JOHN V. SODERBERG, P.E.

PO Box 263
Stony Brook, NY 11790
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September 4, 2018

Caroline Eigenbrodt
Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway Albany, NY 12233-7020
Tel: (518) 402-9621

Re: Former Quick and Clean
Monitoring Frequency Reduction
SSDS System OMM

Dear Caroline,

A frequency reduction for monitoring and sampling of the SSDS system is being requested from monthly to quarterly. Monthly activities from this date (September 2018) forward will now be performed on a quarterly basis and will include all items discussed in section 7.1. of the ISMP. The remaining monthly requirement is inspection of the exhaust stack integrity every 30 days for which the results of the inspection will be included in the monthly progress reports (MPR) for the site. An exhaust stack inspection form will be filed on a monthly basis and include the following items: visual inspection of the integrity of the exhaust stack; guide wires still intact; photo log of stack in place.

Please refer to the attached stack integrity inspection form (next page) to be completed monthly and included with the MPR for the site.

Sincerely,

John V. Soderberg P.E

cc Phil Shapiro (Client)
Walter Berninger (BEI)
Justin Halpin (BEI)
Jacquelyn Nealon (NYSDOH)

Visual Inspection Form (monthly)	
Location: 380 Rockaway Turnpike, Cedarhurst, NY - Former Quick & Clean	
Inspector Name: Time IN:	Date: Time OUT:
Weather:	
Any evidence of system tampering, vandalism or damage? If yes, ALERT PROJECT MANAGER and note findings:	
Any evidence of system tampering, vandalism or damage to the exhaust stack? If yes, ALERT PROJECT MANAGER and note findings:	
Inspection of all electrical system components (guide wire still intact)? If no, ALERT PROJECT MANAGER	
Attached photo of VES Stack? System Shutdown Warning Light On or Off? If off please explain reason for shutdown	

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January 13, 2017

Caroline Eigenbrodt
Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway Albany, NY 12233-7020
Tel: (518) 402-9621

Re: Former Quick and Clean Cleaners (Site: 130198)
Response to Comments (RTC)
revised Interim Site Management Plan (ISMP)

This correspondence is provided to address the comment letter dated December 14, 2016 received from the New York State Department of Environmental Conservation, Division of Environmental Remediation (NYSDEC DER) relative to the ISMP dated October 2016. I repeat each comment issued by the DEC and provide a response accordingly.

Comment 1: Section 4.0 states that monitoring, modification or sampling changes require DEC approval. Please revise this to state that changes will require New York State approval. This change should be made consistently throughout the ISMP.

Response: Section 4.0 and throughout the document has been revised to state that changes will require New York State approval.

Comment 2: Section 4.3 - Post Remediation Media Monitoring and Sampling the post remediation sampling must be in accordance with the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006) and all data must be reported in ug/m3. Detections for contaminants of concern must be at or below 0.25 ug/m3.

Response: Please see the revised section 4.3, which specifies the NYSDOH testing protocol and reporting requirements.

Comment 3: Section 5.1 - Include discussion of the individual(s) responsible for monitoring the SSDS in the SMP.

Response: A discussion is included in section 5.1 stating the individual(s) responsible for monitoring the SSDS under the ISMP. The report was also revised to state the shut-down warning light will be inspected.

Comment 4: Section 5.2.3 - Please describe in detail the procedure that will be used in the event an occupant of the building discovers the warning light to be off.

Response: Please see the revised section 5.2.3 stating that management of the building should contact the contractor, BEI immediately upon finding the system shutdown warning light off.

Comment 5: Section 6.1 discusses the potential vulnerabilities such as high winds and protection of the exhaust stack. Include a detailed discussion in how a stack collapse will be addressed.

Response: A detailed discussion of how a stack collapse would be addressed is included in section 6.1.

Sincerely,

John V. Soderberg

John V. Soderberg P.E

cc Phil Shapiro (Client)
Walter Berninger (BEI)
Justin Halpin (BEI)
Jacquelyn Nealon (NYSDOH)

FORMER QUICK AND CLEAN CLEANERS

Site # 130198

INTERIM SITE MANAGEMENT PLAN (ISMP)

PREPARED FOR:
380 ROCKAWAY TURNPIKE REALTY CORPORATION
36 LAWRENCE AVENUE
LAWRENCE, NEW YORK 11559

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

PREPARED BY:

JOHN V. SODERBERG P.E.
PO BOX 263
STONY BROOK, NEW YORK

January 2017

Professional Engineer Certification

DER-10 Section 1.5(b) 2

I, John V. Soderberg, P.E. , certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375] and that this Report (Interim 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) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

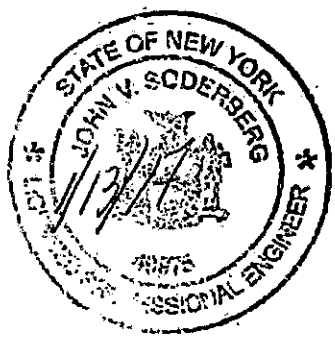
John V. Soderberg P.E

Signature:

License number: 049975

Date: January 13, 2017

Seal:



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LIST OF ACRONYMS

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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
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House 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
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
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

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 Interim Site Management Plan (ISMP):

Site Identification: # 130198 Former Quick and Clean Cleaners, 380 Rockaway Turnpike Cedarhurst, NY

Institutional Controls:	1. The property may be used for commercial use.
Engineering Controls:	1. Cover System 2. GP-501 vent fan
Inspections:	Operation, Maintenance and Monitoring (OMM) of sub-slab depressurization system (SSDS)-- monthly
Monitoring:	Monthly OMM of SSDS and quarterly sampling of four (4) monitoring wells (MW-1-4)
Maintenance:	as needed on SSDS
Reporting:	monthly reporting (SSDS) and quarterly reporting (monitoring wells)
Periodic Review	to be determined

Further description of the above requirements are provided in detail in the latter sections of this Interim Site Management Plan (ISMP).

1.0 INTRODUCTION

1.1 General

This Interim Site Management Plan (ISMP) is a required element of the remedial program for the Former Quick and Clean Cleaners located at 380 Rockaway Turnpike Cedarhurst, New York (hereinafter referred to as the "Site"). See Figure-1 for the site location. The Site is currently in the New York State (NYS) State Superfund Program (SSP) Site No. 130198, which is administered by the New York State Department of Environmental Conservation (NYSDEC).

The 380 Rockaway Turnpike Realty Corporation entered into an Order on Consent, with the NYSDEC to remediate the site. A figure showing the site location and boundaries of this site is provided in Figure-1.

This ISMP was prepared by John V. Soderberg P.E., on behalf of 380 Rockaway Turnpike Realty Corporation, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This ISMP serves as a manual to ensure proper operation and maintenance of the Interim Remedial Measure (IRM), including the engineering control (EC) associated with the sub-slab depressurization system (SSDS). The IRM was prepared to remediate soil vapor contamination found below the Site building's slab on grade foundation. The ISMP may only be revised with the approval of New York State.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of the remedial system, or other significant changes, if any, to the site conditions. The NYSDEC will provide a notice of any approved changes to the ISMP, and append these notices to the ISMP that is retained in its files.

1.3 Notifications

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

- 60-day notice of any proposed changes in site-use that are required under the terms of the Order on Consent.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any ground intrusive activity
- 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 the EC and any action to be taken to mitigate the damage or defect

- Verbal notice by noon the following day of any emergency (fire, storm, etc) that has the potential to reduce the effectiveness of the EC.

- Follow-up status reports on actions taken to respond to an emergency events

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

- 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 Consent Order and all approved work plans and reports, including this ISMP.

- 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.

The following table includes contact information for the above notification:

Notifications:

NAME	Contact Information
Caroline Eigenbrodt P.M, Environmental Engineer	1-518-402-9621 Caroline.Eigenbrodt@dec.ny.gov

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

This section provides a description of the location and layout of the site, remaining areas of contamination, remedial activities performed on-site history and the nature and extent of contamination discovered on and off-site.

2.1 Site Location and Description

The address for the subject property is 380 Rockaway Turnpike, Cedarhurst, NY. The subject property is designated as Section 39, Block 344, Lots 216 and 220 by the Nassau County Department of Assessment. The subject property is located within the Incorporated Village of Cedarhurst, Town of Hempstead, Nassau County, NY as shown in Figure-1. The lot has 123 feet of frontage on Rockaway Turnpike and is approximately 100 feet deep for a combined area of 0.318 acres (13,853 ft2). Figure-2. The subject site is developed with a 3,984ft^2 1-story masonry building, built in 1962 for commercial (retail) use.

2.2 Physical Setting

The elevation of the property ranges from approximately 10 to 13 feet above National Geodetic Vertical Datum (NGVD). The topography in the vicinity of the site generally slopes from southeast to northwest.

2.2.1 Land Use

The area surrounding the Site consists of retail "strip stores" and service stations along the east side of Rockaway Turnpike with single-family residential homes located adjacent to the east. Adjacent properties to the north include a former Cumberland Farms Service Station (CFSS) and an active Shell station. Adjacent properties to the south include a Sunoco, Getty and Gulf service stations. In total the subject property is flanked north and south by four (4) active and one (1) former service station. The west side of Rockaway Turnpike is characterized by larger shopping centers with industrial buildings/warehouses, major oil storage facilities (MOSF) and the Town of Hempstead incinerator plant adjacent to the west. Based on current zoning and the location of the property, it is likely to remain in commercial-retail use.

2.2.2 Geology/Hydrogeology

According to boring logs included in the SCR, subsurface materials at the site consist of medium to coarse sand and gravel for the upper 10 feet followed by fine to medium sand to 18 feet below grade. A 1 to 2 ft layer of silt and clay was reported at some locations. Soils deeper than 20 feet were not characterized although silt and clay zones were suspected at 34 feet to 52 feet based on limited groundwater recharge and clogging of the groundwater sampling tools with silt and clay. The depth to

groundwater was not measured at the site during the site characterization although it is reported in the drill logs at a depth of 11 feet below the surface.

The depth to groundwater beneath the site, as determined from field measurements, is between 5.0' and 10.0' feet below grade surface (bgs). Groundwater flow has been reported as ranging from north to southwest at the adjacent property to the north (former Cumberland Farms Service Station). Despite this wide range of anticipated flow the actual direction of groundwater flow is presumably to the west northwest (>270 degrees). This notion is based upon previously conducted investigation data indicating elevated contamination found northwest of the Site and/or source area. A groundwater flow survey has been conducted as part of the RIWP at the subject property and all indications lead to a west northwest flow direction. Please refer to Figure-3 for the groundwater contour map.

2.3 Investigation and Remedial History

The Site is the location of the former Quick and Clean Cleaners, an on-site dry-cleaning service which operated on the premises from at least 1980 to 1991. Investigations performed by the Nassau County Department of Health (NCDOH) in 1980 and 1991 found that tetrachloroethene (PCE) had been released at the Site in discharge water and/or condensate (vapors).

The environmental history of the subject lots was summarized in the SCR dated August 2010 as prepared by Environmental Assessment and Remediation (EAR) under contract to the NYSDEC. This summary consisted of a chronology of events based solely on NCDOH files. According to the SCR the NCDOH identified approximate PCE concentrations of 67,000 ppb in a sample of "industrial wastewater discharge" at the Site on 3/26/80. In 1991 NCDOH reported PCE concentrations of 1.3 million ug/kg in shallow soil (<2 ft) adjacent to a vapor discharge pipe in the rear of the building. This soil was successfully removed in 1992 by the operator under NCDOH oversight and the case was closed by NCDOH on 3/30/92. The Site was initially assigned a "P" (potential) listing on the Inactive Hazardous Waste Site Registry by the New York Department of Environmental Conservation (NYSDEC) in 2009. The NYSDEC conducted a site characterization in July-August 2001 (SCR 8/2010) and upgraded the registry listing to a Class 2 site in August 2011.

Chlorinated impacts tetrachloroethene (PCE), trichloroethene (TCE), 1, 2 dichloroethene (DCE) and vinyl chloride (VC) in groundwater were identified during the site characterization phase at on-site and off-site locations. PCE contamination extended to the northwest of the site and was discovered to a depth of approximately 50' below grade surface (bgs). Multiple transformation products were also discovered off-site including TCE, 1, 2 DCE and VC. The highest levels of contamination were found off-site along the western side of Rockaway Turnpike with PCE concentrations of 20,400 ppb at 30-32' and 4,620 ppb at 50-52'. Based upon the data generated during the site characterization phase recommendations were made that included: further vertical and horizontal delineation of chlorinated contamination, vertically on-site and laterally and vertically off-site.

A Remedial Investigation (RI) was performed in order to delineate the nature and extent of contamination on-site and off-site. A series of multi-level groundwater sampling locations were selected in order to define the vertical and lateral extent of contamination and to complete the conceptual site model (CSM). On-site sampling was conducted along the eastern property boundary (GW-3, 4 and 5) at multiple depths, but no significant concentrations were detected with the highest constituent 1,2 DCE detected at 87 ppb from 30-32'. GW-2 was collected off the southwest corner of the site building in order to define the west extent of the plume and GW-1 was sampled from the surface of the water table to 70-72' bgs in ten foot increments. Previous locations (EP-15 and EP-18) that were not fully defined during the site characterization were re-evaluated in order to delineate contamination vertically. Former site characterization locations EP-15 and EP-18 were sampled to a depth of 60' bgs and contamination was successfully delineated to acceptable levels. Contamination was also delineated horizontally, to the northwest of the site, where four (4) borings were conducted with multiple sampling depths. Theses samples, collected northwest of the Chase Bank, indicated that PCE contamination was detected at 53 ppb in the 20-30' range at the GW-7 location, but deeper sampling depths were all non-detect at the deeper depths. The findings from the RI stage were successful in defining the full nature and extent of contamination emanating from the site.

2.4 Remedial Action Objectives (RAO's)

Based upon contamination discovered on and off-site above regulatory standards for groundwater the following Generic Remedial Action Objectives (RAOs) will apply during the remedial phase in order to protect the environment and the interest of the public's health:

- prevent contact with, or inhalation of volatiles, from contaminated groundwater within the on-site building by maintaining a negative pressure below the building slab

Based upon the potential for Soil Vapor Intrusion (SVI) due to groundwater contamination present on and off-site, the following RAOs apply for the protection of the environment and the interest of the public's
health:

- mitigate potential impacts to on-site workers and customers of the Urgent Care Facility from existing, or the potential for, soil vapor intrusion within the facility

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

The following section discusses the EC selected during the Interim Remedial Measure (IRM).

3.1 General

Engineering Controls (ECs) are required to protect human health and the environment. This section describes the procedures for the implementation and management of the EC selected as the IRM.

3.2 Institutional Controls

No ICs have been selected for the Site but an Environmental Easement may include, but not be limited to the following : a deed restriction to maintain the site cap/cover and prevent removal of the concrete slab on grade foundation. Prevention of on-site groundwater for potable use without necessary treatment.

3.3 Engineering Control

The current EC at the site is a GP-501 soil vapor vent fan used to continually provide sub-slab depressurization installed as part of the IRM established at the site. The sub-slab depressurization system (SSDS) was installed during September of 2016. The active SSDS will not be discontinued unless prior written approval is granted by New York State. In the event that monitoring data indicates that the SSDS may no longer be required, a proposal to discontinue the SSDS will be submitted by the remedial party to New York State.

3.4 Remedy Design

Sub-slab vapor contamination discovered under the building is currently being removed via active sub-slab depressurization (SSDS). On September 10 and 11, 2015 two inch (2") diameter PVC screened piping was installed at two (2) different locations within the building. Drain entry points have been utilized exiting the building in order to route SSDS piping to the exterior of the building and the roof. Two (2) five (5') lengths of screened piping, wrapped in filter fabric were installed approximately 1' below the slab in order to remove sub-slab vapors from underneath the building's foundation. Solid PVC riser pipe finishes the system to grade and continues to the roof where vapors are exhausted into the atmosphere. Please refer to Figure-4 (engineer as-built) which portrays the layout of the system. The engineering control (E.C) associated with the system is a small powered GP 501 vacuum/blower specifically designed for sub-slab vapor removal. The E.C specs have been attached as Appendix-A to this report. The blower does not need an enclosure due to its relatively quiet operation and minimal vibration. The blower motor was wired with a 110v grounded plug and mounted on the roof top. The mounting location of the blower was based upon the piping scheme and is fixed onto the roof, with the exhaust stack extending to 10' above the nearest neighboring roof line. A system shut-down warning has been installed to the motor wiring to indicate its "on" operation. If the light is ever discovered to be "off" the site staff will contact the project manager in order to diagnose the issue. Please see Appendix-B for photos of the roof-top construction.

4.0 MONITORING AND SAMPLING

The monitoring and sampling discussed in this section provides information for maintaining the SSDS effectiveness and monitoring procedures set forth in the approved IRM.

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 New York State. Details regarding the sampling procedures, analytical methods, etc. for all samples collected as part of the interim site management for the site are discussed herein.

The monitoring and sampling describes the methods to be used for:

- Sampling and analysis of all appropriate media (soil vapor contamination)
- Assessing compliance with applicable NYSDOH Guidance for Evaluating Soil Vapor Intrusion (October 2006).
- 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, monitoring and sampling information is provided on:

- Sampling locations, protocol and frequency
- Analytical sampling
- Inspection and maintenance requirements

4.2 Treatment System Monitoring and Sampling

The following section discusses the remedial system monitoring, and sampling parameters.

4.2.1 Remedial System Monitoring

Monitoring of soil vapor contamination will be performed on a monthly basis as per the NYSDEC request to increase the frequency from quarterly to monthly sampling as per the April 2016 comment letter on the Construction Completion Report (CCR). Modification to the frequency or sampling requirements will require approval from New York State. A detailed description of the SSDS monitoring is discussed in section 5.0.

4.2.2 Remedial System Sampling

Remedial system sampling includes stack emission sampling conducted on a monthly basis in order to assure continuous removal of soil vapor contamination and to confirm the EC is maintaining a negative pressure below the building slab. More information on the SSDS sampling is discussed in section 5.0.

4.3 Post-Remediation Media Monitoring and Sampling

Post remediation sampling will include the collection of a sub-slab vapor sample in conjunction with a confirmatory indoor air sample at the point of which the remediation system is no longer needed.

4.3.1 Soil Vapor Intrusion Sampling

Sub-slab vapor sampling will be conducted at the point at which the operation of the SSDS is no longer needed. Samples will be collected from previously installed permanent vapor probes constructed with stainless steel vapor screens. The implants have been sealed at the surface with a non-VOC containing cement and sealed at the surface. One to three volumes of air will be purged prior to collecting the samples to ensure samples collected are representative. Samples will be collected with the use of a 6.0 liter summa canister, affixed with an 8 hour flow controller capable of a less than 200 ml per minute flow rate. Samples will be analyzed by EPA method TO-15 and sent under strict chain of custody to a New York State ELAP certified lab. All data will be reported in micrograms per cubic meter of air or $\mu g/m^3$. Contaminants of concern will be analyzed with a detection limit at or below 0.25 $\mu g/m^3$. The results of this testing will largely determine if the SSDS system may be fully decommissioned, which will determined by New York State.

5.0 OPERATION MONITORING AND MAINTENANCE (OMM)

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. Personnel responsible for monitoring the SSDS under the SMP will be Berninger Environmental (BEI) under the direction of JVS.

This Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the site to operate and maintain the SSDS.

- Will be updated periodically to reflect changes in the site conditions or the manner in which the SSDS are operated and maintained.

Further detail is discussed in the following section regarding the Operation and Maintenance of the SSDS.

5.2 Operation Monitoring and Maintenance (OMM) of the SSDS

The following sections provide a description of the OMM of the SSDS. Cut-sheets and as -built drawings for the system are provided in Appendix-A and Figure-4 (as-built).

5.2.1 System Start-up and Testing

Prior to starting the SSDS system it is important to check over the entire system. See below for the inspection checklist:

- Inspect all electrical connections
- Inspect all visible plumbing aspects of system
- Stack inspection and rooftop piping
- EC (GP-501 vent fan) inspection
- Pressure field extension testing (PFE)
- Sampling of exhaust stack
- Air flow, pressure and vacuum readings

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 SSDS and the system must be re-started.

5.2.2 Routine System Operation and Maintenance

Inspections and operations of the system are to be performed on a monthly basis and include the following:

- Air flow readings at each sampling port
- Inspection of exhaust stack and support wiring
- PID readings on each of the two system legs (north and south) and exhaust
- communication testing via vacuum readings on permanent vapor point wells (PV-1, PV-2, PV-3, PV-4)
- exhaust stack sampling via EPA method 8260C (VOCs)
- Inspection of all sealed infiltration points

The system is designed with two (2) separate piping legs (north and south) that are manifolded to the roof-top and connected to the EC (GP-501 vent fan). The exhaust stack is routed directly above the vent fan to a height of ten (10') above the neighboring roofline. Sampling ports are affixed on each system leg and the exhaust

stack in order to provide access for air flow readings and PID readings. The on-off switch for the system is mounted directly adjacent to the blower and will be inspected as part of monthly sampling. The system shutdown warning light is affixed next to the circuit panel at the southwest corner of the building in a visible location.

Exhaust stack sampling can be achieved by connecting a 3/8" piece of poly or silicon tubing to the quarter turn valve connected affixed to the exhaust stack.

5.2.3 Non-routine Operation and Maintenance

The system shutdown warning light will be periodically inspected for failure. The light could also be down due to the fact that the bulb has expired. Inspection of this will be conducted as part of the monthly maintenance. In the event that the system shutdown warning light is found to be off, **the building occupant should immediately report this issue to upper management. The management team should then immediately contact BEI, the contractor, in order to inspect and resolve the issue.**

As necessary, preventive maintenance (e.g., replacing vent fans), repairs and/or adjustments will be made to the system to ensure its continued effectiveness at mitigating exposures related to soil vapor intrusion. The need for preventive maintenance will depend upon the life expectancy and warranty for the specific part, as well as visual observations over time. The need for repairs and/or adjustments will depend upon the results of a specific activity compared to that obtained when system operations were initiated. If significant changes are made to the system or when the systems performance is unacceptable, the system may need to be redesigned and restarted.

5.2.4 System Monitoring Devices and Alarms

The system is equipped with a system shutdown warning light that will be inspected on a monthly basis. The shutdown light is located next to the circuit panel at the south-west corner of the building.

5.2.5 Sealing of Infiltration Points

The interior area(s) identified as requiring mitigation were further inspected as to the integrity and condition of the poured concrete floor and any utility or other perforation or penetrations into the sub-grade surface.

As part of the IRM activities, all cracks and "sealable" penetrations were sealed via the utilization of hydraulic cement. All joints, cracks and other penetrations of slabs, floor assemblies and foundation walls below or in contact with the ground surface were sealed with materials that prevent air leakage. All areas sealed were completed prior to the pilot test or any other testing performed at the property in order to limit

the generation of misleading site data. During routine inspections personnel will attempt to ensure all infiltration points are remaining sealed. Many of the original infiltration points (crack and perforation in the slab) have been covered due to renovation activities fro the current site use.

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.

Potential vulnerabilities to the sites remediation system include:

- damage to the blower due to storm activity and/or high wind
- damage to the exhaust stack due to storm activity and/or high wind

In the event the exhaust stack is found collapsed, BEI should be immediately notified of this issue. BEI will then assess the issue with the collapse, determine the cause and repair the stack with added reinforcement. This will involve inspecting the old stack for damage, resetting the stack or a new length of pipe in position and assuring that the proper reinforcement is applied to the stack. Reinforcements may include but not be limited to: added guide wires to add stabilization and durability to the stack positioning.

Photo documentation of this vulnerable area is depicted in Appendix-B.

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 interim site management phase.

The green remediation evaluation during the ISMP phase is limited to energy usage from the operation of the EC. The EC operates on 110 volt electricity capable of consuming up to 140 watts per hour or 3.6 kilowatts over a 24 hour period (0.140 kWh). When calculated annually, considering the EC is operating continuously 24/7, this energy consumption is minimal.

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-C. These forms are subject to NYSDEC revision.

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 listed in the table below:

Task/Report	Reporting Frequency
SSDS OMM Inspection Report	Monthly
Monthly Progress Reports	Monthly

* The frequency of events will be conducted as specified until otherwise approved by New York State.

All OMM inspection reports will include, at a minimum:

- Date of event or reporting period
- Name, company and position of person performing the inspection activities
- Description of activities performed
- Location of any problems or incidents noted
- Types of samples collected
- Figure with sampling locations
- Copies of field inspection log
- Copies of all lab data
- Any system modifications

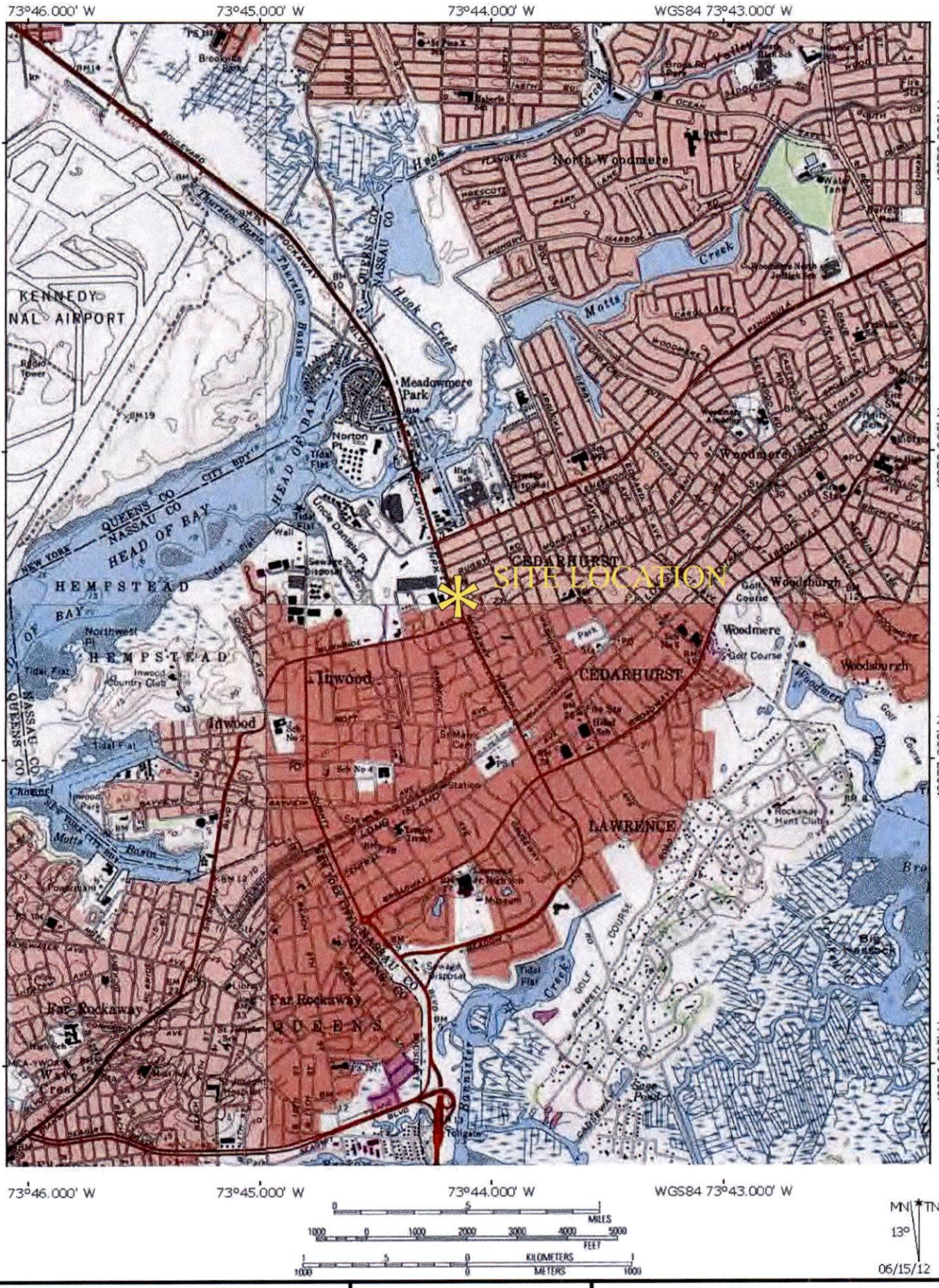
Please refer to Appendix-D for a complete monthly OMM report as issued to the NYSEC.

7.2 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, a Corrective Measures Work

Plan will be submitted to the NYSDEC 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.

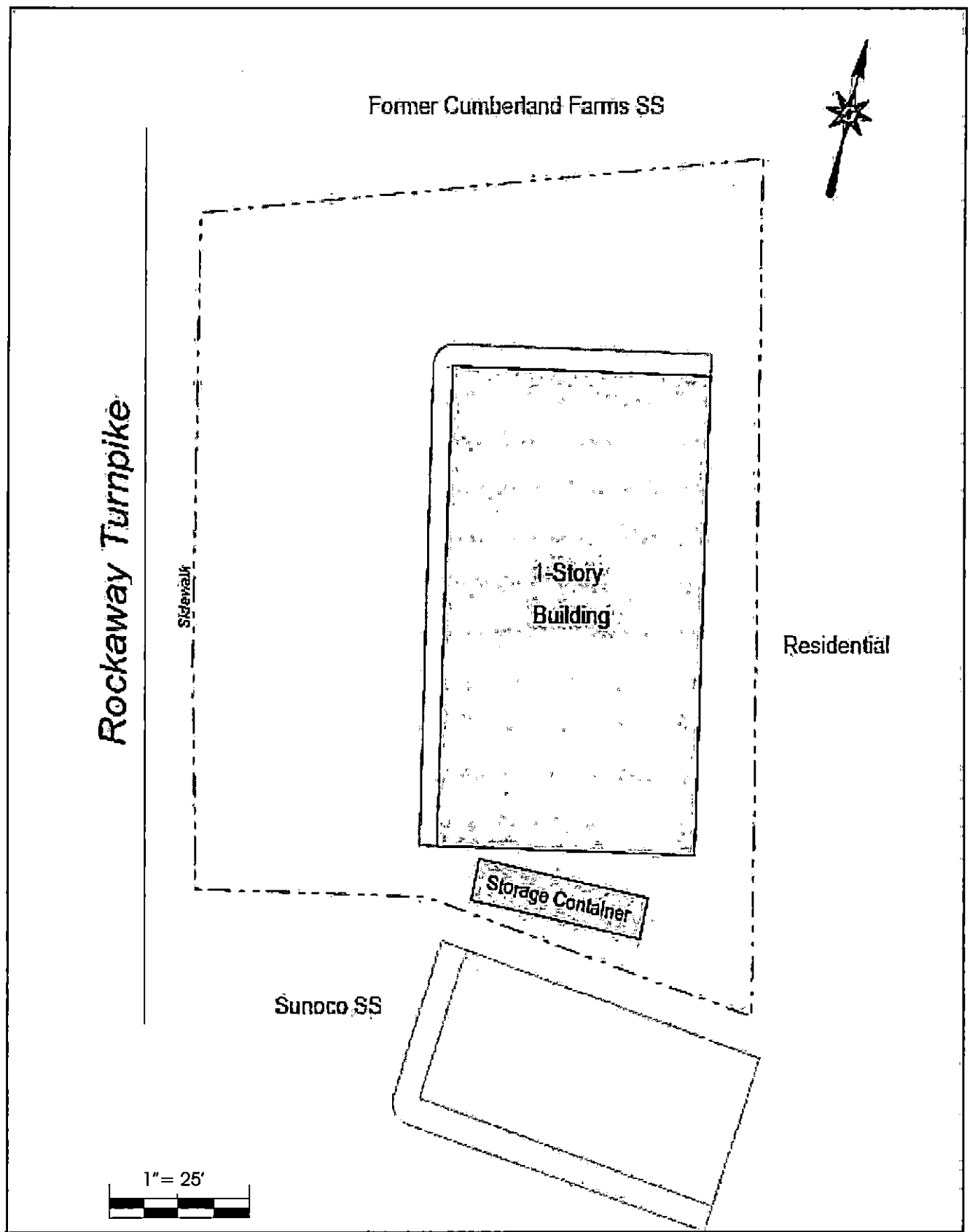
FIGURES



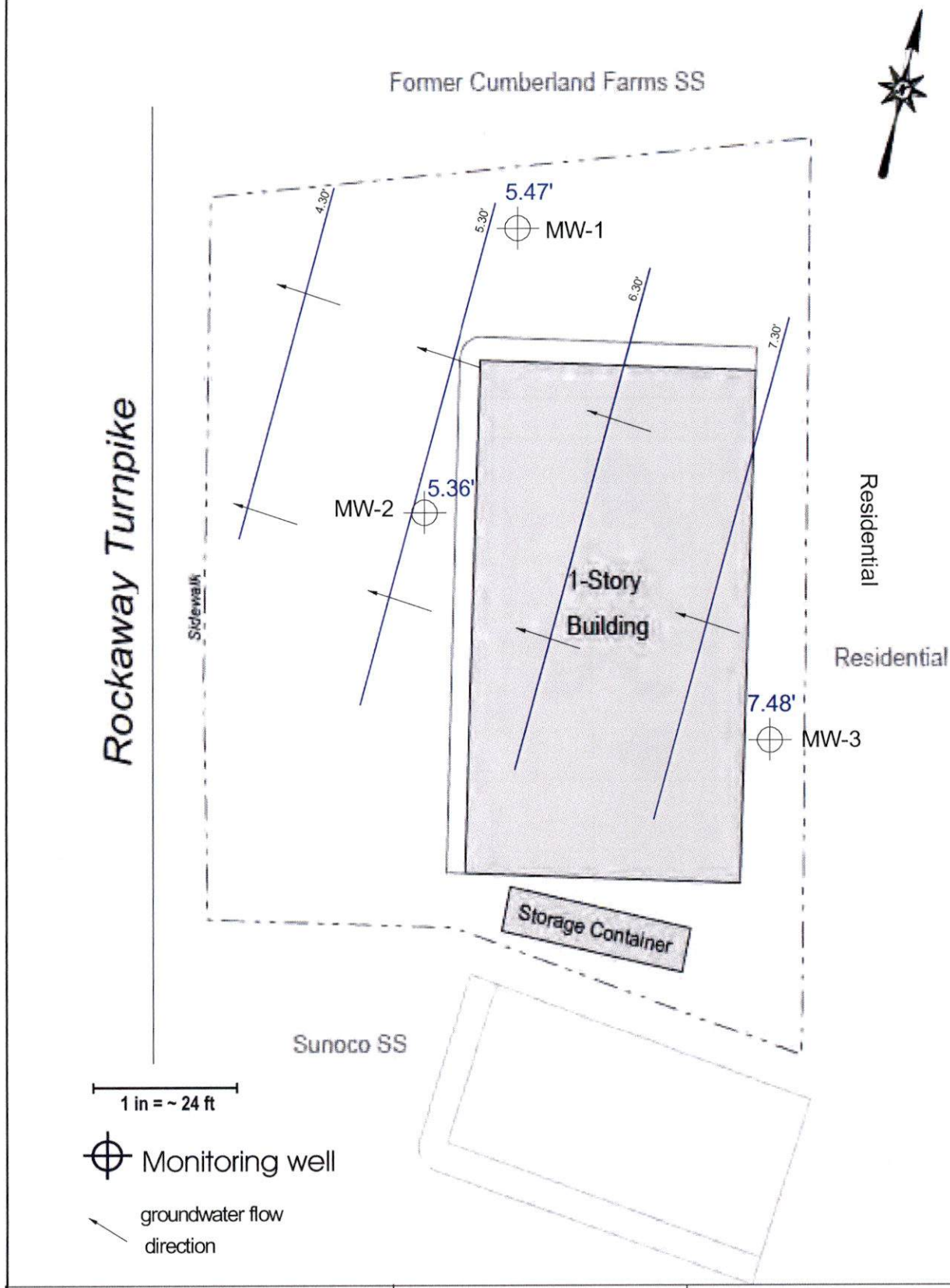
Former Quick and Clean Cleaners
380 Rockaway Turnpike
Cedarhurst, New York

Figure-1
Site Location

John V. Soderberg P.E
PO Box 263
Stony Brook, New York

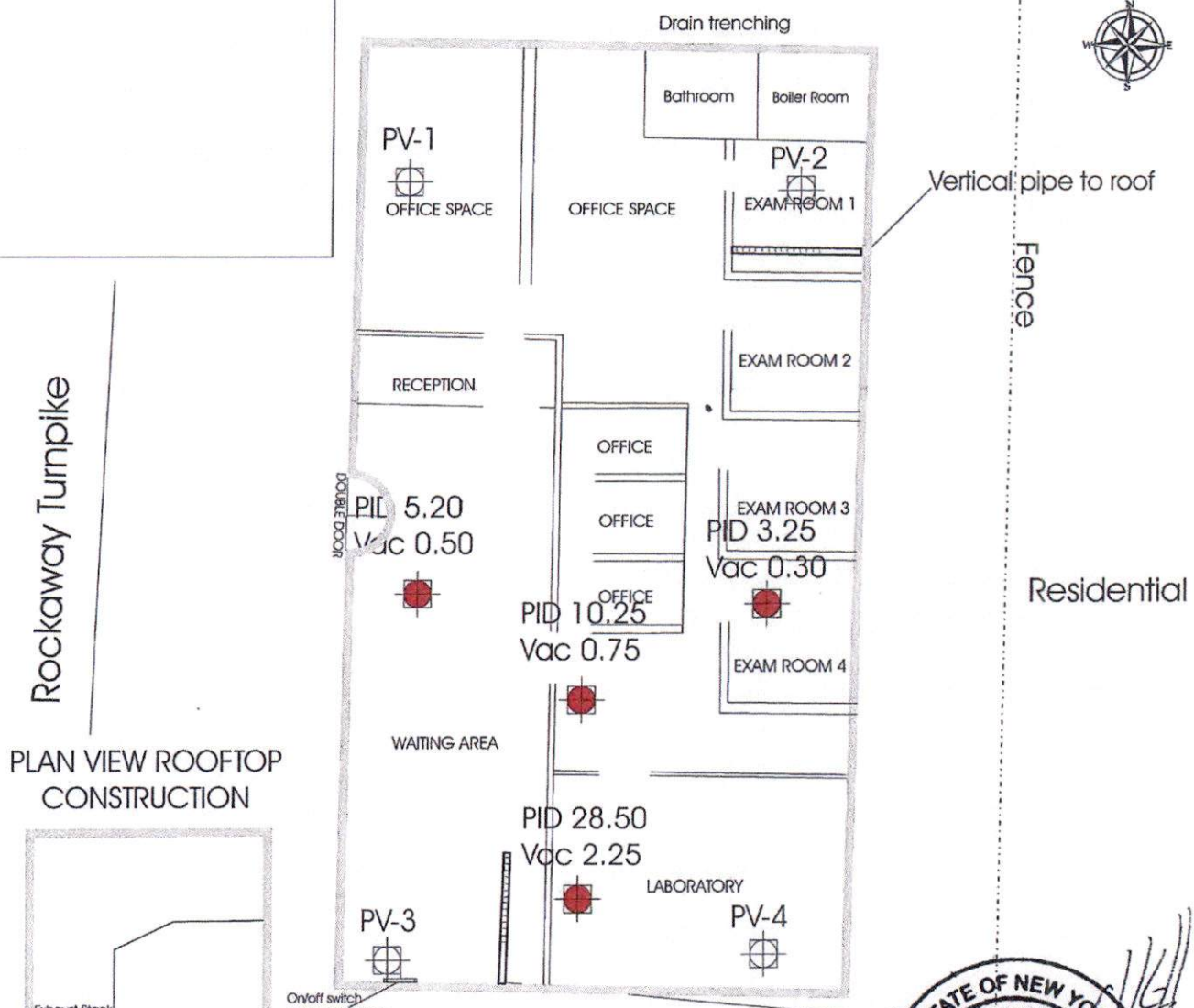


Former Quick and Clean Cleaners **380 Rockaway Turnpike** **Cedarhurst, New York**	Figure-2 Site Map	**John V. Soderberg P.E** **PO Box 263** **Stony Brook, New York**



Former Quick and Clean Cleaners **380 Rockaway Turnpike** **Cedarhurst, New York**	Figure-3 Groundwater Flow	John V. Soderberg P.E PO Box 263 Stony Brook, NY 11790

P.E Certification



Well#	PID (PPM)	Vacuum (In./H2O)
PV-1	0.35	0.50
PV-2	2.40	0.25
PV-3	48.1	2.50
PV-4	2.40	0.25

STATE OF NEW YORK JOHN V. SODERBERG LICENSED PROFESSIONAL ENGINEER 49975

URGENT-MD
Former Quick and Clean Cleaners
380 Rockaway Turnpike
Cedarhurst, New York

Figure-4
Pressure Field
Extension Test

John V. Soderberg P.E
PO Box 263
Stony Brook, NY

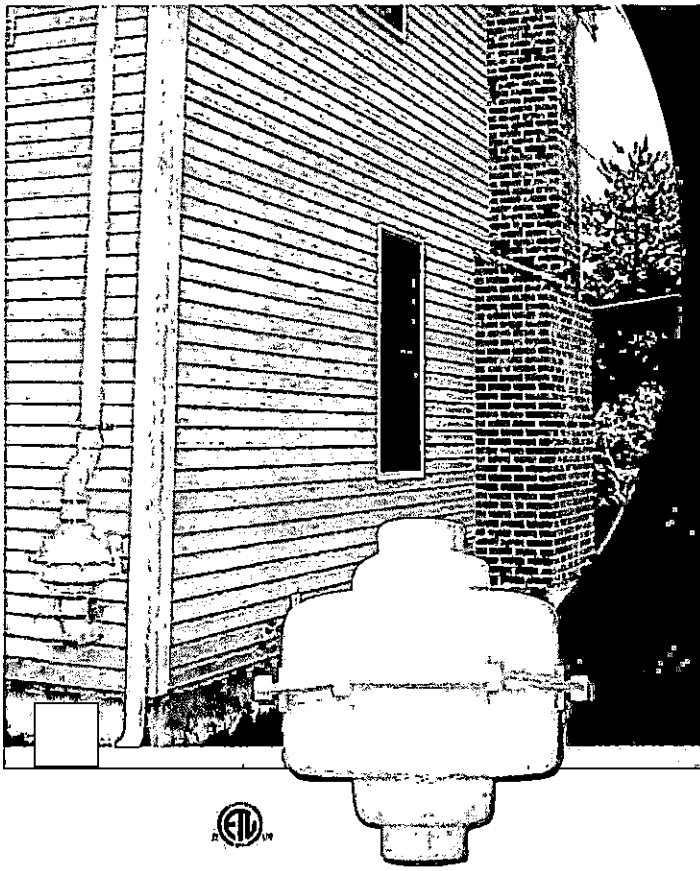
APPENDICES

APPENDIX-A

GP-501 Vacuum Specifications

RadonAway™
The World's Leading Radon Fan Manufacturer

GP Series



Radon Mitigation Fans

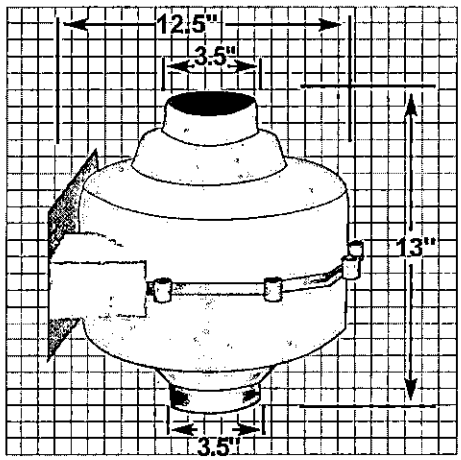
All RadonAway fans are specifically designed for radon mitigation. GP Series Fans provide a wide range of performance that makes them ideal for most sub-slab radon mitigation systems.

Features:

- Five-year hassle-free warranty
- Mounts on duct pipe or with integral flange
- 3.5" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- Meets all electrical code requirements
- Thermally protected
- Rated for commercial and residential use.

Model	Watts	Max. Pressure "WC	Typical CFM vs. Static Pressure WC 1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	40-60	2.0	82	58	5	-	-	-	-
GP301	55-90	2.6	92	77	45	10	-	-	-
GP401	60-110	3.4	93	82	60	40	15	-	-
GP501	70-140	4.2	95	87	80	70	57	30	10

Choice of model is dependent on building characteristics including sub-slab materials and should be made by a radon professional.



For Further Information Contact:

03/08
P/N 02002

APPENDIX-B

SSDS Rooftop Construction

SSDS Roof Construction

Rooftop Construction cont...

APPENDIX-C

Site Management Inspection Form

John V. Soderberg P.E

SSDS System Monitor and Maintenance

Site Name: Quick and Clean	Site# 130198
Address: 380 Rockaway Trpk Cedarhurst, NY	Monthly testing

Remediation System Present? y
Type of System?
Sub-slab Depressurization System
SSDS
Sampling Date:

Air Flow Readings	
Pressure : psi	
Pre motor vac : "H2O	

Sampling Instructions: Volatiles via 8260C

Site Data

Wells	CFM/Vac	PID ppm
North Leg		
South Leg		
Exhaust		
PV-1		
PV-2		
PV-3		
PV-4		

Site Inspection:

Was System Shutdown Warning Light On___ Off___

If Off Why?

Any Visible Signs Of Leaks?

Indicate Any Sampling Procedures:

PID Readings, MiniRae 2000, in ppm

stack sample via 8260C

Sampled by:

APPENDIX-D

SSDS OMM Monthly Report

JOHN V. SODERBERG, P.E.

PO Box 263
Stony Brook, NY 11790
Phone 631-751-6458
Fax 631-675-1185
Cell 631 834-9537
Email jvsode@hotmail.com

September 9, 2016

Caroline Eigenbrodt
Environmental Engineer-- Region 4
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway Albany, NY 12233-7020
Tel: (518) 402-9621

Re: Monthly Monitoring for August 2016
Former Quick and Clean Cleaners
380 Rockaway Turnpike Cedarhurst, NY
Site No.: 130198

On August 15, 2016 personnel were at the above mentioned site for monthly monitoring and maintenance operations (OM&M). Personnel mobilized to the site listed above to gauge PID readings on the north and south legs of the sub-slab depressurization system (SSDS). PID readings were also taken at each vapor point location PV-1-4. Attached to this report are the following:

* Field Maintenance Logs (Attachment-A)
* Tables (Table-1 and Table-2)
* Site Map/As-Built (Figure-1 and 2)
* Lab Data (Attachment-B)

While on-site, personnel recorded PID readings and air flow concentrations on all sampling ports associated with the system. All system components were checked for leaks, cracks and electrical components were also inspected. An effluent stack emission sample was collected via EPA method 8260C.

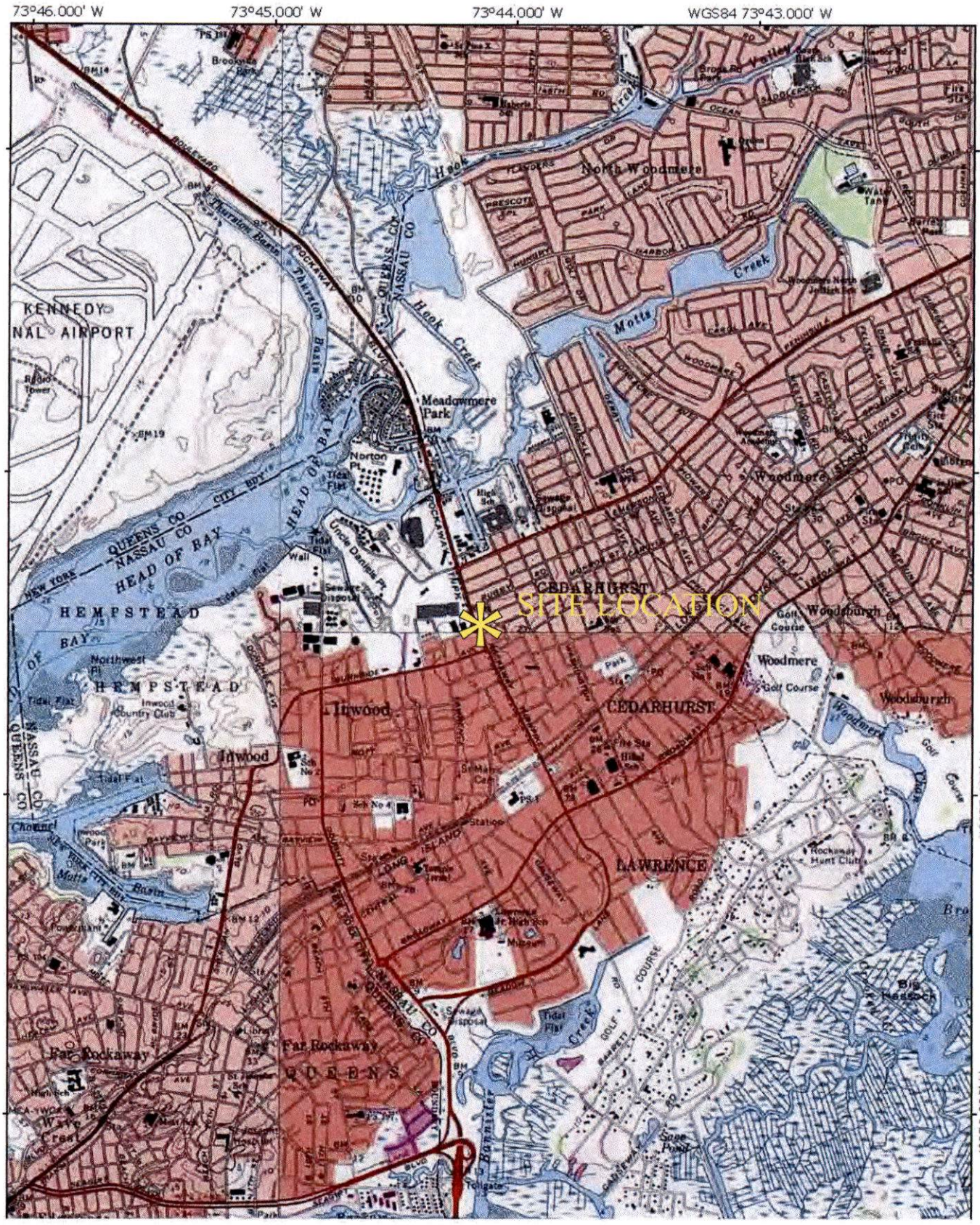
*The next monitoring event is scheduled for September 2016.

*The next monthly OM&M report is due October 10, 2016 and will be forwarded to NYSDEC to the attention of Caroline Eigenbrodt, Environmental Engineer.

Sincerely,

John V. Soderberg
John V. Soderberg P.E.

cc.: Lester Cohen
Walter Berninger (BEI)
Justin Halpin (BEI)
Justin Deming (NYSDOH)
Albert Demarco (NYSDOH)



Former Quick and Clean Cleaners
380 Rockaway Turnpike
Cedarhurst, New York

Figure-1
Site Location

John V. Soderberg P.E.
PO Box 263
Stony Brook, NY 11790

Perm vapor point

Former Cumberland Farms SS

Rockaway Turnpike

Fence

Residential

Drain trenching

Bathroom

Boiler Room

PV-1

PV-2

Former Dry Cleaning Equipment Area

North leg

5'-2" PVC slot screen with exterior vertical pipe to roof

Former Q and C

South leg

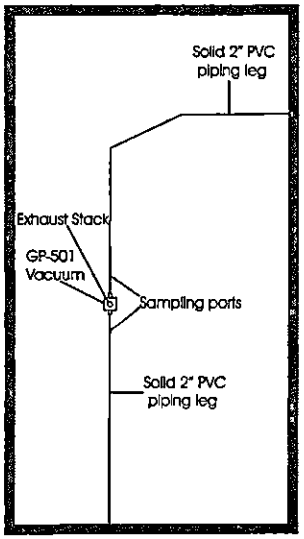
PV-3

PV-4

On/off switch system shutdown warning light

5'-2" PVC slot screen with exterior vertical pipe to roof

PLAN VIEW ROOFTOP CONSTRUCTION



1"=28'

1"=14'

Former Quick and Clean Cleaners **380 Rockaway Turnpike** **Cedarhurst, New York**	Figure-2 SSDS As-built	**John V. Soderberg P.E** **PO Box 263** **Stony Brook, New York**

TABLES

TABLE-1

Field Measurements

JOHN V. SODERBERG, P.E.

PO Box 263
Stony Brook, NY 11790
Phone 631-751-6458
Fax 631-675-1185
Cell 631 834-9537
Email jvsode@hotmail.com

TABLE-1
SSDS

Site Location:
Former Quick and Clean Cleaners
380 Rockaway Turnpike
Cedarhurst, NY

Client:
380 Rockaway Turnpike Realty Corp
36 Lawrence Avenue
Lawrence, NY

Abbreviation Key

PID - Photo Ionization Detector
CFM- cubic feet per minute
ppm- parts per million

August 15, 2016

SSDS Wells	PID (ppm)	CFM/Vacuum
Exhaust	**1.8**	**8.0 ft3/min**
North Leg	**0.9**	**3.9 ft3/min**
South Leg	**1.8**	**4.0 ft3/min**
PV-1	**0.2**	**0.50 in/H2O**
PV-2	**0.0**	**0.25 in/H2O**
PV-3	**0.2**	**2.5 in/H2O**
PV-4	**0.3**	**0.25 in/H2O**

TABLE-2

Lab Data Tabulation

Former Quick and Clean Cleaners
380 Rockaway Turnpike
Cedarhurst, NY
As of August 2016
Table-2

SSDS Stack emissions

SSDS	PCE	TCE	Total DCE	VC
Aug 2016	78	62	430	n/d
Jul 2016	640	230	1100	n/d
Apr 2016	27	n/d	n/d	n/d
Jan 2016	n/d	n/d	n/d	n/d
Oct 2015	96	n/d	360	n/d

*results in ppbv

ATTACHMENTS

ATTACHMENT-A

Field Maintenance Log

John V. Soderberg P.E

SSDS System Monitor and Maintenance

Site Name: Quick and Clean	Site# 130198
Address: Cedarhurst, NY	Monthly testing

Remodiation System Present? y
Typo of System?
Sub-slab Depressurization System
SSDS
Sampling Date: August 15, 2016

Air Flow Readings	
Pressure : 0.5 psi	
Pre motor vac : 0.5 "/H2O	

Sampling Instructions: Volatiles via 8260C

Site Data

Wells	CFM/Vac	PID ppm
North Leg	3.9 ft/min	0.9
South Leg	4.0 ft/min	1.8
Exhaust	8.0 ft/min	1.8
PV-1	0.50 in/H2O	0.2
PV-2	0.25 in/H2O	0
PV-3	2.5 in/H2O	0.2
PV-4	0.25 in/H2O	0.3

Site Inspection:

Was System Shutdown Warning Light On_x_ Off___

If Off Why?

Any Visible Signs Of Leaks? NO

Indicate Any Sampling Procedures:

PID Readings, MiniRae 2000, in ppm

stack sample via 8260C

Sampled by: Joel Meyers

ATTACHMENT-B

Lab Data

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

August 18, 2016

Walter Berninger
WRS d.b.a Berninger Environmental
17 Old Dock Road
Yaphank, NY 11980
TEL: (631) 589-6521
FAX (631) 589-6528

RE: Ex-Quik N Clean, 380 Rockaway Blvd, Ced Order No.: 1608116

Dear Walter Berninger:

American Analytical Laboratories, LLC. received 1 sample(s) on 8/15/2016 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report. The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer

Lori Beyer
Lab Director
American Analytical Laboratories, LLC.

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Workorder Sample Summary

WO#: **1608116**

18-Aug-16

CLIENT: WRS d.b.a Berninger Environmental

Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1608116-001A	1-VES Stack Emission		8/15/2016 10:00:00 AM	8/15/2016 1:50:00 PM	Air

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES

56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: BERNINGER ENVIRO INC
Address: 17 OLD DOCK RD
City: YAPHANK, N.Y State: Zip:
Project Contact: WALT or JUSTIN
Phone #:
E-mail:

Project Information

Project Name: EX QUICK 'N' CLEAN
Street: 380 ROCKAWAY BLVD
City: CEDARHURST, N.Y State: Zip:
Project #: 8133
Sampler's Name / Company: BUTCH MEYERS - BEI
Sampler's Signature: Butch Meyers

Analytical Information

8260

LAB SAMPLE # (LAB USE ONLY)	Sample Information: Client Sample ID	Sample Type	Matrix Code	Sample Collection: Date	Time	Glass / Plastic	Sample Containers: Total # of bottles	Number of Each Preserved Bottle: NONE	HCl	NaOH	HNO_3	H_2SO_4	$NaHSO_4$	MeOH	OTHER	Analytical Information
1608116-001A	1-VES STACK EMISSION	G	AIR	8/15/16	10:00	TEDLAR BAG	X									X

Turnaround Time (Business Days)

Standard
[✓] 7-10 Business Days
[ ] 3 Day *RUSH*
[ ] 5 Day *RUSH*
[ ] 2 Day *RUSH*
[ ] 4 Day *RUSH*
[ ] 1 Day *RUSH*

SAMPLE TYPE

G = Grab
C = Composite
B = Blank

MATRIX CODES

L = Liquid PC = Paint Chip
S = Soil SL = Sludge
O = Oil SD = Solid
W = Wipe M = Miscellaneous

Comments / Remarks

P.O. # 17142

Cooler Temp: NA

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
Butch Meyers	8/15/16 1350	BUTCH MEYERS	P Masi	8/15/16 1350	P Masi
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Sample Log-In Check List

Client Name: **Berninger** Work Order Number: **1608116** RcptNo: **1**

Logged by:	**Jenny Mullady**	**8/15/2016 1:50:00 PM**	Jenny Mullady
Completed By:	**Jenny Mullady**	**8/15/2016**	Jenny Mullady
Reviewed By:	**Karen Kelly**	**8/15/2016**	Karen Kelly

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Coolers are present?	Yes ☐	No ☐	NA ☑
4. Shipping container/cooler in good condition?	Yes ☑	No ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
No. Seal Date:	Signed By:		
5. Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☐	NA ☑
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks:

Air sample - tedlar bag.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Case Narrative

WO#: **1608116**
Date: **8/18/2016**

CLIENT: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846 and additional methods as detailed throughout the text of the report. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives with exceptions notated in this Narrative discussion and/or in the QC Summary Section of the lab report with appropriate qualifiers. Additional quality control information such as surrogate recovery values for organic testing is provided as part of the analytical results. Batch MS/MSD results are provided in the QC section of the lab report unless the MS/MSD summary forms indicate one of your sample identifications. MS/MSD results relate only to the parent sample that was spiked.

Volatile LCS are analyzed with preservatives - HCL/NaHSO4/Methanol depending on level of analysis (high/low) similar to sample analysis. Outliers can be attributed to the presence of chemical preservatives. 2-Chloroethyl vinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

The following parameters (if included in this report) are not offered by NY ELAP: VOA 8260 Soil; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Diisopropyl ether, Ethanol, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl Acetate, n-Butyl Acetate, n-Propyl Acetate. VOA 8260 Liquid; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl acetate, n-Butyl Acetate, n-Propyl Acetate.

The test results meet the requirements of the NYSDOH and NELAC standards, except where noted. The information contained in this analytical report is the sole property of American Analytical Laboratories, LLC. or the client for which this report was issued. The results contained in this report are only representative of the samples received. The sample receipt checklist is included as part of this lab report. Conditions can vary at different times and at different sampling conditions. American Analytical is not responsible for the use or interpretation of the data included herein.

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Definition Only

WO#: **1608116**
Date: **8/18/2016**

Definitions:

Sample Result and QC Summary Qualifiers - Level I and Level II Reports
ND - Not detected at the reporting limit/Limit of Quantitation

B - The analyte was detected in the associated method blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <5x the blank value as artifact.

E - The value is above the quantitation range

D - Analyte concentration was obtained from diluted analysis or from analysis using reduced sample volume.

J - The analyte was detected below the limit of quantitation but greater than the established Limit of Detection (LOD). There is greater uncertainty associated with these results and data should be considered as estimated.

U - The compound was analyzed for but not detected.

H - Holding time for preparation or analysis has been exceeded.

S - Spike recovery is outside accepted recovery limits.

R - RPD is outside accepted recovery range.

P - Secondary column exceeds 40% difference for GC test.

* - Calibration exceeds method requirement. Due to the large number of analytes for organic testing, the method allows 10% of analytes to have %RSD and/or %D to be >20%.

LOD - Limit of Detection; the lowest level the analyte can be determined to be statistically different from a blank.

LOQ - Limit of Quantitation; the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accurary.
m - Analyte was manually integrated for GC/MS.
+ - Concentration exceeds regulatory level for TCLP

American Analytical Laboratories, LLC.

Date: *18-Aug-16*

ELAP ID : 11418

CLIENT:	WRS d.b.a Berninger Environmental	**Client Sample ID:**	1-VES Stack Emission
Lab Order:	1608116	**Collection Date:**	8/15/2016 10:00:00 AM
Project:	Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu	**Matrix:**	AIR
Lab ID:	1608116-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260 - AIR			**SW8260C**		**SW5030C**		Analyst: **LA**
1,1,1,2-Tetrachloroethane	ND	15	29	U	ppbv	1	8/16/2016 4:47:00 AM
1,1,1-Trichloroethane	ND	18	37	U	ppbv	1	8/16/2016 4:47:00 AM
1,1,2,2-Tetrachloroethane	ND	15	29	U	ppbv	1	8/16/2016 4:47:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	13	26	U	ppbv	1	8/16/2016 4:47:00 AM
1,1,2-Trichloroethane	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
1,1-Dichloroethane	ND	25	49	U	ppbv	1	8/16/2016 4:47:00 AM
1,1-Dichloroethene	ND	25	50	U	ppbv	1	8/16/2016 4:47:00 AM
1,1-Dichloropropene	ND	22	44	U	ppbv	1	8/16/2016 4:47:00 AM
1,2,3-Trichlorobenzene	ND	14	27	U	ppbv	1	8/16/2016 4:47:00 AM
1,2,3-Trichloropropane	ND	17	33	U	ppbv	1	8/16/2016 4:47:00 AM
1,2,4,5-Tetramethylbenzene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
1,2,4-Trichlorobenzene	ND	14	27	U	ppbv	1	8/16/2016 4:47:00 AM
1,2,4-Trimethylbenzene	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
1,2-Dibromo-3-chloropropane	ND	10	21	U	ppbv	1	8/16/2016 4:47:00 AM
1,2-Dibromoethane	ND	13	26	U	ppbv	1	8/16/2016 4:47:00 AM
1,2-Dichlorobenzene	ND	17	33	U	ppbv	1	8/16/2016 4:47:00 AM
1,2-Dichloroethane	ND	25	49	U	ppbv	1	8/16/2016 4:47:00 AM
1,2-Dichloropropane	ND	21	43	U	ppbv	1	8/16/2016 4:47:00 AM
1,3,5-Trimethylbenzene	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
1,3-Dichlorobenzene	ND	17	33	U	ppbv	1	8/16/2016 4:47:00 AM
1,3-dichloropropane	ND	21	43	U	ppbv	1	8/16/2016 4:47:00 AM
1,4-Dichlorobenzene	ND	17	33	U	ppbv	1	8/16/2016 4:47:00 AM
1,4-Dioxane	ND	28	55	U	ppbv	1	8/16/2016 4:47:00 AM
2,2-Dichloropropane	ND	20	40	U	ppbv	1	8/16/2016 4:47:00 AM
2-Butanone	ND	68	140	U	ppbv	1	8/16/2016 4:47:00 AM
2-Chloroethyl vinyl ether	ND	46	92	U	ppbv	1	8/16/2016 4:47:00 AM
2-Chlorotoluene	ND	19	39	U	ppbv	1	8/16/2016 4:47:00 AM
2-Hexanone	ND	49	98	U	ppbv	1	8/16/2016 4:47:00 AM
2-Propanol	ND	40	81	U	ppbv	1	8/16/2016 4:47:00 AM
4-Chlorotoluene	ND	19	39	U	ppbv	1	8/16/2016 4:47:00 AM
4-Isopropyltoluene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
4-Methyl-2-pentanone	ND	49	98	U	ppbv	1	8/16/2016 4:47:00 AM
Acetone	1400	84	170	B	ppbv	1	8/16/2016 4:47:00 AM

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American Analytical Laboratories, LLC.

Date: *18-Aug-16*

ELAP ID : 11418

CLIENT:	WRS d.b.a Berninger Environmental	**Client Sample ID:**	1-VES Stack Emission
Lab Order:	1608116	**Collection Date:**	8/15/2016 10:00:00 AM
Project:	Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu	**Matrix:**	AIR
Lab ID:	1608116-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260 - AIR			**SW8260C**		**SW5030C**		Analyst: **LA**
Acrolein	ND	130	260	U	ppbv	1	8/16/2016 4:47:00 AM
Acrylonitrile	ND	46	92	U	ppbv	1	8/16/2016 4:47:00 AM
Benzene	ND	31	63	U	ppbv	1	8/16/2016 4:47:00 AM
Bromobenzene	ND	15	31	U	ppbv	1	8/16/2016 4:47:00 AM
Bromochloromethane	ND	19	38	U	ppbv	1	8/16/2016 4:47:00 AM
Bromodichloromethane	ND	15	30	U	ppbv	1	8/16/2016 4:47:00 AM
Bromoform	ND	10	19	U	ppbv	1	8/16/2016 4:47:00 AM
Bromomethane	ND	25	51	U	ppbv	1	8/16/2016 4:47:00 AM
Carbon disulfide	ND	32	34	U	ppbv	1	8/16/2016 4:47:00 AM
Carbon tetrachloride	ND	16	32	U	ppbv	1	8/16/2016 4:47:00 AM
Chlorobenzene	ND	22	44	U	ppbv	1	8/16/2016 4:47:00 AM
Chlorodifluoromethane	ND	28	57	U	ppbv	1	8/16/2016 4:47:00 AM
Chloroethane	ND	38	76	U	ppbv	1	8/16/2016 4:47:00 AM
Chloroform	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
Chloromethane	ND	48	96	U	ppbv	1	8/16/2016 4:47:00 AM
cis-1,2-Dichloroethene	430	25	50		ppbv	1	8/16/2016 4:47:00 AM
cis-1,3-Dichloropropene	ND	25	50	U	ppbv	1	8/16/2016 4:47:00 AM
Dibromochloromethane	ND	12	24	U	ppbv	1	8/16/2016 4:47:00 AM
Dibromomethane	ND	14	28	U	ppbv	1	8/16/2016 4:47:00 AM
Dichlorodifluoromethane	ND	20	40	U	ppbv	1	8/16/2016 4:47:00 AM
Diisopropyl ether	ND	24	48	U	ppbv	1	8/16/2016 4:47:00 AM
Ethanol	ND	150	300	U	ppbv	1	8/16/2016 4:47:00 AM
Ethyl acetate	ND	28	55	U	ppbv	1	8/16/2016 4:47:00 AM
Ethylbenzene	ND	23	46	U	ppbv	1	8/16/2016 4:47:00 AM
Freon-114	ND	14	29	U	ppbv	1	8/16/2016 4:47:00 AM
Hexachlorobutadiene	ND	10	19	U	ppbv	1	8/16/2016 4:47:00 AM
Isopropyl acetate	ND	14	48	U	ppbv	1	8/16/2016 4:47:00 AM
Isopropylbenzene	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
m,p-Xylene	ND	46	92	U	ppbv	1	8/16/2016 4:47:00 AM
Methyl tert-butyl ether	ND	28	55	U	ppbv	1	8/16/2016 4:47:00 AM
Methylene chloride	4000	29	58	B	ppbv	1	8/16/2016 4:47:00 AM
n-Amyl acetate	ND	19	38	U	ppbv	1	8/16/2016 4:47:00 AM
n-Butyl acetate	ND	21	42	U	ppbv	1	8/16/2016 4:47:00 AM

American Analytical Laboratories, LLC.

Date: *18-Aug-16*

ELAP ID : 11418

CLIENT:	WRS d.b.a Berninger Environmental	**Client Sample ID:**	1-VES Stack Emission
Lab Order:	1608116	**Collection Date:**	8/15/2016 10:00:00 AM
Project:	Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu	**Matrix:**	AIR
Lab ID:	1608116-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260 - AIR			**SW8260C**		**SW5030C**		Analyst: **LA**
n-Butylbenzene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
n-Propyl acetate	ND	24	48	U	ppbv	1	8/16/2016 4:47:00 AM
n-Propylbenzene	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
Naphthalene	ND	19	38	U	ppbv	1	8/16/2016 4:47:00 AM
o-Xylene	ND	23	46	U	ppbv	1	8/16/2016 4:47:00 AM
p-Diethylbenzene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
p-Ethyltoluene	ND	20	41	U	ppbv	1	8/16/2016 4:47:00 AM
sec-Butylbenzene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
Styrene	ND	23	47	U	ppbv	1	8/16/2016 4:47:00 AM
t-Butyl alcohol	ND	33	66	U	ppbv	1	8/16/2016 4:47:00 AM
tert-Butylbenzene	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
Tetrachloroethene	78	14	29		ppbv	1	8/16/2016 4:47:00 AM
Toluene	ND	26	53	U	ppbv	1	8/16/2016 4:47:00 AM
trans-1,2-Dichloroethene	ND	25	50	U	ppbv	1	8/16/2016 4:47:00 AM
trans-1,3-Dichloropropene	ND	22	44	U	ppbv	1	8/16/2016 4:47:00 AM
Trichloroethene	62	18	37		ppbv	1	8/16/2016 4:47:00 AM
Trichlorofluoromethane	ND	18	36	U	ppbv	1	8/16/2016 4:47:00 AM
Vinyl acetate	ND	28	57	U	ppbv	1	8/16/2016 4:47:00 AM
Vinyl chloride	ND	39	78	U	ppbv	1	8/16/2016 4:47:00 AM
Xylenes, Total	ND	69	140	U	ppbv	1	8/16/2016 4:47:00 AM
Surr: 4-Bromofluorobenzene	93.0	0	62-132		%Rec	1	8/16/2016 4:47:00 AM
Surr: Dibromofluoromethane	107	0	72-131		%Rec	1	8/16/2016 4:47:00 AM
Surr: Toluene-d8	102	0	58-131		%Rec	1	8/16/2016 4:47:00 AM

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Website: www.American-Analytical.com

QC SUMMARY REPORT

WO#: **1608116**
18-Aug-16

Client: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu **BatchID:** **10324**

Sample ID **LCS-10324** SampType: **LCS** TestCode: **8260_AIR** Units: **ppbv** Prep Date: **8/15/2016** RunNo: **18326**
Client ID: **LCSW** Batch ID: **10324** TestNo: **SW8260C** **SW5030C** Analysis Date: **8/16/2016** SeqNo: **334621**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19000	50	20040	0	93.1	40	130				
Benzene	14000	63	15670	0	87.0	40	125				
Chlorobenzene	9300	44	10920	0	84.9	42	121				
Ethylbenzene	12000	46	13430	0	92.1	41	124				
Tetrachloroethene	5400	29	7364	0	73.3	34	120				
Toluene	12000	53	13430	0	89.9	49	126				
Trichloroethene	8200	37	9404	0	86.9	50	121				
Surr: 4-Bromofluorobenzene	6600		7026		94.6	62	132				
Surr: Dibromofluoromethane	11000		10820		102	72	131				
Surr: Toluene-d8	13000		12470		105	58	131				

Sample ID **MB-10324** SampType: **MBLK** TestCode: **8260_AIR** Units: **ppbv** Prep Date: **8/15/2016** RunNo: **18326**
Client ID: **PBW** Batch ID: **10324** TestNo: **SW8260C** **SW5030C** Analysis Date: **8/16/2016** SeqNo: **334622**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	29									U
1,1,1-Trichloroethane	ND	37									U
1,1,2,2-Tetrachloroethane	ND	29									U
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	26									U
1,1,2-Trichloroethane	ND	36									U
1,1-Dichloroethane	ND	49									U
1,1-Dichloroethene	ND	50									U
1,1-Dichloropropene	ND	44									U
1,2,3-Trichlorobenzene	ND	27									U
1,2,3-Trichloropropane	ND	33									U

Qualifiers: S Spike Recovery outside accepted recovery limits W Sample container temperature is out of limit as specified at testcode

Original

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QC SUMMARY REPORT

WO#: **1608116**
18-Aug-16

Client: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu **BatchID:** **10324**

Sample ID **MB-10324**	SampType: **MBLK**	TestCode: **8260_AIR**	Units: **ppbv**	Prep Date: **8/15/2016**	RunNo: **18326**
Client ID: **PBW**	Batch ID: **10324**	TestNo: **SW8260C**	**SW5030C**	Analysis Date: **8/16/2016**	SeqNo: **334622**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetramethylbenzene	ND	36									U
1,2,4-Trichlorobenzene	ND	27									U
1,2,4-Trimethylbenzene	ND	41									U
1,2-Dibromo-3-chloropropane	ND	21									U
1,2-Dibromoethane	ND	26									U
1,2-Dichlorobenzene	ND	33									U
1 2-Dichloroethane	ND	49									U
2-Dichloropropane	ND	43									U
3,5-Trimethylbenzene	ND	41									U
1,3-Dichlorobenzene	ND	33									U
1,3-dichloropropane	ND	43									U
1,4-Dichlorobenzene	ND	33									U
1,4-Dioxane	ND	55									U
2,2-Dichloropropane	ND	40									U
2-Butanone	ND	140									U
2-Chloroethyl vinyl ether	ND	92									U
2-Chlorotoluene	ND	39									U
2-Hexanone	ND	98									U
2-Propanol	ND	81									U
4-Chlorotoluene	ND	39									U
4-Isopropyltoluene	ND	36									U
4-Methyl-2-pentanone	ND	98									U
Acetone	1400	170									
Acrolein	ND	260									U
Acrylonitrile	ND	92									U
Benzene	ND	63									U

Qualifiers: S Spike Recovery outside accepted recovery limits W Sample container temperature is out of limit as specified at testcode

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QC SUMMARY REPORT

WO#: **1608116**

18-Aug-16

Client: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu **BatchID:** **10324**

Sample ID **MB-10324**	SampType: **MBLK**	TestCode: **8260_AIR**	Units: **ppbv**	Prep Date: **8/15/2016**	RunNo: **18326**
Client ID: **PBW**	Batch ID: **10324**	TestNo: **SW8260C**	**SW5030C**	Analysis Date: **8/16/2016**	SeqNo: **334622**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	ND	31									U
Bromochloromethane	ND	38									U
Bromodichloromethane	ND	30									U
Bromoform	ND	19									U
Bromomethane	ND	51									U
Carbon disulfide	ND	34									U
Carbon tetrachloride	ND	32									U
ılorobenzene	ND	44									U
ılorodifluoromethane	ND	57									U
Chloroethane	ND	76									U
Chloroform	ND	41									U
Chloromethane	ND	96									U
cis-1,2-Dichloroethene	ND	50									U
cis-1,3-Dichloropropene	ND	50									U
Dibromochloromethane	ND	24									U
Dibromomethane	ND	28									U
Dichlorodifluoromethane	ND	40									U
Diisopropyl ether	ND	48									U
Ethanol	ND	300									U
Ethyl acetate	ND	55									U
Ethylbenzene	ND	46									U
Freon-114	ND	29									U
Hexachlorobutadiene	ND	19									U
Isopropyl acetate	ND	48									U
Isopropylbenzene	ND	41									U
m,p-Xylene	ND	92									U

Qualifiers: S Spike Recovery outside accepted recovery limits W Sample container temperature is out of limit as specified at testcode

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QC SUMMARY REPORT

WO#: **1608116**

18-Aug-16

Client: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu **BatchID:** **10324**

Sample ID **MB-10324**	SampType: **MBLK**	TestCode: **8260_AIR**	Units: **ppbv**	Prep Date: **8/15/2016**	RunNo: **18326**
Client ID: **PBW**	Batch ID: **10324**	TestNo: **SW8260C**	**SW5030C**	Analysis Date: **8/16/2016**	SeqNo: **334622**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	ND	55									U
Methylene chloride	4000	58									
n-Amyl acetate	ND	38									U
n-Butyl acetate	ND	42									U
n-Butylbenzene	ND	36									U
n-Propyl acetate	ND	48									U
n-Propylbenzene	ND	41									U
aphthalene	ND	38									U
Xylene	ND	46									U
p-Diethylbenzene	ND	36									U
p-Ethyltoluene	ND	41									U
sec-Butylbenzene	ND	36									U
Styrene	ND	47									U
t-Butyl alcohol	ND	66									U
tert-Butylbenzene	ND	36									U
Tetrachloroethene	ND	29									U
Toluene	ND	53									U
trans-1,2-Dichloroethene	ND	50									U
trans-1,3-Dichloropropene	ND	44									U
Trichloroethene	ND	37									U
Trichlorofluoromethane	ND	36									U
Vinyl acetate	ND	57									U
Vinyl chloride	ND	78									U
Xylenes, Total	ND	140									U
Surr: 4-Bromofluorobenzene	6300		7026		90.1	62	132				
Surr: Dibromofluoromethane	11000		10820		102	72	131				

Qualifiers: S Spike Recovery outside accepted recovery limits W Sample container temperature is out of limit as specified at testcode

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QC SUMMARY REPORT

WO#: **1608116**
18-Aug-16

Client: WRS d.b.a Berninger Environmental
Project: Ex-Quik N Clean, 380 Rockaway Blvd, Cedarhu **BatchID:** **10324**

Sample ID	MB-10324	SampType:	MBLK	TestCode:	8260_AIR	Units:	ppbv	Prep Date:	8/15/2016	RunNo:	18326
Client ID:	PBW	Batch ID:	10324	TestNo:	SW8260C	SW5030C		Analysis Date:	8/16/2016	SeqNo:	334622

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	13000		12470		103	58	131				

Qualifiers: S Spike Recovery outside accepted recovery limits W Sample container temperature is out of limit as specified at testcode