October 20, 2022

New York State Department of Environmental Conservation
Bureau A, Section A
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7015
Attn: Joseph Jones - Project Manager

RE: **CONSTRUCTION COMPLETION REPORT**
Morton Village Realty Co., Inc.
Former Morton Village Cleaners
998-1064 Old Country Road
Plainview, Nassau County, New York
Site No. 130201
VERTEX Project No. 65720, 66845

Mr. Jones:

Vertex Engineering, PC (VERTEX) is pleased to submit this Construction Completion Report (CCR) for the sub-slab depressurization system (SSDS) installed at the above referenced property (the site).

This CCR is being submitted in electronic format to the New York State Department of Environmental Conservation (NYSDEC). The CCR will also be submitted in hard-copy format if requested.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this report or our recommendations. It has been a pleasure working with you on this project.

Sincerely,

Vertex Engineering, PC

Richard J. Tobia, PE
Technical Director

Joseph J.C. Dultz
Regional Vice President

Former Morton Village Cleaners
Plainview, New York
Site No. 130201

CONSTRUCTION COMPLETION REPORT
SUB-SLAB DEPRESSURIZATION SYSTEM

October 20, 2022

PREPARED FOR:

Morton Village Realty Co., Inc.
c/o John Curran
Sive Paget and Riesel P.C.
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New York, New York 10022

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PHONE 646-553-3500

VERTEX PROJECT NO. 65720, 66845

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LIST OF ACRONYMS	
ACRONYM	**DEFINITION**
CFM	Cubic Feet per Minute
CCR	Construction Completion Report
CVOCs	Chlorinated Volatile Organic Compounds
DAR 1	Division of Air Resources
HASP	Health & Safety Plan
in. WC.	Inches Water Column
IA	Indoor Air
IRM	Interim Remedial Measure
NYSDEC	New York State Department of Environmental Protection
NYSDOH	New York State Department of Health
OSHA	Occupational Health and Safety Administration
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
ROI	Radius of Influence
SSDS	Sub-Slab Depressurization System
UST	Underground Storage Tank
VI	Vapor Intrusion
VOC	Volatile Organic Compound

CONSTRUCTION COMPLETION REPORTSUB-SLAB DEPRESSURIZATION SYSTEM

Certification

I, Richard J. Tobia, PE, certify that I am currently a New York State registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan (or Remedial Design or Plans and Specifications) was implemented and that all construction activities were completed in substantial conformance with the IRM Work Plan and appropriate Design Plans and Specifications provided to the NYSDEC.

Richard J. Tobia, P.E. October 20, 2022

New York State Licensed
Professional Engineer No. 095039-01

In accordance with New York State Education Law, it is a violation for any person, unless they are acting under the direction of a licensed professional engineer, to alter this report in any way.

CONSTRUCTION COMPLETION REPORT – SUB-SLAB DEPRESSURIZATION SYSTEM

Morton Village Plaza
Plainview, New York
VERTEX Project No. 65720, 66845

1.0 INTRODUCTION

Vertex Engineering, PC (VERTEX) has prepared this Construction Completion Report (CCR) to document the installation and operation of an active sub-slab depressurization system (SSDS) at one of the four buildings located at the Morton Village shopping center site, located at 998-1064 Old Country Road, Plainview, Nassau County, New York (hereinafter referred to as the "Site"). The Site location is depicted on Figure 1. This CCR is a required element of the remedial program for the Site. The Former Morton Village Cleaners entered into the New York State Superfund Program with associated Site Code No. 130201, which is administered by the New York State Department of Environmental Conservation (NYSDEC) through a Consent Decree dated April 29, 1998.

The interim remedial measure (IRM) work was performed at the site in accordance with a draft Remedial Action Work Plan (RAWP) and subsequent design documents provided to the NYSDEC. The purpose of the work was to control vapor intrusion (VI) via an SSDS. This CCR will cover the sub-slab vapor mitigation actions conducted following the SSDS Design.

The proposed IRM included retrofitting portions of the existing Shopping Center building, shown on Figures 2 and 3, with an SSDS capable of creating a negative pressure under the building and collecting potentially contaminated vapor for subsequent discharge to the atmosphere above the roof of the Site building. This IRM is a component of the overall investigation and remediation of the Site and addresses soil VI issues.

1.1 Site Location and Description

The property is occupied by Morton Village Plaza Shopping Center, which consists of four buildings. The on-Site buildings are currently occupied by various professional businesses, retail stores, and restaurants. The property is bordered by Knowles Street to the north, Old Country Road to the south, Lester Place to the east and Rex Place to the west. Only one of the four buildings on the property, identified as 1022 Old Country Road, was found to be impacted by historic dry-cleaning operations, which is the source of VI. The SSDS was installed in this building as depicted on Figure 2.

PROJECT LOCATION AND INFORMATION	
Property Name	Morton Village Plaza
Property Address	998-1064 Old Country Road
Property Town, County, State	Plainview, Nassau County, New York
Property Tax Identification	Block 555, Lots 10, 86, 88, and 89
Property Topographic Quadrangle	USGS Huntington Quadrangle, New York (1979)
Current Site Zoning	Commercial-Use, 452.14 – Area/Neighborhood Shopping Center
Site Owner	Morton Village Realty Co., Inc.
Property Acreage	9.936 acres
Date of Construction	c. 1956
Basement/Slab-on-Grade	Basement and Slab-on-Grade

The former Cleaners tenant space is currently occupied by a Subway restaurant. Most tenant spaces include a basement area within this site building.

1.2 Site History

The site, identified with Site Number 130201, is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State with a Classification "2" pursuant to Environmental Conservation Law (ECL) 27-1305. Chlorinated volatile organic compounds (CVOCs) are present in soil vapor beneath portions of the Site and indoor air (IA) in basements of several tenant spaces. The observed impacts, which do not extend into other buildings in the shopping plaza, are likely due to undocumented historic releases of dry-cleaning chemicals from the Morton Village Cleaners, a/k/a Classic French Cleaners, (former cleaners) tenant space (1022 Old Country Road) that is currently occupied by a Subway restaurant. This SSDS is being installed to address soil VI of CVOCs present at the site.

The contaminants of concern include tetrachloroethylene (PCE) and its daughter products, trichloroethylene (TCE), cis-1,2-dichloroethyelene (c-1,2-DCE), and vinyl chloride (VC).

1.3 Summary of Previous Investigations

Interim Remedial Measure Work Plan, Morton Village Plaza Shopping Center, 1022 Old Country Road, Plainview, New York (130201), prepared by Roux Environmental Engineering and Geology, D.P.C., (Roux) and dated September 12, 2019.

In November of 2014, Roux was retained by Morton Village to perform a remedial investigation (RI) to identify the nature and extent of contamination resulting from the former Cleaners. An RI conducted by Roux between 2015 and 2017 identified exceedances of PCE and TCE in the basement areas of several tenants, including CVS, Buffalo Grille, Nail and Spa 2000, and the Former Cleaners (current Subway restaurant). It was established that mitigation was required in these areas as required by the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion. Based on these findings, Roux proposed an SSDS be installed to

address soil VI conditions present at the site. A copy of this draft report is available as Appendix A.

1.3.1 Topography/Hydrogeology

The property location is shown on the 1979 USGS Topographic Map of Huntington, New York (Figure 1). The surface elevation of the property is approximately 145 feet above mean sea level. Topography of the property slopes slightly to the south.

Groundwater was encountered at approximately 80 feet below ground surface (ft-bgs) during previous environmental investigations conducted by Roux. Based on the previous environmental investigations, groundwater beneath the Site flows to the south.

1.3.2 Summary of Environmental Conditions

Petroleum-related compounds and CVOCs have been identified in the soil, soil vapor, and groundwater at the site, predominant contaminants include PCE and TCE, and are attributed to an underground storage tank (UST) removed from the former Cleaners and possible former cesspools and around the former sump area below the basement of the Former Cleaners. The UST and related impacts were identified during a 2008 site characterization, and spill number 0800596 was assigned to the Site. Contaminated soils were removed, and the case was closed in January of 2009. Previous investigations additionally identified soil, soil vapor, and groundwater impacts in the vicinity of a sump located at the northern edge of the Site building in the basement of the former cleaners. Prior to connecting the Site's sanitary system to the municipal sanitary sewer in the 1970s, cesspools and leaching fields were established in the parking lot area behind the Site building. Sampling conducted in this area did not identify a source for the PCE and TCE detected in soil vapor and the indoor samples collected from the Site.

1.3.3 Inactive Hazardous Waste Disposal Site Number 130201

The site, identified with Site Number 130201, is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State with a Classification "2" pursuant to Environmental Conservation Law 27-1305. A Class 2 site is a site where hazardous waste presents a threat to public health or the environment, requiring remedial action. In November of 2014 the NYSDEC and Morton Village entered into an Order on Consent to develop and implement an investigation and remedial program at the Site. The goal of the program is to define the nature and extent of contamination resulting from previous activities of the former Cleaners.

1.3.4 Previous Environmental Sampling

The following includes a summary of previous environmental sampling and reporting conducted at the Site:

- Subsurface Investigation Letter Report - Dry Cleaning Operation - Morton Village Plaza prepared by Galdun Frankel Environmental dated October 2006 on behalf of Morton Village Realty Co., Inc.;
- Environmental Site Assessment - Phase II Report prepared by LBG dated September 2007 on behalf of Morton Village Realty Co., Inc.;
- UST Closure and Remedial Summary Report - Former Classic French Cleaners - Morton Village Shopping Center prepared by LBG dated September 2008 on behalf of Morton Village Realty Co., Inc.;
- Phase I Environmental Assessment - Morton Village Plaza prepared by LBG dated February 2009 on behalf of Morton Village Realty Co., Inc.; and

- Site Characterization Report - Former Morton Village Cleaners prepared by HRP Associates, Inc. dated August 2011 on behalf of the NYSDEC.

- Interim Remedial Measure (IRM) Work Plan, Morton Village Plaza Shopping Center, 1022 Old Country Road, Plainview, New York (130201), prepared by Roux Environmental Engineering and Geology, D.P.C., (Roux) and dated September 12, 2019.

The primary guidance document governing soil vapor work in New York is the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006; updated September 2013, August 2015 and May 2017). Two decision matrices have been developed as part of this guidance by the NYSDOH as risk management tools that provide specified actions based on the concentrations of individual compounds in the IA and sub-slab soil vapor. Three resulting actions are possible from these matrices; no further action, identify sources resample/monitor, and mitigate.

During RI activities conducted by Roux between 2015 and 2017, a total of 17 sub-slab soil vapor, 16 IA and eight soil vapor samples were collected at the Site. Eleven (11) of the basement IA sample locations are depicted on Figure 3. Below is a summary of the outcomes for the various tenancies based on PCE and TCE concentrations detected in sub-slab soil vapor and corresponding IA samples for each sample location based on the NYSDOH VI guidance decision matrices:

MATRIX OUTCOMES		
Sample Location	**Sample Date**	**NYSDOH Matrix Action**
Card Store*	11/20/2017	No Further Action
Liquor Store**	11/20/2017	No Further Action
Dance Studio**	11/20/2017	No Further Action

MATRIX OUTCOMES		
Sample Location	**Sample Date**	**NYSDOH Matrix Action**
CVS*	3/21/2017 11/20/2017	Mitigate
CVS**	3/21/2017	No Further Action
Former Cleaners (currently Subway)*	3/22/2016	Mitigate
Buffalo Grille*	3/21/2017	Mitigate
Nail and Spa 2000*	11/20/2017	Mitigate
VisionWorks*	3/21/2017	No Further Action

* Basement
** Slab-on-Grade

2.0 SUMMARY OF OBJECTIVES

Based on a comparison of PCE and TCE concentrations detected in sub-slab soil vapor and IA samples to the NYSDOH Soil Vapor/Indoor Air Matrices, PCE and TCE concentrations detected in sub-slab and IA samples collected within the tenant spaces currently occupied by CVS, former Cleaners (Subway), Buffalo Grille and Nail and Spa 2000 required mitigation. Therefore, the SSDS was designed to mitigate VI in the tenant spaces between Vision Works on the western side of the building and CVS in the central portion of the building.

The scope of work for the IRM consists of the following tasks:

- Site mobilization and Site preparation;
- Installation of the SSDS components;
- Waste disposal; and
- Documentation

The interim remedial action objectives for the Site are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to CVOCs in IA as a result of VI.
- The release of contaminants from subsurface soil and groundwater into IA via soil vapor.

This CCR addresses only the soil vapor and IA IRM and the corresponding SSDS that was implemented by VERTEX.

2.1 Pilot Study

The SSDS design proposed by Roux in the Draft IRM Work Plan was not based on site-specific data; therefore, VERTEX performed an SSDS pilot study to gather site specific data and determine system performance criteria.

VERTEX conducted the pilot testing on August 21, 2020, which included the installation of two suction points that were drilled through the basement slab. A vacuum was applied to the suction points and pressure (vacuum) data were collected from additional monitoring points that were installed at varying distances from each suction point. The pilot study was performed at varying flow rates and vacuums to provide sufficient data for the evaluation. The data collected were utilized to calculate the site-specific radius of influence (ROI). The data were also utilized to provide design parameters such as air flow rate and vacuum to be utilized in the system design.

Pilot testing indicated that a significant ROI (> 50 feet) could be achieved with an applied vacuum of 5 inches water column (in. WC) and a flow rate of approximately 20 cubic feet per minute (cfm) per extraction point. The SSDS design was based on a conservative ROI of 30 feet at total flow rate of 100 cfm at 5 in. WC for the impacted area of the site building basement.

Figure 2 provides an as built plan view of the SSDS layout. All deviations from the SSDS Design are noted below.

2.2 System Design

Sub-slab soil vapor samples collected during the RI detected elevated concentrations of PCE and TCE; therefore, an active SSDS was proposed to be installed beneath the portions of the affected Site building to address potential exposure pathways. The proposed active SSDS was designed by VERTEX to address these pathways. The basis for the design was a pilot study performed by VERTEX on August 21, 2020. The pilot study was based on an SSDS design that was to include vertical suction points and horizontal piping laterals to be retrofitted into the existing building construction. Two suction points were utilized for the pilot study. Pilot study calculations and results are included as Appendix B.

Overall, the pilot study concluded that a minimum 50-foot ROI was achievable at a flow rate of 20 to 30 cfm and a vacuum of approximately 5 in. WC. The overall design was based on a conservative ROI extraction point spacing of 30 feet which required four extraction points to be placed strategically within the basement area with an overall flow rate of approximately 100 cfm and a vacuum of approximately 5.1 in. WC to account for friction losses in the piping.

The active SSDS for the Site consists of a network of vertical suction points creating a vacuum influence beneath the targeted portion of the building basement slab. The SSDS design is provided in Appendix C. The following is an outline of the design:

- Four vertical suction points installed to create the required vacuum influence below the basement slab of portions of the Site building. All suction points consist of 3-inch PVC piping.
- Each suction point riser is fitted with a shut off valve, monitoring port, and vacuum gauge.

- The manifold piping from the suction points was brought to the roof along the exterior of the building. The single header was connected to a single 1 Hp centrifugal blower located on the roof of the building.
- Interior piping was routed around various building infrastructure as needed. Piping was supported appropriately.
- Piping was sloped to drain collected condensate back to the subsurface. Where piping could not be properly sloped due to interference, a condensate drop was installed within the piping run. Two ½-inch condensate drops were installed to drain to the subsurface.
- An audible and visual alarm was installed on the system to notify the property manager of a loss of vacuum within the SSDS.
- The discharge point is located at least three feet above the roof and located a minimum of 10 feet from any HVAC air inlets and the building edge.

3.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

All work performed during installation and operation of the SSDS at the Morton Village Shopping Center was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA).

3.1 Health and Safety Plan

The site-specific Health and Safety Plan (HASP) was followed for all remedial and invasive work performed at the Site. Furthermore, a designated Site Safety Officer (SSO) was present at the Site while operations were taking place. The Site Supervisor/SSO directed work operations in accordance with the SSDS Design and provided safety oversight in the field.

3.2 Community Air Monitoring Plan

Based on the scope of work, no CAMP was required for the work performed. A handheld photoionization detector (PID) was utilized during installation to measure for vapors from the extraction point locations during the opening of the slab.

3.3 Contractors and Consultants

The following list provides a summary of key project personnel, contractors, subcontractors, and their associated tasks.

PROJECT PERSONNEL AND CONTRACTORS		
Company	**Role**	**Responsibility**
VERTEX Engineering, PC	Engineer and Environmental Consultant	Design and consulting services; oversight

PROJECT PERSONNEL AND CONTRACTORS		
Company	**Role**	**Responsibility**
CFS Environmental	Installation Contractor	SSDS Installation
Clean Globe	Utility Survey	Geophysical Investigation
Vision Environmental	Waste Disposal Contractor	Removal of Soil Drums
Barrett Company Inc.	Electrician	SSDS Electrical Connections

VERTEX acted as both the environmental consultant and contractor for the project. VERTEX provided design and consulting services, prepared project documents on behalf of the owner and provided field operation oversight for the remedial action installation. Compliance Field Services, Inc. (CFS) performed the SSDS installation.

Clean Globe Environmental, LLC (Clean Globe) performed a sub-slab utility scan using electromagnetic induction and ground-penetrating radar. Barrett Company Inc. connected the SSDS equipment to the 208-volt building electric supply and landlord panel.

3.3.1 Site Preparation

Site preparation activities for the SSDS installation included the following activities:

- Visual survey of building interior to determine constructability and pipe routing;
- Coordination of building owner for building access and clearing of any debris within the work area;
- A utility scan to identify sub-slab utilities and foundation structures.

The sub-slab utility scan was performed by Clean Globe on August 21, 2020. The scan identified sub-slab sewer and electric lines, as well as thickened sections of concrete, and other foundation features. Some planned vapor extraction point locations were adjusted due to safety concerns

based on the results of the utility scan and constructability survey, which did not impact the overall performance goals for the SSDS.

3.3.2 Installation of the SSDS

Installation of the SSDS began on November 2, 2020. The extraction points and piping were installed between this date and November 5, 2020. The concrete varied in thickness throughout the building and was approximately 3 to 4 inches thick in most places. The extraction points were constructed of PVC pipe installed flush with or slightly below the bottom of the slab and sealed with Portland cement at the surface. At each extraction point, approximately one cubic foot of soil was removed, and the evacuated space was backfilled with clean gravel. Each extraction point riser was constructed with a ball valve to adjust the flow. PVC risers were connected to overhead piping runs of 3-inch or 4-inch PVC. Piping was suspended from the ceiling and sloped back towards the extraction points to allow for proper drainage of condensate.

The exhaust from the SSDS is discharged to the atmosphere through a stack which has the following minimum characteristics in accordance with NYSDOH guidance:

- 12 inches above the roof of the building;
- 10 feet above the ground surface;
- 10 feet away from any window or opening that is less than two feet below the exhaust point; and,
- 10 feet from any other building, window, or building intake

Exhaust piping is equipped with a screen to prevent objects/animals from entering the piping system. Vacuum gauges (Dwyer minihelic 0 to 10 in. WC) were installed on the system to allow for monitoring of system performance (Figure 2 – As-Built SSDS Layout) in various critical areas. Tenant spaces target by the SSDS were inspected for fractures that might allow the intrusion of vapors or decrease system performance; no cracks larger than hairline cracks were observed.

Non-shrink caulk was used to seal all readily accessible cracks and eliminate the vapor pathway between the IA and sub-slab vapor.

The SSDS is connected to a dedicated electrical panel inside the Site building. The electrical circuit used to control the SSDS is labeled as "Sub-Slab Depressurization System". Due to manufacturing production delays, the system blower was not received until December 15, 2020. The blower and electric were installed, and final electrical connections were made on January 19, 2021. The electrical work was performed by Barrett Company Inc., Island Park, New York, a licensed electrician. A 110 Volt outlet was installed within the electric room for the system alarm.

System readings were collected upon startup of the blower. Upon initial operation, it was determined that the flow rate and vacuum were below the design parameters. Upon troubleshooting the issue, it was determined that the blower motor supplied was rated for a speed of 1150 rpm versus the required/specified 3450 rpm. The system was left running at the lower flow rate and vacuum as it was determined that it was influencing the sub slab environment. The correct motor was ordered and was replaced on the blower on February 22, 2021. Upon startup of the blower with the new motor, the blower and system operated as expected. Note that the fan with the lower speed motor was able to impart a vacuum over much of the area even though the flow and vacuum were greatly reduced from the design flow and vacuum (Table 1).

Start-up flow and vacuum readings were collected on February 22, 2021. Based on these readings, it was determined that three monitoring points were required to be reinstalled, likely due to the condition of the concrete slab and subsurface structures. These points, SSMP-1, SSMP-2, and SSMP-7 were reinstalled on March 12, 2021; one effluent sample and updated system measurements were collected at this time (Tables 1 and 3).

A photographic log of the SSDS installation is presented in Appendix D.

3.3.3 SSDS Start up and Commissioning

Commissioning of the system was performed on February 22, 2021. Commissioning entailed the collection of sub-slab vacuum measurements, a check of proper alarm and blower operation, and collection of flow readings for each riser.

To monitor the vacuum produced by the SSDS, Vapor Pin® sub-slab vapor monitoring points were installed at seven locations within the basement area. The monitoring locations were chosen to obtain measurements at varying distances from the extraction points within the treated area. The monitoring point locations are depicted on Figure 2. After installation, vacuum measurements were made with a digital manometer (Velocicalc Model TSI 9565) capable of reading to 0.001 in. WC. Vacuum measurements are presented in Table 1. The vacuum readings in the monitoring points ranged from 0.004 in. WC. to 0.296 in. WC. Point 1 was surmised to be located outside the original footprint of the building on the other side of the footing that may be blocking communication. Point 2 was located outside of the electrical room and Point 7 was located outside of the doorway to the basement of the hair salon; both points were moved from the main hallway areas to inside of the electrical room and inside of the hair salon basement, respectively. After relocation, the vacuum in Point 1 increased from 0.004 to 0.060; the vacuum in Point 2 increased from 0.004 to 0.89, and the vacuum in Point 7 increased from 0.040 to 0.144. All sub-slab vacuum readings in all of the monitoring points were greater than the required 0.004 in WC to show system influence. Sub-slab vacuum readings were confirmed to be sufficient on March 12, 2021. Overall system vacuum readings ranged from 5.55 in. WC. to 6.25 in. WC. The system measurements and vacuum readings taken on March 12, 2021, are presented in Table 1. Additional readings were collected on June 4, 2021, during the first post-installation round of sampling. Vacuum readings improved and ranged at all points from 0.088 to 0.473 in. WC. It is surmised that the continued operation of the system has dried out sub slab soils and increased air flow pathways.

The overall performance of the system closely matches the design parameters (100 cfm @5.1 in. WC). The overall flow rate is measured at 85 to 90 cfm at an overall vacuum ranging from 5.5 to 6.2 in. WC.

A Division of Air Resources (DAR 1) screening analysis was performed for selected compounds identified in the effluent vapor sample to determine if the estimated emissions from the operation of the active SSDS would exceed the permissible limits. Appendix C presents the DAR 1 screening level worksheet for the evaluation of PCE, TCE and c-1,2- DCE, which were identified as the constituents of concern for the evaluation based on the relatively high concentrations observed in the sub-slab soil vapor samples and the low guidance concentrations (i.e., allowable discharge limits). The DAR 1 evaluation was employed using the contaminant emission rate (pounds per hour) based on the effluent vapor samples collected in March 2021. The emission impacts were compared to the annual guidance concentration values and the short-term guidance concentration values from the July 14, 2016 DAR 1 AGC/SGC Tables. Based on the DAR 1 analysis, the estimated contaminant emission rates are below the AGC and SGC values for PCE, TCE and c-1,2-DCE; therefore, vapor treatment was not required prior to discharge (Table 3).

3.4 Performance Documentation and Sampling

IRM performance sampling for VI was performed approximately 100 days following the installation and startup of the SSDS. IA within the basement area was sampled on June 4, 2021, and again on February 14, 2022 (heating season), at six locations. In addition, one exterior ambient air location was also sampled to provide background concentrations during both sampling events.

In accordance with the draft IRM work plan, post mitigation IA sampling was conducted in the targeted areas of the building where the SSDS is installed. As directed by the NYSDOH VI

guidance, air sampling was conducted at least 30 days after the completion of the SSDS, but no longer than the end of the next heating season (November 15 through April 15). Six IA samples and one outdoor ambient air sample were collected in locations consistent with the pre-mitigation sample collection. Samples were collected in 6-liter summa canisters over a 6- to 8-hour period. Additionally, one effluent sample was collected from the lateral near the exhaust on March 12, 2021 and on February 14, 2022, using a 1-liter summa canister over a five-minute period (Table 3). All samples were analyzed using EPA Method TO-15. Sample collection methods were consistent with past methods. The results of the IA sampling are tabulated and presented in Table 2 and were compared to the NYSDOH matrix air guidelines.

The Operation & Maintenance (O&M) spec sheets for the equipment installed is presented in Appendix E. These sheets provide a detailed account of the monitoring and sampling requirements/procedures and operation and maintenance of the SSDS at the Site.

3.4.1 Indoor Air Results

During the initial June 4, 2021 sampling, PCE, c-1,2-DCE and TCE were detected in all samples collected. Five of the six IA samples were all below the respective NYSDOH VI matrix values for all COCs. One sample, VTX-IA-5, exceeded the lower matrix value for sub-slab soil gas for PCE, TCE, and c-1,2-DCE. This sample was located within the northeast corner of the CVS basement stockroom. Two samples were collected within the CVS basement stockroom, the other sample, VTX-IA-4 was below the matrix values. Although both samples are from the same stock room, the stock room is separated by a wall; however, the door connecting the two rooms was open at the time of sampling. The detection exceeding the matrix values was the most distant point from the suspected source area.

Results of the second round of sampling, performed on February 14, 2022, did not identify any concentrations of PCE, TCE, or c-1,2-DCE above NYSDOH VI matrix values.

Sub-slab samples were not collected during the collection of IA samples. Although the NYSDOH utilizes sub-slab concentration for the evaluation of potential response actions, the IA results collected at the site are within guidelines which demonstrate that the SSDS is successfully mitigating potential VI in the building. Overall, it is concluded that the appropriate response measures have been taken to protect the health of building occupants and that the SSDS is operating as designed and providing the required results.

3.4.2 Deviations

Overall, the installation of the SSDS were conducted as planned in the SSDS Design. The primary deviations were as follows:

- The exhaust was planned to be run through and interior space or what was thought to be an abandoned boiler chimney located in the Subway tenancy. It was later determined that the chimney was active (water heater exhaust) and that this pathway and an interior pathway to the roof was not available. As an alternative, the exhaust was run along the outside rear wall of Subway from the basement to the roof. The relocation of the exhaust location does not affect the SSDS performance.

- One extraction point location was moved from its initial planned location. The point in the Nail & Spa tenancy was moved more to the interior of the leasehold from the back wall to avoid above and below-slab structures. The relocation of the extraction point did not affect the SSDS performance as all vapor monitoring points registered vacuum readings of greater than the required 0.004 inches WC during system operation.

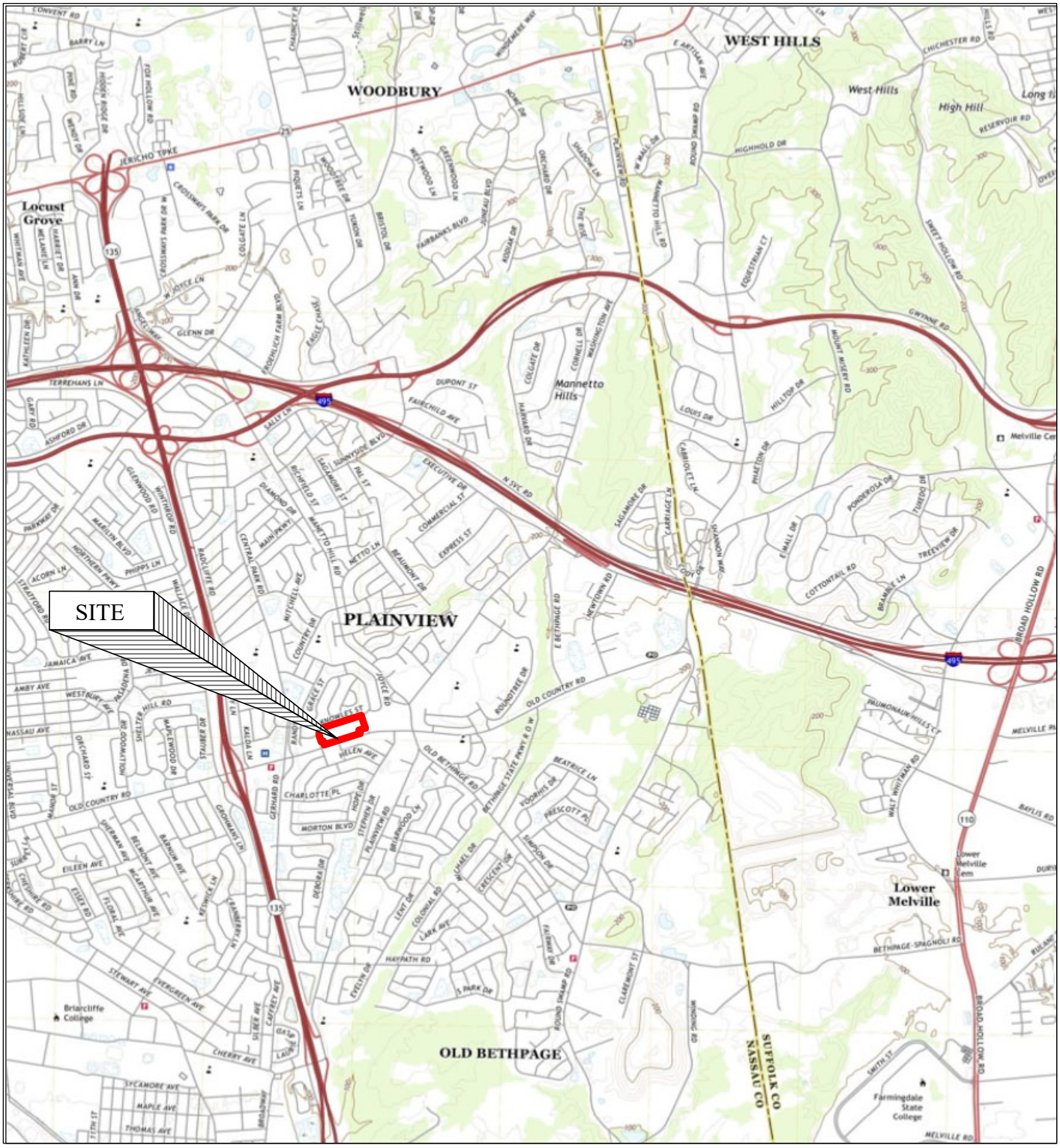
- Locations of some vapor monitoring points were changed due to access reasons or due to the relocation of the extraction point in Nail & Spa. Vapor monitoring points SSMP-1 and SSMP-2 were relocated within 15 feet from their original installed locations when it was determined there were issues with obtaining measurements.

4.0 Conclusions/Recommendations

The SSDS installed to control VI within the building is operating as designed and the appropriate response measures have been taken to protect the health of building occupants. Results of IA testing and system effluent testing have shown that CVOC concentrations have improved with time and that the matrix values are being achieved even during the worst-case heating season.

It is recommended that the SSDS be operated until such time it can be shown that continued operation is no longer necessary. The system alarm and vacuum gauges should be checked periodically for proper operation. The blower shall be replaced if failure occurs or if vacuum cannot be maintained.

FIGURES



NOTES:
SOURCE: UNITED STATES GEOLOGICAL SURVEY MAP
HUNTINGTON, NY QUADRANGLE 7.5 MINUTES SERIES (2019)

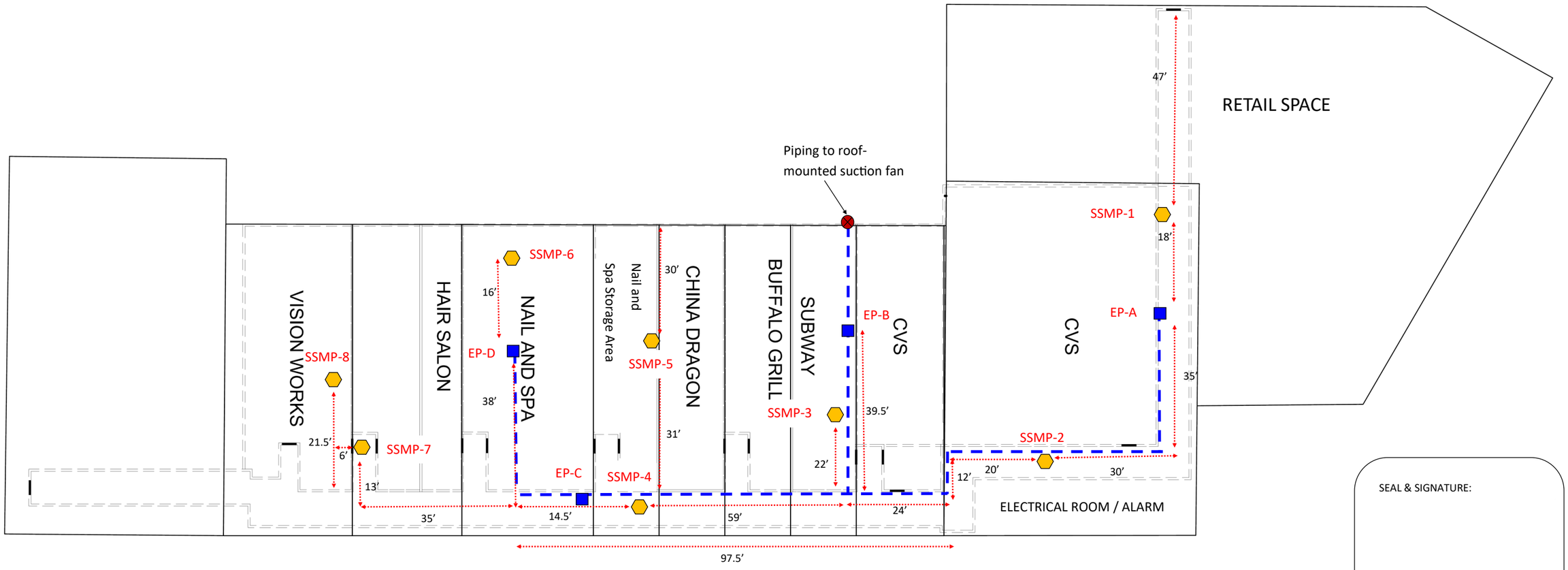
SITE LOCUS MAP			
Morton Village Plaza 1022 Old Country Road Plainview, NY	NOT TO SCALE Date: March 2022 Job No. 65720, 66845	FIGURE 1	VERTEX 400 LIBBEY PARKWAY WEYMOUTH, MA 02189 (T): 781.952.6000 VERTEXENG.COM

LEGEND

Extraction Point w/ Valve, Monitoring Point, & Vacuum Gauge (0 - 10 in WC) — EP-A

Sub-Slab Monitoring Point — SSMP-1

Extraction Piping



SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

	SCALE: 1” = APPROX 24 FEET WHEN PRINTED 11” X 17”. Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018	**SUB-SLAB DEPRESSURIZATION SYSTEM DESIGN** MORTON VILLAGE 1022 OLD COUNTRY ROAD, PLAINVIEW, NY	**FIGURE NO. 2** VERTEX Project Nos. 65720, 66845	**VERTEX ENGINEERING, PC**

LEGEND

- ROUX Indoor Air Sample Location
- ROUX Ambient Air Location
- VERTREX Indoor Air Sample Location
- VERTEX Ambient Air Location

VTX AA1

RETAIL SPACE

VTX IA5

VTX IA2

VTX IA3

VTX IA4

VISION WORKS

HAIR SALON

NAIL AND SPA

ART/FRAME

CHINA DRAGON

BUFFALO GRILLE

SUBWAY

CVS

CVS

VTX IA1

VTX IA6

Basement Hallway

Electrical Room

LOCATIONS ARE APPROXIMATE

	SCALE: 1” = APPROX 24 FEET WHEN PRINTED 11” X 17”. Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018	**INDOOR AIR SAMPLE LOCATIONS** MORTON VILLAGE 1022 OLD COUNTRY ROAD, PLAINVIEW, NY	**FIGURE NO. 3** VERTEX Project No. 65720	**VERTEX ENGINEERING, PC**

TABLES

Table 1

Flow and Vacuum Readings

Morton Village Plaza SSDS

VERTEX Project No. 66845

	1/19/2021		2/22/2021		3/15/2021		6/4/2021		3/9/2022
Riser ID	Flow (CFM)	Vacuum (In. H2O)	Flow (CFM)	Vacuum (In. H2O)	Flow (CFM)	Vacuum (In. H2O)	Flow (CFM)	Vacuum (In. H2O)	Vacuum (In. H2O)
A	4	4.6	19	5.785	18	5.549	20	5.9	4.25
B	2	6.5	11	6.070	11	5.823	11	5.9	4.5
C	7	2.0	39	5.765	35	5.558	32	5.9	4.25
D	5	3.5	22	5.675	20	5.641	21	5.9	4.0
Total	17		91		84		84		

Riser vacuum reading check on 2/14/2022, all fluctuating between 4 and 6 in. WC

Vacuum Readings

SSMP ID	1/19/2021	2/22/2021	3/15/2021	6/4/2021	3/9/2022
1	0.002*	0.004*	0.06*	0.088	---
2	-0.004*	-0.014*	0.004*	0.089	---
3	0.017*	0.130	0.143	0.225	---
4	0.03*	0.275	0.296	0.473	---
5	0.022	0.096	0.13	0.246	---
6	0.016	0.129	0.14	0.237	---
7	0*	0.005*	0.04*	0.144	---
8	not installed	not installed	not installed	not installed	0.018

Measurements reported in Inches Water Column (in. WC).

SSMP 8 installed later at the request of NYSDEC

NOTES:	* Incorrect blower motor supplied. Vacuum and flow lower than design.	Correct blower motor installed. *Attempted to improve readings by removing sub-slab port, inserting tubing, and sealing with clay. Results were similar to original readings.	*Reinstalled monitoring port, readings collected from new SSMP.		

Table 2
Indoor Air Results
Morton Village Plaza SSDS
VERTEX Project No. 66845

SAMPLE ID:	CAS	NY IAC-A	NY IAC-B	NY IAC-C	VTX-AAI				VTX-IA1				VTX-IA2				VTX-IA3				VTX-IA4				VTX-IA5				VTX-IA6			
LAB ID:					L2130400-07				L2130400-01				L2130400-02				L2130400-03				L2130400-04				L2130400-05				L2130400-06			
COLLECTION DATE:					6/4/2021				6/4/2021				6/4/2021				6/4/2021				6/4/2021				6/4/2021				6/4/2021			
SAMPLE MATRIX:					AIR				AIR				AIR				AIR				AIR				AIR				AIR			
ANALYTE		(ug/m3)	(ug/m3)	(ug/m3)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS IN AIR BY SIM																																
cis-1,2-Dichloroethene	156-59-2	0.2	NS	NS	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-	0.23		0.08	-	ND		0.08	-
Tetrachloroethene	127-18-4	NS	3	NS	0.37		0.14	-	2		0.14	-	1.76		0.14	-	1.91		0.14	-	1.46		0.14	-	5.47		0.14	-	0.71		0.14	-
Trichloroethene	79-01-6	0.2	NS	NS	ND		0.11	-	0.12		0.11	-	ND		0.11	-	ND		0.11	-	0.12		0.11	-	0.31		0.11	-	0.11		0.11	-
Vinyl chloride	75-01-4	NS	NS	0.2	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-

SAMPLE ID:	CAS	NY IAC-A	NY IAC-B	NY IAC-C	VTX-AAI				VTX-IA 1				VTX-IA 2				VTX-IA 3				VTX-IA 4				VTX-IA 5				VTX-IA 6			
LAB ID:					L2207873-07				L2207873-01				L2207873-02				L2207873-03				L2207873-04				L2207873-05				L2207873-06			
COLLECTION DATE:					2/14/2022				2/14/2022				2/14/2022				2/14/2022				2/14/2022				2/14/2022				2/14/2022			
SAMPLE MATRIX:					AIR				AIR				AIR				AIR				AIR				AIR				AIR			
ANALYTE		(ug/m3)	(ug/m3)	(ug/m3)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS IN AIR BY SIM																																
cis-1,2-Dichloroethene	156-59-2	0.2	NS	NS	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-	ND		0.08	-
Tetrachloroethene	127-18-4	NS	3	NS	ND		0.14	-	0.26		0.14	-	0.92		0.14	-	0.82		0.14	-	0.19		0.14	-	1.83		0.14	-	0.37		0.14	-
Trichloroethene	79-01-6	0.2	NS	NS	ND		0.11	-	ND		0.11	-	ND		0.11	-	ND		0.11	-	ND		0.11	-	ND		0.11	-	ND		0.11	-
Vinyl chloride	75-01-4	NS	NS	0.2	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-	ND		0.05	-

ND - Not Detected
NS - No Standard
AA - Ambient Air
IA - Indoor Air

NY-IAC-A: New York DOH Matrix A Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.

NY-IAC-B: New York DOH Matrix B Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.

NY-IAC-C: New York DOH Matrix C Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion, October 2006, and updated May 2017.

Table 3
Effluent Sample Results
Morton Village Plaza SSDS
VERTEX Project No. 66845

LOCATION	VTX-SSDS-EFF		VTX-EFFLUENT*	
SAMPLING DATE	3/12/2021		2/14/2022	
LAB SAMPLE ID	L2112332-01		L2207878-01	
SAMPLE TYPE	EFFLUENT VAPOR		EFFLUENT VAPOR	
ABALYTE	Results	Qual	Results	Qual
VOLATILE ORGANICS IN AIR BY SIM				
Dichlorodifluoromethane	2.31	U		
Chloromethane	0.964	U		
Freon-114	3.26	U		
Vinyl chloride (VC)	1.19	U	1.79	U
1,3-Butadiene	1.03	U		
Bromomethane	1.81	U		
Chloroethane	1.23	U		
Ethanol	443			
Vinyl bromide	2.04	U		
Acetone	45.8			
Trichlorofluoromethane	2.62	U		
Isopropanol	35.4			
1,1-Dichloroethene	1.85	U		
Tertiary butyl Alcohol	3.55	U		
Methylene chloride	4.06	U		
3-Chloropropene	1.46	U		
Carbon disulfide	1.45	U		
Freon-113	3.58	U		
trans-1,2-Dichloroethene	1.85	U		
1,1-Dichloroethane	1.89	U		
Methyl tert butyl ether	1.68	U		
2-Butanone (MEK)	6.75			
cis-1,2-Dichloroethene (c-1,2-DCE)	118		2.78	U
Ethyl Acetate	4.22	U		
Chloroform	2.28	U		
Tetrahydrofuran	6.87			
1,2-Dichloroethane	1.89	U		
n-Hexane	1.65	U		
1,1,1-Trichloroethane	2.55	U		
Benzene	1.49	U		
Carbon tetrachloride	2.94	U		
Cyclohexane	1.61	U		
1,2-Dichloropropane	2.16	U		
Bromodichloromethane	3.13	U		
1,4-Dioxane	1.68	U		
Trichloroethene (TCE)	62.3		3.77	U
2,2,4-Trimethylpentane	2.18	U		
Heptane	1.91	U		
cis-1,3-Dichloropropene	2.12	U		
4-Methyl-2-pentanone	4.79	U		
trans-1,3-Dichloropropene	2.12	U		
1,1,2-Trichloroethane	2.55	U		
Toluene	1.76	U		
2-Hexanone	1.91	U		
Dibromochloromethane	3.98	U		
1,2-Dibromoethane	3.59	U		
Tetrachloroethene (PCE)	1110		4.75	U
Chlorobenzene	2.15	U		
Ethylbenzene	2.03	U		
p/m-Xylene	4.05	U		
Bromoform	4.83	U		
Styrene	1.99	U		
1,1,2,2-Tetrachloroethane	3.21	U		
o-Xylene	2.03	U		
4-Ethyltoluene	2.3	U		
1,3,5-Trimethylbenzene	2.3	U		
1,2,4-Trimethylbenzene	2.3	U		
Benzyl chloride	2.42	U		
1,3-Dichlorobenzene	2.81	U		
1,4-Dichlorobenzene	2.81	U		
1,2-Dichlorobenzene	2.81	U		
1,2,4-Trichlorobenzene	3.47	U		
Hexachlorobutadiene	4.98	U		

Contaminants of Concern - PCE and daughter products
* = Only COCs analyzed for
Detections due to system installation PVC primer and glue
Sample from 2/14/22 was only analyzed for contaminants of concern

APPENDIX A

PREVIOUS ENVIRONMENTAL REPORTS

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Appendices *(Provided on CD in Bound Copy)*

Plates

1. INTRODUCTION

Roux Environmental Engineering and Geology, D.P.C. (Roux), has prepared this Interim Remedial Measure (IRM) Work Plan on behalf of the Morton Village Realty Co., Inc. (Morton Village) to detail the scope of work for the installation of an active sub-slab depressurization system (SSDS) beneath portions of the existing building located at the Morton Village Plaza Shopping Center (Shopping Center), 998-1064 Old Country Road, Plainview, New York (Site). The Site location map is provided as Figure 1.

The Site is currently listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 130201 with a Classification "2" pursuant to Environmental Conservation Law (ECL) 27-1305. The SSDS is being installed to address soil vapor intrusion of chlorinated volatile organic compounds (CVOCs) documented to be present in soil vapor beneath portions of the Site and indoor air in the basements of several tenant spaces. The soil vapor and indoor air impacts do not extend across the entire Shopping Center. The extent of impacts exceeding applicable criteria (discussed in Section 2.0), is shown on Plate 1. The observed impacts are likely due to undocumented releases of dry cleaning chemicals from the Morton Village Cleaners, a/k/a Classic French Cleaners, (former Cleaners) tenant space (1022 Old Country Road – currently occupied by a Subway restaurant).

This IRM Work Plan has been prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) procedures set forth in the document titled DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and complies with all applicable Federal, State and local laws, regulations and requirements.

1.1 Objectives and Scope of the IRM Work Plan

The proposed IRM will retrofit portions of the existing Shopping Center building, shown on Figure 2, with an SSDS capable of creating a negative pressure under the building and collecting potentially contaminated vapor for subsequent discharge to the atmosphere above the roof of the Site building. This IRM is a component of the overall investigation and remediation of the Site. It will address soil vapor intrusion issues. Additional remedial measures may be required based upon the results of a Remedial Investigation/Feasibility Study (RI/FS) currently being conducted for the Site, which will be submitted separately.

The remainder of this IRM Work Plan is organized as follows:

- Section 2: Site Background
- Section 3: Scope of Work
- Section 4: Soils/Materials Management Plan
- Section 5: Reporting
- Section 6: IRM Work Plan Implementation Schedule

1.2 Certification

I, Noelle Clarke, certify that I am currently a New York State registered professional engineer as defined in 6 NYCRR Part 375 and that this Interim Remedial Measure Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER-10.

Noelle Clarke		
NYS Professional Engineer # 072491	Date	Signature

2. SITE BACKGROUND

This section provides relevant Site background information.

2.1 Site Description and History

Property Location	
Property Name:	Morton Village Plaza
Property Description:	The property is occupied by Morton Village Plaza Shopping Center, which consists of four buildings situated on four adjacent lots (Lots 10, 86, 88 and 89). The on-Site buildings are currently occupied by various professional businesses, retail stores, and restaurants. The property is bordered by Knowles Street to the north, Old Country Road to the south, Lester Place to the east and Rex Place to the west.
Property Address:	998-1064 Old Country Road
Property Town, County, State:	Plainview, Nassau County, New York
Property Tax Identification:	Block 555 Lots 10, 86, 88 and 89
Property Topographic Quadrangle:	USGS Huntington Quadrangle, New York (1979)
Nearest Intersection:	Rex Place and Old Country Road
Area Description:	The area surrounding the Site is used mainly for residential purposes. Surrounding properties to the north, east and west are all residential properties. To the south of the Site, there are both residential properties as well as the Plainview-Old Bethpage Public Library.
Current Site Zoning:	Commercial-Use, 452.14 - Area/Neighborhood Shopping Center

Property Information	
Property Acreage:	9.936 acres (total)
Property Shape:	Rectangular
Property Use:	The property is currently occupied by various professional businesses, retail stores, and restaurants.
Number of Buildings:	Four
Number of Stories:	One two-story and three one-story buildings
Date of Construction:	c. 1956
Basement/ Slab-on-Grade:	Basement and Slab-on-grade
Number of Units:	27
Ceiling Finishes:	Acoustic ceiling tiles and exposed structural elements

Property Information	
Floor Finishes:	Carpet, tile and bare concrete
Wall Finishes:	Painted drywall and exposed structural elements
HVAC:	Natural Gas
Renovation Date:	Unknown
Renovation Description:	An extension was added to the northern side of the building A, bringing it to present day configuration
Vehicular Access:	Via Old Country Road, Rex Place, Knowles Street or Lester Place
Other Improvements:	Paved Parking Areas
Property Coverage:	Footprint of the buildings, sidewalks and associated parking areas

2.1.1 Site Operations

The Site is currently occupied by various professional businesses, retail stores, and restaurants. The former Cleaners tenant space is currently occupied by a Subway restaurant.

2.1.2 Topography/Hydrogeology

The property location is shown on the 1979 USGS Topographic Map of Huntington, New York. The surface elevation of the property is approximately 145 feet above mean sea level. Topography of the property slopes slightly to the south.

Groundwater was encountered at approximately 80 feet below ground surface (ft-bgs) during previous environmental investigations conducted by Roux. Based on the previous environmental investigations groundwater beneath the Site flows to the south.

2.2 Summary of Environmental Conditions

Previous investigations (soil, groundwater, and soil vapor sampling) performed at the Site from 2006 to 2011 identified petroleum-related compounds and CVOCs in the soil, soil vapor and groundwater, predominately tetrachloroethene (PCE) and trichloroethene (TCE), at the Site. The petroleum-related compounds were identified to be associated with a former underground storage tank (UST) that was located and removed from the rear of the former Cleaners during Site characterization work in 2008 conducted by Leggette, Brashears & Graham, Inc (LBG). The NYSDEC was notified and spill number 0800596 was assigned to the Site. Based upon a review of closure documentation, the spill number was subsequently closed by the NYSDEC on January 28, 2009. During excavation activities, a total of 250.31 tons of soil was removed from the Site for off-Site disposal. According to previous investigators, operations at the former Cleaners have resulted in contamination of the soil around a sump located at the northern edge of the Site building within the basement of the former Cleaners, as well as the groundwater and soil vapor in the vicinity of the former Cleaners. Based on Remedial Investigations (RI) completed by Roux in 2015 through 2018, groundwater, soil vapor and indoor air (in the basements of some retail spaces) at the Site have been impacted by CVOCs,

predominately PCE and TCE, above applicable regulatory guidance values. Prior to the 1970's, there were cesspools and leaching fields installed in the rear parking lot areas of Site. The Site's sanitary system was not connected to the Municipal sanitary sewer line until the 1970's. Soil samples collected in the vicinity of what is believed to be the former cesspools and around the former sump area below the basement of the Former Cleaners has not identified a source for the PCE and TCE detected in soil vapor and indoor air.

2.2.1 Inactive Hazardous Waste Disposal Site Number 130201

The Site is currently listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 130201 with a Classification "2" pursuant to Environmental Conservation Law (ECL) 27-1305. A Class 2 site is a site where hazardous waste presents a threat to public health or the environment, and a remediation action is required.

The NYSDEC and Morton Village entered into an Order on Consent in November 2014 to develop and implement an investigation and remedial program at the Site to define the nature and extent of any contamination resulting from previous activities of the former Cleaners.

2.2.2 Previous Environmental Sampling

The following is a brief summary of environmental sampling conducted at the Site, focusing on soil vapor and indoor air results. A complete description of previous environmental sampling conducted at the Site will be included in the RI/FS. A description of previous environmental sampling conducted at the Site by others between 2006 and 2011 is included in the NYSDEC-approved Remedial Investigation Work Plan (RIWP) prepared by Roux, dated September 2015 based on a review of the following reports:

- Subsurface Investigation Letter Report - Dry Cleaning Operation - Morton Village Plaza prepared by Galdun Frankel Environmental dated October 2006 on behalf of Morton Village Realty Co., Inc.;
- Environmental Site Assessment - Phase II Report prepared by LBG dated September 2007 on behalf of Morton Village Realty Co., Inc.;
- UST Closure and Remedial Summary Report - Former Classic French Cleaners - Morton Village Shopping Center prepared by LBG dated September 2008 on behalf of Morton Village Realty Co., Inc.;
- Phase I Environmental Assessment - Morton Village Plaza prepared by LBG dated February 2009 on behalf of Morton Village Realty Co., Inc.; and
- Site Characterization Report - Former Morton Village Cleaners prepared by HRP Associates, Inc. dated August 2011 on behalf of the NYSDEC.

During Remedial Investigation (RI) activities conducted by Roux between 2015 and 2017, a total of 17 sub-slab soil vapor, 16 indoor air and eight soil vapor samples were collected at the Site. All sample locations are shown on Figure 2. Below is a summary of PCE and TCE concentrations only (Tables 1 and 2) detected

in sub-slab soil vapor and corresponding indoor air, and soil vapor samples collected at the Site. Additionally, Table 1 below includes the New York State Department of Health (NYSDOH) Matrices Stage, included in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006 and revised in May 2017 (NYSDOH Guidance; Appendix A), for each sample:

Table 1: Sub-Slab Soil Vapor/Indoor Air PCE and TCE Concentrations

Sample Location	Sample Date	PCE Sub-Slab Concentrations / Sample Designation ($\mu g/m^3$)	PCE Indoor Air Concentrations / Sample Designation ($\mu g/m^3$)	TCE Sub-Slab Concentrations / Sample Designation ($\mu g/m^3$)	TCE Indoor Air Concentrations / Sample Designation ($\mu g/m^3$)	NYSDOH Matrices Stage
Card Store*	11/20/2017	145 (OSV-11) 3.72 (OSV-12)	0.658 (IA-CS-1) 0.80 (IA-CS-2)	4.12 (OSV-11) ND (OSV-12)	0.231 (IA-CS-1) 0.199 (IA-CS-2)	No Further Action
Liquor Store**	11/20/2017	26 (OSV-10)	1.66 (IA-LQ-1)	9.4 (OSV-10)	0.161 (IA-LQ-1)	No Further Action
Dance Studio**	11/20/2017	1.51 (OSV-9)	0.834 (IA-DS-1)	ND (OSV-9)	0.302 (IA-DS-1)	No Further Action
CVS*	3/21/2017 11/20/2017	12,900 (OSV-3) 12,700 (OSV-4) 2,470 (OSV-8)	160 (IA-CVS-1) 66.8 (IA-CVS-2) 113 (IA-CVS-4)	1,210 (OSV-3) 1,300 (OSV-4) 178 (OSV-8)	6.56 (IA-CVS-1) 3.12 (IA-CVS-2) 4.22 (IA-CVS-4)	Mitigate
CVS**	3/21/2017	60.80 (OSV-5)	3.47 (IA-CVS-3)	6.18 (OSV-5)	0.167 (IA-CVS-3)	No Further Action
Former Cleaners*	3/22/2016	18,800 (SV-1) 14,200 (SV-2) 1,500 (SV-3 DUP) 1,170 (SV-4)	24.8 (IA-1_Basement)	1,280 (SV-1) 763 (SV-2) 66.6 (SV-3 DUP) 67.7 (SV-4)	0.79 (IA-1_Basement)	Mitigate
Buffalo Grille*	3/21/2017	9,760 (OSV-2)	26.4 (IA-BG)	519 (OSV-2)	1.3 (IA-BG)	Mitigate
Nail and Spa 2000*	11/20/2017	104 (OSV-6) 115 (OSV-7)	13.4 (IA-NS-1) 18.9 (IA-NS-2)	4.77 (OSV-6) 9.3 (OSV-7)	0.564 (IA-NS-1) 0.785 (IA-NS-2)	Mitigate
VisionWorks*	3/21/2017	21.6 (OSV-1)	7.53 (IA-VW)	ND (OSV-1)	0.355 (IA-VW)	No Further Action

* - Basement

** - Slab-on-grade

$\mu g/m^3$ - Micrograms per cubic meter

NYSDOH – New York State Department of Health

ND - Not Detected

DUP - Duplicate sample

Table 2: Soil Vapor PCE and TCE Concentrations

Sample Location	Sample Date	PCE Concentrations ($\mu g/m^3$)	TCE Concentrations ($\mu g/m^3$)
SV-5	11/2/2016	4.23	12.5
SV-6	11/2/2016	314	114
SV-7	11/4/2016	30,700	2,600
SV-8	11/2/2016	649	5.7
SV-9	11/2/2016	342	11.2
SV-10	3/21/2017	ND	ND
SV-11	3/21/2017	11.7	ND

$\mu g/m^3$ - Micrograms per cubic meter

Based on a comparison PCE and TCE concentrations detected in sub-slab soil vapor and indoor air samples to the NYSDOH Soil Vapor/Indoor Air Matrices, PCE and TCE concentrations detected in sub-slab and indoor air samples collected within the spaces currently occupied by CVS, former Cleaners, Buffalo Grille and Nail and Spa 2000 require mitigation. Therefore, all tenant spaces between Vision Works on the western side of the Shopping Center and CVS in the central portion of the shopping center will be addressed by the proposed SSDS.

3. SCOPE OF WORK

The scope of work for the IRM consists of the following tasks:

- Site mobilization and Site preparation;
- Installation of the SSDS components;
- Waste disposal (assumed to be minimal); and
- Documentation.

Implementation of the IRM will be in accordance with the Soils/Materials Management Plan (SoMP) included in Section 4 of this IRM Work Plan.

3.1 Mobilization and Site Preparation

A project kick-off meeting will be conducted with NYSDEC, Morton Village, Roux and the selected Contractor prior to the commencement of any intrusive activities, if requested by NYSDEC. The Contractor will supply any labor (HAZWOPER Certified in accordance with OSHA 1910.120) and materials required for the implementation of the IRM scope of work. In addition, necessary permits, insurance, bonds, and licenses required to complete the work will be obtained and fees necessary to obtain these permits will be paid. Mobilization and Site preparation activities include:

1. Mobilization of equipment to the work area;
2. Installation of work area delineation zones;
3. Installation of sub-slab suction points and laterals;
4. Installation of header piping and roof leaders;
5. Installation of blowers on roof; and
6. Demobilization of equipment.

3.2 SSDS Installation

Sub-slab soil vapor samples collected during the RI detected elevated concentrations of PCE and TCE on-Site; therefore, an active SSDS is proposed to be installed beneath the portions of the Site building shown on Plate 1 to address potential exposure pathways. The proposed active SSDS will include vertical polyvinyl chloride (PVC) suction points and horizontal perforated PVC suction laterals to be retrofitted into the existing building foundation while maintaining the structural integrity of the foundation. The testing of the SSDS will be completed following installation.

The active SSDS for the Site, when complete, will consist of a network of vertical suction points and horizontal suction laterals creating a vacuum influence beneath the portion of the building basement slab shown on Drawing 1 (Appendix B), and two vacuum blowers (one for the east side of the building and one for the west side). The SSDS will be designated SSDS-East and SSDS-West. The SSDS floor plan design and piping details are provided in Appendix B. A description of the proposed active SSDS is provided below.

- All existing interior utility and slab penetrations will be sealed with silicone caulking, to the extent feasible.
- Five vertical suction points and two horizontal suction laterals will be installed to create the required vacuum influence below the basement slab of portions of the Site building. All suction points and laterals will consist of 4-inch PVC piping.
- Each suction point and lateral will have a shut off valve and vacuum gauge.
- The piping from the suction points and laterals will be brought to the roof along the interior of the building and be manifolded to two separate headers. Each header will be connected to a vacuum blower on the roof of the building. A 5.5 horsepower (Hp) explosion proof vacuum blower (East Blower) will be provided for the suction points located on the west side of the building and a second 5.5 Hp explosion proof vacuum blower (West Blower) will be provided for the suction points located on the east side of the building. The drawing in Appendix B shows suction points/laterals and piping associated with Blower B (West) in red and suction points/laterals associated with Blower A (East) in blue. Blowers and piping headers will be located on the roof, as not to interfere with the existing Site use.
- Any interior piping will be routed around existing heating, ventilation, and air conditioning (HVAC) ducts and utility pipes and supported, as needed. Exterior piping will be supported appropriately.
- Extracted vapor evaluation:
    - A Division of Air Resources (DAR 1) screening analysis was performed for selected compounds identified in the sub-slab soil vapor samples to determine if the estimated emissions from the operation of the active SSDS would exceed the permissible limits. Appendix C presents the DAR 1 screening level worksheet for the evaluation of PCE, TCE and 1,2-Dichloroethane (DCE), which were identified as the constituents of concern for the evaluation based on the relatively high concentrations observed in the sub-slab soil vapor samples and the low guidance concentrations (i.e., allowable discharge limits). The DAR 1 evaluation was employed using the contaminant emission rate (pounds per hour) based on the vapor samples collected in March 2016 and March 2017. The emission impacts were compared to the annual guidance concentration (AGC) values and the short-term guidance concentration (SGC) values from the July 14, 2016 DAR 1 AGC/SGC Tables. Based on the DAR 1 analysis, the estimated contaminant emission rates are below the AGC and SGC values for PCE, TCE and DCE and therefore vapor treatment is not required prior to discharge. This will be confirmed during SSDS start-up testing, as described in Section 3.3.
- Each vacuum blower will be installed on the roof on timber supports. The discharge stacks will extend a minimum of 10 feet above the roof line, and will be supported as necessary. The discharge points will be located a minimum of 10 feet from any HVAC air inlets and the building edge.
- Eleven sub-slab soil vapor monitoring points will be used to monitor the performance of the SSDS. Four new monitoring points (MP-1 through MP-4) will be installed approximately where shown on Drawing 1 in Appendix B and seven existing sub-slab sampling points (SV-2, OSV-1, OSV-2, OSV-4, OSV-6, OSV-7 and OSV-8) will be used.
- The blowers were designed with excess capacity so additional suction points can be added if adequate depressurization of the sub-slab is not achieved. Capped PVC tees were included in the piping design to facilitate future connection of additional suction points, if necessary.

3.3 SSDS Startup and Testing

Performance monitoring will be performed on SSDS-East and SSDS-West as part of the SSDS start-up to verify that the systems are operating properly and will consist of the following for each system:

- Confirm operation of the local alarm warning light and remote alarm;
- Confirm acceptable air flow rate (90 to 180 cubic feet per minute [cfm]) from the SSDS blower by a visual inspection of gauges affixed to each blower;
- Confirm acceptable negative pressure readings (-20 to -50 inches of water column) from the SSDS and suction points by a visual inspection of gauges to each blower and suction point or lateral;
- Confirm acceptable negative differential pressure (a minimum of -0.004 inches of water column) beneath the building from monitoring points by using an appropriate micromanometer;
- Collect photoionization detector (PID) readings; and
- Collect confirmation effluent air samples.

Negative differential pressure measurements will be collected from the soil vapor monitoring points shown on SSDS Drawing 1 included in Appendix B. The negative pressure measurements will be collected using a micromanometer capable of monitoring differential pressure at a minimum of 0.001 inches of water column. If adequate depressurization (e.g., negative differential pressure of at least -0.004 inches of water column) is not occurring, the cause for the lack of depressurization will be investigated and repaired, and measurements will be collected again.

Following the initial start-up, performance monitoring of the SSDS will also include monitoring the system effluent VOC concentrations using a PID. In addition, during start-up of the SSDS, an effluent air sample will be collected from the discharge of each blower using a Summa canister and analyzed using USEPA TO-15 to verify that vapor treatment is not needed. The effluent air sample results will be compared to the DAR-1 Air Guide guidance values. If the sample results indicate that treatment is required, appropriate treatment options will be evaluated and installed.

The system testing described above (excluding effluent air sampling) will be conducted if, in the course of the SSDS lifetime, significant changes are made to the SSDS, or if the system is shut down for an extended period for any reason, and the system must be restarted.

3.4 SSDS Operation, Maintenance and Monitoring (O, M &M)

O, M & M procedures for the SSDS will be included in the Site Management Plan (SMP) for the Site, but are outlined herein for the period prior to the SMP being in place.

3.4.1 System Operation: Routine Operation Procedures

Routine operation procedures will consist of monitoring the vacuum at the blower inlet and recording dilution valve setting (i.e., 50% open).

3.4.2 System Operation: Routine Equipment Maintenance

The routine maintenance activities include visual inspections, operating data collection and general maintenance. Visual inspection is the routine part of the SSDS operator's activities. The system operator will note any conditions that present a potential hazard or could cause future system shutdown. In the field, special attention will be paid to the condition of the blower and appurtenances, and the above slab discharge piping and supports. Special attention will also be given to any unusual or excessive noise or vibrations from the piping and blower. The piping and valves will be inspected for leaks.

All equipment maintenance and inspections will be performed in accordance with manufacturer's instructions (see Appendix D for specifications). Specific routine maintenance tasks are outlined below:

- Inspect control panel and warning lights/alarms and remote alarm;
- Inspect blower piping to confirm operation of appropriate valves (i.e., dilution valve);
- Inspect vacuum/pressure gauges for proper operation;
- Check and clean air filter on moisture knockout tank; and
- Check for the presence of and remove water in knockout tank.

In the event that a condition warranting system component maintenance is identified, the appropriate reporting and maintenance should be conducted immediately. Manufacturer's recommendations for system component maintenance are included in the component manuals in Appendix D. Any maintenance completed for the SSDS should be documented in the Maintenance Log included in Appendix E.

3.4.3 System Operation: Non-Routine Equipment Maintenance

Non-routine equipment maintenance consists of maintenance activities that will be performed with less frequency than the routine maintenance (i.e., semi-annually) on several system components. Specific non-routine maintenance tasks are outlined below:

- Inspect and test local and remote alarms;
- Check float switch in each knockout tank for proper operation;
- Replacement of vacuum/pressure gauges; and
- Change bearings on blowers after 15,000 hours of operation.

Most damage or problems associated with SSDS components will trigger one of the alarms. Damage to any SSDS components will be noted during the routine and detailed system inspections and remedied upon identification.

Accumulated condensate will be containerized in a 55-gallon drum for future off-Site disposal, if necessary based upon sample results from the first batch of drummed condensate and pending NYSDEC Contained-In Determination approval. Manufacturer's recommendations for SSDS component maintenance are included in the component manuals in Appendix D. Any maintenance completed for the SSDS should be documented in the SSDS Log included in Appendix E.

In the event that low SSDS air flow rates or vacuum are observed anywhere in the SSDS, further SSDS balancing may be necessary following moisture removal, to ensure that the combined air flow rates and vacuum in a given area of the Site achieve the minimum design requirements.

3.5 Waste Disposal

All wastes generated during the installation of the SSDS will be handled, transported and disposed of in a manner consistent with Federal, State and local laws and regulations. A limited amount of soil is anticipated to be generated during SSDS installation since the majority of the SSDS piping will be installed above the basement concrete slab/floor. However, based on results of soil samples collected during RI activities, soil containing elevated concentration of CVOCs is not anticipated to be encountered during SSDS installation and is expected to be declassified as non-hazardous waste under the NYSDEC Contained-In Determination Policy and disposed of as non-hazardous waste, pending NYSDEC approval.

3.6 Documentation

Detailed information regarding the IRM (e.g., as-built drawings, waste disposal documentation, backfill documentation, photographs, etc.) will be included in the Construction Completion Report (CCR) described in Section 5.

4. SOIL/MATERIALS MANAGEMENT PLAN

Although the amount of earthwork is expected to be very limited, the following sections provide the SoMP to be implemented during the IRM, as necessary.

4.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed during SSDS installation activities under the supervision of Roux personnel.

4.2 Containerization of Waste

All soil generated during SSDS installation will be containerized in labeled, New York State Department of Transportation (NYSDOT) rated 55-gallon drums or roll-off containers, which will be fitted with tight fitting covers. If waste is determined to be hazardous, it will be disposed of within 90 days of generation at an approved hazardous waste disposal facility.

4.3 Characterization of Excavated Materials

Soil/fill or other excavated media that will be transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations.

4.4 Materials Excavation and Load Out

Roux will oversee all invasive work and the excavation and load-out of all excavated material. The quantity of waste is expected to be very limited and it will be containerized in drums for disposal. Loadout and trucking of bulk waste is not expected.

Morton Village and its contractors are solely responsible for safe execution of all invasive and other work performed under this SoMP. Support of excavation, though unlikely due to the nature of the work, will be provided, if necessary, based upon Site conditions and local 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.

The proposed inbound truck route to the Site is:

Take I-278 to I-495 (Long Island Expressway) east in New York. Take exit 44 S, NY-135 S toward Seaford. Take exit 10 from NY-135 S and make a left onto Old Country Road (east bound). Entrance to the Site will be on the left.

The proposed outbound truck route from the Site is:

Take Old Country Road (west bound) to NY-135 N toward Syosset. Take exit 13W (I-495 W) to exit 17 (I-278).

These are the most appropriate routes and take into account: (a) limiting transport through residential areas and past sensitive sites; (b) prohibiting off-Site queuing of trucks entering the facility; (c) limiting total distance to major highways; (d) promoting safety in access to highways; and (e) overall safety in transport. To the extent possible, trucks will travel to/from the Site using these approved truck routes.

Trucks will avoid stopping and idling in the neighborhood outside the project Site, to the extent practicable. Queuing of trucks will be performed on-Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during the IRM implementation.

4.6 Materials Disposal Off-Site

All soil/fill/solid waste excavated and removed from the Site will be disposed of in accordance with regulatory requirements based on the levels of contamination found to be present in waste characterization samples collected.

The following documentation will be obtained and reported for each disposal location used in this project to demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter or facility-specific waste profile/application from Roux or Morton Village to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter/profile/application will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of Roux or Morton Village. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the CCR; and (3) a Contained-In Determination approval from the NYSDEC declassifying the waste as non-hazardous, unless waste characterization sampling indicates the waste is characteristically hazardous.

The CCR will include an accounting of the destination of all material removed from the Site during this IRM. This information will also be presented in a tabular form in the CCR.

A Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the CCR.

Hazardous and non-hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

4.7 Materials Reuse On-Site

Soil reuse is not anticipated as part of the IRM.

4.8 Fluids Management

Liquids (if any) to be removed from the Site will be handled, transported and disposed in accordance with applicable laws and regulations. Liquid waste manifests will be reported to NYSDEC in the CCR.

Characterization of fluids for off-Site disposal will be performed in a manner suitable to the receiving facility and in conformance with applicable permits.

4.9 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by Roux and will be in compliance with provisions in this IRM prior to receipt at the Site.

Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site. Solid waste will not be imported onto the Site.

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC approved backfill or cover soil quality objectives are the lower of the protection of groundwater or the protection of public health soil cleanup objectives for Commercial or higher use as set forth in Table 375-6.8(b) of 6 NYCRR Part 375. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved IRM Work Plan or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this IRM Work Plan should be construed as an approval for this purpose.

In accordance with DER-10, the following material may be imported, without chemical testing, to be used as backfill beneath pavement, buildings or as part of the final Site cover, provided that it contains less than 10% by weight material which would pass through a size 80 sieve and consists of:

- Gravel, rock or stone, consisting of virgin material from a NYSDEC permitted mine or quarry; or
- Recycled concrete or brick from a NYSDEC registered construction and demolition debris processing facility if the material conforms to the requirements of Section 304 of the New York State Department of Transportation *Standard Specifications Construction and Materials Volume 1* (2002).

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

4.10 Stormwater Pollution Prevention

Although disturbance of soil outside the building footprint is not expected to be part of the scope, if changes to the scope require soil disturbance outside the building footprint, applicable laws and regulations pertaining to stormwater pollution prevention will be addressed. If necessary, erosion and sediment control measures (silt fences and/or barriers, and/or hay bale checks) will be installed, as appropriate, around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs to erosion and sediment controls shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

4.11 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during implementation of the IRM. Due to the nature of the proposed work, discovery of previously unknown USTs is extremely unlikely.

If previously unidentified contaminant sources are found during implementation of the IRM, sampling will be performed on potentially contaminated source material and surrounding soils and reported to NYSDEC. Chemical analytical work will be for full suite of parameters (target compound list [TCL] VOCs, TCL semivolatile organic compounds [SVOCs], target analyte list [TAL] metals, TCL polychlorinated biphenyls [PCBs], pesticides and herbicides).

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will also be included in weekly and periodic electronic reports.

4.12 Community Air Monitoring Plan (CAMP)

Due to the nature of the work, with no intrusive work occurring outside the footprint of the building, community air monitoring is not required. If the scope changes, NYSDEC will be notified and a CAMP will be prepared. Health and safety monitoring for workers will be performed in accordance with the Health and Safety Plan (HASP; Appendix F).

4.13 Odor, Dust and Nuisance Control Plan

The CCR will include the following certification by the certifying professional engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the IRM Work Plan."

4.13.1 Odor Control Plan

In addition to the health and safety monitoring described in the HASP (Appendix F), Roux will closely monitor the presence of odors emanating from the work area within the building. This odor control plan is capable of controlling emissions of nuisance odors on-Site. Due to the nature of the project, with all intrusive work occurring in the basement of the existing building, t nuisance odor will not be generated at the sidewalk level surrounding the Site. The HASP will contain specific measures to address potential worker exposure to airborne contaminants during the IRM implementation. Specific odor control methods to be used on a routine basis will include limiting open excavation areas, keeping excavations covered, and covering excavated soil (i.e., in covered drums). If nuisance odors are identified, 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 all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of Roux, who is responsible for certifying the CCR and its subcontractors.

Odor controls will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of odor suppressants to cover exposed odorous soils.

4.13.2 Dust Control Plan

Due to the nature of the project, with excavation occurring in the basement of the existing building, generation of nuisance dust at the sidewalk level surrounding the Site will not occur. The HASP will contain specific

measures to address potential worker exposure to airborne particulates during the IRM implementation. 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 through the use of water for wetting excavation areas. Water will be available on-Site at suitable supply and pressure for use in dust control.

4.13.3 Other Nuisances

Noise control will be exercised during the remedial program.

5.0 REPORTING

5.1 Weekly Reporting During Site Activities

Weekly reports to NYSDEC and NYSDOH will be submitted during the weeks when IRM activities take place. Weekly reports will include an update of progress made during the reporting period; locations of work and quantities of material imported and exported from the Site; a summary of any and all complaints with relevant details (names, phone numbers); a summary of CAMP readings, if implemented, and an explanation of notable Site conditions, etc. If any issues arise (i.e., issues with the CAMP, if implemented) then daily notification will be provided to NYSDOH and NYSDEC.

5.2 Construction Completion Report (CCR)

Detailed information regarding the IRM (e.g., general description of the construction activities, as-built of the SSDS, waste disposal documentation, backfill documentation, photographs, etc.) will be included in the CCR. The CCR will be submitted within 60 days after the data usability summary report (DUSR) is complete for any vapor samples collected during the SSDS start-up.

6.0 IRM IMPLEMENTATION SCHEDULE

This IRM Work Plan is anticipated to begin in the third quarter of 2018 and will require approximately four to six weeks to complete. It is anticipated that the actual on-Site duration of major remedial construction tasks will be completed as follows (time frames are not necessarily consecutive):

- Site Mobilization and Preparation ..... one day
- SSDS Installation ..... four to five weeks
- SSDS Startup and Testing ..... two days
- Transportation and Off-Site Disposal ..... one day
- Site Restoration and Demobilization ..... one day
- Submittal of CCR After Startup and Testing Completed ..... 60 days

MEMORANDUM

Date: April 26, 2019

To: Mr. Joseph Jones

From: Jeff Wills, Roux Environmental Engineering and Geology, D.P.C.

CC: John Patrick Curran, Esq., Sive Paget & Riesel P.C.
Joseph Duminuco, Roux Environmental Engineering and Geology, D.P.C.
Alex Schoenbart, NYSDEC
Robert Corcoran, NYSDEC
Walter Parish, RHWRE
Alali Tamuno, NYSDEC
Dawn Hettrick, NYSDOH
Charlotte Bethoney, NYSDOH

Subject: Site No. 130201, Former Morton Village Cleaners, IRM Work Plan Response Letter
1022 Old Country Road
Plainview, New York

Roux Environmental Engineering and Geology, D.P.C. (Roux), on behalf of Morton Village Realty Co., Inc., has prepared this memorandum in response to the New York State Department of Environmental Conservation's (NYSDEC) comment letter dated February 19, 2019 for the disapproval of the June 2018 Interim Remedial Measure (IRM) Work Plan. The NYSDEC comments are italicized below followed by Roux's responses.

February 19, 2019 NYSDEC Letter:

1. *Suction laterals of the sub-slab depressurization system (SSDS) should be pitched away from extraction points to prevent pooling of condensate in the bottom of vertical risers. If sufficient water accumulates in the bottom of a riser, the section will fail to provide negative pressure under that portion of the building serviced by that section of the SSDS.*

Roux's Response: Suction laterals of the SSDS will be pitched away from the extraction points to the extent feasible. The SSDS drawing, included in the IRM Work Plan, will be updated to include this information.

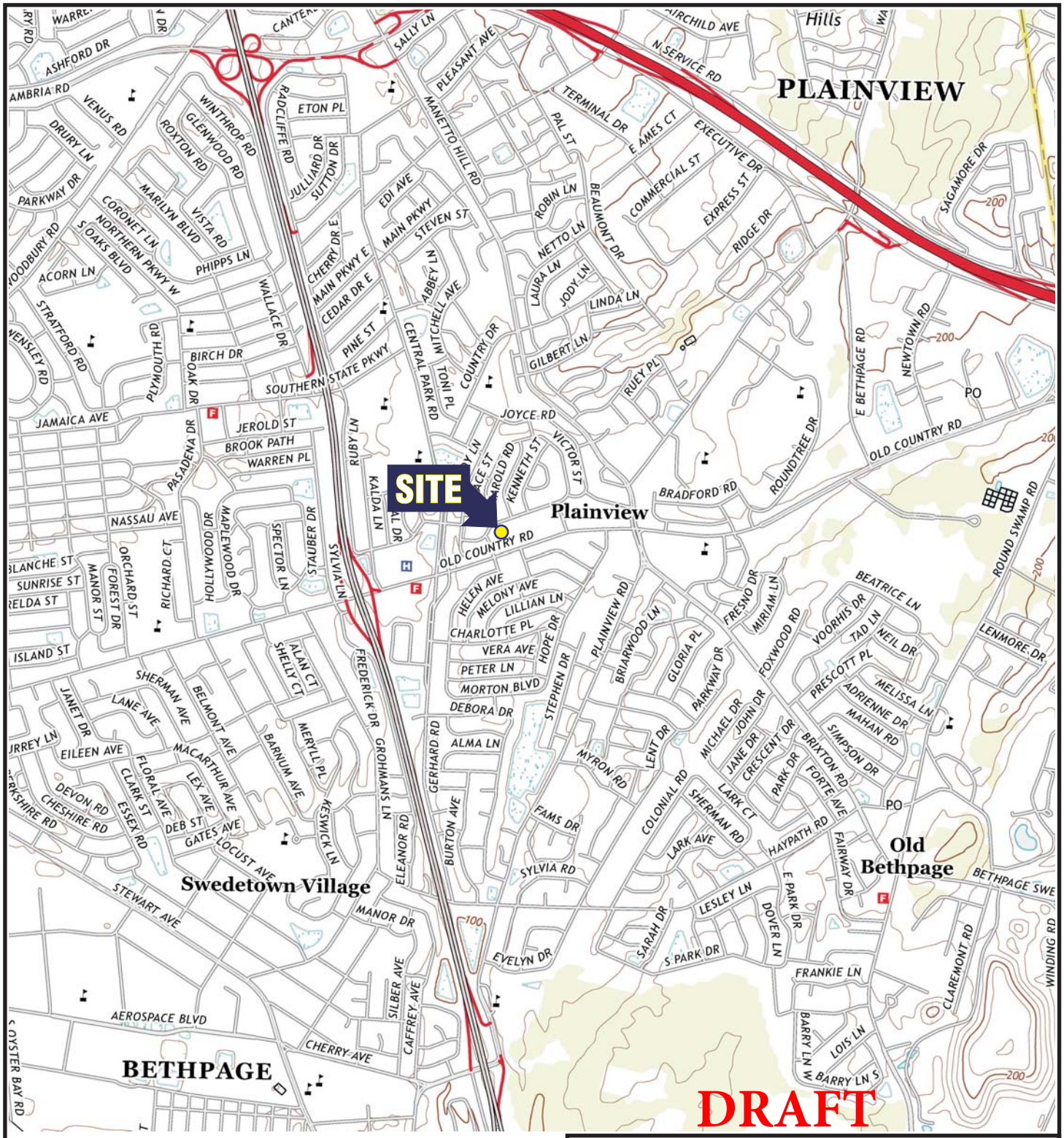
2. *No community Air Monitoring Program (CAMP) has been proposed because all the work is presumed to be contained inside a building. This is acceptable if the work area is vacant and will only be occupied by workers doing remedial work. However, if there are any people within the area where the SSDS or any of its elements are being installed, measures will be needed to monitor air quality and prevent exposures. Please clarify and/or provide a CAMP that considers the actual conditions where work is to be performed.*

Roux's Response: The IRM Work Plan will be revised to include CAMP during all invasive work.

3. *Daily reports (not weekly reports) are to be submitted during the IRM installation.*

Roux's Response: The IRM Work Plan will be revised to include daily report submittals in place of weekly reports.

209 Shafter Street ■ Islandia, New York 11749 ■ +1.631.232.2600 ■ www.rouxinc.com
California ■ Illinois ■ Massachusetts ■ New Jersey ■ New York ■ Texas



QUADRANGLE LOCATION

SOURCE:
USGS; 2013, HUNTINGTON, NY
7.5 Minute Topographic Quadrangle

N

0 2000'

Title:

SITE LOCATION MAP

1022 OLD COUNTRY ROAD
PLAINVIEW, NEW YORK

Prepared for:

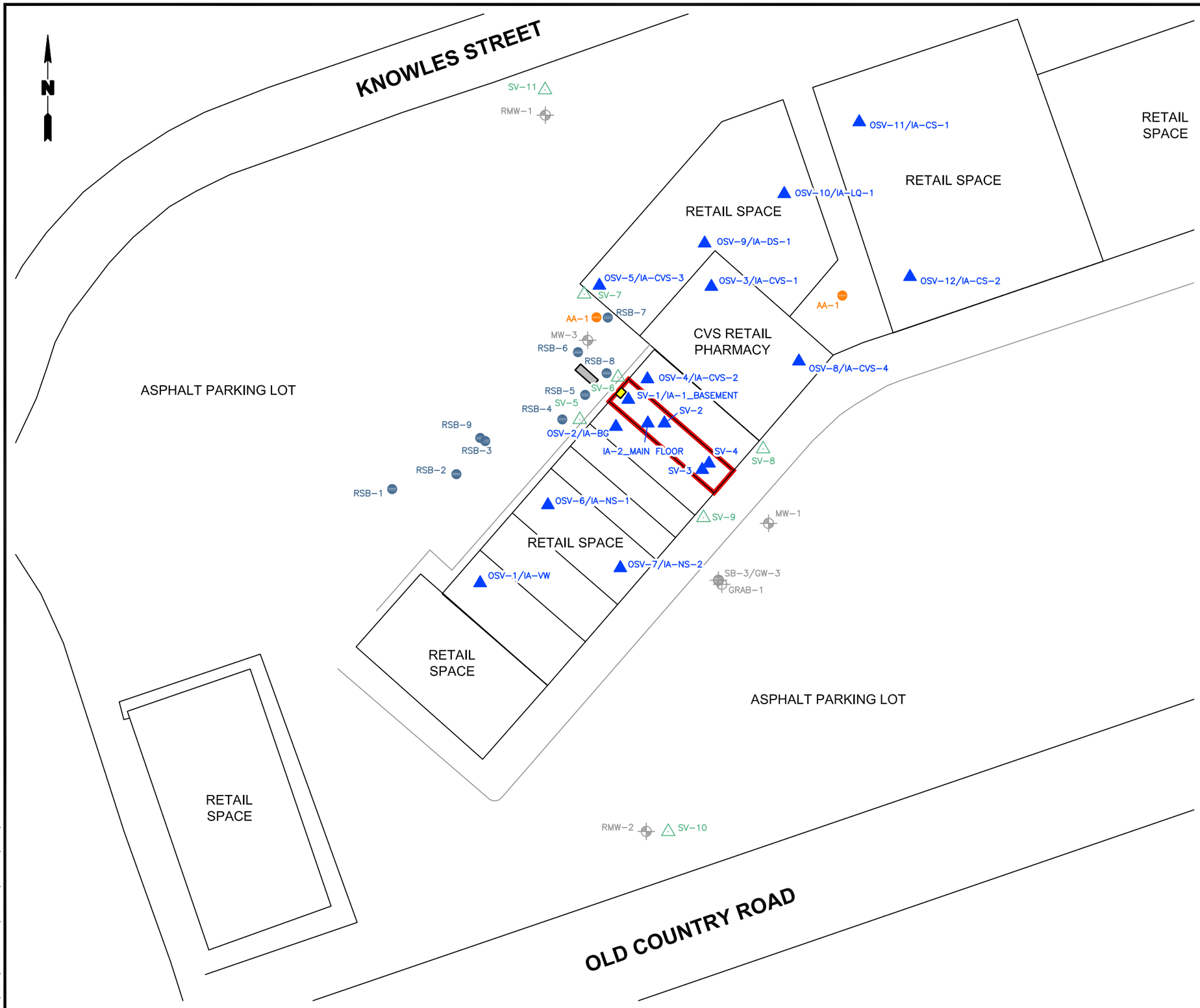
MORTON VILLAGE REALTY CO., INC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.W.	Date: 05JAN14
Prepared by: J.A.D.	Scale: AS SHOWN
Project Mgr.: J.W.	Project No.: 2517.0001Y000
File: 2517.0001Y101.01.CDR	

FIGURE 1

V:\CAD\PROJECTS\2517\Y0001Y\10\12517.0001Y101.01.CDR



LEGEND

- MW-1 — LOCATION AND DESIGNATION OF EXISTING MONITORING WELL INSTALLED BY LEGGETTE, BRASHEARS & GRAHAM, INC IN 2007
- SB-1/GW-1 — LOCATION AND DESIGNATION OF SOIL BORING/GROUNDWATER GRAB SAMPLE INSTALLED BY HRP ASSOCIATES IN 2010
- RSB-1 — LOCATION AND DESIGNATION OF SOIL BORING
- RMW-1 — LOCATION AND DESIGNATION OF UP-GRADIENT MONITORING WELL
- GRAB-1 — LOCATION AND DESIGNATION OF GROUNDWATER GRAB SAMPLE
- SV-2 — LOCATION AND DESIGNATION OF SUB-SLAB SOIL VAPOR AND INDOOR AIR SAMPLE
- SV-5 — LOCATION AND DESIGNATION OF SOIL VAPOR MONITORING POINT
- AA-1 — LOCATION AND DESIGNATION OF OUTDOOR AMBIENT AIR SAMPLE
- APPROXIMATE LOCATION OF FORMER UST
- APPROXIMATE LOCATION OF FORMER SUMP
- FORMER MORTON VILLAGE CLEANERS LOCATION

SOURCE

HRP ASSOCIATES, INC., SITE CHARACTERIZATION REPORT AUGUST 2011.

DRAFT

50' 0 50'

Title:

SAMPLE LOCATIONS

1022 OLD COUNTRY ROAD
PLAINVIEW, NEW YORK

Prepared For:

MORTON VILLAGE REALTY CO., INC.

ROUX	Compiled by: J.W.	Date: 23MAY18	FIGURE 2
	Prepared by: G.M.	Scale: AS SHOWN	
	Project Mgr: J.W.	Project: 2517.0001Y000	
	File: 2517.0001Y118.01.DWG		

V:\CAD\PROJECTS\2517Y\0001Y\118\2517.0001Y118.01.DWG

AIR AND SOIL VAPOR RESULTS

IA-CVS-3	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	43.7
Benzene	0.661
Carbon Tetrachloride	0.428
Chloromethane	1.15
Dichlorodifluoromethane	1.57
Ethanol	181
Ethyl Acetate	2.28
Isopropanol	11.6
Tert-Butyl Alcohol	15
Tetrachloroethene (PCE)	3.47
Toluene	1.53
Trichloroethylene (TCE)	0.167
Trichlorofluoromethane	3.59

OSV-5	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	12.7
Cis-1,2-Dichloroethylene	6.03
Ethanol	45.4
Isopropanol	2.73
m,p-Xylene	3.85
O-Xylene (1,2-Dimethylbenzene)	2.01
Tetrachloroethene (PCE)	60.8
Toluene	10.1
Trichloroethene (TCE)	6.18
Trichlorofluoromethane	8.99

IA-CVS-1	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	61.5
Benzene	0.754
Carbon Tetrachloride	0.459
Chloroform	1.03
Chloromethane	1.63
Cis-1,2-Dichloroethylene	3.45
Dichlorodifluoromethane	1.25
Ethanol	390
Ethyl Acetate	22.5
Isopropanol	20.3
Methylene Chloride	2.29
Tert-Butyl Alcohol	10.8
Tetrachloroethene (PCE)	160
Toluene	2.76
Trichloroethene (TCE)	6.56
Trichlorofluoromethane	3.02

SV-11	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	29.5
Dichlorodifluoromethane	1.28
m,p-Xylene	2.47
Methyl Ethyl Ketone (2-Butanone)	4.48
O-Xylene (1,2-Dimethylbenzene)	1.28
Tert-Butyl Alcohol	5.7
Tetrachloroethene (PCE)	11.7
Toluene	3.18
Trichlorofluoromethane	1.32

OSV-3	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	674
Tetrachloroethene (PCE)	12900
Trans-1,2-Dichloroethene	11
Trichloroethene (TCE)	1210

OSV-9	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,4-Dichlorobenzene	2.14
Acetone	166
Chloromethane	0.576
Cyclohexane	1.22
Dichlorodifluoromethane	2.33
Ethanol	228
Isopropanol	39.1
Methyl Ethyl Ketone (2-Butanone)	5.4
N-Hexane	1.4
Tert-Butyl Alcohol	8.58
Tetrachloroethene (PCE)	1.51
Tetrahydrofuran	2.98
Toluene	1.42
Trichlorofluoromethane	3.39

IA-DS-1	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	17 JV
Carbon Tetrachloride	0.612 JV
Chloromethane	1.15 JV
Dichlorodifluoromethane	2.48 JV
Ethanol	167 JV
Isopropanol	5.9 JV
Tetrachloroethene (PCE)	0.834 JV
Trichloroethene (TCE)	0.302 JV
Trichlorofluoromethane	3.57 JV

OSV-10	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,1,1-Trichloroethane (TCA)	7.58
1,4-Dichlorobenzene	2.4
Acetone	7.96
Chloromethane	0.555
Dichlorodifluoromethane	2.25
Ethanol	181
Isopropanol	1.73
N-Hexane	1.21
Tetrachloroethene (PCE)	26
Toluene	0.935
Trichloroethene (TCE)	9.4
Trichlorofluoromethane	2.93

IA-LQ-1	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	9.69
Carbon Tetrachloride	0.547
Chloromethane	1.08
Dichlorodifluoromethane	2.53
Ethanol	458
Ethyl Acetate	2.28
Isopropanol	3.29
Tetrachloroethene (PCE)	1.66
Trichloroethene (TCE)	0.161
Trichlorofluoromethane	1.92

OSV-11	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,1,1-Trichloroethane (TCA)	2.32
1,4-Dichlorobenzene	1.23
Acetone	4.49
Dichlorodifluoromethane	2.29
N-Hexane	1.33
Tetrachloroethene (PCE)	145
Toluene	1.12
Trichloroethene (TCE)	4.12
Trichlorofluoromethane	37.1

IA-CS-1	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,2,4-Trimethylbenzene	1.03
1,2-Dichloroethane	0.89
Acetone	17.2
Carbon Tetrachloride	0.535
Chloromethane	1.04
Dichlorodifluoromethane	2.48
Ethanol	16.6
Isopropanol	1.71
Methyl Ethyl Ketone (2-Butanone)	1.93
Tetrachloroethene (PCE)	0.658
Toluene	5.77
Trichloroethene (TCE)	0.231

SV-7	11/04/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	1130
Cyclohexane	60.9
Tetrachloroethene (PCE)	30700
Trichloroethene (TCE)	2600

AA-1	3/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	9.93
Benzene	0.799
Carbon Tetrachloride	0.409
Chloromethane	0.987
Dichlorodifluoromethane	1.58
Ethanol	18.6
Isopropanol	1.39
Methyl Ethyl Ketone (2-Butanone)	1.52
Methylene Chloride	5.32
Tetrachloroethene (PCE)	0.258
Toluene	4.07
Trichloroethene (TCE)	ND

OSV-4	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	1590
Tetrachloroethene (PCE)	12700
Trans-1,2-Dichloroethene	19.7
Trichloroethene (TCE)	1300

IA-CVS-2	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	35.9
Benzene	0.786
Carbon Tetrachloride	0.447
Chloromethane	1.15
Cis-1,2-Dichloroethylene	2.01
Dichlorodifluoromethane	1.5
Ethanol	496
Ethyl Acetate	6.05
Isopropanol	16.4
Tert-Butyl Alcohol	10.1
Tetrachloroethene (PCE)	66.8
Toluene	6.67
Trichloroethylene (TCE)	3.12
Trichlorofluoromethane	1.98

SV-6	11/02/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
1,2,4-Trimethylbenzene	20.2
1,3,5-Trimethylbenzene (Mesitylene)	4.87
1,4-Dichlorobenzene	1.39
2,2,4-Trimethylpentane	1.49
4-Ethyltoluene	3.46
Acetone	30.4
Benzene	1.48
Chloroform	1.41
Cis-1,2-Dichloroethylene	78.5
Dichlorodifluoromethane	1.77
Ethylbenzene	3.61
Isopropanol	4.99
m,p-Xylene	16.4
Methyl Ethyl Ketone (2-Butanone)	2.63
N-Heptane	1.33
O-Xylene (1,2-Dimethylbenzene)	9.51
Tert-Butyl Alcohol	8.79
Tetrachloroethene (PCE)	314
Toluene	6.48
Trans-1,2-Dichloroethene	0.987
Trichloroethene (TCE)	114
Trichlorofluoromethane	1.28

SV-1	03/22/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	603
Ethanol	577
Tetrachloroethene (PCE)	18800
Trichloroethene (TCE)	1280

IA-1_BASEMENT	03/22/2016	03/22/2016
Normal or Duplicate:	N	FD
Volatile Organic Compounds		
Acetone	28	29.7
Carbon Tetrachloride	0.459	0.459
Chloromethane	1.22	1.18
Cis-1,2-Dichloroethylene	0.329	0.317
Dichlorodifluoromethane	2.56	1.97
Ethanol	5600	5350
Ethyl Acetate	6.56	6.63
Isopropanol	7.99	7.57
Methylene Chloride	1.9	14
Tetrachloroethene (PCE)	24.8	23.3
Toluene	2.14	3.1
Trichloroethene (TCE)	0.79	0.763
Trichlorofluoromethane	1.29	1.39

SV-5	11/02/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
1,2,4-Trimethylbenzene	36.8
1,3,5-Trimethylbenzene (Mesitylene)	9.09
1,4-Dichlorobenzene	2.04
2,2,4-Trimethylpentane	3.36
4-Ethyltoluene	6.54
Acetone	53.9
Benzene	1.91
Carbon Disulfide	8.1
Chloroform	3.59
Cis-1,2-Dichloroethylene	2.94
Cyclohexane	0.73
Dichlorodifluoromethane	1.62
Ethanol	12.7
Ethyl Acetate	1.99
Ethylbenzene	6.21
Isopropanol	4.92
m,p-Xylene	29.3
Methyl Ethyl Ketone (2-Butanone)	4.39
N-Heptane	2.66
N-Hexane	4.86
O-Xylene (1,2-Dimethylbenzene)	16.9
Tert-Butyl Alcohol	13.6
Tetrachloroethene (PCE)	4.23
Toluene	10.4
Trichloroethene (TCE)	12.5
Trichlorofluoromethane	1.47

OSV-2	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Chloroform	10.2
Cis-1,2-Dichloroethylene	301
Tetrachloroethene (PCE)	9760
Trans-1,2-Dichloroethene	30.4
Trichloroethene (TCE)	519

AA-1	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	4.99
Benzene	ND
Carbon Tetrachloride	0.484
Chloromethane	1.1
Dichlorodifluoromethane	2.47
Ethanol	ND
Isopropanol	ND
Methyl Ethyl Ketone (2-Butanone)	ND
Methylene Chloride	ND
Tetrachloroethene (PCE)	ND
Toluene	ND
Trichloroethene (TCE)	0.177

OSV-12	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	15.6
Chloromethane	1.03
Dichlorodifluoromethane	2.52
Ethanol	14.6
Isopropanol	1.32
N-Hexane	1.27
Tetrachloroethene (PCE)	3.72
Toluene	5.28

IA-CS-2	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	14.8
Carbon Tetrachloride	0.51
Chloromethane	1.09
Dichlorodifluoromethane	2.46
Ethanol	12.9
Isopropanol	1.36
Methyl Ethyl Ketone (2-Butanone)	1.58
Tetrachloroethene (PCE)	0.80
Toluene	4.26
Trichloroethene (TCE)	0.199

OSV-8	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,1,1-Trichloroethane (TCA)	8.84 JV
Chloroform	6.54 JV
Cis-1,2-Dichloroethylene	26.2 JV
Tetrachloroethene (PCE)	2470 JV
Trichloroethene (TCE)	178 JV
Trichlorofluoromethane	6.01 JV

IA-CVS-4	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	35.6
Carbon Tetrachloride	1.06
Chloromethane	1.31
Cis-1,2-Dichloroethylene	2.35
Dichlorodifluoromethane	2.56
Ethanol	388
Ethyl Acetate	8.83
Isopropanol	77.2
Methyl Ethyl Ketone (2-Butanone)	1.74
Methylene Chloride	1.84
Styrene	1.22
Tetrachloroethene (PCE)	113
Toluene	3.3
Trichloroethylene (TCE)	4.22
Trichlorofluoromethane	3

SV-8	11/02/2016	11/02/2016
Normal or Duplicate:	N	FD
Volatile Organic Compounds		
1,2,4-Trimethylbenzene	42.8	42.9
1,3,5-Trimethylbenzene (Mesitylene)	11.1	10.7
1,4-Dichlorobenzene	2.86	3.31
2,2,4-Trimethylpentane	4.14 JV	ND
4-Ethyltoluene	7.67	6.78
Acetone	32.3	22
Benzene	1.8	ND
Carbon Disulfide	4.76	4.48
Dichlorodifluoromethane	2.23	ND
Ethylbenzene	8.12	5.52
Isopropanol	7.55 JV	3.07 JV
m,p-Xylene	35.6	26.1
Methyl Ethyl Ketone (2-Butanone)	4.01 JV	ND
N-Heptane	5.12 JV	ND
O-Xylene (1,2-Dimethylbenzene)	21.6	15.2
Tert-Butyl Alcohol	10.8	6.94
Tetrachloroethene (PCE)	649 JV	1150 JV
Toluene	13.9	10.4
Trichloroethene (TCE)	5.75	6.99

SV-2	03/22/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	338
Tetrachloroethene (PCE)	14200
Trichloroethene (TCE)	763

SV-4	03/22/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	7.89
Chloroform	3.57
Cis-1,2-Dichloroethylene	16.2
Ethanol	74.1
m,p-Xylene	5.78
Tetrachloroethene (PCE)	1170
Toluene	3.84
Trichloroethene (TCE)	67.7

SV-3	03/22/2016	03/22/2016
Normal or Duplicate:	N	FD
Volatile Organic Compounds		
Acetone	22.8	16
Chloroform	2.68 JV	ND
Cis-1,2-Dichloroethylene	11.4	11.9
Cyclohexane	ND	4.44 JV
Ethanol	153	125
Isopropanol	5.75 JV	ND
m,p-Xylene	4.95 JV	ND
Tetrachloroethene (PCE)	1080	1500
Toluene	3.25 JV	ND
Trichloroethene (TCE)	59.1	66.6

IA-BG	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	38.7
Benzene	0.712
Carbon Tetrachloride	0.428
Chloromethane	1.03
Cis-1,2-Dichloroethylene	0.706
Dichlorodifluoromethane	1.74
Ethanol	1260
Ethyl Acetate	3.93
Isopropanol	10.5
Tert-Butyl Alcohol	4.55
Tetrachloroethene (PCE)	26.4
Toluene	1.86
Trichloroethene (TCE)	1.3
Trichlorofluoromethane	1.55

IA-VW	03/21/2017	03/21/2017
Normal or Duplicate:	N	FD
Volatile Organic Compounds		
Acetone	786	784
Benzene	0.706 JV	ND
Carbon Tetrachloride	0.396 JV	0.66 JV
Chloromethane	1.21	1.12
Cis-1,2-Dichloroethylene	0.159	0.198
Dichlorodifluoromethane	1.4	1.8
Ethanol	563	650
Ethyl Acetate	92.3	115
Isopropanol	242	246
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	11.3	16.2
Tetrachloroethene (PCE)	7.53	9.49
Toluene	7.27	7.65
Trichloroethene (TCE)	0.355	0.484
Trichlorofluoromethane	1.51 JV	ND

OSV-1	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	14.3
Dichlorodifluoromethane	1.26
Ethanol	9.69
Isopropanol	1.49
Tetrachloroethene (PCE)	21.6
Toluene	1.47
Trichlorofluoromethane	1.21

OSV-6	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,4-Dichlorobenzene	5.77
Acetone	6.75
Chloroform	4.84
Dichlorodifluoromethane	1.84
m,p-Xylene	2.14
Methyl Ethyl Ketone (2-Butanone)	1.65
N-Hexane	1.98
Tetrachloroethene (PCE)	104
Tetrahydrofuran	3.92
Toluene	1.37
Trichloroethene (TCE)	4.77
Trichlorofluoromethane	1.65

IA-NS-1	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	218
Carbon Tetrachloride	0.516
Chloromethane	1.11
Cis-1,2-Dichloroethylene	0.25
Dichlorodifluoromethane	2.52
Ethanol	292
Ethyl Acetate	5.87
Isopropanol	66.4
Tetrachloroethene (PCE)	13.4
Toluene	1.7
Trichloroethene (TCE)	0.564
Trichlorofluoromethane	1.82

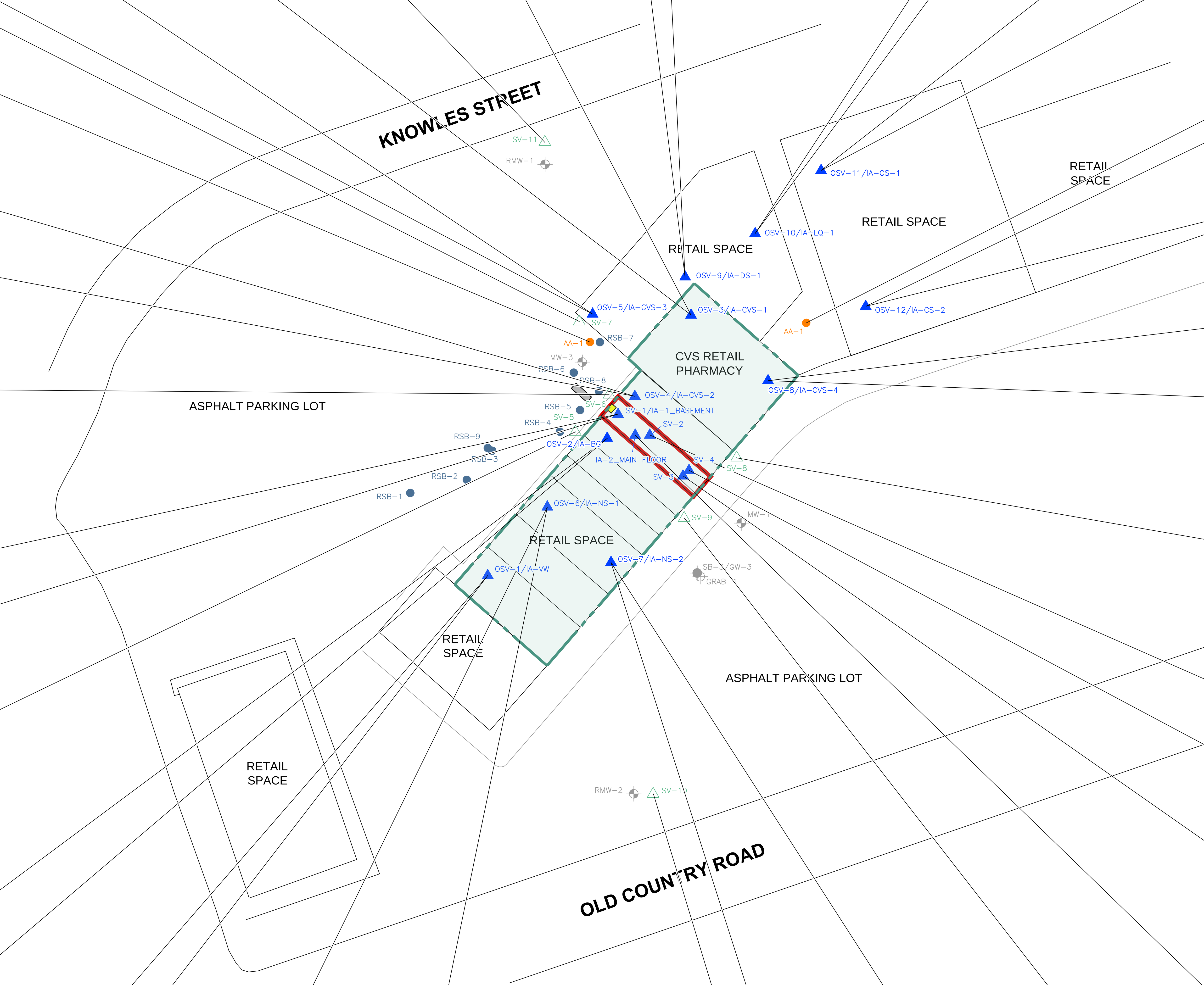
SV-10	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
1,3-Butadiene	0.471
2,2,4-Trimethylpentane	5.79
2-Hexanone	1.25
Acetone	26.6
Benzene	1.12
Carbon Disulfide	0.906
Chloroform	1.51
Cyclohexane	0.888
Dichlorodifluoromethane	1.51
Ethanol	16.6
Ethylbenzene	1.26
Isopropanol	8.75
m,p-Xylene	3.64
Methyl Ethyl Ketone (2-Butanone)	4.95
N-Heptane	3.93
N-Hexane	2.48
O-Xylene (1,2-Dimethylbenzene)	1.24
Tert-Butyl Alcohol	5.27
Toluene	4.52
Trichlorofluoromethane	1.19

IA-NS-2	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	356
Carbon Tetrachloride	0.572
Chloromethane	1.14
Cis-1,2-Dichloroethylene	0.349
Dichlorodifluoromethane	2.53
Ethanol	335
Ethyl Acetate	7.64
Isopropanol	79.6
Tetrachloroethene (PCE)	18.9
Toluene	1.99
Trichloroethylene (TCE)	0.785
Trichlorofluoromethane	2.17

OSV-7	11/20/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	10.3 J+V
Chloroform	1.78
Chloromethane	1.04
Dichlorodifluoromethane	2.25
Isopropanol	2.93
Methyl Ethyl Ketone (2-Butanone)	1.99
Methylene Chloride	1.78
N-Hexane	0.874
Tert-Butyl Alcohol	18
Tetrachloroethene (PCE)	115
Tetrahydrofuran	6.43
Toluene	1.24
Trichloroethene (TCE)	9.3
Trichlorofluoromethane	1.4

SV-9	11/02/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
1,2,4-Trimethylbenzene	82.6
1,3,5-Trimethylbenzene (Mesitylene)	22.7
1,4-Dichlorobenzene	3.1
2,2,4-Trimethylpentane	20.6
4-Ethyltoluene	12.5
Acetone	33.3
Benzene	1.9
Carbon Disulfide	3.61
Chloroform	0.982
Cyclohexane	1.81
Dichlorodifluoromethane	2.03
Ethanol	13.4
Ethyl Acetate	2.11
Ethylbenzene	13.1
Isopropanol	9
m,p-Xylene	58.6
Methyl Ethyl Ketone (2-Butanone)	4.1
N-Heptane	4.26
N-Hexane	2.01
O-Xylene (1,2-Dimethylbenzene)	42.8
Styrene	0.903
Tert-Butyl Alcohol	9.19
Tetrachloroethene (PCE)	342
Toluene	17.8
Trichloroethene (TCE)	11.2
Trichlorofluoromethane	1.47

IA-2_MAIN FLOOR	03/22/2016
Normal or Duplicate:	N
Volatile Organic Compounds	
Acetone	21.3
Carbon Tetrachloride	0.434
Chloromethane	1.29
Dichlorodifluoromethane	2.4
Ethanol	17800
Ethyl Acetate	14.5
Isopropanol	5.53
Methyl Ethyl Ketone (2-Butanone)	2.42
Methylene Chloride	3.82
Tetrachloroethene (PCE)	0.719
Toluene	1.61
Trichlorofluoromethane	1.25



LEGEND

- MW-1 — LOCATION AND DESIGNATION OF EXISTING MONITORING WELL INSTALLED BY LEGGETTE, BRASHEARS & GRAHAM, INC IN 2007
- SB-1/GW-1 — LOCATION AND DESIGNATION OF SOIL BORING/GROUNDWATER GRAB SAMPLE INSTALLED BY HRP ASSOCIATES IN 2010
- RSB-1 — LOCATION AND DESIGNATION OF SOIL BORING
- RMW-1 — LOCATION AND DESIGNATION OF UP-GRADIENT MONITORING WELL
- GRAB-1 — LOCATION AND DESIGNATION OF GROUNDWATER GRAB SAMPLE
- SV-2 — LOCATION AND DESIGNATION OF SUB-SLAB SOIL VAPOR AND INDOOR AIR SAMPLE
- SV-5 — LOCATION AND DESIGNATION OF SOIL VAPOR MONITORING POINT
- AA-1 — LOCATION AND DESIGNATION OF OUTDOOR AMBIENT AIR SAMPLE
- APPROXIMATE LOCATION OF FORMER UST
- APPROXIMATE LOCATION OF FORMER SUMP
- FORMER MORTON VILLAGE CLEANERS LOCATION
- PROPOSED TREATMENT AREA

DATA BOX KEY

SAMPLE LABEL — SAMPLE DATE

OSV-3	03/21/2017
Normal or Duplicate:	N
Volatile Organic Compounds	
Cis-1,2-Dichloroethylene	674
Tetrachloroethene (PCE)	12900
Trans-1,2-Dichloroethene	11
Trichloroethene (TCE)	1210

CONCENTRATIONS IN $\mu g/m^3$

- $\mu g/m^3$ — MICROGRAMS PER CUBIC METER
- VOCs — VOLATILE ORGANIC COMPOUNDS
- ND — COMPOUND WAS ANALYZED FOR BUT NOT DETECTED
- D — A SECONDARY ANALYSIS AFTER DILUTION DUE TO EXCEEDANCE OF THE CALIBRATION RANGE IN THE ORIGINAL SAMPLE
- V — VALUE ALTERED OR QUALIFIER ADDED DURING DATA VALIDATION
- UJ — ANALYTE WAS NOT DETECTED. THE ASSOCIATED REPORTED QUANTITATION LIMIT IS AN ESTIMATE
- J — ESTIMATED VALUE
- J+ — ESTIMATED VALUE, HIGH BIAS

SOURCE

HRP ASSOCIATES, INC., SITE CHARACTERIZATION REPORT AUGUST 2011.

DRAFT

30' 0 30'

Title:

AIR AND SOIL VAPOR RESULTS

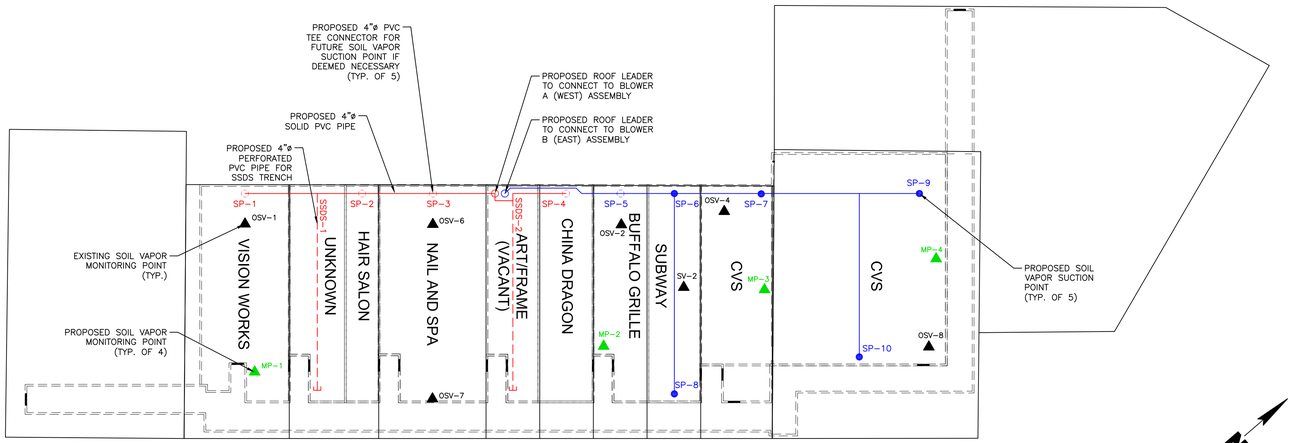
1022 OLD COUNTRY ROAD
PLAINVIEW, NEW YORK

Prepared For:

MORTON VILLAGE REALTY CO., INC.

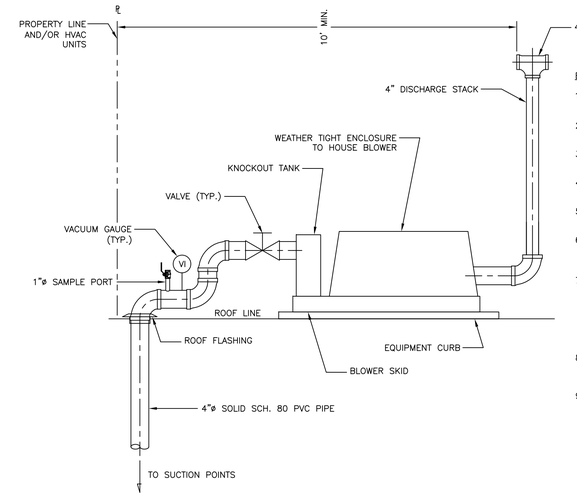
ROUX

Compiled by: J.W.	Date: 24MAY18	PLATE
Prepared by: G.M.	Scale: AS SHOWN	1
Project Mgr: J.W.	Project: 2517.0001Y000	
File: 2517.0001Y118.01.DWG		



SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

SCALE: 1" = 20'

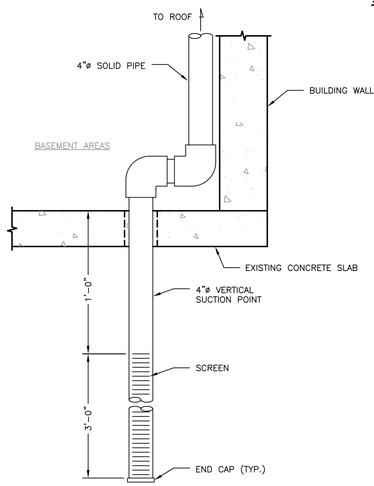


BLOWER NOTES

1. PROVIDE ELECTRICAL/CONTROL CONDUIT TO BLOWERS. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. ELECTRICAL CONDUIT SHALL BE SIZED FOR 115/230 VOLT, SINGLE PHASE, 30 AMPS 60 HZ, FOR EACH BLOWER MOTOR.
3. THE BLOWER DISCHARGES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM HVAC AIR INLETS, AND PROPERTY LINE.
4. THE BLOWERS SHALL BE A 5.5 HP, AMETEK ROTRON MODEL EN757FL5MWL OR APPROVED EQUAL.
5. THE BLOWERS SHALL BE PROVIDED WITH A WEATHER TIGHT ENCLOSURE GASHO ALUMINUM CUSTOM ENCLOSURE OR APPROVED EQUAL.
6. THE BLOWER SKIDS SHALL INCLUDE WEATHER TIGHT ENCLOSURE, PLASTIC KNOCKOUT TANK (WITH HIGH LEVEL ALARM), VACUUM RELIEF VALVE, LOW VACUUM SWITCH, GAUGES, AND INTERCONNECTING PIPING/FITTINGS.
7. A CONTROL PANEL SHALL BE PROVIDED WITH THE BLOWER SKIDS. THE CONTROL PANEL SHALL HAVE GREEN OPERATING LIGHTS AND RED ALARM LIGHTS. THE CONTROL PANEL SHALL HAVE AN ALARM FOR WATER LEVEL IN KNOCKOUT TANK, LOW VACUUM AND NO POWER. THE ALARM SIGNAL SHALL BE SENT TO AN APPROPRIATE LOCATION IN THE PROPOSED BUILDING (I.E., SUPERINTENDENT'S OFFICE) AND SHALL ALSO BE AUDIBLE.
8. BLOWER SHALL BE PROVIDED WITH A REMOTE ALARM CAPABLE OF ALERTING THE OWNER OF A SYSTEM SHUTDOWN OR LOW VACUUM CONDITION VIA PHONE OR TEXT MESSAGE
9. PROVIDE ALL NECESSARY PIPE SUPPORTS FOR RISERS FROM THE BASEMENT SLAB TO THE BLOWERS ON THE ROOF.

4 TYPICAL BLOWER DETAIL

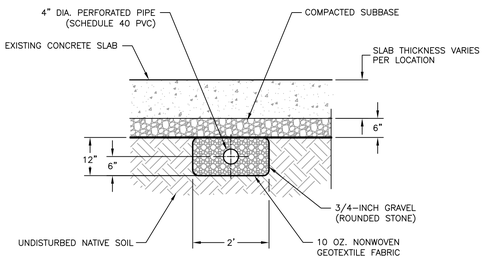
SCALE: NOT TO SCALE



SECTION VIEW

1 TYPICAL VERTICAL SUCTION POINT DETAIL

SCALE: NOT TO SCALE

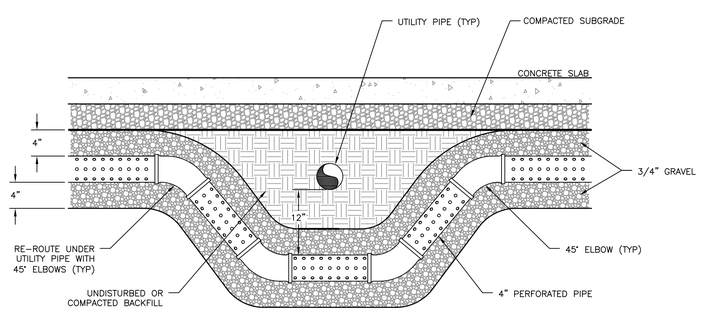


SSDS PIPE NOTES

1. CONTRACTOR SHALL COORDINATE WITH PLUMBING, MECHANICAL, CIVIL AND ELECTRICAL CONTRACTORS FOR ALL UTILITY CROSSINGS.
2. THE PERFORATED PIPE MAY BE ROUTED AROUND OR UNDERNEATH ANY UTILITY LINES (SEWER, WATER, GAS), AS REQUIRED AND AS APPROVED BY THE ENGINEER.
3. THE SURFACES TO BE LINED WITH GEOTEXTILE SHALL BE FREE OF ALL ROCKS, STONES, SHARP OBJECTS OR CONSTRUCTION DEBRIS OF ANY KIND.
4. INSTALL GEOTEXTILE NONWOVEN FABRIC DIRECTLY ON FILL. MATERIAL OVERLAPS SHALL BE A MINIMUM OF 12" THE OVERLAPPED SEAMS WILL BE SEALED WITH TAPE.
5. ALL PENETRATIONS THROUGH THE SLAB ON GRADE (SOG) SHALL BE SEALED USING A SILICONE BASED WATERPROOF SEALANT OR EQUIVALENT.

2 SUB-SLAB DEPRESSURIZATION SYSTEM PIPE DETAIL

SCALE: NOT TO SCALE



3 TYPICAL UTILITY PIPE CROSSING

SCALE: NOT TO SCALE

5 TYPICAL SOIL VAPOR MONITORING POINT DETAIL

SCALE: NOT TO SCALE

DRAFT

NO.	DATE	REVISION DESCRIPTION	INT.

PROJ. ENGINEER:	N.C.	DRAWN BY:	D.E.K.
DESIGNED BY:	D.E.K.	CHECKED BY:	N.C.
DRAWING SCALE:	AS SHOWN	PLOT SCALE:	1:1
DRAWING DATE:	13JUN18	PRINT TYPE:	B&W
OFFICE:	NY	PAPER SIZE:	ARCH D
PROJECT NO.:	2517.0001Y000		
DRAWING FILE:	2517.0001Y110.02.DWG		

ROUX
Roux Environmental Engineering & Geology, D.P.C.
209 SHAFTER STREET ISLANDIA NEW YORK 11749
(631) 232-2600

PROJECT NAME:
MORTON VILLAGE REALTY CO., INC.
1022 OLD COUNTRY ROAD, PLAINVIEW, NEW YORK

PROJECT FOR:
MORTON VILLAGE REALTY CO., INC.
1022 OLD COUNTRY ROAD, PLAINVIEW, NEW YORK

TITLE:
SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS

DRAWING NO.
1
DRAWING 1 OF 1

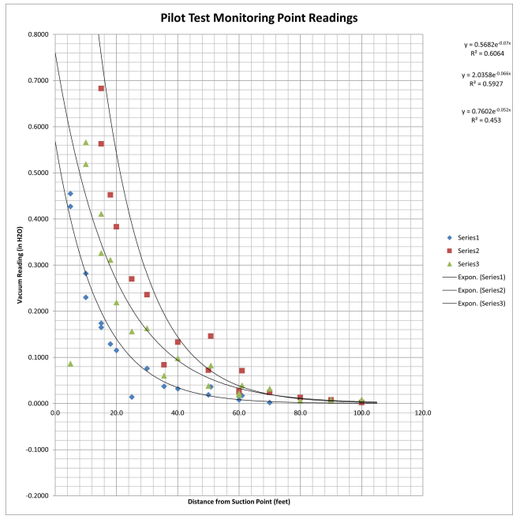
V:\CAD\PROJECTS\2517\Y\0001Y\110\2517.0001Y110.02.DWG

APPENDIX B

PILOT STUDY

Site Name:	Morton Village
Suction Point #:	1
Date:	Friday, August 21, 2020
VERTEX Representative:	MK and MU

Test Point ID	Distance from (feet)	Test 1	Test 2	Test 3
Flow (CFM)	-	20.00	60.00	33.00
Vac (in H2O)	0.0	2.5	9.0	5.0
A	5.0	0.455	1.540	0.09
B	10.0	0.282	0.882	0.519
C	15.0	0.165	0.563	0.326
D	20.0	0.115	0.383	0.219
E	25.0	0.014	0.270	0.156
F	30.0	0.076	0.236	0.163
G	40.0	0.032	0.133	0.098
H	50.0	0.019	0.072	0.038
I	60.0	0.008	0.027	0.018
J	70.0	0.002	0.024	0.032
K	80.0		0.013	0.006
L	90.0		0.008	0.008
M	100.0		0.002	0.009
U	18.0	0.129	0.452	0.311
V	35.5	0.037	0.084	0.060
W	60.0	0.015	0.025	0.022
Q	5.0	0.427	1.740	0.970
R	10.0	0.230	0.916	0.566
S	15.0	0.174	0.683	0.411
X	50.8	0.036	0.146	0.082
Y	61.0	0.017	0.071	0.039
ROI at 0.005 in H2O		**67.6**	**91.0**	**96.6**



Monitoring Point

Test Extraction Point

Pilot Study locations are approximate

SCALE: 1" = APPROX 24 FEET
WHEN PRINTED 11" X 17".

Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018

PILOT STUDY TESTING LOCATIONS AND RESULTS

MORTON VILLAGE
1022 OLD COUNTRY ROAD, PLAINVIEW, NY

FIGURE NO. 1

VERTEX Project No. 65720

THE VERTEX COMPANIES, INC.

APPENDIX C

SSDS DESIGN

AREA OF STUDY

RETAIL SPACE

VISION WORKS

HAIR SALON

NAIL AND SPA

ART/FRAME

CHINA DRAGON

BUFFALO GRILLE

SUBWAY

CVS

CVS

Basement Hallway

SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

SCALE: 1" = APPROX 24 FEET
WHEN PRINTED 11" X 17".

Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018

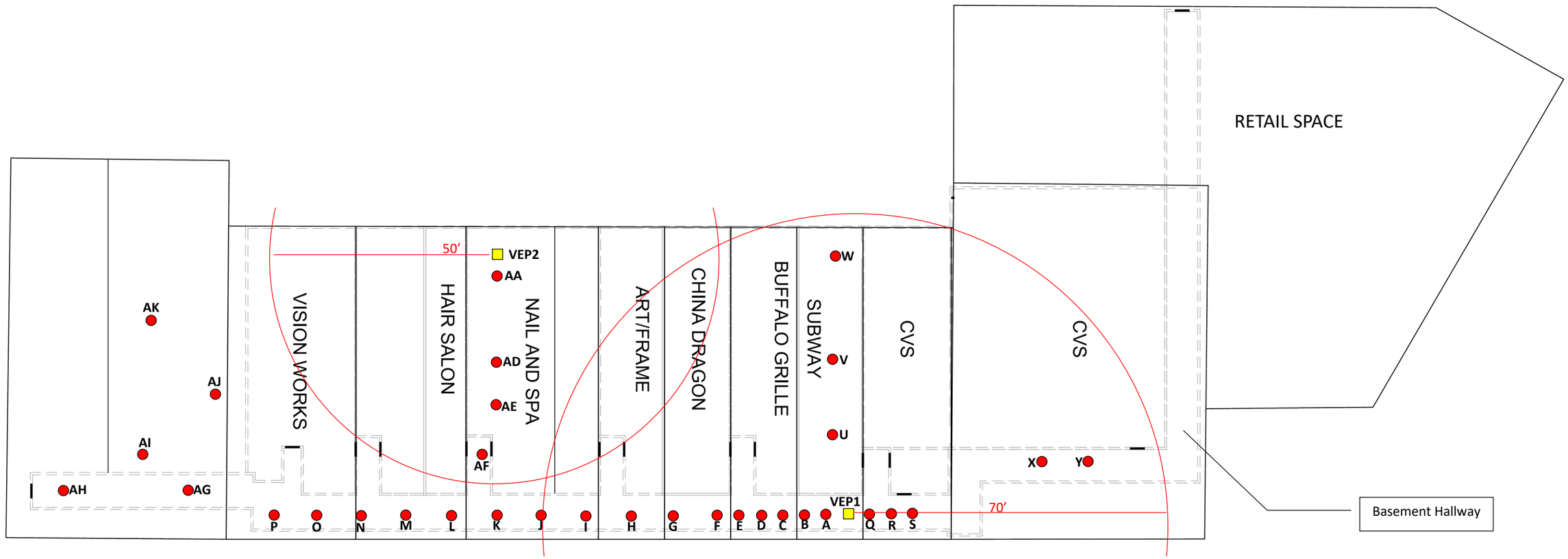
SUB-SLAB DEPRESSURIZATION SYSTEM DESIGN
SITE LOCATION AND BUILDING LAYOUT

MORTON VILLAGE
1022 OLD COUNTRY ROAD, PLAINVIEW, NY

FIGURE NO. 1

VERTEX Project No. 65720

VERTEX ENGINEERING, PC



PILOT STUDY RESULTS

VEP-1: 70 ft ROI @ # inches WC & 30 cfm

VEP-2: 50 ft ROI @ # inches WC & 20 cfm

SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

SCALE: 1” = APPROX 24 FEET
WHEN PRINTED 11” X 17”.

Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018

PILOT TEST LAYOUT AND CALCULATED RADIUS OF INFLUENCE

MORTON VILLAGE
1022 OLD COUNTRY ROAD, PLAINVIEW, NY

FIGURE NO. 2

VERTEX Project No. 65720

VERTEX ENGINEERING, PC

LEGEND

Extraction Point

Valve & Monitoring Point

Vacuum Gauge (0 - 10 in WC)

Sub-Slab Monitoring Point

Electrical Conduit

Estimated Extent of System Influence

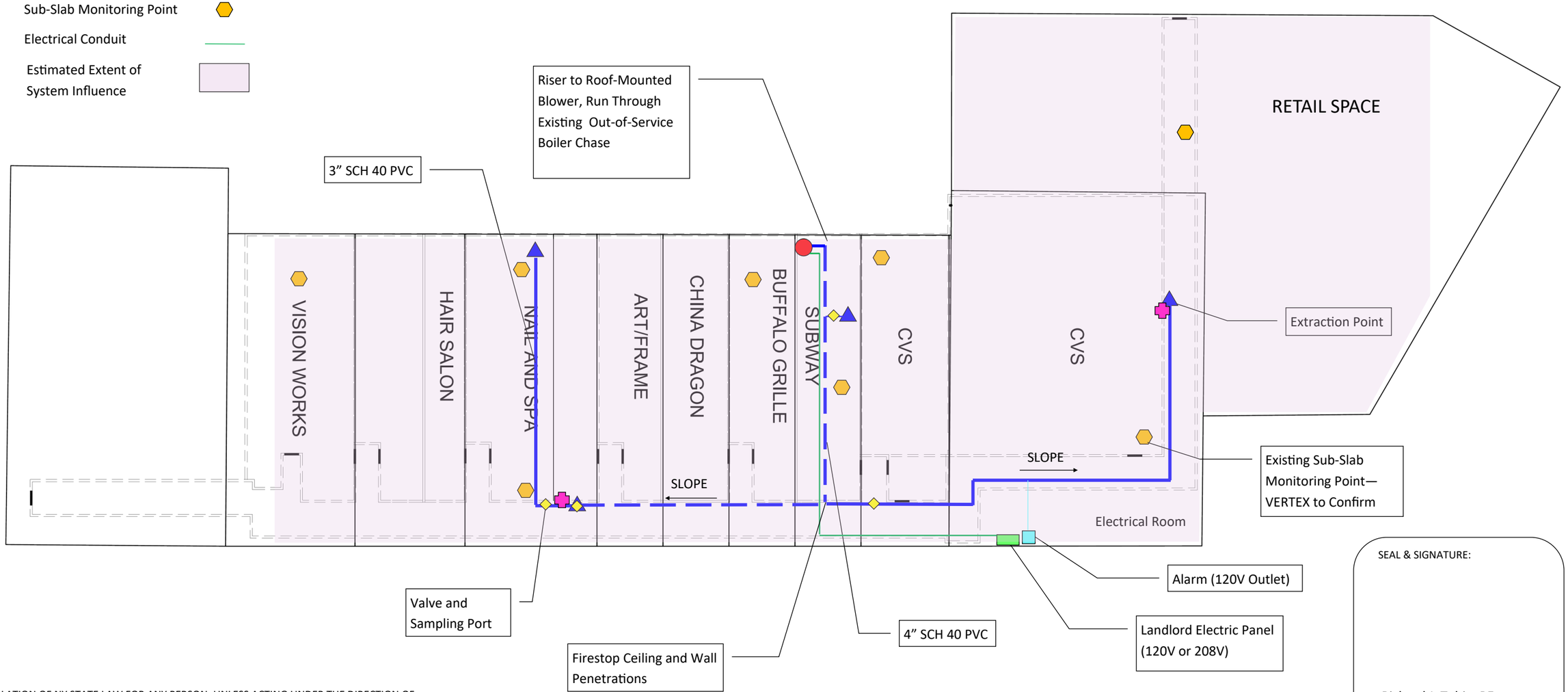
DESIGN BASIS

100 CFM @ 5.1" WC

Vertical Extraction Points Manifolded to Single Exhaust Blower/Fan

Blower/Fan (Cincinnati Fan, HPA, 10" wheel diameter, 1/2 HP, Arrangement 4, TEFC) or equal capable of achieving the specified flow rate and vacuum.

Electric: 208V or 120V



SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

SCALE: 1" = APPROX 24 FEET
WHEN PRINTED 11" X 17".

Base Map Source: ROUX, SUB-SLAB DEPRESSURIZATION SYSTEM PLAN AND DETAILS, JUNE 13, 2018

SSDS LAYOUT

MORTON VILLAGE
1022 OLD COUNTRY ROAD, PLAINVIEW, NY

FIGURE NO. 3

VERTEX Project No. 65720

VERTEX ENGINEERING, PC

VAPOR VENT PIPE.
IF DAMAGED
IMMEDIATELY
NOTIFY BUILDING
OWNER

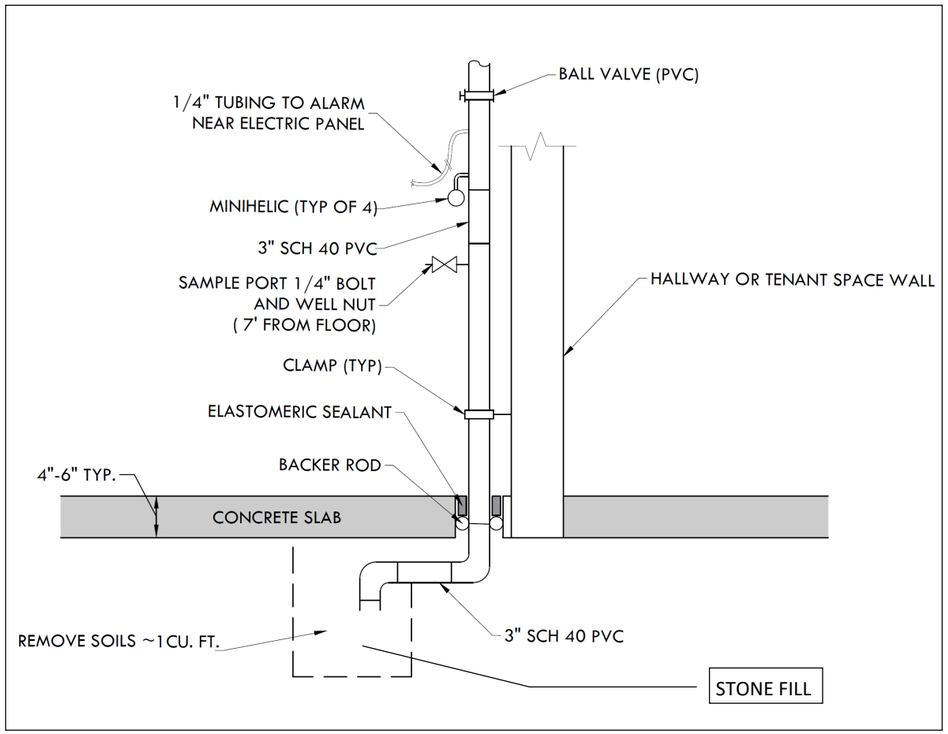
ALL SIGNS VINYL WITH ADHESIVE BACKING

LARGE LETTERS MIN ½" HIGH

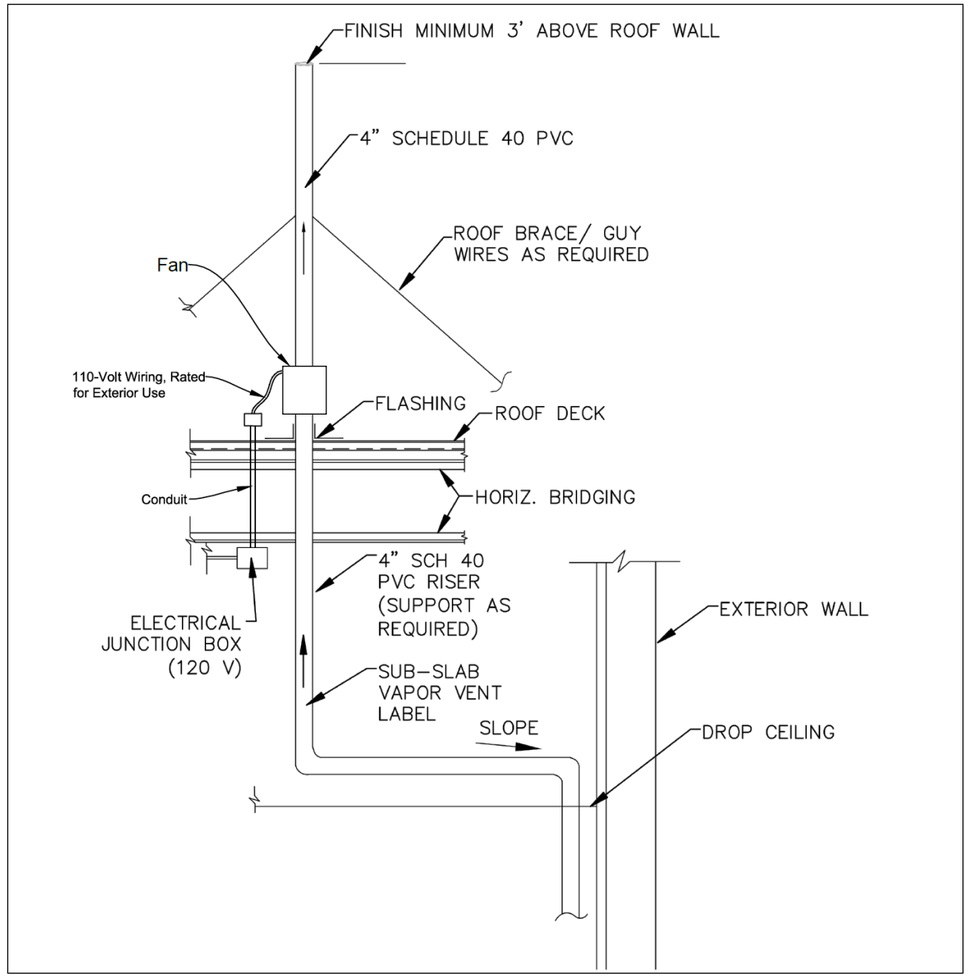
RED LETTER ON WHITE OR YELLOW BACKGROUND

THIS PLACARD SHALL BE POSTED ON EACH VENT RISER AND ON ALL HORIZONTAL RUNS APPROXIMATELY EVERY FIVE FEET

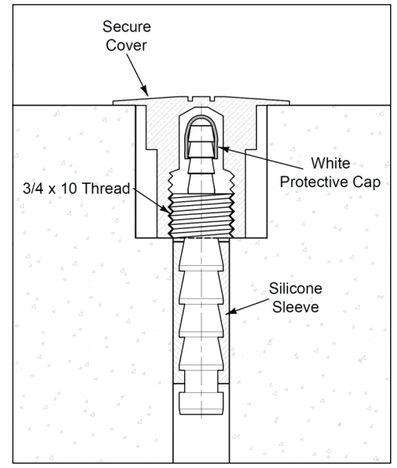
DETAIL 1—SUB-SLAB VENT PIPE STICKER



DETAIL 2—TYPICAL FLOOR PENETRATION AND RISER DETAIL



DETAIL 3—TYPICAL RISER AND ROOF PENETRATION DETAIL



DETAIL 4—SUB-SLAB MONITORING POINT DETAIL

SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

SCALE: NTS	**SSDS DETAILS** MORTON VILLAGE 1022 OLD COUNTRY ROAD, PLAINVIEW, NY	**FIGURE NO. 4** VERTEX Project No. 65720	**VERTEX ENGINEERING, PC**

Note

Contractor shall:

- Comply with all OSHA requirements and training in accordance with 1910:120
- Follow their own H&S plan or the Site-Specific H&S plan, whichever is more protective. VERTEX is not responsible for contractor H&S
- Obtain local permits for all work, as required
- Verify site conditions prior to the start of work
- Be responsible for identifying and verifying the location of all utilities within the limits of disturbance
- Be responsible for the means and methods for implementation of the scope of work
- Coordinate work and schedule with Engineer and Owner and provide a safe demarcated work area
- Perform all work in accordance with all drawings and other information provided by Engineer and Owner
- Install all materials and appurtenances in accordance with manufacturer's instructions
- Coordinate delivery of all materials and support equipment
- Restore area to pre-construction conditions

Submittals:

- Provide material cut sheets for Engineer approval if different than that specified
- Proposed changes to plans shall be submitted in writing for Engineer/Owner approval
- Provide a sketch of staging areas for Engineer/Owner approval

Installation:

- Install vertical vent risers flush with basement walls
- Install monitoring port on each vertical riser
- Install 4 sub-slab monitoring points below building slab
- Provide 115V junction box at roof for in-line exhaust fan operation and one for alarm in the meter room.
- Construct all above grade vent piping and fittings to be gas tight.

General:

- The Vapor Mitigation System (VMS) presented in these plans and specifications shall be utilized to prevent vapor intrusion into the building. The basis of design is an active sub-slab depressurization system described in these plans.
- The VMS construction shall consist of, but not be limited to, the following:
  a. Supply and install vapor vent risers with ancillary monitoring equipment
  b. Supply and install exhaust fan

Vapor Vent System:

- A vapor vent system shall be installed beneath the slab as detailed in this drawing set.
- The exhaust shall be located at least 10 feet from air intakes.
- All vent piping shall be sloped to a sub-grade drainage point.
- Materials of construction shall comply with the applicable Plumbing and Mechanical Codes.
- Riser pipe sample ports and gauges shall be installed within accessible sections.
- The riser pipes shall be fully supported through the entire height of the building such that no downward force is exerted on the sub-slab venting piping.

Materials:

- All materials are to be delivered to the project site in their original unbroken packages bearing the manufacturer's label showing brand, weight, volume, and batch number
- Materials are to be stored at the project site in strict compliance with the manufacturer's instructions

Blower: Cincinnati Fan, HPA, 10" wheel diameter, 1/2 HP, Arrangement 4)
Alarm: Radon Away Checkpoint 11a
Vacuum Gauge: Dwyer Minihelic 2-5010 0-10" W:L
Pipe: Schedule 40 PVC

SEAL & SIGNATURE:

Richard J. Tobia, PE
PE License No.: 095039-1

	SSDS NOTES MORTON VILLAGE 1022 OLD COUNTRY ROAD, PLAINVIEW, NY	**FIGURE NO. 5** VERTEX Project No. 65720	**VERTEX ENGINEERING, PC**

APPENDIX D

PHOTOLOG

Photographic Documentation - SSDS
Morton Village – 1022 Old Country Road
Plainview, NY
VERTEX Project No. 65720, 66845

Photo #1: Typical Extraction pit prior to installation of riser.

Photo #2: Typical riser with valve and piping run.

Photo #3: Basement penetration for riser to roof.

Photo #4: Pipe through wall with firestop insulation.

Photo #5: Typical riser with cement seal.

Photo #6: Typical riser with ball valve and vacuum gauge.

Photographic Documentation - SSDS
Morton Village – 1022 Old Country Road
Plainview, NY
VERTEX Project No. 65720, 66845

Photo #7: Typical vapor monitoring point (Vapor Pin)

Photo #8: Installation of blower on roof.

Photo #9: Landlord electrical panel.

Photo #10: Blower local disconnect switch.

Photo #9: Condensate drain.

Photo #10: Alarm.

APPENDIX E

SPEC SHEETS

cincinnati fan

OEM and Industrial Air Handling Specialist

HP
SERIES I

HIGH PRESSURE BLOWERS

7697 Snider Road, Mason, OH 45040-9135
Telephone: 513-573-0600

Visit us at www.cincinnatifan.com for more information.

Cat. No. HP-I-107
Supersedes HP-1-803

cincinnati fan

A Company That Stands Behind Its Product

Since the founding of **Cincinnati Fan** in 1956, the company's mission has been to provide quality products at competitive prices, backed by dependable service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 HP. But specialization does not mean the product line is small. **Cincinnati Fan** offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

Cincinnati Fan has over 170 experienced sales engineers across the U.S. and Canada ready to serve your air handling needs.

Cincinnati Fan can provide:

- Technical evaluation for correct performance conditions.
- Review of air stream and ambient conditions that require special attention.
- Selection of proper components to meet required design specifications.
- Selection of proper accessories.
- System analysis for proper fan design.

Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 10 working days.

With support like this, you can be sure your **Cincinnati Fan** product will be well-built and will provide maximum dependability and longevity.

Visit us at www.cincinnatifan.com for more information.

SPECIFICATIONS FOR HP SERIES I BLOWERS

Radial bladed pressure blowers shall be Cincinnati Fan HP, Series I, Model _____, Arrangement _____ Capacity: _____ CFM, _____ Static Pressure at standard conditions. Operating conditions: _____°F, _____Ft. Altitude.

Wheels shall be 319 cast aluminum with integral cast hub and blades. Wheels shall be dynamically balanced to assure smooth operation. Fan motor and bearing vibration levels shall not exceed 1.5 mils displacement at 3450 RPM. Shafts shall be turned, ground and polished steel (or stainless steel). All fan shafts shall receive a rust preventive coating prior to shipment. All fans shall be test run at factory before shipping.

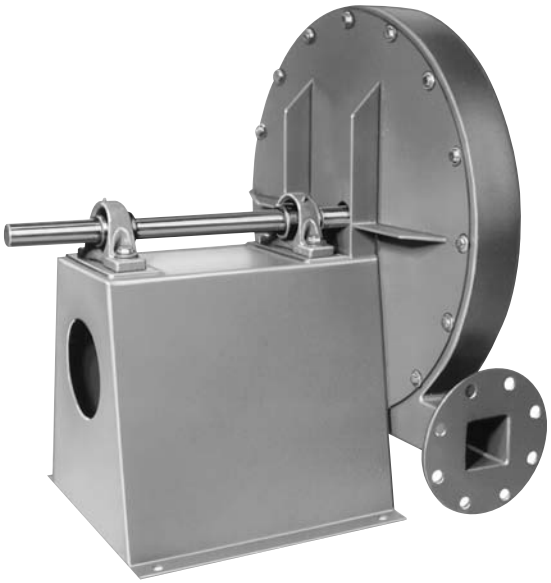
Construction gauges shall be as shown in Cincinnati Fan's HP, Series I catalog. The blower housing shall be continuously welded and supported to prevent pulsation at all conditions. Fan bearings shall be grease-lubricated, heavy-duty, self-aligning ball bearings mounted in cast iron pillow blocks. V-belt drives shall be selected for a minimum of 1.3 times nominal horsepower.

All parts in contact with airstream shall be standard steel, aluminum or stainless steel as specified.

Before painting, steel parts shall be cleaned by detergent wash, phosphatized and painted with oven cured gray enamel.

The following accessories shall be included: (See page 4 for available accessories).

THREE STANDARD ARRANGEMENTS

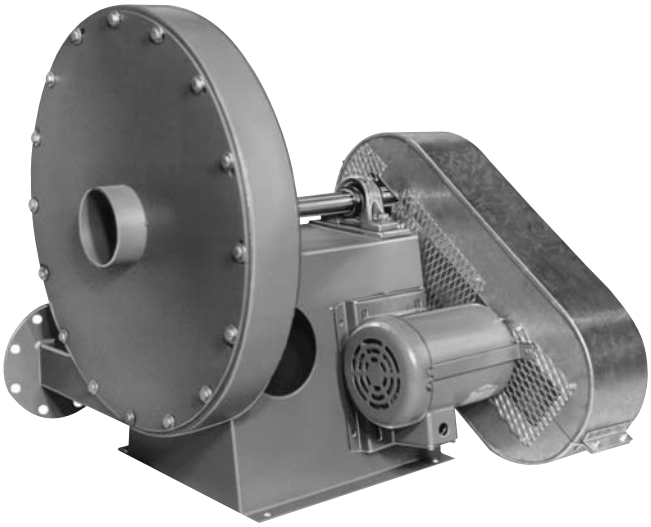


ARRANGEMENT 1 (V-BELT DRIVE)

- Motor not mounted on bearing base.
- Turned, ground and polished shafting assures smooth operation. A rust preventive coating is applied prior to shipment.
- Heavy-duty, self-aligning ball bearings in relubricatable cast-iron pillow blocks. Bearings are selected for optimal performance.
- Maximum temperature of standard design: 200°F; high temperature design up to 400°F.

ARRANGEMENT 4 (DIRECT DRIVE)

- Motor mounted on motor base.
- Wheel mounted on motor shaft.
- Maximum temperature of standard design: 200°F; high temperature design not available.

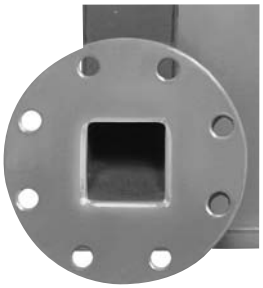


ARRANGEMENT 9 (V-BELT DRIVE)

- Motor mounted on an adjustable slide base on the side of the bearing base.
- Turned, ground and polished shafting assures smooth operation. A rust preventive coating is applied prior to shipment.
- Heavy-duty, self-aligning ball bearings in relubricatable cast-iron pillow blocks. Bearings are selected for optimal performance.
- Maximum temperature of standard design: 200°F; high temperature design up to 400°F.

STANDARD FEATURES FOR ALL HP's

Teflon Shaft Seal



Discharge Flange
Standard ANSI-125/ASA-150 pound hole pattern furnished. See pages 10 or 11 for dimensions.

Motor Slide Base
(Arrangement 9 only)

Belt Guard
(Arrangement 9 only)
Painted safety yellow.

Cast Aluminum Wheel
(Non-Sparking)

+ PLUS +

- Continuously welded fan housings with removable inlet and drive side plates.
- Blower housings are reversible and rotatable in 45° increments.
- All fans receive a mechanical run test to assure proper balance and alignment before shipping. Arrangements #1 and #9 (less motor) have drive-end key furnished.
- Fan shafts receive a rust preventative coating prior to shipment.
- Arrangement #1 fans offer easy field conversion to arrangement #9 by the addition of a motor slide base.
- Bearings are relubricatable, cast iron, pillow blocks sized for 150,000 hours average life under normal operating conditions. (Excessive belt tension will shorten bearing life).

OPTIONAL ACCESSORIES

Shaft Guard

Shaft guard available on arrangement 1 and 9. Covers bearings and shaft between fan housing and belt guard.
Painted safety yellow.

Inlet Filter

Wire mesh or paper cartridge available.

Drain Connection

¾" pipe coupling welded to lowest point of housing.

Inlet Flange

Standard ANSI-125/ASA-150 pound hole pattern furnished. See page 10 for dimensions.

SPARK-RESISTANT CONSTRUCTION

Type A: All parts in contact with airstream are of nonferrous material. Consult factory.

Type B: The standard wheels are cast aluminum. With the addition of an aluminum ring around the housing shaft opening, the fan will be AMCA type "B" spark resistant. **Maximum Temperature 200°F.**

⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking.

The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

TEMPERATURE - ALTITUDE CONVERSIONS

Standard Construction: All arrangements suitable to 200°F.
201°- 300°F. Construction: Standard fan with steel wheel. Arrangements 1 and 9 only.
301°- 400°F. Construction: Standard fan with steel wheel, heat slinger and slinger guard. Arrangements 1 and 9 only.

TEMPERATURE - ALTITUDE CONVERSION FACTORS

AIR TEMP DEG. F.	ALTITUDE IN FEET ABOVE SEA LEVEL										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0˚	.87	.91	.94	.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40˚	.94	.98	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.32	1.36
70˚	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80˚	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48
100˚	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48	1.54
120˚	1.09	1.14	1.18	1.23	1.28	1.32	1.38	1.43	1.48	1.53	1.58
140˚	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54	1.58	1.65
160˚	1.17	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.59	1.64	1.70
180˚	1.21	1.26	1.30	1.36	1.41	1.46	1.52	1.58	1.64	1.70	1.75
200˚	1.25	1.29	1.34	1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81

Fan performance tables are developed using standard air which is 70°F., 29.92" barometric pressure and .075 lbs. per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as high altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data.

Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

EXAMPLE:

Select a belt driven HPE to deliver 500 CFM at 18" SP at 160°F., and 7000' altitude.

STEP 1. From the table, conversion factor is 1.53.

STEP 2. Correct static pressure is: 1.53 x 18" SP = 27.5" SP at standard conditions.

STEP 3. Check HP catalog for 500 CFM at 27.5" SP. We select a belt driven HPE and interpolation gives 3463 RPM and 5.61 BHP.

STEP 4. Correct the BHP for the lighter air: 5.61 ÷ 1.53 = 3.67 BHP. A 5 HP motor will suffice at 160° F., and 7000' but not at standard conditions. Special motor insulation may be required above 3500 feet altitude. Consult factory.

SUCTION PRESSURE CORRECTIONS

Rarefication: When air is pulled into a blower inlet (negative pressure) the air molecules are "stretched out", or rarefied, and become less dense than at the blower discharge where the air is compressed.

Catalog ratings may be used directly, without correction, for static pressures defined at the fan discharge. For static pressures defined at the fan inlet (i.e., negative pressures), a correction is typically only made for inlet suction pressures greater than 15" W.G.

The table at the right gives corrected static pressures for suction pressure (rarefication). These corrected static pressures are for standard air (70˚F., 29.92" Hg barometric pressure and .075 lbs. per cubic foot density) at the blower inlet.

If the inlet air temperature and/or altitude are different, make those corrections as shown above and then correct for rarefication.

Suction Pressure in Inches W.G.	Corrected Static Pressure
16	16.7
18	18.8
20	21.0
22	23.3
24	25.5
26	27.8
28	30.1
30	32.4

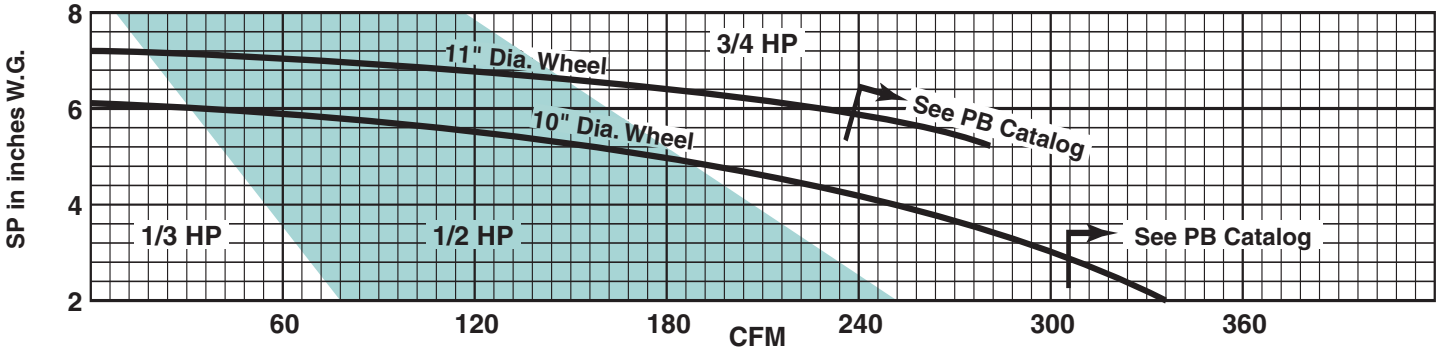
DIRECT DRIVE RATINGS @ 3450 RPM

CFM and BHP at Static Pressure Shown • Ratings at 70˚F., .075 Density, Sea Level
Performance shown is for fans with inlet and outlet ducts

Model HPA

OUTLET AREA: .063 SQ. FT.
INLET AREA: .120 SQ. FT.

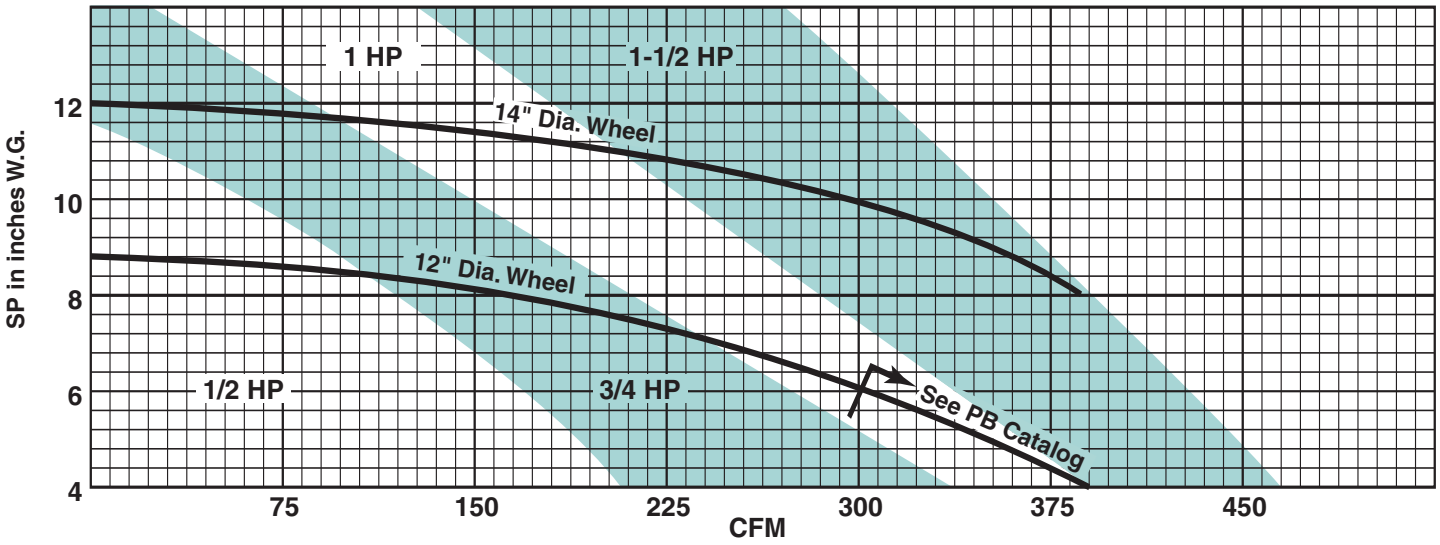
MAXIMUM MOTOR FRAME: 143T



Model HPB

OUTLET AREA: .063 SQ. FT.
INLET AREA: .120 SQ. FT.

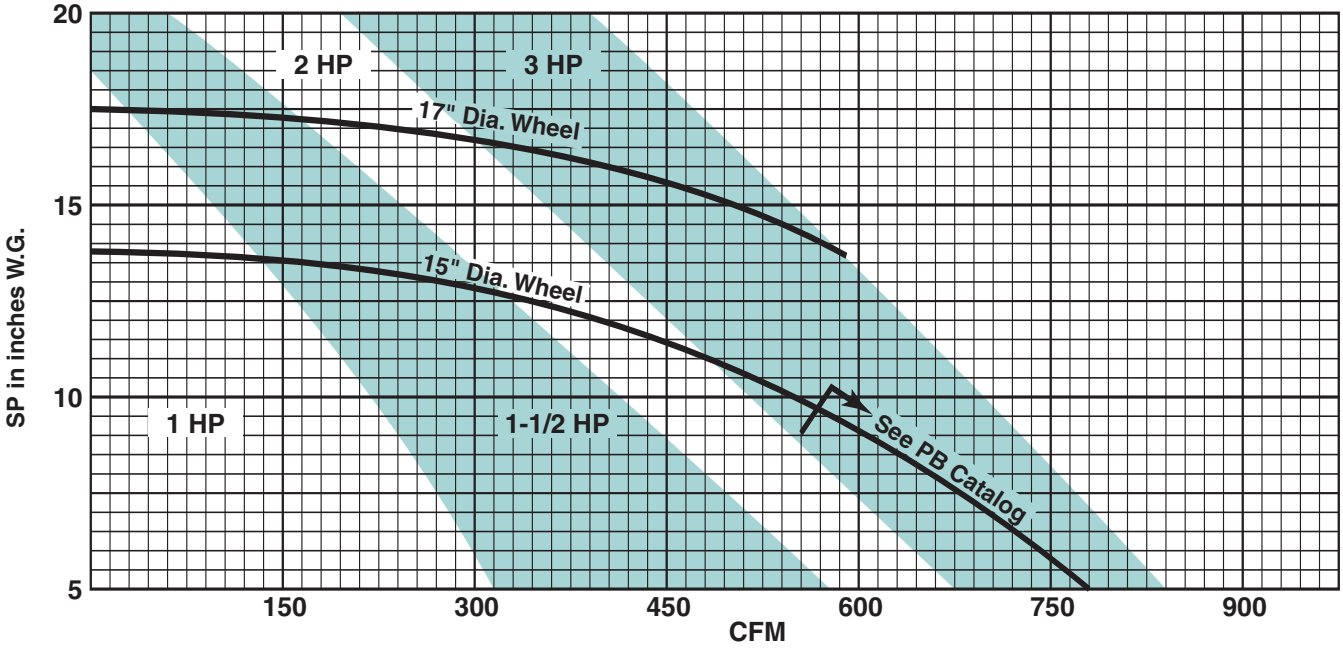
MAXIMUM MOTOR FRAME: 145T



Model HPC

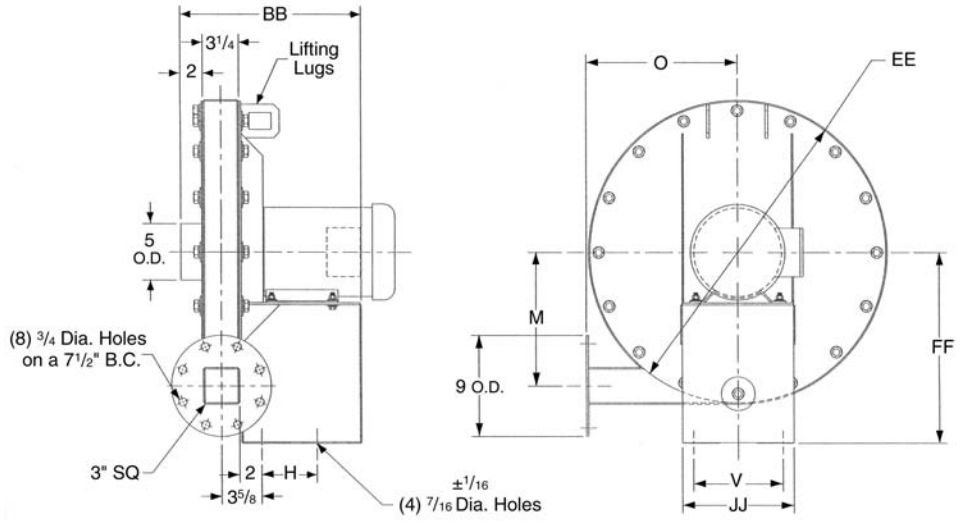
OUTLET AREA: .063 SQ. FT.
INLET AREA: .120 SQ. FT.

MAXIMUM MOTOR FRAME: 184T



DIMENSIONS and SPECIFICATIONS

Arrangement #4, Direct Drive



CW BH (Clockwise Bottom Horizontal)

Discharge flange not available with Down Blast Discharge on Models HPA, HPB and HPC.

Note: On some models motor may extend past end of motor base.

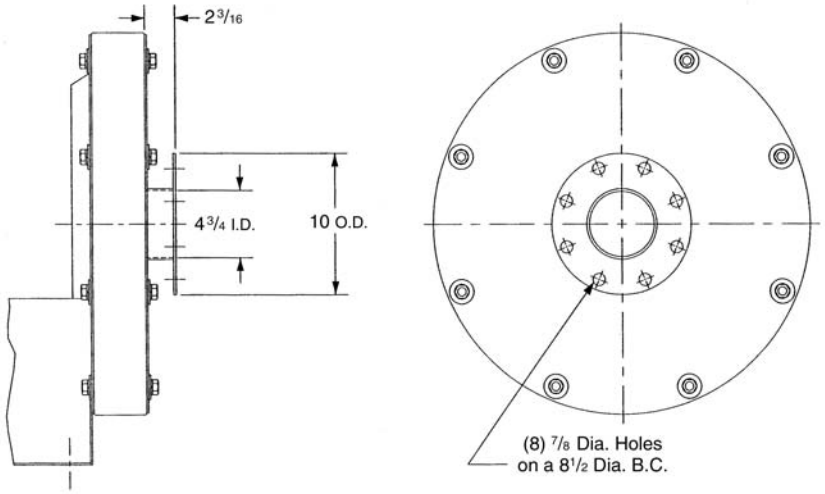
DIMENSIONS IN INCHES ±1/8"

MODEL	MOTOR FRAME	G	H	J	M	O	V	BB	EE	FF	JJ	SHIP WT. LESS MTR.
HPA	56-143T	3 5/8	5	2	5 7/8	8 1/8	5 1/2	14 1/4	15	11	7 1/2	60
HPB	56-145T	3 5/8	5	2	7 3/8	9 5/8	5 1/2	14 1/4	18	12 1/2	7 1/2	70
HPC	56-145T	3 5/8	5	2	8 7/8	11 1/8	7 1/2	14 1/4	21	14	9 1/2	90
	182T-184T							16 1/4				93
HPD	56-184T	3 5/8	5	2	9 7/8	11 5/8	7 1/2	16 1/4	23	15	9 1/2	123
HPE	56-184T	3 5/8	5	2	11 7/8	13 5/8	8	16 1/4	27	17	10	140
	213T-215T		9	2			9	18 1/16			11	150

★ NOTE

Discharge flange not available with down-blast discharge on models HPA, HPB and HPC.

INLET FLANGE DIMENSIONS FOR ALL HP's

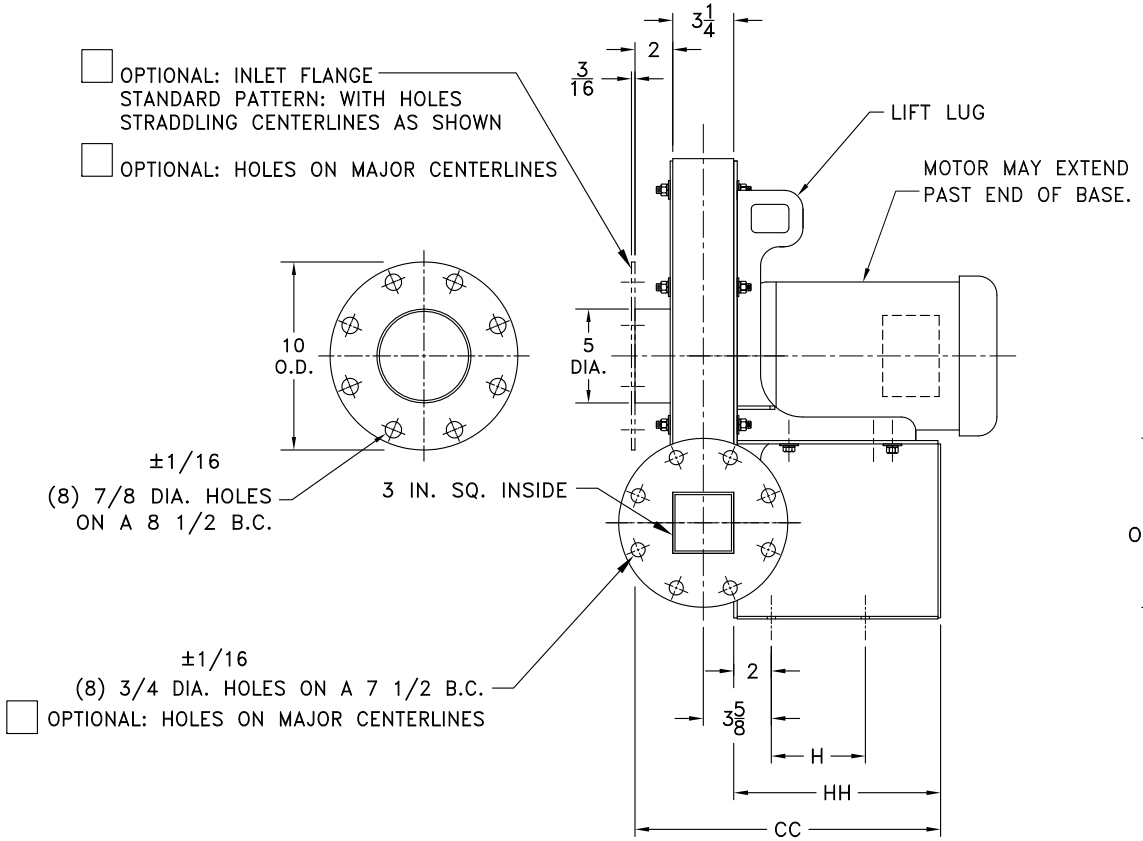


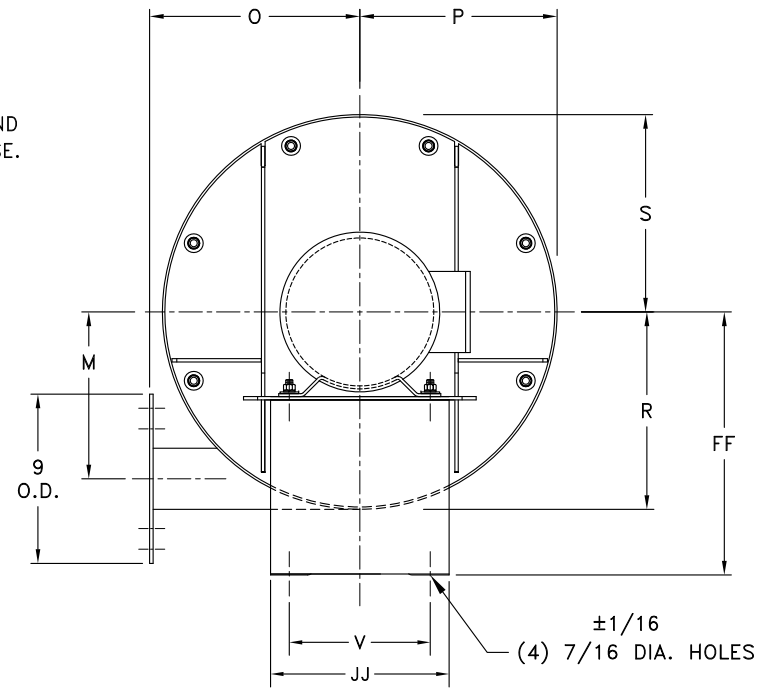
⚠ DANGER

All fans & blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source. Read operating instructions.

HP MATERIAL GAUGES

HOUSING	10
INLET SIDE PLATE	10
DRIVE SIDE PLATE	7
BASE	10
FLANGES	10





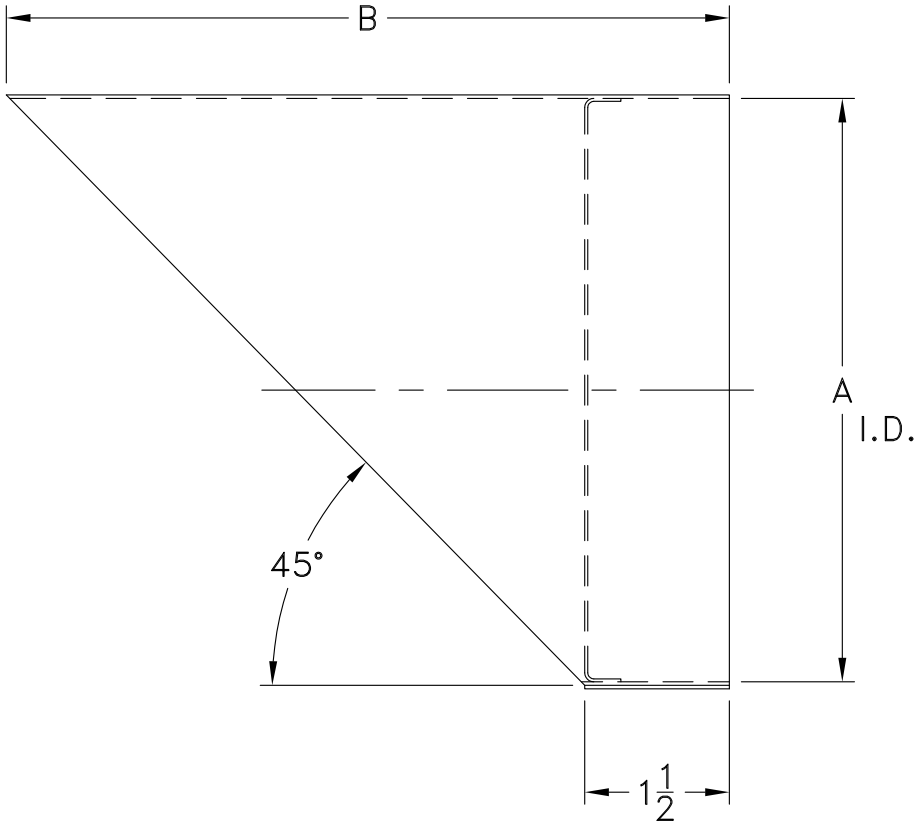
CLOCKWISE BOTTOM HORIZONTAL
DISCHARGE SHOWN ABOVE

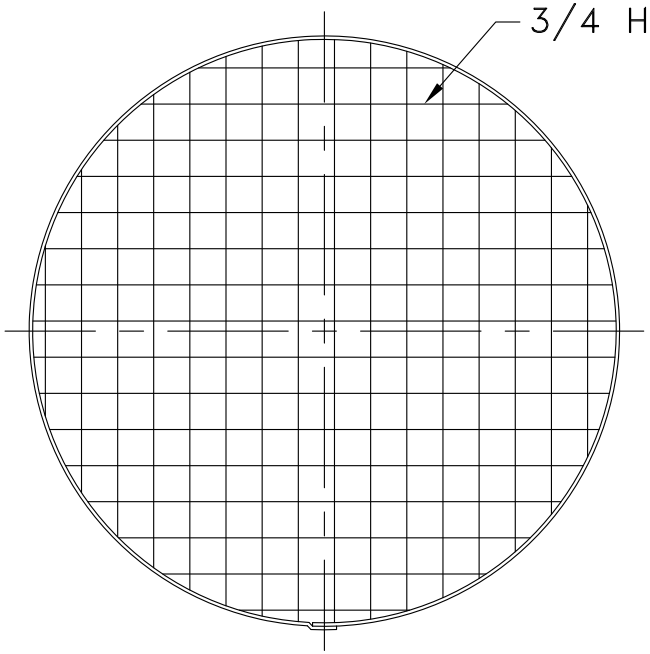
	MODEL	MOTOR FRAME	H	HOUSING M	HOUSING O	HOUSING P	HOUSING R	HOUSING S	V	CC	FF	HH	JJ	WEIGHT LESS MOTOR
X	HPA	56–143T	5	5 7/8	8 3/16	7 1/2	7 1/2	7 1/2	5 1/2	14 1/16	11	8 13/16	7 1/2	60
	HPB	56–145T	5	7 3/8	9 11/16	9	9	9	5 1/2	14 1/16	12 1/2	8 13/16	7 1/2	70
	HPC	56–145T	5	8 7/8	11 3/16	10 1/2	10 1/2	10 1/2	7 1/2	14 1/16	14	8 13/16	9 1/2	90
		182–184T								16 1/4		11	9 1/2	93
	HPD	56–184T	5	9 7/8	11 11/16	11 1/2	11 1/2	11 1/2	7 1/2	16 1/4	15	11	9 1/2	123
	HPE	56–184T	5	11 7/8	13 11/16	13 1/2	13 1/2	13 1/2	8	16 1/4	17	11	10	140
		213–215T	9						9	18 1/16		12 13/16	11	150

NOTES:

1. SHAFT SEAL IS STANDARD.
2. FAN HOUSINGS ARE REVERSIBLE AND ROTATABLE IN 45° INCREMENTS.
3. DISCHARGE FLANGE NOT AVAILABLE WITH DOWNBLAST DISCHARGE ON FOLLOWING MODELS: HPA, HPB, AND HPC.

A	29286





	SIZE	PART NO.	A I.D.	B
	4	29286	4-1/16	5-1/2
X	5	29287	5-1/16	6-1/2
	6	29288	6-1/8	7-1/2
	7	29415	7-1/16	8-1/2
	8	29289	8-1/16	9-1/2
	10	29413	10-1/16	11-1/2

NO.	DESCRIPTION	DATE	INITIALS
8	REMOVE VENDOR NOTES	8/7/12	DCF
7	ADDED 3/8 HARDWARE CLOTH	1/16/02	EAS
6	4-1/16 ID WAS 4-1/2. 5-1/16 ID WAS 5-1/6.	11/02/99	DKB
5	REDRAWN ON CAD. ADDED LAP TO OUTSIDE NOTE.	12/23/93	CRS

REVISIONS

SUPERSEDES:

SIMILAR TO:

CERTIFIED BY:

TOLERANCES:
FRACTIONS ±1/16
ANGLES: ± 1°
DECIMALS: X.XXX = ±0.005
X.XX = ±0.060
X.X = ±0.120
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

SCALE: NONE
DATE: 08/08/12
DR. BY: DCF
CHK. BY:

MATERIAL: 20 GA. JP STEEL

ASSEMBLY

A

DRAWING NO. 29286

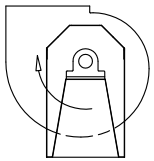
SHEET 1 of 1

REV. 8

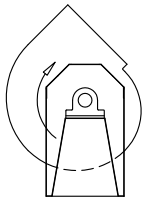
cincinnati fan
7697 SNIDER ROAD MASON, OHIO 45040

TITLE WEATHER COVER FOR FG DAMPERS AND PB FANS

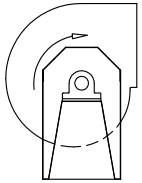
CLOCKWISE ROTATION



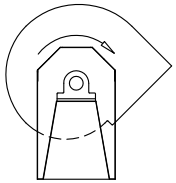
CLOCKWISE
UP BLAST



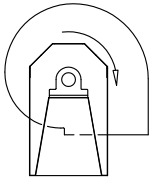
CLOCKWISE
TOP ANGULAR UP



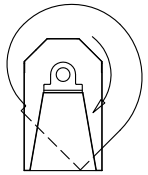
CLOCKWISE
TOP HORIZONTAL



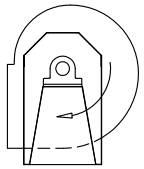
CLOCKWISE
TOP ANGULAR DOWN



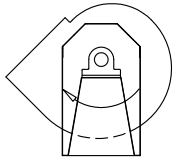
CLOCKWISE
DOWN BLAST



CLOCKWISE
BOTTOM ANGULAR DOWN

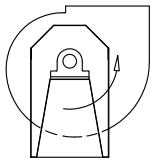


CLOCKWISE
BOTTOM HORIZONTAL

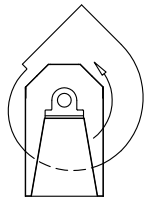


CLOCKWISE
BOTTOM ANGULAR UP

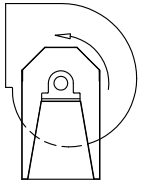
COUNTERCLOCKWISE ROTATION



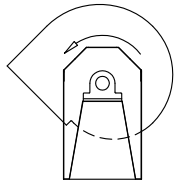
COUNTERCLOCKWISE
UP BLAST



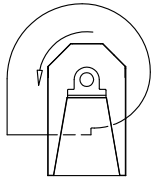
COUNTERCLOCKWISE
TOP ANGULAR UP



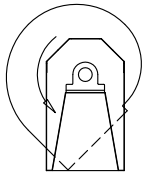
COUNTERCLOCKWISE
TOP HORIZONTAL



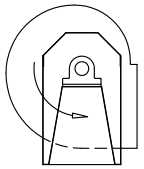
COUNTERCLOCKWISE
TOP ANGULAR DOWN



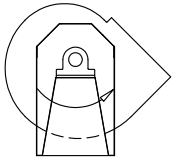
COUNTERCLOCKWISE
DOWN BLAST



COUNTERCLOCKWISE
BOTTOM ANGULAR DOWN



COUNTERCLOCKWISE
BOTTOM HORIZONTAL

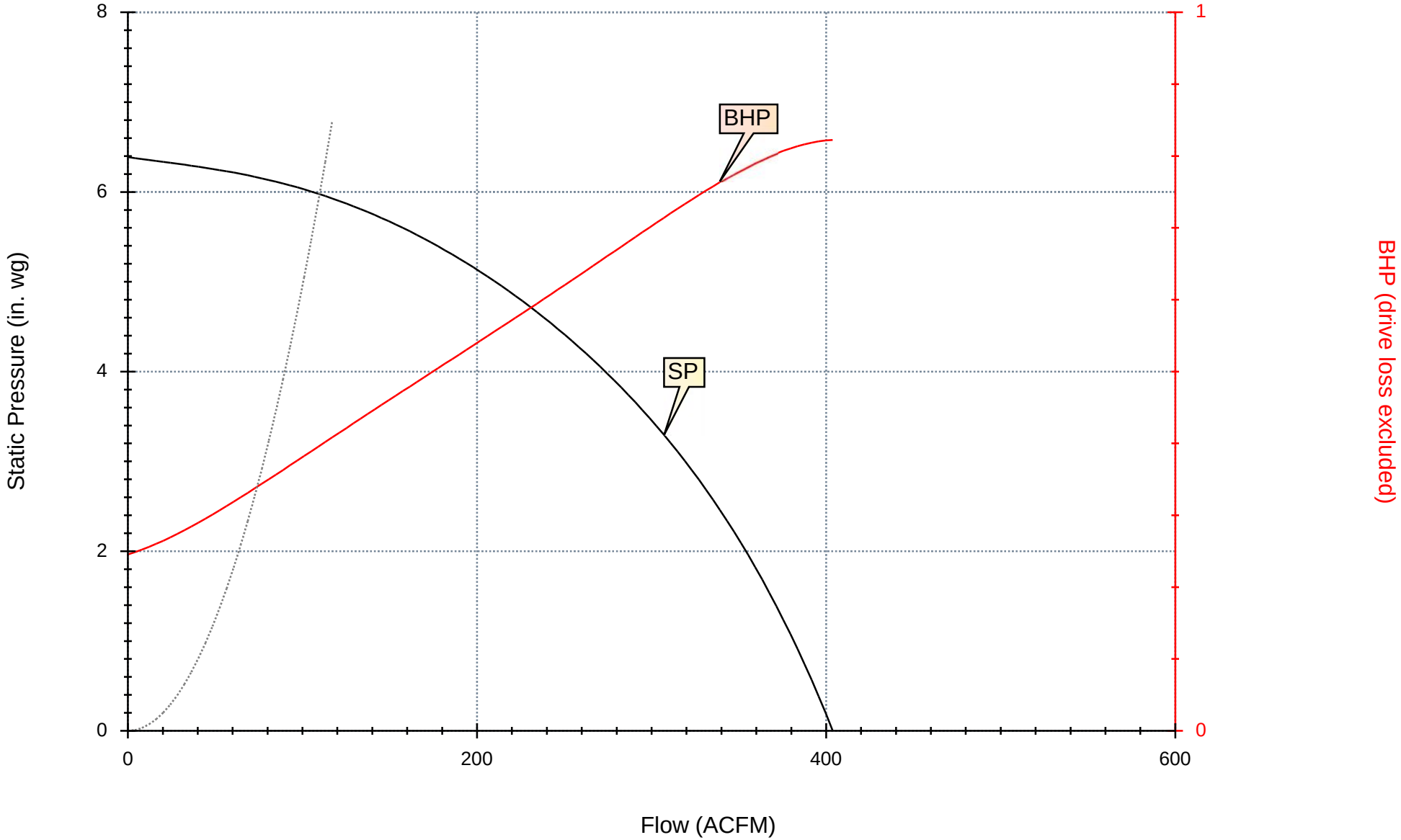


COUNTERCLOCKWISE
BOTTOM ANGULAR UP

NOTES:

1. DIRECTION OF ROTATION IS DETERMINED FROM DRIVE SIDE OF FAN.
2. SAME AS AMCA STANDARD 99–2406.

Cincinnati Fan Model HPA with 10 X 1.5625 Wheel (Full Width) @ 3,500 RPM
Rating Point: 108 ACFM @ 5.78 in. wg SP, 0.075 lb./ft.³ Density, 0.40 BHP



INSTALLATION & OPERATING INSTRUCTIONS
Instruction P/N IN015 Rev E
FOR *CHECKPOINT IIa* TM P/N 28001-2 & 28001-3
RADON SYSTEM ALARM

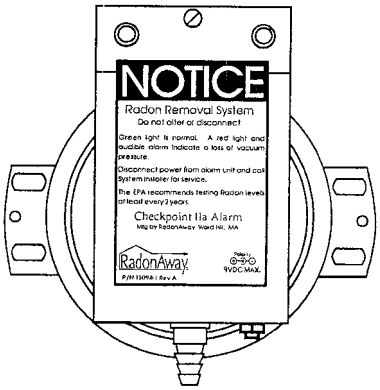
INSTALLATION INSTRUCTIONS
(WALL MOUNTING)

Select a suitable wall location near a vertical section of the suction pipe. The unit should be mounted about four or five feet above the floor and as close to the suction pipe as possible. Keep in mind that with the plug-in transformer provided, the unit must also be within six feet of a 120V receptacle. **NOTE: The Checkpoint IIa is calibrated for vertical mounting, horizontal mounting will affect switchpoint calibration.**

Drill two ¼" holes 4" apart horizontally where the unit is to be mounted.

Install the two ¼" wall anchors provided.

Hang the CHECKPOINT IIa from the two mouting holes located on the mounting bracket. Tighten the mounting screws so the unit fits snugly and securely against the wall.



Drill a 5/16" hole into the side of the vent pipe about 6" higher than the top of the unit.

Insert the vinyl tubing provided about 1" inside the suction pipe.

Cut a suitable length of vinyl tubing and attach it to the pressure switch connector on the CHECKPOINT IIa.

CALIBRATION AND OPERATION.

The CHECKPOINT IIa units are calibrated and sealed at the factory to alarm when the vacuum pressure falls below the factory setting and should not normally require field calibration. Factory Settings are:
28001-2 -.25" WC Vacuum
28001-3 -.10" WC Vacuum

To Verify Operation:

With the exhaust fan off or the pressure tubing disconnected and the CHECKPOINT IIa plugged in, both the red indicator light and the audible alarm should be on.

Turn the fan system on or connect the pressure tubing to the fan piping. The red light and the audible alarm should go off. The green light should come on.

Now turn the fan off. The red light and audible alarm should come on in about two or three seconds and the green light should go out.

WARRANTY INFORMATION

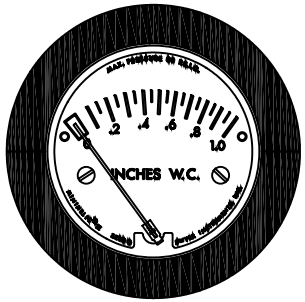
Subject to applicable consumer protection legislation, RadonAway warrants that the CHECKPOINT IIa will be free from defective material and workmanship for a period of (1) year from the date of purchase. Warranty is contingent on installation in accordance with the instructions provided. This warranty does not apply where repairs or alterations have been made or attempted by others; or the unit has been abused or misused. Warranty does not include damage in shipment unless the damage is due to the negligence of RadonAway. All other warranties, expressed or written, are not valid. To make a claim under these limited warranties, you must return the defective item to RadonAway with a copy of the purchase receipt. RadonAway is not responsible for installation or removal cost associated with this warranty. In no case is RadonAway liable beyond the repair or replacement of the defective product FOB RadonAway.

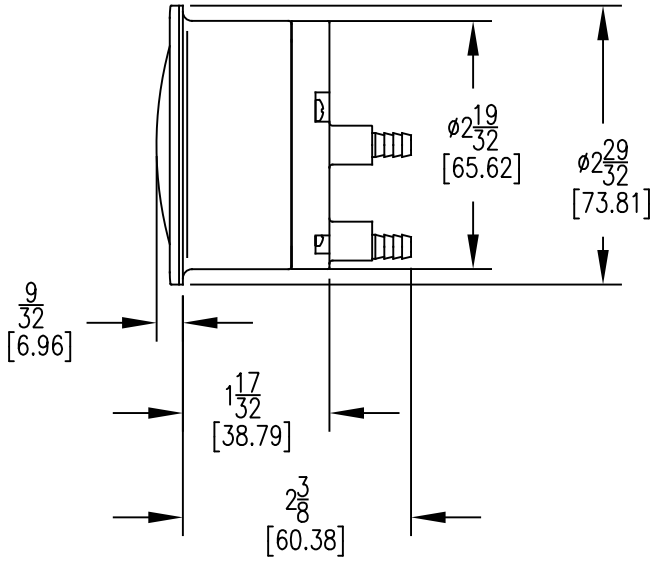
THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO WARRANTY OF MERCHANTIBILITY. ALL OTHER WARRANTIES, EXPRESSED OR WRITTEN, ARE NOT VALID.

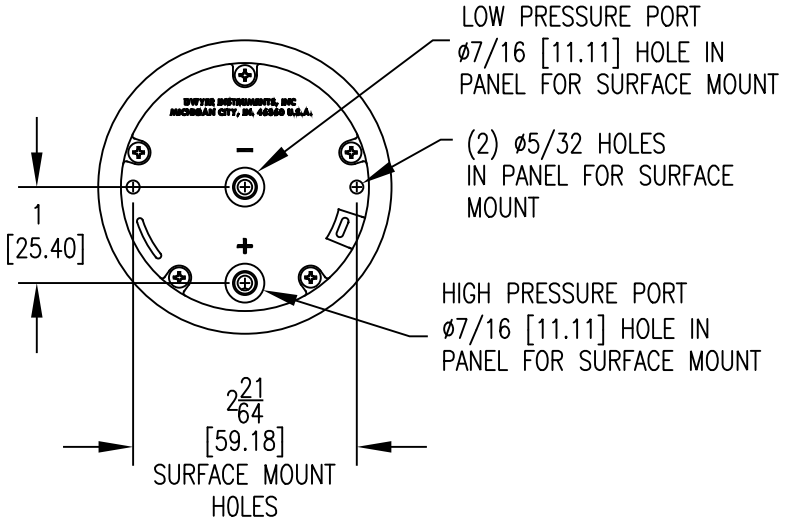
For service under these warranties, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. **No returns can be accepted without an RMA.** If factory return is required, the customer assumes all shipping costs to and from factory.

Manufactured by:
RadonAway
Ward Hill, MA

700154-00







CD = CRITICAL DIMENSION

STANDARD TOLERANCES UNLESS NOTED:
ALL DECIMAL DIMENSIONS ±
ALL ANGLES ±

SCALE 1:2

NO.	CHANGES	BY/DATE

DATE
DWN BY
CHKD
APPD

NAME

BULLETIN ARTWORK
MINIHELIC II
BACK CONNECTION
ARTWORK
(FOR REFERENCE ONLY)

ACAD2002

MATERIAL

FINISH

DWYER INSTRUMENTS, INC.
MICHIGAN CITY, INDIANA 46360 U.S.A.

FR. NO. 700154-00

APPENDIX F

LAB REPORTS

ANALYTICAL REPORT

Lab Number:	L2207878
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Richard Tobia
Phone:	(908) 458-9604
Project Name:	MORTON VILLAGE
Project Number:	66845
Report Date:	03/02/22

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207878
Report Date: 03/02/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2207878-01	VTX-EFFLUENT	SOIL_VAPOR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 17:30	02/15/22

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on February 10, 2022. The canister certification results are provided as an addendum.

L2207878-01D: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen in order to perform a screen analysis. The pressurization resulted in a dilution of the samples. The reporting limits have been elevated accordingly.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/02/22

AIR

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207878
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207878-01 D
Client ID: VTX-EFFLUENT
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 17:30
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/02/22 01:43
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Vinyl chloride	ND	0.701	--	ND	1.79	--		3.504
cis-1,2-Dichloroethene	ND	0.701	--	ND	2.78	--		3.504
Trichloroethene	ND	0.701	--	ND	3.77	--		3.504
Tetrachloroethene	ND	0.701	--	ND	4.75	--		3.504

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	90		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	91		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207878
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/01/22 18:01

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG1610434-4								
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2207878

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG1610434-3								
Vinyl chloride	96		-		70-130	-		
cis-1,2-Dichloroethene	96		-		70-130	-		
Trichloroethene	113		-		70-130	-		
Tetrachloroethene	108		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207878
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1610434-5 QC Sample: L2207878-01 Client ID: VTX-EFFLUENT						
Vinyl chloride	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25

Project Name: MORTON VILLAGE

Lab Number: L2207878

Project Number: 66845

Report Date: 03/02/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2207878-01	VTX-EFFLUENT	0947	Flow 2	02/10/22	378571		-	-	-	Pass	200	185	8
L2207878-01	VTX-EFFLUENT	822	1.0L Can	02/10/22	378571	L2202190-07	Pass	-28.7	1.3	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 01/15/22 00:40
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 01/15/22 00:40
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2202190
Report Date: 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.030	0.020	--	0.203	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2202190

Project Number: CANISTER QC BAT **Report Date:** 03/02/22

Air Canister Certification Results

Lab ID: L2202190-07
Client ID: CAN 3555 SHELF 16
Sample Location:

Date Collected: 01/14/22 08:00
Date Received: 01/14/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	97		60-140

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207878
Report Date: 03/02/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2207878-01A	Canister - 1 Liter	NA	NA			Y	Absent		TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207878
Project Number:	66845	**Report Date:**	03/02/22

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

ALPHA ANALYTICAL — CHAIN OF CUSTODY

PAGE 1 OF 1

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 2-16-22

ALPHA Job #: L2207873

Client Information

Client: VERTEX
Address: 3322 Rt 22 Suite 907
Branchburg NJ
Phone:
Fax:
Email: rtobia@vertexeng.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Morton Village
Project Location: 1022 Old Country Rd Plainview NY
Project #: 66845
Project Manager: Rich Tobia
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NYDEC		

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	PCE, TCE, c-DCE, VC	Sample Comments (i.e. PID)
07873-01	VTX-EFFLUENT	2/14	17:25	17:30	-29.16	-0.11	SV	AT	L	822	0947						X	

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS CS

Relinquished By:	Date/Time	Received By:	Date/Time:
Amanda Turco	2/15/2022/0900	Cnx-AAL-	2/15/22 12:38
Cnx-AAL-	2/15/22 1850	Yoshiana Green	2/16/22 700
Yoshiana Green	2/15/22	AAL	2/15/22 2345
AAL	2/16/22 0358		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

ANALYTICAL REPORT

Lab Number:	L2207873
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Richard Tobia
Phone:	(908) 458-9604
Project Name:	MORTON VILLAGE
Project Number:	66845
Report Date:	03/01/22

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207873
Report Date: 03/01/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2207873-01	VTX-IA 1	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 16:50	02/15/22
L2207873-02	VTX-IA 2	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 17:11	02/15/22
L2207873-03	VTX-IA 3	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 17:22	02/15/22
L2207873-04	VTX-IA 4	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 17:49	02/15/22
L2207873-05	VTX-IA 5	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 16:41	02/15/22
L2207873-06	VTX-IA 6	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 16:31	02/15/22
L2207873-07	VTX-AAI	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	02/14/22 17:40	02/15/22

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207873
Project Number:	66845	**Report Date:**	03/01/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207873
Project Number:	66845	**Report Date:**	03/01/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on February 10, 2022. The canister certification results are provided as an addendum.

The WG1609900-4 Method Blank, associated with L2207873-01 through -07, has a concentration above the reporting limit for Trichloroethane. Since the associated sample concentrations are either greater than 10X the blank concentration or non-detect to the reporting limit for this target analyte, no corrective action is required. Any results detected below the reporting limit are qualified with a "B".

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/01/22

AIR

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-01
Client ID: VTX-IA 1
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 16:50
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 05:01
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.039	0.020	--	0.264	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	101		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-02
Client ID: VTX-IA 2
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 17:11
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 05:45
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.135	0.020	--	0.915	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	97		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-03
Client ID: VTX-IA 3
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 17:22
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 07:15
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.121	0.020	--	0.821	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	93		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-04
Client ID: VTX-IA 4
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 17:49
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 07:55
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.028	0.020	--	0.190	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	94		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-05
Client ID: VTX-IA 5
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 16:41
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 08:37
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.270	0.020	--	1.83	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	100		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-06
Client ID: VTX-IA 6
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 16:31
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 06:28
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.055	0.020	--	0.373	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	95		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	96		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

SAMPLE RESULTS

Lab ID: L2207873-07
Client ID: VTX-AAI
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 02/14/22 17:40
Date Received: 02/15/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/01/22 03:37
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	92		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2207873
Report Date: 03/01/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 02/28/22 20:57

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-07 Batch: WG1609900-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	0.032	0.020	--	0.172	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2207873

Report Date: 03/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG1609900-3								
Vinyl chloride	113		-		70-130	-		25
cis-1,2-Dichloroethene	99		-		70-130	-		25
Trichloroethene	91		-		70-130	-		25
Tetrachloroethene	79		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207873
Report Date: 03/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1609900-5 QC Sample: L2207873-07 Client ID: VTX-AAI						
Vinyl chloride	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2207873

Report Date: 03/01/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2207873-01	VTX-IA 1	01583	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.9	1
L2207873-01	VTX-IA 1	1825	6.0L Can	02/10/22	378571	L2205332-05	Pass	-29.0	-9.8	-	-	-	-
L2207873-02	VTX-IA 2	0909	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.5	5
L2207873-02	VTX-IA 2	1580	6.0L Can	02/10/22	378571	L2205332-05	Pass	-29.3	-11.0	-	-	-	-
L2207873-03	VTX-IA 3	01774	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.9	1
L2207873-03	VTX-IA 3	2829	6.0L Can	02/10/22	378571	L2205085-09	Pass	-29.3	-11.2	-	-	-	-
L2207873-04	VTX-IA 4	01825	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	8.1	21
L2207873-04	VTX-IA 4	638	6.0L Can	02/10/22	378571	L2205332-05	Pass	-29.0	-9.0	-	-	-	-
L2207873-05	VTX-IA 5	0724	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.9	1
L2207873-05	VTX-IA 5	2292	6.0L Can	02/10/22	378571	L2205085-09	Pass	-29.0	-9.6	-	-	-	-
L2207873-06	VTX-IA 6	01944	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.1	9
L2207873-06	VTX-IA 6	964	6.0L Can	02/10/22	378571	L2205085-09	Pass	-29.1	-9.2	-	-	-	-
L2207873-07	VTX-AAI	01770	Flow 4	02/10/22	378571		-	-	-	Pass	10.0	9.4	6
L2207873-07	VTX-AAI	3645	6.0L Can	02/10/22	378571	L2205332-05	Pass	-29.1	-7.7	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205085
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/02/22 20:43
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205085
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205085
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205085
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205085

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	91		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205085
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/02/22 20:43
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205085

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205085

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205085-09
Client ID: CAN 966 SHELF 43
Sample Location:

Date Collected: 02/01/22 09:00
Date Received: 02/01/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	96		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205332
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/02/22 23:59
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205332
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205332

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205332
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2205332
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	95		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2205332
Report Date: 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/02/22 23:59
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205332

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2205332

Project Number: CANISTER QC BAT **Report Date:** 03/01/22

Air Canister Certification Results

Lab ID: L2205332-05
Client ID: CAN 2935 SHELF 63
Sample Location:

Date Collected: 02/01/22 17:00
Date Received: 02/02/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	99		60-140

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2207873
Report Date: 03/01/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2207873-01A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-02A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-03A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-04A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-05A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-06A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2207873-07A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207873
Project Number:	66845	**Report Date:**	03/01/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207873
Project Number:	66845	**Report Date:**	03/01/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2207873
Project Number:	66845	**Report Date:**	03/01/22

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

ALPHA ANALYTICAL

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 2-16-22

ALPHA Job #: L2207873

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: VERTEX
Address: 3322 Rt. 22, Ste 907 Branchburg, NJ
Phone:
Fax:
Email: rtobia@vertexeng.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Morton Village
Project Location: 1022 Old Country Rd Plainview, NY
Project #: 66845
Project Manager: Rich Tobia
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NYDOH		

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ANALYSIS: TO-15 | TO-15 SIM | APH | Fixed Gases | Sulfides & Mercaptans by TO-15 | PCE, TCE, c-DCE, VC

ALPHA Lab ID (Lab Use Only)	Sample ID	End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	PCE, TCE, c-DCE, VC	Sample Comments (i.e. PID)
07873-01	VTX-IA 1	2/14	10:31	16:50	-29.40	-10.95	AA	AT	6L	1825	01683						X	
02	VTX-IA 2	↓	10:55	17:11	-30.55	-12.13	AA	AT	6L	1580	0909						X	
03	VTX-IA ~~2~~ 3		11:16	17:22	-30.62	-12.19	AA	AT	6L	2829	01774						X	
04	VTX-IA 4		11:32	17:49	-34.74	-10.46	AA	AT	6L	688	01825						X	
05	VTX-IA 5		10:01	16:41	-30.79	-10.54	AA	AT	6L	2292	0724						X	
06	VTX-IA 6		10:10	16:31	-17.04	-10.53	AA	AT	6L	944	01944						X	
07	VTX-AAI		11:35	17:40	-30.51	-10.63	AA	AT	6L	3645	01770						X	
	~~VTX-Effluent~~	↓	~~17:25~~	~~17:30~~	~~-29.16~~	~~-0.11~~		~~AT~~	~~1L~~									Separate sheet

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS | CS

Relinquished By:	Date/Time	Received By:	Date/Time:
Amanda Turner	2/15/2022/09:10	[signature] AAL	2/15/22 12:38
[signature] AAL	2/15/22 18:50	[signature]	2/15/22 2000
[signature]	2/15/22	[signature] AAL	2/15/22 2345
[signature] AAL	2/16/22 0355	[signature]	2/16/22 0355

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions.
See reverse side.

ANALYTICAL REPORT

Lab Number:	L2130400
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Richard Tobia
Phone:	(908) 458-9604
Project Name:	MORTON VILLAGE
Project Number:	66845
Report Date:	06/14/21

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2130400
Report Date: 06/14/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2130400-01	VTX-IA1	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 14:33	06/07/21
L2130400-02	VTX-IA2	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 16:25	06/07/21
L2130400-03	VTX-IA3	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 16:22	06/07/21
L2130400-04	VTX-IA4	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 15:30	06/07/21
L2130400-05	VTX-IA5	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 15:28	06/07/21
L2130400-06	VTX-IA6	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 14:43	06/07/21
L2130400-07	VTX-AAI	AIR	1022 OLD COUNTRY RD, PLAINVIEW, NY	06/04/21 14:50	06/07/21

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 3, 2021. The canister certification results are provided as an addendum.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 06/14/21

AIR

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-01
Client ID: VTX-IA1
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 14:33
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/11/21 22:03
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	0.022	0.020	--	0.118	0.107	--		1
Tetrachloroethene	0.295	0.020	--	2.00	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	96		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-02
Client ID: VTX-IA2
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 16:25
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/11/21 22:54
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.260	0.020	--	1.76	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	92		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-03
Client ID: VTX-IA3
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 16:22
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/11/21 23:45
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.282	0.020	--	1.91	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	91		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	92		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-04
Client ID: VTX-IA4
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 15:30
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/12/21 00:28
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	0.022	0.020	--	0.118	0.107	--		1
Tetrachloroethene	0.215	0.020	--	1.46	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	93		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	94		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-05
Client ID: VTX-IA5
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 15:28
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/12/21 01:12
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	0.058	0.020	--	0.230	0.079	--		1
Trichloroethene	0.058	0.020	--	0.312	0.107	--		1
Tetrachloroethene	0.806	0.020	--	5.47	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	94		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-06
Client ID: VTX-IA6
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 14:43
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/12/21 01:58
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	0.020	0.020	--	0.107	0.107	--		1
Tetrachloroethene	0.105	0.020	--	0.712	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	94		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

SAMPLE RESULTS

Lab ID: L2130400-07
Client ID: VTX-AAI
Sample Location: 1022 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 06/04/21 14:50
Date Received: 06/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/11/21 17:19
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.055	0.020	--	0.373	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	88		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	91		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2130400
Report Date: 06/14/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/11/21 15:12

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-07 Batch: WG1511081-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2130400

Report Date: 06/14/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG1511081-3								
Vinyl chloride	93		-		70-130	-		25
cis-1,2-Dichloroethene	108		-		70-130	-		25
Trichloroethene	109		-		70-130	-		25
Tetrachloroethene	111		-		70-130	-		25

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2130400

Report Date: 06/14/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2130400-01	VTX-IA1	01882	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.3	7
L2130400-01	VTX-IA1	3012	6.0L Can	06/03/21	353762	L2127874-03	Pass	-29.1	-10.8	-	-	-	-
L2130400-02	VTX-IA2	0058	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.3	7
L2130400-02	VTX-IA2	1680	6.0L Can	06/03/21	353762	L2127874-03	Pass	-29.5	-14.0	-	-	-	-
L2130400-03	VTX-IA3	01059	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.5	5
L2130400-03	VTX-IA3	3354	6.0L Can	06/03/21	353762	L2127874-03	Pass	-29.3	-14.0	-	-	-	-
L2130400-04	VTX-IA4	01720	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.7	3
L2130400-04	VTX-IA4	2946	6.0L Can	06/03/21	353762	L2127270-05	Pass	-29.4	-10.4	-	-	-	-
L2130400-05	VTX-IA5	01209	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.8	2
L2130400-05	VTX-IA5	3144	6.0L Can	06/03/21	353762	L2127874-03	Pass	-29.5	-10.6	-	-	-	-
L2130400-06	VTX-IA6	0140	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	9.0	11
L2130400-06	VTX-IA6	3125	6.0L Can	06/03/21	353762	L2127270-05	Pass	-29.4	-12.3	-	-	-	-
L2130400-07	VTX-AAI	0969	Flow 5	06/03/21	353762		-	-	-	Pass	10.0	10.2	2
L2130400-07	VTX-AAI	1544	6.0L Can	06/03/21	353762	L2127874-03	Pass	-29.5	-10.5	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 05/24/21 00:13
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	82		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2127270
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 05/24/21 00:13
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2127270

Project Number: CANISTER QC BAT **Report Date:** 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2127270

Project Number: CANISTER QC BAT **Report Date:** 06/14/21

Air Canister Certification Results

Lab ID: L2127270-05
Client ID: CAN 1642 SHELF 67
Sample Location:

Date Collected: 05/21/21 16:00
Date Received: 05/22/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	87		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	80		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 05/26/21 23:22
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	86		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 05/26/21 23:22
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2127874
Report Date: 06/14/21

Air Canister Certification Results

Lab ID: L2127874-03
Client ID: CAN 1621 SHELF 35
Sample Location:

Date Collected: 05/25/21 16:00
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	89		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	87		60-140

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2130400
Report Date: 06/14/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2130400-01A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-02A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-03A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-04A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-05A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-06A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)
L2130400-07A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2130400
Project Number:	66845	**Report Date:**	06/14/21

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

ALPHA ANALYTICAL

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 6/8/21

ALPHA Job #: L2130400

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Vertex
Address: 3322 Rt 22 Ste 907
Branchburg NJ
Phone:
Fax:
Email: Rtobin@vertexeng.com

❑ These samples have been previously analyzed by Alpha

Project Information

Project Name: Morton Village
Project Location: 1022 Old Country Rd, Plainview, NY
Project #: 66845
Project Manager: Rich Tobin
ALPHA Quote #:

Turn-Around Time

☒ Standard ❑ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

❑ FAX
❑ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
❑ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NY DOH		

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ❑

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	PCE, TCE, c-DCE, VC	Sample Comments (i.e. PID)
30400-01	VTX-IA1	6/4/21	0812	1433	-29.98	-11.75	AA	EG	6	3012	01862						X	
02	VTX-IA2		1102	1625	-30.12	-15.22				1680	0058						X	
03	VTX-IA3		1056	1622	-29.78	-14.84				3354	01089						X	
04	VTX-IA4		0905	1530	-29.81	-11.68				2946	01720						X	
05	VTX-IA5		0909	1528	-29.95	-11.82				3144	01209						X	
06	VTX-IA6		0818	1443	-30.13	-13.92				3125	0140						X	Can ID 3125
07	VTX-AAI	↓	0828	1450	-30.01	-10.98	↓	↓	↓	1544	0969						X	

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS CS

Relinquished By:	Date/Time	Received By:	Date/Time:
Evan Grady		AAL	6/7/21 11:05
AAL	6/7/21 15:18	AAL	6/7/21 22:00
AAL	6/8/21 03:30		6/8/21 0330

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

 (25-Sep-15)

ANALYTICAL REPORT

Lab Number:	L2112332
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Matthew Urm
Phone:	(908) 458-9475
Project Name:	MORTON VILLAGE
Project Number:	66845
Report Date:	03/19/21

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2112332
Report Date: 03/19/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2112332-01	VTX-SSDS-EFF	SOIL_VAPOR	1026 OLD COUNTRY RD, PLAINVIEW, NY	03/12/21 10:30	03/12/21

Project Name:	MORTON VILLAGE	**Lab Number:**	L2112332
Project Number:	66845	**Report Date:**	03/19/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	MORTON VILLAGE	**Lab Number:**	L2112332
Project Number:	66845	**Report Date:**	03/19/21

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on March 11, 2021. The canister certification results are provided as an addendum.

L2112332-01D: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen due to canister size. The pressurization resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

The WG1476101-3 LCS recoveries for bromoform (131%), 1,2,4-trichlorobenzene (135%) and hexachlorobutadiene (132%) are above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of these analytes.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/19/21

AIR

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

SAMPLE RESULTS

Lab ID: L2112332-01 D
Client ID: VTX-SSDS-EFF
Sample Location: 1026 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 03/12/21 10:30
Date Received: 03/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/18/21 23:08
Analyst: RY

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	0.467	--	ND	2.31	--		2.333
Chloromethane	ND	0.467	--	ND	0.964	--		2.333
Freon-114	ND	0.467	--	ND	3.26	--		2.333
Vinyl chloride	ND	0.467	--	ND	1.19	--		2.333
1,3-Butadiene	ND	0.467	--	ND	1.03	--		2.333
Bromomethane	ND	0.467	--	ND	1.81	--		2.333
Chloroethane	ND	0.467	--	ND	1.23	--		2.333
Ethanol	235	11.7	--	443	22.0	--		2.333
Vinyl bromide	ND	0.467	--	ND	2.04	--		2.333
Acetone	19.3	2.33	--	45.8	5.53	--		2.333
Trichlorofluoromethane	ND	0.467	--	ND	2.62	--		2.333
Isopropanol	14.4	1.17	--	35.4	2.88	--		2.333
1,1-Dichloroethene	ND	0.467	--	ND	1.85	--		2.333
Tertiary butyl Alcohol	ND	1.17	--	ND	3.55	--		2.333
Methylene chloride	ND	1.17	--	ND	4.06	--		2.333
3-Chloropropene	ND	0.467	--	ND	1.46	--		2.333
Carbon disulfide	ND	0.467	--	ND	1.45	--		2.333
Freon-113	ND	0.467	--	ND	3.58	--		2.333
trans-1,2-Dichloroethene	ND	0.467	--	ND	1.85	--		2.333
1,1-Dichloroethane	ND	0.467	--	ND	1.89	--		2.333
Methyl tert butyl ether	ND	0.467	--	ND	1.68	--		2.333
2-Butanone	2.29	1.17	--	6.75	3.45	--		2.333
cis-1,2-Dichloroethene	29.7	0.467	--	118	1.85	--		2.333

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

SAMPLE RESULTS

Lab ID: L2112332-01 D
Client ID: VTX-SSDS-EFF
Sample Location: 1026 OLD COUNTRY RD, PLAINVIEW, NY
Date Collected: 03/12/21 10:30
Date Received: 03/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	1.17	--	ND	4.22	--		2.333
Chloroform	ND	0.467	--	ND	2.28	--		2.333
Tetrahydrofuran	2.33	1.17	--	6.87	3.45	--		2.333
1,2-Dichloroethane	ND	0.467	--	ND	1.89	--		2.333
n-Hexane	ND	0.467	--	ND	1.65	--		2.333
1,1,1-Trichloroethane	ND	0.467	--	ND	2.55	--		2.333
Benzene	ND	0.467	--	ND	1.49	--		2.333
Carbon tetrachloride	ND	0.467	--	ND	2.94	--		2.333
Cyclohexane	ND	0.467	--	ND	1.61	--		2.333
1,2-Dichloropropane	ND	0.467	--	ND	2.16	--		2.333
Bromodichloromethane	ND	0.467	--	ND	3.13	--		2.333
1,4-Dioxane	ND	0.467	--	ND	1.68	--		2.333
Trichloroethene	11.6	0.467	--	62.3	2.51	--		2.333
2,2,4-Trimethylpentane	ND	0.467	--	ND	2.18	--		2.333
Heptane	ND	0.467	--	ND	1.91	--		2.333
cis-1,3-Dichloropropene	ND	0.467	--	ND	2.12	--		2.333
4-Methyl-2-pentanone	ND	1.17	--	ND	4.79	--		2.333
trans-1,3-Dichloropropene	ND	0.467	--	ND	2.12	--		2.333
1,1,2-Trichloroethane	ND	0.467	--	ND	2.55	--		2.333
Toluene	ND	0.467	--	ND	1.76	--		2.333
2-Hexanone	ND	0.467	--	ND	1.91	--		2.333
Dibromochloromethane	ND	0.467	--	ND	3.98	--		2.333
1,2-Dibromoethane	ND	0.467	--	ND	3.59	--		2.333
Tetrachloroethene	163	0.467	--	1110	3.17	--		2.333
Chlorobenzene	ND	0.467	--	ND	2.15	--		2.333
Ethylbenzene	ND	0.467	--	ND	2.03	--		2.333

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

SAMPLE RESULTS

Lab ID: L2112332-01 D
Client ID: VTX-SSDS-EFF
Sample Location: 1026 OLD COUNTRY RD, PLAINVIEW, NY

Date Collected: 03/12/21 10:30
Date Received: 03/12/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.933	--	ND	4.05	--		2.333
Bromoform	ND	0.467	--	ND	4.83	--		2.333
Styrene	ND	0.467	--	ND	1.99	--		2.333
1,1,2,2-Tetrachloroethane	ND	0.467	--	ND	3.21	--		2.333
o-Xylene	ND	0.467	--	ND	2.03	--		2.333
4-Ethyltoluene	ND	0.467	--	ND	2.30	--		2.333
1,3,5-Trimethylbenzene	ND	0.467	--	ND	2.30	--		2.333
1,2,4-Trimethylbenzene	ND	0.467	--	ND	2.30	--		2.333
Benzyl chloride	ND	0.467	--	ND	2.42	--		2.333
1,3-Dichlorobenzene	ND	0.467	--	ND	2.81	--		2.333
1,4-Dichlorobenzene	ND	0.467	--	ND	2.81	--		2.333
1,2-Dichlorobenzene	ND	0.467	--	ND	2.81	--		2.333
1,2,4-Trichlorobenzene	ND	0.467	--	ND	3.47	--		2.333
Hexachlorobutadiene	ND	0.467	--	ND	4.98	--		2.333

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	100		60-140
Bromochloromethane	109		60-140
chlorobenzene-d5	115		60-140

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/18/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG1476101-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/18/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG1476101-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: MORTON VILLAGE
Project Number: 66845
Lab Number: L2112332
Report Date: 03/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/18/21 15:13

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG1476101-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2112332

Report Date: 03/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG1476101-3								
Dichlorodifluoromethane	105		-		70-130	-		
Chloromethane	83		-		70-130	-		
Freon-114	96		-		70-130	-		
Vinyl chloride	86		-		70-130	-		
1,3-Butadiene	82		-		70-130	-		
Bromomethane	93		-		70-130	-		
Chloroethane	89		-		70-130	-		
Ethanol	61		-		40-160	-		
Vinyl bromide	108		-		70-130	-		
Acetone	89		-		40-160	-		
Trichlorofluoromethane	126		-		70-130	-		
Isopropanol	80		-		40-160	-		
1,1-Dichloroethene	105		-		70-130	-		
Tertiary butyl Alcohol	78		-		70-130	-		
Methylene chloride	95		-		70-130	-		
3-Chloropropene	103		-		70-130	-		
Carbon disulfide	96		-		70-130	-		
Freon-113	116		-		70-130	-		
trans-1,2-Dichloroethene	101		-		70-130	-		
1,1-Dichloroethane	104		-		70-130	-		
Methyl tert butyl ether	95		-		70-130	-		
2-Butanone	98		-		70-130	-		
cis-1,2-Dichloroethene	106		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2112332

Report Date: 03/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG1476101-3								
Ethyl Acetate	98		-		70-130	-		
Chloroform	106		-		70-130	-		
Tetrahydrofuran	95		-		70-130	-		
1,2-Dichloroethane	110		-		70-130	-		
n-Hexane	80		-		70-130	-		
1,1,1-Trichloroethane	95		-		70-130	-		
Benzene	82		-		70-130	-		
Carbon tetrachloride	103		-		70-130	-		
Cyclohexane	80		-		70-130	-		
1,2-Dichloropropane	88		-		70-130	-		
Bromodichloromethane	92		-		70-130	-		
1,4-Dioxane	80		-		70-130	-		
Trichloroethene	93		-		70-130	-		
2,2,4-Trimethylpentane	82		-		70-130	-		
Heptane	86		-		70-130	-		
cis-1,3-Dichloropropene	91		-		70-130	-		
4-Methyl-2-pentanone	82		-		70-130	-		
trans-1,3-Dichloropropene	80		-		70-130	-		
1,1,2-Trichloroethane	98		-		70-130	-		
Toluene	96		-		70-130	-		
2-Hexanone	88		-		70-130	-		
Dibromochloromethane	118		-		70-130	-		
1,2-Dibromoethane	110		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2112332

Report Date: 03/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG1476101-3								
Tetrachloroethene	108		-		70-130	-		
Chlorobenzene	108		-		70-130	-		
Ethylbenzene	108		-		70-130	-		
p/m-Xylene	111		-		70-130	-		
Bromoform	**131**	Q	-		70-130	-		
Styrene	113		-		70-130	-		
1,1,2,2-Tetrachloroethane	107		-		70-130	-		
o-Xylene	113		-		70-130	-		
4-Ethyltoluene	118		-		70-130	-		
1,3,5-Trimethylbenzene	120		-		70-130	-		
1,2,4-Trimethylbenzene	126		-		70-130	-		
Benzyl chloride	110		-		70-130	-		
1,3-Dichlorobenzene	126		-		70-130	-		
1,4-Dichlorobenzene	127		-		70-130	-		
1,2-Dichlorobenzene	127		-		70-130	-		
1,2,4-Trichlorobenzene	**135**	Q	-		70-130	-		
Hexachlorobutadiene	**132**	Q	-		70-130	-		

Project Name: MORTON VILLAGE

Project Number: 66845

Lab Number: L2112332

Report Date: 03/19/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2112332-01	VTX-SSDS-EFF	0601	SV200	03/11/21	345133		-	-	-	Pass	220	222	1
L2112332-01	VTX-SSDS-EFF	840	1.0L Can	03/11/21	345133	L2110928-07	Pass	-29.7	-1.9	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2110928
Report Date: 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/07/21 03:06
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2110928

Project Number: CANISTER QC BAT **Report Date:** 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2110928
Report Date: 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2110928

Project Number: CANISTER QC BAT **Report Date:** 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2110928
Report Date: 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2110928
Report Date: 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/07/21 03:06
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2110928

Project Number: CANISTER QC BAT **Report Date:** 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2110928

Project Number: CANISTER QC BAT **Report Date:** 03/19/21

Air Canister Certification Results

Lab ID: L2110928-07
Client ID: CAN 2396 SHELF 17
Sample Location:

Date Collected: 03/05/21 09:00
Date Received: 03/05/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	93		60-140

Project Name: MORTON VILLAGE
Project Number: 66845

Lab Number: L2112332
Report Date: 03/19/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
NA	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2112332-01A	Canister - 1 Liter	NA	NA			Y	Absent		TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	MORTON VILLAGE	**Lab Number:**	L2112332
Project Number:	66845	**Report Date:**	03/19/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2112332
Project Number:	66845	**Report Date:**	03/19/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	MORTON VILLAGE	**Lab Number:**	L2112332
Project Number:	66845	**Report Date:**	03/19/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/13/21

ALPHA Job #: L2112332

Client Information

Client: Vertex

Address: 3322 Rt 22 West
Branchburg, NJ

Phone:

Fax:

Email: MVAN@vertexeng.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Morton Village

Project Location: 1026 Old County Rd, Plainview NY

Project #: 66545

Project Manager: Matt Van

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NY		

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH (Solvent Non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
12332-01	VTX-SSDS-EFF	3/12/21	1025	1030	-29.4	-29	SV	EG	1L	840	0601	X					

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Evans Cipolino	3/12/21 1102	Matt Delore AAL	3/12/21 11:02
Matt Delore AAL	3/12/21 14:30		3/12/21 2300
AAL	3/13/21 0450		3/13/21 0500