FINAL

2021 SOIL VAPOR INTRUSION MITIGATION SYSTEM ANNUAL REPORT and PROPOSED SYSTEM MODIFICATIONS FOR REMEDIAL ACTION AT THE DEFENSE NATIONAL STOCKPILE CENTER SCOTIA DEPOT GLENVILLE, NEW YORK

U.S. Army Corps of Engineers

Prepared By:

AECOM Technical Services

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1 INTRODUCTION

This report has been prepared by AECOM on behalf of the United States Army Corps of Engineers (USACE) to document the sixth year of operation, maintenance and monitoring (O&M) of the soil vapor intrusion (SVI) mitigation systems at the Former Scotia Navy Depot (FSND) (Site). The Site is adjacent to the north side of New York State (NYS) Route 5 (Amsterdam Road) in the Town of Glenville, Schenectady County, New York. A Site location map is provided in Figure 1-1. After operating the SVI mitigation systems for five years, an evaluation was performed to determine if it is necessary to continue to operate the systems. Based on that report fifteen SSDSs were selected to remain in operation with the use of the remaining systems discontinued. Those 15 SSDS systems were reactivated in November 2021 with the approval of the NYSDEC. This report presents the results of the recent SVI mitigation system monitoring after the system modifications were instituted.

1.1 Site History

The Scotia Depot was built between 1942 and 1943 and was commissioned as a United States Navy facility on March 30, 1943. It served as a storage and supply depot for naval forces along the Atlantic coast and Europe, and as a storage and distribution point for National Stockpile materials. On January 1, 1960 the Navy turned the facility over to the General Services Administration (GSA). During the period between early 1966 and approximately 1973, the USACE/Army Material Command (AMC) leased buildings from the Navy for the fabrication and storage of vehicles as well as other military equipment. Additionally, between 1967 and 1969, the GSA and the Navy leased to the United States Army/Defense Supply Agency, buildings 202 and 203. The agreement indicates these buildings were used for the preservation and rail loading of trucks, and storage of trucks and vehicles.

Details on the groundwater portion of the remedy are provided in the Final Engineering Report (FER) (AECOM, 2017a) for the Site.

SVI investigations were conducted at off-Site and on-Site structures in relation to the groundwater impacts. An investigation was conducted to determine potential sources of the Trichloroethene (TCE) and detections of volatile organic compounds (VOCs) in some of the tested residential wells were consistent with the known groundwater contamination concentrations at the Defense National Stockpile Center Scotia Depot Site. The SVI evaluations conducted during the Expanded Site Investigation (ESI) performed by the New York State Department of Environmental Conservation (NYSDEC) (NYSDEC, 2007) included passive soil gas sampling on-Site and indoor air sampling at 10 off-Site properties. The results of the ESI SVI sampling indicated off-Site groundwater containing TCE was not influencing the quality of indoor air at homes that directly overlie or that are along the margins of the TCE groundwater plume.

1.2 Pre-Design Investigation for SSDS System Design

The 2010 Record of Decision (ROD) (NYSDEC, 2010) required monitoring and mitigation (if necessary) of soil vapor intrusion for the on-Site commercial buildings (buildings 201 through 204) that were over the volatile organic compound (VOC) plumes. A predesign investigation (PDI) was conducted by Stone Environmental in 2013 and 2014 to quantify the data gap and

obtain information pertinent to any future remedial design to address SVI issues at the Site.

The first round of on-Site SVI sampling in 2013 collected 15 sub-slab samples from target locations in buildings 201 through 204 and vacant buildings 403 and 404 and 11 co-located indoor air samples (including background ambient air samples). The analytical results of the SVI sampling were evaluated using the air guidelines provided in the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (dated October 2006). The NYSDOH recommended strategies (no-action, monitoring, and/or mitigation), based upon NYSDOH Guidance, are presented in Figure 5 of the Final SVI Report (Stone, 2013) and included in Appendix A of this report. Areas of mitigation were recommended in each of buildings 201 through 204.

The second round of on-Site SVI sampling was performed in 2014 to replicate the 2013 SVI sampling in the 200-block buildings (Stone, 2014a). In March 2014, sub-slab and indoor air samples were collected from 11 sub-slab vapor locations, 10 indoor air sample locations, and in addition one background ambient outdoor location. In general, the samples were collected at the same locations as the 2013 sampling event. The analytical results of the 2014 SVI sampling were again evaluated using the air guidelines provided in the NYSDOH Guidance. Results indicated that carbon tetrachloride, 1-1-1-TCA, TCE, and PCE were present in the soil vapor and indoor air. Analytical results from these samples are presented on Figures 4 to 7 of the 2014 Stone Letter Report (Stone, 2014b) and included in this report as Appendix A.

The analytical results of the 2014 samples were similar to the 2013 results and indicated similar recommendations when compared to the NYSDOH Guidance, however there were three differences:

- Based on the results at location SV06/IA06, the western end of Building 201 was recommended for reasonable and practical actions in 2013, but for monitoring in 2014.
- Based on the results at locations SV09/IA09 and SV10/IA10, the eastern and western ends of Building 203 were recommended for monitoring in 2013, but for monitoring / mitigation in 2014.
- Based on the results at locations SV14/IA14 and SV15/IA15, the eastern and office area of Building 204 were recommended for monitoring in 2013, but for reasonable and practical actions in 2014.

The relative positions of NYSDOH recommended strategies for analytical results from the March 2014 sampling event, based upon NYSDOH guidance, are presented in Figure 8 of the 2014 Stone Letter Report (Stone, 2014a) and included in Appendix A.

All of the indoor air samples collected during the 2013 and 2014 PDI SVI samples were below the NYSDOH chemical specific air guideline values available at that time. In August 2015, the NYSDOH guideline values for TCE indoor air was updated reducing the value from 5 $\mu g/m^3$ to 2 $\mu g/m^3$. During the PDI SVI sampling events, TCE was detected in indoor air at 2.52 $\mu g/m^3$ in Building 203 in 2013 and 3.92 $\mu g/m^3$ in Building 204 but have since been reduced by the mitigation systems that were subsequently installed. However, the 2013 and 2014 sub-slab soil vapor concentrations exceeded the indoor air concentrations at every paired location. Based on the 2013 and 2014 PDI SVI sampling results, the sub-slab concentrations of carbon tetrachloride were identified as the primary compound driving the need for soil vapor intrusion mitigation in the

buildings. A sub-slab concentration of TCE was also detected at one location requiring mitigation. Since no products containing carbon tetrachloride were identified in any of the buildings, soil vapor is assumed to be the source of carbon tetrachloride. A low concentration carbon tetrachloride groundwater plume had been identified in earlier groundwater investigations, although no source was identified. In terms of groundwater impacts, the PDI reported only one well (MW-12) was slightly above the groundwater standard of 5 µg/L at 6.2 µg/L. More recent groundwater testing continues to report carbon tetrachloride at or slightly above the 5 µg/L groundwater standard (4.8 µg/L in 2019 and 8.0 µg/L in 2020) in MW-12R, a replacement well installed near the original location of MW-12 in 2018.

1.3 Remedial Action Implementation

In response to the ROD and subsequent monitoring, sub-slab depressurization systems (SSDSs) were installed in the on-site buildings 201, 202, 203 and 204 to mitigate the potential impacts of SVI from groundwater constituents of concern (COCs) on the indoor air quality in the buildings.

The SSDSs mitigate SVI by redirecting the soil vapor from the sub-slab area to the suction points and then into ambient air above the building, rather than through the slab into the building.

A Site layout map showing the locations of the groundwater plumes and buildings where SSDSs were installed is provided in Figure 1-2. Although the results of data comparison to the NYSDOH decision matrices indicated that mitigation was not required in all areas of each of the four buildings, SSDS systems were installed throughout each of the 200-block buildings as an additional precautionary measure. The Stone PDI results were the basis of the design for the SSDSs. Design and implementation details are provided in the SVI-Remedial Action Work Plan (SVI-RAWP) (AECOM, 2016). Installations of these SSDSs were completed from February 2016 through June 2016. All SSDSs were completed and operational by June 21, 2016. As an additional preventative measure, cracks in the building slabs were filled with caulk and sealed with an abrasion resistant coating. Crack sealing was completed in Building 201 on June 8, 2016, Building 202 on June 6, 2016, Building 203 on June 21, 2016, and Building 204 on June 9, 2016. Construction details and final system layout figures and are documented in the FER (AECOM, 2017a).

After the installations of the SSDSs were completed, the systems were turned on and underwent a communication test on June 30, 2016 to ensure that a sufficient vacuum was being generated. Each sub-slab vacuum monitoring point (8 locations per building) was tested for vacuum using a digital micro-manometer to ensure that the SSDSs were creating a pressure differential beneath the building slabs. A vacuum reading of negative 0.004 inches of water or greater indicated that the SSDSs were creating enough of a pressure differential to provide sufficient system operation to mitigate the potential SVI impacts. Initial vacuum monitoring results indicated that the SSDSs were creating a sufficient pressure differential to be considered operational. U-Tube manometer readings showing the sub-slab suction for each system were also recorded at this time. Results of the communication testing and U-Tube manometer readings are provided in Table 1-1.

2 OPERATION AND MAINTENANCE

2.1 On-Site System Monitoring

During the December 2021 monitoring event pressure readings were taken with a digital micro-manometer at each confirmation testing sub-slab vacuum monitoring point and U-tube manometers readings were recorded at the suction points throughout the building (see locations on Figure 1-2). The results of these readings are provided in Table 2-1.

In accordance with the Final Site Management Plan (SMP), dated November 2017 (revised September 2018, AECOM, 2017b), and the recommendations stated in the 2020 Soil Vapor Intrusion Mitigation System Annual Report and Proposed modifications (AECOM, 2021) select SSDS were turned on one month prior to the December 2021 monitoring event.. The presence of a vacuum within the select systems was verified by spot checking the U-tube monometers.

The December 2021 U-Tube manometer readings produced stable results at those systems which had been turned on with one exception where the pressure was unable to be monitored due to damage to the system. Sub-slab pressure differential monitoring showed stable readings indicating that sufficient suction (minimum of negative 0.004 inches of water column) was being generated at 8 out of 29 accessible monitoring locations. Locations where U-Tube or sub-slab readings were not able to be obtained are indicated in Table 2-1. Lack of sufficient suction at the other locations could be due to only 14 of 48 total systems in operation, operation of forced air heating systems and doors and windows being opened in the buildings. In general the negative pressures were measured where systems are in operation.

2.2 Off-Site Residential System

During the PDI (2013), offers for sampling were made by GSA to the four potentially impacted off-site residential properties; however, two property owners refused sampling and two did not respond to the offers. In 2015 the offer to sample was extended to the residents again given that one of the homes had changed owners since 2013. This new owner agreed to have his residence sampled and monitored. It was noted that the homeowner that agreed to sampling already had a mitigation system (radon) in place; therefore, no sampling was undertaken. Documentation of the offers and responses, or lack thereof, was provided to NYSDEC/DOH in separate correspondences.

In response to the homeowner's agreement to monitoring, AECOM performed an inspection of the homeowner's radon system and installed a vacuum gauge to allow for vacuum monitoring to ensure system functionality. During the first year of the SVI monitoring program this system was monitored for proper operation by AECOM on a monthly basis while AECOM personnel were on-Site during remedial action construction activities. Going forward the off-Site residential will be inspected/monitored on an annual basis in accordance with the Final Site Management Plan (SMP) (AECOM 2017b). During the December 2021 event the system was observed to be on and drawing a vacuum of negative 1.4" H_2O.

2.3 Annual Operation and Maintenance

The SSDSs operated without shutdown from when installation was completed in 2016 throughout the inspection event in June 2020. As described in Section 1.3, when the system was installed an initial communication test was performed to ensure adequate sub-slab vacuum and the U-tube manometer readings were recorded. No general maintenance to the systems was required during the first three years of operation other than repair of occasional damage caused by operations conducted by building tenants (additional details provided below).

In December of 2016, one SSDS suction point in Building 202 was noticed to have a fluctuating manometer. When this manometer was monitored during the June 2017 and June 2018 Site inspections, the fluctuation had stopped. This fluctuation was again observed during the December 2017, December 2018, January 2020 and December 2021 sampling events, and appears to occur on a seasonal basis in the winter. Vacuum readings were taken at the nearby vacuum monitoring points to confirm that the suction point was still producing a sufficient sub-slab vacuum.

During the December 2018 Site inspection of the SVI mitigation systems located in buildings 201, 202, 203, and 204, AECOM observed damage to several systems likely due to tenant activities. On April 15 and 16, 2019 AECOM personnel mobilized to the Site with a subcontractor (Precision Environmental Services, PES) to repair the observed damages. A summary of the repairs conducted on the SVI mitigation systems is presented below:

- Building 201: Repaired broken PVC and replaced missing manometer at extraction point 12A; replaced broken manometer at extraction point 6A.
- Building 202: Repaired broken PVC at extraction point 6B; PES replaced the Radon Away fan on system 11 due to observed seasonal fluctuations of manometer readings (fluctuations only observed during winter monitoring).
- Building 204: Repaired broken PVC and adjusted gate valve at extraction point 5A; adjusted gate valve at extraction point 10A.

A broken manometer at extraction point 11A, and broken vapor pin at monitoring point 204-6 within Building 204 could not be repaired at this time due to lack of access within the required areas. These two locations were not accessible during the April 2019 repair event due to storage of materials within the area and were repaired during the June 2019 inspection and monitoring event.

Additional system damages in buildings 203, 202 and 201 were observed during the January 2020 monitoring event and most were able to be repaired during the week prior to indoor air sampling collection. In Building 203 suction point 203-9A was damaged at the base and two manometers were walled in due to some construction activities in the building. The suction point was repaired, and holes were cut in the wall by the property owner so that the manometers could be observed, and vacuum readings recorded, however the full PVC pipe is no longer visible due to being walled in. In Building 202 suction point 202-5A was broken at the base. In Building 201 vacuum monitoring point 202-7 was sheared off and unable to be repaired.

In June 2020, additional system damages were noted but no repairs were made at that time since the systems were being turned off in preparation for the December 2020 sampling/system evaluation event.

In October 2021 the fifteen systems slated to be turned on for the December 2021 monitoring event were checked for damage and operability. The following damages were noted and repaired:

- Building 201
    - Suction point 201-5B is damaged at bottom
    - Suction point 201-6A is damaged at bottom and gate valve
    - Suction point 201-6B is damaged at bottom
    - Suction point 201-11A is damaged at bottom
- Building 202
    - Suction point 202-6B is damaged at bottom
    - Suction point 202-12A is damaged at bottom
- Building 203
    - Slab adjacent to suction point 203-6B substantially cracked
    - Suction point 203-11B is damaged at bottom and gate valve

In addition to these damages two fans were inoperable, 201-6 and 203-2. On November 11, 2021 fans were removed from systems 204-1 and 204-12 and were used to replace the inoperable fans on 201-6 and 203-2. Once this was complete all systems targeted to be operational for the December 2021 monitoring event were left running and in operable condition apart from 201-12 which had significant damage along the overhead run and modifications to the system which made repair difficult.

3 ANNUAL INDOOR AIR MONITORING

Indoor air samples and sub-slab pressure differential monitoring readings are collected from buildings 201-204 on a regular scheduled basis in accordance with the Final SMP, dated November 2017 (revised September 2018). Indoor air sampling occurs annually during the heating season (November 15 through March 15) and sub-slab differential readings are collected semi-annually. The sixth monitoring event was conducted between December 15, 2021 and December 16, 2021 and included indoor air samples, and sub-slab air samples. The purpose of this sampling event was to continue monitoring concentrations of the targeted volatile organic compounds (VOCs) to assess the need for continued use of the SSDSs with the intention to mitigate the potential for impacted soil vapor intrusion into the building. Sub-slab samples were co-located with indoor air samples and collected via the permanently installed vapor pin sample collection points installed at the Site.

In addition to the indoor air and sub-slab vapor samples, one outdoor ambient air sample was collected concurrently to determine the background levels and extent to which outdoor sources may be influencing indoor air quality within the sampling area. Figure 3-1 provides the location of the outdoor air sample. The outdoor air sample location was placed upwind of the buildings in the vicinity of the previous (Stone Environmental) outdoor air sample locations. The weather conditions at the time of the sampling event, including the prevailing wind direction at the time of the outdoor canister placement, are included in Appendix B.

3.1 Sample Collection Methods

The December 2021 monitoring event was conducted in accordance with the SMP (AECOM, 2017b) and in accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH October 2006; updated September 2013 and August 2015). A New York State Department of Health Indoor Air Quality Questionnaire and Building Inventory form was completed for each building prior to sample collection. A Photoionization detector (PID) was used to record the VOC level in parts per billion (ppb) at each chemical inventory location. Copies of the completed questionnaires are provided in Appendix C. Questionnaire findings did not indicate any substances in the buildings that would impact the air sampling results; however, there are some tenant activities in the buildings that may impact the air sample results. These tenant activities involve the use of heavy machinery in Buildings 201, 202 and 203. The NYSDOH recommends the collection of indoor air samples during the heating season, defined as November 15 through March 31. Air samples are collected when HVAC systems are active because their operation may cause negative pressures which can draw impacted vapors into the building. At the time of sampling, heating ventilation and air conditioning (HVAC) systems were in use in occupied sections of buildings 201, 202, 203 and 204.

A sample log sheet indicating the canister/regulator identification, sample start and stop time and canister vacuum readings of the canister before and after sampling is included in Appendix D. A PID was used to record the VOC level in ambient air at each sample location. Results of these readings are provided in Table 3-1. All samples were collected in a certified pre-evacuated 6-L Summa canister with a 24-hour regulator provided by the laboratory. Sample canisters were set up in designated locations consistent with previous sampling events and allowed to collect

the sample for a 24-hour period. Sample locations are identified on Figures 3-1 through Figure 3-5. Indoor Air sample canisters were set up with flexible tubing mechanically attached to the laboratory-provided flow regulator (compression fitting). The tubing was then attached to a stand that held the end of the tubing within the breathing zone. To test the integrity of the permanent sub-slab sampling ports, one sub-slab sampling port in each building was tested by conducting a helium leak test. All sub-slab sampling ports tested passed the helium leak test. Sub-slab samples were collected by attaching flexible tubing to the sample canister and attaching tubing to the designated sub-slab sample collection ports. A detail of the sub-slab air monitoring port is provided in Figure 3-6. After the allotted sample collection period the sample canisters were retrieved, closed, and packaged for shipment to ALS Laboratory in Simi Valley, CA for analysis for targeted VOCs via EPA method TO-15 SIM.

3.2 Air Sample Results

Laboratory results for the indoor and outdoor air samples are presented in Table 3-1. Laboratory results for sub-slab vapor samples are presented in Table 3-2. The laboratory results were validated by an AECOM chemist and a full data usability summary report (DUSR) was prepared. The DUSR, included in Appendix F, indicated that all data points were usable, with some qualifications, and no data points were rejected. Full laboratory analytical results are included in Appendix E. Results obtained from the AECOM December 2020 sampling event were compared to the results obtained during previous sampling events conducted by AECOM (after the SSDS installation) and Stone Environmental (prior to the SSDS installation; Stone, 2014a). As shown in Tables 3-1 and 3-2, overall concentrations of chlorinated volatile organic compounds (CVOC) are lower than in the pre system installation (2014) indicating that the SSDSs are functioning as designed. Results from outdoor air monitoring have always shown consistently low concentrations of all CVOCs.

Table 3-2 includes a comparison to the May 2017 New York State Department of Health Soil Vapor/Indoor Air Matrices for soil vapor intrusion evaluation (DOH Decision Matrix) using the December 2021 indoor air and sub-slab vapor sampling results. Compared to the soil vapor intrusion evaluation conducted by Stone Environmental (the basis for design of the SSDS), the results of the December 2021 soil vapor intrusion evaluation are summarized below.

- Building 201:
    - In Building 201, the SSDS design was based upon carbon tetrachloride in both the sub-slab soil vapor and indoor air. Since 2014, sub-slab and indoor air concentrations of carbon tetrachloride have declined. Indoor air concentrations of carbon tetrachloride are equivalent to outdoor air concentrations. One sub-slab soil gas monitoring location exhibits carbon tetrachloride concentrations high enough to warrant continued monitoring (201SS-3). PID readings at the indoor air sample locations ranged from 0-51 ppb and the highest reading at the chemical inventory locations was 1562 ppb.

- Building 202:
    - In Building 202, the SSDS design was based upon carbon tetrachloride in both the sub-slab vapor and indoor air. Results from the 2021 monitoring show a decline in carbon tetrachloride in sub-slab soil vapor compared to results from the 2014 and 2020 monitoring and in indoor air to levels equivalent to the outdoor air; however, compared to the DOH Decision Matrix, monitoring is still warranted in the area around 202SS-1 with no further action in the remainder of the building based upon current sub-slab soil vapor concentrations at 202SS-1 and 202SS-3. PID readings at the indoor air sample locations ranged from 0-300 ppb and the highest reading at the chemical inventory locations was 4100 ppb.

- Building 203:
    - In Building 203, the SSDS design was based upon carbon tetrachloride and trichloroethene in both the sub-slab vapor and indoor air. Results from the 2021 monitoring show a decline in carbon tetrachloride in sub-slab soil vapor compared to results from the 2014 monitoring. In indoor air, levels of both carbon tetrachloride and tetrachloroethene have been reduced, in comparison to 2020 levels, to concentrations equivalent to their respective outdoor air concentrations. Tetrachloroethene has not historically been a chemical of concern for indoor air in Building 203, however elevated concentrations were detected in the December 2020 samples. The indoor air results for tetrachloroethene from the December 2021 results suggest that the elevated concentrations detected in 2020 were from an external source and not from sub-slab impacts. Based upon the DOH Decision Matrix, mitigation is still warranted in parts of the building due to trichloroethene in the sub-slab around 203SS-3. Monitoring is still warranted around 203SS-2 due to carbon tetrachloride in the sub-slab. PID readings at the indoor air sample locations ranged from 0-2444 ppb and the highest reading at the chemical inventory locations was 11.7 ppm.
- Building 204:
    - In Building 204, the SSDS design was based upon carbon tetrachloride in sub-slab soil vapor and trichloroethene in indoor air. Since 2014, both carbon tetrachloride and trichloroethene concentrations in sub-slab and indoor air have declined. Indoor air concentrations of both compounds are at levels equivalent to outdoor air concentrations in 2021. The sub-slab concentration of carbon tetrachloride in 204SS-1 increased from December 2020 to December 2021 (0.81 $\mu g/m^3$ to 7.5 $\mu g/m^3$). This is still well below the concentration of 937 $\mu g/m^3$ detected in the 2014 sub-slab sample at this location. Based upon the DOH Decision Matrix monitoring is still warranted in parts of the building near this point. No further action is required for the rest of Building 204 based upon the results from the December 2021 monitoring. PID readings at the indoor air sample locations ranged from 0-835 ppb. Adirondack beverage (current tenants) did not have any chemicals for chemical inventory.

4 SUMMARY AND RECOMMENDATIONS

This report presents data from the sixth round of indoor air and second round of sub-slab vapor sampling since installation of the SSDSs was completed in 2016. In accordance with the SMP, after six years of operation of the SSDSs, the indoor air and sub-slab vapor was evaluated to determine if continued mitigation is necessary. Based upon this evaluation, the following actions are recommended:

- Building 201:
    - As discussed in Section 3.2, this evaluation indicates the need for continued monitoring based upon the carbon tetrachloride results obtained from sampling sub-slab vapor at sampling location 201SS-3. The indoor air results for carbon tetrachloride have been consistent with outdoor air results throughout the sampling program indicating that there is no intrusion of this compound from sub-slab vapor. To address the need for continued monitoring in this area, the four SSDSs located at the eastern end of the building designated as 201-5, 201-6, 201-11 and 201-12 (as shown on Figure 3-7) should be shut down and location 201SS-3 be resampled in a years' time. The remaining systems in Building 201 will remain inoperable as they have since June 2020.
- Building 202:
    - As discussed in Section 3.2, this evaluation indicates the need for continued monitoring based upon the carbon tetrachloride results obtained from sampling sub-slab vapor at sampling location 202SS-1 To address the need for continued monitoring 202SS-1 will be resampled in a years' time. SSDS systems 202-5, 202-6, 202-11 and 202-12 should be shut off as results from points 202SS-2 and 202SS-3 indicate the need for no further action. These four SSDSs are all located within one contiguous space currently occupied by one tenant
- Building 203:
    - As discussed in Section 3.2, this evaluation indicates the need for continued mitigation based upon carbon tetrachloride results obtained from sampling sub-slab vapor at sampling location 203SS-3. To address the need for continued mitigation, the following SSDSs will be operated: 203-5, 203-6, 203-11 and 203-12. Additionally continued monitoring is warranted due to results from point 203SS-2. To address this need SSDSs 203-2 and 203-3 will be discontinued, and point 203SS-2 will be resampled in a years' time. Operation of the SSDS and monitoring of the building will continue in accordance with the SMP using vacuum monitoring points 203-6, 203-7 and 203-8 and air sampling locations 203IA-2 and 203IA-3. Operation of the remaining SSDSs in Building 203 will be discontinued.
- Building 204:
    - Continued monitoring is required for Building 204 based upon the results from the December 2021 monitoring of 204SS-1. As with other buildings 204SS-1 should be resampled in a years' time. Operation of all SSDs in Building 204 will remain discontinued.

All SSDSs will remain in place, including those recommended to be discontinued. Each individual SSDS has its own circuit breaker. Systems where operation will be discontinued will have their breaker turned to off and the breaker box will be tagged.

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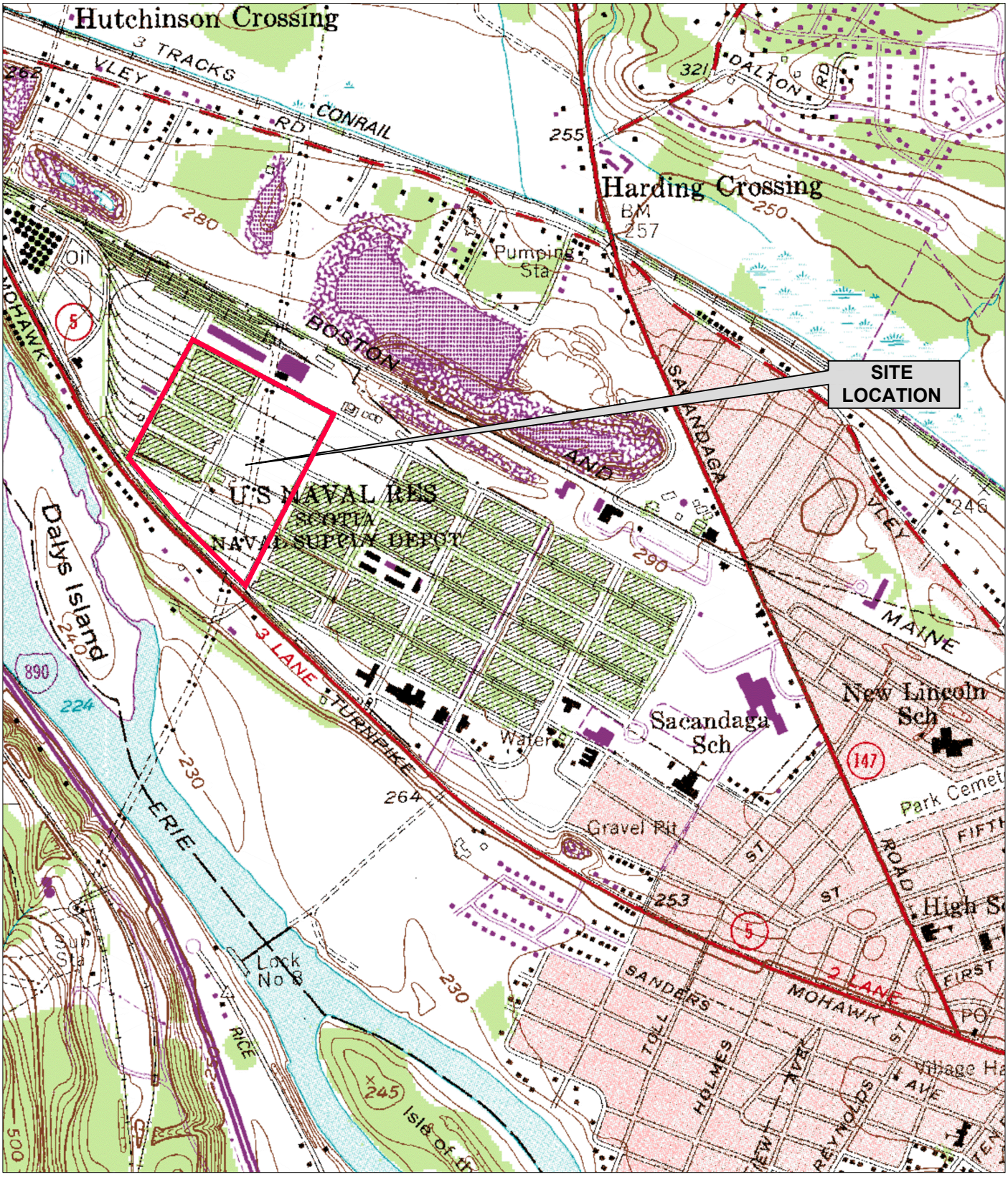
FIGURES



MAP REFERENCE:
IMAGE SHOWN FROM U.S.G.S.7.5 MINUTE
QUADRANGLE, SCHENECTADY SERIES

0 2000' 4000'

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

US ARMY Corps of Engineers

SITE LOCATION PLAN

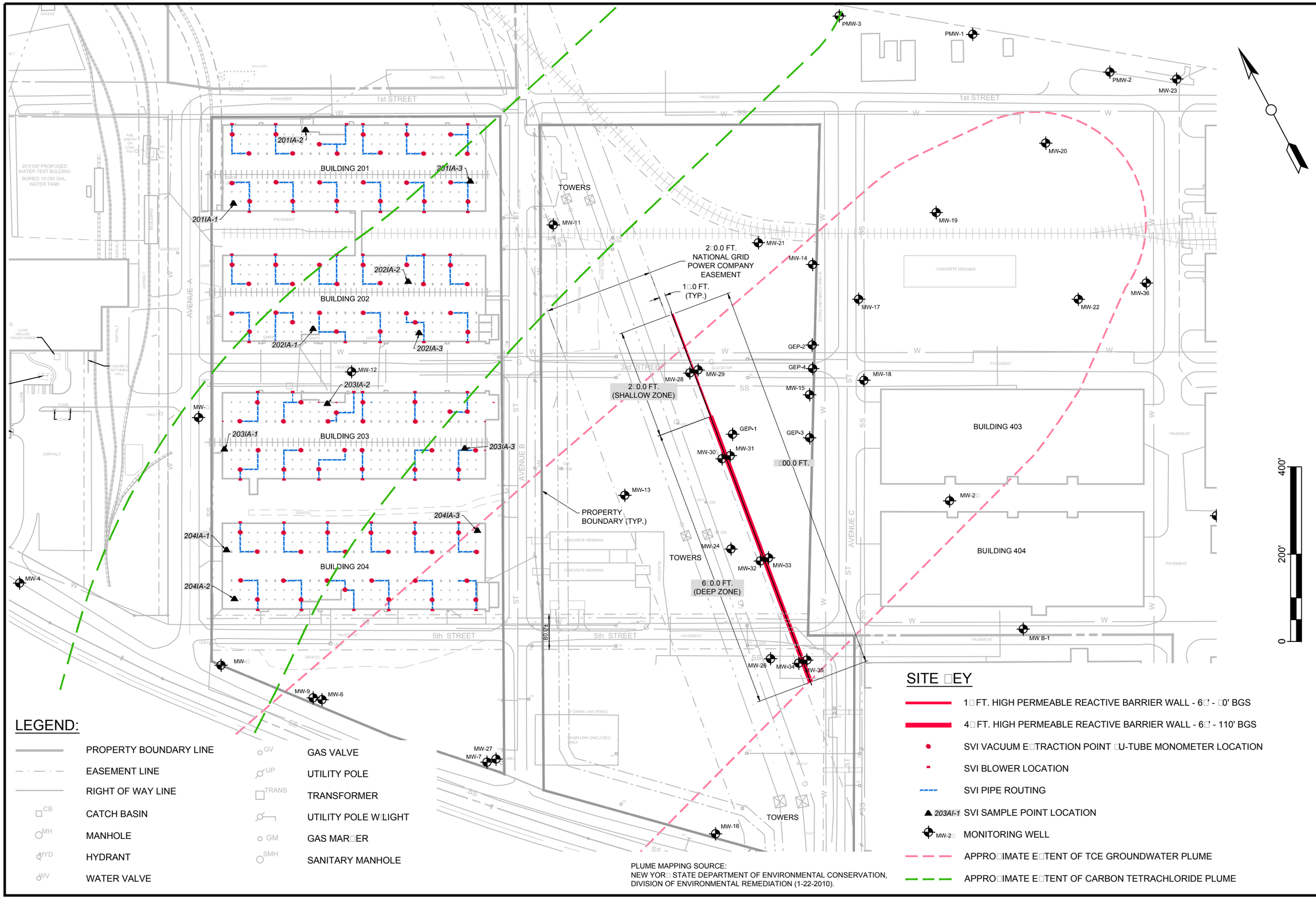
AECOM

Figure: 1-1

AECOM

Figure: 1-2

SITE LAYOUT PLAN



LEGEND:

- PROPERTY BOUNDARY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- CB — CATCH BASIN
- MH — MANHOLE
- HYD — HYDRANT
- WV — WATER VALVE
- GV — GAS VALVE
- UP — UTILITY POLE
- TRANS — TRANSFORMER
- UTILITY POLE W□LIGHT
- GM — GAS MAR□ER
- SMH — SANITARY MANHOLE

PLUME MAPPING SOURCE:
NEW YOR□ STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
DIVISION OF ENVIRONMENTAL REMEDIATION (1-22-2010).

SITE □EY

- 1□ FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 6□' - □0' BGS
- 4□ FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 6□' - 110' BGS
- SVI VACUUM E□TRACTION POINT □U-TUBE MONOMETER LOCATION
- SVI BLOWER LOCATION
- SVI PIPE ROUTING
- *203AI-1* SVI SAMPLE POINT LOCATION
- MW-2□ MONITORING WELL
- APPRO□IMATE E□TENT OF TCE GROUNDWATER PLUME
- APPRO□IMATE E□TENT OF CARBON TETRACHLORIDE PLUME

US ARMY Corps
of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

AECOM

Figure: 3-1

OUTSIDE
AIR MONITORING LOCATIONS

SAMPLE KEY

SAMPLE ID → 201IA-1

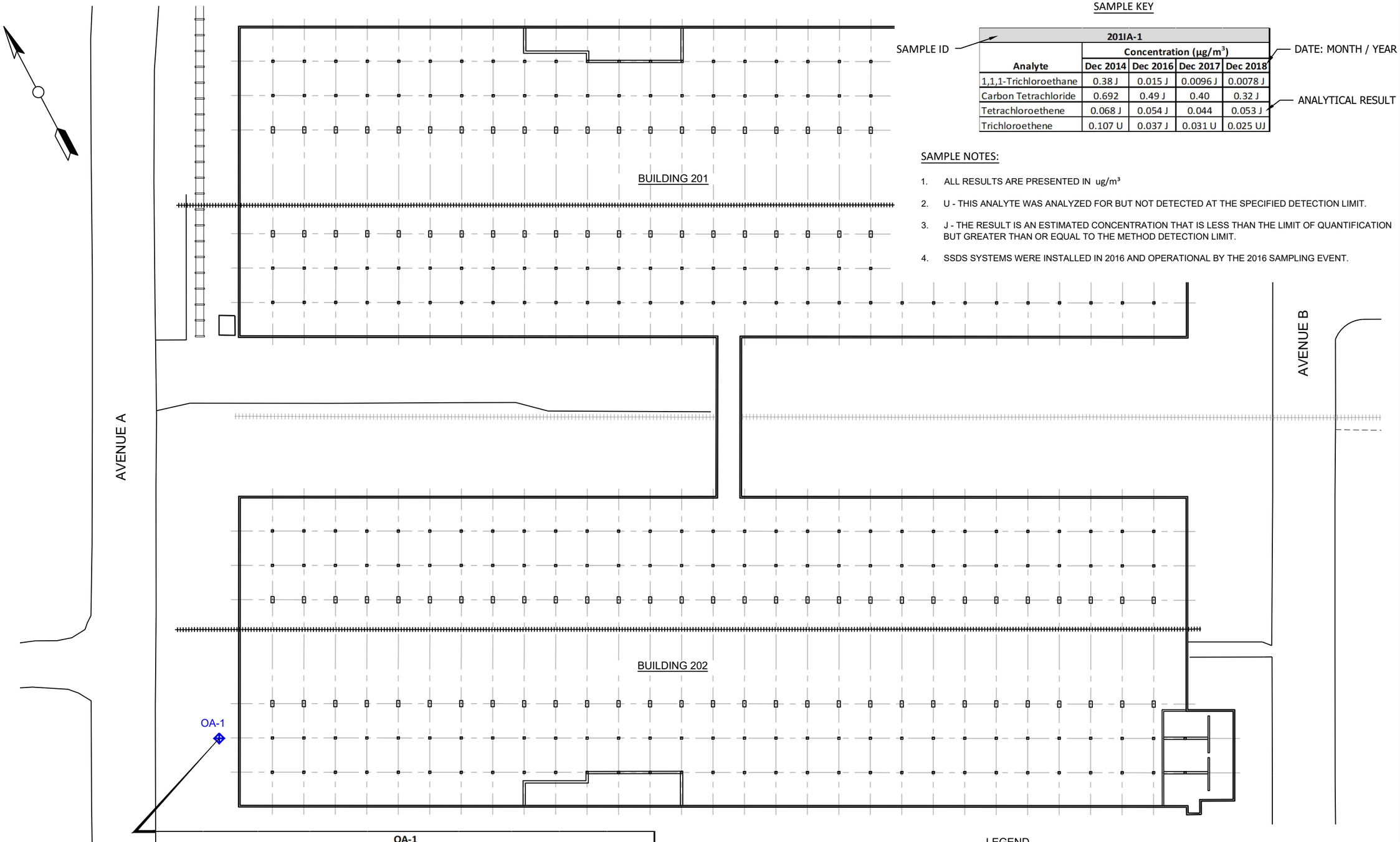
Analyte	Concentration (µg/m³) Dec 2014	Dec 2016	Dec 2017	Dec 2018
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ

DATE: MONTH / YEAR

ANALYTICAL RESULT

SAMPLE NOTES:

1. ALL RESULTS ARE PRESENTED IN ug/m³
2. U - THIS ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT THE SPECIFIED DETECTION LIMIT.
3. J - THE RESULT IS AN ESTIMATED CONCENTRATION THAT IS LESS THAN THE LIMIT OF QUANTIFICATION BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT.
4. SSDS SYSTEMS WERE INSTALLED IN 2016 AND OPERATIONAL BY THE 2016 SAMPLING EVENT.



Analyte	OA-1 Concentration (µg/m³) Dec 2014	Dec 2016	Dec 2017	2/28/18 Resample	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trich	0.109 J	0.014 J	0.01 J	0.014 J	0.012 J	0.015 U	0.019 J	0.026 UJ
Carbon Te	0.434	0.49	0.41	0.48	0.34 J	0.41	0.37	0.47 J
Tetrachlo	0.075	0.054	0.041	0.079	0.087 J	0.069	0.38	0.11 J
Trichloroe	0.107 U	0.001 J	0.029 U	0.11	0.078 J	0.025 J	0.051 J	0.041 J

PLAN

0 60' 120'

LEGEND

IA06 — OUTSIDE AIR SAMPLING LOCATION (STONE)

201IA-1 — OUTSIDE AIR SAMPLING LOCATION (AECOM)

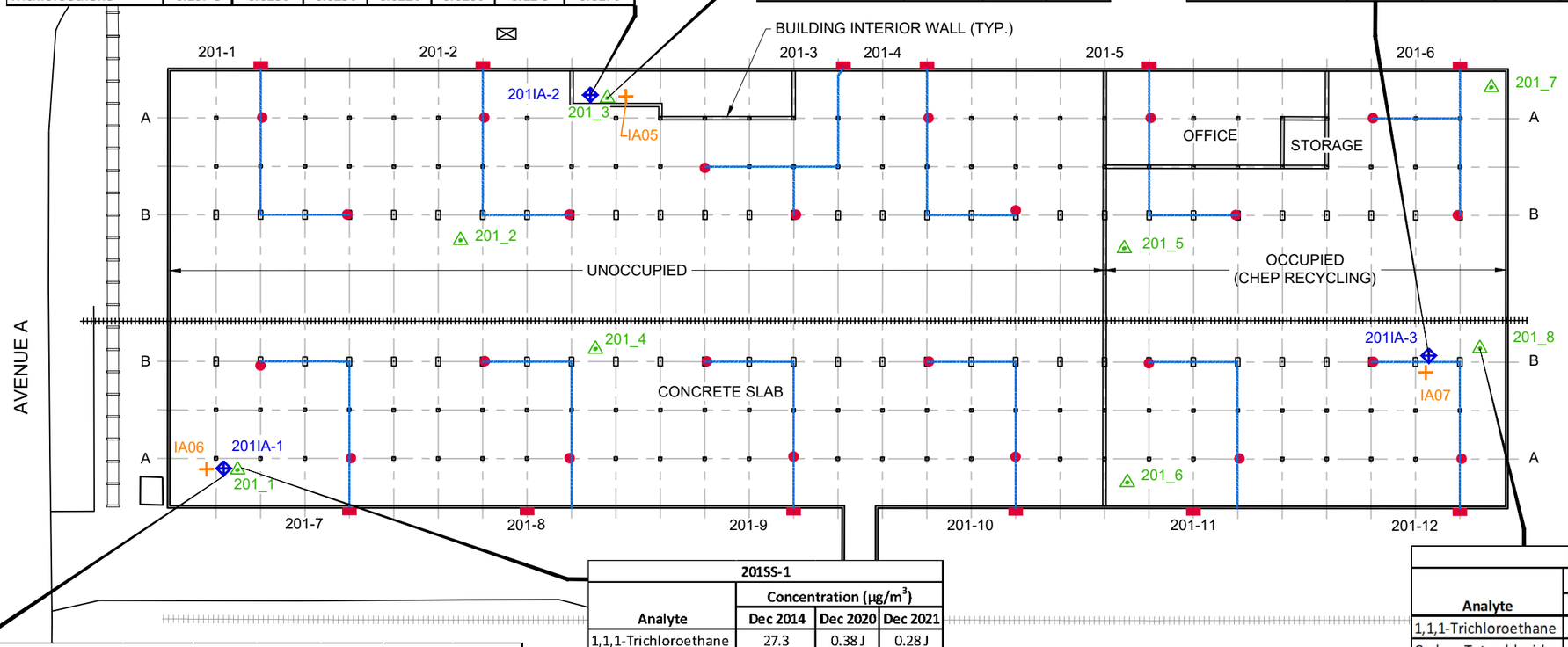
US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

201IA-2							
	Concentration (µg/m³)						
Analyte	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.109 U	0.014 J	0.011 J	0.0086 J	0.025 J	0.12 U	0.026 UJ
Carbon Tetrachloride	0.673	0.51	0.39	0.34 J	2.1	0.57	0.49 J
Tetrachloroethene	0.136	0.05	0.16	0.088 J	0.10	0.13 J	0.089 J
Trichloroethene	0.107 U	0.023 J	0.023 J	0.022 J	0.020 J	0.12 U	0.017 J

201SS-2			
	Concentration (µg/m³)		
Analyte	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.737	0.026 J	0.019 J
Carbon Tetrachloride	122	1.2	0.69
Tetrachloroethene	0.542 J	0.17	0.083
Trichloroethene	1.05	0.078 U	0.021 J

201IA-3							
	Concentration (µg/m³)						
Analyte	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.109 U	0.015 J	0.01 J	0.0079 J	0.011 J	0.10 U	0.081 U
Carbon Tetrachloride	2.64	0.59	0.43	0.34 J	0.43	0.4	0.36
Tetrachloroethene	0.258	0.094	0.11	0.14 J	0.11	0.15	0.11
Trichloroethene	0.107 U	0.046	0.082	0.019 J	0.026 J	0.10 U	0.076 J



201IA-1							
	Concentration (µg/m³)						
Analyte	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J	0.011 U	0.099 U	0.021 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J	0.39	0.62	0.52 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J	0.30	0.11 J	0.099 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ	0.025 J	0.099 U	0.020 J

201SS-1			
	Concentration (µg/m³)		
Analyte	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	27.3	0.38 J	0.28 J
Carbon Tetrachloride	10.1	0.54 J	0.59 J
Tetrachloroethene	3.44	0.13 J	0.11 J
Trichloroethene	2.82	0.053 UJ	0.014 J

201SS-3			
	Concentration (µg/m³)		
Analyte	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	1.39	0.046 J	0.018 J
Carbon Tetrachloride	1120	60	12
Tetrachloroethene	0.868	0.12	0.093
Trichloroethene	0.349	0.045 J	0.039

BUILDING 201
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

SAMPLE KEY

SAMPLE ID

201IA-1				
	Concentration (µg/m³)			
Analyte	Dec 2014	Dec 2016	Dec 2017	Dec 2018
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ

DATE: MONTH / YEAR

ANALYTICAL RESULT

SAMPLE NOTES:

1. ALL RESULTS ARE PRESENTED IN ug/m³
2. U - THIS ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT THE SPECIFIED DETECTION LIMIT.
3. J - THE RESULT IS AN ESTIMATED CONCENTRATION THAT IS LESS THAN THE LIMIT OF QUANTIFICATION BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT.
4. SSDS SYSTEMS WERE INSTALLED IN 2016 AND OPERATIONAL BY THE 2016 SAMPLING EVENT.

0 60' 120'

AECOM

Figure: 3-2

BUILDING 201
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

AECOM

Figure: 3-3

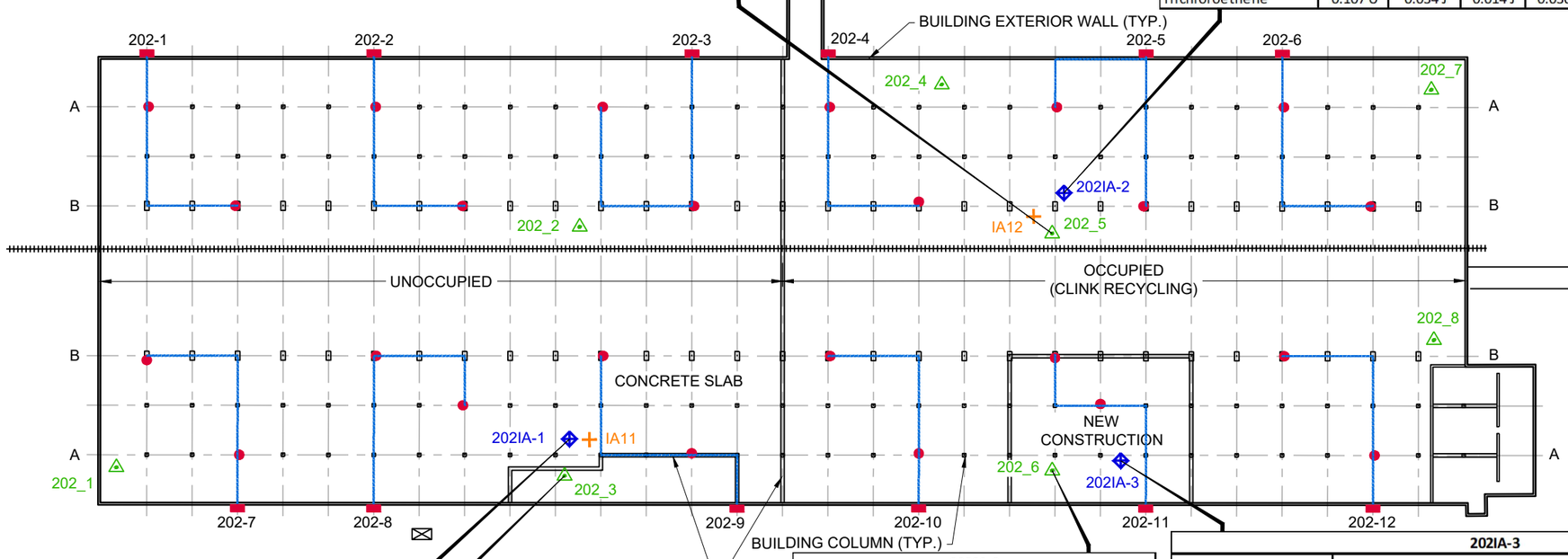
BUILDING 202
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

202SS-2			
Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	103	47	0.46 J
Carbon Tetrachloride	918	440	3.1 J
Tetrachloroethene	0.271 U	0.59	0.12 J
Trichloroethene	0.172 J	0.13 J	0.052 J

202IA-2							
Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.147	0.017 J	0.011 J	0.012 J	0.010 J	0.11 U	0.026 UJ
Carbon Tetrachloride	1.01	0.45 J	0.40	0.34	0.43	0.46	0.44 J
Tetrachloroethene	0.061 J	0.060 J	0.075	0.11	0.11	76	0.090 J
Trichloroethene	0.107 U	0.034 J	0.014 J	0.030 J	0.021 J	0.11 U	0.024 J



202IA-1							
Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.469	0.018 J	0.012 J	0.010 J	0.012 J	0.097 U	0.020 J
Carbon Tetrachloride	1.95	0.45 J	0.39	0.32 J	0.41	0.55	0.53
Tetrachloroethene	0.142	0.054 J	0.15	0.11 J	0.078	0.46	0.10
Trichloroethene	0.107 U	0.030 J	0.025 J	0.028 J	0.028 J	0.097 U	0.055

202SS-1			
Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	96	1.1 J	1.1
Carbon Tetrachloride	223	21 J	17
Tetrachloroethene	5.85 U	0.28 J	0.11
Trichloroethene	2.32 J	0.041 J	0.063 J

202SS-3			
Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	-	0.23 J	0.035
Carbon Tetrachloride	-	22	2.9
Tetrachloroethene	-	0.33	0.12
Trichloroethene	-	0.21 U	0.048

202IA-3							
Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	-	0.017 J	0.011 J	0.014 J	0.024 U	0.15 U	0.026 UJ
Carbon Tetrachloride	-	0.39	0.40	0.33	0.43	0.43	0.47 J
Tetrachloroethene	-	0.11	0.086	0.12	0.082 J	23	0.11 J
Trichloroethene	-	0.036	0.019 J	0.052	0.073 J	0.15 U	0.033 J

BUILDING 202
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

SAMPLE KEY

201IA-1				
Analyte	Concentration (µg/m³)			
	Dec 2014	Dec 2016	Dec 2017	Dec 2018
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ

SAMPLE ID

DATE: MONTH / YEAR

ANALYTICAL RESULT

SAMPLE NOTES:

1. ALL RESULTS ARE PRESENTED IN ug/m³
2. U - THIS ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT THE SPECIFIED DETECTION LIMIT.
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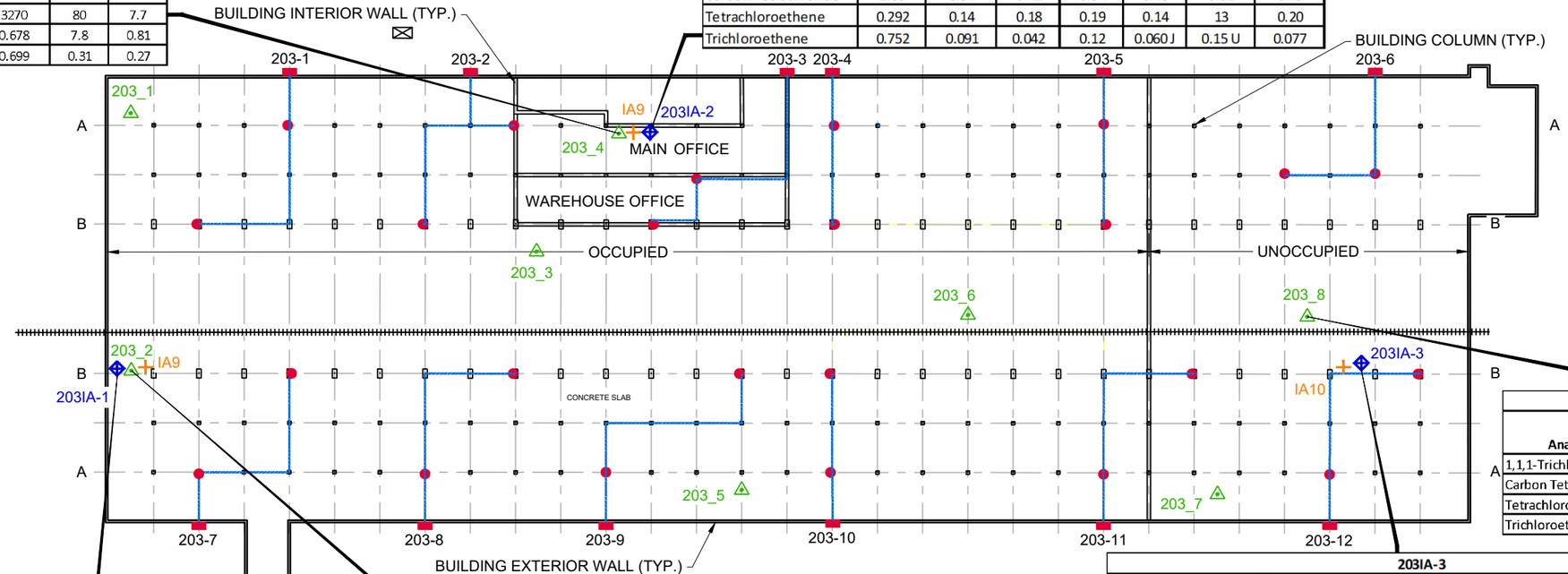
4. SSDS SYSTEMS WERE INSTALLED IN 2016 AND OPERATIONAL BY THE 2016 SAMPLING EVENT.

0 60' 120'



203SS-2

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	862	23	2.2
Carbon Tetrachloride	3270	80	7.7
Tetrachloroethene	0.678	7.8	0.81
Trichloroethene	0.699	0.31	0.27

203IA-2

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.737	0.023 J	0.013 J	0.016 J	0.016 U	0.096 J	0.018 J
Carbon Tetrachloride	2.65	0.54	0.41	0.34	0.45	0.61	0.49
Tetrachloroethene	0.292	0.14	0.18	0.19	0.14	13	0.20
Trichloroethene	0.752	0.091	0.042	0.12	0.060 J	0.15 U	0.077

203SS-3

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	45.7	39	16
Carbon Tetrachloride	22.3	13	4.8
Tetrachloroethene	0.231	1.3	0.37
Trichloroethene	132	140	120 D

203IA-3

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.18	0.019 J	0.012 J	0.015 J	0.014 J	0.072 J	0.038 U
Carbon Tetrachloride	0.654	0.48	0.40	0.35 J	0.42	0.46	0.46
Tetrachloroethene	0.156	0.075	0.068	0.087 J	0.092	1.7	0.17
Trichloroethene	0.623	0.076	0.027J	0.085 J	0.083	0.23	0.047

203SS-1

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	72.6	4.2	1.1 J
Carbon Tetrachloride	68.9	0.64	0.58 J
Tetrachloroethene	0.339	5.3	0.17 J
Trichloroethene	0.333	0.14 U	0.031 J

203IA-1

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.196	0.380 U	0.011 J	0.075 U	0.012 J	0.051 J	0.014 J
Carbon Tetrachloride	0.692	0.42 J	0.37	0.33	0.40	0.46	0.48 J
Tetrachloroethene	0.17	0.380 U	0.073	0.15	0.074	11	0.23 J
Trichloroethene	0.683	0.380 U	0.019 J	0.099	0.045	0.073 J	0.055 J

BUILDING 203
PLAN

SAMPLE KEY

SAMPLE ID

201IA-1

Analyte	Concentration (µg/m³)			
	Dec 2014	Dec 2016	Dec 2017	Dec 2018
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ

DATE: MONTH / YEAR

ANALYTICAL RESULT

SAMPLE NOTES:

1. ALL RESULTS ARE PRESENTED IN ug/m³
2. U - THIS ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT THE SPECIFIED DETECTION LIMIT.
3. J - THE RESULT IS AN ESTIMATED CONCENTRATION THAT IS LESS THAN THE LIMIT OF QUANTIFICATION BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT.
4. SSDS SYSTEMS WERE INSTALLED IN 2016 AND OPERATIONAL BY THE 2016 SAMPLING EVENT.

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

AECOM

Figure: 3-4

BUILDING 203
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022

204IA-1

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	-	0.029 J	0.0091 J	0.098 U	0.015 U	0.22 U	0.018 J
Carbon Tetrachloride	-	0.5	0.40	0.37	0.43	0.43	0.53
Tetrachloroethene	-	0.072	0.99	0.087 J	0.075	0.22 U	0.11
Trichloroethene	-	0.089	0.038	0.069 J	0.045 J	0.13 J	0.14

204IA-3

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.038 J	0.018 J	0.012 J	0.012 J	0.0099 J	0.084 U	0.019 J
Carbon Tetrachloride	0.516	0.5	0.40	0.31	0.40	0.37	0.46 J
Tetrachloroethene	0.142	0.043	0.059	0.057	0.084	0.075 J	0.16 J
Trichloroethene	0.21	0.059	0.035	0.067	0.057	0.084 U	0.17 J

204SS-3

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	2.35	0.20	0.65 J
Carbon Tetrachloride	1.99	0.34	0.65
Tetrachloroethene	63.4	0.50	0.14
Trichloroethene	3.12	0.090 U	0.14

204SS-1

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	8.07	0.070 J	0.27
Carbon Tetrachloride	937	0.81	7.5
Tetrachloroethene	3.76	0.51	2.1
Trichloroethene	1630	1.8	3.2

204IA-2

Analyte	Concentration (µg/m³)						
	Dec 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.044 J	0.016 J	0.017J	0.062 UJ	0.094 U	0.14 U	0.026 UJ
Carbon Tetrachloride	0.572	0.47	0.46	0.36 J	0.56	0.45	0.48 J
Tetrachloroethene	0.149	0.057	0.29	0.063 J	0.083 J	0.063 J	0.078 J
Trichloroethene	3.92	0.061	0.2	0.096 J	0.079 U	0.14 U	0.032 J

204SS-2

Analyte	Concentration (µg/m³)		
	Dec 2014	Dec 2020	Dec 2021
1,1,1-Trichloroethane	0.109 U	0.12 U	0.060 U
Carbon Tetrachloride	0.774	0.19	0.094
Tetrachloroethene	0.075 J	0.070 J	0.77
Trichloroethene	0.065 J	0.12 U	0.24

BUILDING 204
PLAN

SAMPLE KEY

201IA-1

Analyte	Concentration (µg/m³)			
	Dec 2014	Dec 2016	Dec 2017	Dec 2018
1,1,1-Trichloroethane	0.38 J	0.015 J	0.0096 J	0.0078 J
Carbon Tetrachloride	0.692	0.49 J	0.40	0.32 J
Tetrachloroethene	0.068 J	0.054 J	0.044	0.053 J
Trichloroethene	0.107 U	0.037 J	0.031 U	0.025 UJ

SAMPLE ID

DATE: MONTH / YEAR

ANALYTICAL RESULT

SAMPLE NOTES:

1. ALL RESULTS ARE PRESENTED IN ug/m³
2. U - THIS ANALYTE WAS ANALYZED FOR BUT NOT DETECTED AT THE SPECIFIED DETECTION LIMIT.
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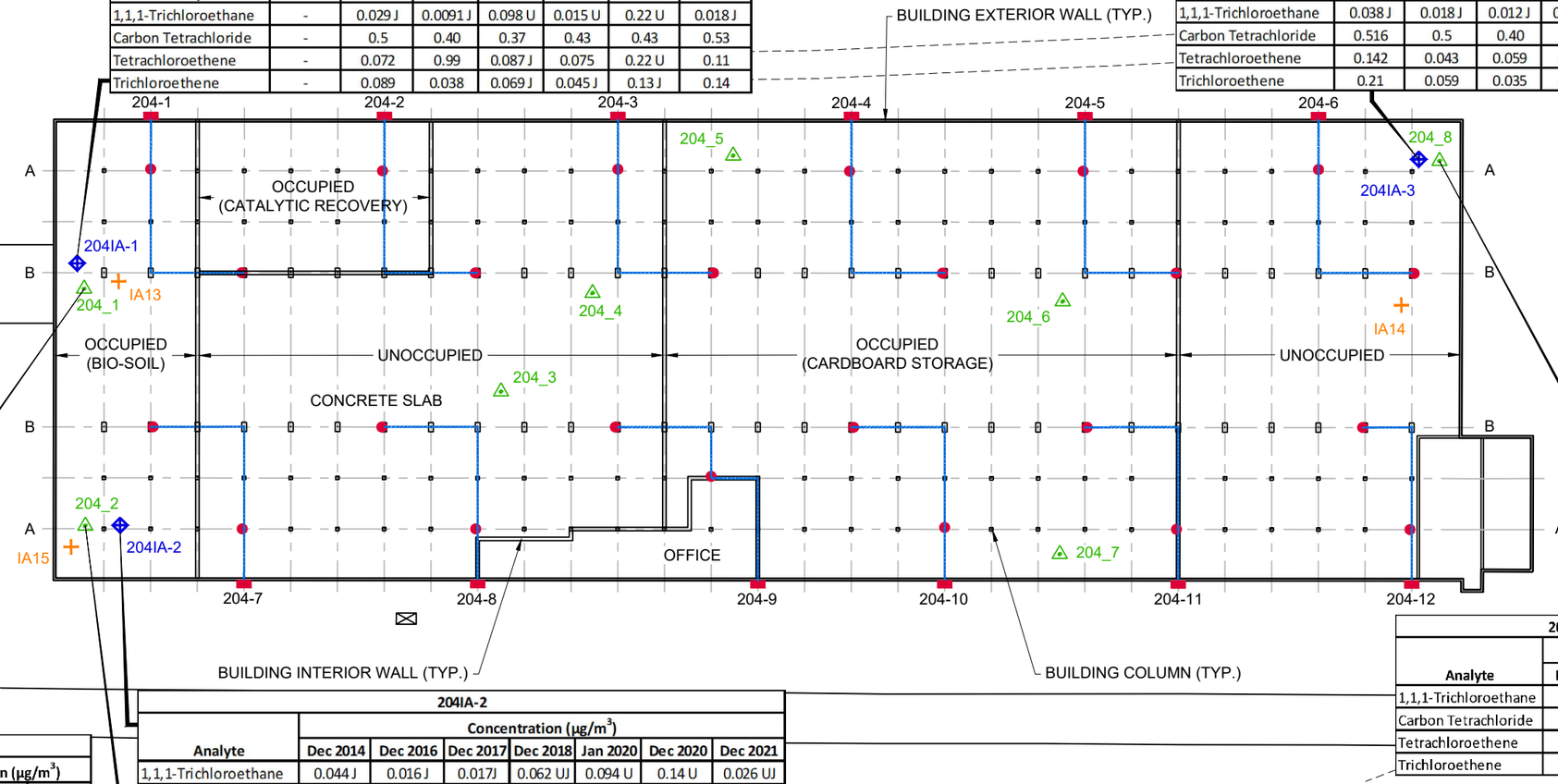


LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

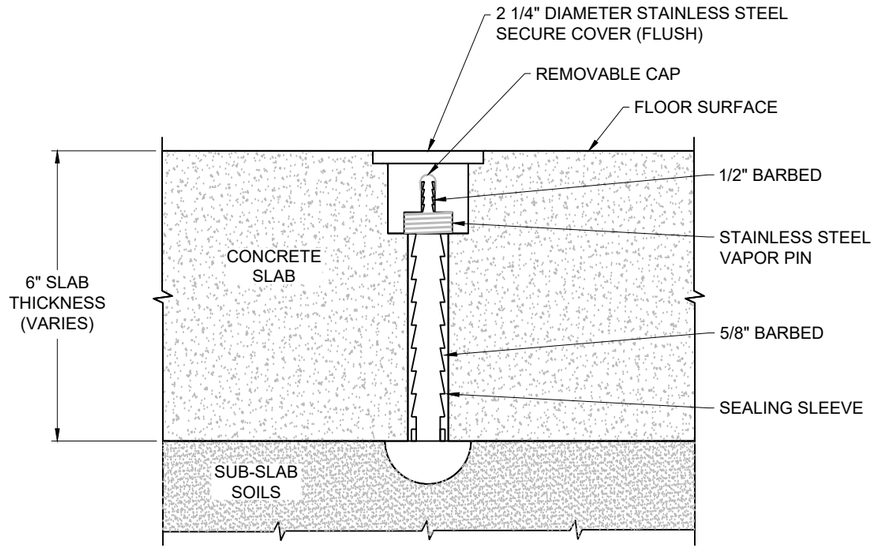
AECOM

Figure: 3-5

BUILDING 204
AIR MONITORING LOCATIONS

US ARMY Corps
of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022



INTERIOR SOIL VAPOR SAMPLING POINT DETAIL

NTS

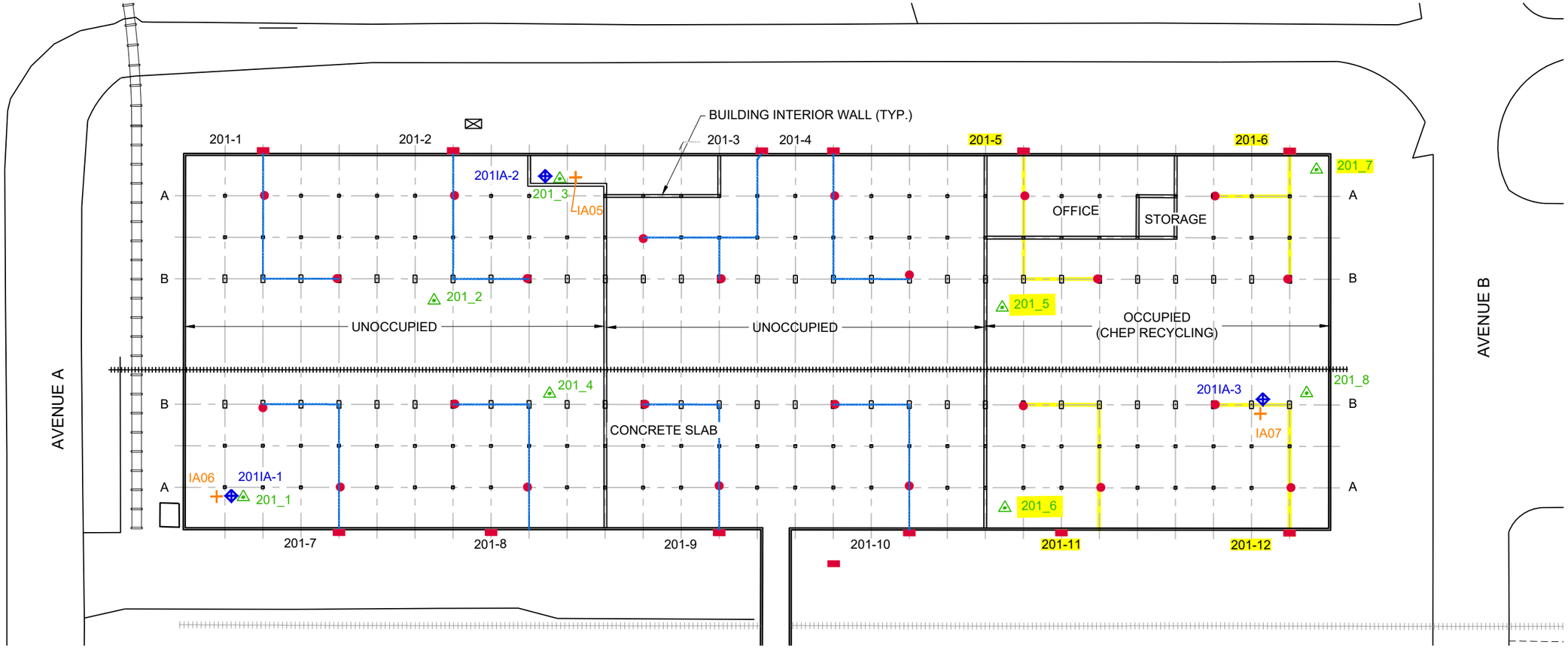
AECOM

Figure: 3-6

AIR MONITORING DETAIL

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: FEBRUARY 2022



BUILDING 201
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)
- 201-11 — SYSTEM COMPONENTS FOR CONTINUED MITIGATION AND MONITORING

0 60' 120'

NOTES:

1. AS DISCUSSED IN SECTION 3.2, THIS EVALUATION INDICATES THE NEED FOR CONTINUED MITIGATION BASED UPON THE CARBON TETRACHLORIDE RESULTS OBTAINED FROM SAMPLING SUB-SLAB VAPOR AT SAMPLING LOCATION 201SS-3. TO ADDRESS THE NEED FOR CONTINUED MITIGATION IN THIS AREA, THE FOUR SSDSS LOCATED AT THE EASTERN END OF THE BUILDING DESIGNATED AS 201-5, 201-6, 201-11 AND 201-12 (AS SHOWN ON FIGURE 3-7) WILL CONTINUE TO OPERATE. THESE FOUR SSDSS ARE ALL LOCATED WITHIN ONE CONTIGUOUS SPACE CURRENTLY OCCUPIED BY ONE TENANT. OPERATION OF THE SSDS AND MONITORING OF THE BUILDING WILL CONTINUE IN ACCORDANCE WITH THE SMP USING VACUUM MONITORING POINTS 201-5, 201-6, 201-7 AND 201-8 AND AIR SAMPLING LOCATION 201IA-3. OPERATION OF THE REMAINING SSDSS IN BUILDING 201 WILL BE DISCONTINUED.

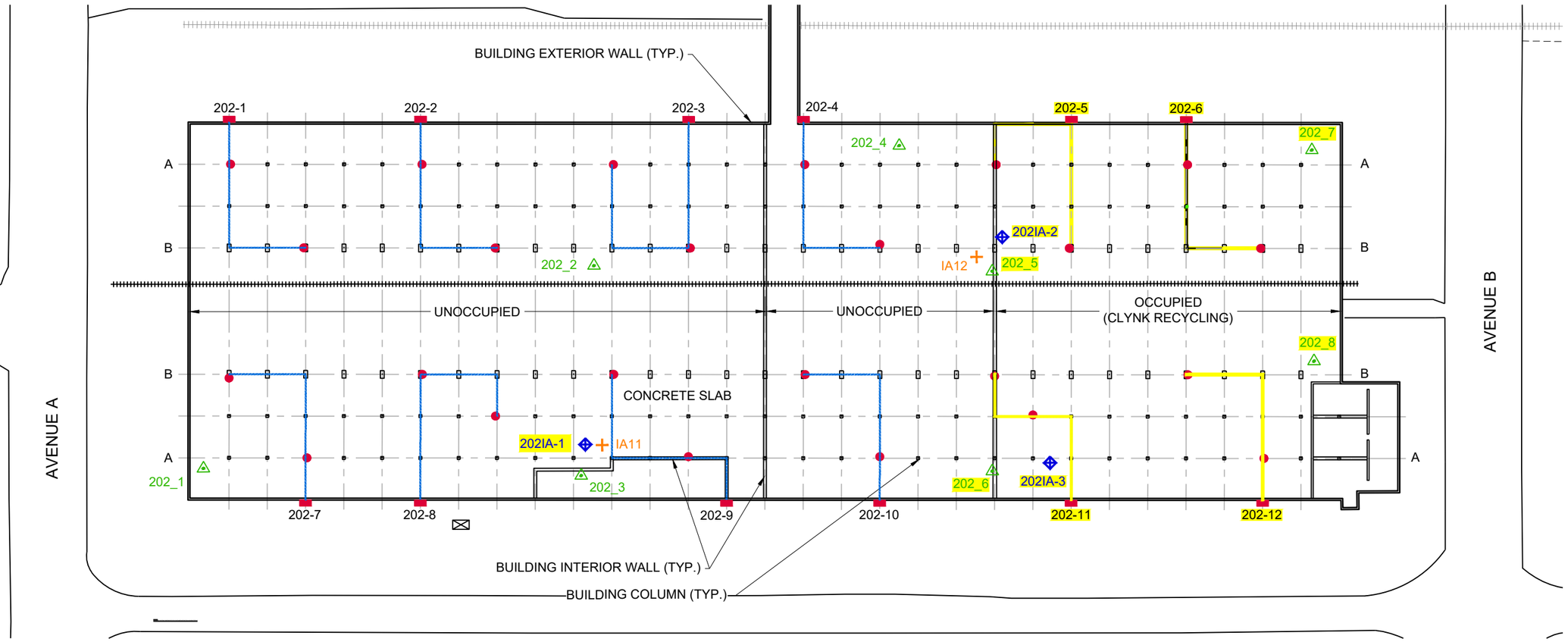
AECOM

Figure: 3-7

BUILDING 201
SSDS OPERATIONS

US ARMY Corps
of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY Project
No.: 60440641 Date: FEBRUARY 2022



BUILDING 202
PLAN

NOTES:

1. AS DISCUSSED IN SECTION 3.2, THIS EVALUATION INDICATES THE NEED FOR CONTINUED MITIGATION BASED UPON THE CARBON TETRACHLORIDE RESULTS OBTAINED FROM SAMPLING SUB-SLAB VAPOR AT SAMPLING LOCATION 202SS-2 AND CONTINUED MONITORING BASED UPON THE RESULTS OBTAINED AT SAMPLING LOCATIONS 202SS-1 AND 202SS-3. TO ADDRESS THE NEED FOR CONTINUED MITIGATION AND MONITORING, THE FOUR SSDSS LOCATED AT THE EASTERN END OF THE BUILDING DESIGNATED AS 202-5, 202-6, 202-11 AND 202-12 (AS SHOWN ON FIGURE 3-8) WILL CONTINUE TO OPERATE. THESE FOUR SSDSS ARE ALL LOCATED WITHIN ONE CONTIGUOUS SPACE CURRENTLY OCCUPIED BY ONE TENANT. OPERATION OF THE SSDS AND MONITORING OF THE BUILDING WILL CONTINUE IN ACCORDANCE WITH THE SMP USING VACUUM MONITORING POINTS 202-5, 202-6, 202-7 AND 202-8 AND AIR SAMPLING LOCATIONS 202IA-1, 202IA-2 AND 202IA-3. OPERATION OF THE REMAINING SSDSS IN BUILDING 202 WILL BE DISCONTINUED.

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)
- 201-11 — SYSTEM COMPONENTS FOR CONTINUED MITIGATION AND MONITORING

0 60' 120'

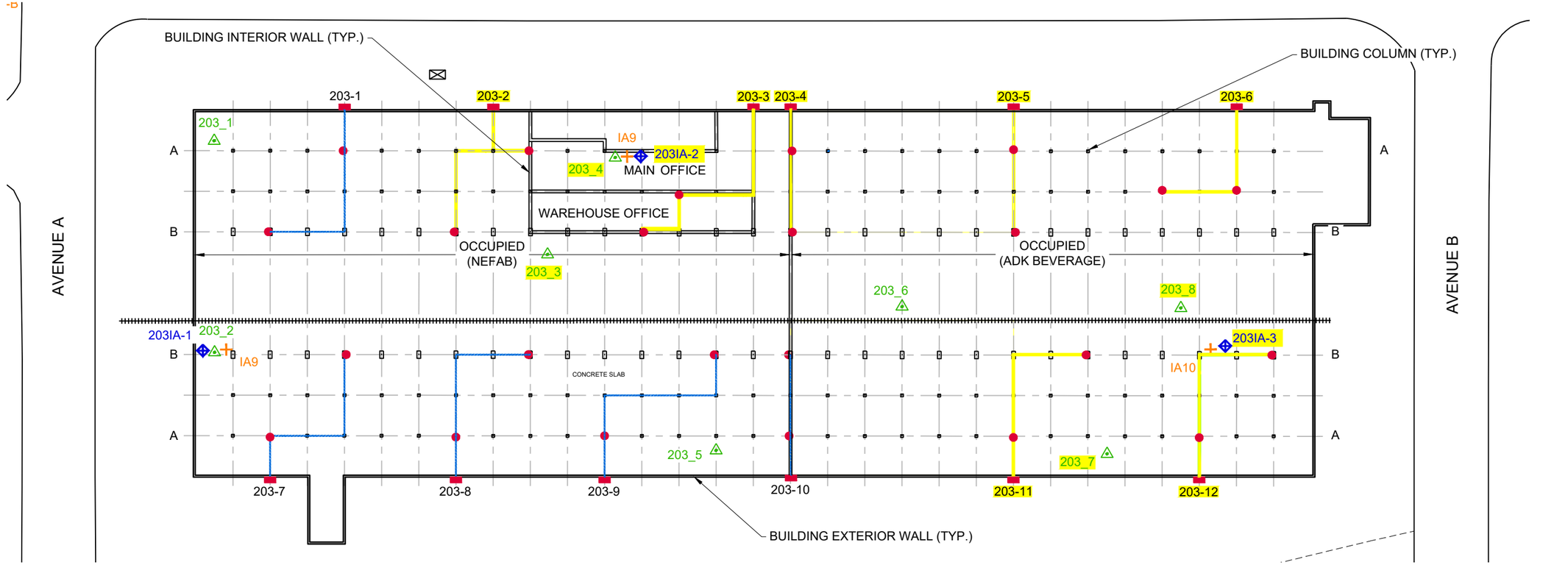
AECOM

Figure: 3-8

BUILDING 202
SSDS OPERATIONS

US ARMY Corps
of Engineers

SVI MONITORING PRORAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY Project
No.: 60440641 Date: FEBRUARY 2022



BUILDING 203
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)
- 201-11 — SYSTEM COMPONENTS FOR CONTINUED MITIGATION AND MONITORING

NOTES:

1. AS DISCUSSED IN SECTION 3.2, THIS EVALUATION INDICATES THE NEED FOR CONTINUED MITIGATION BASED UPON CARBON TETRACHLORIDE AND TRICHLOROETHENE RESULTS OBTAINED FROM SAMPLING SUB-SLAB VAPOR AT SAMPLING LOCATIONS 203SS-2 AND 203SS-3, RESPECTIVELY. TO ADDRESS THE NEED FOR CONTINUED MITIGATION AND MONITORING, THE FOLLOWING SSDSS WILL BE OPERATED: 203-2, 203-3, 203-4, 203-5, 203-6, 203-11 AND 203-12. THESE SYSTEMS ARE SHOWN ON FIGURE 3-9. OPERATION OF THE SSDS AND MONITORING OF THE BUILDING WILL CONTINUE IN ACCORDANCE WITH THE SMP USING VACUUM MONITORING POINTS 203-3, 203-4, 203-6, 203-7 AND 203-8 AND AIR SAMPLING LOCATIONS 203IA-2 AND 203IA-3. OPERATION OF THE REMAINING SSDSS IN BUILDING 203 WILL BE DISCONTINUED.

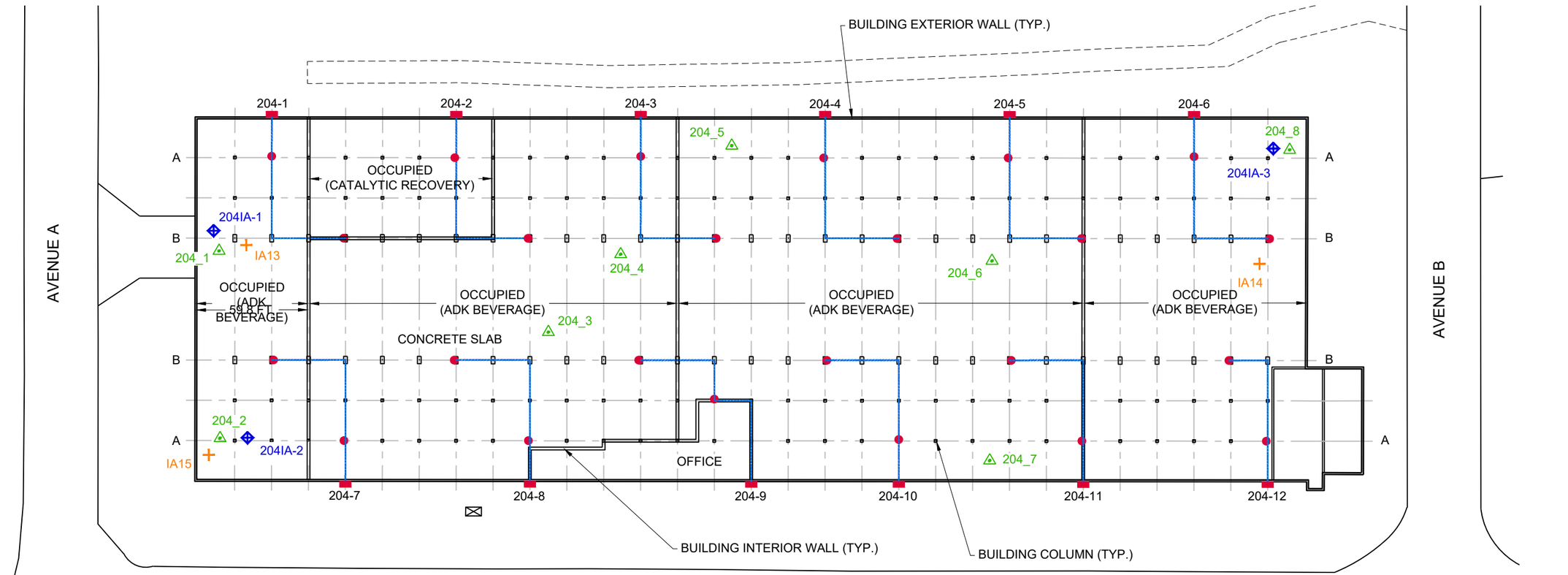
AECOM

Figure: 3-9

BUILDING 203
SSDS OPERATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY Project No.: 60440641 Date: FEBRUARY 2022



NOTES:

1. NO FURTHER ACTION IS REQUIRED FOR BUILDING 204 BASED UPON THE RESULTS FROM THE DECEMBER 2020 MONITORING; THEREFORE, OPERATION OF ALL SSDSS IN BUILDING 204 WILL BE DISCONTINUED.

BUILDING 204
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

AECOM

Figure: 3-10

BUILDING 204
SSDS OPERATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY Project No.: 60440641 Date: FEBRUARY 2022

TABLES

Table 1-1
Field Readings System Startup Communication Test (June 2016)
Former Scotia Naval Depot
Glenville, NY

COMMUNICATION TESTING

BUILDING 204			BUILDING 202			BUILDING 201			BUILDING 203		
MP	Before	After	MP	Before	After	MP	Before	After	MP	Before	After
1	NM	-0.017	1	-0.016	-0.029	1	-0.030	-0.033	1	-0.002	-0.004
2	NM	-0.005	2	-0.048	-0.087	2	-0.049	-0.051	2	-0.004	-0.005
3	NM	-0.027	3	-0.017	-0.036	3	-0.014	-0.018	3	-0.008	-0.054
4	NM	-0.047	4	-0.045	-0.069	4	-0.060	-0.085	4	NM	-0.007
5	NM	-0.011	5	-0.049	-0.090	5	-0.025	NM	5	-0.001	-0.002
6	NM	-0.034	6	-0.054	-0.093	6	-0.014	NM	6	-0.025	-0.038
7	NM	-0.021	7	-0.020	-0.018	7	-0.006	NM	7	-0.010	-0.045
8	-0.002	-0.031	8	-0.014	-0.037	8	-0.028	NM	8	-0.015	-0.065

MONOMETER READINGS

BUILDING 204			BUILDING 202			BUILDING 201			BUILDING 203		
Point	Before	After	Point	Before	After	Point	Before	After	Point	Before	After
1A	NM	3.5	1A	3.0	3.3	1A	3.0	3.2	1A	2.3	2.9
1B	NM	3.4	1B	2.9	3.3	1B	2.7	3.0	1B	2.3	2.7
2A	NM	3.3	2A	3.4	3.7	2A	2.5	3.0	2A	2.3	3.1
2B	NM	3.6	2B	3.3	3.5	2B	2.5	3.0	2B	2.3	3.0
3A	NM	3.6	3A	2.9	3.4	3A	2.7	NM	3A	1.1	2.5
3B	NM	3.6	3B	2.9	3.4	3B	2.7	NM	3B	0.9	2.8
4A	NM	3.9	4A	3.1	3.3	4A	2.8	NM	4A	2.8	3.2
4B	NM	3.8	4B	3.0	3.3	4B	MNI	MNI	4B	2.1	3.1
5A	NM	3.3	5A	3.3	3.3	5A	2.9	NM	5A	1.8	2.5
5B	NM	3.3	5B	3.3	3.4	5B	2.9	NM	5B	1.7	2.4
6A	NM	2.9	6A	3.5	3.5	6A	3.0	NM	6A	1.6	2.8
6B	NM	2.8	6B	3.4	3.4	6B	3.2	NM	6B	1.7	2.9
7A	NM	4.0	7A	3.3	3.6	7A	3.0	3.2	7A	1.7	3.4
7B	NM	3.8	7B	3.3	3.6	7B	2.7	2.9	7B	1.6	3.4
8A	NM	3.2	8A	3.7	3.8	8A	3.1	3.4	8A	1.9	3.4
8B	NM	3.1	8B	3.6	3.7	8B	3.3	3.6	8B	2	3.5
9A	NM	3.6	9A	3.0	3.1	9A	2.9	NM	9A	2.4	3.5
9B	NM	3.6	9B	2.8	3.0	9B	2.9	NM	9B	2.1	3.3
10A	NM	3.5	10A	3.5	3.6	10A	3.0	NM	10A	1.3	3.1
10B	NM	3.5	10B	3.3	3.4	10B	3.3	NM	10B	1.1	3.0
11A	NM	3.1	11A	3.4	3.0	11A	2.9	NM	11A	1.7	2.9
11B	NM	2.8	11B	3.3	3.3	11B	3.2	NM	11B	0.8	2.3
12A	NM	3.8	12A	3.4	3.4	12A	3.5	NM	12A	1.8	2.3
12B	NM	3.4	12B	3.2	3.2	12B	3.5	NM	12B	2.7	2.7

Notes:
*All Readings measured in inches of water column
MP - Monitoring Point
NM - Not Measured
MNI - Monometer Not Installed

Table 2-1
Field Readings During December 2021 Monitoring Event
Former Scotia Naval Depot

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.013	1	--	1	-0.004	1	-0.003
2	-0.005	2	0.003	2	0.002	2	0.000
3	0.000	3	-0.003	3	-0.008	3	0.001
4	-0.004	4	-0.011	4	-0.001	4	-0.021
5	-0.002	5	-0.003	5	0.050	5*	--
6	0.000	6	0.006	6	0.000	6	-0.004
7	0.000	7	--	7	-0.001	7	-0.001
8	-0.001	8	-0.001	8	0.000	8	0.003

MONOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	0.0	1A	--	1A	1.7	1A	--
1B	0.0	1B	0.0	1B	1.7	1B	0.0
2A	0.0	2A	0.0	2A	3.0	2A	0.0
2B	0.0	2B	0.0	2B	2.9	2B	0.0
3A	0.0	3A	0.0	3A	3.2	3A	0.0
3B	0.0	3B	0.0	3B	3.2	3B	0.0
4A	2.9	4A	3.4	4A	2.7	4A	0.0
4B	3.2	4B	3.3	4B	2.5	4B	0.0
5A	3.4	5A	1.8	5A	2.9	5A	0.0
5B	3.3	5B	--	5B	2.1	5B	0.0
6A	--	6A	--	6A	1.8	6A	0.0
6B	>3.0	6B	3.4	6B	1.6	6B	0.0
7A	0.0	7A	0.0	7A	0.0	7A	0.0
7B	0.0	7B	0.0	7B	0.0	7B	0.0
8A	0.0	8A	0.0	8A	0.0	8A	0.0
8B	0.0	8B	0.0	8B	0.0	8B	0.0
9A	0.0	9A	0.0	9A	0.0	9A	0.0
9B	0.0	9B	0.0	9B	0.0	9B	0.0
10A	3.1	10A	3.5	10A	0.0	10A	0.0
10B	3.5	10B	3.4	10B	--	10B	0.0
11A	--	11A	1 to 2.8	11A	2.3	11A	0.0
11B	3.2	11B	1.1 to 3.2	11B	1.4	11B	0.0
12A	--	12A	3.1	12A	1.8	12A	0.0
12B	0.0	12B	2.8	12B	1.9	12B	0.0

Notes:
* Point removed or, unable to take reading.
-- Reading unable to be taken.
1 to 3 : System readings were bouncing between that range.

Table 3-1
Indoor/Outdoor Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	Carbon Tetrachloride (µg/m^3)														1,1,1-Trichloroethane (µg/m^3)													
		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021	
Sample ID	Sample ID																												
IA06-1-B	201IA-1	0.692		0.49	J	0.40		0.32	J	0.39		0.62		0.52	J	0.038	J	0.015	J	0.0096	J	0.0078	J	0.011	U	0.099	U	0.021	J
IA05-1-B	201IA-2	0.673		0.51		0.39		0.34	J	2.1		0.57		0.49	J	0.109	U	0.014	J	0.011	J	0.0086	J	0.025	J	0.12	U	0.026	UJ
IA07-1-B	201IA-3	2.64		0.59		0.43		0.34	J	0.43	J	0.40		0.36		0.109	U	0.015	J	0.010	J	0.0079	J	0.011	J	0.10	U	0.081	U
IA11-1-B	202IA-1	1.95		0.45	J	0.39		0.32	J	0.41	J	0.55		0.53		0.469		0.018	J	0.012	J	0.010	J	0.012	J	0.097	U	0.020	J
IA12-1-B	202IA-2	1.01		0.45	J	0.40		0.34		0.43	J	0.46		0.44	J	0.147		0.017	J	0.011	J	0.012	J	0.010	J	0.11	U	0.026	UJ
NS	202IA-3	-		0.39		0.40		0.33		0.43	J	0.43		0.47	J	-		0.017	J	0.011	J	0.014	J	0.024	UJ	0.15	U	0.026	UJ
IA09-1-B	203IA-1	0.692		0.42	J	0.37		0.33		0.40	J	0.46		0.48	J	0.196		0.380	U	0.011	J	0.075	U	0.012	J	0.051	J	0.014	J
IA08-1-B	203IA-2	2.65		0.54		0.41		0.34		0.45		0.61		0.49		0.737		0.023	J	0.013	J	0.016	J	0.016	U	0.096	J	0.018	J
IA10-1-B	203IA-3	0.654		0.48		0.40		0.35	J	0.42	J	0.46		0.46		0.180		0.019	J	0.012	J	0.015	J	0.014	J	0.072	J	0.038	U
NS	204IA-1	-		0.50		0.40		0.37		0.43	J	0.43		0.53		-		0.029	J	0.0091	J	0.098	U	0.015	UJ	0.22	U	0.018	J
IA15-1-B	204IA-2	0.572		0.47		0.46		0.36	J	0.56	J	0.45		0.48	J	0.044	J	0.016	J	0.017	J	0.062	UJ	0.094	UJ	0.14	U	0.026	UJ
IA14-1-B	204IA-3	0.516		0.50		0.40		0.31		0.40	J	0.37		0.46	J	0.038	J	0.018	J	0.012	J	0.012	J	0.0099	J	0.084	U	0.019	J
IABG-1-B	NS	0.447		-		-		-		-		-		-		0.109	U	-		-		-		-		-		-	
IABG-2-B	OA-1	0.434		0.490	J	0.41		0.34	J	0.41	J	0.37		0.47	J	0.109	U	0.014	J	0.010	J	0.012	J	0.015	U	0.019	J	0.026	UJ
	2017 OA-1 Resample	-		-		0.48		-		-		-		-		-		-		0.014	J	-		-		-		-	
	3/26/20 IA201-2 Resample	-		-		-		-		0.38	J	-		-		-		-		-		-		0.009	J	-		-	
	3/26/20 OA-1 Resample	-		-		-		-		0.39		-		-		-		-		-		-		0.028	U	-		-	

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.
D - Qualifier denotes that the result was obtained from a dilution.

Table 3-1
Indoor/Outdoor Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	Tetrachloroethene (µg/m^3)														Trichloroethene (µg/m^3)													
		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021	
Sample ID	Sample ID																												
IA06-1-B	201IA-1	0.068	J	0.054	J	0.044		0.053	J	0.30	J	0.11	J	0.099	J	0.107	U	0.037	J	0.031	U	0.025	UJ	0.025	J	0.099	U	0.020	J
IA05-1-B	201IA-2	0.136		0.050		0.16		0.088	J	0.10		0.13	J	0.089	J	0.107	U	0.023	J	0.023	J	0.022	J	0.020	J	0.12	U	0.017	J
IA07-1-B	201IA-3	0.258		0.094		0.11		0.14	J	0.11	J	0.15		0.11		0.107	U	0.046		0.082		0.019	J	0.026	J	0.10	U	0.076	J
IA11-1-B	202IA-1	0.142		0.054	J	0.15		0.11	J	0.078		0.46		0.10		0.107	U	0.030	J	0.025	J	0.028	J	0.028	J	0.097	U	0.055	
IA12-1-B	202IA-2	0.061	J	0.060	J	0.075		0.11		0.11	J	76		0.090	J	0.107	U	0.034	J	0.014	J	0.030	J	0.021	J	0.11	U	0.024	J
NS	202IA-3	-		0.110		0.086		0.12		0.082	J	23		0.11	J	-		0.036		0.019		0.052		0.073	J	0.15	U	0.033	J
IA09-1-B	203IA-1	0.170		0.380	U	0.073		0.15		0.074		11		0.23	J	0.683		0.380	U	0.019	J	0.099		0.045		0.073	J	0.055	J
IA08-1-B	203IA-2	0.292		0.140		0.18		0.19		0.14		13		0.20		0.752		0.091		0.042		0.12		0.060	J	0.15	U	0.077	
IA10-1-B	203IA-3	0.156		0.075		0.068		0.087	J	0.092		1.7		0.17		0.623		0.076		0.027	J	0.085	J	0.083		0.23		0.047	
NS	204IA-1	-		0.072		0.99		0.087	J	0.075		0.22	U	0.11		-		0.089		0.038		0.069	J	0.045	J	0.13	J	0.14	
IA15-1-B	204IA-2	0.149		0.057		0.29		0.063	J	0.083	J	0.063	J	0.078	J	3.92		0.061		0.20		0.096	J	0.079	U	0.14	U	0.032	J
IA14-1-B	204IA-3	0.142		0.043		0.059		0.057		0.084		0.075	J	0.16	J	0.210		0.059		0.035		0.067		0.057		0.084	U	0.17	J
IABG-1-B	NS	0.054	J	-		-		-		-		-		-		0.107	U	-		-		-		-		-		-	
IABG-2-B	OA-1	0.075		0.054		0.041		0.087	J	0.069		0.38		0.11	J	0.107	U	0.001	J	0.029	U	0.078	J	0.025	J	0.051	J	0.041	J
	2017 OA-1 Resample	-		-		0.079		-		-		-		-		-		-		0.11		-		-		-		-	
	3/26/20 IA201-2 Resample	-		-		-		-		0.098	J	-		-		-		-		-		-		0.021	J	-		-	
	3/26/20 OA-1 Resample	-		-		-		-		0.074		-		-		-		-		-		-		0.028	U	-		-	

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.
D - Qualifier denotes that the result was obtained from a dilution.

Table 3-1
Indoor/Outdoor Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	Vinyl Chloride (µg/m^3)												1,1-Dichloroethene (µg/m^3)											
		Stone 2014		AECOM 2016		AECOM2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021		Stone		Stone 2014		AECOM2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021	
Sample ID	Sample ID																												
IA06-1-B	201IA-1	0.051	U	0.025	UJ	0.031	U	0.025	UJ	0.040	U	0.10	U	0.028	UJ	0.079	U	0.012	J	0.031	U	0.025	UJ	0.040	U	0.10	U	0.028	UJ
IA05-1-B	201IA-2	0.051	U	0.027	U	0.029	U	0.027	UJ	0.032	U	0.12	U	0.027	UJ	0.079	U	0.029	U	0.029	U	0.027	UJ	0.032	U	0.12	U	0.027	UJ
IA07-1-B	201IA-3	0.051	U	0.030	U	0.031	U	0.026	UJ	0.025	UJ	0.11	U	0.085	U	0.079	U	0.031	U	0.031	U	0.026	UJ	0.025	UJ	0.11	U	0.085	U
IA11-1-B	202IA-1	0.051	U	0.025	UJ	0.031	U	0.025	UJ	0.026	UJ	0.10	U	0.029	U	0.079	U	0.026	UJ	0.031	U	0.025	UJ	0.026	UJ	0.10	U	0.029	U
IA12-1-B	202IA-2	0.051	U	0.024	UJ	0.032	U	0.035	U	0.026	UJ	0.11	U	0.027	UJ	0.079	U	0.026	UJ	0.032	U	0.035	U	0.026	UJ	0.11	U	0.027	UJ
NS	202IA-3	-		0.022	U	0.034	U	0.034	U	0.087	UJ	0.15	U	0.027	UJ	-		0.023	U	0.034	U	0.034	U	0.087	UJ	0.15	U	0.027	UJ
IA09-1-B	203IA-1	0.051	U	0.360	U	0.032	U	0.071	U	0.027	UJ	0.15	U	0.026	U	0.079	U	0.380	U	0.032	U	0.071	U	0.027	UJ	0.15	U	0.026	U
IA08-1-B	203IA-2	0.051	U	0.030	U	0.032	U	0.034	U	0.057	U	0.16	U	0.031	U	0.079	U	0.031	U	0.032	U	0.034	U	0.057	U	0.16	U	0.031	U
IA10-1-B	203IA-3	0.051	U	0.027	U	0.033	U	0.050	UJ	0.026	UJ	0.16	U	0.040	U	0.079	U	0.029	U	0.033	U	0.050	UJ	0.026	UJ	0.16	U	0.040	U
NS	204IA-1	-		0.028	U	0.032	U	0.093	U	0.052	UJ	0.23	U	0.028	U	-		0.020	J	0.032	J	0.093	U	0.052	UJ	0.23	U	0.028	U
IA15-1-B	204IA-2	0.051	U	0.028	U	0.032	U	0.059	UJ	0.090	UJ	0.14	U	0.028	UJ	0.079	U	0.029	U	0.032	U	0.059	UJ	0.090	UJ	0.14	U	0.028	UJ
IA14-1-B	204IA-3	0.051	U	0.027	U	0.028	U	0.033	U	0.0250	UJ	0.088	U	0.028	UJ	0.079	U	0.028	U	0.028	U	0.033	U	0.025	UJ	0.088	U	0.028	UJ
IABG-1-B	NS	0.051	U	-		-		-		-		-		-		0.079	U	-		-		-		-		-		-	
IABG-2-B	OA-1	0.051	U	0.023	UJ	0.029	U	0.026	UJ	0.052	UJ	0.058	U	0.027	UJ	0.079	U	0.024	UJ	0.029	U	0.026	UJ	0.052	UJ	0.058	U	0.027	UJ
	2017 OA-1 Resample	-		-		0.032	U	-		-		-		-		-		-		0.032	U	-		-		-		-	
	3/26/20 IA201-2 Resample	-		-		-		-		0.028	UJ	-		-		-		-		-		-		0.028	UJ	-		-	
	3/26/20 OA-1 Resample	-		-		-		-		0.03	U	-		-		-		-		-		-		0.030	U	-		-	

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.
D - Qualifier denotes that the result was obtained from a dilution.

Table 3-1
Indoor/Outdoor Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	cis-1,2-Dichloroethene (µg/m^3)											
		Stone 2014		AECOM 2016		AECOM2017		AECOM 2018		AECOM Jan 2020		AECOM Dec 2020		AECOM Dec 2021	
Sample ID	Sample ID														
IA06-1-B	201IA-1	0.079	U	0.043	J	0.031	U	0.025	UJ	0.040	U	0.099	U	0.026	UJ
IA05-1-B	201IA-2	0.079	U	0.029	U	0.029	U	0.027	UJ	0.032	U	0.12	U	0.026	UJ
IA07-1-B	201IA-3	0.079	U	0.031	U	0.031	U	0.026	UJ	0.025	UJ	0.10	U	0.081	U
IA11-1-B	202IA-1	0.079	U	0.026	UJ	0.031	U	0.025	UJ	0.026	UJ	0.097	U	0.027	U
IA12-1-B	202IA-2	0.079	U	0.026	UJ	0.032	U	0.035	U	0.026	UJ	0.11	U	0.026	UJ
NS	202IA-3	-		0.023	U	0.034	U	0.034	U	0.087	UJ	0.15	U	0.026	UJ
IA09-1-B	203IA-1	0.079	U	0.380	U	0.032	U	0.071	U	0.027	UJ	0.14	U	0.025	U
IA08-1-B	203IA-2	0.079	U	0.031	U	0.032	U	0.034	U	0.057	U	0.15	U	0.030	U
IA10-1-B	203IA-3	0.079	U	0.029	U	0.033	U	0.050	UJ	0.026	UJ	0.16	U	0.038	U
NS	204IA-1	-		0.039		0.032		0.093	U	0.052	UJ	0.22	U	0.027	U
IA15-1-B	204IA-2	0.079	U	0.029	U	0.032	U	0.059	UJ	0.090	UJ	0.14	U	0.026	UJ
IA14-1-B	204IA-3	0.079	U	0.028	U	0.028	U	0.033	U	0.025	UJ	0.084	U	0.026	UJ
IABG-1-B	NS	0.079	U	-		-		-		-		-		-	
IABG-2-B	OA-1	0.079	U	0.024	UJ	0.029	U	0.026	UJ	0.052	UJ	0.030	J	0.026	UJ
	2017 OA-1 Resample	-		-		0.032	U	-		-		-		-	
	3/26/20 IA201-2 Resample	-		-		-		-		0.022	J	-		-	
	3/26/20 OA-1 Resample	-		-		-		-		0.028	U	-		-	

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.
D - Qualifier denotes that the result was obtained from a dilution.

Table 3-2
NYSDOH Guidance Decision Matrix Outcomes
December 2021
Former Scotia Naval Depot
Glenville NY

Location ID Stone (Indoor Air/Soil Vapor)	Location ID AECOM (Indoor Air/Soil Vapor)	Analyte	Soil Vapor Concentration 2014 ($\mu g/m^3$)	Soil Vapor Concentration Jan 2020 ($\mu g/m^3$)	Soil Vapor Concentration Dec 2021 ($\mu g/m^3$)	Indoor Air Concentration 2014 ($\mu g/m^3$)	Indoor Air Concentration 2016 ($\mu g/m^3$)	Indoor Air Concentration 2017 ($\mu g/m^3$)	Indoor Air Concentration 2018 ($\mu g/m^3$)	Indoor Air Concentration Jan 2020 ($\mu g/m^3$)	Indoor Air Concentration Dec 2020 ($\mu g/m^3$)	Indoor Air Concentration Dec 2021 ($\mu g/m^3$)	New York State Department of Health Guidance/Decision Matrix Outcome[1] December 2020	New York State Department of Health Guidance/Decision Matrix Outcome[2] December 2021
IA05/SV05	201IA-2/201SS-2	1,1,1-Trichloroethane	0.737	0.026 J	0.019 J	0.109 U	0.014 J	0.011 J	0.0086 J	0.025 J / 0.009 J	0.12 U	0.026 UJ	No Further Action	No Further Action
		Carbon Tetrachloride	122	1.2	0.69	0.673	0.51	0.39	0.34 J	2.1 / 0.38 J	0.57	0.49 J	No Further Action	No Further Action
		Tetrachloroethene	0.542 J	0.17	0.083	0.136	0.05	0.16	0.088 J	0.1 / 0.098	0.13 J	0.089 J	No Further Action	No Further Action
		Trichloroethene	1.05	0.078 U	0.021 J	0.107 U	0.023 J	0.023 J	0.022 J	0.020 J / 0.021 J	0.12 U	0.017 J	No Further Action	No Further Action
IA06/SV06	201IA-1/201SS-1	1,1,1-Trichloroethane	27.3	0.38 J	0.28 J	0.038 J	0.015 J	0.0096 J	0.0078 J	0.011 U	0.099 U	0.021 J	No Further Action	No Further Action
		Carbon Tetrachloride	10.1	0.54 J	0.59 J	0.692	0.49 J	0.4	0.32 J	0.39	0.62	0.52 J	No Further Action	No Further Action
		Tetrachloroethene	3.44	0.13 J	0.11 J	0.068 J	0.054 J	0.044	0.053 J	0.30	0.11 J	0.099 J	No Further Action	No Further Action
		Trichloroethene	2.82	0.053 UJ	0.014 J	0.107 U	0.037 J	0.031 U	0.025 UJ	0.025 J	0.099 U	0.020 J	No Further Action	No Further Action
IA07/SV07	201IA-3/201SS-3	1,1,1-Trichloroethane	1.39	0.046 J	0.018 J	0.109 U	0.015 J	0.01 J	0.0079 J	0.011 J	0.10 U	0.081 U	No Further Action	No Further Action
		Carbon Tetrachloride	1,120	60	12	2.64	0.59	0.43	0.34 J	0.43	0.40	0.36	Mitigate	Monitor
		Tetrachloroethene	0.868	0.12	0.093	0.258	0.094	0.11	0.14 J	0.11	0.15	0.11	No Further Action	No Further Action
		Trichloroethene	0.349	0.045 J	0.039	0.107 U	0.046	0.082	0.019 J	0.026 J	0.10 U	0.076 J	No Further Action	No Further Action
IA11/SV11	202IA-1/202SS-1	1,1,1-Trichloroethane	96	1.1 J	1.1	0.469	0.018 J	0.012 J	0.010 J	0.012 J	0.097 U	0.020 J	No Further Action	No Further Action
		Carbon Tetrachloride	223	21 J	17	1.95	0.45 J	0.39	0.32 J	0.41	0.55	0.53	Monitor	Monitor
		Tetrachloroethene	5.85 U	0.28 J	0.11	0.142	0.054	0.15	0.11 J	0.078	0.46	0.10	No Further Action	No Further Action
		Trichloroethene	2.32 J	0.041 J	0.063 J	0.107 U	0.030 J	0.025 J	0.028 J	0.028 J	0.097 U	0.055	No Further Action	No Further Action
IA12/SV12	202IA-2/202SS-2	1,1,1-Trichloroethane	103	47	0.46 J	0.147	0.017 J	0.011 J	0.012 J	0.010 J	0.11 U	0.026 UJ	No Further Action	No Further Action
		Carbon Tetrachloride	918	440	3.1 J	1.01	0.45 J	0.4	0.34	0.43	0.46	0.44 J	Mitigate	No Further Action
		Tetrachloroethene	0.271 U	0.59	0.12 J	0.061 J	0.060 J	0.075	0.11	0.11	76	0.090 J	Identify Source(s) and Resample Or Mitigate	No Further Action
		Trichloroethene	0.172 J	0.13 J	0.052 J	0.107 U	0.034 J	0.014 J	0.030 J	0.021 J	0.11 U	0.024 J	No Further Action	No Further Action
No sample	202IA-3/202SS-3	1,1,1-Trichloroethane	-	0.23 J	0.035	-	0.017 J	.011 J	0.014 J	0.024 U	0.15 U	0.026 UJ	No Further Action	No Further Action
		Carbon Tetrachloride	-	22	2.9	-	0.39	0.4	0.33	0.43	0.43	0.47 J	Monitor	No Further Action
		Tetrachloroethene	-	0.33	0.12	-	0.11	0.086	0.12	0.082 J	23	0.11 J	Identify Source(s) and Resample Or Mitigate	No Further Action
		Trichloroethene	-	0.21 U	0.048	-	0.036	.019 J	0.052	0.073 J	0.15 U	0.033 J	No Further Action	No Further Action
IA08/SV08	203IA-2/203SS-2	1,1,1-Trichloroethane	862	23	2.2	0.737	0.023 J	0.011 J	0.016 J	0.016 U	0.096 J	0.018 J	No Further Action	No Further Action
		Carbon Tetrachloride	3,270	80	7.7	2.65	0.54	0.37	0.34	0.45	0.61	0.49	Mitigate	Monitor
		Tetrachloroethene	0.678	7.8	0.81	0.292	0.14	0.073	0.19	0.14	13	0.20	Identify Source(s) and Resample Or Mitigate	No Further Action
		Trichloroethene	0.699	0.31	0.27	0.752	0.091	0.019 J	0.12	0.060 J	0.15 U	0.077	No Further Action	No Further Action
IA09/SV09	203IA-1/203SS-1	1,1,1-Trichloroethane	72.6	4.2	1.1 J	0.196	0.380 U	0.013 J	0.075 U	0.012 J	0.051 J	0.014 J	No Further Action	No Further Action
		Carbon Tetrachloride	68.9	0.64	0.58 J	0.692	0.42 J	0.41	0.33	0.40	0.46	0.48 J	No Further Action	No Further Action
		Tetrachloroethene	0.339	5.3	0.17 J	0.17	0.380 U	0.18	0.15	0.074	11	0.23 J	Identify Source(s) and Resample Or Mitigate	No Further Action
		Trichloroethene	0.333	0.14U	0.031 J	0.683	0.380 U	0.042	0.099	0.045	0.073 J	0.055 J	No Further Action	No Further Action
IA10/SV10	203IA-3/203SS-3	1,1,1-Trichloroethane	45.7	39	16	0.18	0.019 J	0.012 J	0.015 J	0.014 J	0.072 J	0.038 U	No Further Action	No Further Action
		Carbon Tetrachloride	22.3	13	4.8	0.654	0.48	0.4	0.35 J	0.42	0.46	0.46	Monitor	No Further Action
		Tetrachloroethene	0.231	1.3	0.37	0.156	0.075	0.068	0.087 J	0.092	1.7	0.17	No Further Action	No Further Action
		Trichloroethene	132	140	120 D	0.623	0.076	0.027J	0.085 J	0.083	0.23	0.047	Mitigate	Mitigate
SV13 No indoor air sample	204IA-1/204SS-1	1,1,1-Trichloroethane	8.07	0.070 J	0.27	Not Available	0.029 J	0.0091 J	0.098 U	0.015 U	0.22 U	0.018 J	No Further Action	No Further Action
		Carbon Tetrachloride	937	0.81	7.5	Not Available	0.5	0.4	0.37	0.43	0.43	0.53	No Further Action	Monitor
		Tetrachloroethene	3.76	0.51	2.1	Not Available	0.072	0.99	0.087 J	0.075	0.22 U	0.11	No Further Action	No Further Action
		Trichloroethene	1,630	1.8	3.2	Not Available	0.089	0.038	0.069 J	0.045 J	0.13 J	0.14	No Further Action	No Further Action
IA14/SV14	204IA-3/204SS-3	1,1,1-Trichloroethane	2.35	0.20	0.65 J	0.038 J	0.018 J	0.012 J	0.012 J	0.0099 J	0.084 U	0.019 J	No Further Action	No Further Action
		Carbon Tetrachloride	1.99	0.34	0.65	0.516	0.5	0.4	0.31	0.40	0.37	0.46 J	No Further Action	No Further Action
		Tetrachloroethene	63.4	0.50	0.14	0.142	0.043	0.059	0.057	0.084	0.075 J	0.16 J	No Further Action	No Further Action
		Trichloroethene	3.12	0.090 U	0.14	0.21	0.059	0.035	0.067	0.057	0.084 U	0.17 J	No Further Action	No Further Action
IA15/SV15	204IA-2/204SS-2	1,1,1-Trichloroethane	0.109 U	0.12 U	0.060 U	0.044 J	0.016 J	0.017 J	0.062 UJ	0.094 U	0.14 U	0.026 UJ	No Further Action	No Further Action
		Carbon Tetrachloride	0.774	0.19	0.094	0.572	0.47	0.46	0.36 J	0.56	0.45	0.48 J	No Further Action	No Further Action
		Tetrachloroethene	0.075 J	0.070 J	0.77	0.149	0.057	0.29	0.063 J	0.083 J	0.063 J	0.078 J	No Further Action	No Further Action
		Trichloroethene	0.065 J	0.12 U	0.24	3.92	0.061	0.20	0.096 J	0.079 J	0.14 U	0.032 J	No Further Action	No Further Action

Note:
[1] - Matrix outcome determined by 2020 sub-slab vapor concentrations and 2020 indoor air concentrations.
[2] - Matrix outcome determine by 2021 sub-slab vapor cocentrations and 2021 indoor air concentrations.

APPENDICES

APPENDIX A: Stone PDI Results 2013 and 2014 Air Sampling Events

Figure 4: Carbon Tetrachloride Sub-Slab Soil Vapor Concentration Map

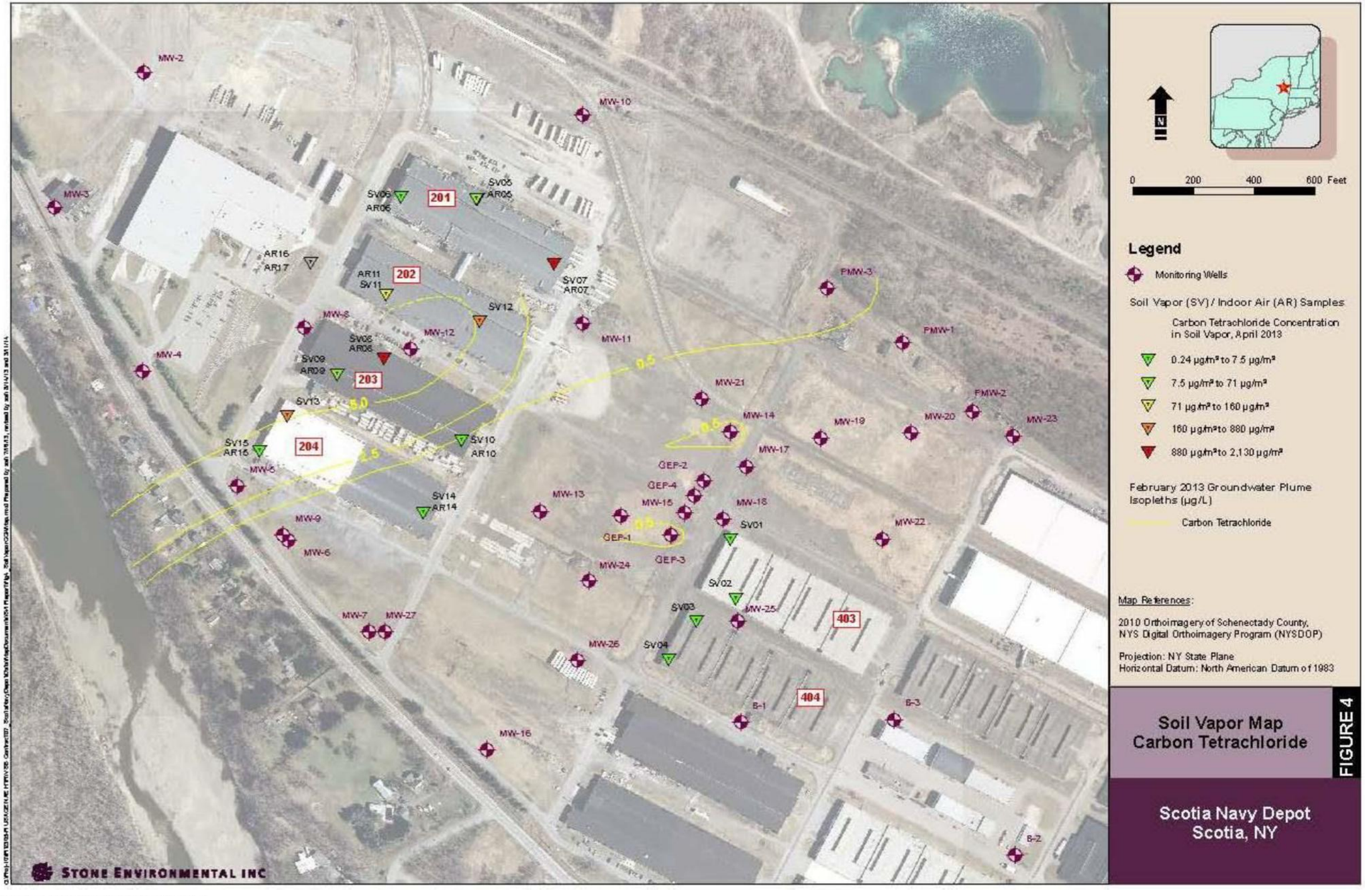


Figure 5: 1,1,1-Trichloroethane Sub-Slab Soil Vapor Concentration Map

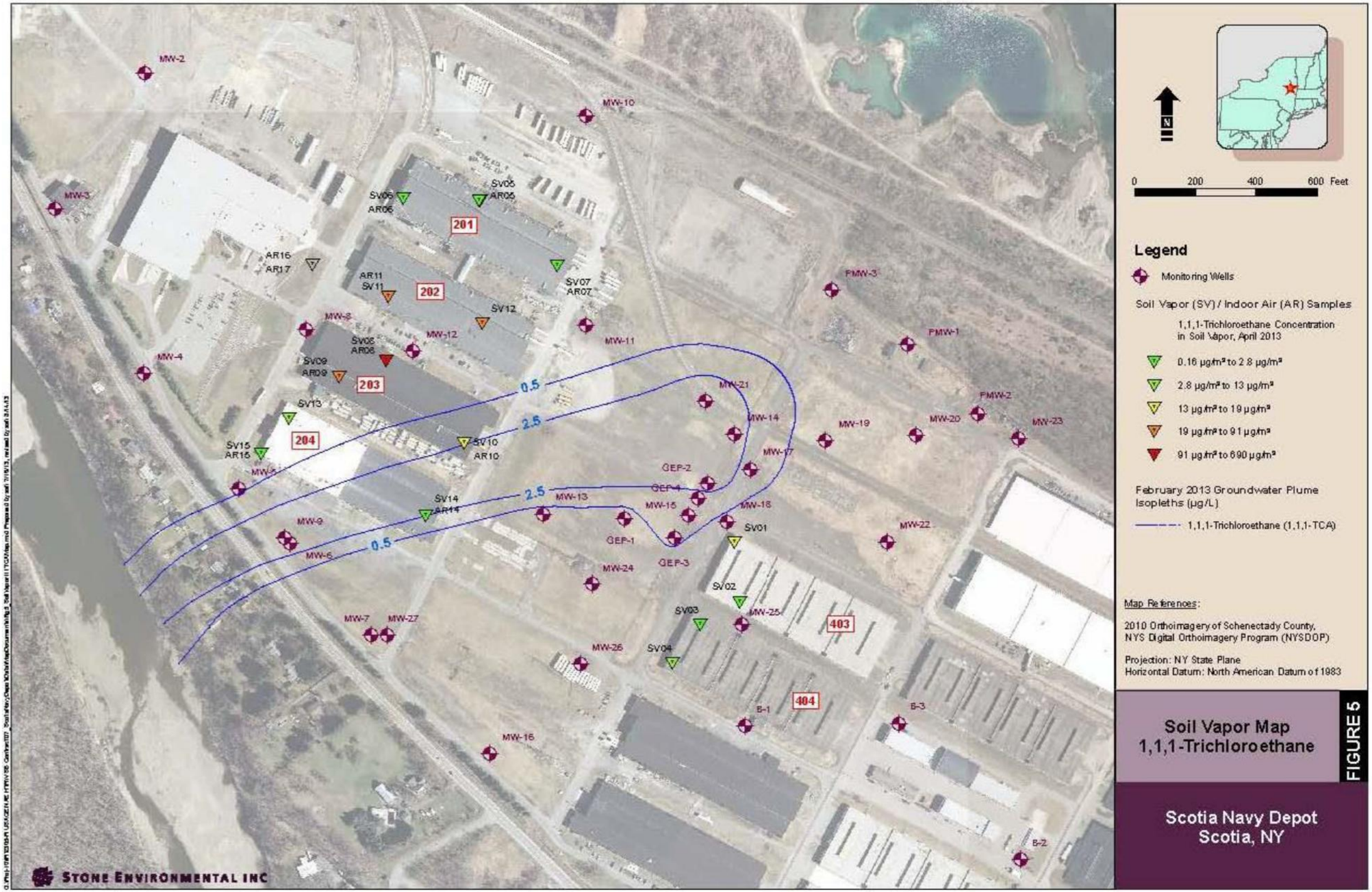


Figure 6: Tetrachloroethene Sub-Slab Soil Vapor Concentration Map

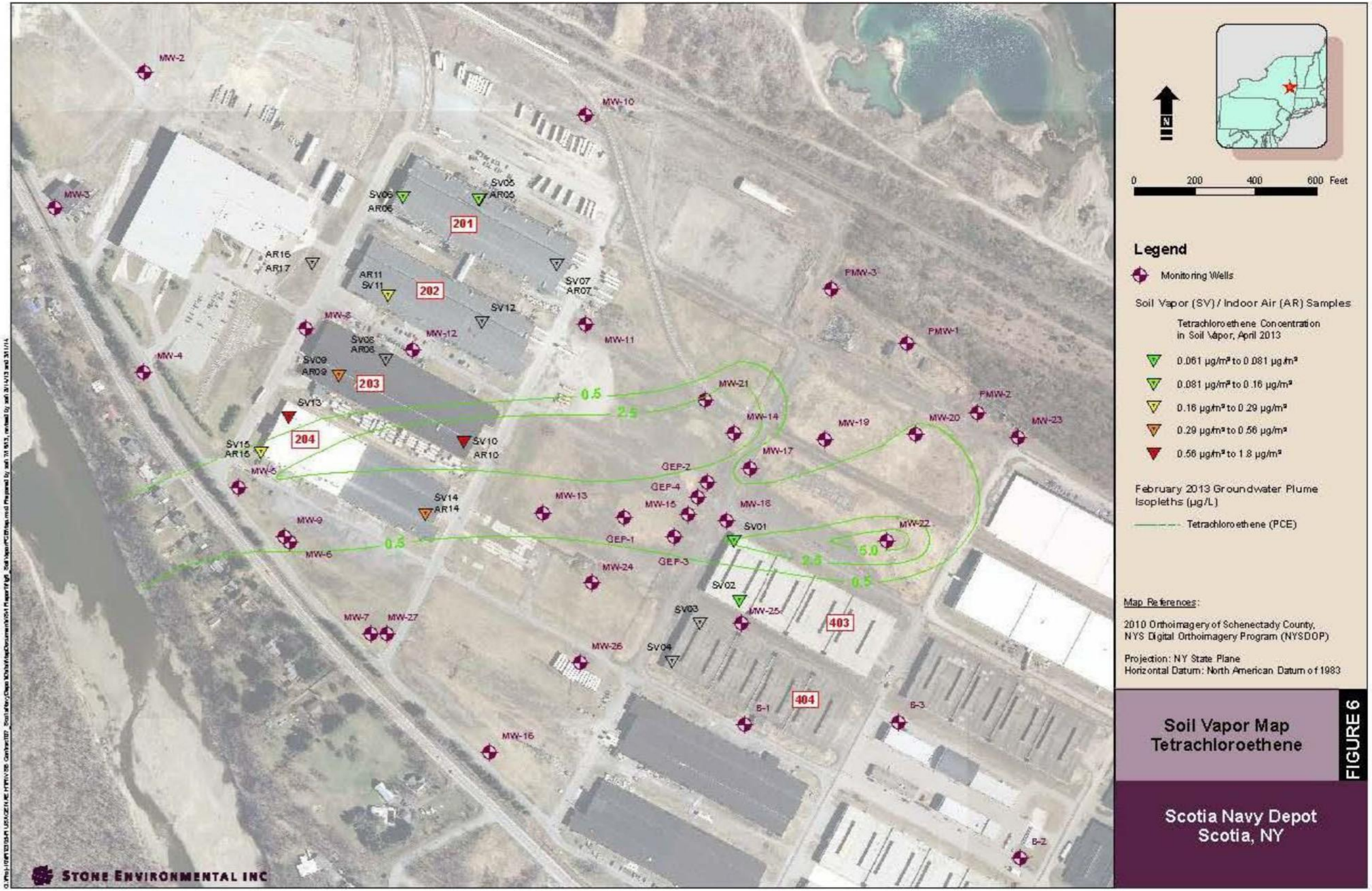
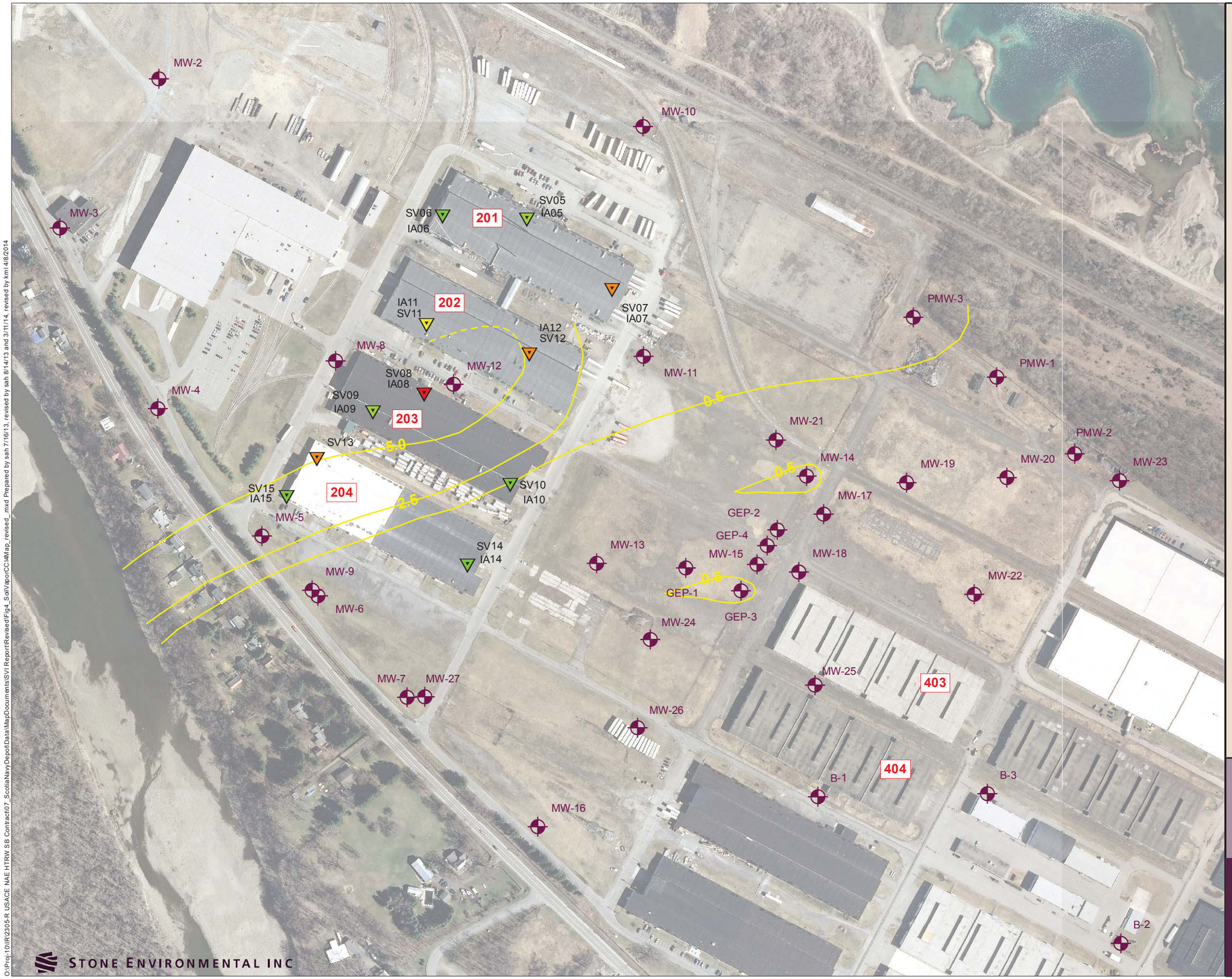


Figure 7: Trichloroethene Sub-Slab Soil Vapor Concentration Map



0 200 400 600 Feet

Legend

Monitoring Wells

Sub-SlabSoil Vapor (SV) / Indoor Air (IA) Samples

Carbon Tetrachloride Concentration in Sub-Slab Soil Vapor, March 2014

- Non-detect
- 0.77 µg/m^3 to 22.3 µg/m^3
- 22.3 µg/m^3 to 122 µg/m^3
- 122 µg/m^3 to 223 µg/m^3
- 223 µg/m^3 to 1,210 µg/m^3
- 1,210 µg/m^3 to 3,270 µg/m^3

February 2013 Groundwater Plume Isopleths (µg/L)

- Carbon Tetrachloride

Map References:

2010 Orthoimagery of Schenectady County, NYS Digital Orthoimagery Program (NYSDOP)

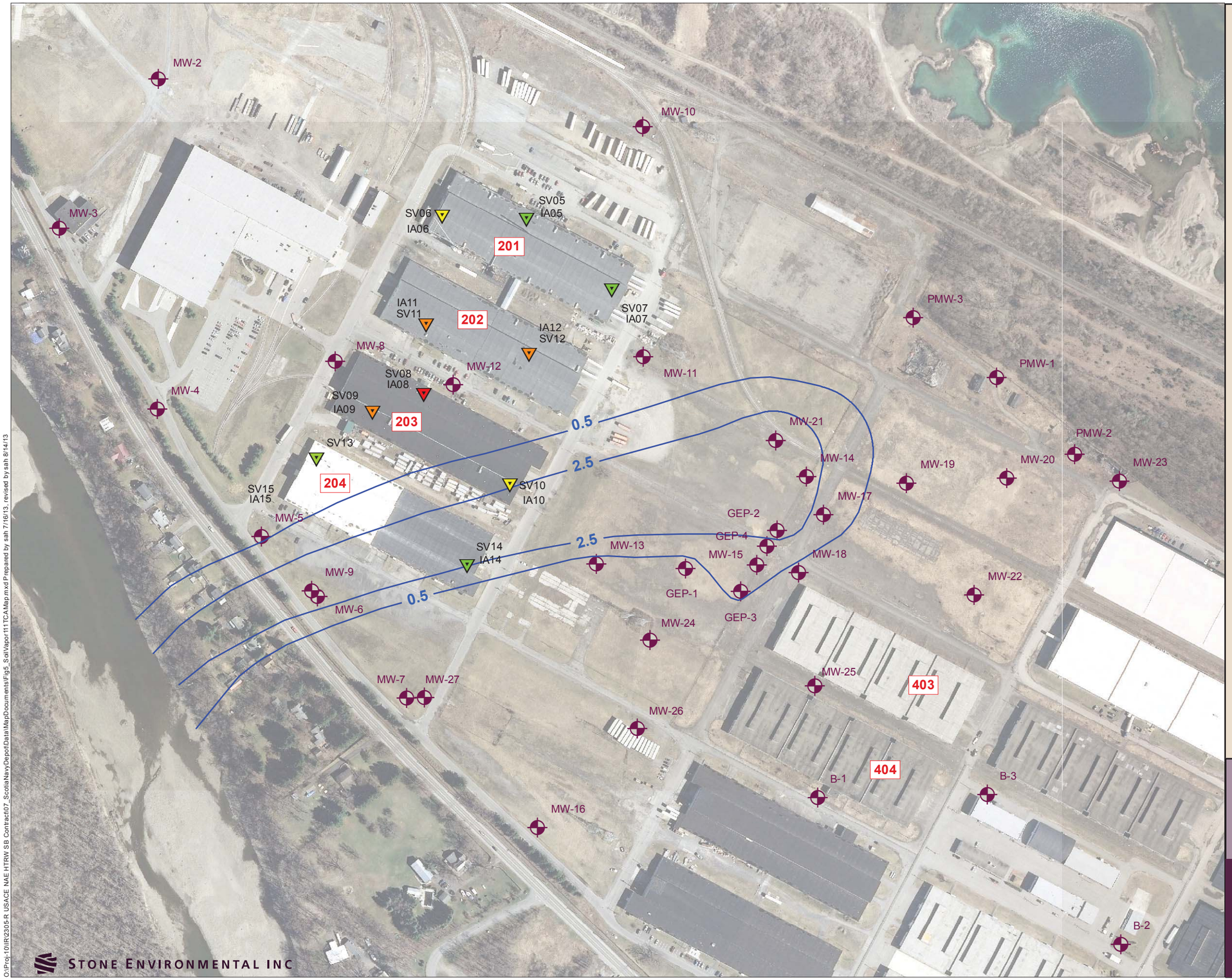
Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

Sub-Slab Soil Vapor Map Carbon Tetrachloride

FIGURE 4

Scotia Navy Depot
Scotia, NY

O:\Proj-110\R2305-R USACE NAE HTRW SB Contract\07_ScotiaNavyDepot\Data\MapDocuments\SVI Report\Revised\Fig4_SoilVaporCC4Map_revised_.mxd Prepared by sah 7/16/13, revised by sah 8/14/13 and 3/11/14, revised by kml 4/8/2014



Legend

Monitoring Wells

Sub-Slab Soil Vapor (SV) / Indoor Air (IA) Samples

1,1,1-Trichloroethane Concentration in Sub-Slab Soil Vapor, March 2014

- Non-detect
- 0.737 µg/m^3 to 2.35 µg/m^3
- 2.35 µg/m^3 to 8.07 µg/m^3
- 8.07 µg/m^3 to 45.7 µg/m^3
- 45.7 µg/m^3 to 103 µg/m^3
- 103 µg/m^3 to 862 µg/m^3

February 2013 Groundwater Plume Isopleths (µg/L)

- 1,1,1-Trichloroethane (1,1,1-TCA)

Map References:

2010 Orthoimagery of Schenectady County, NYS Digital Orthoimagery Program (NYSDOP)

Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

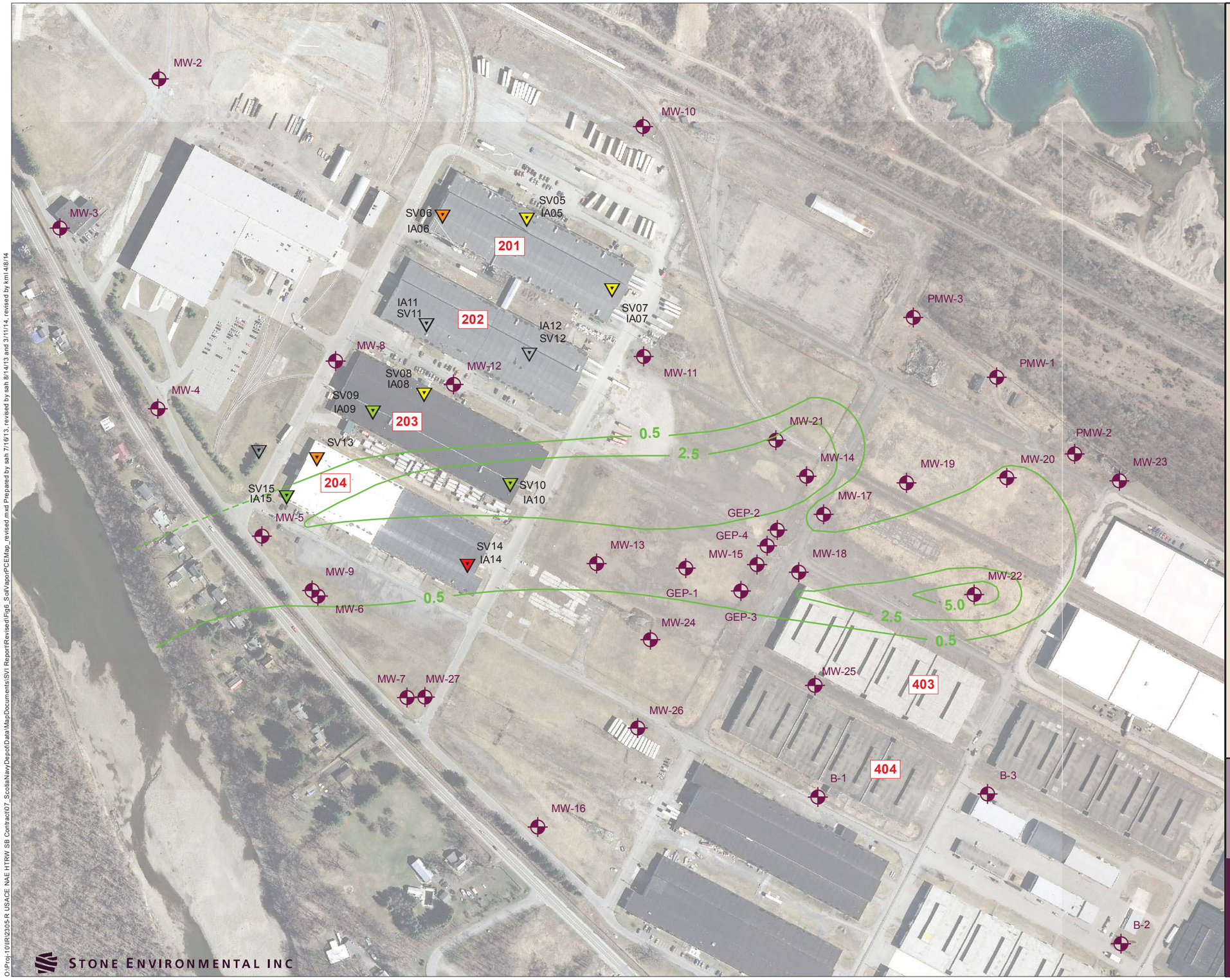
Sub-Slab Soil Vapor Map 1,1,1-Trichloroethane

FIGURE 5

Scotia Navy Depot
Scotia, NY

STONE ENVIRONMENTAL INC

O:\Proj-1\0IR\2305-R USACE NAE HTRW SB Contract\07_ScotiaNavyDepot\DataMapDocuments\Fig5_SatVapor111TCAMap.mxd Prepared by sah 7/16/13, revised by sah 8/14/13



Legend

Monitoring Wells

Sub-Slab Soil Vapor (SV) / Indoor Air (IA) Samples

Tetrachloroethene Concentration in Sub-Slab Soil Vapor, March 2014

- Non-detect
- 0.075 µg/m^3
- 0.075 µg/m^3 to 0.339 µg/m^3
- 0.339 µg/m^3 to 0.868 µg/m^3
- 0.868 µg/m^3 to 0.3.76 µg/m^3
- 3.76 µg/m^3 to 63.4 µg/m^3

February 2013 Groundwater Plume Isopleths (µg/L)

Tetrachloroethene (PCE)

Map References:

2010 Orthoimagery of Schenectady County, NYS Digital Orthoimagery Program (NYSDOP)

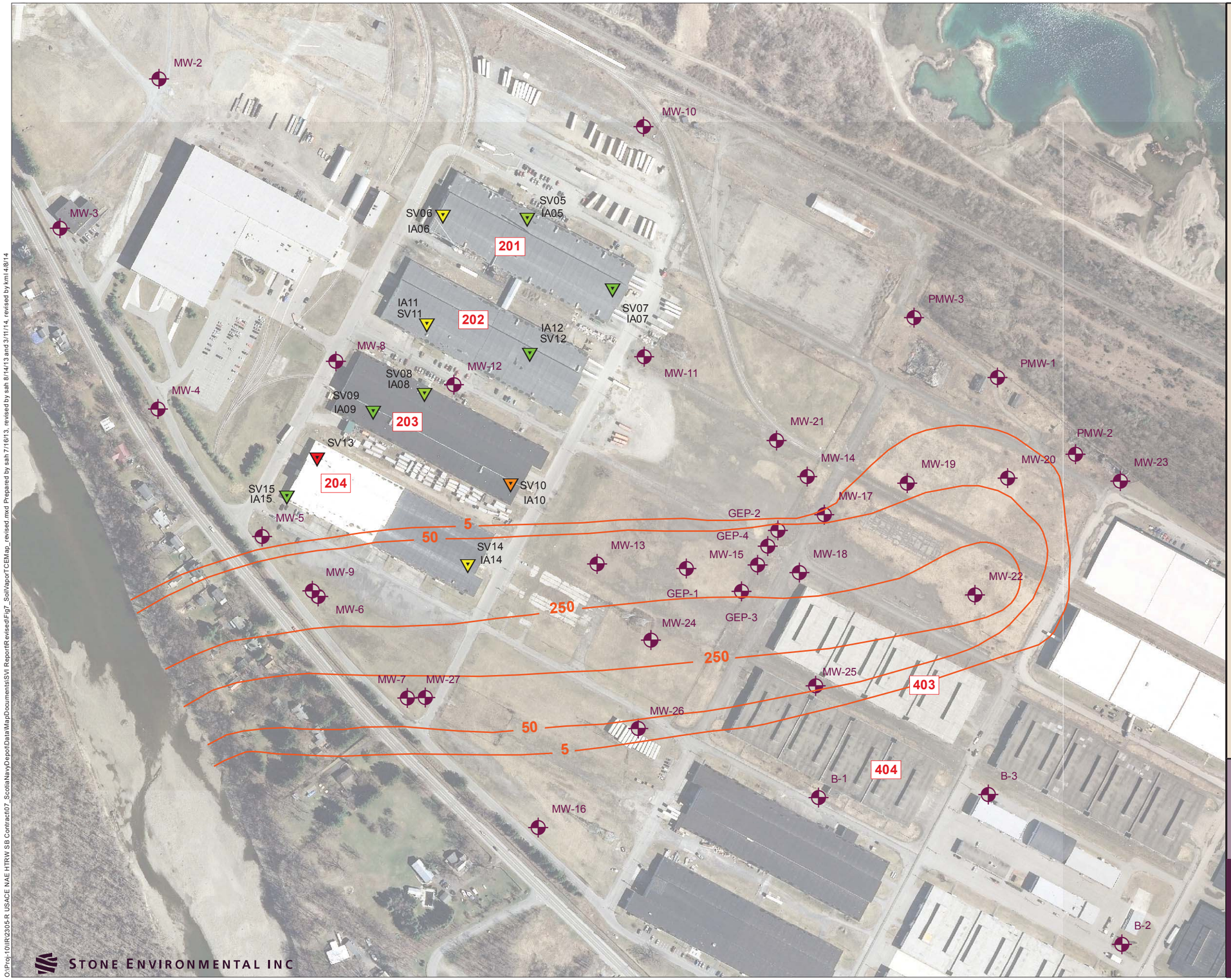
Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

Sub-Slab Soil Vapor Map Tetrachloroethene

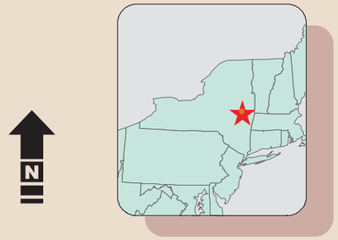
FIGURE 6

Scotia Navy Depot Scotia, NY

O:\Proj-10\IR\2305-R USACE NAE HTRW SB Contract\07_ScotiaNavyDepot\DataMapDocuments\SVI Report\Revised\Fig6_SoilVaporPCEMap_revised.mxd Prepared by sah 7/16/13, revised by sah 8/14/13 and 3/11/14, revised by kml 4/8/14



O:\Proj-1\01IR\2305-R USACE NAE HTRW SB Contract\07_ScotiaNavyDepot\DataMapDocuments\SVI ReportRevised\Fig7_SoilVaporTCEMap_revised_mxd Prepared by sah 7/16/13, revised by sah 8/14/13 and 3/11/14, revised by kml 4/8/14



0 200 400 600 Feet

Legend

Monitoring Wells

Sub-Slab Soil Vapor (SV) / Indoor Air (IA) Samples

Trichloroethene Concentration in Sub-Slab Soil Vapor, March 2014

- Non-detect
- 0.065 µg/m^3 to 0.349 µg/m^3
- 0.34 µg/m^3 to 1.05 µg/m^3
- 1.05 µg/m^3 to 3.12 µg/m^3
- 3.12 µg/m^3 to 132 µg/m^3
- 132 µg/m^3 to 1,630 µg/m^3

February 2013 Groundwater Plume Isopleths (µg/L)

- Trichloroethene (TCE)

Map References:

2010 Orthoimagery of Schenectady County, NYS Digital Orthoimagery Program (NYSDOP)

Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

Sub-Slab Soil Vapor Map Trichloroethene

FIGURE 7

Scotia Navy Depot
Scotia, NY

APPENDIX B: Weather Data

Weather Data for SVI Monitoring
Source: Weather Underground

Date	Time	Temp	Dewpoint	Humidity	Wind Direction	Wind Speed	Wind Gust	Pressure	Precip.	Conditions
12/15/2021	7:51 AM	27 °F	20 °F	75 %	CALM	0 mph	0 mph	30.34 in	0.0 in	Mostly Cloudy
12/15/2021	8:51 AM	29 °F	22 °F	75 %	CALM	0 mph	0 mph	30.32 in	0.0 in	Mostly Cloudy
12/15/2021	9:51 AM	31 °F	23 °F	72 %	S	7 mph	0 mph	30.30 in	0.0 in	Mostly Cloudy
12/15/2021	10:51 AM	34 °F	23 °F	64 %	SSE	7 mph	0 mph	30.27 in	0.0 in	Mostly Cloudy
12/15/2021	11:51 AM	38 °F	23 °F	55 %	SSE	9 mph	0 mph	30.24 in	0.0 in	Mostly Cloudy
12/15/2021	12:51 PM	40 °F	20 °F	45 %	SE	12 mph	20 mph	30.19 in	0.0 in	Cloudy
12/15/2021	1:51 PM	41 °F	21 °F	45 %	SSE	10 mph	0 mph	30.16 in	0.0 in	Cloudy
12/15/2021	2:51 PM	42 °F	20 °F	41 %	SSE	12 mph	0 mph	30.14 in	0.0 in	Cloudy
12/15/2021	3:31 PM	42 °F	20 °F	41 %	SSE	14 mph	0 mph	30.13 in	0.0 in	Wintry Mix
12/15/2021	3:51 PM	41 °F	25 °F	53 %	SSE	14 mph	18 mph	30.13 in	0.0 in	Light Snow and Sleet
12/15/2021	4:14 PM	40 °F	27 °F	60 %	SSE	14 mph	0 mph	30.12 in	0.0 in	Wintry Mix
12/15/2021	4:40 PM	39 °F	30 °F	70 %	SSE	12 mph	20 mph	30.11 in	0.0 in	Light Rain
12/15/2021	4:51 PM	40 °F	30 °F	68 %	SSE	10 mph	0 mph	30.10 in	0.0 in	Light Rain
12/15/2021	5:51 PM	39 °F	32 °F	76 %	SSE	14 mph	0 mph	30.06 in	0.0 in	Light Rain
12/15/2021	6:51 PM	37 °F	34 °F	89 %	SSE	7 mph	0 mph	30.04 in	0.0 in	Light Rain
12/15/2021	7:51 PM	38 °F	36 °F	93 %	SSE	13 mph	20 mph	29.99 in	0.0 in	Light Rain
12/15/2021	8:51 PM	41 °F	37 °F	86 %	SSE	10 mph	21 mph	29.95 in	0.0 in	Cloudy
12/15/2021	9:51 PM	42 °F	39 °F	89 %	SSE	12 mph	0 mph	29.93 in	0.0 in	Light Rain
12/15/2021	10:21 PM	42 °F	40 °F	92 %	SSE	13 mph	22 mph	29.90 in	0.0 in	Light Rain
12/15/2021	10:35 PM	43 °F	40 °F	89 %	SSE	12 mph	20 mph	29.90 in	0.0 in	Light Rain
12/15/2021	10:51 PM	43 °F	41 °F	93 %	SSE	12 mph	0 mph	29.90 in	0.1 in	Light Rain
12/15/2021	11:06 PM	44 °F	41 °F	89 %	SSE	12 mph	0 mph	29.89 in	0.0 in	Light Rain
12/15/2021	11:51 PM	45 °F	42 °F	90 %	SSE	9 mph	0 mph	29.86 in	0.0 in	Light Rain
12/16/2021	12:37 AM	45 °F	43 °F	93 %	SSE	10 mph	0 mph	29.84 in	0.0 in	Cloudy
12/16/2021	12:51 AM	46 °F	43 °F	89 %	SSE	10 mph	0 mph	29.84 in	0.0 in	Cloudy

12/16/2021	1:07 AM	46 °F	43 °F	89 %	SSE	10 mph	0 mph	29.83 in	0.0 in	Cloudy
12/16/2021	1:51 AM	46 °F	44 °F	93 %	SSE	9 mph	0 mph	29.82 in	0.0 in	Light Rain
12/16/2021	2:43 AM	47 °F	45 °F	93 %	SSE	8 mph	0 mph	29.81 in	0.0 in	Light Rain
12/16/2021	2:51 AM	47 °F	45 °F	93 %	S	8 mph	0 mph	29.80 in	0.0 in	Light Rain
12/16/2021	3:51 AM	48 °F	46 °F	93 %	SSE	7 mph	0 mph	29.79 in	0.1 in	Light Rain
12/16/2021	4:51 AM	48 °F	46 °F	93 %	S	9 mph	0 mph	29.77 in	0.0 in	Light Rain
12/16/2021	5:51 AM	49 °F	46 °F	90 %	SSE	9 mph	0 mph	29.75 in	0.0 in	Cloudy
12/16/2021	6:51 AM	48 °F	46 °F	93 %	SSE	5 mph	0 mph	29.73 in	0.0 in	Mostly Cloudy
12/16/2021	7:51 AM	48 °F	46 °F	93 %	SSE	5 mph	0 mph	29.71 in	0.0 in	Mostly Cloudy
12/16/2021	8:51 AM	51 °F	46 °F	83 %	SSE	10 mph	0 mph	29.68 in	0.0 in	Cloudy
12/16/2021	9:51 AM	51 °F	46 °F	83 %	SSE	12 mph	20 mph	29.68 in	0.0 in	Mostly Cloudy
12/16/2021	10:51 AM	53 °F	46 °F	77 %	SSE	15 mph	0 mph	29.63 in	0.0 in	Mostly Cloudy
12/16/2021	11:51 AM	55 °F	45 °F	69 %	S	15 mph	23 mph	29.59 in	0.0 in	Mostly Cloudy
12/16/2021	12:51 PM	57 °F	44 °F	62 %	S	13 mph	0 mph	29.55 in	0.0 in	Mostly Cloudy
12/16/2021	1:51 PM	60 °F	43 °F	53 %	SSE	13 mph	0 mph	29.51 in	0.0 in	Mostly Cloudy
12/16/2021	2:51 PM	60 °F	42 °F	51 %	SSE	9 mph	0 mph	29.51 in	0.0 in	Mostly Cloudy
12/16/2021	3:51 PM	58 °F	42 °F	56 %	S	7 mph	0 mph	29.53 in	0.0 in	Mostly Cloudy

APPENDIX C: NYSDOH Air Sampling Questionnaires

201
48x40

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Renata Porter Date/Time Prepared 12/13/21

Preparer's Affiliation AECOM Phone No. 603-770-0800

Purpose of Investigation SVI Monitoring

1. OCCUPANT:

Interviewed: Y /(N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y /(N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
(Industrial)	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Pallet Refurbishing

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age 1940s

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	(wood frame)	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	(unsealed)	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / (N)			
k. Water in sump?	Y / N (not applicable)			

Basement/Lowest level depth below grade: NA (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

When the SVI systems were installed, crack sealing in the cement floor was completed; however, there could be limited cracks remaining that couldn't be assessed

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

(Hot air circulation)	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: None

Boiler/furnace located in: Basement Outdoors Main Floor (Other) None

Air conditioning: (Central Air) Window units Open Windows None

In the occupied office area

Are there air distribution ducts present? (Y) / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

There are air ducts in the office for the AC and heat. The AC unit is located on the roof.

7. OCCUPANCY

Is basement/lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	
1st Floor	office, pallet refurbishing shop, woodworking machinery in use
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) Please specify Forklift stored and used in warehouse area

d. Has the building ever had a fire? Y / (N) When? _____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where? _____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type? _____

g. Is there smoking in the building? Y / (N) How frequently? _____

h. Have cleaning products been used recently? Y / (N) When & Type? _____

i. Have cosmetic products been used recently? Y (N) When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? Y / (N) When & Type? _____

m. Is there a kitchen exhaust fan? (Y) N If yes, where vented? Not in use

n. Is there a bathroom exhaust fan? (Y) N If yes, where vented? Not in Use

o. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? Y / (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
(Unknown)

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	(Public Water)	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	(Public Sewer)	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

NA

First Floor:

See attached map

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

See attached map

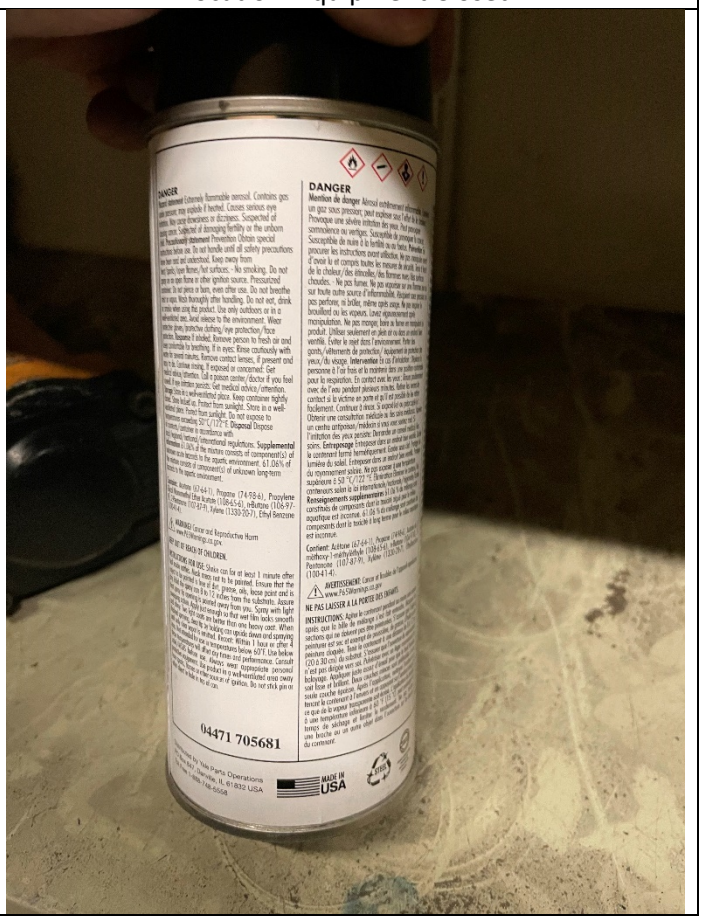
13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: PPB Rae 3000 (27264 serial #)

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Equipment closet	Spray Paint (15x)	12oz	UO	In photos	1562 ppb	Y
Equipment closet	Cleaner/degreaser (2x)	1 gal	U	In photos	1562 ppb	Y
Equipment closet	Road Salt (10x)	50 lb	UO	In photos	1562 ppb	Y
Equipment closet	Spirax	5 gal	UO	In photos	1562 ppb	Y

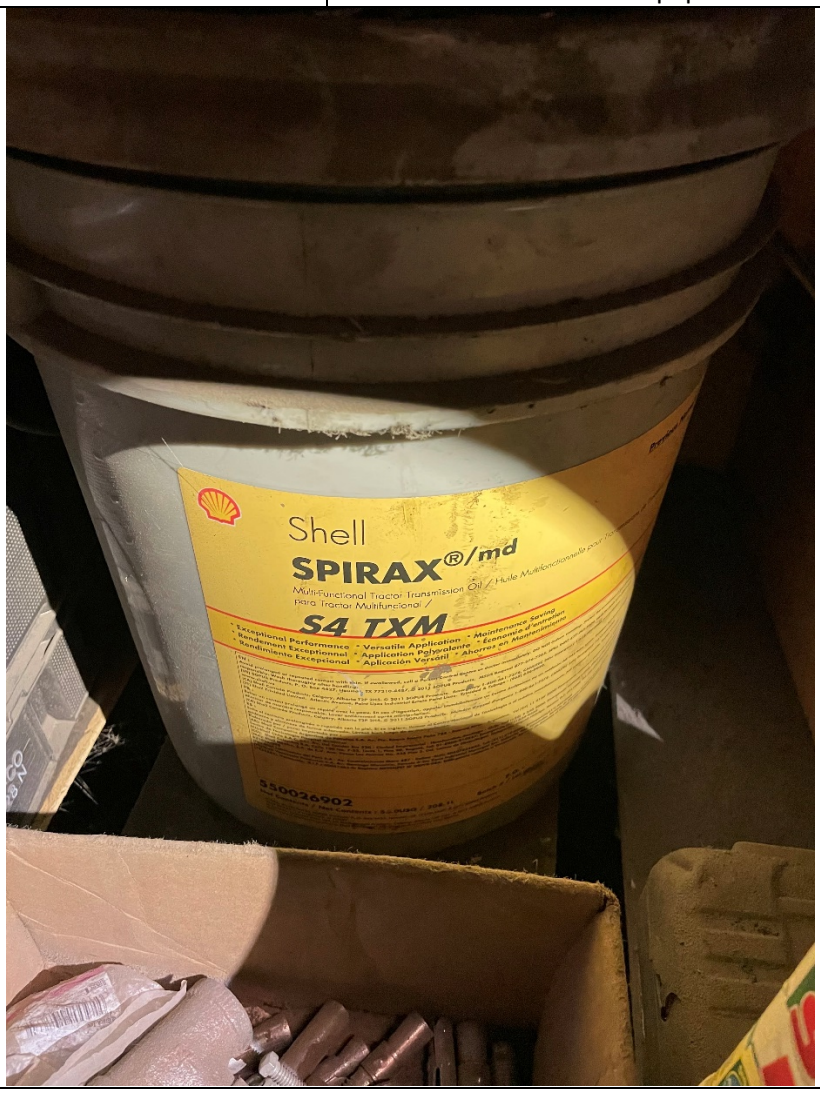
* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

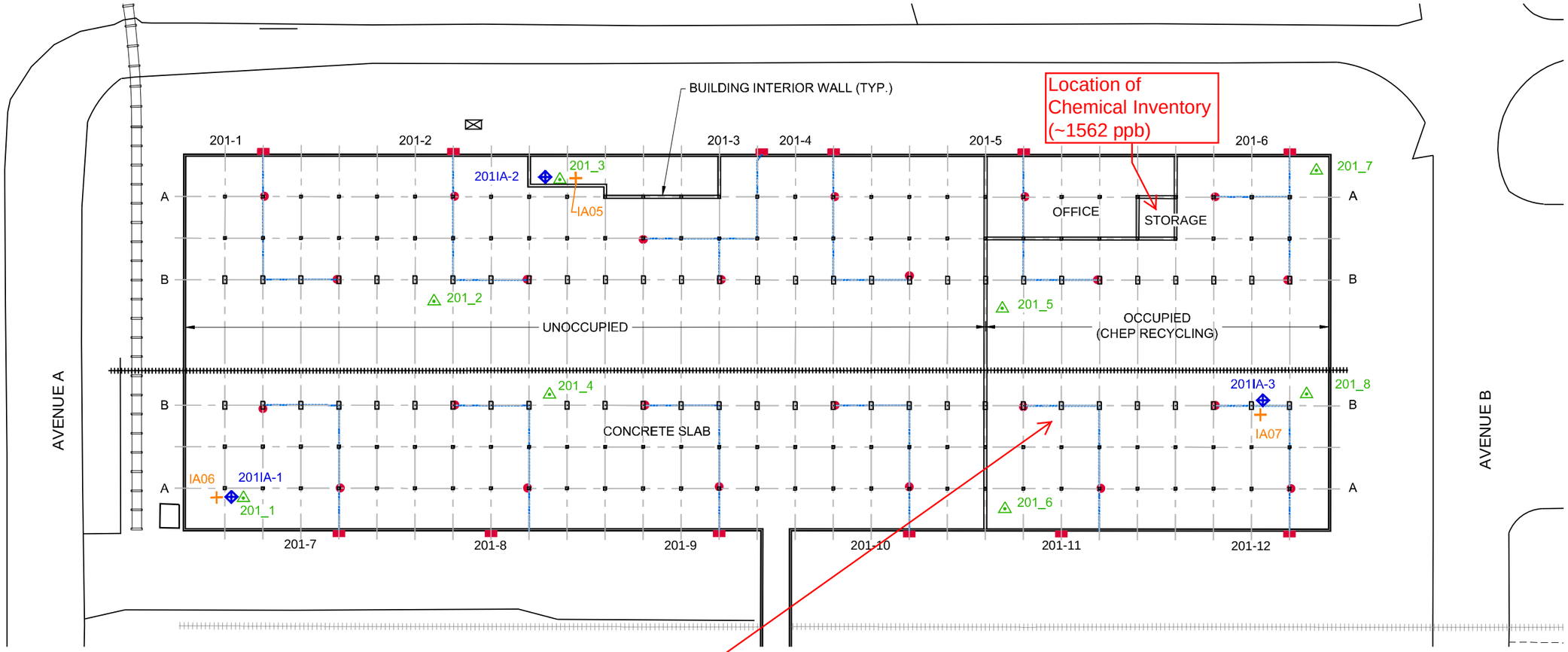
Photograph No. 1	Product: Yale Maintenance Spray Paint Location: Equipment Closet
	

Photograph No. 2	Product: Spray Nine Cleaner/Degreaser Location: Equipment Closet
	

Photograph No. 3	Product: Road Runner Ice Melt Location: Equipment Closet

Photograph No. 4	Product: Shell Spirax Tractor Transmission Oil Location: Equipment Closet





2.

3.

AECOM

BUILDING 201
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: DECEMBER 2021

OSR – 3

202 Clynk

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Renata Spinosa Date/Time Prepared 12/13/21

Preparer's Affiliation AECOM Phone No. 603-770-0800

Purpose of Investigation SVI Monitoring

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
(Industrial)	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Bottle/can processing for recycling

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age 1940s

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	(wood frame)	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	(sealed)	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y (N)			
k. Water in sump?	Y / N / (not applicable)			

Basement/Lowest level depth below grade: NA (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

When the SVI systems were installed, crack sealing in the cement floor was completed; however, there could be limited cracks remaining that could not be assessed

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

(Hot air circulation)	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
(Electric)	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: natural gas

Boiler/furnace located in: Basement Outdoors Main Floor (Other) forced air

Air conditioning: (Central Air) Window units Open Windows None

Are there air distribution ducts present? (Y) / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Ductwork along ceiling in office area; not all visible

7. OCCUPANCY

Is basement/lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	
1st Floor	office space and warehouse area where can/bottle processing for recycling is done, heavy machinery in use.
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY influence INDOOR AIR QUALITY

a. Is there an attached garage?	Y / (N)	
b. Does the garage have a separate heating unit?	Y / N / (NA)	
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	(Y) / N / NA	Please specify Propane forklifts used and stored in warehouse
d. Has the building ever had a fire?	Y / (N)	When?
e. Is a kerosene or unvented gas space heater present?	Y / (N)	Where?
f. Is there a workshop or hobby/craft area?	(Y) / N	Where & Type? Equipment closet in warehouse, spray paint used within 6 months
g. Is there smoking in the building?	Y / (N)	How frequently?
h. Have cleaning products been used recently?	(Y) / N	When & Type? Bathroom/office area cleaning - Wednesday and Sunday
i. Have cosmetic products been used recently?	Y / (N)	When & Type?

j. Has painting/staining been done in the last 6 months? (Y) / N Where & When? small paint jobs in shop area

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? office area ~2 years ago

l. Have air fresheners been used recently? Y / (N) When & Type? used in office occasionally

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented?_____

n. Is there a bathroom exhaust fan? Y / (N) If yes, where vented?_____

o. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / (N) When & Type?_____

Are there odors in the building? Y / (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) (No)
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

NA

First Floor:

See attached map

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

See attached map

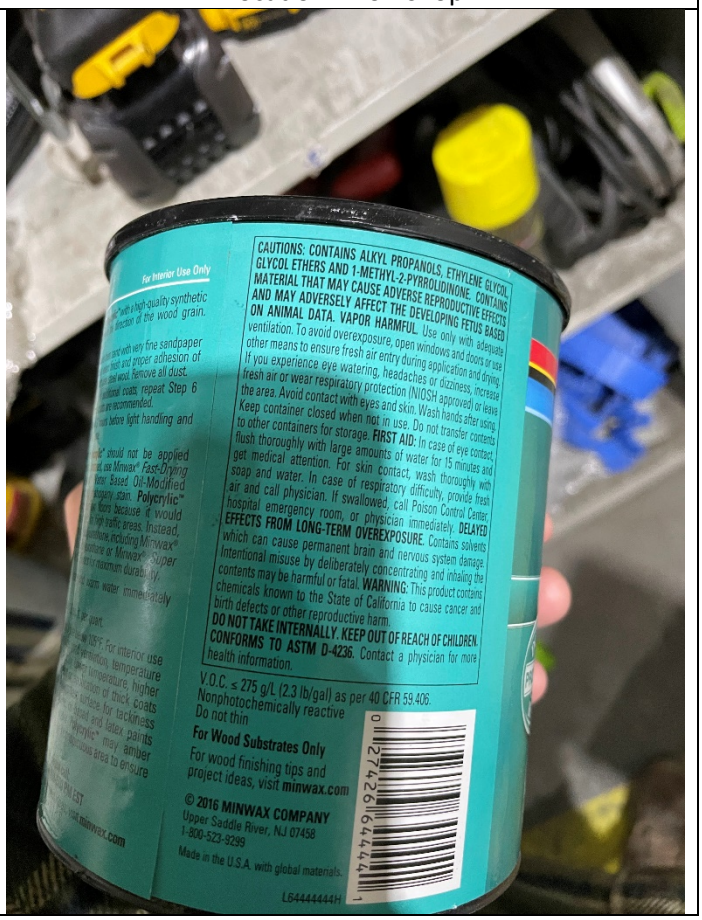
13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: PPB Rae 3000 (27264 serial #)

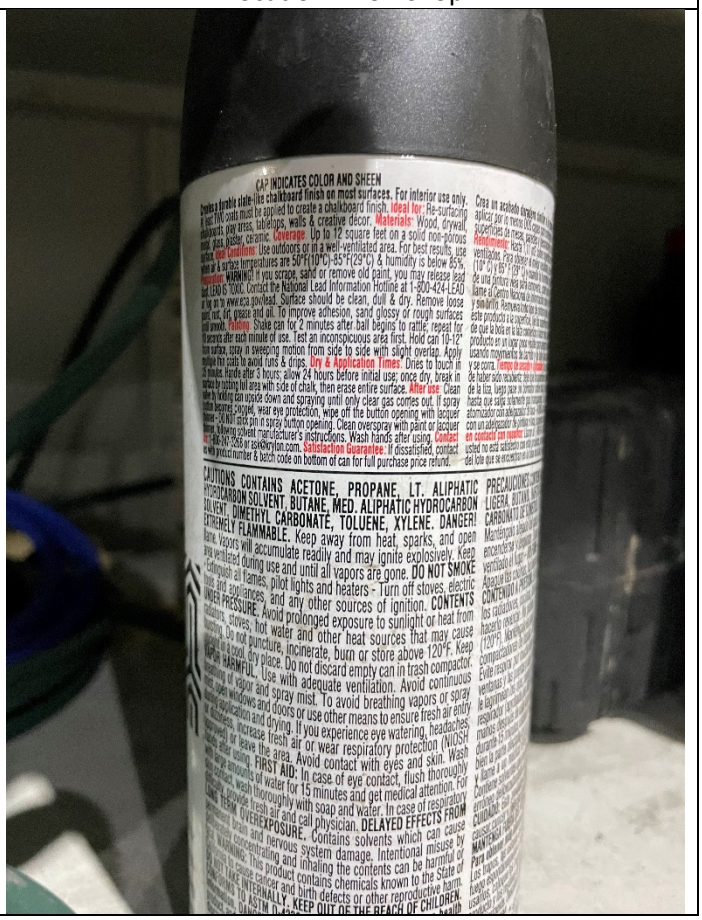
List specific products found in the residence that have the potential to affect indoor air quality.

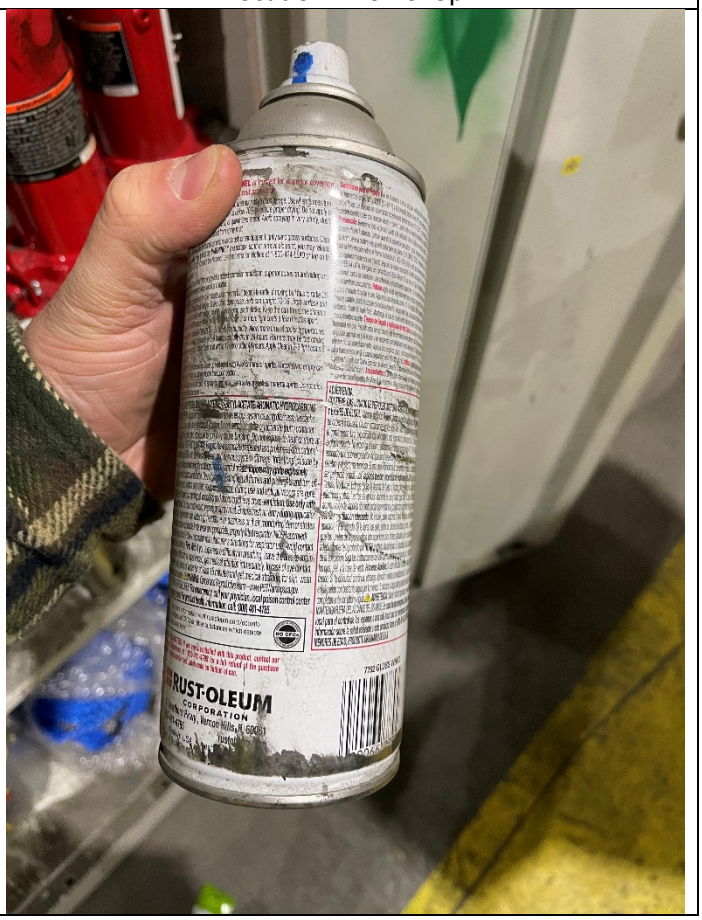
Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Workshop	Protective Finish (2x)	8oz	U	In photo	4100ppb	Y
Workshop	Air Tool Oil	16oz	U	In photo	4100 ppb	Y
Workshop	Spray Paint (2x)	12oz	U	In photo	4100 ppb	Y
Workshop	Enamel (2x)	12oz	U	In photo	4100ppb	Y
Workshop	PVC Primer	8oz	U	In photo	4100 ppb	Y
Workshop	Pipe thread sealant	4oz	U	In photo	4100 ppb	Y
Workshop	Oil (2x)	1 liter	UO	In photo	4100 ppb	Y
Workshop	Grease	14oz	UO	In photo	4100 ppb	Y
Workshop	Silicone Sealant (5x)	10oz	UO	In photo	4100 ppb	Y
Workshop	Wasp+Hornet Killer	20oz	U	In photo	4100 ppb	Y
Workshop	Instant Spot Remover	19oz	U	In photo	4100 ppb	Y
Workshop	Paint (4x)	31oz	U	In photo	4100 ppb	Y
Workshop	Penetrating Stain (3x)	32oz	U	In photo	4100 ppb	Y
Workshop	Antifreeze	1gal	U	In photo	4100 ppb	Y
Workshop	Bug Spray	6oz	U	In photo	4100 ppb	Y
Workshop	WD-40	1gal	U	In photo	4100 ppb	Y
Workshop	Winsheild Washer Fluid	1 gal	U	In photo	4100 ppb	Y
Workshop	Propane Fuel Cylinder	14.1oz	U	In photo	4100 ppb	Y

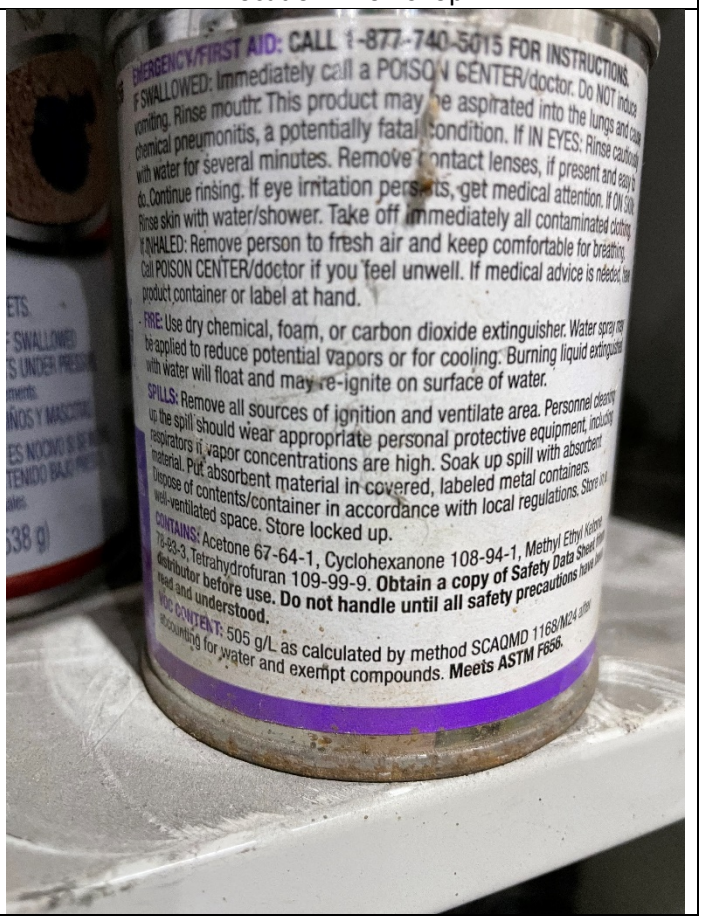
* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

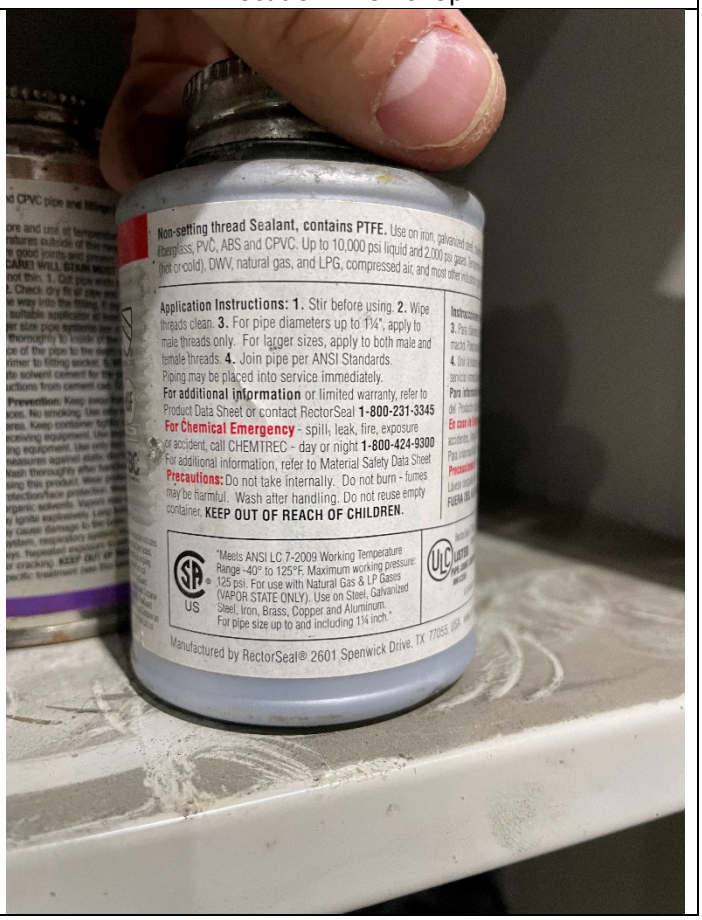
Photograph No. 1	Product: Minwax Ploycrylic Protective Finish Location: Workshop
	

Photograph No. 2	Product: Central Pneumatic Air Tool Oil Location: Workshop
	

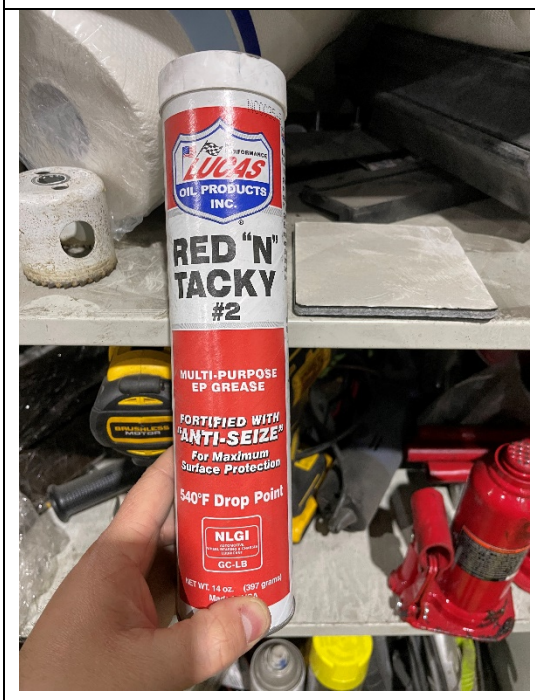
Photograph No. 3	Product: Krylon Chalkboard Black Spray Paint Location: Workshop
	

Photograph No. 4	Product: Rust-Oleum Gloss Protective Enamel Location: Workshop
	

Photograph No. 5	Product: Oatey Purple PVC Primer Location: Workshop
	

Photograph No. 6	Product: Rectorseal Pipe Thread Sealant Location: Workshop
	

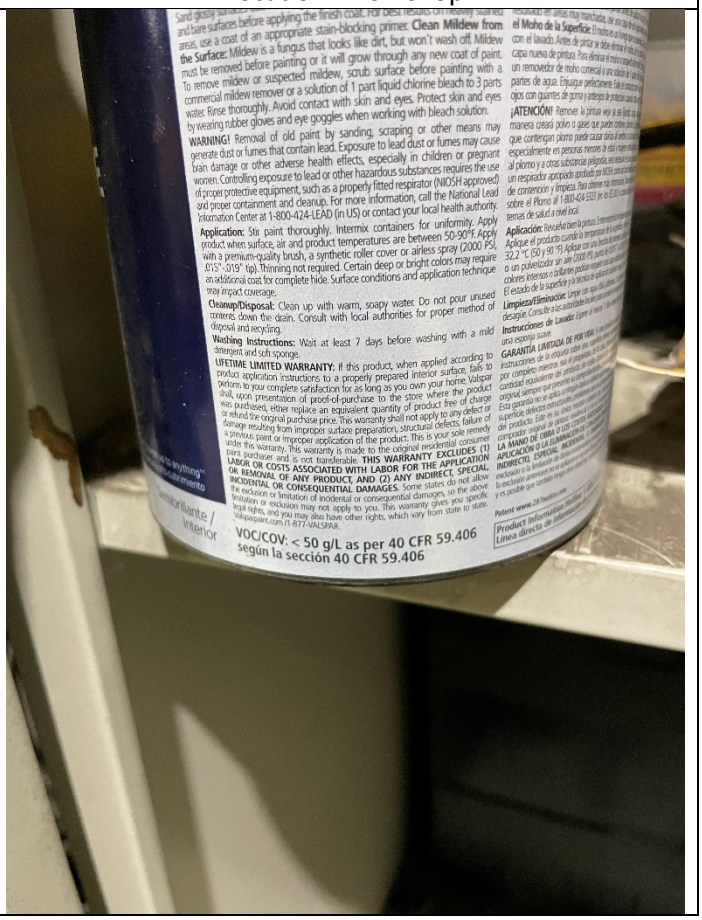
Photograph No. 7	Product: Ingersoll Rand All Season Select Synthetic Recip Lubricant Oil Location: Workshop
	

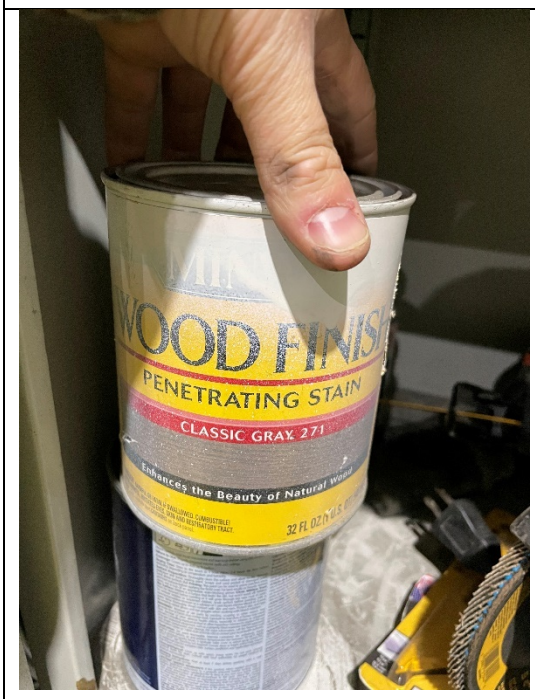
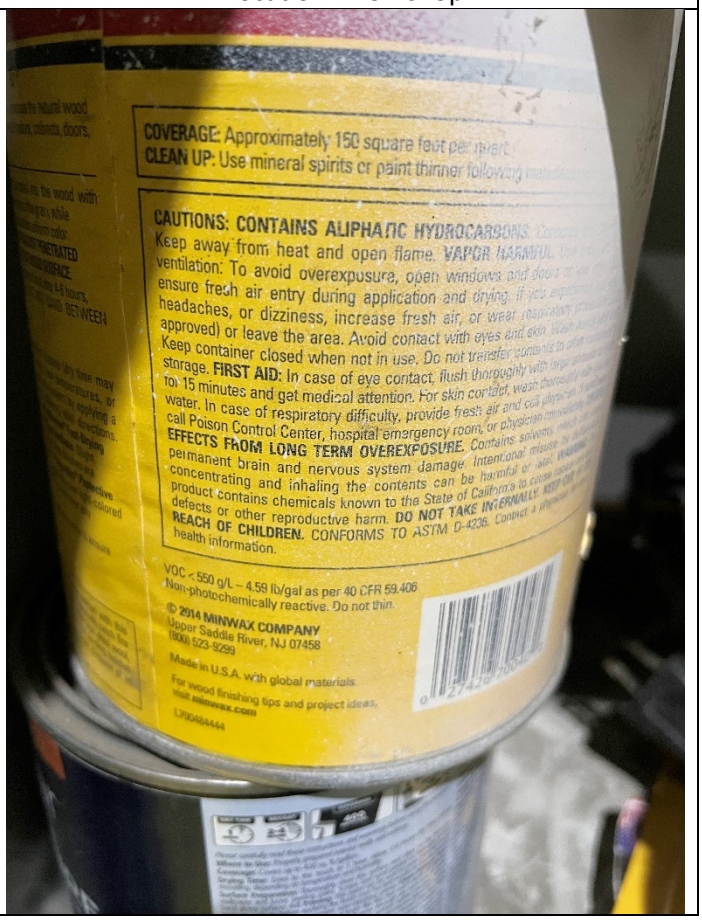
Photograph No. 8	Product: Lucas Oil Red “N” Tacky Multi-Purpose EP Grease Location: Workshop
	

Photograph No. 9	Product: Dow Corning Silicone Sealant Location: Workshop
	

Photograph No. 10	Product: Spectracide Wasp & Hornet Killer Location: Workshop
	

Photograph No. 11	Product: Zep Instant Spot Remover Location: Workshop
	

Photograph No. 12	Product: Valspar Interior Ultra White Paint Location: Workshop
	

Photograph No. 13	Product: Minwax Wood Finish Penetrating Stain Location: Workshop
	

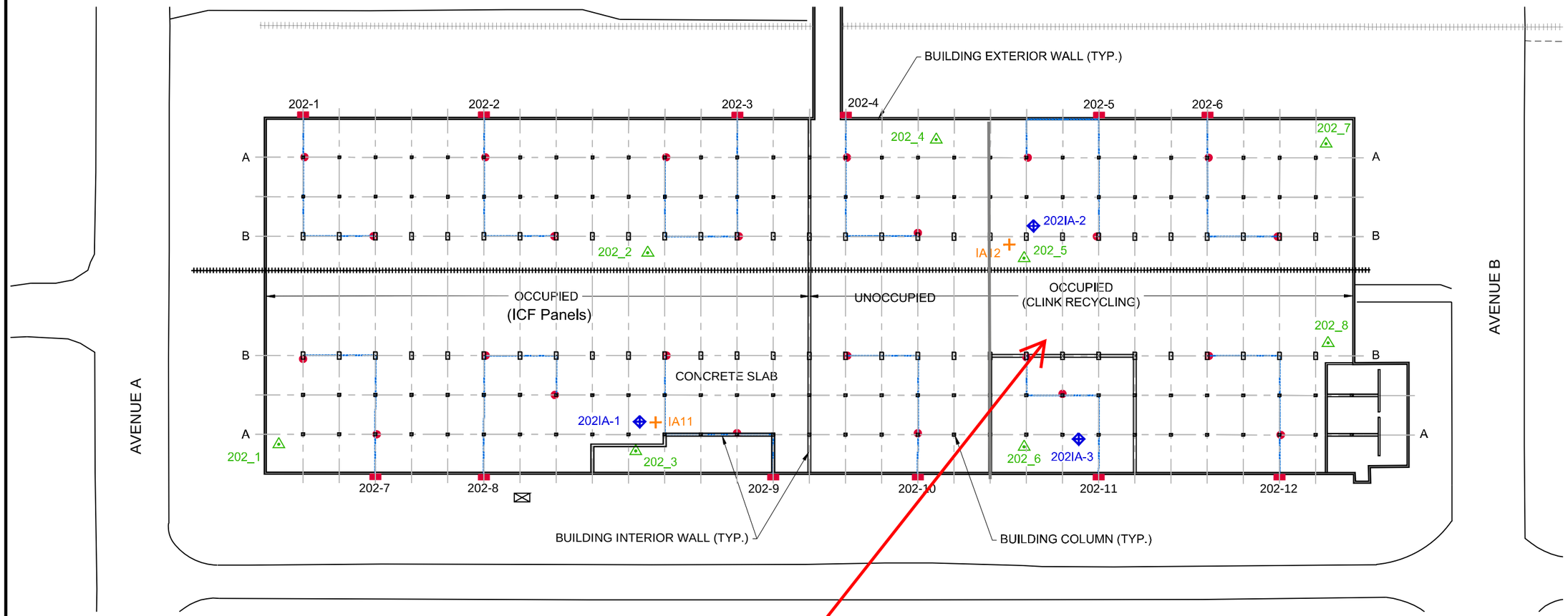
Photograph No. 14	Product: South Win, LTD RV Antifreeze Location: Workshop
	

Photograph No. 15	Product: Cutter Backwoods Insect Repellent Location: Workshop
	

Photograph No. 16	Product: WD-40 Location: Workshop
	

Photograph No. 17	Product: Splash All Season Windshield Wash Location: Workshop
	

Photograph No. 18	Product: Propane Fuel Cylinder Location: Workshop



ICF was moving panels from another location into their space in building 202. ICF was using a propane powered forklift and diesel powered skytrack for this work. The doors to this portion of 202 were open during working hours.

Clynk was operating their can/bottle recycling equipment and some doors were open for shipping during working hours.

BUILDING 202
PLAN

Approximate location of cabinet in warehouse with surveyed chemicals (~4100 ppb)

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

AECOM

BUILDING 202
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: DECEMBER 2021

OSR – 3

203
NEFAB

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Renata Porter Date/Time Prepared 12/13/21: 1015

Preparer's Affiliation AECOM Phone No. 603-770-0800

Purpose of Investigation SVI Mon. Forhg

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Jankiewicz First Name: Jason

Address: 2000 7th Street Building 203

County: _____

Home Phone: _____ Office Phone: 518-346-9105

Number of Occupants/persons at this location ~20 Age of Occupants >18

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
(Industrial)	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 1 Building age 1940s

Is the building insulated? (Y) / N Partially How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	(wood frame)	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other None
c. Basement floor:	concrete	dirt	stone	other None
d. Basement floor:	uncovered	covered	covered with None	
e. Concrete floor:	unsealed	(sealed)	sealed with _____	
f. Foundation walls:	poured	block	stone	other None
g. Foundation walls:	unsealed	sealed	sealed with None	
h. The basement is:	wet	damp	dry	moldy
i. The basement is: None	finished	unfinished	partially finished	
j. Sump present? None	Y (N)			
k. Water in sump?	Y / N / (not applicable)			

Basement/Lowest level depth below grade: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	natural Gas heater in warehouse
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other furnace in office

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Electric

Boiler/furnace located in: Basement Outdoors (Main Floor) Other_____

Air conditioning: (Central Air) Window units Open Windows None

Are there air distribution ducts present? (Y) / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	
1st Floor	Normal work hours
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) (Y) / N / NA Please specify Chainsaw

d. Has the building ever had a fire? Y / (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where?_____

f. Is there a workshop or hobby/craft area? (Y) / N Where & Type?_____

g. Is there smoking in the building? Y / (N) How frequently?_____

h. Have cleaning products been used recently? Y / (N) When & Type?_____

i. Have cosmetic products been used recently? Y / (N) When & Type?_____

j. Has painting/staining been done in the last 6 months? (Y) N Where & When? Main Warehouse, once a month

k. Is there new carpet, drapes or other textiles? Y (N) Where & When? _____

l. Have air fresheners been used recently? Y (N) When & Type? _____

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented? _____

n. Is there a bathroom exhaust fan? Y / (N) If yes, where vented? _____

o. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? (Y) / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? petroleum based

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
(No)
Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

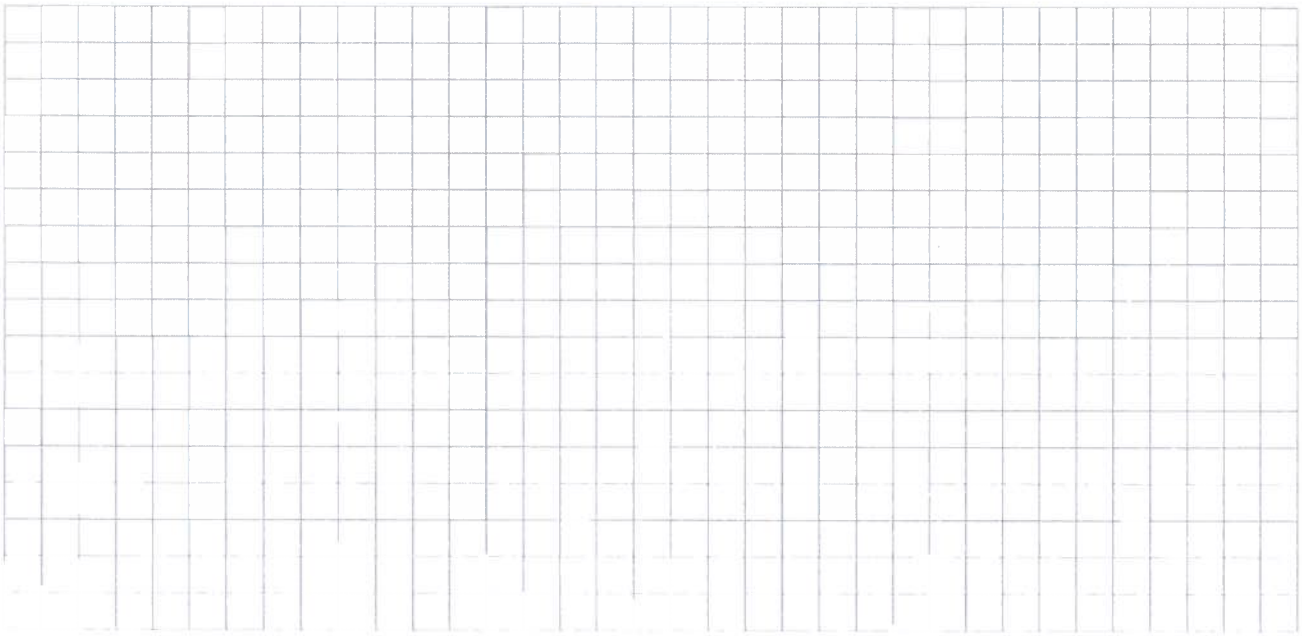
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

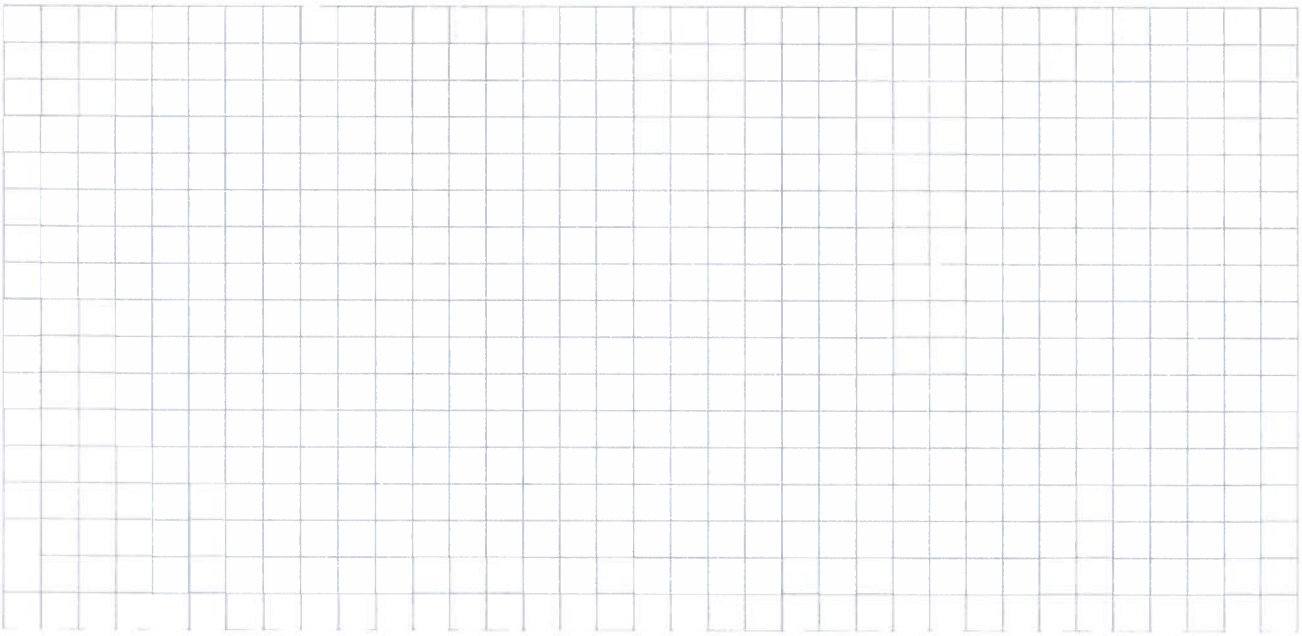
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



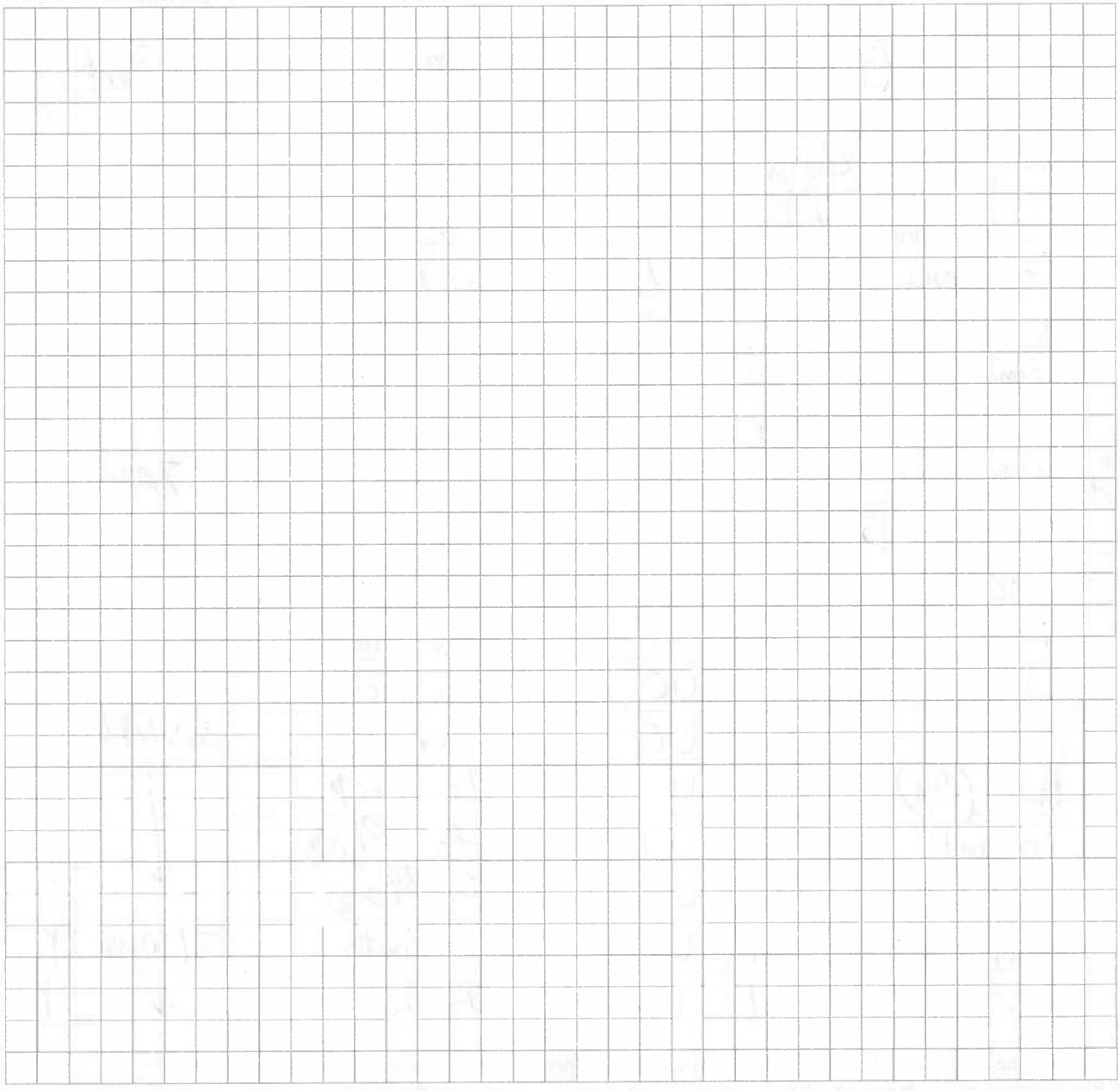
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



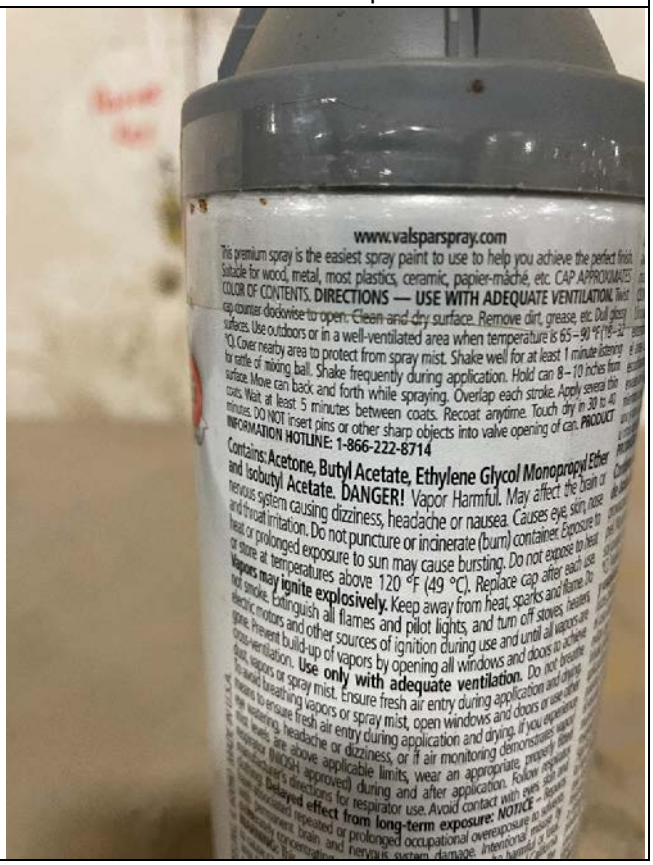
13. PRODUCT INVENTORY FORM

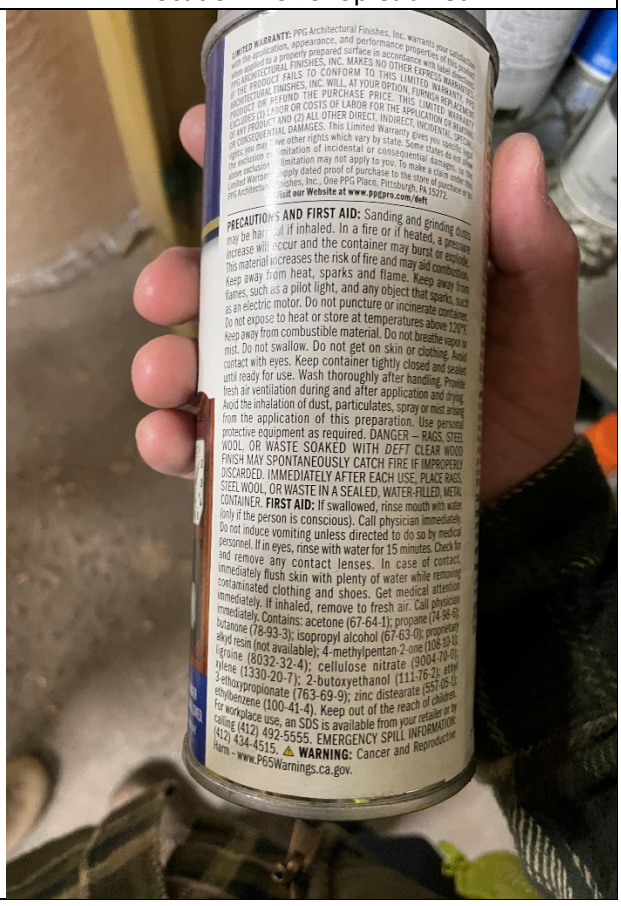
Make & Model of field instrument used: PPb rae 3000 (27264 Serial #)

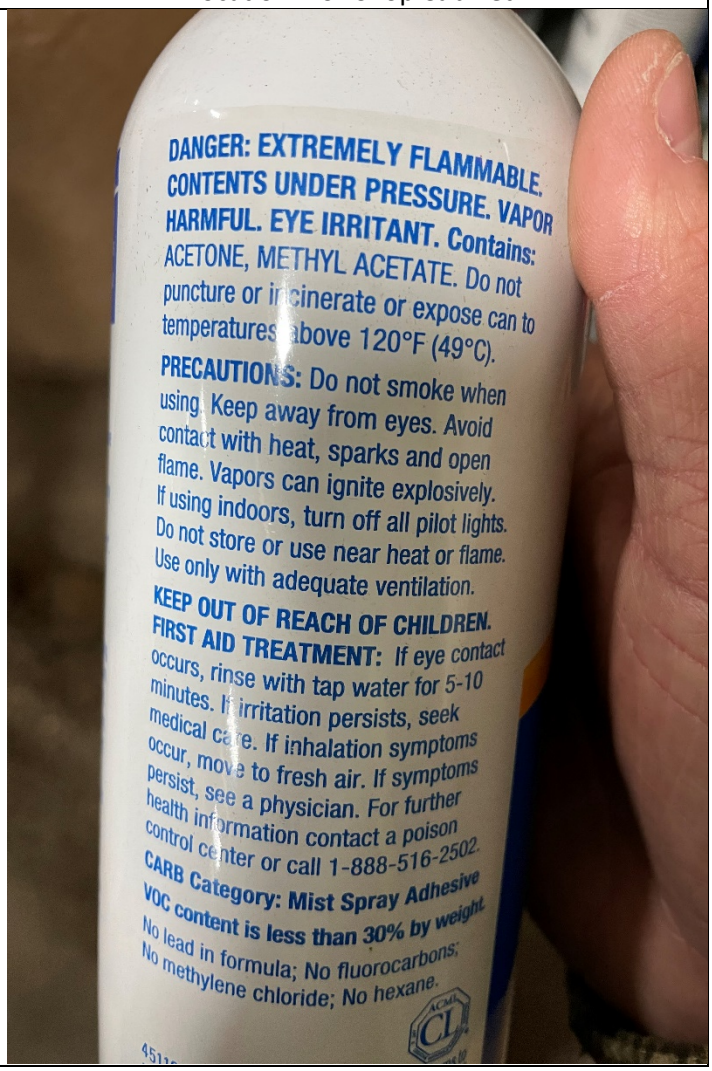
List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Boxstop Cabinet	Spray Paint (4x)	12oz	U	In Photo	5603ppb	Y
↑	Wood Fihish (2x)	12oz	U	In Photo	↓	Y
	Spray Adhesive (4x)	11oz	U	In Photo		Y
	Silicone Lubricant	11oz	U	In Photo		Y
	Goo Gone	12oz	U	In Photo		Y
	Contact Cement (4x)	32oz	U	In Photo		Y
↓	Penetrating Oil (2x)	11oz	U	In Photo		Y
Boxstop Cabinet	Motor Oil	1Qt	U	In Photo	↓	Y
Warehouse Flam cabinet	Spray Paint (3x)	15oz	U	In Photo	11.7ppm	Y
↓	Motor oil (6x)	1Qt	U	In Photo	↓	Y
	coolant (2x)	4L	U	In Photo		Y
	Paint can (4x)	1gal	U	In Photo		Y
↓	Water sealant (5x)	6gal	UO	In Photo	↓	Y
Warehouse FlamCab 2	Motor Oil	5gal	UO	In Photo	3641ppb	Y
↓	Paint (19x)	1gal	U	In Photo	↓	Y
	Coolant	5gal	U	In Photo		Y
↓	Methane	1.5L	UO	In Photo	↓	Y
Warehouse Floor	Paint (80x)	1gal	UO	In Photo	2150ppb	Y
	Water sealant	6gal	UO	In Photo	↓	Y

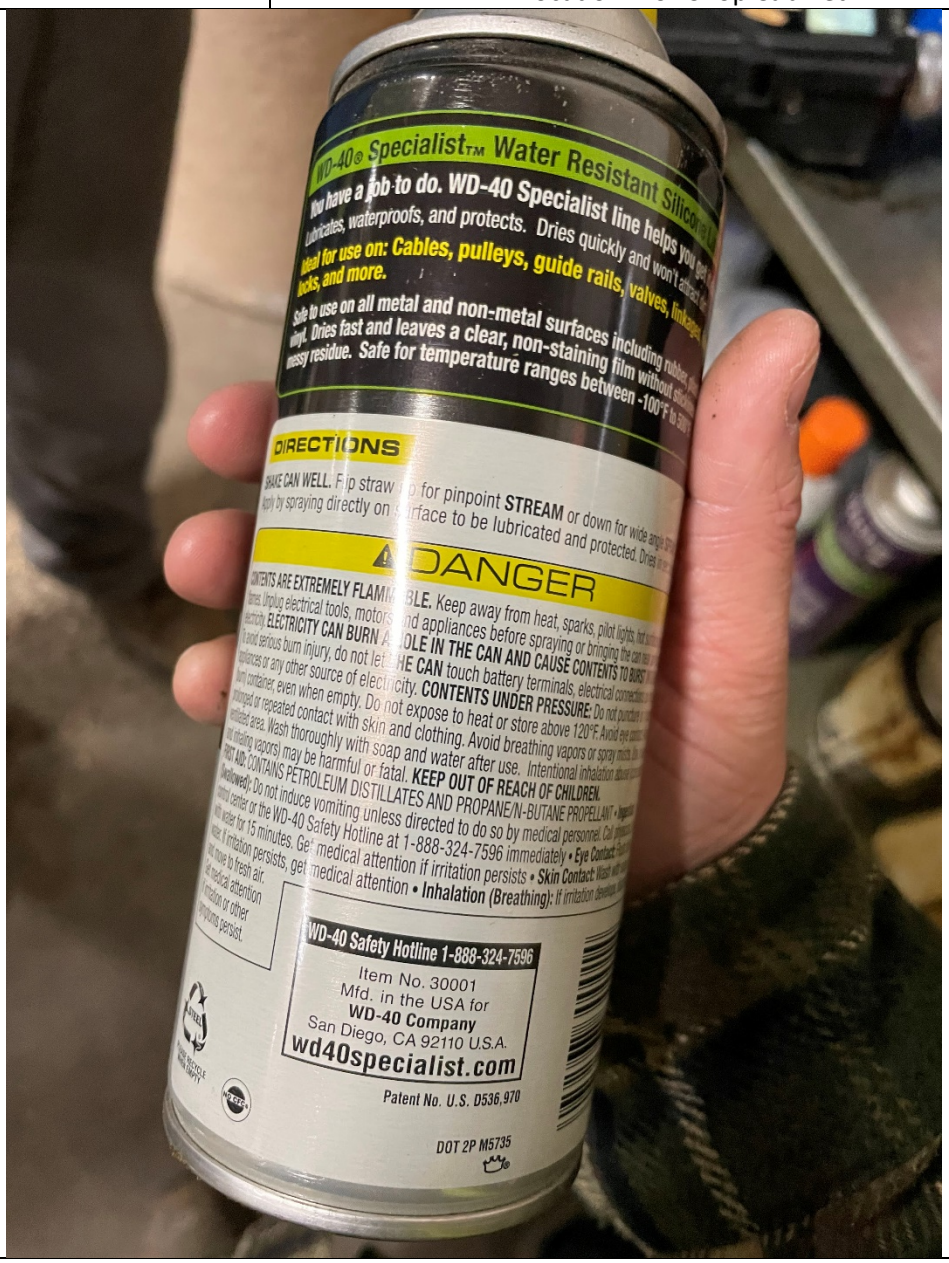
* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Photograph No. 1	Product: Valspar Paint & Primer Gloss Spray Paint Location: Box Shop Cabinet
	

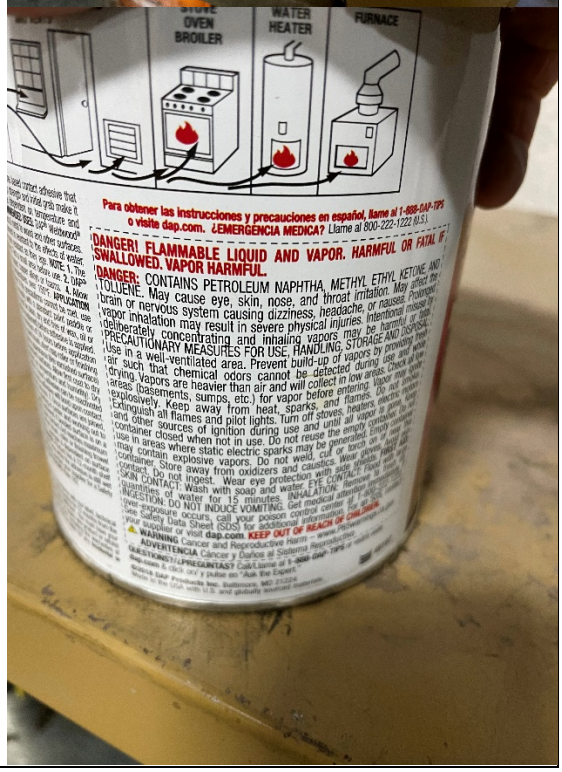
Photograph No. 2	Product: Deft Clear Wood Finish Location: Box Shop Cabinet
	

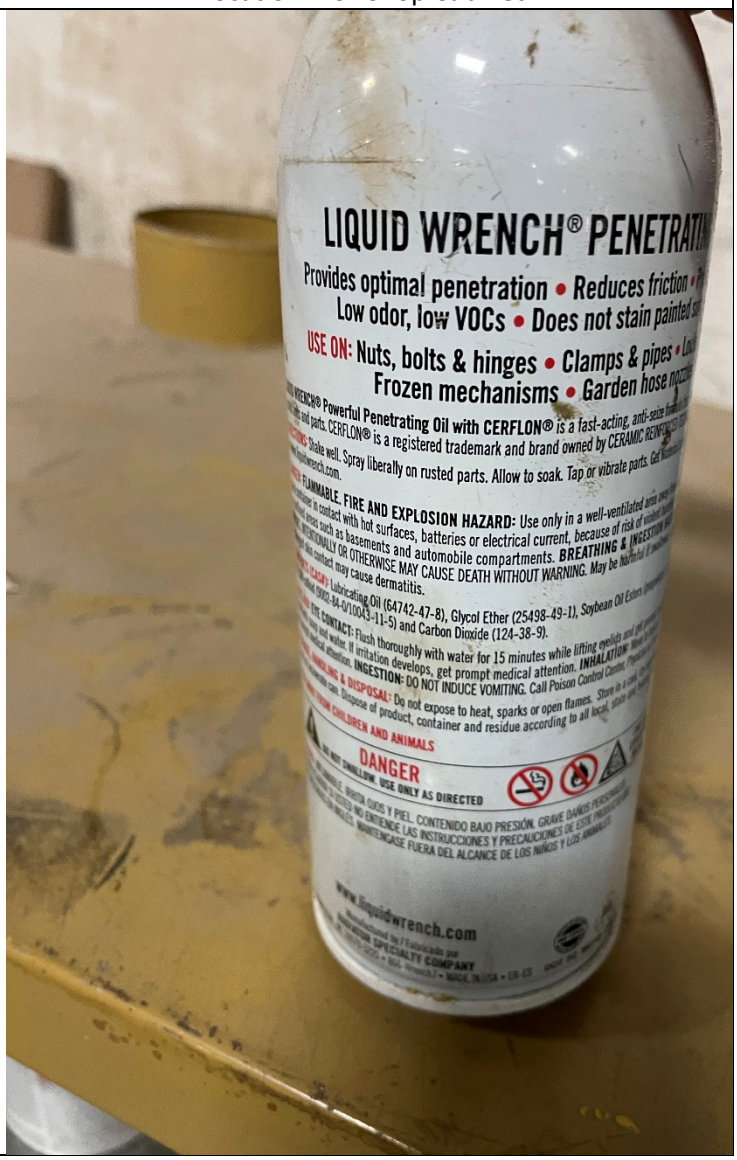
Photograph No. 3	Product: Elmer's Multi-Purpose Spray Adhesive Location: Box Shop Cabinet
	

Photograph No. 4	Product: WD-40 Specialist Water Resistant Silicone Lubricant Location: Box Shop Cabinet



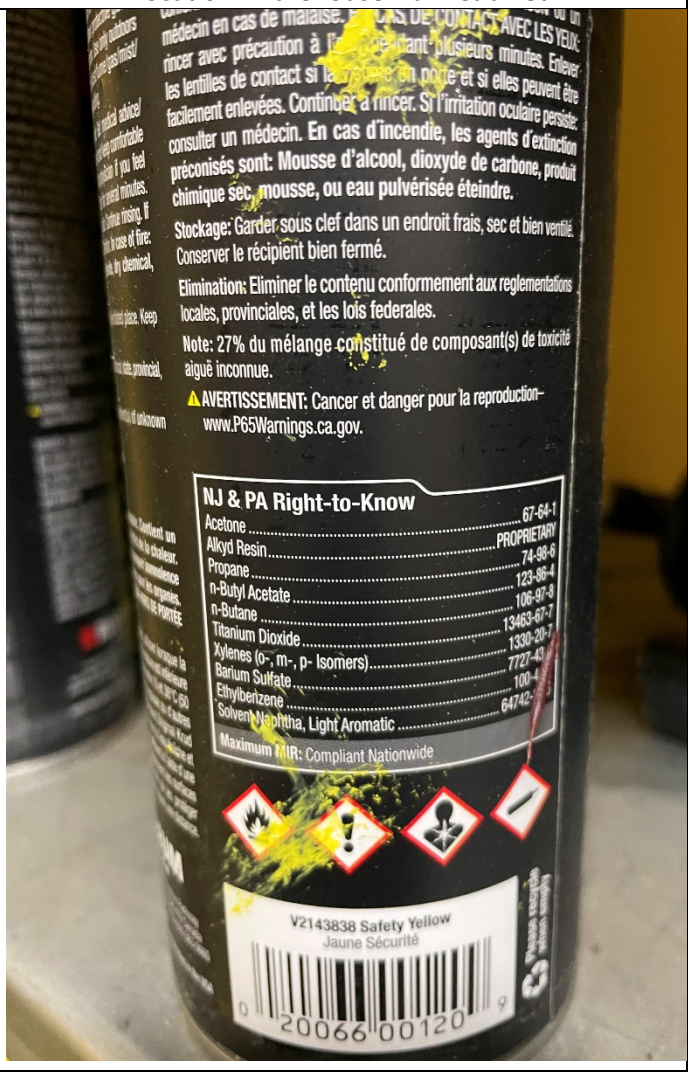
Photograph No. 5	Product: Goo Gone Spray Gel Location: Box Shop Cabinet

Photograph No. 6	Product: Weldwood Contact Cement Location: Box Shop Cabinet
	 

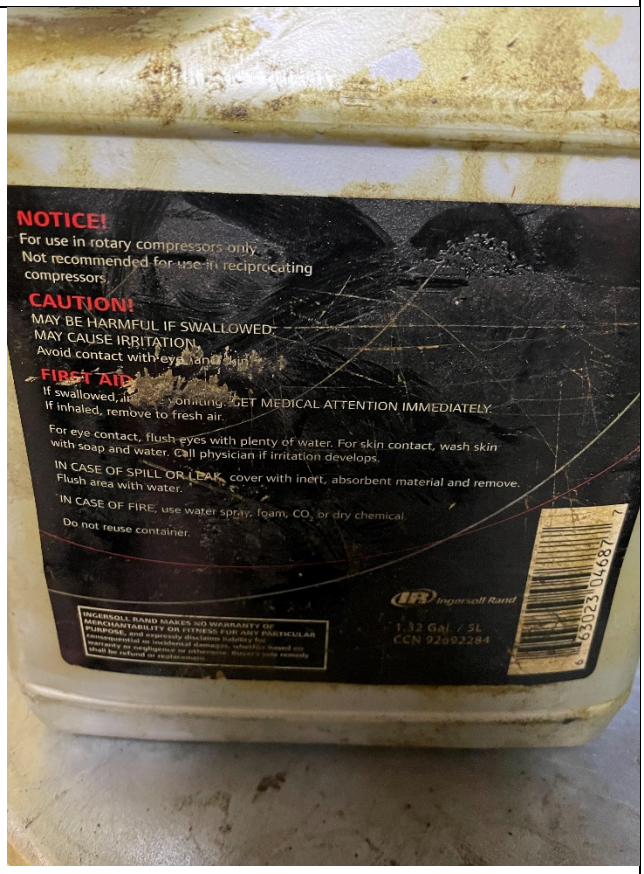
Photograph No. 7	Product: Liquid Wrench Penetrating Oil Location: Box Shop Cabinet
	

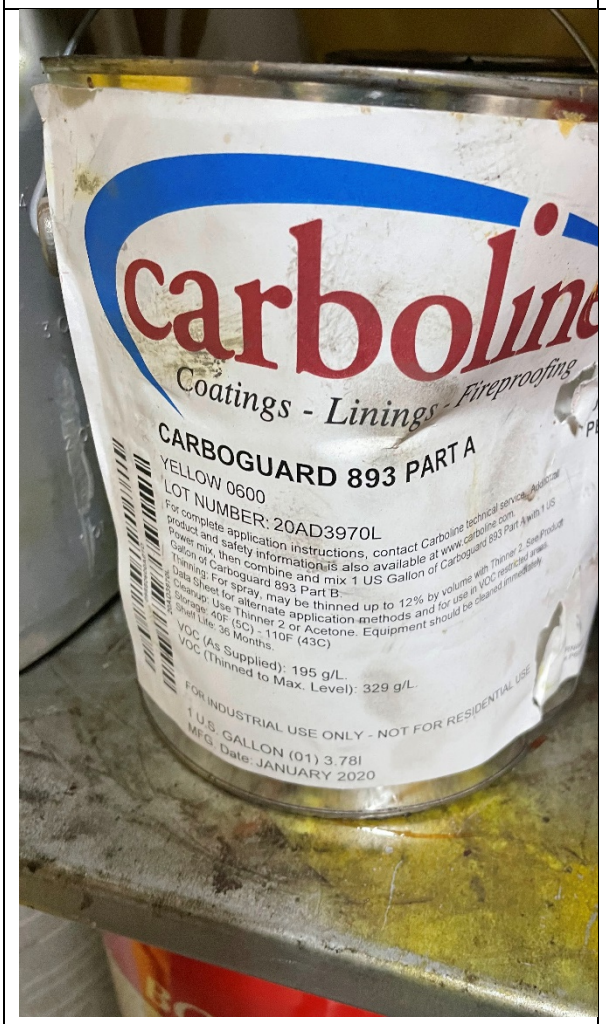
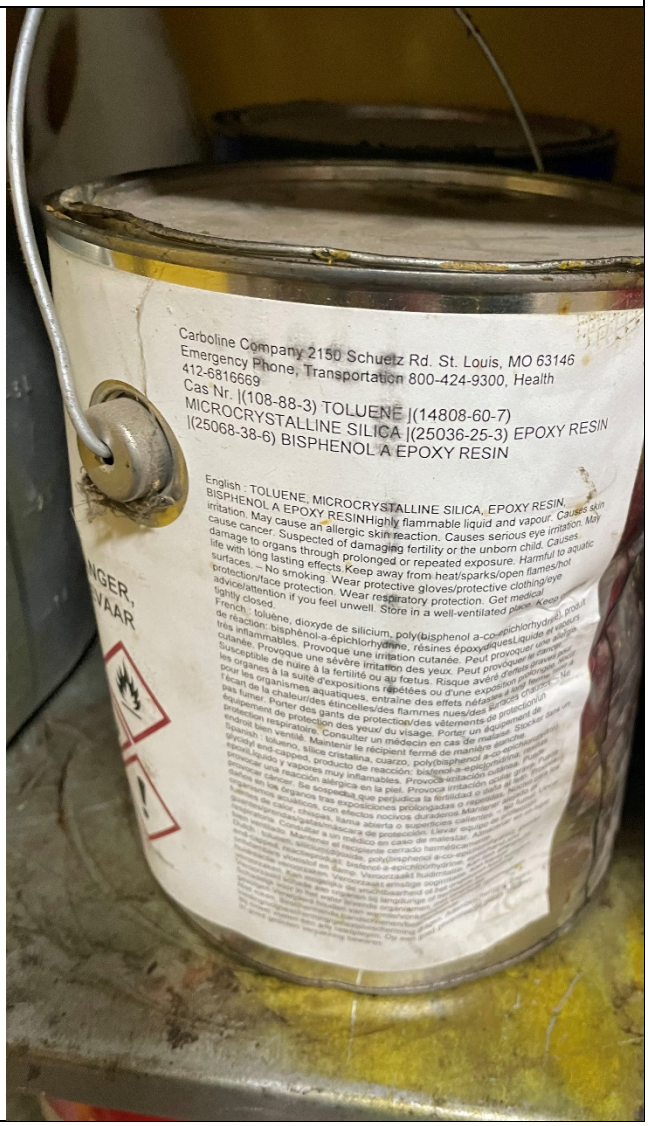
Photograph No. 8	Product: Valvoline SAE 10W-40 Motor Oil Location: Box Shop Cabinet
	

Photograph No. 9	Product: Rust-Oleum Safety Yellow Enamel Spray Paint Location: Warehouse Flam Cabinet



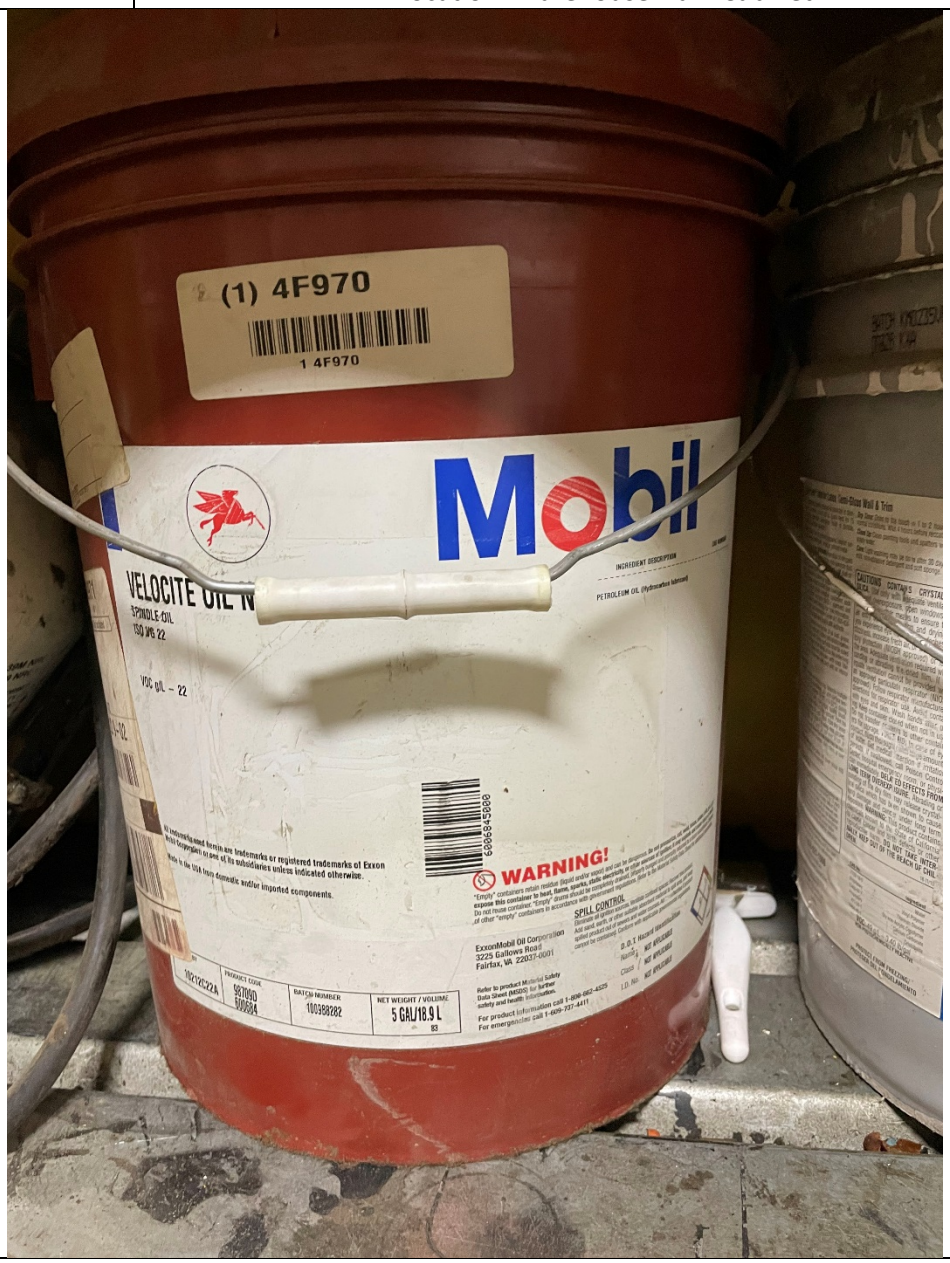
Photograph No. 10	Product: Super Tech Heavy Duty SAE HD-30 Motor Oil Location: Warehouse Flam Cabinet
	

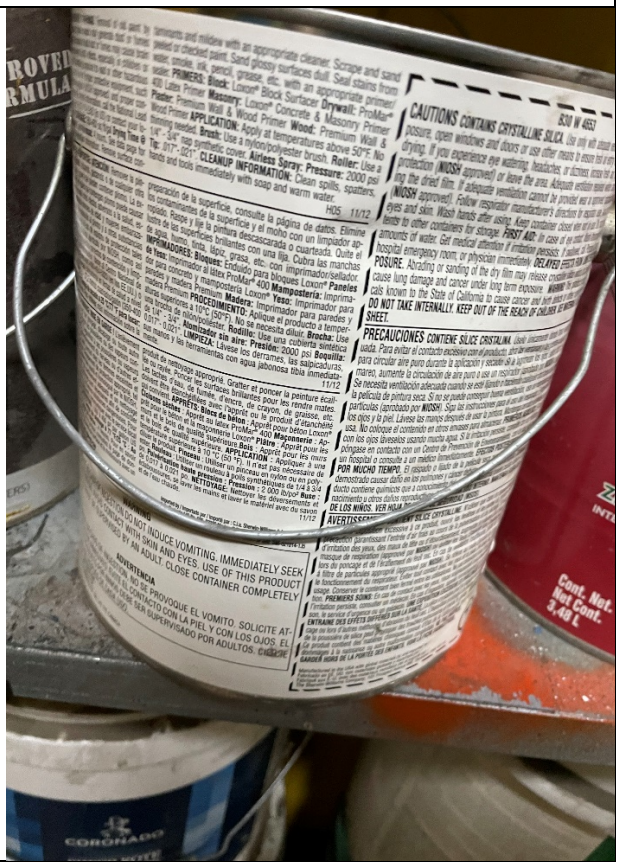
Photograph No. 11	Product: Ingersoll Rand Ultra Coolant Location: Warehouse Flam Cabinet
	

Photograph No. 12	Product: Carboline Carboguard 893 Part A Paint Location: Warehouse Flam Cabinet
	

Photograph No. 13	Product: Thompson's WaterSeal Clear Multi-Surface Waterproofer Location: Warehouse Flam Cabinet

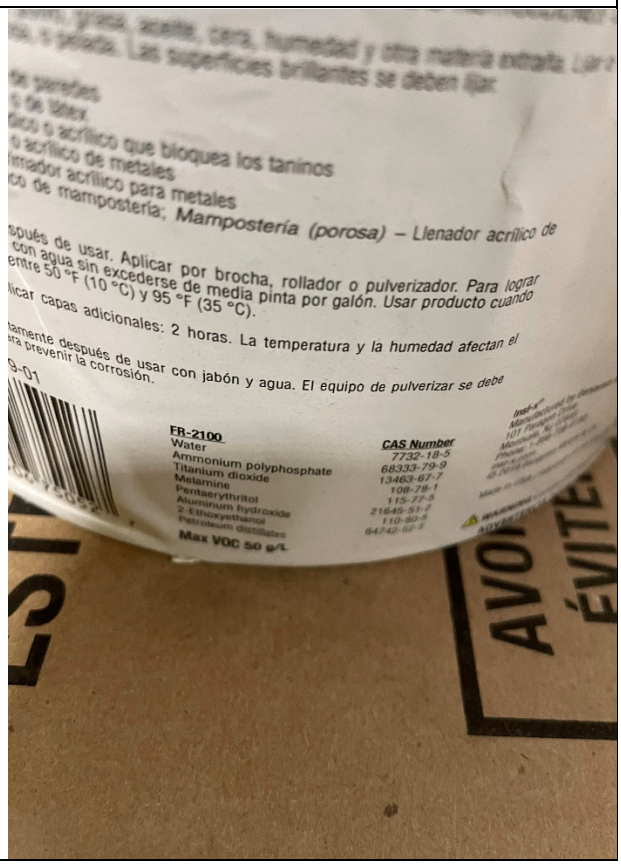
Photograph No. 14	Product: Mobil Velocite Oil Location: Warehouse Flam Cabinet 2

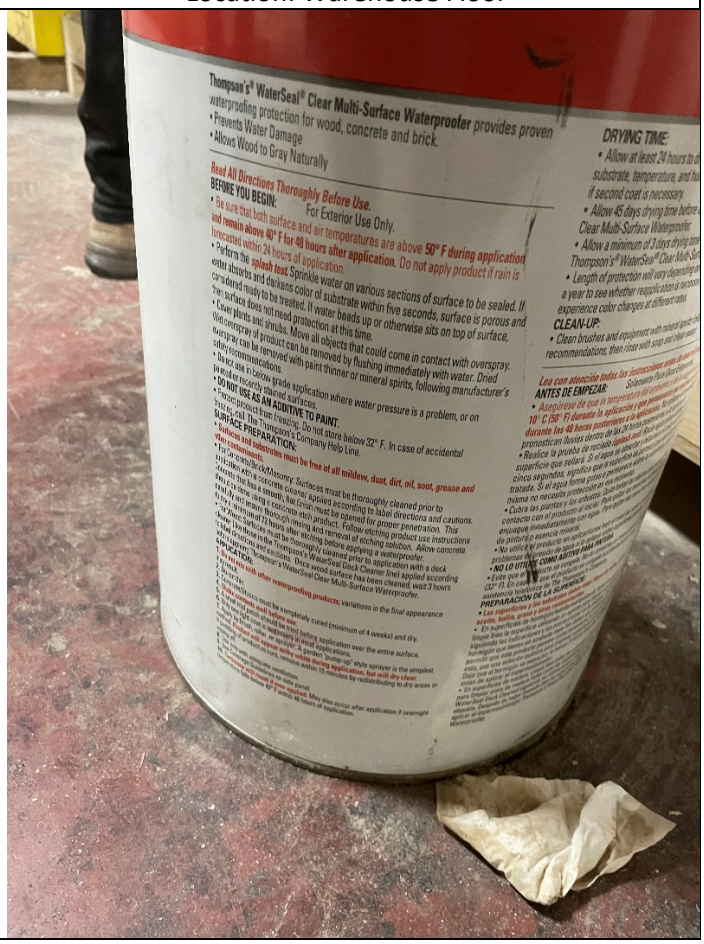


Photograph No. 15	Product: ProMar 400 Deep Base Paint Location: Warehouse Flam Cabinet 2
	

Photograph No. 16	Product: Ultrachem Inc Coolant 32 PE Location: Warehouse Flam Cabinet 2

Photograph No. 17	Product: Honeywell Methane Location: Warehouse Flam Cabinet 2

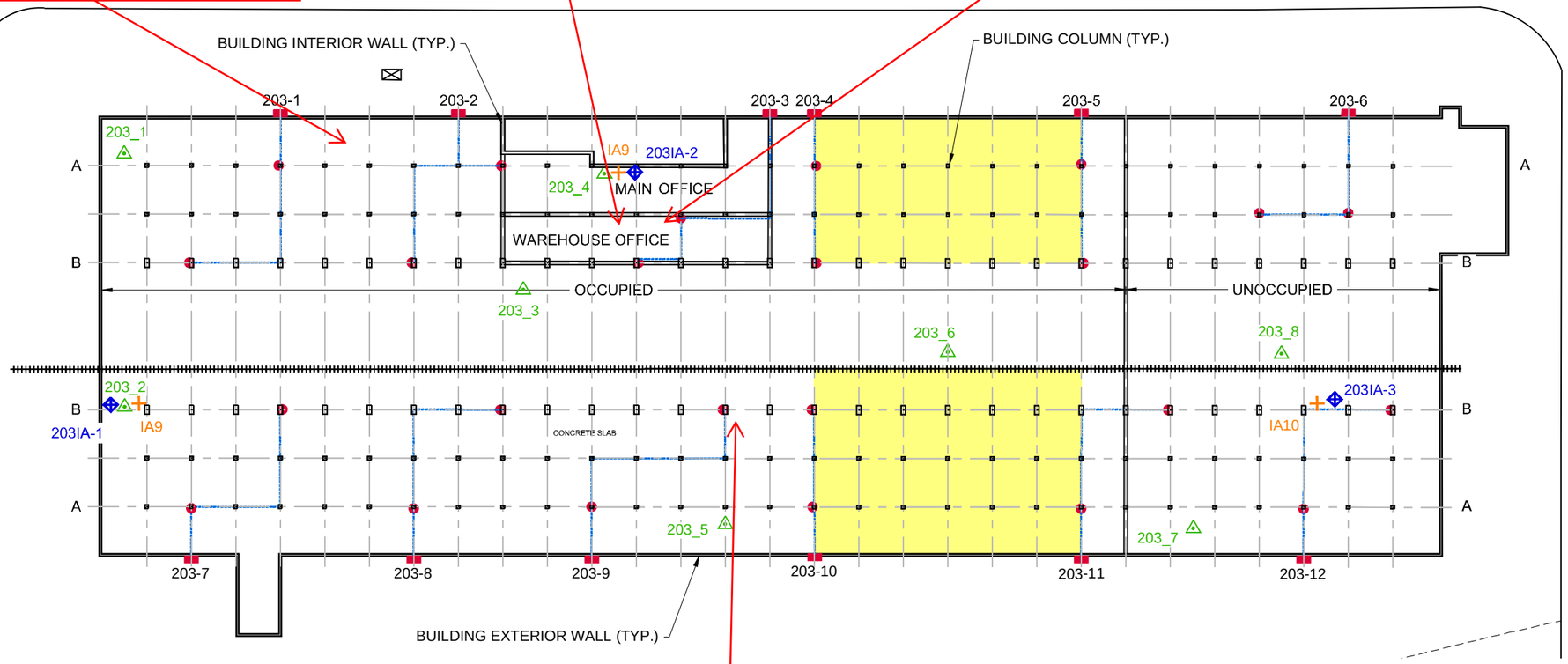
Photograph No. 18	Product: INSL-X Fire Retardant Paint Location: Warehouse Floor
	

Photograph No. 19	Product: Thompson's WaterSeal Clear Multi-Surface Waterproofer Location: Warehouse Floor
	

Approximate location of cabinet in box shop with Surveyed chemicals (~5603 ppb)

Approximate location of Cabinet in warehouse office with surveyed chemicals (~11.7 ppm)

Approximate location of 2nd cabinet in warehouse office with surveyed chemicals (~3641 ppb)



Approximate location of surveyed chemicals on warehouse floor (~2150 ppb)

Regular activity was occurring in the office/warehouse areas during the daytime hours of sample collection. This included the use of hand power tools and forklifts within the warehouse area.
There are three small forklifts and one large forklift stored and/or in use.
Garage doors open and close frequently durring buisness hours.

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- AREA INACCESSIBLE
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

AECOM

BUILDING 203
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: DECEMBER 2021

OSR – 3

204
ADK Beverage

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Renata Porter Date/Time Prepared 1/13/21: 9:00am

Preparer's Affiliation AECOM Phone No. 603-770-0800

Purpose of Investigation SVI Monitoring

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
(Industrial)	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Beverage packaging and storage

Does it include residences (i.e., multi-use)? Y (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age 1940s

Is the building insulated? (Y) N Partially How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	(wood frame)	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	(unsealed)	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / (N)			
k. Water in sump?	Y / N / (not applicable)			

Basement/Lowest level depth below grade: NA (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

When the SVI systems were installed, crack sealing in the cement floor was completed; however, there could be limited cracks remaining that could not be assessed

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

In the office area

(Hot air circulation)	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Electric

Boiler/furnace located in: Basement Outdoors Main Floor (Other) office Furnace on roof

Air conditioning: (Central Air) Window units Open Windows None

In the office area

Are there air distribution ducts present? (Y) N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

There are air ducts in the office for the AC and heat

7. OCCUPANCY

Is basement/lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	
1st Floor	Occupied until 4am
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y (N) NA Please specify_____

d. Has the building ever had a fire? Y / (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where?_____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type?_____

g. Is there smoking in the building? Y / (N) How frequently?_____

h. Have cleaning products been used recently? Y / (N) When & Type?_____

i. Have cosmetic products been used recently? Y / (N) When & Type?_____

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? Y (N) When & Type? _____

m. Is there a kitchen exhaust fan? Y (N) If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) N If yes, where vented? Not in use

o. Is there a clothes dryer? Y (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y (N) When & Type? _____

Are there odors in the building? Y (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) — No
Yes, use dry-cleaning infrequently (monthly or less) — (Unknown)
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	(Public Water)	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	(Public Sewer)	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

NA

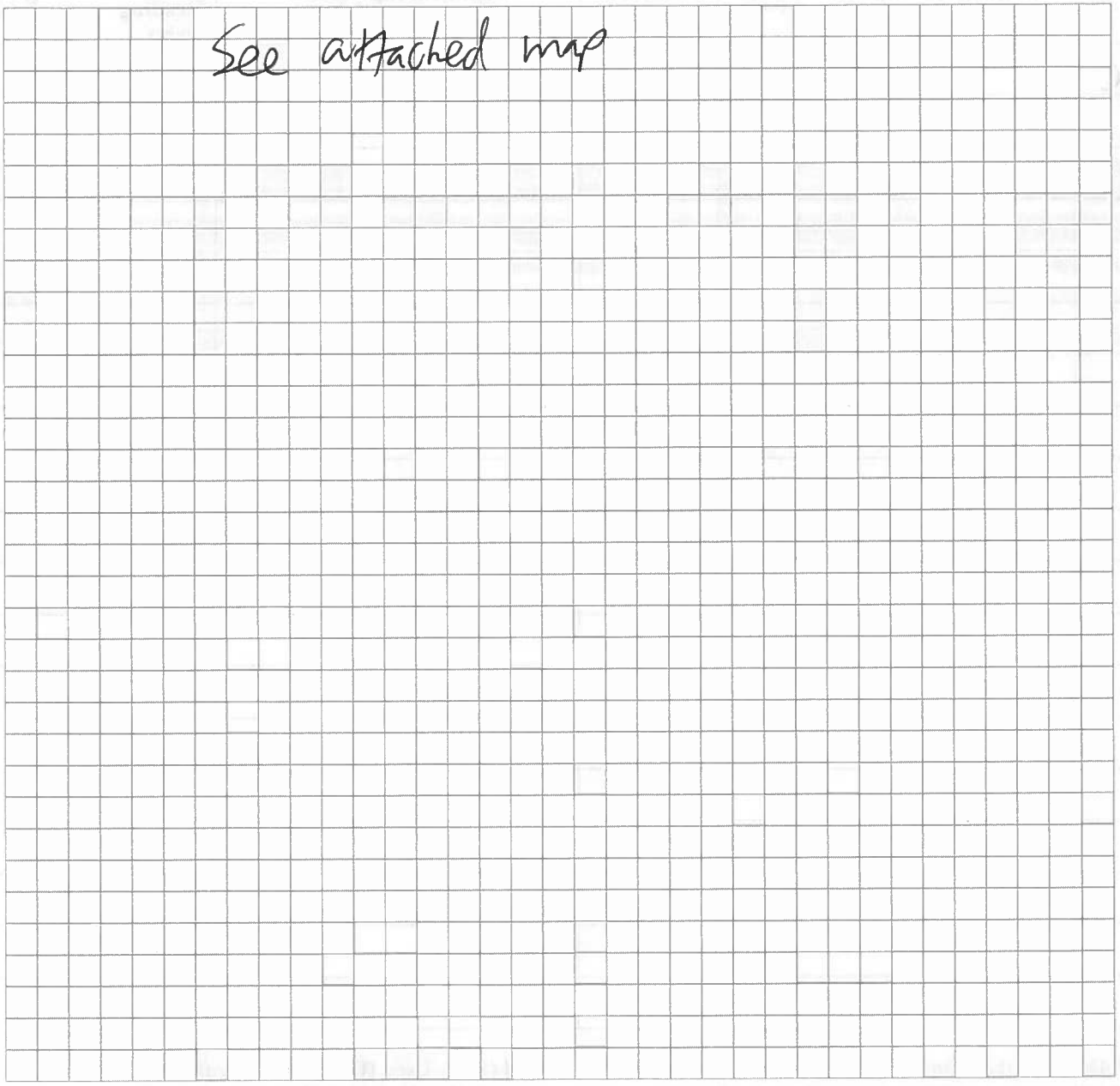
First Floor:

See attached map

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



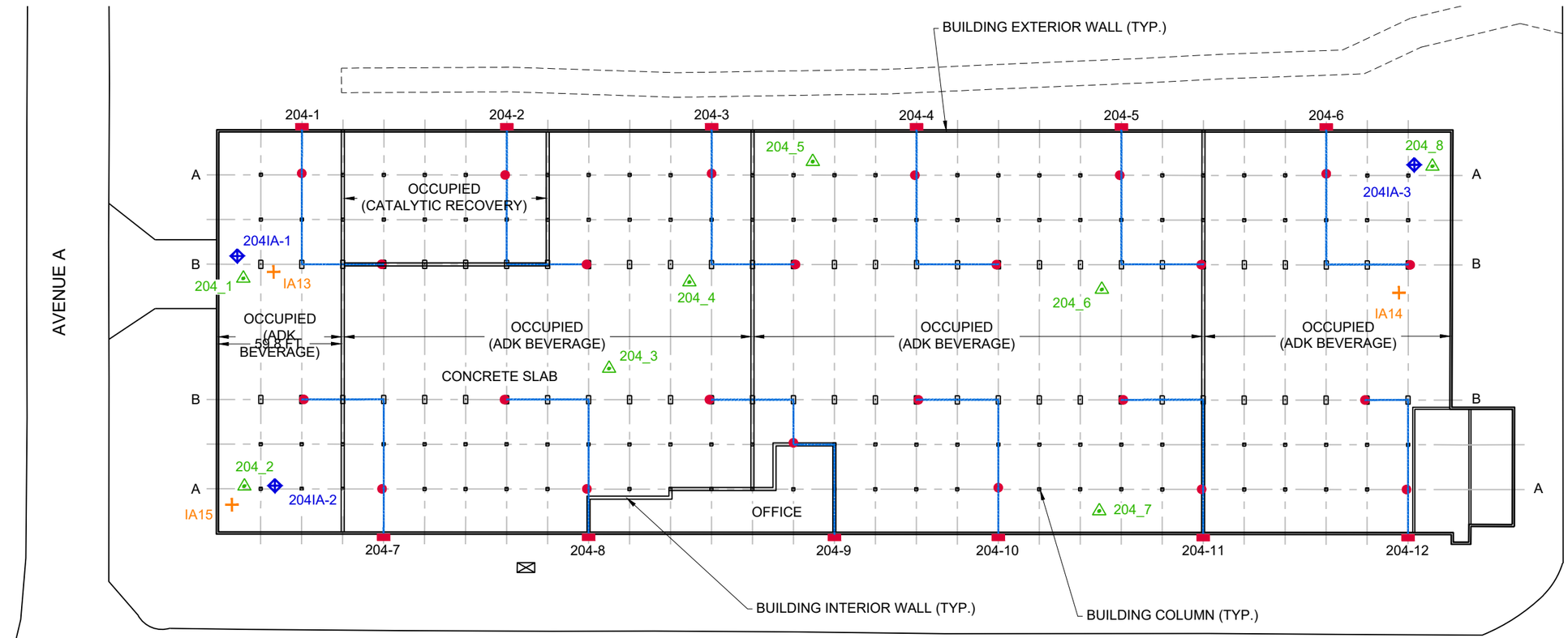
13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: PPB Rae 3000 (27264 serial #)

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
None						

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



ADK Beverage is running automated bottling systems within space. Occasional use of propane powered fork lifts occur and building doors are typically closed unless shipping or recieving product.

BUILDING 204
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL
- IA06 — AIR SAMPLING LOCATION (STONE)
- 201IA-1 — AIR SAMPLING LOCATION (AECOM)

0 60' 120'

AECOM

BUILDING 204
Air Monitoring Locations

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY Project
No.: 60440641 Date: December 2021

APPENDIX D: SVI Air Sample Field Log December 2021

VAPOR INTRUSION SURVEY
SUB-SLAB VAPOR SAMPLING LOG SHEET

Sampled by: Chris French, Renata Spinosa, Patrick McHugh

						Inches	ppb[1]	Inches of Mercury		
Sample ID	Sample Date	Canister Number	Regulator Number	Sample Start Time	Sample Stop Time	Sample Depth	PID Reading	Vacuum Before	Vacuum at Start	Vacuum After
204-SS1	12/16/2021	SSC00473	SFC00485	9:25	9:25	Port	473	0	30	4.7
204-SS2	12/16/2021	SC00831	SFC00264	9:31	9:31	Port	1856	0	30	5
204-SS3	12/16/2021	AC02099	SFC00301	9:59	9:59	Port	836	0	30	6.1
203-SS1	12/16/2021	AS00074	SFC00250	13:55	13:55	Port	0	0	29.5	0
203-SS2	12/16/2021	AS01598	SFC00260	13:49	13:49	Port	4500	0	30	6
203-SS3	12/16/2021	AS01015	SFC00281	14:15	14:15	Port	0	0	27	0
202-SS1	12/16/2021	SSC00137	SFC00491	13:35	13:35	Port	0	0.5	30	6
202-SS2	12/16/2021	AS01327	SFC00114	13:13	13:13	Port	0	0	30	0.5
202-SS3	12/16/2021	AC02168	SFC00058	13:07	13:07	Port	1560	0	30	4.5
201-SS1	12/16/2021	AS01117	SFC00207	11:14	11:14	Port	1332	0	29.5	0
201-SS2	12/16/2021	AS00789	SFC00312	10:39	10:39	Port	0	0	29	1
201-SS3	12/16/2021	AS00457	SFC00295	10:20	10:20	Port	0	0	29	1.9
SS-DUP-1 (@204-SS3)	-	AS01270	SFC00008	-	-	Port	836	0	29	2.8
SS-DUP-2 (@201-SS2)	-	AC02404	SFC00294	-	-	Port	0	0	30	0
Notes:										

1 - Parts per billion (isobutylene equivalent).

2 - Regulators were preset by laboratory to 0.0042 Liters/minute sampling rate.

3 - All sub-slab (SS) samples were collected in 6-liter SUMMA ® canisters after purging the sample tubing of its contents.

VAPOR INTRUSION SURVEY
INDOOR AIR SAMPLING LOG SHEET

Sampled by: Chris French, Renata Spinosa, Patrick McHugh

						ppb[1]	Inches of Mercury		
Sample ID	Sample Date	Canister Number	Regulator Number	Sample Start Time	Sample Stop Time	PID Reading	Vacuum Before	Vacuum at Start	Vacuum After
204-IA2	12/16/2021	AS00749	SFC00416	9:32	9:32	0	0	28.5	0
204-IA1	12/16/2021	AS00325	SFC00082	9:27	9:27	0	0	30	3.1
204-IA3	12/16/2021	AS01004	SFC00124	10:00	10:00	835	0	28.3	1.5
203-IA2	12/16/2021	SC02236	SFC00233	13:51	13:51	1278	0.5	30	5.5
203-IA1	12/16/2021	AC01570	SFC00311	13:56	13:56	2444	0	30	0.5
203-IA3	12/16/2021	AS00584	SFC00540	14:13	14:13	0	0.5	30	12
202-IA1	12/16/2021	SC00057	SFC00418	13:37	13:37	0	0	30	3
202-IA2	12/16/2021	AC01280	SFC00476	13:13	13:13	293	0	29.5	0
202-IA3	12/16/2021	AC02053	SFC00039	13:08	13:08	300	0	30	2
201-IA1	12/16/2021	AC02380	SFC00073	11:14	11:14	0	0	30	2
201-IA2	12/16/2021	AS00369	SFC00538	10:39	10:39	0	0	30	0
201-IA3	12/16/2021	AC02125	SFC00548	10:20	10:20	51	1	30	23
IA-DUP-1 (@204-IA3)	-	AS01371	SFC00479	-	-	835	0	30	2.5
IA-DUP-2 (@201-IA2)	-	AS01357	SFC00323	-	-	0	0	30	2.8

Notes:
1 - Parts per billion (isobutylene equivalent).
2 - Regulators were preset by laboratory to 0.0042 Liters/minute sampling rate.
3 - All indoor air (IA) samples were collected in 6-liter SUMMA ® canisters from a height of about 4-6 feet above ground surface.
4 - DUP-1 collected at 204-IA3; DUP-2 collected at 201-IA2.
5. Canisters were placed on 12/15/21 and retrieved on 12/16/21.

VAPOR INTRUSION SURVEY
OUTDOOR VAPOR SAMPLING LOG SHEET

Sampled by: Chris French, Renata Spinosa, Patrick McHugh

						ppb[1]	Inches of Mercury		
Sample ID	Sample Date	Canister Number	Regulator Number	Sample Start Time	Sample Stop Time	PID Reading	Vacuum Before	Vacuum at Start	Vacuum After
OA-1	12/16/2021	AC01947	SFC00458	13:40	13:40	0	0	30	0

Notes:
1 - Parts per billion (isobutylene equivalent).
2 - Regulators were preset by laboratory to 0.0042 Liters/minute sampling rate.
3 - All outdoor air (OA) samples were collected in 6-liter SUMMA ® canisters.
4. Canisters were placed on 12/15/21 and retrieved on 12/16/21.

APPENDIX E: December 2021 Air Sample Laboratory Report

APPENDIX F: December 2021 Air Sample Data Usability Summary Report (DUSR)

AECOM

Prepared for:
U.S. Army Corps of Engineers
Huntsville and New York Districts

Prepared by:
AECOM
Amherst, NY
60440641-03
January 2022

Data Usability Summary Report
Defense National Stockpile Center
Scotia Depot
ALS Service Request Number: P2106684
December 2021 Air and Soil Vapor Samples

Prepared for:
U.S. Army Corps of Engineers
Huntsville and New York Districts

Prepared by:
AECOM
Amherst, NY
60440641-03

Data Usability Summary Report
Defense National Stockpile Center
Scotia Depot
ALS Service Request Number: P2106684
December 2021 Air and Soil Vapor Samples

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Contents

List of Appendices

Executive Summary

Data validation was performed by Ann Marie Kropovitch of AECOM - Amherst on one data report from ALS, 2655 Park Center Dr., Suite A, Simi Valley, CA 93065 (ALS) for the analysis of soil vapor, indoor and outdoor air samples collected on December 16, 2021 at the Defense National Stockpile Center Scotia Depot, Glenville, NY. Samples were collected to determine the effectiveness of the soil vapor mitigation systems at maintaining indoor air VOC concentrations below the NYSDOH air guidelines.

This sampling event was described in Final Quality Assurance Project Plan for the Defense National Stockpile Center Scotia Depot Glenville, New York (the project specific QAPP; AECOM, September 2017). ALS processed the samples and reported the results in one sample delivery group (SDGs). The analyses were performed in accordance with the project specific QAPP which is based on the DoD QSM v5.0.

The following analytical method was requested on the chain-of-custody (CoC) records:

- USEPA Compendium Method TO-15 - Volatile Organic Compounds (VOCs) by Gas Chromatography/Mass Spectrometry (GC/MS) in Selected Ion Monitoring (SIM) Mode.

Table 1 below lists the field sample identifications cross-referenced to the laboratory identifications.

Table 1
Sample Submittals - Scotia Depot Air Samples

Field ID	ALS ID	Matrix	Date Sampled
204-SS1	P2106684-001	Soil Vapor	12/16/2021
204-SS2	P2106684-002	Soil Vapor	12/16/2021
204-SS3	P2106684-003	Soil Vapor	12/16/2021
203-SS1	P2106684-004	Soil Vapor	12/16/2021
203-SS2	P2106684-005	Soil Vapor	12/16/2021
203-SS3	P2106684-006	Soil Vapor	12/16/2021
202-SS1	P2106684-007	Soil Vapor	12/16/2021
202-SS2	P2106684-008	Soil Vapor	12/16/2021
202-SS3	P2106684-009	Soil Vapor	12/16/2021
201-SS1	P2106684-010	Soil Vapor	12/16/2021
201-SS2	P2106684-011	Soil Vapor	12/16/2021
201-SS3	P2106684-012	Soil Vapor	12/16/2021
SS-DUP-1 [204-SS3]	P2106684-013	Soil Vapor (QC)	12/16/2021
SS-DUP-2 [201-SS2]	P2106684-014	Soil Vapor (QC)	12/16/2021
204-IA2	P2106684-015	Indoor Air	12/16/2021
204-IA1	P2106684-016	Indoor Air	12/16/2021
204-IA3	P2106684-017	Indoor Air	12/16/2021
203-IA2	P2106684-018	Indoor Air	12/16/2021
203-IA1	P2106684-019	Indoor Air	12/16/2021
203-IA3	P2106684-020	Indoor Air	12/16/2021

Field ID	ALS ID	Matrix	Date Sampled
202-IA1	P2106684-021	Indoor Air	12/16/202
202-IA2	P2106684-022	Indoor Air	12/16/202
202-IA3	P2106684-023	Indoor Air	12/16/202
201-IA1	P2106684-024	Indoor Air	12/16/202
201-IA2	P2106684-025	Indoor Air	12/16/202
201-IA3	P2106684-026	Indoor Air	12/16/202
IADUP-01 [204-IA3]	P2106684-027	Indoor Air (QC)	12/16/202
IADUP-02 [201-IA2]	P2106684-028	Indoor Air (QC)	12/16/202
OA-1	P2106684-029	Outdoor Air	12/16/202

The data were evaluated for conformance to method specifications and qualifiers were applied using the validation criteria set forth in the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-2017-002, January 2017, as they apply to the analytical method employed.

Summary

All samples were collected and analyzed successfully. All data have been determined to be useable for the purpose of assessing the presence/absence and quantitative concentrations of the compounds in the media tested (i.e., air and soil vapor) with some qualification. No data points were rejected. Completeness of 100% was achieved for this data set. This is within the completeness goal of 90-100%. The qualified analytical result summaries are attached in Appendix B of this report. A glossary of data qualifier definitions is included in Appendix A of this report.

Each nonconformance with specific data usability criteria is discussed below. Support documentation for data qualifications was included in Appendix C of this report.

The samples identifications on the chain of custody for the sub-slab samples was SS. The laboratory mis-identified the SS as 88. All sample identifications in the report that have 88 should be SS.

1.0 Volatile Organic Compounds

Analytical results for VOCs were reviewed for the following measurement performance indicators.

- Chain-of-custody records
- Sample integrity, initial and final vacuum measurements
- Holding times
- GC/MS hardware tunes
- Initial and continuing calibrations
- Laboratory method blanks
- Surrogate recoveries
- Internal standard areas and retention times
- Laboratory control standards (LCSs)
- Laboratory duplicate precision
- Field duplicate (co-located sample) precision
- Clean canister certification records
- Target compound identification and quantitation

Measurement performance indicators which did not meet criteria for the VOCs analysis are described below.
Residual Laboratory Vacuum Checks (P2106684, p. 4): All residual vacuum check measurements taken upon receipt at ALS were greater than 1.0 inches Hg and less than 10 inches Hg with the following exceptions.

The residual vacuum measurements taken upon receipt at ALS for samples 203-SS1, 202-SS2, 201-SS1, SS-DUP-2 [201-SS2], 204-IA2204-IA3, 203-IA1, 202-IA2, 202-IA3, 201-IA1, 201-IA2, IADUP-02 [201-IA2], and OA-1were less than 1.0 inches Hg or had positive pressure. It is uncertain whether the required sampling interval was achieved before the canister arrived at near ambient conditions. There was inadequate differential pressure to drive the flow controller approaching 0.0 inches Hg. ALS determined that the sample canisters still contained sample from the site and could still be analyzed. Based on professional judgment, all positive and non-detect results for the samples listed above were qualified 'J' and 'UJ', as estimates, because of the sample integrity issue.

The recovery of internal standard chlorobenzene-d5 was outside of the QC limits for several samples. The laboratory suspected matrix interference and diluted the samples to minimize the interference. Since all IS were acceptable in the dilution, only the diluted results have been reported. The reporting limits for the non-detect compounds have been elevated. The affected samples are: 204-SS1, 204-SS2, 204-SS3, 203-SS1, 203-SS2, and 202-SS1.

Field Duplicate Precision (P2106684, pp. 22, 23, 36, 37): Field duplicate samples were collected for samples 204-SS3, 201-SS2, 204-IA3, and 201-IA2. The results for the parent and field duplicate samples were non-detected, with exception to those listed in Table 2A, 2B, 2C and 2D below. The method specification advisory limit for RPD is 25% for air, or the absolute difference between the primary and field duplicate results must be less than or equal to two times the LOQ for results less than five times the LOQ.

Results associated with a nonconforming RPD or absolute difference were qualified 'J', as estimated concentrations, because of field sampling/laboratory imprecision and/or sample heterogeneity

The following notations are used in the field precision tables.

≤ ±2LOQ: The absolute difference between the primary and field duplicate results was less than twice the limit of quantitation for results ≤ five times the limit of quantitation. Variation of this magnitude is acceptable.
RPD: Relative percent difference
Qual: Qualifier(s) required

Table 2A
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	204-SS3	SS-DUP-1	RPD (%)	Qual
1,1,1-Trichloroethane	µg/m3	0.65	0.49	28.1	J
Carbon tetrachloride	µg/m3	0.65	0.69	6.0	None
Trichloroethene	µg/m3	0.14	0.15	6.9	None
Tetrachloroethene	µg/m3	0.14	0.12	15.4	None

Table 2B
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	201-SS2	SSDUP-2	RPD (%)	Qual
1,1,1-Trichloroethane	µg/m3	0.019 J	0.015 J	23.5	±2LOQ, None
Carbon tetrachloride	µg/m3	0.69	0.61 J	12.3	None
Trichloroethene	µg/m3	0.021 J	0.017 J	21.0	None
Tetrachloroethene	µg/m3	0.083	0.073 J	12.8	None

Table 2C
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	204-IA3	IADUP-01	RPD (%)	Qual
1,1,1-Trichloroethane	µg/m3	0.019 J	0.022 J	14.6	None
Carbon tetrachloride	µg/m3	0.46 J	0.48	4.3	None
Trichloroethene	µg/m3	0.17 J	0.19	11.1	None
Tetrachloroethene	µg/m3	0.16 J	0.13	20.7	None

Table 2D
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	201-IA2	IADUP-02	RPD (%)	Qual
Carbon tetrachloride	µg/m3	0.49 J	0.50 J	2.0	None
Trichloroethene	µg/m3	0.017 J	0.017	0.0	None
Tetrachloroethene	µg/m3	0.089 J	0.098 J	9.6	None

2.0 Notes

Data Reporting: Non-detect results were reported to the method detection limits (MDLs) in µg/m^3. Positive results less than the limit of quantitation (LOQ), but greater than the MDL, were qualified 'J', as estimated concentrations, due to increased uncertainty near the detection limit. These 'J' qualifiers were maintained in the data assessment. Sample results reported between the MDL and LOQ are usable as estimated values with an unknown directional bias.

Appendix A

Glossary of USEPA Data Qualifiers

Glossary of USEPA Data Qualifiers

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximated and may be inaccurate or imprecise.

J The analyte was positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.

R The data are unusable. The sample results are rejected due to serious deficiencies in the ability to meet quality control criteria. The presence or absence of the analyte cannot be verified.

N (Organics) The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.

NJ (Organics) The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

Appendix B

Qualified Analytical Results

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-SS1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-001

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: SSC00473

Initial Pressure (psig): -0.85 Final Pressure (psig): 4.11

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.060	0.068	0.060	0.033	**U**
75-35-4	1,1-Dichloroethene	0.060	0.068	0.060	0.024	**U**
156-59-2	cis-1,2-Dichloroethene	0.057	0.068	0.057	0.020	**U**
71-55-6	1,1,1-Trichloroethane	**0.27**	0.068	0.057	0.024	
56-23-5	Carbon Tetrachloride	**7.5**	0.068	0.057	0.019	
79-01-6	Trichloroethene	**3.2**	0.068	0.057	0.021	
127-18-4	Tetrachloroethene	**2.1**	0.068	0.057	0.044	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-SS2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-002

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: SC00831

Initial Pressure (psig): -1.67 Final Pressure (psig): 4.11

Container Dilution Factor: 1.44

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.063	0.072	0.063	0.035	**U**
75-35-4	1,1-Dichloroethene	0.063	0.072	0.063	0.025	**U**
156-59-2	cis-1,2-Dichloroethene	**0.64**	0.072	0.060	0.021	
71-55-6	1,1,1-Trichloroethane	0.060	0.072	0.060	0.026	**U**
56-23-5	Carbon Tetrachloride	**0.094**	0.072	0.060	0.020	
79-01-6	Trichloroethene	**0.24**	0.072	0.060	0.022	
127-18-4	Tetrachloroethene	**0.77**	0.072	0.060	0.046	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-SS3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-003

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: AC02099
Initial Pressure (psig): -1.94 Final Pressure (psig): 3.83

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.064	0.073	0.064	0.035	**U**
75-35-4	1,1-Dichloroethene	0.064	0.073	0.064	0.026	**U**
156-59-2	cis-1,2-Dichloroethene	0.061	0.073	0.061	0.021	**U**
71-55-6	1,1,1-Trichloroethane	**0.65**	0.073	0.061	0.026	**J**
56-23-5	Carbon Tetrachloride	**0.65**	0.073	0.061	0.021	
79-01-6	Trichloroethene	**0.14**	0.073	0.061	0.022	
127-18-4	Tetrachloroethene	**0.14**	0.073	0.061	0.046	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **203-SS1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-004

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: AS00074
Initial Pressure (psig): 0.67 Final Pressure (psig): 3.85

Container Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.053	0.061	0.053	0.029	**U J**
75-35-4	1,1-Dichloroethene	0.053	0.061	0.053	0.021	**U J**
156-59-2	cis-1,2-Dichloroethene	0.051	0.061	0.051	0.017	**U J**
71-55-6	1,1,1-Trichloroethane	**1.1**	0.061	0.051	0.022	**J**
56-23-5	Carbon Tetrachloride	**0.58**	0.061	0.051	0.017	**J**
79-01-6	Trichloroethene	**0.031**	0.061	0.051	0.019	**J**
127-18-4	Tetrachloroethene	**0.17**	0.061	0.051	0.039	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

Client: **AECOM**
Client Sample ID: **203-SS2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-005

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: AS01598
Initial Pressure (psig): -1.67 Final Pressure (psig): 3.85

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.062	0.071	0.062	0.034	**U**
75-35-4	1,1-Dichloroethene	0.062	0.071	0.062	0.025	**U**
156-59-2	cis-1,2-Dichloroethene	**0.036**	0.071	0.060	0.020	**J**
71-55-6	1,1,1-Trichloroethane	**2.2**	0.071	0.060	0.026	
56-23-5	Carbon Tetrachloride	**7.7**	0.071	0.060	0.020	
79-01-6	Trichloroethene	**0.27**	0.071	0.060	0.022	
127-18-4	Tetrachloroethene	**0.81**	0.071	0.060	0.045	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **203-SS3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-006

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: #N/A Date Analyzed: 1/3 - 1/4/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: AS01015

Initial Pressure (psig): -0.09 Final Pressure (psig): 3.90

Container Dilution Factor: 1.27

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.056	0.064	0.056	0.030	**U**
75-35-4	1,1-Dichloroethene	**0.11**	0.064	0.056	0.022	
156-59-2	cis-1,2-Dichloroethene	**0.040**	0.064	0.053	0.018	**J**
71-55-6	1,1,1-Trichloroethane	**16**	0.064	0.053	0.023	
56-23-5	Carbon Tetrachloride	**4.8**	0.064	0.053	0.018	
79-01-6	Trichloroethene	**120**	0.64	0.53	0.20	**D**
127-18-4	Tetrachloroethene	**0.37**	0.064	0.053	0.041	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **202-SS1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-007

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: SSC00137
Initial Pressure (psig): -1.76 Final Pressure (psig): 3.99

Container Dilution Factor: 1.44

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.063	0.072	0.063	0.035	**U**
75-35-4	1,1-Dichloroethene	0.063	0.072	0.063	0.025	**U**
156-59-2	cis-1,2-Dichloroethene	0.060	0.072	0.060	0.021	**U**
71-55-6	1,1,1-Trichloroethane	**1.1**	0.072	0.060	0.026	
56-23-5	Carbon Tetrachloride	**17**	0.072	0.060	0.020	
79-01-6	Trichloroethene	**0.063**	0.072	0.060	0.022	**J**
127-18-4	Tetrachloroethene	**0.11**	0.072	0.060	0.046	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

Client: **AECOM**
Client Sample ID: **202-SS2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-008

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01327
Initial Pressure (psig): 0.63 Final Pressure (psig): 3.67

Container Dilution Factor: 1.20

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.026	0.030	0.026	0.014	**U J**
75-35-4	1,1-Dichloroethene	0.026	0.030	0.026	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.0086	**U J**
71-55-6	1,1,1-Trichloroethane	**0.46**	0.030	0.025	0.011	**J**
56-23-5	Carbon Tetrachloride	**3.1**	0.030	0.025	0.0085	**J**
79-01-6	Trichloroethene	**0.052**	0.030	0.025	0.0092	**J**
127-18-4	Tetrachloroethene	**0.12**	0.030	0.025	0.019	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **202-SS3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-009

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02168
Initial Pressure (psig): -0.88 Final Pressure (psig): 4.20

Container Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.030	0.034	0.030	0.016	**U**
75-35-4	1,1-Dichloroethene	0.030	0.034	0.030	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.029	0.034	0.029	0.0099	**U**
71-55-6	1,1,1-Trichloroethane	**0.035**	0.034	0.029	0.012	
56-23-5	Carbon Tetrachloride	**2.9**	0.034	0.029	0.0097	
79-01-6	Trichloroethene	**0.048**	0.034	0.029	0.011	
127-18-4	Tetrachloroethene	**0.12**	0.034	0.029	0.022	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-SS1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-010

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01117

Initial Pressure (psig): 0.68 Final Pressure (psig): 4.90

Container Dilution Factor: 1.27

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.028	0.032	0.028	0.015	**UJ**
75-35-4	1,1-Dichloroethene	0.028	0.032	0.028	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.027	0.032	0.027	0.0091	**U J**
71-55-6	1,1,1-Trichloroethane	**0.28**	0.032	0.027	0.011	**J**
56-23-5	Carbon Tetrachloride	**0.59**	0.032	0.027	0.0090	**J**
79-01-6	Trichloroethene	**0.014**	0.032	0.027	0.0098	**J**
127-18-4	Tetrachloroethene	**0.11**	0.032	0.027	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-SS2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-011

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00789

Initial Pressure (psig): -0.30 Final Pressure (psig): 3.99

Container Dilution Factor: 1.30

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.029	0.033	0.029	0.016	**U**
75-35-4	1,1-Dichloroethene	0.029	0.033	0.029	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.027	0.033	0.027	0.0094	**U**
71-55-6	1,1,1-Trichloroethane	**0.019**	0.033	0.027	0.012	**J**
56-23-5	Carbon Tetrachloride	**0.69**	0.033	0.027	0.0092	
79-01-6	Trichloroethene	**0.021**	0.033	0.027	0.010	**J**
127-18-4	Tetrachloroethene	**0.083**	0.033	0.027	0.021	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-SS3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-012

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00457

Initial Pressure (psig): -0.37 Final Pressure (psig): 4.20

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.029	0.033	0.029	0.016	**U**
75-35-4	1,1-Dichloroethene	0.029	0.033	0.029	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.028	0.033	0.028	0.0095	**U**
71-55-6	1,1,1-Trichloroethane	**0.018**	0.033	0.028	0.012	**J**
56-23-5	Carbon Tetrachloride	**12**	0.033	0.028	0.0094	
79-01-6	Trichloroethene	**0.039**	0.033	0.028	0.010	
127-18-4	Tetrachloroethene	**0.093**	0.033	0.028	0.021	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **SS-DUP-1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-013

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01270
Initial Pressure (psig): -0.91 Final Pressure (psig): 3.97

Container Dilution Factor: 1.35

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.030	0.034	0.030	0.016	**U**
75-35-4	1,1-Dichloroethene	0.030	0.034	0.030	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.028	0.034	0.028	0.0097	**U**
71-55-6	1,1,1-Trichloroethane	**0.49**	0.034	0.028	0.012	**J**
56-23-5	Carbon Tetrachloride	**0.69**	0.034	0.028	0.0096	
79-01-6	Trichloroethene	**0.15**	0.034	0.028	0.010	
127-18-4	Tetrachloroethene	**0.12**	0.034	0.028	0.022	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **SS-DUP-2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-014

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02404
Initial Pressure (psig): 0.88 Final Pressure (psig): 4.20

Container Dilution Factor: 1.21

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.030	0.027	0.015	**U J**
75-35-4	1,1-Dichloroethene	0.027	0.030	0.027	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.0087	**U J**
71-55-6	1,1,1-Trichloroethane	**0.015**	0.030	0.025	0.011	**J**
56-23-5	Carbon Tetrachloride	**0.61**	0.030	0.025	0.0086	**J**
79-01-6	Trichloroethene	**0.017**	0.030	0.025	0.0093	**J**
127-18-4	Tetrachloroethene	**0.073**	0.030	0.025	0.019	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-IA2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-015

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00749
Initial Pressure (psig): 0.40 Final Pressure (psig): 4.15

Container Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.028	0.031	0.028	0.015	**U J**
75-35-4	1,1-Dichloroethene	0.028	0.031	0.028	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0090	**U J**
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	**U J**
56-23-5	Carbon Tetrachloride	**0.48**	0.031	0.026	0.0089	**J**
79-01-6	Trichloroethene	**0.032**	0.031	0.026	0.0096	**J**
127-18-4	Tetrachloroethene	**0.078**	0.031	0.026	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-IA1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-016

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00325

Initial Pressure (psig): -0.31 Final Pressure (psig): 3.73

Container Dilution Factor: 1.28

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.028	0.032	0.028	0.015	**U**
75-35-4	1,1-Dichloroethene	0.028	0.032	0.028	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.027	0.032	0.027	0.0092	**U**
71-55-6	1,1,1-Trichloroethane	**0.018**	0.032	0.027	0.012	**J**
56-23-5	Carbon Tetrachloride	**0.53**	0.032	0.027	0.0091	
79-01-6	Trichloroethene	**0.14**	0.032	0.027	0.0099	
127-18-4	Tetrachloroethene	**0.11**	0.032	0.027	0.020	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **204-IA3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-017

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01004
Initial Pressure (psig): 0.0 Final Pressure (psig): 3.88

Container Dilution Factor: 1.26

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.028	0.032	0.028	0.015	**U J**
75-35-4	1,1-Dichloroethene	0.028	0.032	0.028	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.026	0.032	0.026	0.0091	**U J**
71-55-6	1,1,1-Trichloroethane	**0.019**	0.032	0.026	0.011	**J**
56-23-5	Carbon Tetrachloride	**0.46**	0.032	0.026	0.0089	**J**
79-01-6	Trichloroethene	**0.17**	0.032	0.026	0.0097	**J**
127-18-4	Tetrachloroethene	**0.16**	0.032	0.026	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **203-IA2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-018

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02236

Initial Pressure (psig): -1.66 Final Pressure (psig): 4.00

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.031	0.036	0.031	0.017	**U**
75-35-4	1,1-Dichloroethene	0.031	0.036	0.031	0.013	**U**
156-59-2	cis-1,2-Dichloroethene	0.030	0.036	0.030	0.010	**U**
71-55-6	1,1,1-Trichloroethane	**0.018**	0.036	0.030	0.013	**J**
56-23-5	Carbon Tetrachloride	**0.49**	0.036	0.030	0.010	
79-01-6	Trichloroethene	**0.077**	0.036	0.030	0.011	
127-18-4	Tetrachloroethene	**0.20**	0.036	0.030	0.023	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **203-IA1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-019

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01570

Initial Pressure (psig): 0.67 Final Pressure (psig): 3.69

Container Dilution Factor: 1.20

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.026	0.030	0.026	0.014	**U**
75-35-4	1,1-Dichloroethene	0.026	0.030	0.026	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.0086	**U**
71-55-6	1,1,1-Trichloroethane	**0.014**	0.030	0.025	0.011	**J**
56-23-5	Carbon Tetrachloride	**0.48**	0.030	0.025	0.0085	**J**
79-01-6	Trichloroethene	**0.055**	0.030	0.025	0.0092	**J**
127-18-4	Tetrachloroethene	**0.23**	0.030	0.025	0.019	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **203-IA3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-020

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/3/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00584

Initial Pressure (psig): -4.47 Final Pressure (psig): 3.85

Container Dilution Factor: 1.81

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.040	0.045	0.040	0.022	**U**
75-35-4	1,1-Dichloroethene	0.040	0.045	0.040	0.016	**U**
156-59-2	cis-1,2-Dichloroethene	0.038	0.045	0.038	0.013	**U**
71-55-6	1,1,1-Trichloroethane	0.038	0.045	0.038	0.016	**U**
56-23-5	Carbon Tetrachloride	**0.46**	0.045	0.038	0.013	
79-01-6	Trichloroethene	**0.047**	0.045	0.038	0.014	
127-18-4	Tetrachloroethene	**0.17**	0.045	0.038	0.029	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **202-IA1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-021

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00057

Initial Pressure (psig): -0.44 Final Pressure (psig): 3.77

Container Dilution Factor: 1.30

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.029	0.033	0.029	0.016	**U**
75-35-4	1,1-Dichloroethene	0.029	0.033	0.029	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.027	0.033	0.027	0.0094	**U**
71-55-6	1,1,1-Trichloroethane	**0.020**	0.033	0.027	0.012	**J**
56-23-5	Carbon Tetrachloride	**0.53**	0.033	0.027	0.0092	
79-01-6	Trichloroethene	**0.055**	0.033	0.027	0.010	
127-18-4	Tetrachloroethene	**0.10**	0.033	0.027	0.021	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **202-IA2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-022

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01280
Initial Pressure (psig): 0.59 Final Pressure (psig): 4.00

Container Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.031	0.027	0.015	UJ
75-35-4	1,1-Dichloroethene	0.027	0.031	0.027	0.011	UJ
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0088	UJ
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	UJ
56-23-5	Carbon Tetrachloride	**0.44**	0.031	0.026	0.0087	J
79-01-6	Trichloroethene	**0.024**	0.031	0.026	0.0094	J
127-18-4	Tetrachloroethene	**0.090**	0.031	0.026	0.020	J

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **202-IA3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-023

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Wida Ang/Mike Thomas Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02053
Initial Pressure (psig): 0.39 Final Pressure (psig): 4.00

Container Dilution Factor: 1.24

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.031	0.027	0.015	U J
75-35-4	1,1-Dichloroethene	0.027	0.031	0.027	0.011	U J
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0089	U J
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	U J
56-23-5	Carbon Tetrachloride	**0.47**	0.031	0.026	0.0088	J
79-01-6	Trichloroethene	**0.033**	0.031	0.026	0.0095	J
127-18-4	Tetrachloroethene	**0.11**	0.031	0.026	0.020	J

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-IA1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-024

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02380
Initial Pressure (psig): 0.26 Final Pressure (psig): 4.00

Container Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.028	0.031	0.028	0.015	**U J**
75-35-4	1,1-Dichloroethene	0.028	0.031	0.028	0.011	**U J**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0090	**U J**
71-55-6	1,1,1-Trichloroethane	**0.021**	0.031	0.026	0.011	**J**
56-23-5	Carbon Tetrachloride	**0.52**	0.031	0.026	0.0089	**J**
79-01-6	Trichloroethene	**0.020**	0.031	0.026	0.0096	**J**
127-18-4	Tetrachloroethene	**0.099**	0.031	0.026	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-IA3** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-025

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02125
Initial Pressure (psig): -9.86 Final Pressure (psig): 4.00

Container Dilution Factor: 3.86

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.085	0.097	0.085	0.046	**U**
75-35-4	1,1-Dichloroethene	0.085	0.097	0.085	0.034	**U**
156-59-2	cis-1,2-Dichloroethene	0.081	0.097	0.081	0.028	**U**
71-55-6	1,1,1-Trichloroethane	0.081	0.097	0.081	0.035	**U**
56-23-5	Carbon Tetrachloride	**0.36**	0.097	0.081	0.027	
79-01-6	Trichloroethene	**0.076**	0.097	0.081	0.030	**J**
127-18-4	Tetrachloroethene	**0.11**	0.097	0.081	0.062	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **201-IA2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-026

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00369
Initial Pressure (psig): 0.76 Final Pressure (psig): 4.50

Container Dilution Factor: 1.24

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.031	0.027	0.015	**UJ**
75-35-4	1,1-Dichloroethene	0.027	0.031	0.027	0.011	**UJ**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0089	**UJ**
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	**UJ**
56-23-5	Carbon Tetrachloride	**0.49**	0.031	0.026	0.0088	**J**
79-01-6	Trichloroethene	**0.017**	0.031	0.026	0.0095	**J**
127-18-4	Tetrachloroethene	**0.089**	0.031	0.026	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

Client: **AECOM**
Client Sample ID: **IA-DUP-1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-027

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01371

Initial Pressure (psig): -0.52 Final Pressure (psig): 4.00

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.029	0.033	0.029	0.016	**U**
75-35-4	1,1-Dichloroethene	0.029	0.033	0.029	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.028	0.033	0.028	0.0095	**U**
71-55-6	1,1,1-Trichloroethane	**0.022**	0.033	0.028	0.012	**J**
56-23-5	Carbon Tetrachloride	**0.48**	0.033	0.028	0.0094	
79-01-6	Trichloroethene	**0.19**	0.033	0.028	0.010	
127-18-4	Tetrachloroethene	**0.13**	0.033	0.028	0.021	

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **IA-DUP-2** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-028

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01357
Initial Pressure (psig): 0.24 Final Pressure (psig): 3.77

Container Dilution Factor: 1.24

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.031	0.027	0.015	**UJ**
75-35-4	1,1-Dichloroethene	0.027	0.031	0.027	0.011	**UJ**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0089	**UJ**
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	**UJ**
56-23-5	Carbon Tetrachloride	**0.50**	0.031	0.026	0.0088	**J**
79-01-6	Trichloroethene	**0.017**	0.031	0.026	0.0095	**J**
127-18-4	Tetrachloroethene	**0.098**	0.031	0.026	0.020	**J**

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **OA-1** ALS Project ID: P2106684
Client Project ID: **Scotia Depot / 60440641** ALS Sample ID: P2106684-029

Test Code: EPA TO-15 SIM Date Collected: 12/16/21
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/17/21
Analyst: Topacio Zavala Date Analyzed: 1/4/22
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01947
Initial Pressure (psig): 0.26 Final Pressure (psig): 3.73

Container Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.031	0.027	0.015	U J
75-35-4	1,1-Dichloroethene	0.027	0.031	0.027	0.011	U J
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.0089	U J
71-55-6	1,1,1-Trichloroethane	0.026	0.031	0.026	0.011	U J
56-23-5	Carbon Tetrachloride	**0.47**	0.031	0.026	0.0087	J
79-01-6	Trichloroethene	**0.041**	0.031	0.026	0.0095	J
127-18-4	Tetrachloroethene	**0.11**	0.031	0.026	0.020	J

U = This analyte was analzyed for but not detected at the specified detection limit.
LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Appendix C

Support Documentation

Air - Chain of Custody Record & Analytical Service Request

R210 CG84

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P2007113

Company Name & Address (Reporting Information)
AECOM
40 British American Blvd Latham, NY 12110

Project Name: Scotia Depot
Project Number: 60440641
P.O. # / Billing Information

ALS Contact: Elizabeth Porter

Project Manager: John Santacroce
Phone: 518-951-2206
Fax:
Email Address for Result Reporting: John.Santacroce@aecom.com
Sampler (Print & Sign): Renata Porter Renata Porter

Analysis Method: TO-15

Comments e.g. Actual Preservative or specific instructions

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume
204-SS1	1	12/16/21	0925	SSC00473	SFC00485	30	4.7	6L
204-SS2	2		0931	SC00831	SFC00264	30	5	
204-SS3	3		0959	AC02099	SFC00301	30	6.1	
203-SS1	4		1355	AS00074	SFC00250	29.5	0	
203-SS2	5		1349	AS01598	SFC00260	30	6	
203-SS3	6		1415	AS01015	SFC00281	27	0	
202-SS1	7		1335	SSC00137	SFC00491	30	6	
202-SS2	8		1313	AS01327	SFC00114	30	0.5	
202-SS3	9		1307	AC02168	SFC00058	30	4.5	
201-SS1	10		1114	AS01117	SFC00207	29.5	0	
201-SS2	11		1039	AS00789	SFC00312	29	1	
201-SS3	12		1020	AS00457	SFC00295	29	1.9	
SS-DUP-1	13		—	AS01270	SFC00008	29	2.8	
SS-DUP-2	14		—	AC02404	SFC00294	30	0	

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge X

EDD required (Yes) No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Renata Porter	12/16/21	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				12-17-21	7:50

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

P210CC84

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P2007113

Company Name & Address (Reporting Information)
AECOM
40 British American Blvd, Latham, NY 12110

Project Name: Scotia Depot
Project Number: 60440641
P.O. # / Billing Information

ALS Contact: Elizabeth Porter

Project Manager: John Santacroce
Phone: 518-951-2206
Fax:
Email Address for Result Reporting: John.Santacroce@aecom.com
Sampler (Print & Sign): Renata Porter Renata Porter

Analysis Method: TO-15

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Comments e.g. Actual Preservative or specific instructions
204-IA2	15	12/16/21	0932	AS00749	SFC00416	28.5	0	6L	
204-IA1	16		0927	AS00325	SFC00082	30	3.1		
204-IA3	17		1000	AS01004	SFC00124	28.3	1.5		
203-IA2	18		1351	SC02236	SFC00233	30	5.5		
203-IA1	19		1356	AC01570	SFC00311	30	0.5		
203-IA3	20		1413	AS00584	SFC00540	30	12		
202-IA1	21		1337	SC00057	SFC00418	30	3		
202-IA2	22		1313	AC01280	SFC00476	29.5	0		
202-IA3	23		1308	AC02053	SFC00039	30	2		
201-IA1	24		1114	AC02380	SFC00073	30	2		
201-IA3	25		1020	AC02125	SFC00548	30	23		
201-IA2	26		1039	AS00369	SFC00538	30	0		
IA-DUP-1	27		—	AS01371	SFC00479	30	2.5		
IA-DUP-2	28		—	AS01357	SFC00323	30	2.8		

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge X

EDD required (Yes) / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Renata Porter	12/16/21	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				12-17-21	0850

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

R2106C84

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P2007113

Company Name & Address (Reporting Information)
AECOM
40 British American Blvd, Latham, NY 12110

Project Name: Scotia Depot
Project Number: 60440641
P.O. # / Billing Information

ALS Contact: Elizabeth Porter

Project Manager: John Santacroce
Phone: 518-951-2206
Fax:
Email Address for Result Reporting: John.Santacroce@aecom.com
Sampler (Print & Sign): Renata Porter RA Porter

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		Comments e.g. Actual Preservative or specific instructions
OA-1	29	12/16/21	1340	AC01947	SFC00458	30	0	6L	X		

Report Tier Levels - please select
Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge X

EDD required (Yes) / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
RA Porter	12/16/21	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				12-17-21	1550

Cooler / Blank Temperature ____ °C

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: AECOM
Project: Scotia Depot / 60440641

Service Request No: P2106684
New York Lab ID: 11221

CASE NARRATIVE

The samples were received intact under chain of custody on December 18, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed in SIM mode for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The response for the #3 internal standard in samples 204-881 (P2106684-001), 204-882 (P2106684-002), 204-883 (P2106684-003), 203-881 (P2106684-004), 203-882 (P2106684-005), and 202-881 (P2106684-007) were outside the control criteria because of suspected matrix interference. The samples were diluted in an attempt to eliminate the effects of the matrix interference. The results are reported from the dilution; therefore, the associated method reporting limits are elevated.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.3 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: AECOM
Project ID: Scotia Depot / 60440641

Service Request: P2106684

Date Received: 12/17/2021
Time Received: 15:50

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC SIM
204-881	P2106684-001	Air	12/16/2021	09:25	SSC00473	-0.85	4.11	X
204-882	P2106684-002	Air	12/16/2021	09:31	SC00831	-1.67	4.11	X
204-883	P2106684-003	Air	12/16/2021	09:59	AC02099	-1.94	3.83	X
203-881	P2106684-004	Air	12/16/2021	13:55	AS00074	0.67	3.85	X
203-882	P2106684-005	Air	12/16/2021	13:49	AS01598	-1.67	3.85	X
203-883	P2106684-006	Air	12/16/2021	14:15	AS01015	-0.09	3.90	X
202-881	P2106684-007	Air	12/16/2021	13:35	SSC00137	-1.76	3.99	X
202-882	P2106684-008	Air	12/16/2021	13:13	AS01327	0.63	3.67	X
202-883	P2106684-009	Air	12/16/2021	13:07	AC02168	-0.88	4.20	X
201-881	P2106684-010	Air	12/16/2021	11:14	AS01117	0.68	4.90	X
201-882	P2106684-011	Air	12/16/2021	10:39	AS00789	-0.30	3.99	X
201-883	P2106684-012	Air	12/16/2021	10:20	AS00457	-0.37	4.20	X
SS-DUP-1	P2106684-013	Air	12/16/2021	00:00	AS01270	-0.91	3.97	X
SS-DUP-2	P2106684-014	Air	12/16/2021	00:00	AC02404	0.88	4.20	X
204-IA2	P2106684-015	Air	12/16/2021	09:32	AS00749	0.40	4.15	X
204-IA1	P2106684-016	Air	12/16/2021	09:27	AS00325	-0.31	3.73	X
204-IA3	P2106684-017	Air	12/16/2021	10:00	AS01004	0.00	3.88	X
203-IA2	P2106684-018	Air	12/16/2021	13:51	SC02236	-1.66	4.00	X
203-IA1	P2106684-019	Air	12/16/2021	13:56	AC01570	0.67	3.69	X
203-IA3	P2106684-020	Air	12/16/2021	14:13	AS00584	-4.47	3.85	X
202-IA1	P2106684-021	Air	12/16/2021	13:37	SC00057	-0.44	3.77	X
202-IA2	P2106684-022	Air	12/16/2021	13:13	AC01280	0.59	4.00	X
202-IA3	P2106684-023	Air	12/16/2021	13:08	AC02053	0.39	4.00	X
201-IA1	P2106684-024	Air	12/16/2021	11:14	AC02380	0.26	4.00	X
201-IA3	P2106684-025	Air	12/16/2021	10:20	AC02125	-9.86	4.00	X
201-IA2	P2106684-026	Air	12/16/2021	10:39	AS00369	0.76	4.50	X
IA-DUP-1	P2106684-027	Air	12/16/2021	00:00	AS01371	-0.52	4.00	X
IA-DUP-2	P2106684-028	Air	12/16/2021	00:00	AS01357	0.24	3.77	X
OA-1	P2106684-029	Air	12/16/2021	13:40	AC01947	0.26	3.73	X

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2106684

Project: Scotia Depot / 60440641

Sample(s) received on: 12/17/21 Date opened: 12/17/21 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2106684-001.01	6.0 L Silonite Can					
P2106684-002.01	6.0 L Source Can					
P2106684-003.01	6.0 L Ambient Can					
P2106684-004.01	6.0 L Silonite Can					
P2106684-005.01	6.0 L Silonite Can					
P2106684-006.01	6.0 L Silonite Can					
P2106684-007.01	6.0 L Silonite Can					
P2106684-008.01	6.0 L Silonite Can					
P2106684-009.01	6.0 L Ambient Can					
P2106684-010.01	6.0 L Silonite Can					
P2106684-011.01	6.0 L Silonite Can					
P2106684-012.01	6.0 L Silonite Can					
P2106684-013.01	6.0 L Silonite Can					
P2106684-014.01	6.0 L Ambient Can					
P2106684-015.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2106684

Project: Scotia Depot / 60440641

Sample(s) received on: 12/17/21 Date opened: 12/17/21 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2106684-016.01	6.0 L Silonite Can					
P2106684-017.01	6.0 L Silonite Can					
P2106684-018.01	6.0 L Source Can					
P2106684-019.01	6.0 L Ambient Can					
P2106684-020.01	6.0 L Silonite Can					
P2106684-021.01	6.0 L Source Can					
P2106684-022.01	6.0 L Ambient Can					
P2106684-023.01	6.0 L Ambient Can					
P2106684-024.01	6.0 L Ambient Can					
P2106684-025.01	6.0 L Ambient Can					
P2106684-026.01	6.0 L Silonite Can					
P2106684-027.01	6.0 L Silonite Can					
P2106684-028.01	6.0 L Silonite Can					
P2106684-029.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

Client: **AECOM**

Client Project ID: **Scotia Depot / 60440641** ALS Project ID: P2106684

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 01032202.D

Analyst: Wida Ang Date Analyzed: 1/3/22

Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 07:14

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	17203		9.61	80188		11.56		14947		15.90	
	Upper Limit	24084		9.94	112263		11.89		20926		16.23	
	Lower Limit	10322		9.28	48113		11.23		8968		15.57	
	Client Sample ID											
01	Method Blank	16238		9.62	75637		11.57		14039		15.90	
02	Lab Control Sample	15339		9.61	71011		11.56		13303		15.90	
03	Duplicate Lab Control Sample	14695		9.61	68326		11.56		12768		15.90	
04	204-881	15056		9.61	70763		11.56		14808		15.90	
05	204-882	15920		9.61	73931		11.57		14754		15.90	
06	204-883	15849		9.61	73956		11.56		14622		15.90	
07	203-881	16227		9.61	75599		11.56		15713		15.90	
08	203-882	16014		9.61	75303		11.56		14733		15.90	
09	203-883	15553		9.61	73230		11.56		14346		15.90	
10	202-881	16507		9.61	75023		11.56		14743		15.90	
11	202-882	17664		9.61	81113		11.56		16640		15.90	
12	202-883	16560		9.61	79254		11.57		16206		15.90	
13	201-881	15874		9.61	74351		11.56		14699		15.90	
14	201-882	15525		9.61	72711		11.56		14860		15.90	
15	201-883	15326		9.61	72202		11.56		14552		15.90	
16	SS-DUP-1	15410		9.61	70905		11.57		15138		15.90	
17	SS-DUP-2	15289		9.61	71534		11.56		14353		15.90	
18	204-IA2	15308		9.61	70577		11.56		13454		15.90	
19	204-IA1	16160		9.61	74662		11.57		14379		15.90	
20	204-IA3	17096		9.62	72867		11.57		14199		15.90	
21	203-IA2	15456		9.61	71796		11.57		13274		15.90	
22	203-IA1	15362		9.61	72067		11.56		14677		15.90	
23	203-IA3	16086		9.60	74626		11.56		14028		15.90	

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the specified limits. See case narrative.

Client: **AECOM**

Client Project ID: **Scotia Depot / 60440641** ALS Project ID: P2106684

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 01042202.D

Analyst: Wida Ang Date Analyzed: 1/4/22

Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 01:15

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	14405		9.61	67196		11.56		12522		15.90	
	Upper Limit	20167		9.94	94074		11.89		17531		16.23	
	Lower Limit	8643		9.28	40318		11.23		7513		15.57	
	Client Sample ID											
01	Method Blank	12942		9.63	59996		11.56		11029		15.90	
02	Lab Control Sample	13823		9.61	64584		11.56		12057		15.90	
03	Duplicate Lab Control Sample	13860		9.61	64443		11.56		11986		15.90	
04	202-IA1	13890		9.61	64341		11.56		11844		15.90	
05	202-IA2	15562		9.61	72157		11.56		13815		15.90	
06	202-IA3	15668		9.61	72242		11.57		14113		15.90	
07	201-IA1	14445		9.61	67687		11.56		12755		15.90	
08	201-IA3	14159		9.61	66884		11.56		12360		15.90	
09	201-IA2	14296		9.61	66177		11.57		12448		15.90	
10	IA-DUP-1	15060		9.61	69716		11.57		13562		15.90	
11	IA-DUP-2	13556		9.61	63583		11.56		12112		15.90	
12	OA-1	13318		9.61	62470		11.56		12008		15.90	
13	203-883 (Dilution)	13484		9.62	64308		11.56		10686		15.91	
14												
15												
16												
17												
18												
19												
20												

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the specified limits. See case narrative.

APPENDIX G: NYSDOH Decision Matrices

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

APPENDIX H: Site-Wide Semi-Annual Inspection Form

Site-Wide Semi-Annual Inspection Form

The Defense National Stockpile Center Scotia Depot
Glenville, New York

Engineering Control (s): SSDS Inspection Date: 12/14/2021

Item	Yes	No	N/A	Comments
Does the Engineering Control continue to perform as designed?	X			Note: Components of the system were turned on in response to data recieved from the 5 year annual sampling event.
Does the Engineering Control continue to protect human health and the environment?	X			
Does the Engineering Control comply with requirements established in the SMP?	X			
Has remedial performance criteria been achieved or maintained?	X			
Has sampling and analysis of appropriate media been performed during the monitoring event?	X			6 year system review, sampling of indoor air and sub slab vapor
Have there been any modifications made to the remedial or monitoring system?	X			Components of the system were turned back on in response to data obtained from the 5 year monitoring event
Does the remedial or monitoring system need to be changed or altered at this time?		X		
Has there been any intrusive activity, excavation, or construction occurred at the site?		X		
Were the activities mentioned above, performed in accordance with the SMP?	X			
Was there a change in the use of the site or were there new structures constructed on the site?	X			Some tenants left, no new tenants at this time
In case a new occupied structure is constructed or the use of the current building changed, was a vapor intrusion evaluation done?			X	
Were new mitigation systems installed based on monitoring results?		X		
Were the groundwater wells in the monitoring network inspected during this site inspection? If so, were the Monitoring Well Field Inspection Logs Completed?			X	

Note: Upon completion of the form any non-conforming items warranting corrective action should be identified here within.

Name of Inspector: Christopher French
Inspector's Company: AECOM

Signature of Inspector:
Date: 12/14/2021

IMMEDIATELY REPORT ANY FAILURE OR DEFECT TO THE PROJECT MANAGER SO A COUNTERMEASURE PLAN CAN BE IMPLEMENTED.