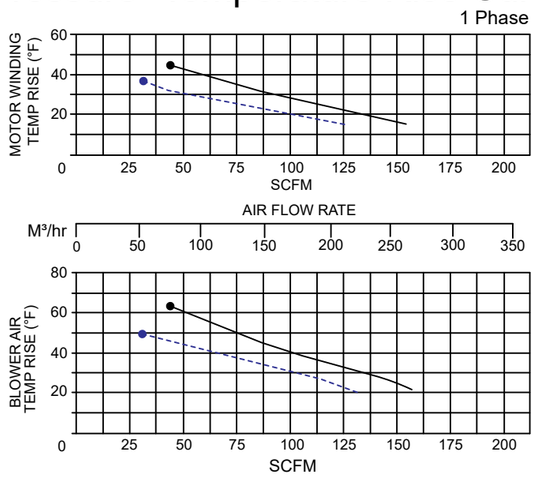
Pressure Performance Curve



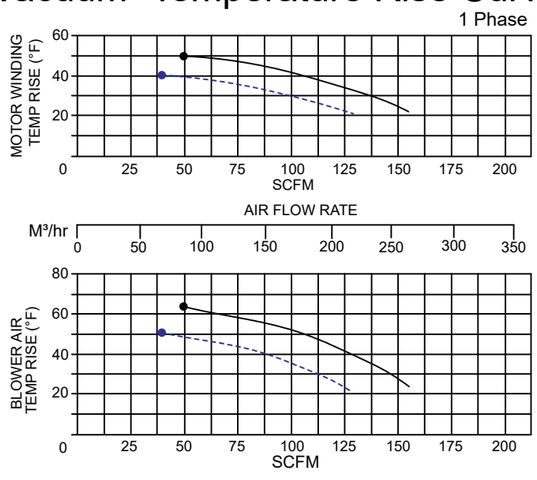
Vacuum Performance Curve



Pressure -Temperature Rise Curve



Vacuum -Temperature Rise Curve



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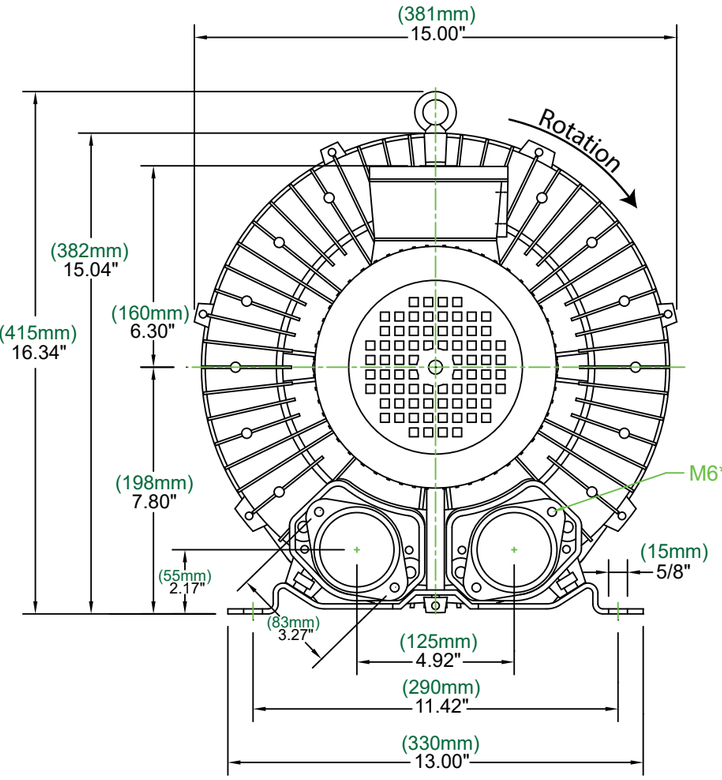
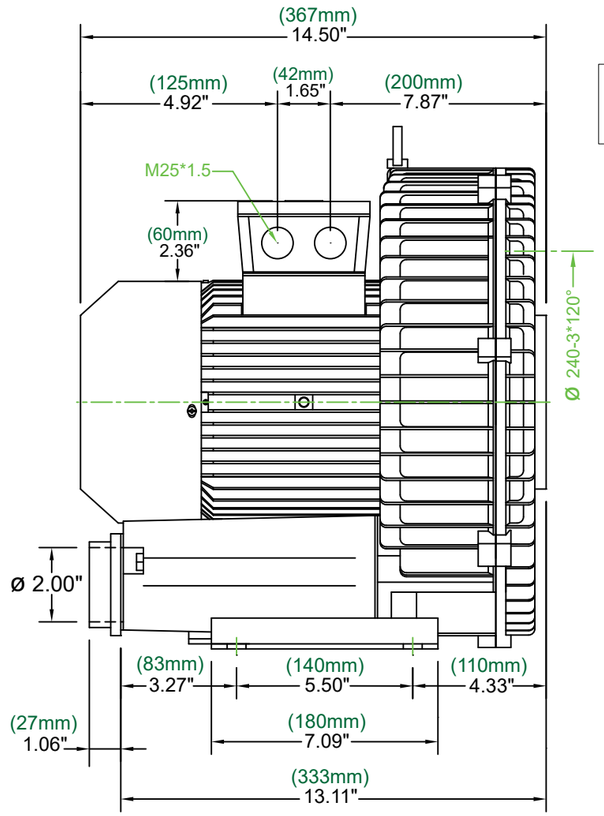
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-500	A17	60Hz	2.55	3.50	230	88	88	70	2.00"	220-275/380-480	10.7Δ/6.2Y	68
			50Hz	2.20	3.00	192	61	61	67		200-240/345-415	9.7Δ/5.6Y	

**Sound db measured at 3 ft.

MODEL NO. : AB-500 SINGLE STAGE



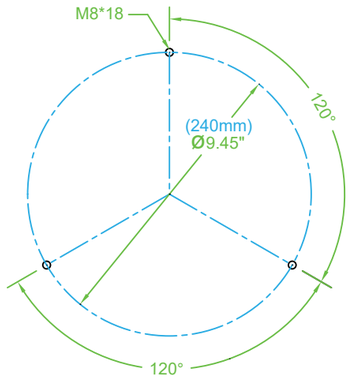


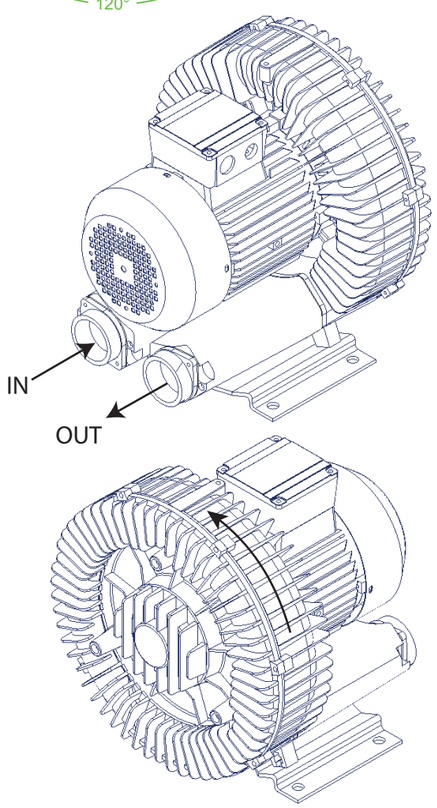
Key

60Hz

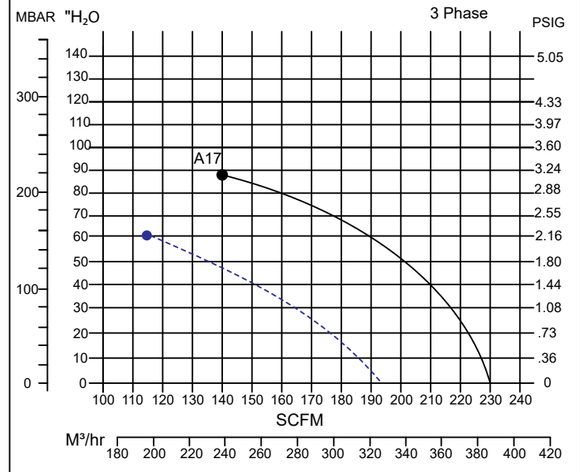
50Hz

Standard Conditions
-Sea Level (14.69 PSI)
-60°F (15°C)
-0% Relative Humidity

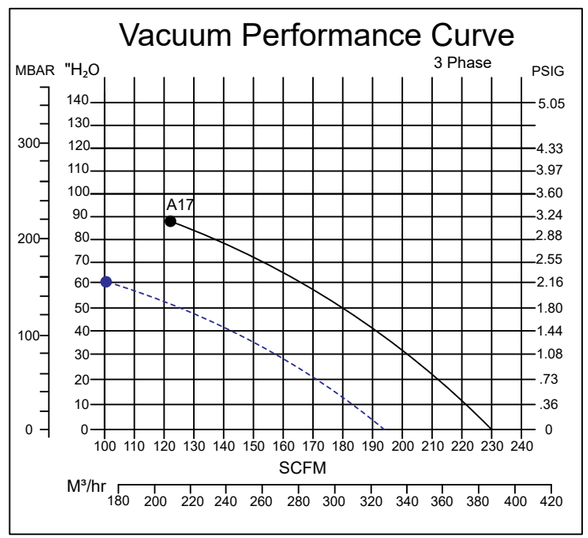




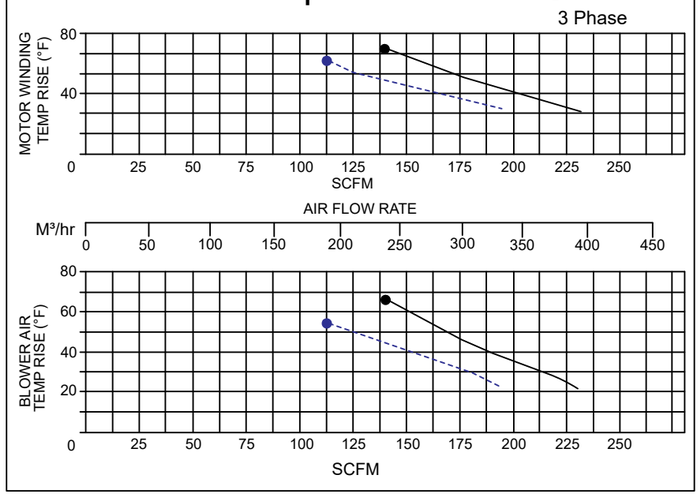
Pressure Performance Curve



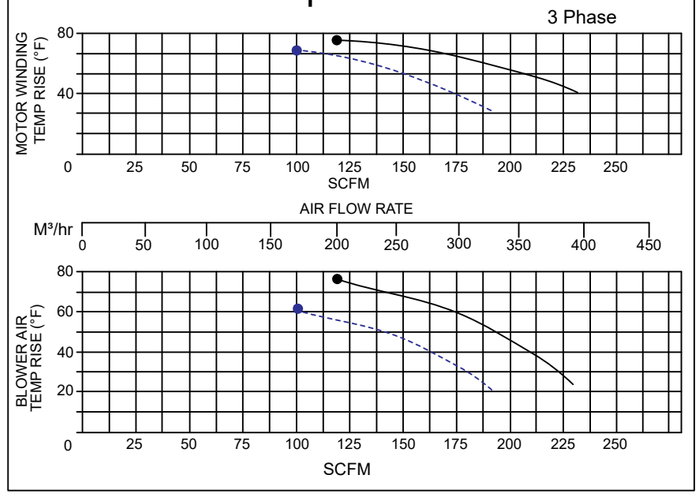
Vacuum Performance Curve



Pressure -Temperature Rise Curve



Vacuum -Temperature Rise Curve



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APPENDIX 10 - REMEDIAL SYSTEM OPTIMIZATION TABLE OF CONTENTS

REMEDIAL SYSTEM OPTIMIZATION FOR HIP ROCHDALE CLEANERS

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