2019-2020 SOIL VAPOR INTRUSION MITIGATION SYSTEM ANNUAL REPORT FOR

REMEDIAL ACTION AT THE DEFENSE NATIONAL STOCKPILE CENTER SCOTIA DEPOT GLENVILLE, NEW YORK

Prepared For:

U.S. Army Corps of Engineers

Prepared By:

AECOM Technical Services

April 2020

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Contract No. W912DY-09-D-0059

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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 fourth 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.

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 locations. 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 five 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 was 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 reports only one well (MW-12) was slightly above the groundwater standard of 5 µg/L at 6.2 µg/L.

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 in order 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 of the 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 -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 June 2019 and January 2020 monitoring events 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). Results of these readings are provided in Table 2-1 and 2-2.

The June 2019 U-Tube manometer readings produced stable results 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 -0.004 inches of water column) was being generated at 28 out of 30 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 doors and windows being opened in the buildings, however overall a vacuum is being generated under the slab.

The January readings were stable aside from Building 202 at suction points 11A and 11B (there has been fluctuation which is discussed in section 2.3). One of the U-Tube manometers were unable to be monitored because they were either inaccessible or damaged. During the January 2020 event sufficient suction was recorded at 29 out of 30 accessible sub-slab monitoring locations. One sub-slab pressure monitoring location was inaccessible or damaged. 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 doors and windows being opened in the buildings, however overall a vacuum is being generated under the slab.

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 January 2020 event the system was checked and it was found to be on, but the manometer did not indicate any suction in the system. The system could be heard as if it was on, but the manometer was at 0 inches of water. The USACE notified the NYSDEC of the findings. The next inspection for the off-Site SSDS is scheduled for December

2021.

2.3 Annual Operation and Maintenance

The SSDSs have operated without shutdown from when installation was completed in 2016 throughout the inspection event in January 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 the observed system damages. This is discussed 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 and January 2020 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 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.

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 (w/ September 2018, latest revision). Indoor air sampling occurs annually during the heating season (November 15 through March 15) and sub-slab differential readings are collected semi-annually. The fourth monitoring event was conducted from January 15, 2020 to January 16, 2020 and included indoor air samples and pressure differential readings. During this event one sample regulator was faulty and AECOM conducted a resample event at this location, 204-IA-2 on January 23rd. The purpose of this sampling event was to continue monitoring concentrations of the targeted volatile organic compounds (VOCs) in order to assess the performance of the SSDSs with the intention to mitigate the potential for impacted soil vapor intrusion into the building.

In addition to the indoor air samples, one outdoor ambient air sample was collected concurrently with the indoor air samples 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 January 2020 monitoring event was conducted in accordance with the Final Site Management Plan (SMP), dated November 2017 (w/ September 2018, latest revision (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. Two separate questionnaires were completed for both Building 202 and Building 204, one for each of the different tenants. Copies of the completed questionnaires are provided in Appendix C. Questionnaire findings did not indicate any substances or tenant activities in the buildings that would impact the air sample results. The NYSDOH recommends the collection of indoor air samples during the heating season, defined as 15 November through 31 March. Indoor 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 office/occupied sections of buildings 201, 202, 203 and 204.

Prior to indoor air sample collection, pressure readings were taken with a digital micro-manometer at each confirmation testing vacuum monitoring point and U-tube manometers readings were recorded at the suction throughout the building (see locations on Figure 1-2). During the 2019-2020 sampling event, 29 of the 30 accessible Sub-slab vacuum readings were less than or equal to -0.004 inches of water, indicating sufficient vacuum was being generated by the suction points at these locations. Furthermore, manometer measurements indicate that the SSDSs were producing sufficient vacuum beneath the building slab.

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. Results of these readings are provided in Table 3-1. All indoor air 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. Air sample locations are identified on Figures 3-1 through Figure 3-5. Sample canisters were set up with flexible tubing attached to a stand extending approximately 4 ft. to allow for sample collection within the breathing zone. 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. One sample canister at the 204-IA-2 location was found to have had a faulty regulator and residual vacuum check measurements indicated that little or no sample entered the can. The results for this sample were not reported and a resample was taken on January 23, 2020.

3.2 Air Sample Results

Laboratory results for the indoor air samples are presented in Table 3-1. 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 2020 sampling event were compared to the AECOM 2018, 2017 and 2016 sampling events and the Stone Environmental 2014 sample data (Stone, 2014a) prior to the SSDS installation. As shown in Table 3-1, chlorinated volatile organic compounds (CVOC) overall concentrations are lower than in the pre system installation (2014) results indicating that the SSDSs are functioning as designed. One sample location, 201IA-2. had a Carbon Tetrachloride result that was higher than concentrations in the past, so the project team decided to conduct a resample to be conservative. The resample, taken on March 26th 2020, results were similar to past results and more along the lines of the results that were expected. Both sets of results are presented in the data tables and compared to the New York State Department of Health Decision Matrix tables. For this location the matrix result of "mitigate" is driven by the sub slab concentration and therefore the matrix result is the same for both sets of indoor air sample results. The 2020 sampling event results show that the current indoor air CVOC concentrations are similar to those measured in the concurrent outdoor air samples. Air sample results for the Stone Environmental 2014 sample data and AECOM data are identified on Figures 3-1 through Figure 3-5.

The most recent indoor air results and the 2014 sub-slab results were compared to the New York State Department of Health Decision Matrix and the outcomes are shown in Table 3-2. The New York State Department of Health Decision Matrices are provided in Appendix G. Evaluation of the data using the decision matrix indicates that the required appropriate actions

are currently being taken within the buildings. In the case where the New York State Department of Health Decision Matrix outcome was mitigation, the SSDS serves as the appropriate action. As a precautionary measure the SSDSs were installed to cover the entire building footprint (with the exception of a small area in Building 203 that was inaccessible).

4 SUMMARY AND CONCLUSIONS

The 2020 indoor air sampling event data indicate that the installed SSDSs are functioning as designed. Indoor air sample results were similar to that of the outdoor air sample indicating that the SVI mitigation systems are providing the appropriate level of mitigation by redirecting the sub-slab vapor to ambient air above the building. The off-Site residential system was inspected in January 2020 and was found to be on, but the manometer indicated that the system was not generating any suction. As described in the Final SMP, dated November 2017 (w/ September 2018, latest revision) (AECOM, 2017b) this air sampling event was the 4th round of samples collected since the SSDSs were installed and was the final round of samples prior to the shutdown of the system as described below.

The next inspection event is scheduled for June 2020 after which point the SSDSs will be turned off for a 6 month period. Following the shutdown period, sub-slab vapor and indoor air samples will be collected while the systems are still off. Sampling will occur during the 2020-2021 heating season (November 15 through March 15). Sub-slab vapor and indoor air samples will be collected in accordance with the SMP (AECOM, 2017b) from each 200-block building and compared to the NYSDOH decision matrices to determine if further operations of the SSDSs are necessary. If the NYSDOH decision matrices lead to the conclusion of "no further action" or "monitor only" the SSDSs will be turned off. A detail of the sub-slab air monitoring port is provided in Figure 3-6. If the results lead to the conclusion that continued mitigation is required, then the SSDSs will be turned back on and remain functional for an additional five years with annual monitoring.

The SSDSs will be inspected for operation according to the schedule outlined in the Final SMP, dated November 2017 (w/ October 2018, latest revision) (AECOM, 2017b). The next routine system inspection is scheduled for June 2020.

5 REFERENCES

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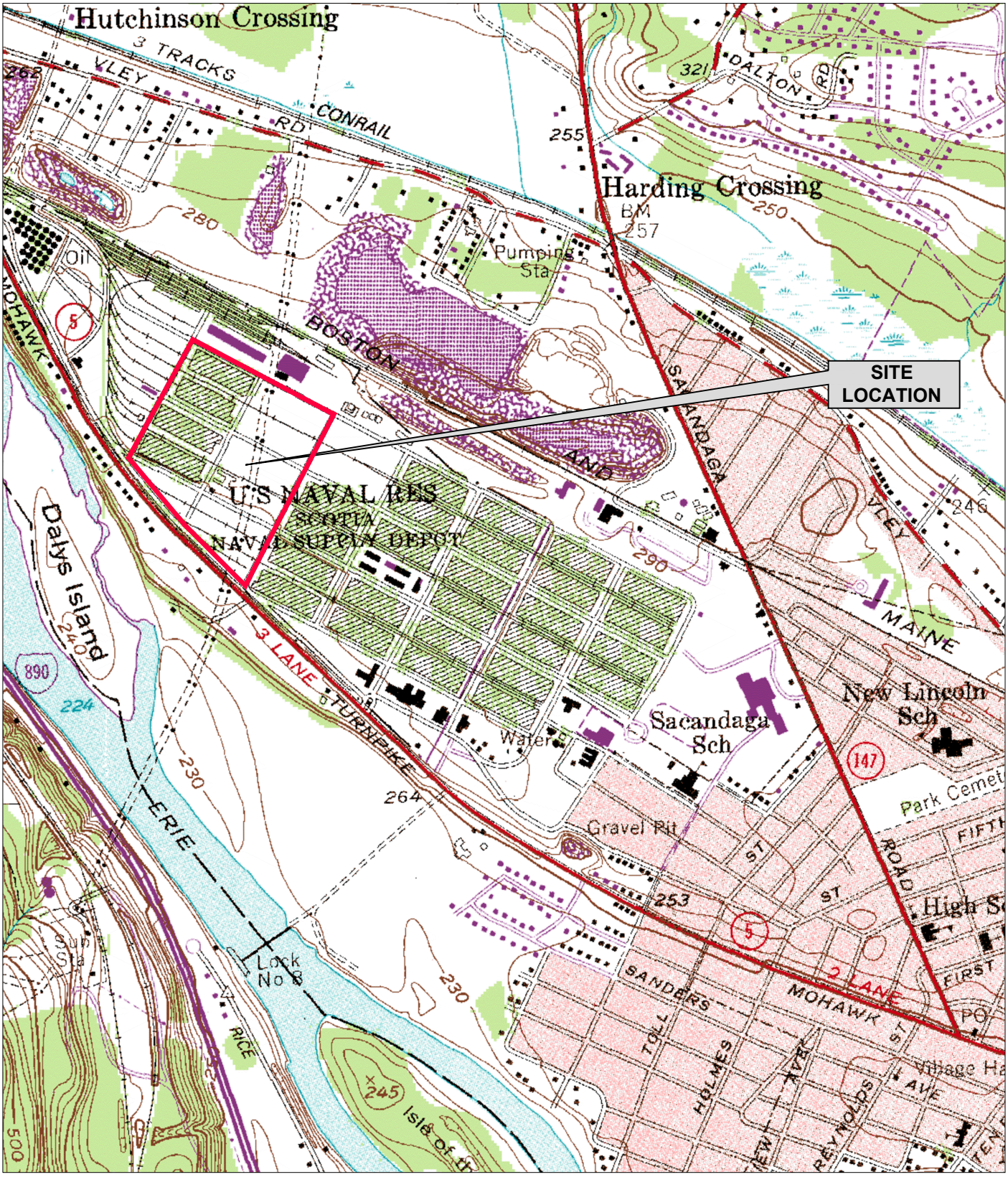
FIGURES



SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: JANUARY 2020

US ARMY Corps of Engineers

SITE LOCATION PLAN

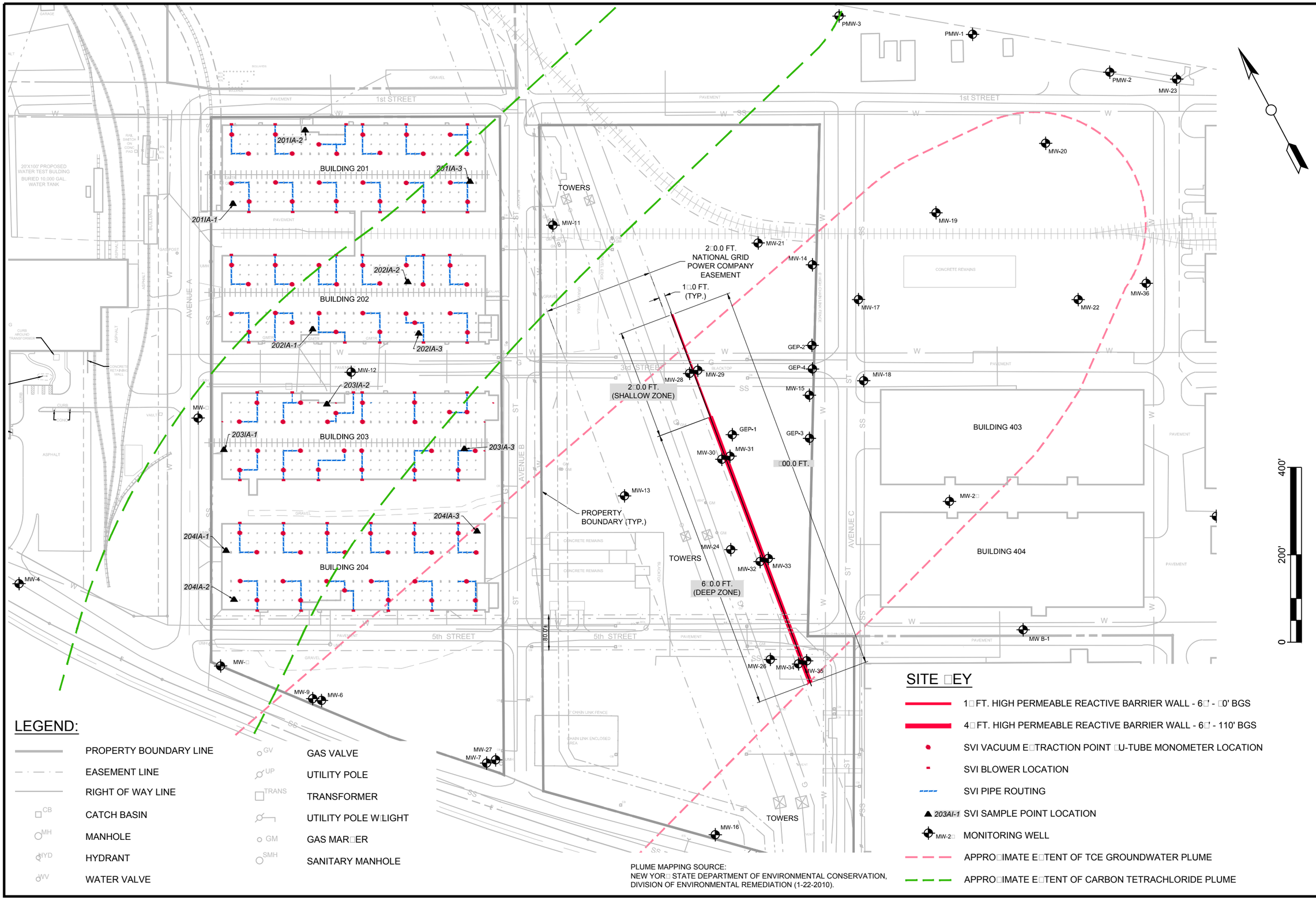
AECOM

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

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
- 203/A-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

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

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: January 2020

SAMPLE KEY

SAMPLE ID → 202IA-1

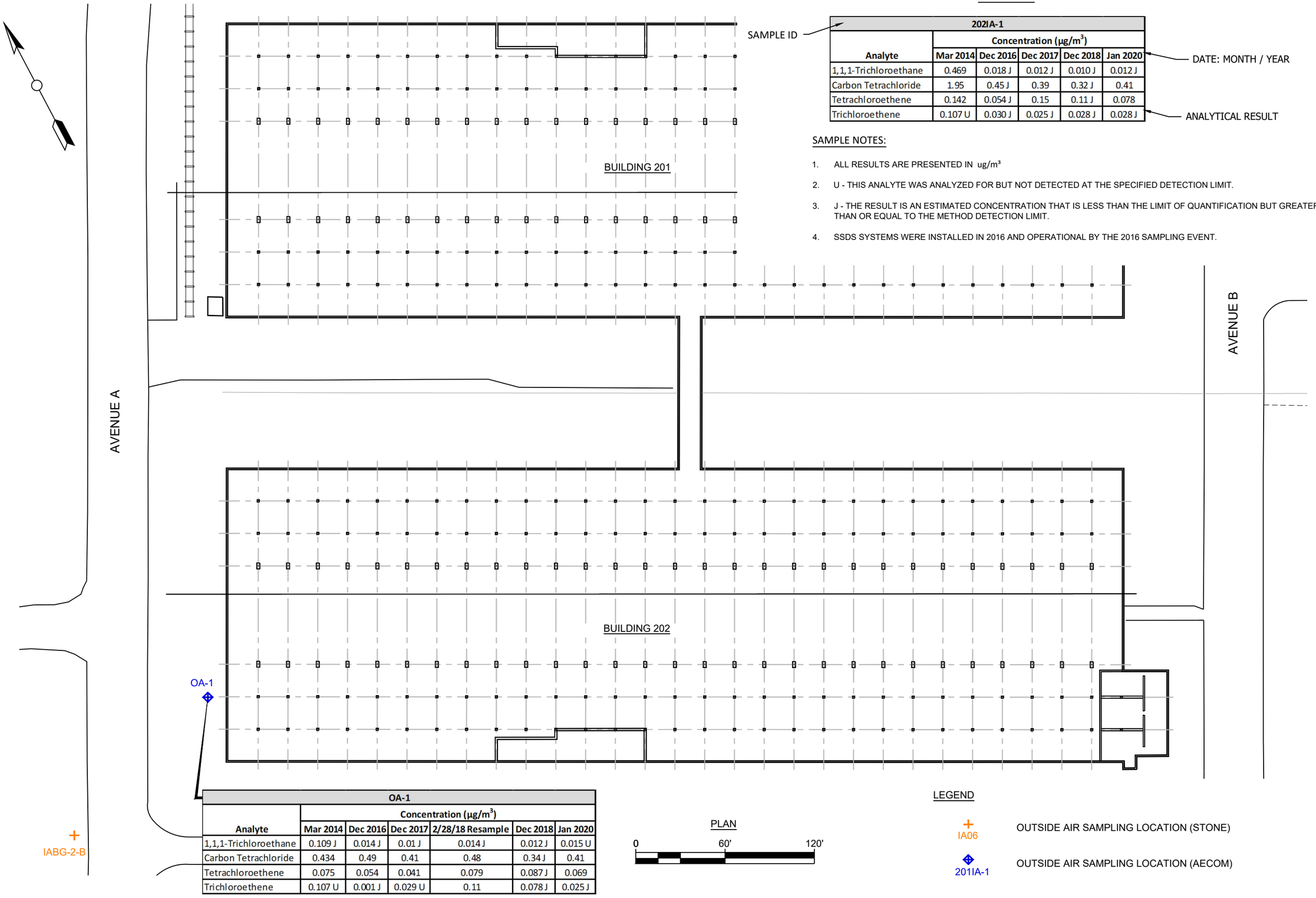
Analyte	Concentration (µg/m³) Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020
1,1,1-Trichloroethane	0.469	0.018 J	0.012 J	0.010 J	0.012 J
Carbon Tetrachloride	1.95	0.45 J	0.39	0.32 J	0.41
Tetrachloroethene	0.142	0.054 J	0.15	0.11 J	0.078
Trichloroethene	0.107 U	0.030 J	0.025 J	0.028 J	0.028 J

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) Mar 2014	Dec 2016	Dec 2017	2/28/18 Resample	Dec 2018	Jan 2020
1,1,1-Trichloroethane	0.109 J	0.014 J	0.01 J	0.014 J	0.012 J	0.015 U
Carbon Tetrachloride	0.434	0.49	0.41	0.48	0.34 J	0.41
Tetrachloroethene	0.075	0.054	0.041	0.079	0.087 J	0.069
Trichloroethene	0.107 U	0.001 J	0.029 U	0.11	0.078 J	0.025 J

PLAN

0 60' 120'

LEGEND

IA06 — OUTSIDE AIR SAMPLING LOCATION (STONE)

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

AECOM

Figure: 3-1

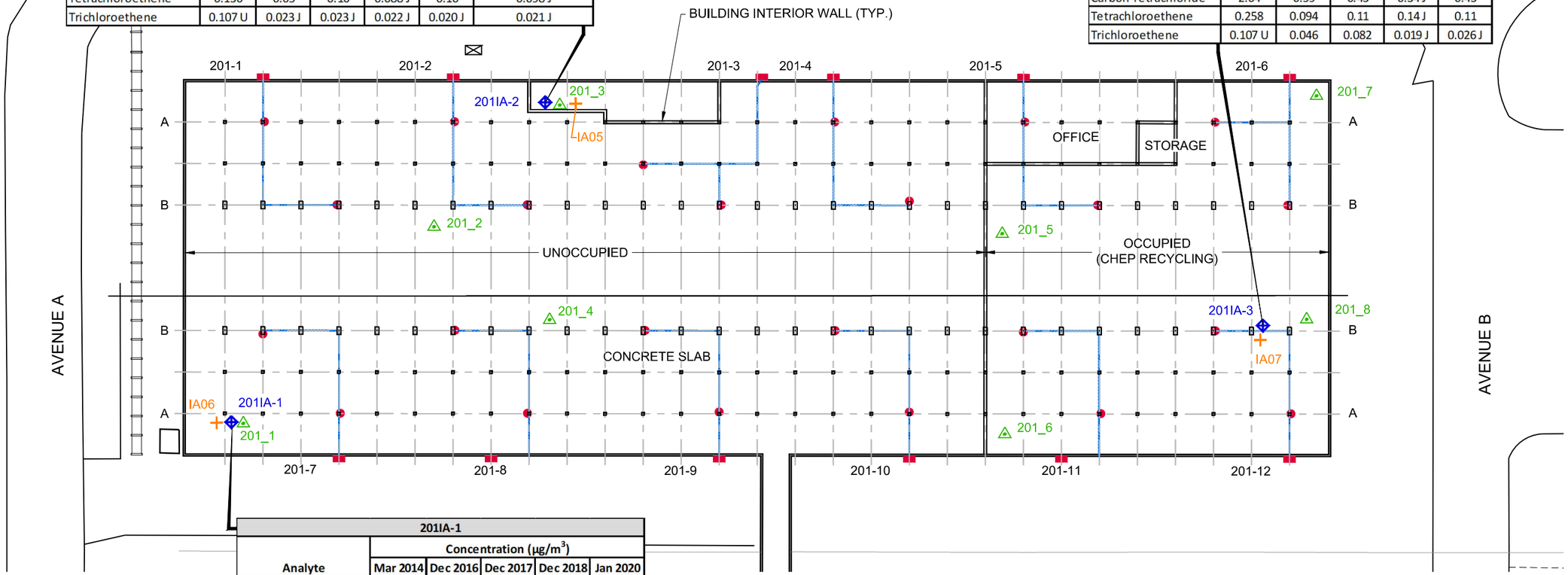
OUTSIDE
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: JANUARY 2020

201IA-2						
	Concentration (µg/m³)					
Analyte	Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020	3/26/2020 Resample
1,1,1-Trichloroethane	0.109 U	0.014 J	0.011 J	0.0086 J	0.025 J	0.009 J
Carbon Tetrachloride	0.673	0.51	0.39	0.34 J	2.1	0.38 J
Tetrachloroethene	0.136	0.05	0.16	0.088 J	0.10	0.098 J
Trichloroethene	0.107 U	0.023 J	0.023 J	0.022 J	0.020 J	0.021 J

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



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

BUILDING 201
PLAN

SAMPLE KEY

SAMPLE ID

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

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'

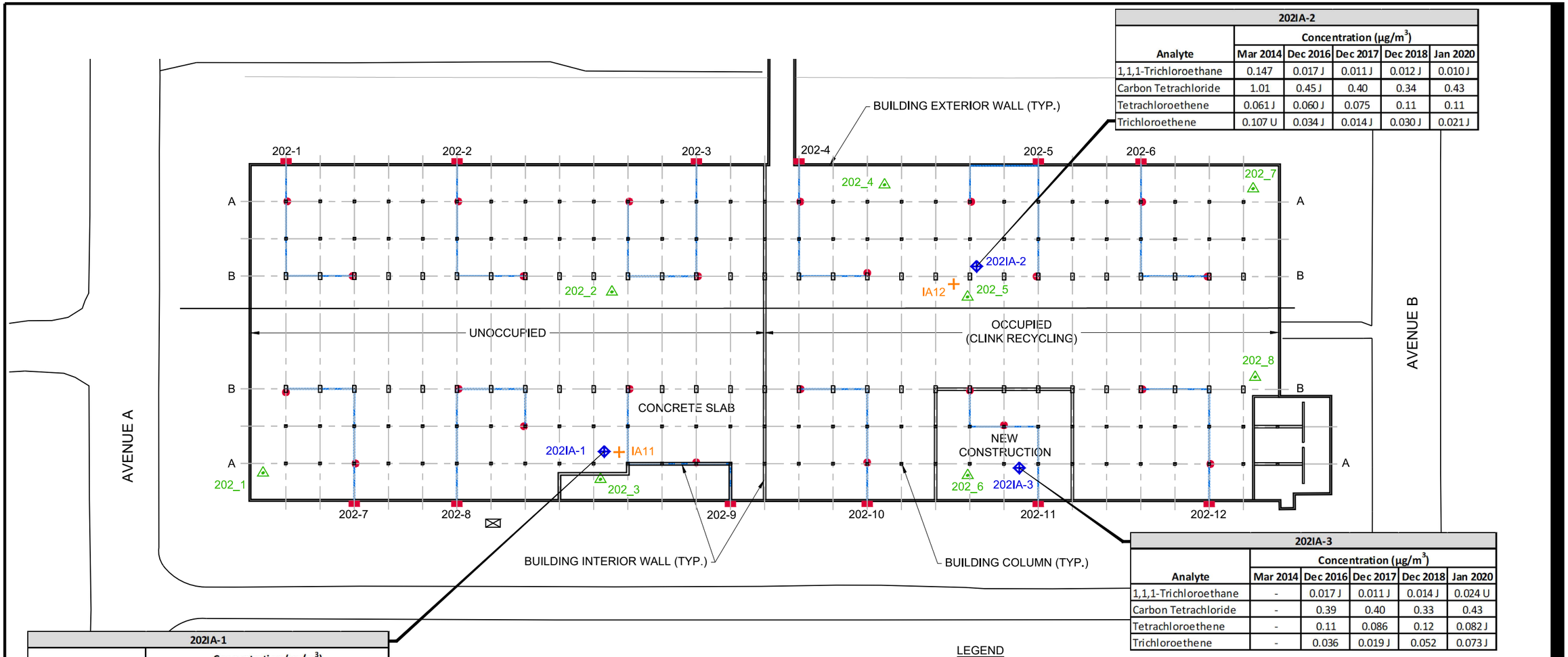
AECOM

Figure: 3-2

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: JANUARY 2020



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

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

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

BUILDING 202
PLAN

SAMPLE KEY

SAMPLE ID

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

DATE: MONTH / YEAR

ANALYTICAL RESULT

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 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.

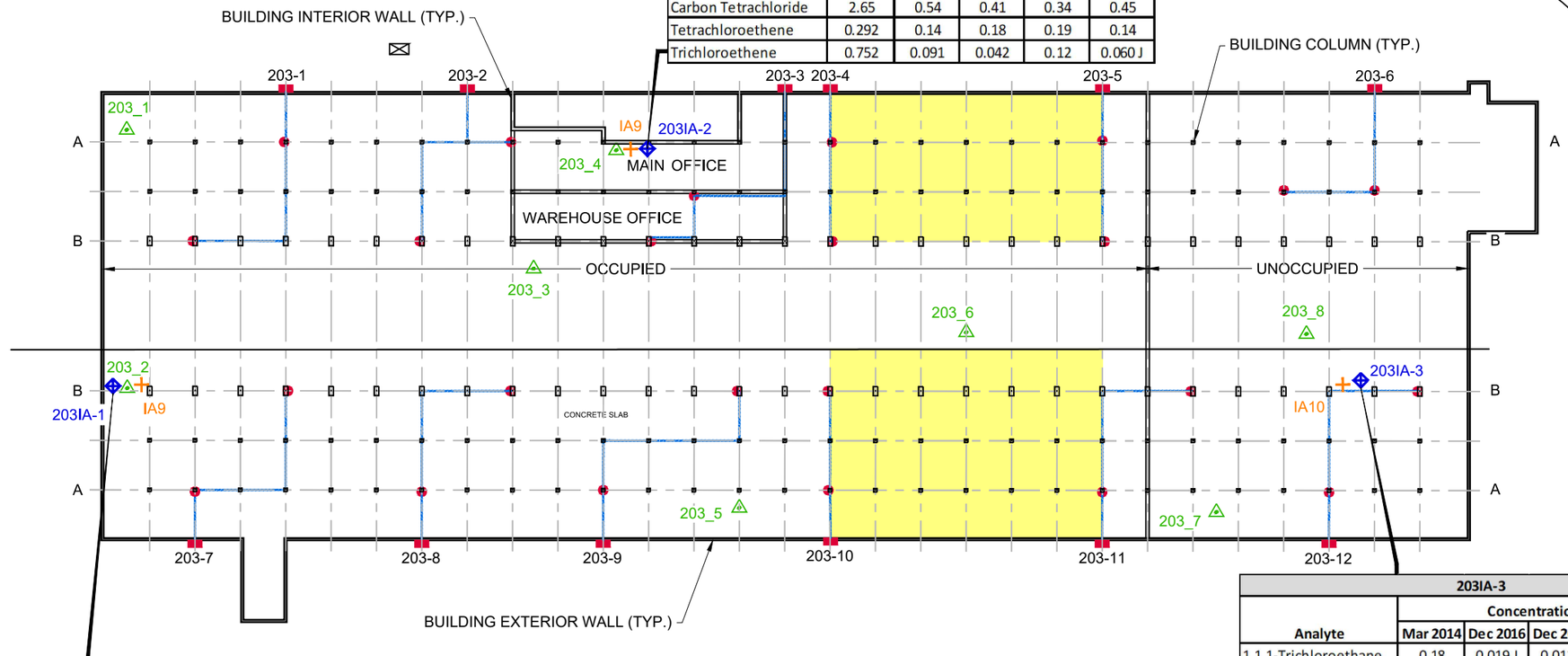
AECOM

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: JANUARY 2020



203IA-2

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

203IA-3

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

203IA-1

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

BUILDING 203
PLAN

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)

SAMPLE KEY

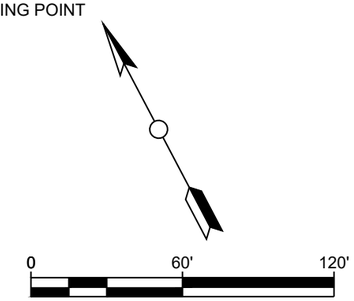
SAMPLE ID

202IA-1

Analyte	Concentration (µg/m³)				
	Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020
1,1,1-Trichloroethane	0.469	0.018 J	0.012 J	0.010 J	0.012 J
Carbon Tetrachloride	1.95	0.45 J	0.39	0.32 J	0.41
Tetrachloroethene	0.142	0.054 J	0.15	0.11 J	0.078
Trichloroethene	0.107 U	0.030 J	0.025 J	0.028 J	0.028 J

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.

AECOM

Figure: 3-4

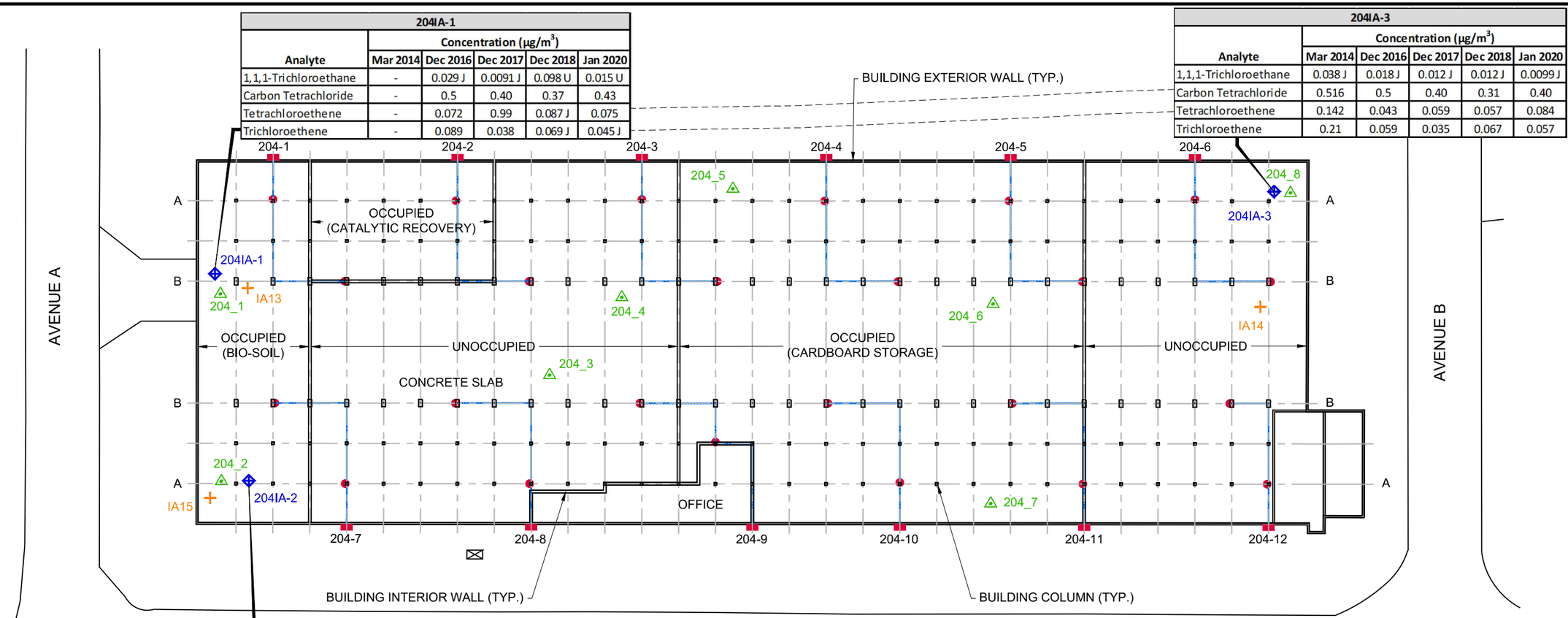
BUILDING 203
AIR MONITORING LOCATIONS

US ARMY Corps of Engineers

SVI MONITORING PROGRAM
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: JANUARY 2020

204IA-1					
Analyte	Concentration (µg/m³)				
	Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020
1,1,1-Trichloroethane	-	0.029 J	0.0091 J	0.098 U	0.015 U
Carbon Tetrachloride	-	0.5	0.40	0.37	0.43
Tetrachloroethene	-	0.072	0.99	0.087 J	0.075
Trichloroethene	-	0.089	0.038	0.069 J	0.045 J

204IA-3					
Analyte	Concentration (µg/m³)				
	Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020
1,1,1-Trichloroethane	0.038 J	0.018 J	0.012 J	0.012 J	0.0099 J
Carbon Tetrachloride	0.516	0.5	0.40	0.31	0.40
Tetrachloroethene	0.142	0.043	0.059	0.057	0.084
Trichloroethene	0.21	0.059	0.035	0.067	0.057



204IA-2					
Analyte	Concentration (µg/m³)				
	Mar 2014	Dec 2016	Dec 2017	Dec 2018	Jan 2020
1,1,1-Trichloroethane	0.044 J	0.016 J	0.017J	0.062 UJ	0.094 U
Carbon Tetrachloride	0.572	0.47	0.46	0.36 J	0.56
Tetrachloroethene	0.149	0.057	0.29	0.063 J	0.083 J
Trichloroethene	3.92	0.061	0.2	0.096 J	0.079 J

BUILDING 204
PLAN

SAMPLE KEY

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

SAMPLE ID

DATE: MONTH / YEAR

ANALYTICAL RESULT

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'

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.

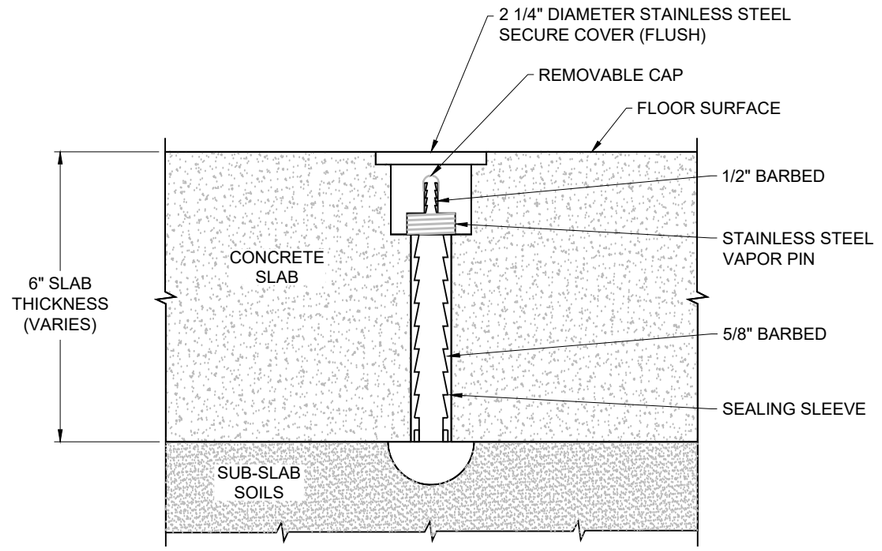
AECOM

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: JANUARY 2020



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: JANUARY 2020

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
Vacuum and Manometer Readings - June 2019
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.05	1	-0.040	1	-0.002	1	-0.003
2	-0.069	2	-0.097	2	-0.011	2	-0.021
3	-0.015	3	-0.037	3	-0.019	3	-0.021
4	-0.090	4	NM	4	0.016	4	-0.042
5	-0.013	5	-0.124	5	-0.004	5	NM
6	-0.042	6	-0.103	6	-0.039	6	-0.050
7	0.012	7	-0.026	7	-0.036	7	-0.470
8	-0.090	8	-0.048	8	-0.046	8	-0.036

MANOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	3.1	1A	3.0	1A	2.4	1A	3.1
1B	2.9	1B	3.2	1B	2.2	1B	3.7
2A	3.0	2A	2.7	2A	3.2	2A	3.7
2B	3.0	2B	3.5	2B	3.4	2B	3.6
3A	3.5	3A	3.5	3A	2.8	3A	3.6
3B	3.5	3B	3.5	3B	2.9	3B	3.6
4A	3.0	4A	3.5	4A	3.3	4A	3.9
4B	3.5	4B	3.4	4B	3.0	4B	3.9
5A	3.6	5A	3.5	5A	2.5	5A	3.3
5B	3.0	5B	3.5	5B	2.5	5B	3.3
6A	1.5	6A	2.5	6A	2.6	6A	3
6B	NM	6B	3.5	6B	2.6	6B	2.9
7A	3.1	7A	3.4	7A	3.6	7A	3.9
7B	2.9	7B	3.3	7B	3.6	7B	3.8
8A	3.3	8A	3.7	8A	2.9	8A	3.7
8B	3.6	8B	3.8	8B	3.2	8B	3.7
9A	3.2	9A	3.1	9A	0.5	9A	3.2
9B	3.3	9B	3.0	9B	0.5	9B	3.2
10A	3.7	10A	3.6	10A	3.0	10A	3.3
10B	3.7	10B	3.5	10B	2.9	10B	3.5
11A	3.0	11A	3.2	11A	3.0	11A	3.7
11B	3.4	11B	3.6	11B	2.4	11B	3.2
12A	NM	12A	3.4	12A	2.8	12A	3.4
12B	NM	12B	3.2	12B	2.6	12B	3.4

Notes:
NM- Not Monitored, the location was inaccessible or damaged

Table 2-2
Vacuum and Manometer Readings - January 2020
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.061	1	-0.004	1	-0.028	1	-0.030
2	-0.060	2	-0.022	2	-0.032	2	-0.025
3	-0.035	3	-0.009	3	-0.055	3	-0.009
4	-0.078	4	-0.021	4	-0.004	4	-0.009
5	-0.027	5	-0.019	5	-0.187	5	NM
6	-0.017	6	-0.032	6	-0.190	6	-0.003
7	NM	7	-0.031	7	-0.023	7	-0.007
8	-0.029	8	-0.030	8	-0.022	8	-0.006

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	2.9	1A	2.8	1A	2.3	1A	3.0
1B	2.2	1B	3.1	1B	2.1	1B	3.6
2A	3.0	2A	2.7	2A	2.0	2A	3.6
2B	3.0	2B	3.0	2B	3.2	2B	3.4
3A	3.0	3A	3.0	3A	2.8	3A	3.5
3B	3.0	3B	3.0	3B	2.9	3B	3.5
4A	2.9	4A	3.5	4A	3.1	4A	3.7
4B	3.3	4B	3.3	4B	2.5	4B	3.6
5A	3.6	5A	3.2	5A	2.3	5A	3.1
5B	3.0	5B	3.5	5B	2.2	5B	3.1
6A	3.6	6A	2.3	6A	2.0	6A	2.5
6B	3.5	6B	3.4	6B	1.9	6B	2.5
7A	3.1	7A	3.1	7A	2.7	7A	4.0
7B	2.8	7B	3.1	7B	2.6	7B	3.6
8A	3.4	8A	3.8	8A	2.2	8A	3.4
8B	3.6	8B	3.9	8B	2.5	8B	3.3
9A	3.1	9A	3.0	9A	2.6	9A	3.3
9B	NM	9B	2.9	9B	2.5	9B	3.6
10A	3.5	10A	3.7	10A	0.9	10A	2.6
10B	3.3	10B	3.5	10B	1.0	10B	3.0
11A	3.2	11A	2.9	11A	2.6	11A	3.3
11B	3.2	11B	3.3	11B	1.8	11B	3.1
12A	3.1	12A	3.4	12A	2.2	12A	3.1
12B	3.0	12B	3.2	12B	1.9	12B	3.0

Notes:
NM- Not Monitored, the location was inaccessible or damaged

Table 3-1
Air Sample Analytical Results January 2020
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 2020		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM 2020	
Sample ID	**Sample ID**																				
IA06-1-B	**201IA-1**	0.692		0.49	J	0.40		0.32	J	0.39		0.038	J	0.015	J	0.0096	J	0.0078	J	0.042	U
IA05-1-B	**201IA-2**	0.673		0.51		0.39		0.34	J	2.1		0.109	U	0.014	J	0.011	J	0.0086	J	0.025	J
IA07-1-B	**201IA-3**	2.64		0.59		0.43		0.34	J	0.43	J	0.109	U	0.015	J	0.010	J	0.0079	J	0.011	J
IA11-1-B	**202IA-1**	1.95		0.45	J	0.39		0.32	J	0.41	J	0.469		0.018	J	0.012	J	0.010	J	0.012	J
IA12-1-B	**202IA-2**	1.01		0.45	J	0.40		0.34		0.43	J	0.147		0.017	J	0.011	J	0.012	J	0.010	J
NS	**202IA-3**	-		0.39		0.40		0.33		0.43	J	-		0.017	J	0.011	J	0.014	J	0.091	UJ
IA09-1-B	**203IA-1**	0.692		0.42	J	0.37		0.33		0.40	J	0.196		0.380	U	0.011	J	0.075	U	0.012	J
IA08-1-B	**203IA-2**	2.65		0.54		0.41		0.34		0.45		0.737		0.023	J	0.012	J	0.016	J	0.059	U
IA10-1-B	**203IA-3**	0.654		0.48		0.40		0.35	J	0.42	J	0.180		0.019	J	0.012	J	0.015	J	0.014	J
NS	**204IA-1**	-		0.50		0.40		0.37		0.43	J	-		0.029	J	0.0091	J	0.098	U	0.054	UJ
IA15-1-B	**204IA-2**	0.572		0.47		0.46		0.36	J	0.56	J	0.044	J	0.016	J	0.017	J	0.062	UJ	0.094	UJ
IA14-1-B	**204IA-3**	0.516		0.50		0.40		0.31		0.40	J	0.038	J	0.018	J	0.012	J	0.012	J	0.0099	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	0.109	U	0.014	J	0.010	J	0.012	J	0.054	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.

Table 3-1
Air Sample Analytical Results January 2020
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 2020		Stone 2014		AECOM 2016		AECOM 2017		AECOM 2018		AECOM 2020	
Sample ID	Sample ID																				
IA06-1-B	**201IA-1**	0.068	J	0.054	J	0.044		0.053	J	0.30	J	0.107	U	0.037	J	0.031	U	0.025	UJ	0.025	J
IA05-1-B	**201IA-2**	0.136		0.050		0.16		0.088	J	0.10		0.107	U	0.023	J	0.023	J	0.022	J	0.020	J
IA07-1-B	**201IA-3**	0.258		0.094		0.11		0.14	J	0.11	J	0.107	U	0.046		0.082		0.019	J	0.026	J
IA11-1-B	**202IA-1**	0.142		0.054	J	0.15		0.11	J	0.078	J	0.107	U	0.030	J	0.025	J	0.028	J	0.028	J
IA12-1-B	**202IA-2**	0.061	J	0.060	J	0.075		0.11		0.11	J	0.107	U	0.034	J	0.014	J	0.030	J	0.021	J
NS	**202IA-3**	-		0.110		0.086		0.12		0.082	J	-		0.036		0.019		0.052		0.073	J
IA09-1-B	**203IA-1**	0.170		0.380	U	0.073		0.15		0.074	J	0.683		0.380	U	0.019	J	0.099		0.045	J
IA08-1-B	**203IA-2**	0.292		0.140		0.18		0.19		0.14		0.752		0.091		0.042		0.12		0.060	J
IA10-1-B	**203IA-3**	0.156		0.075		0.068		0.087	J	0.092	J	0.623		0.076		0.027	J	0.085	J	0.083	J
NS	**204IA-1**	-		0.072		0.99		0.087	J	0.075	J	-		0.089		0.038		0.069	J	0.045	J
IA15-1-B	**204IA-2**	0.149		0.057		0.29		0.063	J	0.083	J	3.92		0.061		0.20		0.096	J	0.079	J
IA14-1-B	**204IA-3**	0.142		0.043		0.059		0.057		0.084	J	0.210		0.059		0.035		0.067		0.057	J
IABG-1-B	**NS**	0.054	J	-		-		-		-		0.107	U	-		-		-		-	
IABG-2-B	**OA-1**	0.075	J	0.054	J	0.041		0.087	J	0.069	J	0.107	U	0.011	J	0.029	U	0.078	J	0.025	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.

Table 3-1
Air Sample Analytical Results January 2020
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 2020		Stone		Stone 2014		AECOM2017		AECOM 2018		AECOM 2020	
Sample ID	**Sample ID**																				
IA06-1-B	**201IA-1**	0.051	U	0.025	UJ	0.031	U	0.025	UJ	0.040	U	0.079	U	0.012	J	0.031	U	0.025	UJ	0.040	U
IA05-1-B	**201IA-2**	0.051	U	0.027	U	0.029	U	0.027	UJ	0.032	U	0.079	U	0.029	U	0.029	U	0.027	UJ	0.032	U
IA07-1-B	**201IA-3**	0.051	U	0.030	U	0.031	U	0.026	UJ	0.025	UJ	0.079	U	0.031	U	0.031	U	0.026	UJ	0.025	UJ
IA11-1-B	**202IA-1**	0.051	U	0.025	UJ	0.031	U	0.025	UJ	0.026	UJ	0.079	U	0.026	UJ	0.031	U	0.025	UJ	0.026	UJ
IA12-1-B	**202IA-2**	0.051	U	0.024	UJ	0.032	U	0.035	U	0.026	UJ	0.079	U	0.026	UJ	0.032	U	0.035	U	0.026	UJ
NS	**202IA-3**	-		0.022	U	0.034	U	0.034	U	0.087	UJ	-		0.023	U	0.034	U	0.034	U	0.087	UJ
IA09-1-B	**203IA-1**	0.051	U	0.360	U	0.032	U	0.071	U	0.027	UJ	0.079	U	0.380	U	0.032	U	0.071	U	0.027	UJ
IA08-1-B	**203IA-2**	0.051	U	0.030	U	0.032	U	0.034	U	0.057	U	0.079	U	0.031	U	0.032	U	0.034	U	0.057	U
IA10-1-B	**203IA-3**	0.051	U	0.027	U	0.033	U	0.050	UJ	0.026	UJ	0.079	U	0.029	U	0.033	U	0.050	UJ	0.026	UJ
NS	**204IA-1**	-		0.028	U	0.032	U	0.093	U	0.052	UJ	-		0.020	J	0.032	J	0.093	U	0.052	UJ
IA15-1-B	**204IA-2**	0.051	U	0.028	U	0.032	U	0.059	UJ	0.090	UJ	0.079	U	0.029	U	0.032	U	0.059	UJ	0.090	UJ
IA14-1-B	**204IA-3**	0.051	U	0.027	U	0.028	U	0.033	U	0.0250	UJ	0.079	U	0.028	U	0.028	U	0.033	U	0.025	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	0.079	U	0.024	UJ	0.029	U	0.026	UJ	0.052	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.

Table 3-1
Air Sample Analytical Results January 2020
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 2020	
Sample ID	Sample ID										
IA06-1-B	201IA-1	0.079	U	0.043	J	0.031	U	0.025	UJ	0.040	U
IA05-1-B	201IA-2	0.079	U	0.029	U	0.029	U	0.027	UJ	0.032	U
IA07-1-B	201IA-3	0.079	U	0.031	U	0.031	U	0.026	UJ	0.025	UJ
IA11-1-B	202IA-1	0.079	U	0.026	UJ	0.031	U	0.025	UJ	0.026	UJ
IA12-1-B	202IA-2	0.079	U	0.026	UJ	0.032	U	0.035	U	0.026	UJ
NS	202IA-3	-		0.023	U	0.034	U	0.034	U	0.087	UJ
IA09-1-B	203IA-1	0.079	U	0.380	U	0.032	U	0.071	U	0.027	UJ
IA08-1-B	203IA-2	0.079	U	0.031	U	0.032	U	0.034	U	0.057	U
IA10-1-B	203IA-3	0.079	U	0.029	U	0.033	U	0.050	UJ	0.026	UJ
NS	204IA-1	-		0.039		0.032		0.093	U	0.052	UJ
IA15-1-B	204IA-2	0.079	U	0.029	U	0.032	U	0.059	UJ	0.090	UJ
IA14-1-B	204IA-3	0.079	U	0.028	U	0.028	U	0.033	U	0.025	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
	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.
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Table 3-2
NYSDOH Health Guidance Decision Matrix Outcomes
January 2020
Former Scotia Naval Depot
Glenville NY

Location ID Stone/AECOM	Analyte	Soil Vapor Concentration 2014 (µg/m^3)	Indoor Air Concentration 2014 (µg/m^3)	Indoor Air Concentration 2016 (µg/m^3)	Indoor Air Concentration 2017 (µg/m^3)	Indoor Air Concentration 2018 (µg/m^3)	Indoor Air Concentration 2020 (µg/m^3)	New York State Department of Health Guidance/Decision Matrix Outcome[1]
IA05 - SV05 / 201IA-2	1,1,1-Trichloroethane	0.737	0.109 U	0.014 J	0.011 J	0.0086 J	0.025 J / 0.009 J	No Further Action
	Carbon Tetrachloride	122	0.673	0.51	0.39	0.34 J	2.1 / 0.38 J	Mitigate
	Tetrachloroethene	0.542 J	0.136	0.05	0.16	0.088 J	0.1 / 0.098	No Further Action
	Trichloroethene	1.05	0.107 U	0.023 J	0.023 J	0.022 J	0.020 J / 0.021 J	No Further Action
IA06 - SV06 / 201IA-1	1,1,1-Trichloroethane	27.3	0.038 J	0.015 J	0.0096 J	0.0078 J	0.011 U	No Further Action
	Carbon Tetrachloride	10.1	0.692	0.49 J	0.4	0.32 J	0.39	Monitor Only
	Tetrachloroethene	3.44	0.068 J	0.054 J	0.044	0.053 J	0.30	No Further Action
	Trichloroethene	2.82	0.107 U	0.037 J	0.031 U	0.025 UJ	0.025 J	No Further Action
IA07 - SV07 / 201IA-3	1,1,1-Trichloroethane	1.39	0.109 U	0.015 J	0.01 J	0.0079 J	0.011 J	No Further Action
	Carbon Tetrachloride	1,120	2.64	0.59	0.43	0.34 J	0.43	Mitigate
	Tetrachloroethene	0.868	0.258	0.094	0.11	0.14 J	0.11	No Further Action
	Trichloroethene	0.349	0.107 U	0.046	0.082	0.019 J	0.026 J	No Further Action
IA11 - SV11 / 202IA-1	1,1,1-Trichloroethane	96	0.469	0.018 J	0.012 J	0.010 J	0.012 J	No Further Action
	Carbon Tetrachloride	223	1.95	0.45 J	0.39	0.32 J	0.41	Monitor Only/Mitigate
	Tetrachloroethene	5.85 U	0.142	0.054	0.15	0.11 J	0.078	No Further Action
	Trichloroethene	2.32 J	0.107 U	0.030 J	0.025 J	0.028 J	0.028 J	No Further Action
IA12 - SV12 / 202IA-2	1,1,1-Trichloroethane	103	0.147	0.017 J	0.011 J	0.012 J	0.010 J	Monitor Only
	Carbon Tetrachloride	918	1.01	0.45 J	0.4	0.34	0.43	Mitigate
	Tetrachloroethene	0.271 U	0.061 J	0.060 J	0.075	0.11	0.11	No Further Action
	Trichloroethene	0.172 J	0.107 U	0.034 J	0.014 J	0.030 J	0.021 J	No Further Action
NS / 202IA-3	1,1,1-Trichloroethane	-	-	0.017 J	.011 J	0.014 J	0.024 U	N/A
	Carbon Tetrachloride	-	-	0.39	0.4	0.33	0.43	N/A
	Tetrachloroethene	-	-	0.11	0.086	0.12	0.082 J	N/A
	Trichloroethene	-	-	0.036	.019 J	0.052	0.073 J	N/A
IA08 - SV08 / 203IA-2	1,1,1-Trichloroethane	862	0.737	0.023 J	0.011 J	0.016 J	0.016 U	Monitor Only
	Carbon Tetrachloride	3,270	2.65	0.54	0.37	0.34	0.45	Mitigate
	Tetrachloroethene	0.678	0.292	0.14	0.073	0.19	0.14	No Further Action
	Trichloroethene	0.699	0.752	0.091	0.019 J	0.12	0.060 J	No Further Action
IA09 - SV09 / 203IA-1	1,1,1-Trichloroethane	72.6	0.196	0.380 U	0.013 J	0.075 U	0.012 J	No Further Action
	Carbon Tetrachloride	68.9	0.692	0.42 J	0.41	0.33	0.40	Monitor Only/Mitigate
	Tetrachloroethene	0.339	0.17	0.380 U	0.18	0.15	0.074	No Further Action
	Trichloroethene	0.333	0.683	0.380 U	0.042	0.099	0.045	No Further Action
IA10 - SV10 / 203IA-3	1,1,1-Trichloroethane	45.7	0.18	0.019 J	0.012 J	0.015 J	0.014 J	No Further Action
	Carbon Tetrachloride	22.3	0.654	0.48	0.4	0.35 J	0.42	Monitor Only
	Tetrachloroethene	0.231	0.156	0.075	0.068	0.087 J	0.092	No Further Action
	Trichloroethene	132	0.623	0.076	0.027J	0.085 J	0.083	Monitor Only
SV13 / 204IA-1	1,1,1-Trichloroethane	8.07	Not Available	0.029 J	0.0091 J	0.098 U	0.015 U	No Further Action
	Carbon Tetrachloride	937	Not Available	0.5	0.4	0.37	0.43	Mitigate
	Tetrachloroethene	3.76	Not Available	0.072	0.99	0.087 J	0.075	No Further Action
	Trichloroethene	1,630	Not Available	0.089	0.038	0.069 J	0.045 J	Mitigate
IA14 - SV14 / 204IA-3	1,1,1-Trichloroethane	2.35	0.038 J	0.018 J	0.012 J	0.012 J	0.0099 J	No Further Action
	Carbon Tetrachloride	1.99	0.516	0.5	0.4	0.31	0.40	Identify and Reduce
	Tetrachloroethene	63.4	0.142	0.043	0.059	0.057	0.084	No Further Action
	Trichloroethene	3.12	0.21	0.059	0.035	0.067	0.057	No Further Action
IA15 - SV15 / 204IA-2	1,1,1-Trichloroethane	0.109 U	0.044 J	0.016 J	0.017 J	0.062 UJ	0.094 U	No Further Action
	Carbon Tetrachloride	0.774	0.572	0.47	0.46	0.36 J	0.56	Identify and Reduce
	Tetrachloroethene	0.075 J	0.149	0.057	0.29	0.063 J	0.083 J	No Further Action
	Trichloroethene	0.065 J	3.92	0.061	0.20	0.096 J	0.079 J	No Further Action

Note:
[1] - Matrix outcome determined by 2014 sub-slab vapor concentrations and 2020 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

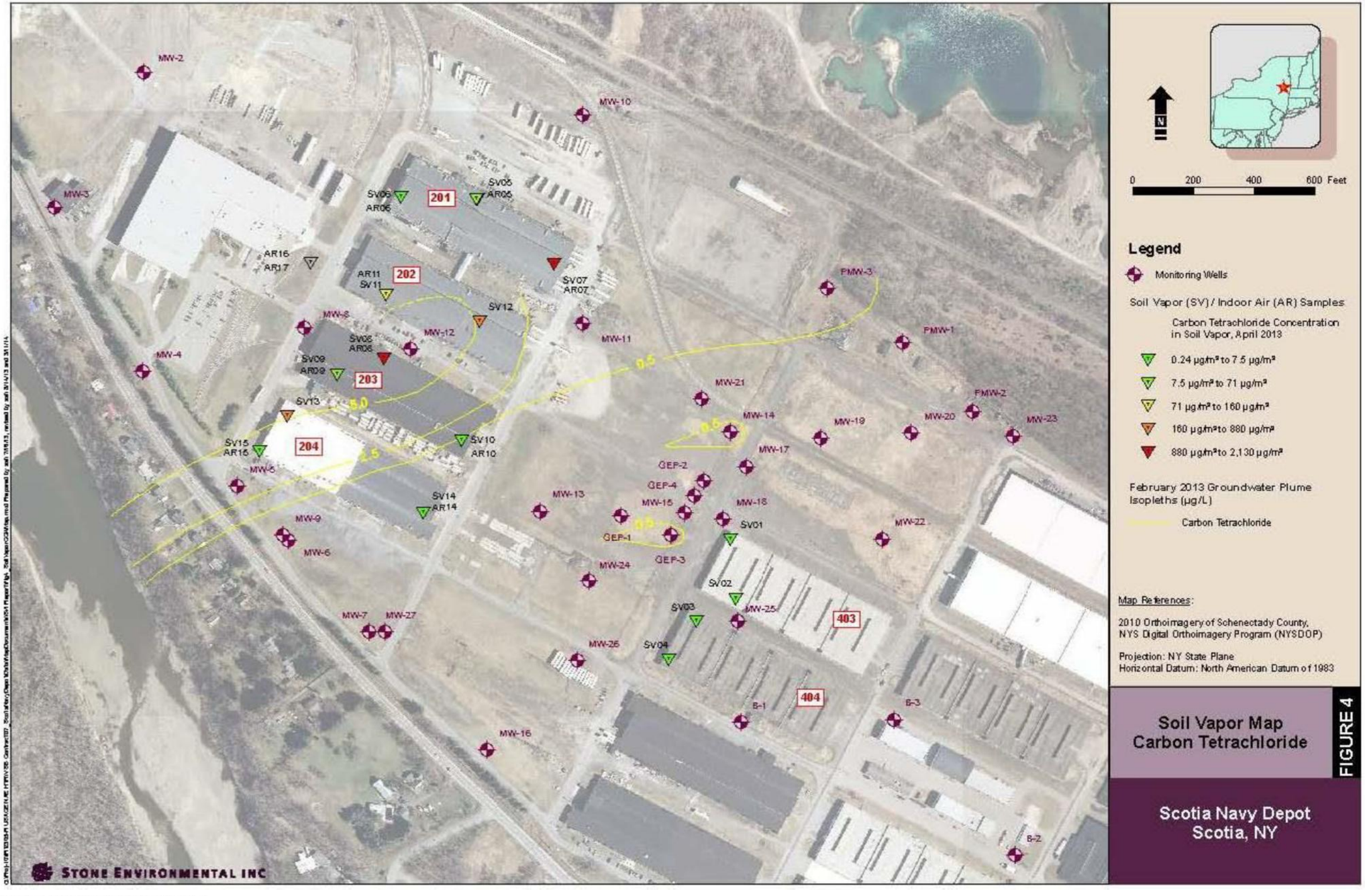


Figure 5: 1,1,1-Trichloroethane Sub-Slab Soil Vapor Concentration Map

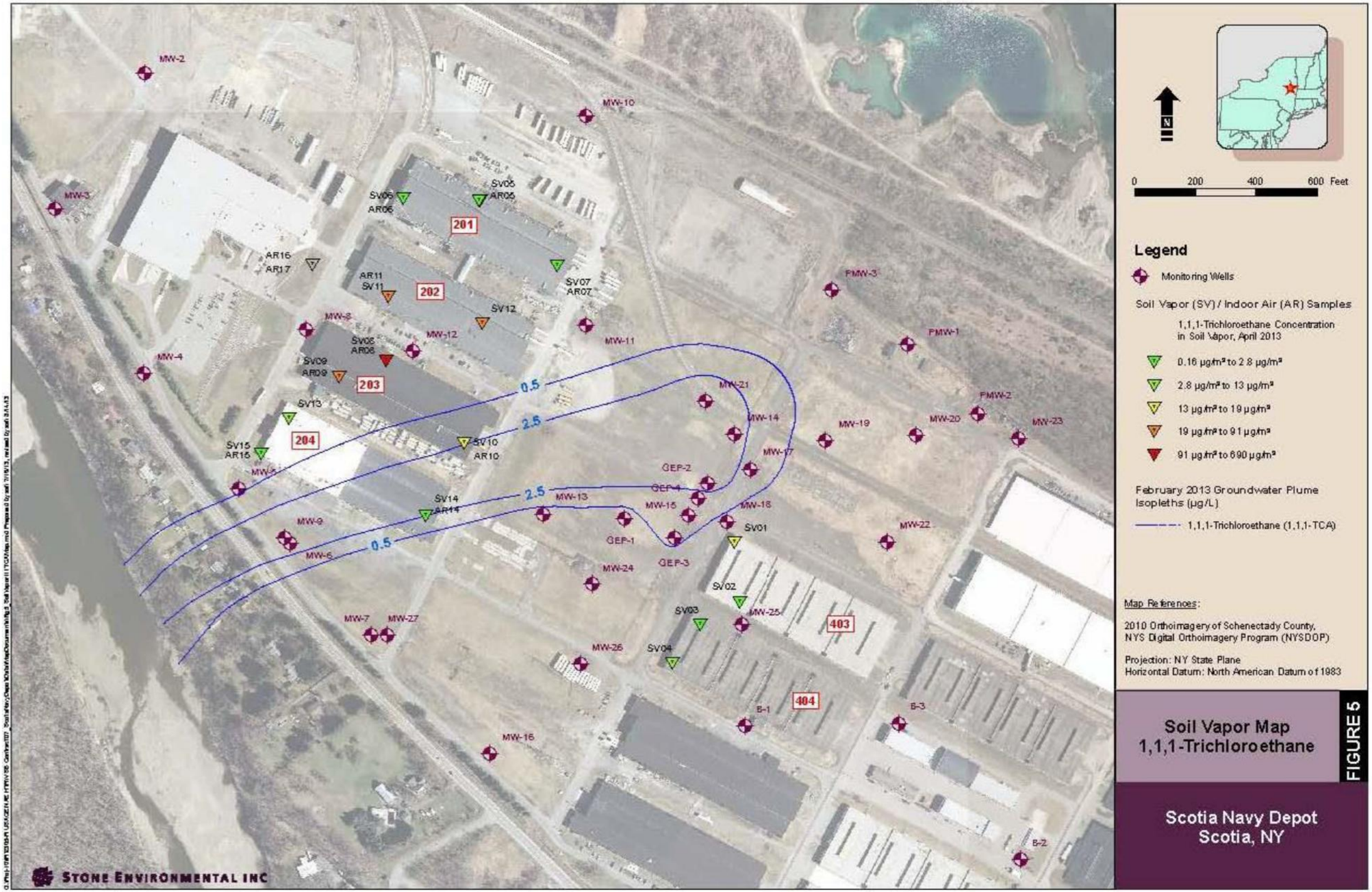


Figure 6: Tetrachloroethene Sub-Slab Soil Vapor Concentration Map

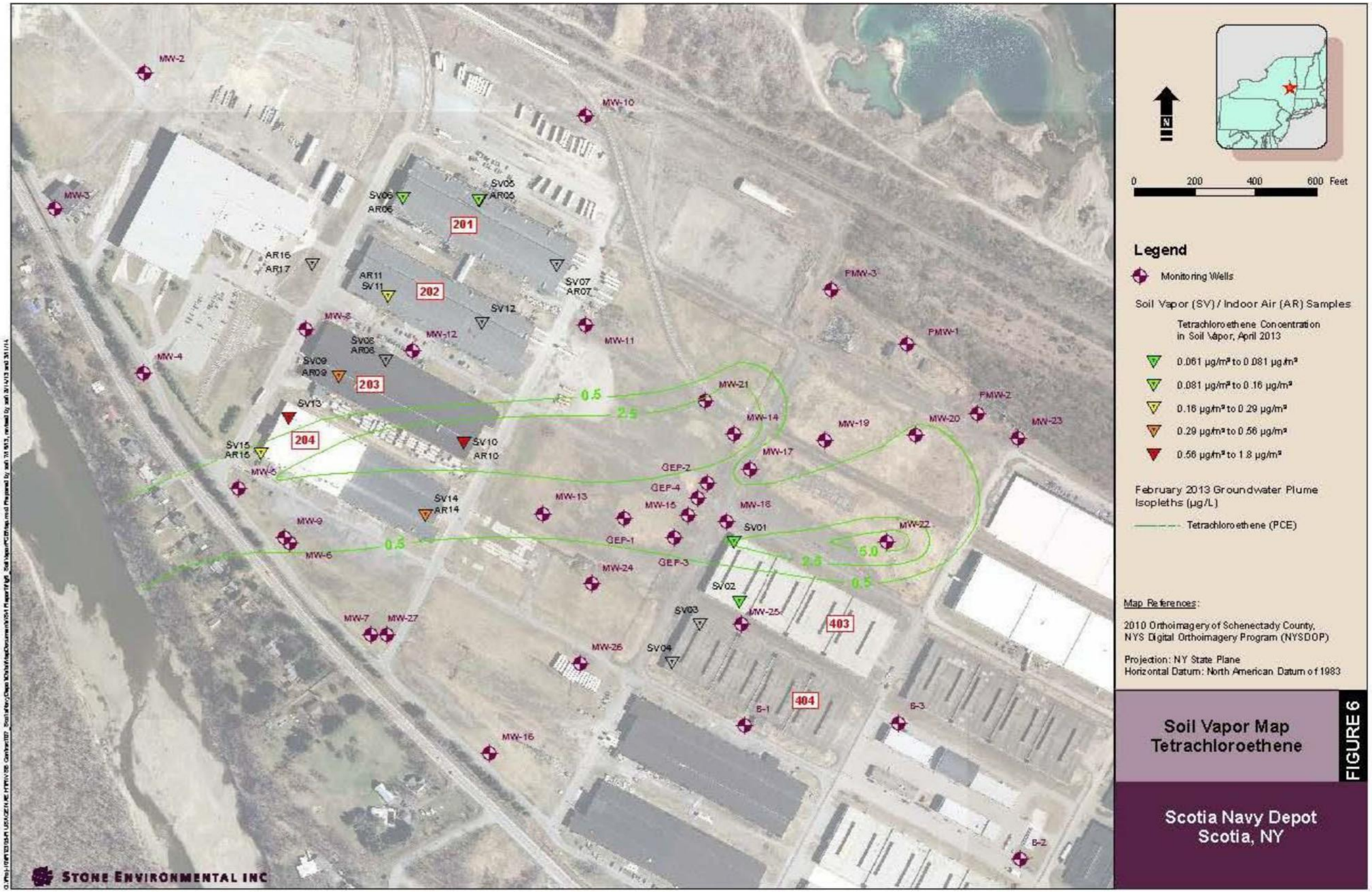
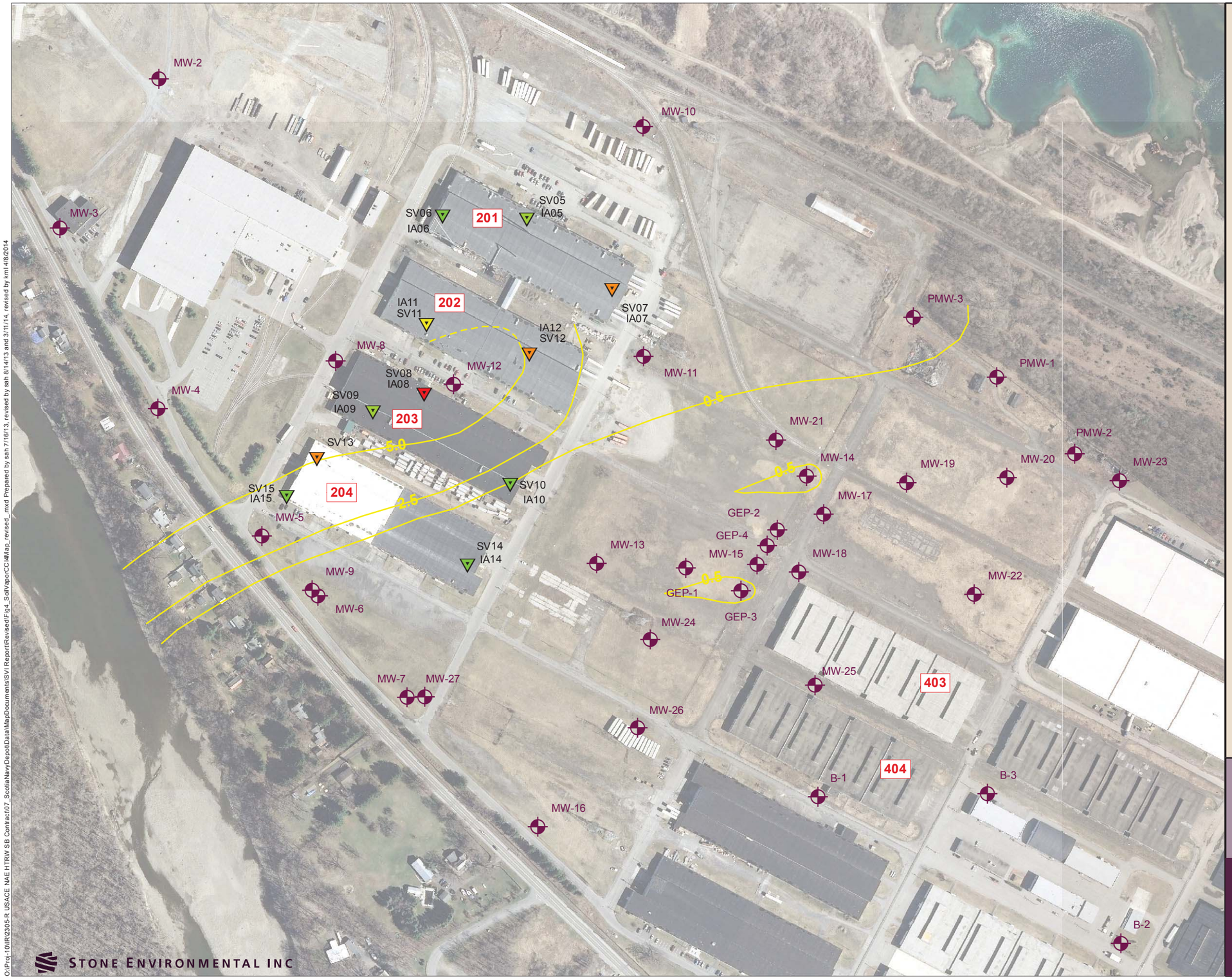


Figure 7: Trichloroethene Sub-Slab Soil Vapor Concentration Map



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)

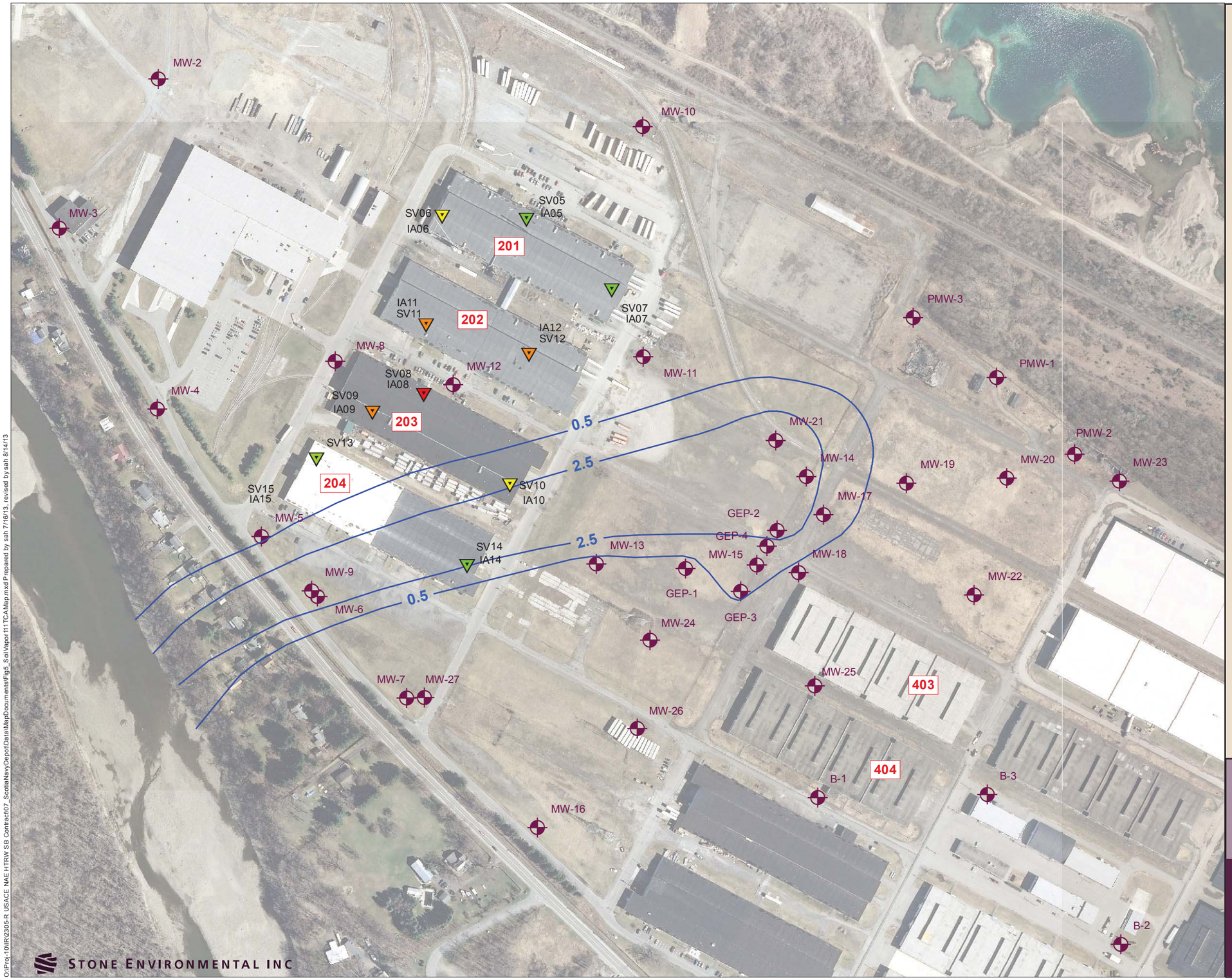
Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

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



N

0 200 400 600 Feet

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:

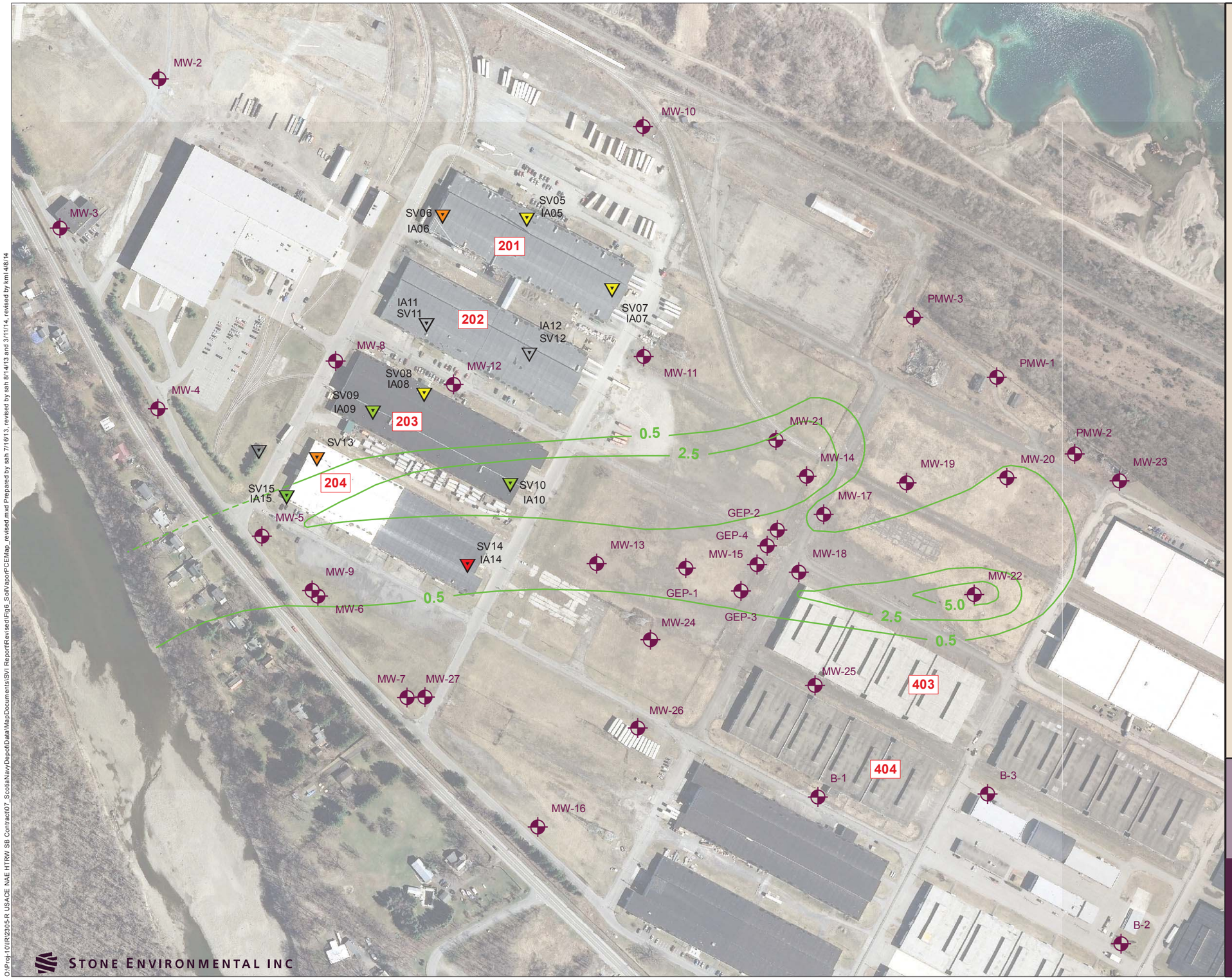
2010 Orthoimagery of Schenectady County, NYS Digital Orthoimagery Program (NYSDOP)

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



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)

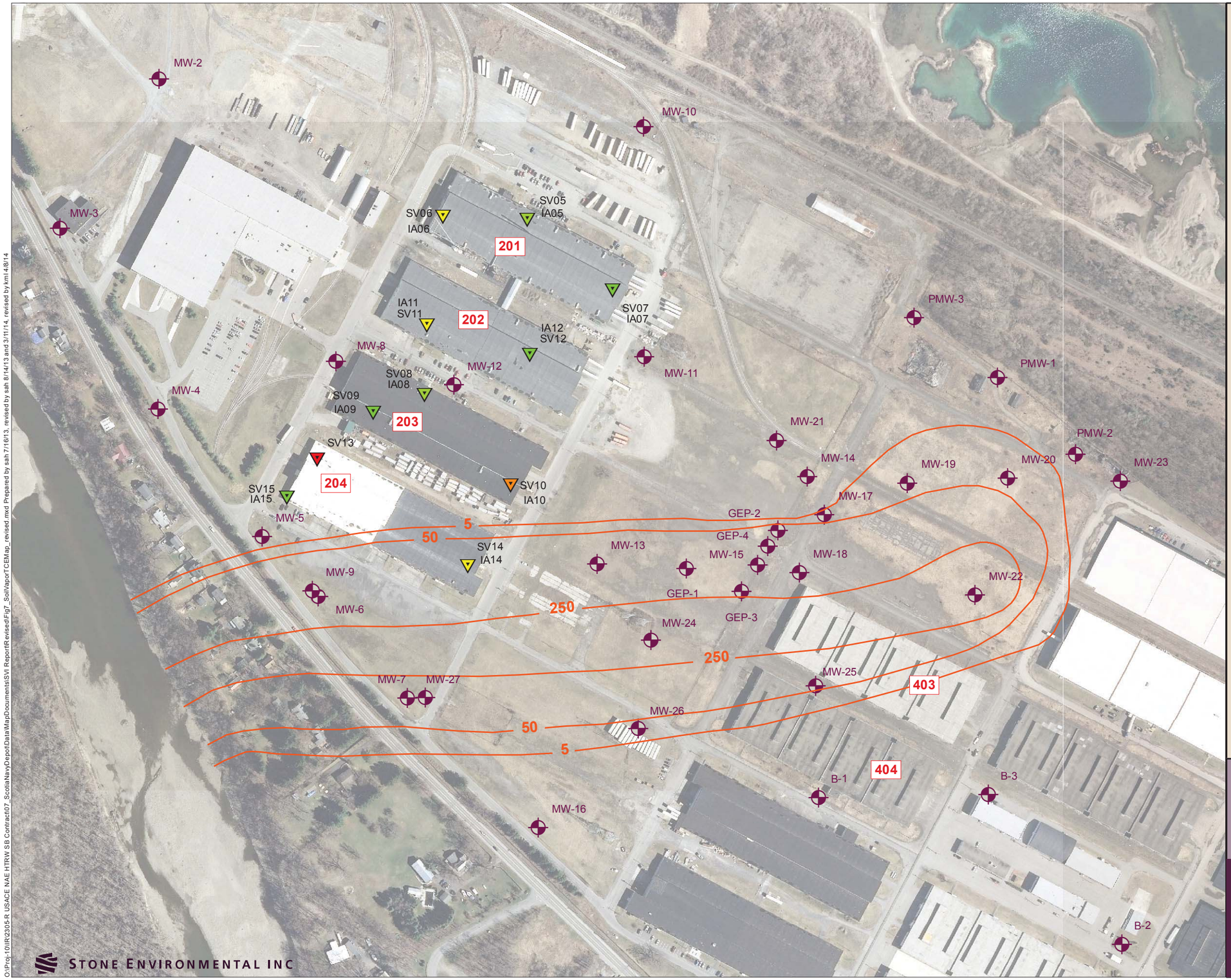
Projection: NY State Plane
Horizontal Datum: North American Datum of 1983

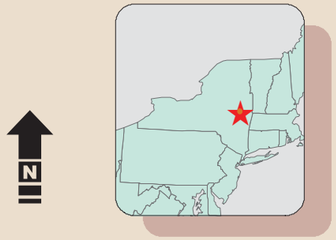
Sub-Slab Soil Vapor Map Tetrachloroethene

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





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

O:\Proj-1\01IR\2305-R USACE NAE HTRW SB Contract\07_ScotiaNavyDepot\DataMapDocuments\SVI Report\Revised\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

APPENDIX B: Weather Data at Time of Sample Collection

Weather Data for SVI Monitoring

Source: Weather Underground

Date	Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
1/15/2020	07:51	42 F	28 F	58 %	WNW	9 mph	0 mph	29.8 in	0.0 in	0.0 in	Cloudy
1/15/2020	08:51	42 F	29 F	60 %	WNW	10 mph	0 mph	29.8 in	0.0 in	0.0 in	Cloudy
1/15/2020	09:51	43 F	29 F	58 %	WNW	9 mph	0 mph	29.8 in	0.0 in	0.0 in	Cloudy
1/15/2020	12:51	42 F	28 F	53 %	WNW	12 mph	0 mph	29.8 in	0.0 in	0.0 in	Cloudy
1/15/2020	14:51	43 F	25 F	42 %	NW	12 mph	0 mph	29.8 in	0.0 in	0.0 in	Cloudy
1/15/2020	15:51	41 F	26 F	49 %	NW	13 mph	0 mph	29.8 in	0.0 in	0.0 in	Partly Cloudy
1/15/2020	16:51	41 F	25 F	53 %	NNW	5 mph	0 mph	29.8 in	0.0 in	0.0 in	Mostly Cloudy
1/15/2020	17:51	39 F	25 F	57 %	N	7 mph	0 mph	29.8 in	0.0 in	0.0 in	Partly Cloudy
1/15/2020	18:51	39 F	25 F	67 %	CALM	0 mph	0 mph	29.8 in	0.0 in	0.0 in	Fair
1/15/2020	21:51	39 F	24 F	79 %	CALM	0 mph	0 mph	29.8 in	0.0 in	0.0 in	Mostly Cloudy

Date	Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
1/16/2020	07:51	32 F	32 F	92 %	S	3 mph	0 mph	29.4 in	0.0 in	0.0 in	Fog
1/16/2020	08:51	32 F	32 F	79 %	W	9 mph	0 mph	29.4 in	0.0 in	0.0 in	Mostly Cloudy
1/16/2020	10:51	29 F	29 F	65 %	WNW	22 mph	32 mph	29.5 in	0.0 in	0.0 in	Partly Cloudy/Windy
1/16/2020	11:51	28 F	28 F	63 %	WNW	21 mph	39 mph	29.5 in	0.0 in	0.0 in	Partly Cloudy/Windy
1/16/2020	12:51	26 F	26 F	53 %	WNW	23 mph	32 mph	29.5 in	0.0 in	0.0 in	Partly Cloudy/Windy
1/16/2020	13:51	24 F	24 F	55 %	WNW	18 mph	0 mph	29.5 in	0.0 in	0.0 in	Mostly Cloudy
1/16/2020	14:51	25 F	25 F	57 %	WNW	14 mph	0 mph	29.5 in	0.0 in	0.0 in	Mostly Cloudy
1/16/2020	15:51	20 F	20 F	46 %	NW	17 mph	28 mph	29.6 in	0.0 in	0.0 in	Mostly Cloudy
1/16/2020	16:51	19 F	19 F	50 %	WNW	21 mph	33 mph	29.6 in	0.0 in	0.0 in	Light Snow/Windy
1/16/2020	17:51	16 F	16 F	48 %	WNW	18 mph	32 mph	29.7 in	0.0 in	0.0 in	Mostly Cloudy

APPENDIX C: NYSDOH Indoor Air Quality Questionnaires and Building Inventory Forms

Building 201 - 48 Fourty SOLUTIONS

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 Gerlinde Wolf Date/Time Prepared 1/15/2020; 1000

Preparer's Affiliation AECOM Phone No. 518-951-2200

Purpose of Investigation SVI monitoring

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Finlan First Name: James

Address: 201 A Street Schenectady, NY 12306

County: Schenectady

Home Phone: 518-861-5400 Office Phone: 518-861-5410

Number of Occupants/persons at this location 30 Age of Occupants >18

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

Interviewed: Y / (N)

Last Name: Ahl First Name: David

Address: 695 Rotterdam Industrial Park, Schenectady, NY 12306

County: Schenectady

Home Phone: _____ Office Phone: 518-356-4445

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 could not be accessed.

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 unoccupied 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
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 Fork lift 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) 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 PID Meter

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

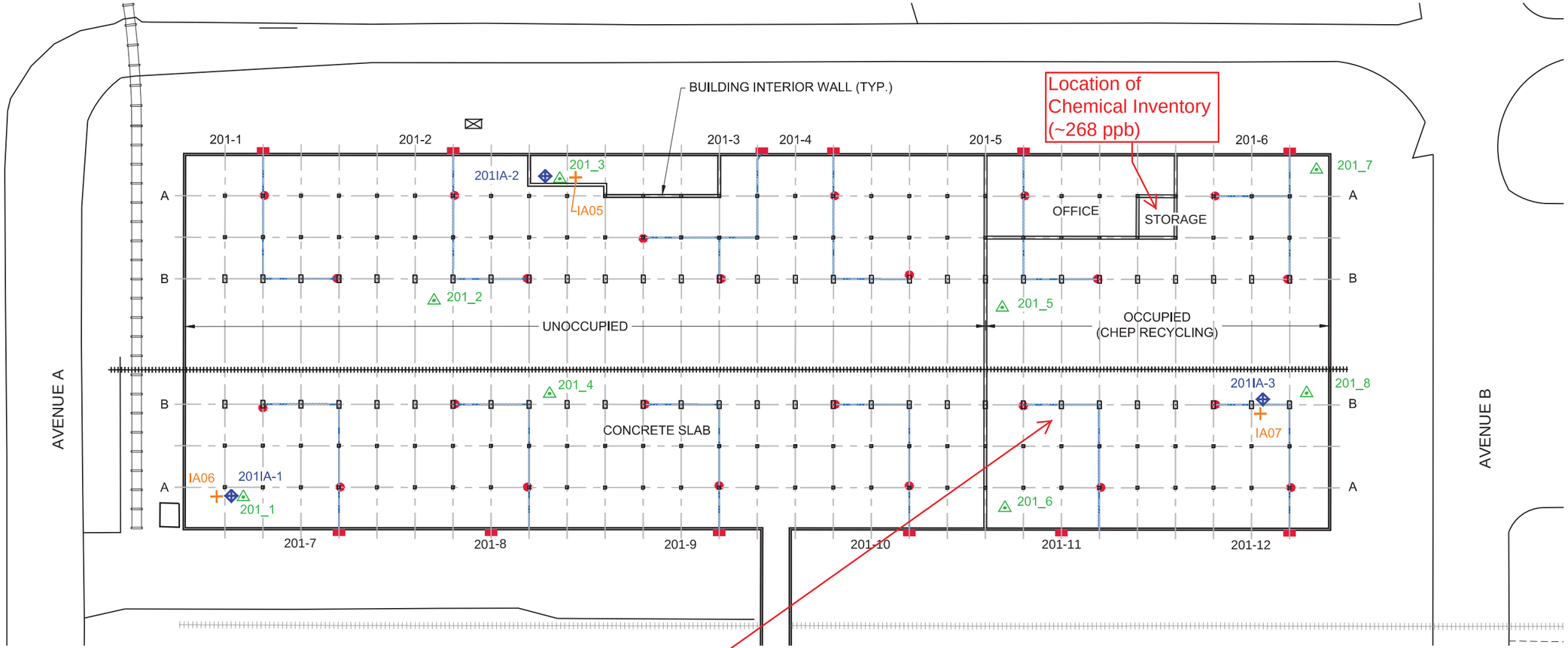
Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Warehouse	Motor Oil	1 qt.	U	Ingredients In Photos	268 ppb	Y
Warehouse	Anti-freeze (2x)	1 gal.	U	Ingredients In Photos		Y
Warehouse	Shell Spirax Transmission Oil	5 gal.	U	Ingredients In Photos		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: SAE 5W-30 Motor Oil** **Location: Warehouse**
Front: 	Back: 

Photograph No. 2	**Product: Pestone Anti-freeze/Coolant** **Location: Warehouse**
Front: 	Back: 

Photograph No. 3	**Product: Shell Spirax Transmission Oil** **Location: Warehouse**



2.

3.

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: DECEMBER 2017

Building 202
East
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 Gerlinde Wolf Date/Time Prepared 1/15/2020; 1020

Preparer's Affiliation AECOM Phone No. 518-951-2200

Purpose of Investigation SVI Monitoring

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Kimball First Name: Micha

Address: 202 B Street, Scotia, NY

County: Schenectady

Home Phone: _____ Office Phone: 518-410-8551

Number of Occupants/persons at this location ~10-15 Age of Occupants >18

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

Interviewed: Y / (N)

Last Name: Ahl First Name: David

Address: 695 Rotterdam Industrial Park, Schenectady, NY 12306

County: Schenectady

Home Phone: _____ Office Phone: 518-356-4445

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 accessed.

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

In 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.

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.
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 Prpoane forklift 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? Paints/chemicals stored in warehouse outside newly constructed office area
~Spray paint within 6 months ~Welding 1x / week

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 equipment paint jobs performed 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? Not directly in sampled areas. Used in office area 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? WD-40, Lubricants and paint used in workshop area.

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 PID Meter

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
Bathroom	Spray Bleach	24 fl. oz.	empty	Ingredients In Photo	243 ppb	Y
Warehouse	Windshield Washer Fluid	1 gal.	N	Ingredients In Photo	305 ppb	Y
Workshop Cabinet	WD-40 (6x)	12 oz.	N	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Spray Paint (10x)	12 oz.	N	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	All Season Lube	1 qt.	N	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Mean Green (2x)	1 gal.	U	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Cleaning Agent (1x)	1 gal.	N	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Paint (5x)	1 qt.	U	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Windex (1x)	24 oz.	U	Ingredients In Photo	1370 ppb	Y
Workshop Cabinet	Xtra Grease (3x)	14.5 fl. oz.	U	Ingredients In Photo	1370 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.

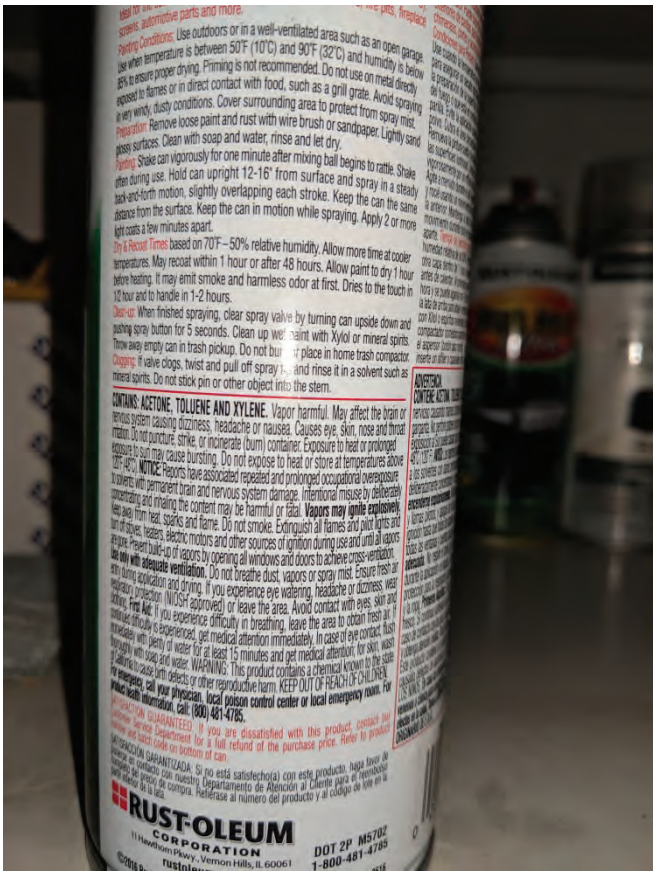
Photograph No. 1	**Product: Comet Cleaner** **Location: Bathroom**
Front: 	**Back:** 

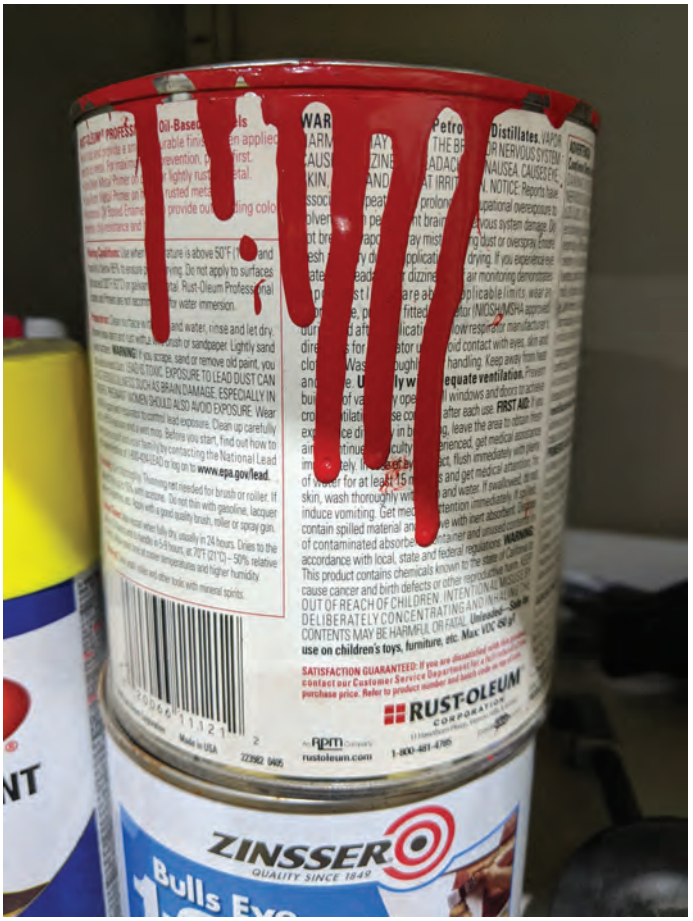
Photograph No. 2

Product: Windshield Washer Fluid

Location: Bathroom

Front:

Photograph No. 3	**Product: Spray Paint** **Location: Workshop Cabinet**
Front:  	Back: 

Photograph No. 4	**Product: Enamel** **Location: Workshop Cabinet**
Front: 	Back: 

Photograph No. 5	**Product: All Season Lube** **Location: Workshop Cabinet**
Front: 	Back: 

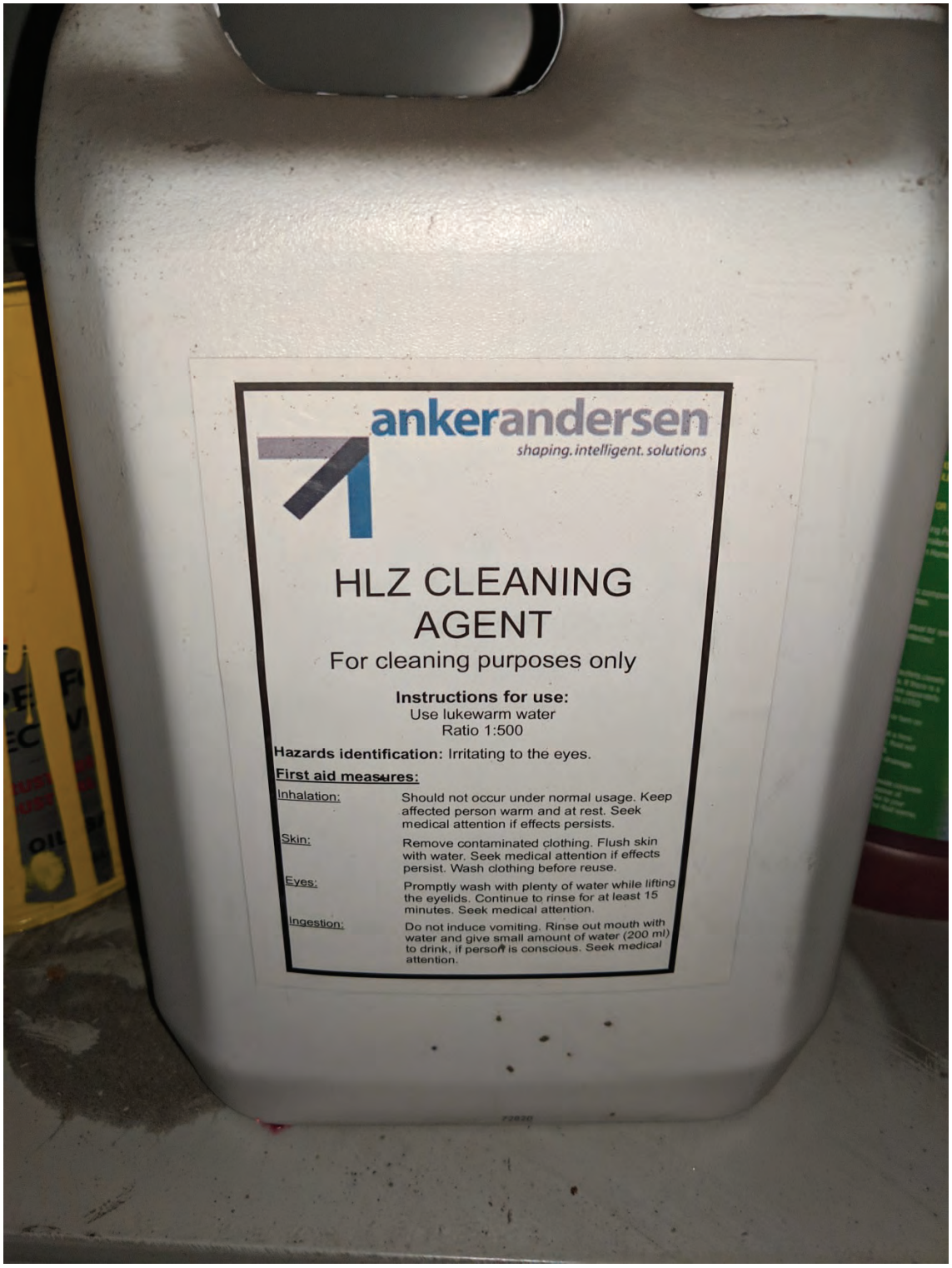
Photograph No. 6

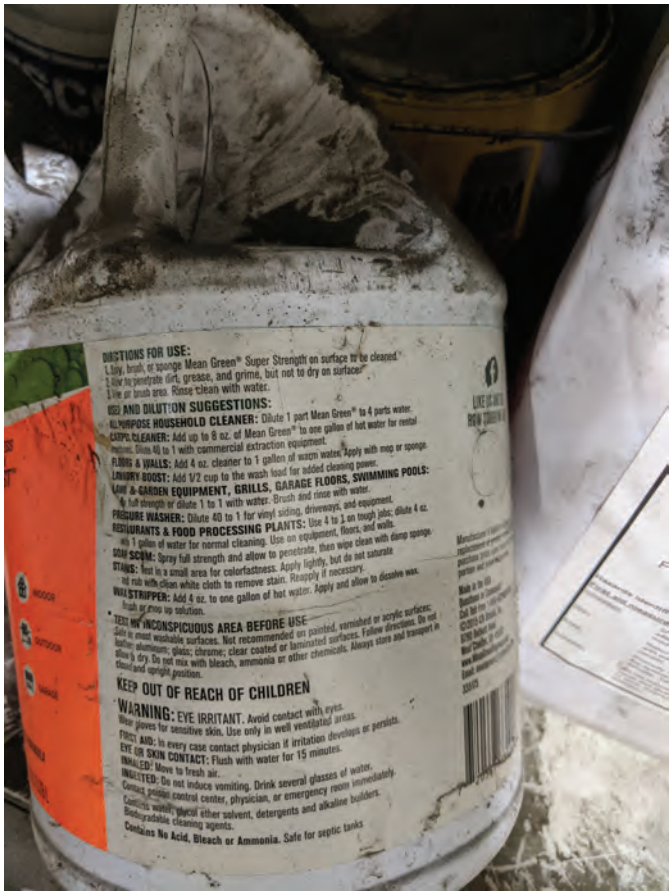
Product: Xtra Grease

Location: Workshop Cabinet

Front:

Photograph No. 7	**Product: Cleaning Agent** **Location: Workshop Cabinet**



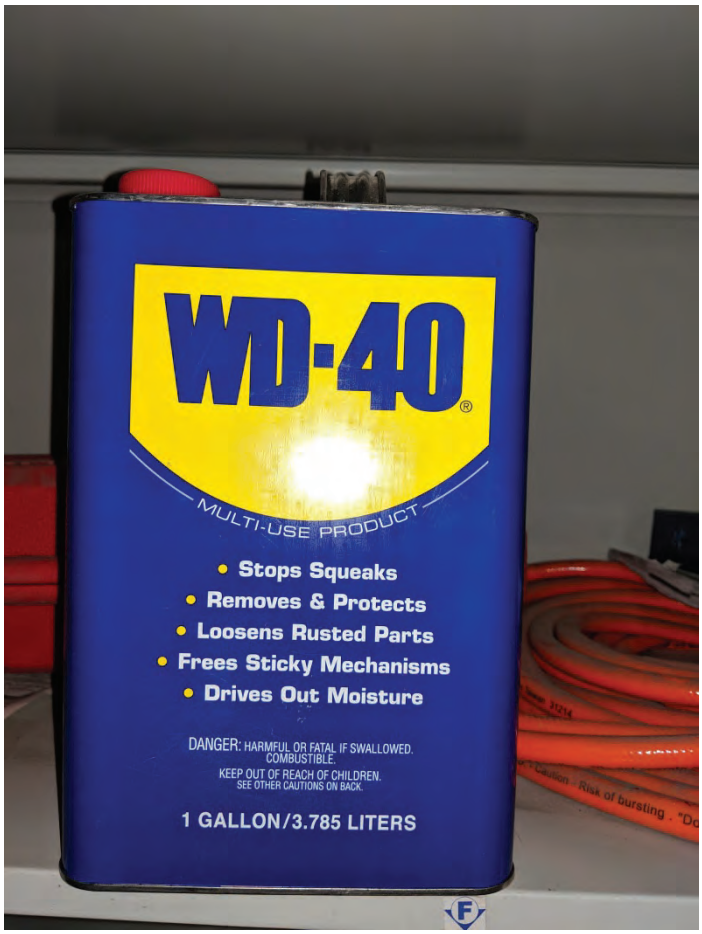
Photograph No. 8	**Product: Mean Green** **Location: Workshop Cabinet**
Front: 	Back: 

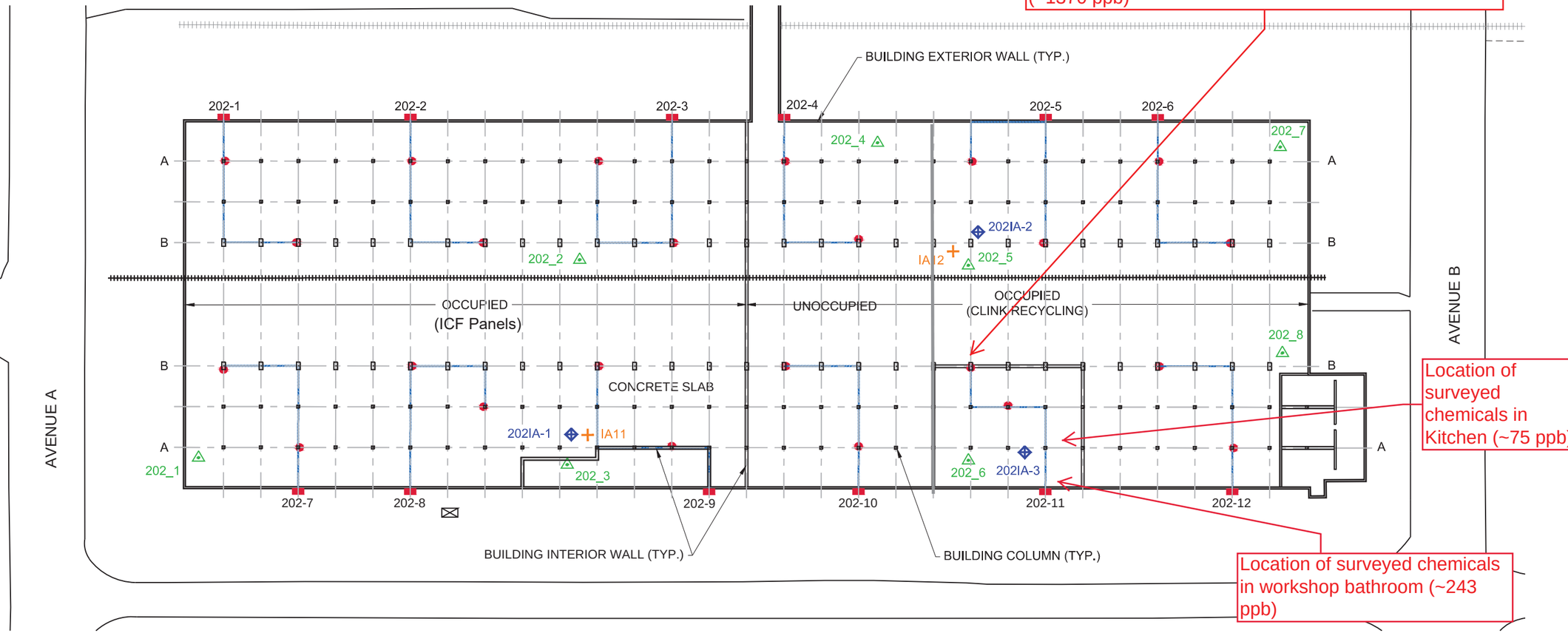
Photograph No. 9	Product: Windex Location: Workshop Cabinet

Photograph No. 10

Product: Antifreeze
Location: Workshop Cabinet

Front:

Photograph No. 10	**Product: WD-40** **Location: Workshop Cabinet**
Front:  	Back: 



There was regular work activity occurring in the ICF Panels side of the warehouse during the SVI monitoring (summarized on a separate questionnaire). ICF activities including some use of welding, approximately less than 1 hr per day.

On the Clynk side of the warehouse , can/bottle recycling equipment was being used during daily operations.

On both the ICF Panels and Clynk sides, it appeared that doors were kept closed unless someone was entering/exiting.

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)

0 60' 120'

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: DECEMBER 2017

Building 202-West ICF Panels

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 Gerlinde Wolf Date/Time Prepared 1/15/2020; 1020

Preparer's Affiliation AECOM Phone No. 518-951-2200

Purpose of Investigation SVI monitoring

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Cleavey First Name: Mike

Address: 144 Langley Road, Amsterdam, NY 12010

County: Schenectady

Home Phone: _____ Office Phone: 518-859-6646

Number of Occupants/persons at this location 15 (daily) Age of Occupants >18

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

Interviewed: Y / (N)

Last Name: Ahl First Name: David

Address: 695 Rotterdam Industrial Park, Schenectady, NY 12306

County: Schenectady

Home Phone: _____ Office Phone: 518-356-4445

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) Concrete Form Fabrication/ Building supply manufacturing/assemble

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 accessed.

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)

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; 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	
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? _____

Occasional Spray Paint
Welding- Everyday
Use Acetone/ No Solvents

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Office Area

k. Is there new carpet, drapes or other textiles? Y / N Where & When? Office Area

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? _____

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

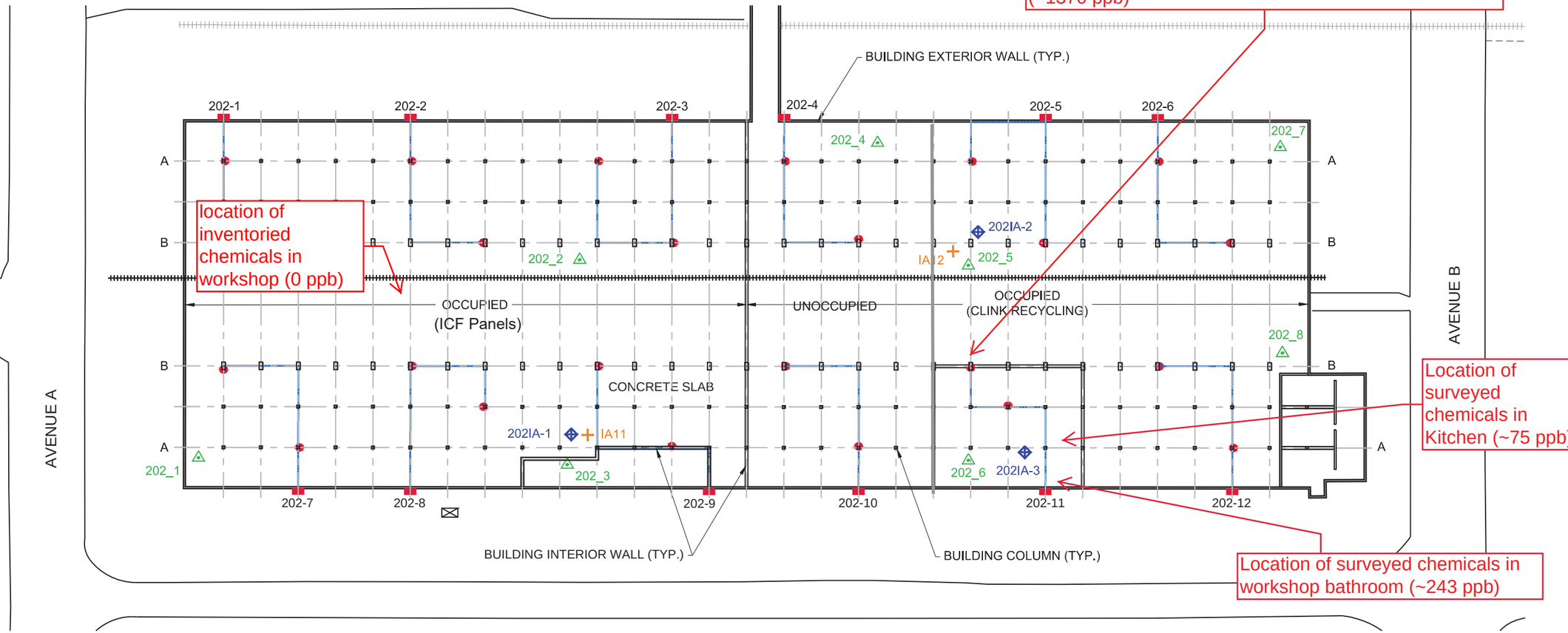
Make & Model of field instrument used: ppb RAE 3000 PID Meter

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
Warehouse	Acetone Jasco (x2)	1 gal.	U	Ingredients In Photos	0 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: Jasco Acetone** **Location: Locker Room**
Front: 	Back: 



There was regular work activity occurring in the ICF Panels side of the warehouse during the SVI monitoring (summarized on a separate questionnaire). ICF activities including some use of welding, approximately less than 1 hr per day.

On the Clynk side of the warehouse , can/bottle recycling equipment was being used during daily operations.

On both the ICF Panels and Clynk sides, it appeared that doors were kept closed unless someone was entering/exiting.

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)

0 60' 120'

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: DECEMBER 2017

Building 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 Gerlinde Wolf Date/Time Prepared 1/15/2020; 1340

Preparer's Affiliation AECOM Phone No. 518-951-2200

Purpose of Investigation SVI monitoring

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Frisch First Name: Paul

Address: _____

County: _____

Home Phone: _____ Office Phone: 518-378-0864

Number of Occupants/persons at this location _____ Age of Occupants >18

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

Interviewed: Y / (N)

Last Name: Ahl First Name: David

Address: 695 Rotterdam Industrial Park, Schenectady, NY 12306

County: Schenectady

Home Phone: _____ Office Phone: 518-356-4445

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) _Packaging_____

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 accessed.

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	Warehouse-radiant Office - forced air
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_____

Air conditioning: Central Air Window units Open Windows None

Electric in office

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	_____
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 Forklifts (3 small and 1 large)

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? Warehouse

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

h. Have cleaning products been used recently? (Y) / N When & Type? In office areas, breakroom, and bathrooms; non-solvent type

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

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Spray paint in warehouse

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? Painting; rarely

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 PID Meter

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
Warehouse Office Cabinet	Spray Paint (7x)	12 oz.	U	Ingredients In Photos	1628 ppm	Y
Warehouse Office Cabinet	TruFuel Oil (4x)	110 oz.	U	Ingredients In Photos	1628 ppm	Y
Warehouse Office Cabinet	Aircomp Oil	1 qt.	U	Ingredients In Photos	1628 ppb	Y
Warehouse Office Cabinet	Hydraulic Oil (3x)	1 gal.	U	Ingredients In Photos	1628 ppb	Y
Warehouse Office Cabinet	Engine Oil (5x)	12.8 oz.	U	Ingredients In Photos	1628 ppb	Y
Office Warehouse Shelf	Spray Paint (20x)	12 oz.	U	Ingredients In Photos	438 ppb	Y
Office Warehouse Shelf	Contact Cement (2x)	1 gal.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Stencil Ink (4x)	1 gal.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Gear Oil (3x)	1 qt.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Paint (10x)	1 gal.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Marsh Stencil Paint (2x)	1 gal.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Engine Oil (3x)	1 qt.	U	Ingredients In Photos	7654 ppb	Y
Office Warehouse Shelf	Jack Oil (1x)	12 oz.	U	Ingredients In Photos	7654 ppb	Y
Boxshop Cabinet	Spray Paint (7x)	12 oz.	U	Ingredients In Photos	1753 ppb	Y
Boxshop Cabinet	Paint (6x)	1 gal.	U	Ingredients In Photos	1753 ppb	Y
Boxshop Cabinet	WD-40 (2x)		U	Ingredients In Photos	1753 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: Propane Cylinders** **Location: Warehouse Cabinet**

Photograph No. 2	**Product: Spray Paint** **Location: Warehouse Cabinet**
Front: 	Back: 

Photograph No. 3	**Product: Spray Enamel** **Location: Warehouse Cabinet**
Front:	Back:
	

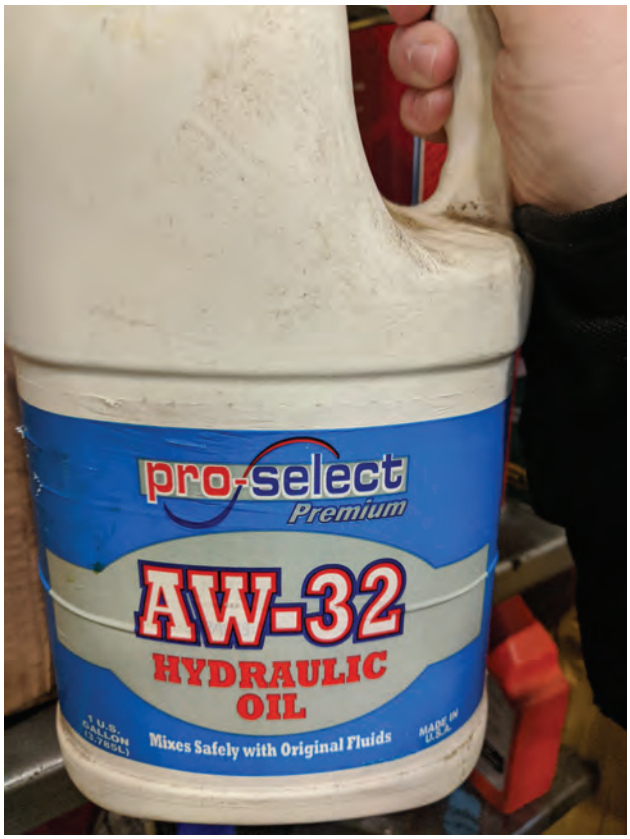
Photograph No. 4	**Product: TruFuel Oil** **Location: Warehouse Cabinet**
Front: 	Back: 

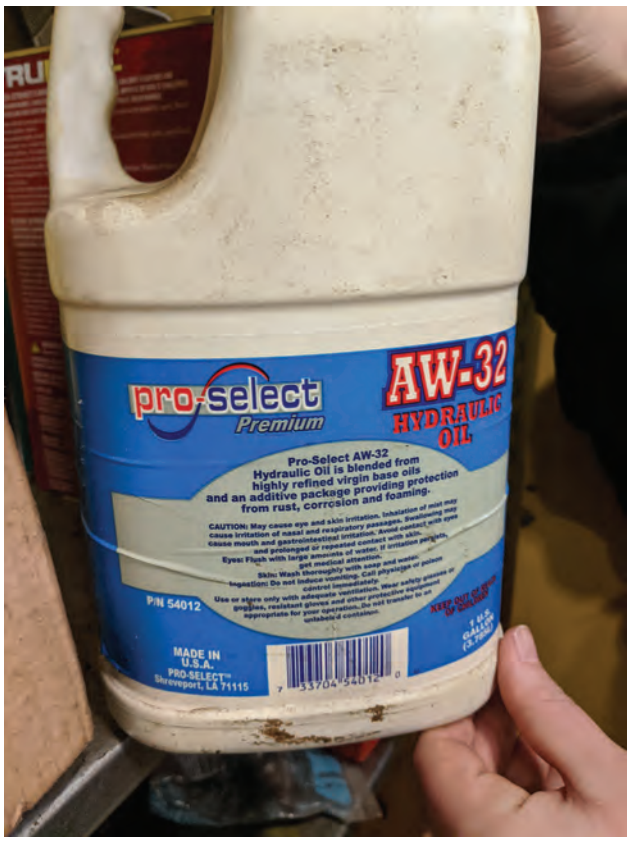
Photograph No. 5	**Product: Air Compressor Oil** **Location: Warehouse Cabinet**
Front: 	Back: 

Photograph No. 6	**Product: 2-cycle Engine Oil** **Location: Warehouse Cabinet**
Front: 	Back: 

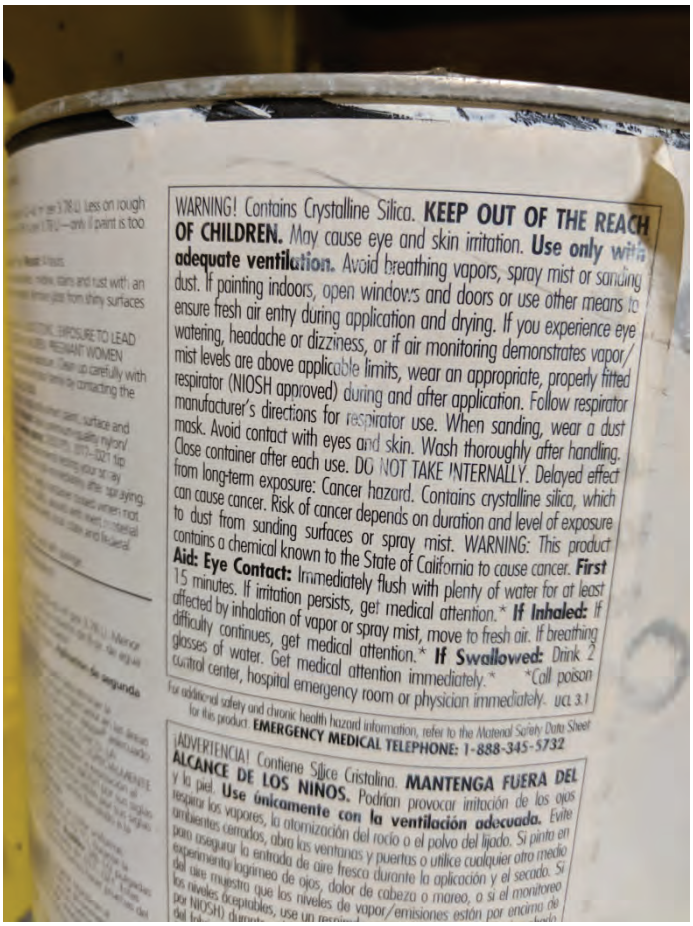
Photograph No. 7	**Product: Spray Paint** **Location: Metal FAB Shop**
Front: 	Back: 

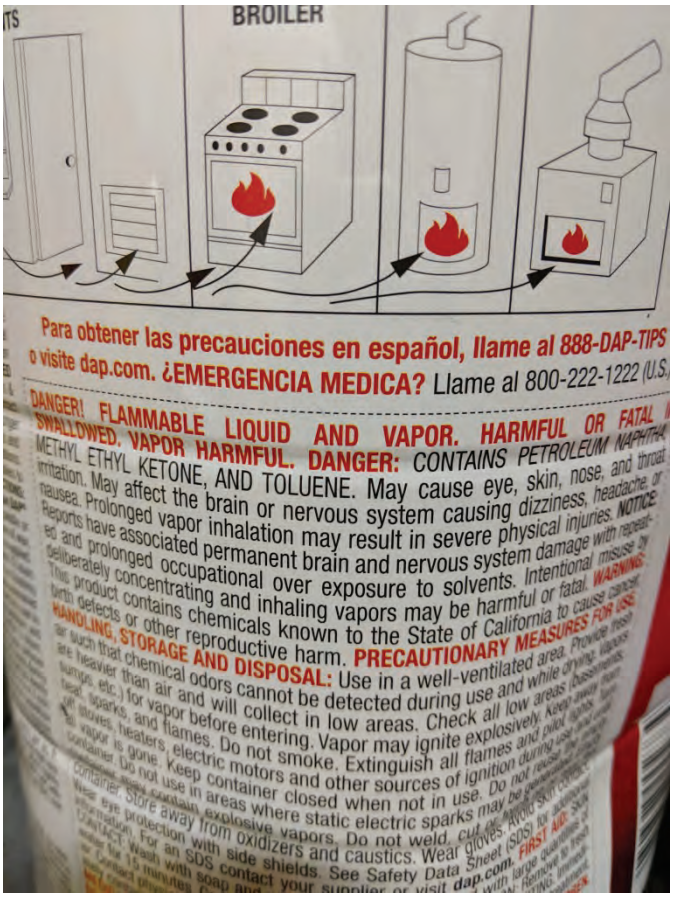
Photograph No. 8	Product: Hydraulic Oil Location: Warehouse Cabinet



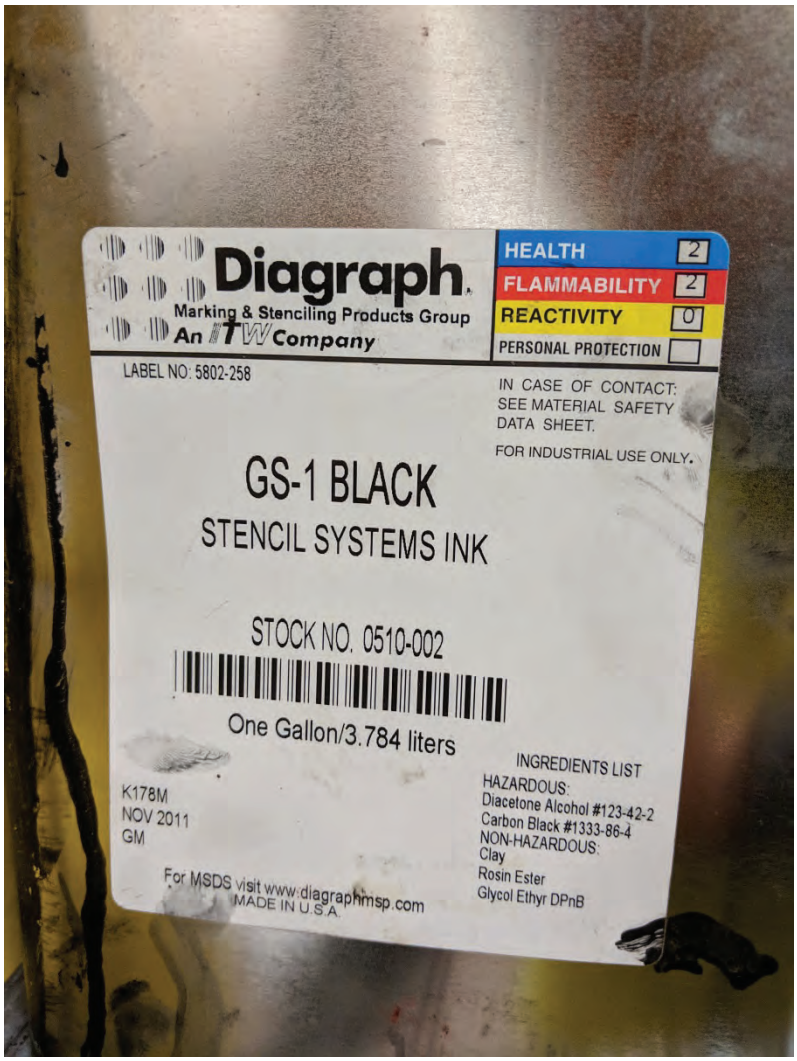


Photograph No. 9	**Product: Spray Paint** **Location: Warehouse Office Cabinet**
Front: 	Back: 

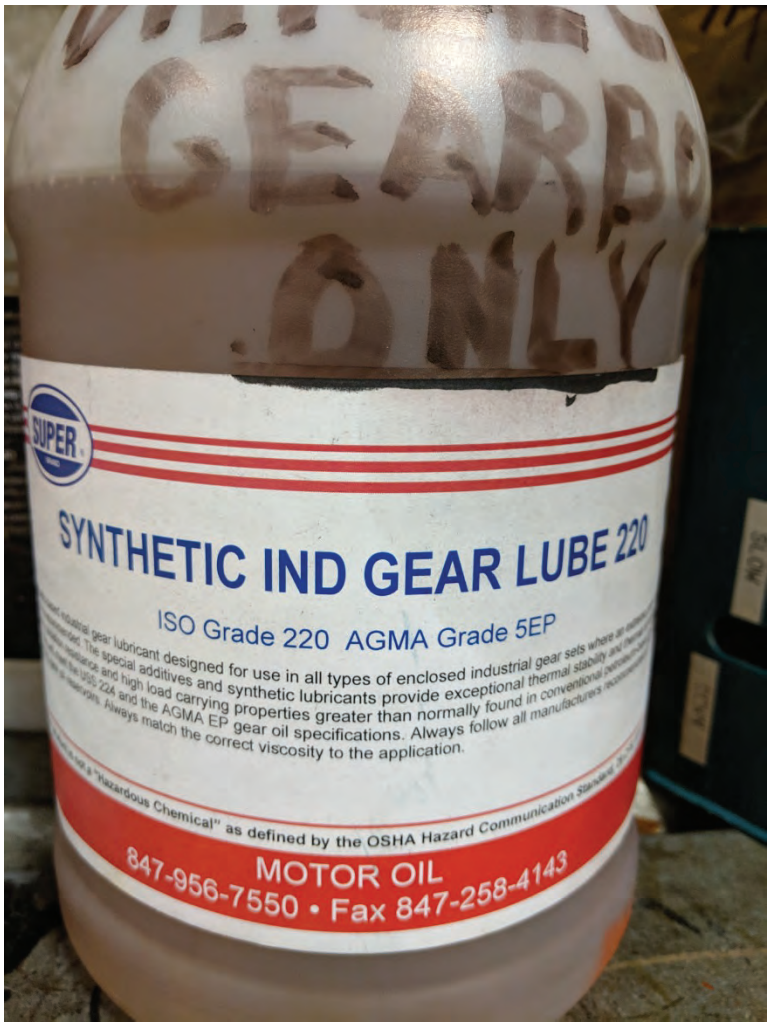
Photograph No. 10	**Product: Paint** **Location: Warehouse Office Cabinet**
Front:  	Back:  WARNING! Contains Crystalline Silica. **KEEP OUT OF THE REACH OF CHILDREN.** May cause eye and skin irritation. **Use only with adequate ventilation.** Avoid breathing vapors, spray mist or sanding dust. If painting indoors, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness, or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. When sanding, wear a dust mask. Avoid contact with eyes and skin. Wash thoroughly after handling. Close container after each use. DO NOT TAKE INTERNALLY. Delayed effect from long-term exposure: Cancer hazard. Contains crystalline silica, which can cause cancer. Risk of cancer depends on duration and level of exposure to dust from sanding surfaces or spray mist. WARNING: This product contains a chemical known to the State of California to cause cancer. **First Aid: Eye Contact:** Immediately flush with plenty of water for at least 15 minutes. If irritation persists, get medical attention.* **If Inhaled:** If affected by inhalation of vapor or spray mist, move to fresh air. If breathing difficulty continues, get medical attention.* **If Swallowed:** Drink 2 glasses of water. Get medical attention immediately.* *Call poison control center, hospital emergency room or physician immediately. VOC 3.1 For additional safety and chronic health hazard information, refer to the Material Safety Data Sheet for this product. **EMERGENCY MEDICAL TELEPHONE: 1-888-345-5732** ¡ADVERTENCIA! Contiene Sílice Cristalina. **MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS.** Podrían provocar irritación de los ojos y la piel. **Use únicamente con la ventilación adecuada.** Evite respirar los vapores, la atomización del rocío o el polvo del lijado. Si pinta en ambientes cerrados, abra las ventanas y puertas o utilice cualquier otro medio para asegurar la entrada de aire fresca durante la aplicación y el secado. Si experimenta lagrimeo de ojos, dolor de cabeza o mareo, o si el monitoreo del aire muestra que los niveles de vapor/emisiones están por encima de los niveles aceptables, use un respirador (aprobado por NIOSH) durante

Photograph No. 11	**Product: Weldwood Contact Cement** **Location: Warehouse Office Cabinet**
Front:  	Back: 

Photograph No. 12	Product: Stencil Systems Ink Location: Warehouse Office Cabinet



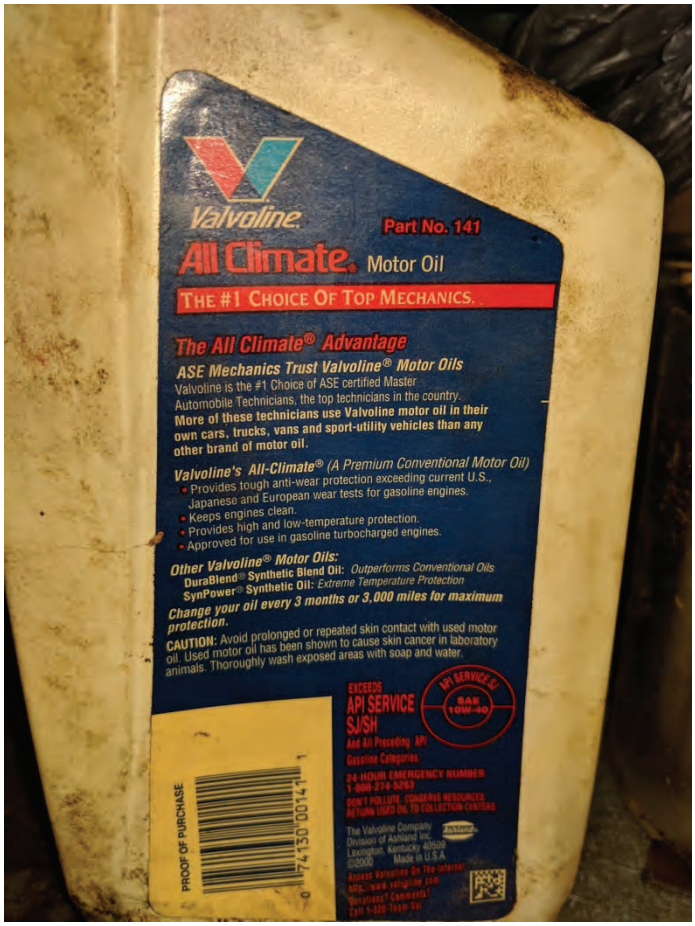
Photograph No. 13	**Product: Gear Lube** **Location: Warehouse Office Cabinet**

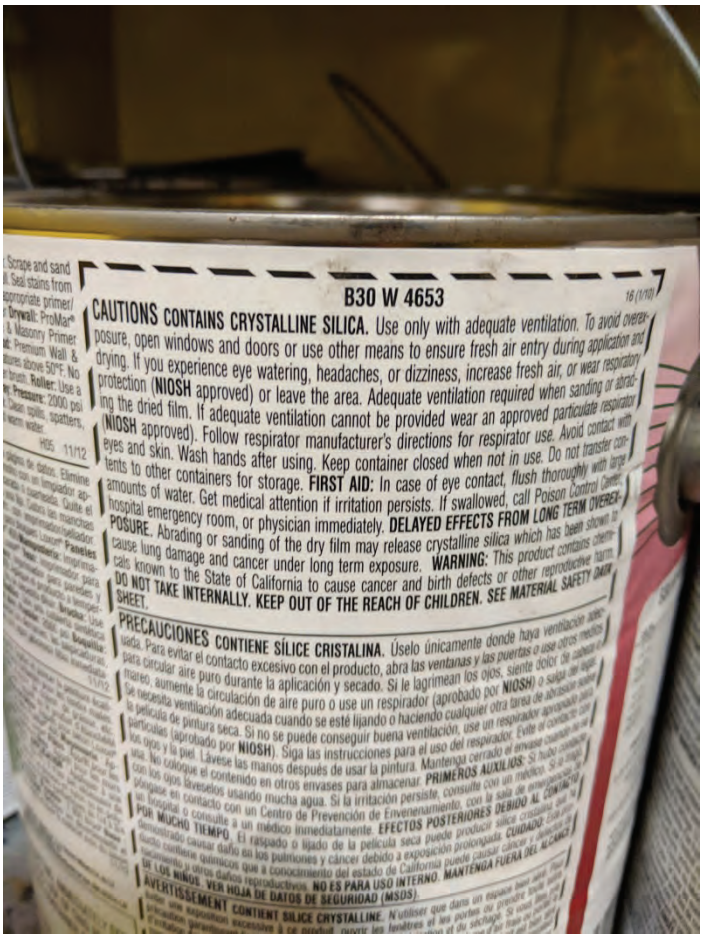


Photograph No. 14	**Product: Jack Oil** **Location: Warehouse Office Cabinet**
Front: 	Back: 

Photograph No. 15	**Product: WD-40** **Location: Box Shop Cabinet**
Front: 	Back: 

Photograph No. 16	**Product: Spray Paint** **Location: Box Shop Cabinet**
Front: 	Back: 

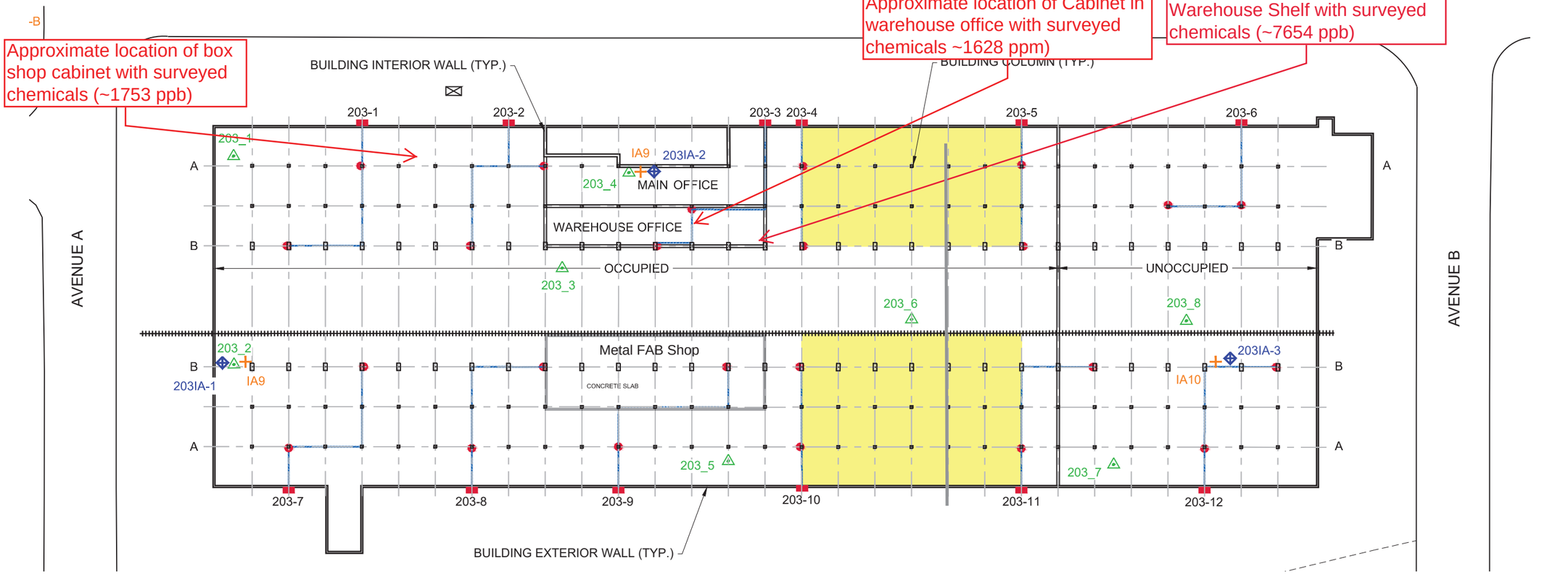
Photograph No. 17	**Product: Valvoline Motor Oil** **Location: Box shop Cabinet**
Front: 	Back: 

Photograph No. 18	**Product: Paint** **Location: Box shop Cabinet**
Front: 	Back: 

Approximate location of box shop cabinet with surveyed chemicals (~1753 ppb)

Approximate location of Cabinet in warehouse office with surveyed chemicals ~1628 ppm)

Approximate Location of Office Warehouse Shelf with surveyed chemicals (~7654 ppb)



BUILDING 203
PLAN

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

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: DECEMBER 2017

Building 204
Bio Soil

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 ___Gerlinde Wolf ____ Date/Time Prepared _1/15/2020; 1400

Preparer's Affiliation _____AECOM_____ Phone No.__518-951-2200_____

Purpose of Investigation_____SVI monitoring _____

Building 204 is partially occupied and partially unoccupied.

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: _Bio Soil Manager_____ First Name: _____

Address: _695 Rotterdam Industrial Park, Schenectady, NY 12306_____

County: Schenectady ___

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location __~5___ Age of Occupants _>18 _____

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

Interviewed: Y / (N)

Last Name: __Ahl_____ First Name: __David _____

Address: __695 Rotterdam Industrial Park, Schenectady, NY 12306__

County: _Schenectady __

Home Phone: _____ Office Phone: __518-356-4445_____

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) ___soil farming_____

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

Partially; east side is uninsulated; west side is insulated.

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 accessed.

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 during 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_____

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) 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

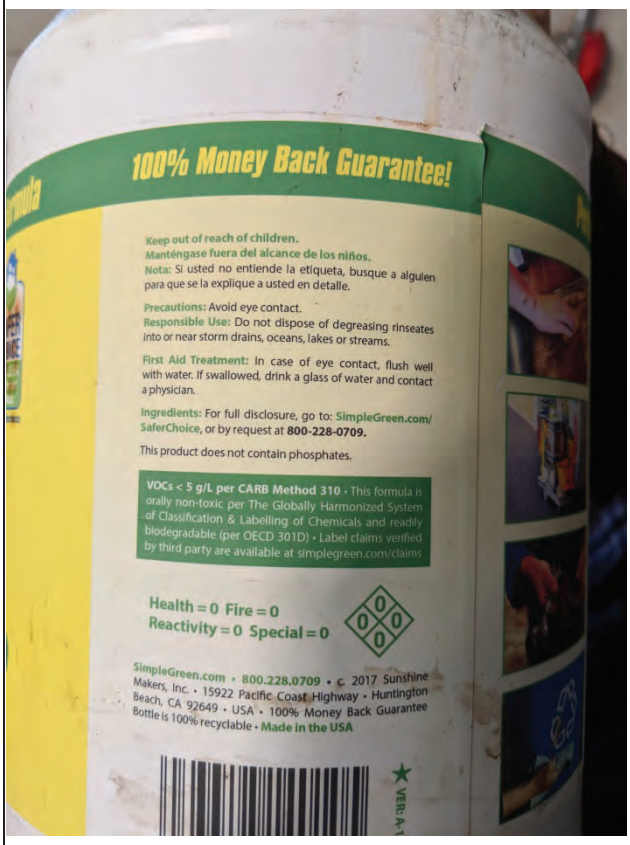
Make & Model of field instrument used: ppb RAE 3000 PID Meter

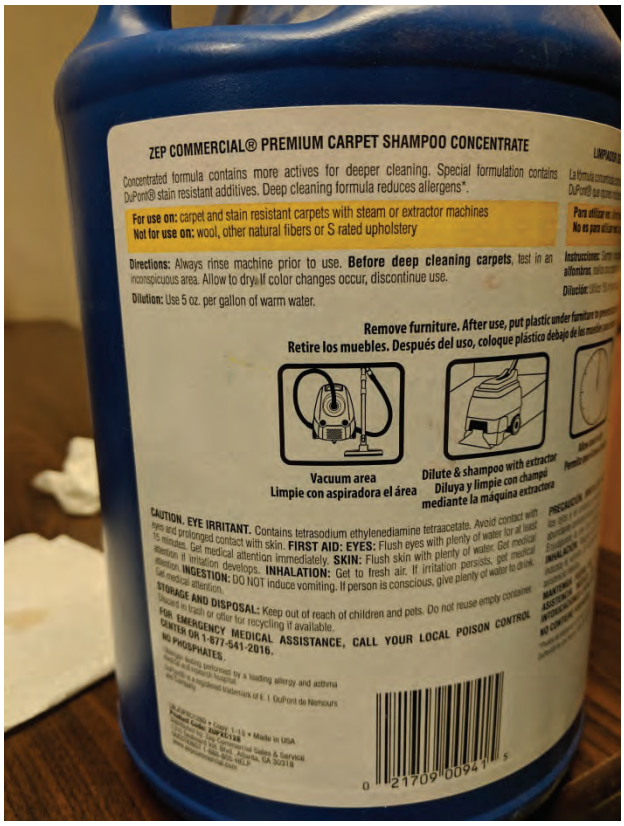
List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Warehouse	Simple Green (1x)	1 gal.	U	Ingredients In Photos	59 ppb	Y
Kitchen	Fast Orange (3x)	64 oz.	U	Ingredients In Photos	40 ppb	Y
Kitchen	409 Cleaner (2x)	24 oz.	U	Ingredients In Photos	40 ppb	Y
Kitchen	Windex (2x)	24 oz.	U	Ingredients In Photos	40 ppb	Y
Kitchen	Lime Away (1x)	28 oz.	U	Ingredients In Photos	40 ppb	Y
Kitchen	Clorox (1x)	24 oz.	U	Ingredients In Photos	40 ppb	Y
Closet	Paint (7x)	1 gal.	U	Ingredients In Photos	48 ppb	Y
Closet	Carpet Shampoo	1 gal.	U	Ingredients In Photos	48 ppb	Y

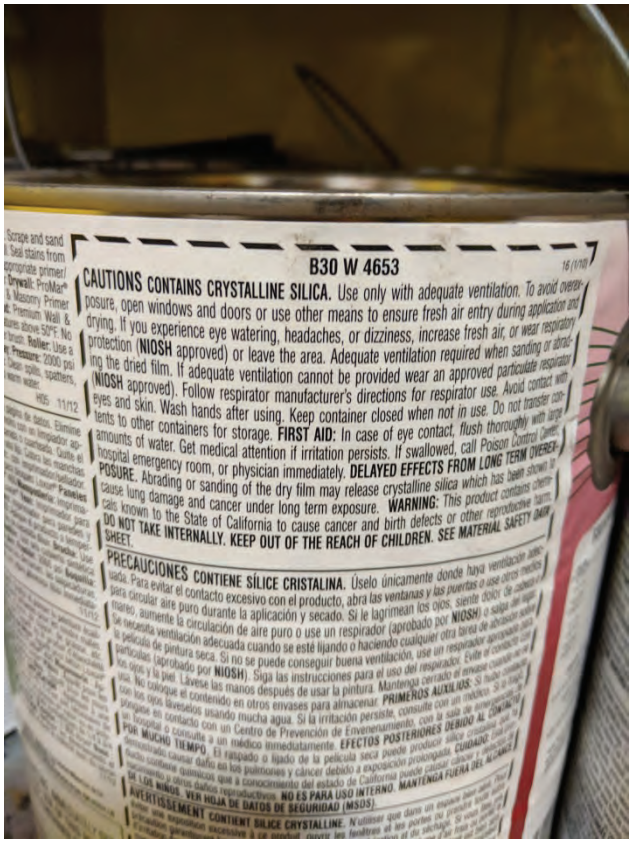
* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must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

Photograph No. 1	**Product: Clorox Bleach** **Location: Kitchen**
Front: 	Back: 

Photograph No. 2	**Product: All-Purpose Cleaner** **Location: Warehouse**
Front: 	Back: 

Photograph No. 3	**Product: Carpet Shampoo** **Location: Kitchen Closet**
Front:  	Back: 

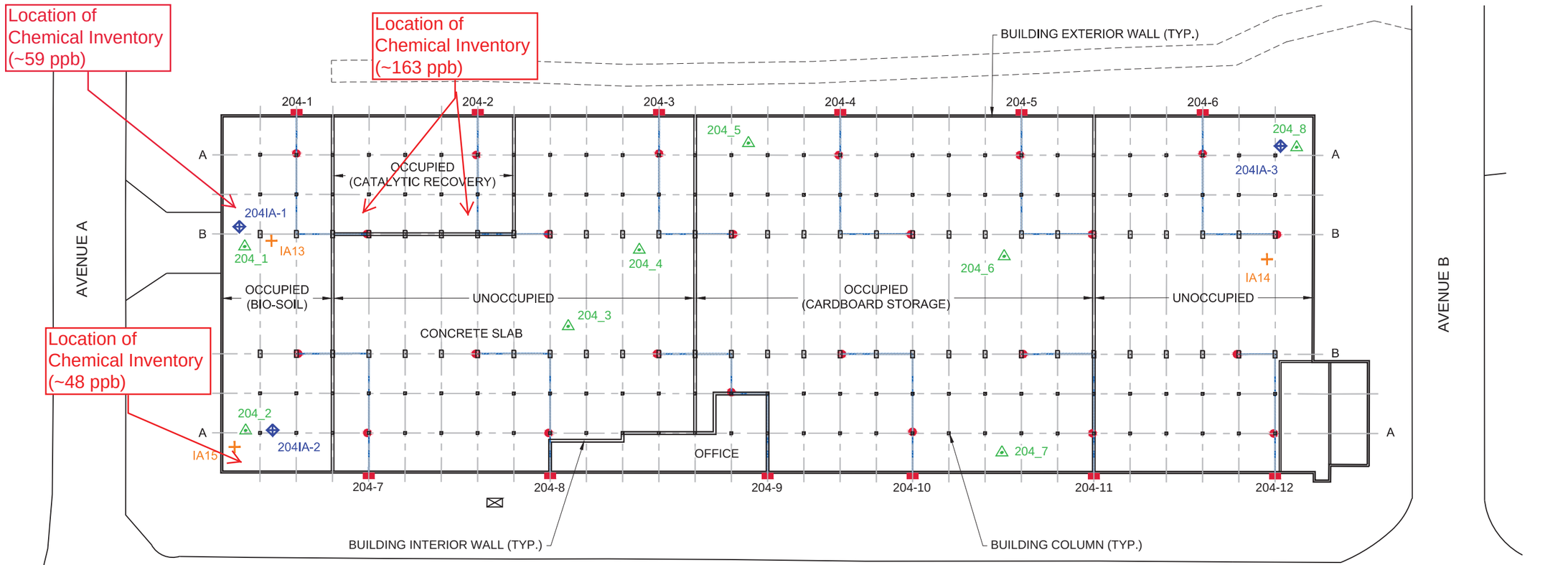
Photograph No. 4	**Product: Lime Away** **Location: Kitchen**
Front: 	Back: 

Photograph No. 5	**Product: Paint** **Location: Kitchen Closet**
Front: 	Back: 

Photograph No. 6	Product: 409 Cleaner Location: Kitchen

Photograph No. 7	Product: Fast Orange Location: Kitchen

Photograph No. 8	**Product: Windex** **Location: Kitchen**



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 propane forklifts within the warehouse area.

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: 3-5

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: DECEMBER 2017

Building 204
Catalytic
Recovery

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 ___Gerlinde Wolf ____ Date/Time Prepared _1/15/2020; 1400

Preparer's Affiliation _____AECOM_____ Phone No.__518-951-2200_____

Purpose of Investigation_____SVI monitoring_____

Building 204 is partially occupied and partially unoccupied.

1. OCCUPANT:

Interviewed: (**Y** / **N**)

Last Name: _Catalytic Recvery Manager First Name: _____

Address: _695 Rotterdam Industrial Park, Schenectady, NY 12306 ___

County: Schenectady ___

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location __~5___ Age of Occupants ___>18_____

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

Interviewed: **Y** / (**N**)

Last Name: Ahl First Name: David

Address: 695 Rotterdam Industrial Park, Schenectady, NY 12306

County: Schenectady

Home Phone: _____ Office Phone: 518-356-4445

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) __Car Scrap Metal 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

Partially; east side is uninsulated; west side is insulated.

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 accessed.

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 during 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_____

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) 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

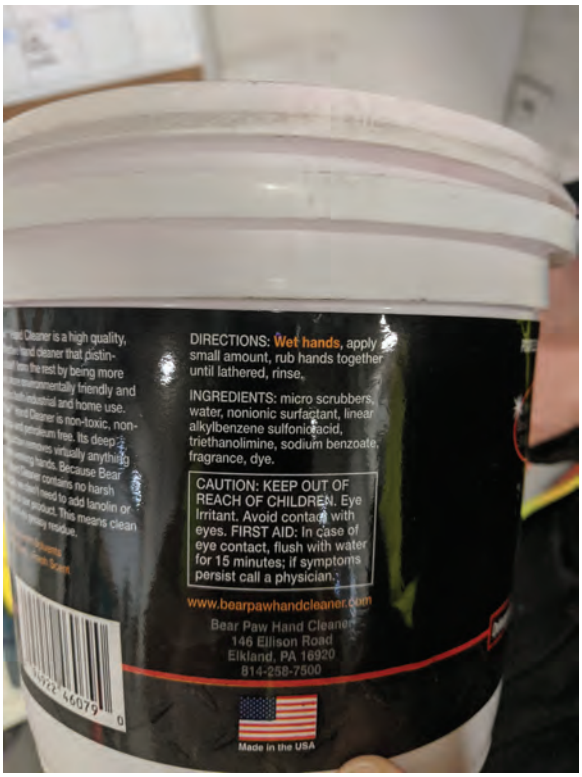
13. PRODUCT INVENTORY FORM

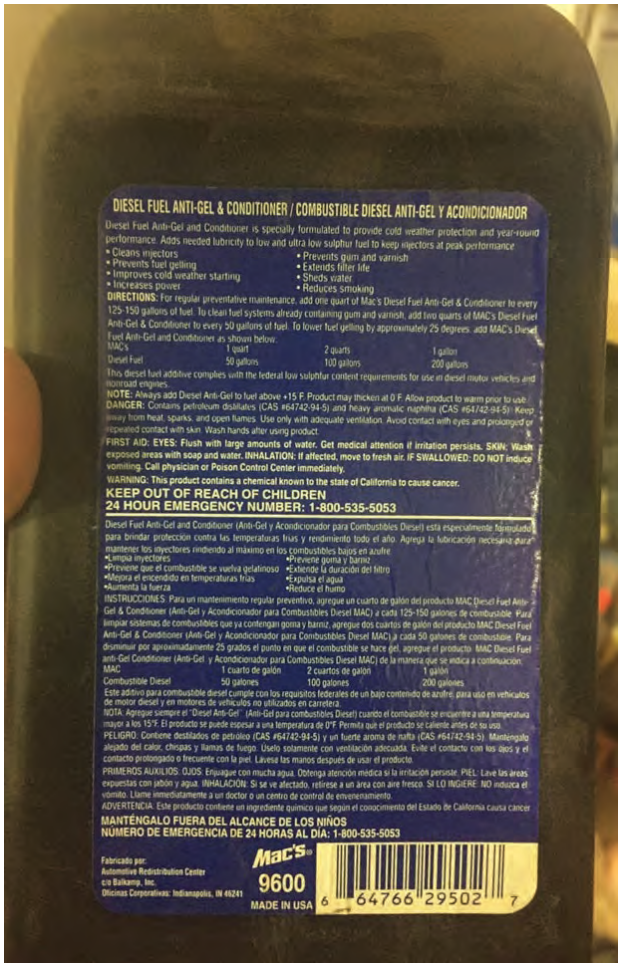
Make & Model of field instrument used: ppb RAE 3000 PID Meter

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
Shelf	Bear Paw Cleaner (1x)	40 oz.	U	Ingredients In Photos	163 ppb	Y
Shelf	Spray Paint (23x)	12 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Lucas Slick Mist (2x)	24 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Diesel Fuel Cond. Anti Gel (23x)	32 oz.	N	Ingredients In Photos	129 ppb	Y
Shelf	Rain X	32 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Tire Shine	16 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Tire Cleaner	24 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Goo Gone	24 oz.	U	Ingredients In Photos	87 ppb	Y
Shelf	Armorall	2 qt.	U	ngredients In Photos	87 ppb	Y
Shelf	Road Trip Grime Destroyer	24 oz.	U	Ingredients In Photos	87 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: Bear Paw Hand Cleaner** **Location: Shelf**
Front: 	Back: 

Photograph No. 2	**Product: Diesel Fuel Conditioner (Anti-Gel)** **Location: Shelf**
Front:  	Back: 

Photograph No. 3	**Product: Mothers Wheel and Tire Cleaner** **Location: Shelf**
Front:  	Back: 

Photograph No. 4	**Product: Goo Gone Spray Gel** **Location: Shelf**
Front: 	Back: 

Photograph No. 5	**Product: Road Trip Grime Destroyer** **Location: Shelf**
Front: 	Back: 

Photograph No. 6	**Product: ArmorAll** **Location: Shelf**
Front: 	Back: 

Photograph No. 7	**Product: Lucas Slick Mist** **Location: Shelf**

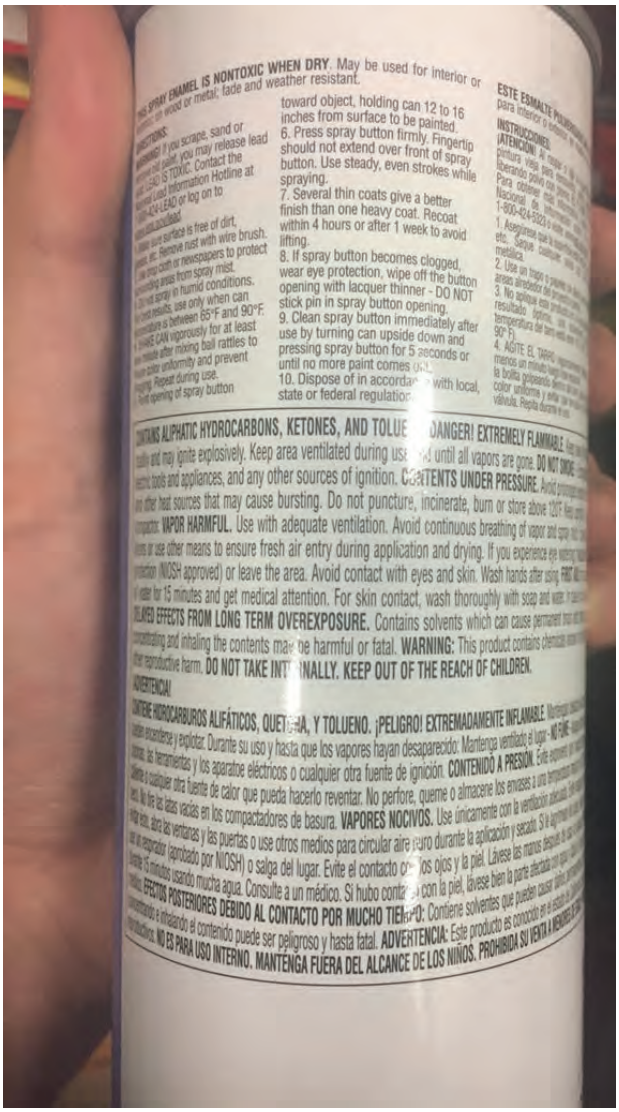
Front:

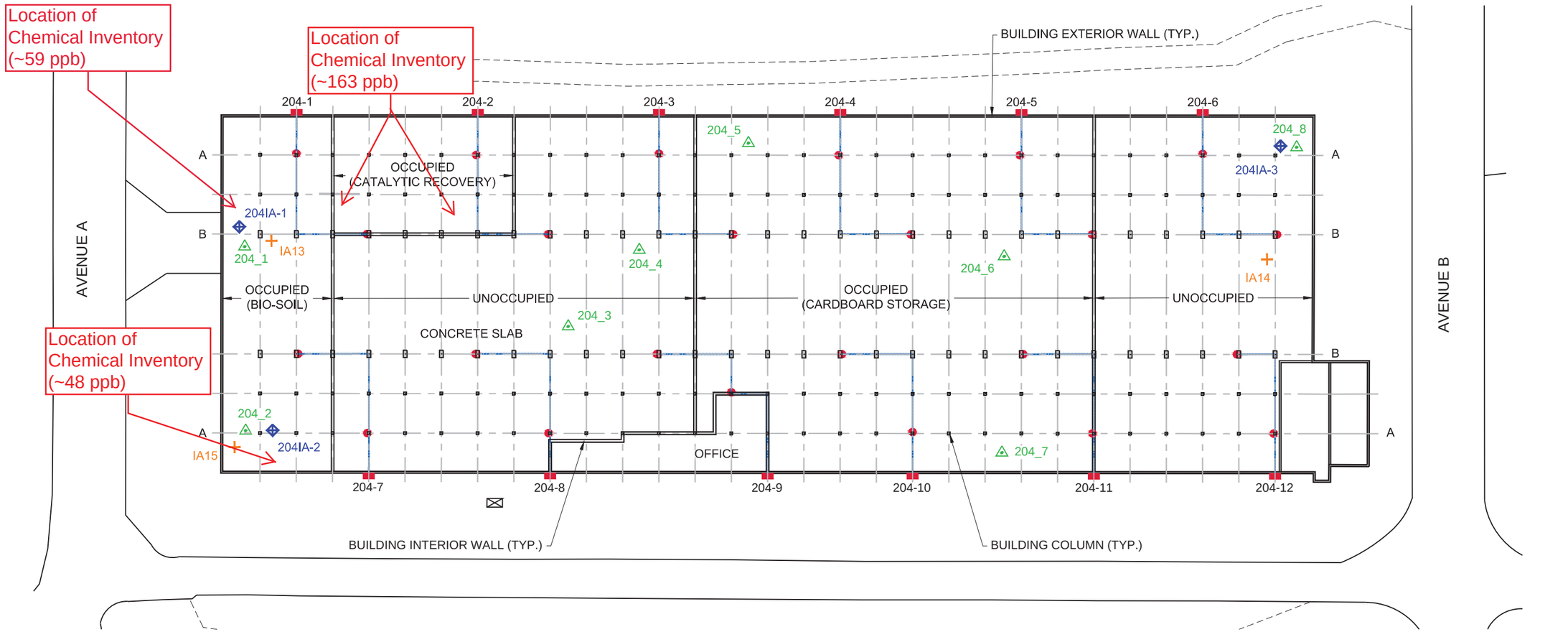
Photograph No. 8	**Product: Tire Shine** **Location: Shelf**

Front:

Photograph No. 9	**Product: Rainx Glass Cleaner** **Location: Shelf**

Front:

Photograph No. 10	**Product: Spray Paint** **Location: Shelf**
Front:  	Back: 



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 propane forklifts within the warehouse area.

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: 3-5

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: DECEMBER 2017

APPENDIX D: SVI Air Sample Log Sheet

VAPOR INTRUSION SURVEY
SAMPLING LOG SHEET

Sampled by: Gerlinde Wolf

						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
Dup-1	1/15/2020	AC02295	FCA01023	10:25	10:25	3	0	30	7
Dup-2	1/15/2020	SC01848	FCS00007	10:15	10:15	0	0	30	1
201 IA-1	1/15/2020	AS01010	FCA00990	10:15	10:15	0	0	29	11
201 IA-2	1/15/2020	SSC00240	FCS00049	10:55	10:55	0	0	30	4
201 IA-3	1/15/2020	SC01062	FCA00737	11:05	11:05	125	0	30	0
202 IA-1	1/15/2020	SC00381	FCA00854	10:25	10:25	3	0	29	2
202 IA-2	1/15/2020	AC02134	FCA00929	13:00	13:00	161	0	28.5	0
202 IA-3	1/15/2020	SC02078	FCS00101	12:55	12:55	75	0	30	13
203 IA-1	1/15/2020	AC01466	FCA00610	13:40	13:40	293	0	29.5	2
203 IA-2	1/15/2020	AS00678	FCS00121	13:25	13:25	380	0	30	4.5
203 IA-3	1/15/2020	SSC00506	FCA00706	13:10	13:10	245	0	29	1
204 IA-1	1/15/2020	SC01535	FCA00636	14:10	14:10	442	0	30	1
204 IA-2	1/15/2020	AC02408	FCS00113	14:05	14:05	1220	2	30	29
204 IA-3	1/15/2020	SC01569	FCA00506	13:55	13:55	162	0	29	0
OA-1	1/15/2020	SC00995	FCA00707	13:50	13:50	0	0	30	16
204 IA-2 1-22-20	1/22/2020	SSC00271	FCS00123	9:00	9:00	0	0	22.5	1
IA 201-2 3-26-20	3/26/2020	SSC00144	FCR00239	10:25	10:25	0	0	29	2
DUP 3-26-20	3/26/2020	SSC00077	FCR00336	10:25	10:25	0	0	30	5
OA 3-26-20	3/26/2020	ASO11136	FCR00242	10:25	10:25	0	0	30	4

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 202IA-1; DUP-2 collected at 201IA-1.
5. Canisters were placed on 1/14/20 and retrieved on 1/15/20.

APPENDIX E: January 2020 Air Sample Laboratory Report

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

LABORATORY REPORT

February 4, 2020

Daniel Servetas
AECOM
40 British American Boulevard
Latham, NY 12110

RE: Scotia / 60440641

Dear Daniel:

Enclosed are the results of the samples submitted to our laboratory on January 22, 2020. For your reference, these analyses have been assigned our service request number P2000369.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
5:15 pm, Feb 04, 2020
Kate Kaneko
Project Manager

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

Client: AECOM
Project: Scotia / 60440641

Service Request No: P2000369
New York Lab ID: 11221

CASE NARRATIVE

The samples were received intact under chain of custody on January 22, 2020 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 #2 internal standard in samples 202 IA-3, 203 IA-2, 204 IA-1 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 this 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 5.1 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.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: AECOM
Project ID: Scotia / 60440641

Service Request: P2000369

Date Received: 1/22/2020
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
Dup-1	P2000369-001	Air	1/15/2020	00:00	AC02295	-2.49	4.59	X
Dup-2	P2000369-002	Air	1/15/2020	00:00	SC01848	0.80	4.01	X
201 IA-1	P2000369-003	Air	1/15/2020	10:15	AS01010	-4.65	4.51	X
201 IA-2	P2000369-004	Air	1/15/2020	10:55	SSC00240	-1.05	6.13	X
201 IA-3	P2000369-005	Air	1/15/2020	11:05	SC01062	0.89	4.06	X
202 IA-1	P2000369-006	Air	1/15/2020	10:25	SC00381	0.37	3.99	X
202 IA-2	P2000369-007	Air	1/15/2020	13:00	AC02134	0.54	4.48	X
202 IA-3	P2000369-008	Air	1/15/2020	12:55	SC02078	-5.82	3.71	X
203 IA-1	P2000369-009	Air	1/15/2020	13:40	AC01466	0.14	4.50	X
203 IA-2	P2000369-010	Air	1/15/2020	13:25	AS00678	-1.03	3.78	X
203 IA-3	P2000369-011	Air	1/15/2020	13:10	SSC00506	0.60	4.24	X
204 IA-1	P2000369-012	Air	1/15/2020	14:10	SC01535	0.32	3.70	X
204 IA-2	P2000369-013	Air	1/15/2020	14:05	AC02408	-13.50	3.68	X
204 IA-3	P2000369-014	Air	1/15/2020	13:55	SC01569	1.15	4.06	X
OA-1	P2000369-015	Air	1/15/2020	13:50	SC00995	-6.67	5.15	X

Air - Chain of Custody Record & Analytical Service Request

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. P2000369

Company Name & Address (Reporting Information)	AECOM 40 British American Blvd Latham NY 12110
Project Name	Scotia
Project Number	60140641
Project Manager	Dan Servetas
P.O. # / Billing Information	
Phone	518 369 6024
Fax	
Email Address for Result Reporting	gerlinde.wolf@AECOM.com, daniel.servetas@AECOM.com
Sampler (Print & Sign)	Gerlinde Wolf
ALS Contact:	Kate Kanelko

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	Analysis Method: TO-15 Sim		Comments e.g. Actual Preservative or specific instructions
Dup-1	1	1/15/20	[redacted]	AC02295	FCA01023	30	7	6L			
Dup-2	2		[redacted]	SC01848	FCS00007	30	1				
201 1A-1	3		1015	AS01010	FCA00990	29	11				
201 1A-2	4		1055	SSC00240	FCS00049	30	4				
201 1A-3	5		1105	SC01062	FCA00737	30	0				
202 1A-1	6		1025	SC00381	FCA00854	29	2				
202 1A-2	7		1300	AC02134	FCA00929	28.5	0				
202 1A-3	8		1255	SC02078	FCS00101	30	13				
203 1A-1	9		1340	AC01466	FCA00610	29.5	2				
203 1A-2	10		1325	AS00678	FCS00121	30	4.5				
203 1A-3	11		1310	SSC00506	FCA00706	29	1				
204 1A-1	12		1410	SC01535	FCA00636	30	1				
204 1A-2	13		1405	AC02408	FCS00113	30	29				
204 1A-3	14		1355	SC01569	FCA00506	29	0				

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

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) Gerlinde Wolf	Date: 1/15/20	Time: 1600	Received by: (Signature)	Date: 1-22-20	Time: 900
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

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. P1000369

Company Name & Address (Reporting Information)	AECOM 40 British American Blvd Latham NY 12110
Project Name	Scotia
Project Number	60440641
Project Manager	Dan Servetas
P.O. # / Billing Information	
Phone	518-369-6024
Fax	
Email Address for Result Reporting	gerlinde.wolff@aecom.com, Dan.Servetas@AECOM.com
Sampler (Print & Sign)	Gerlinde Wolff
ALS Contact	Kate Kaneko

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	Analysis Method: TO-15 SIM		Comments e.g. Actual Preservative or specific instructions
OA-1	15	1/15/20	1350	SC00995	FCA00707	30	16	6L			

6 of 29

Report Tier Levels - please select

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

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Gerlinde Wolff	Date: 1/15/20	Time: 1600	Received by: (Signature)	Date: 1-22-20	Time: 900
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2000369

Project: Scotia / 60440641

Sample(s) received on: 1/22/20 Date opened: 1/22/20 by: DENISE.POSADA

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
P2000369-001.01	6.0 L Ambient Can					
P2000369-002.01	6.0 L Source Can					
P2000369-003.01	6.0 L Silonite Can					
P2000369-004.01	6.0 L Silonite Can					
P2000369-005.01	6.0 L Source Can					
P2000369-006.01	6.0 L Source Can					
P2000369-007.01	6.0 L Ambient Can					
P2000369-008.01	6.0 L Source Can					
P2000369-009.01	6.0 L Ambient Can					
P2000369-010.01	6.0 L Silonite Can					
P2000369-011.01	6.0 L Silonite Can					
P2000369-012.01	6.0 L Source Can					
P2000369-013.01	6.0 L Ambient Can					
P2000369-014.01	6.0 L Source Can					
P2000369-015.01	6.0 L Source Can					

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **Dup-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-001

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02295
Initial Pressure (psig): -2.49 Final Pressure (psig): 4.59

Container Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.033	0.040	0.033	0.012	**U**
75-35-4	1,1-Dichloroethene	0.033	0.040	0.033	0.014	**U**
156-59-2	cis-1,2-Dichloroethene	0.033	0.040	0.033	0.015	**U**
71-55-6	1,1,1-Trichloroethane	**0.013**	0.040	0.035	0.0093	**J**
56-23-5	Carbon Tetrachloride	**0.39**	0.040	0.033	0.019	
79-01-6	Trichloroethene	**0.031**	0.040	0.033	0.013	**J**
127-18-4	Tetrachloroethene	**0.57**	0.040	0.033	0.013	

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: **Dup-2** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-002

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01848
Initial Pressure (psig): 0.80 Final Pressure (psig): 4.01

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	0.025	0.030	0.025	0.0092	**U**
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	**U**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	**U**
71-55-6	1,1,1-Trichloroethane	**0.0087**	0.030	0.027	0.0071	**J**
56-23-5	Carbon Tetrachloride	**0.41**	0.030	0.025	0.015	
79-01-6	Trichloroethene	**0.014**	0.030	0.025	0.010	**J**
127-18-4	Tetrachloroethene	**0.092**	0.030	0.025	0.0099	

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 IA-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-003

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01010
Initial Pressure (psig): -4.65 Final Pressure (psig): 4.51

Container Dilution Factor: 1.91

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.040	0.048	0.040	0.015	**U**
75-35-4	1,1-Dichloroethene	0.040	0.048	0.040	0.016	**U**
156-59-2	cis-1,2-Dichloroethene	0.040	0.048	0.040	0.018	**U**
71-55-6	1,1,1-Trichloroethane	0.042	0.048	0.042	0.011	**U**
56-23-5	Carbon Tetrachloride	**0.39**	0.048	0.040	0.023	
79-01-6	Trichloroethene	**0.025**	0.048	0.040	0.016	**J**
127-18-4	Tetrachloroethene	**0.30**	0.048	0.040	0.016	

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 IA-2** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-004

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00240
Initial Pressure (psig): -1.05 Final Pressure (psig): 6.13

Container Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.032	0.038	0.032	0.012	**U**
75-35-4	1,1-Dichloroethene	0.032	0.038	0.032	0.013	**U**
156-59-2	cis-1,2-Dichloroethene	0.032	0.038	0.032	0.014	**U**
71-55-6	1,1,1-Trichloroethane	**0.025**	0.038	0.034	0.0090	**J**
56-23-5	Carbon Tetrachloride	**2.1**	0.038	0.032	0.018	
79-01-6	Trichloroethene	**0.020**	0.038	0.032	0.013	**J**
127-18-4	Tetrachloroethene	**0.10**	0.038	0.032	0.013	

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 IA-3** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-005

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01062
Initial Pressure (psig): 0.89 Final Pressure (psig): 4.06

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	0.025	0.030	0.025	0.0091	**U**
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	**U**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	**U**
71-55-6	1,1,1-Trichloroethane	**0.011**	0.030	0.026	0.0071	**J**
56-23-5	Carbon Tetrachloride	**0.43**	0.030	0.025	0.014	
79-01-6	Trichloroethene	**0.026**	0.030	0.025	0.010	**J**
127-18-4	Tetrachloroethene	**0.11**	0.030	0.025	0.0098	

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 IA-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-006

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00381
Initial Pressure (psig): 0.37 Final Pressure (psig): 3.99

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	0.026	0.031	0.026	0.0094	**U**
75-35-4	1,1-Dichloroethene	0.026	0.031	0.026	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.011	**U**
71-55-6	1,1,1-Trichloroethane	**0.012**	0.031	0.027	0.0073	**J**
56-23-5	Carbon Tetrachloride	**0.41**	0.031	0.026	0.015	
79-01-6	Trichloroethene	**0.028**	0.031	0.026	0.011	**J**
127-18-4	Tetrachloroethene	**0.078**	0.031	0.026	0.010	

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 IA-2** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-007

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02134
Initial Pressure (psig): 0.54 Final Pressure (psig): 4.48

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	0.026	0.032	0.026	0.0096	**U**
75-35-4	1,1-Dichloroethene	0.026	0.032	0.026	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.026	0.032	0.026	0.012	**U**
71-55-6	1,1,1-Trichloroethane	**0.010**	0.032	0.028	0.0074	**J**
56-23-5	Carbon Tetrachloride	**0.43**	0.032	0.026	0.015	
79-01-6	Trichloroethene	**0.021**	0.032	0.026	0.011	**J**
127-18-4	Tetrachloroethene	**0.11**	0.032	0.026	0.010	

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 IA-3** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-008

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: SC02078
Initial Pressure (psig): -5.82 Final Pressure (psig): 3.71

Container Dilution Factor: 2.07

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.087	0.10	0.087	0.031	**U**
75-35-4	1,1-Dichloroethene	0.087	0.10	0.087	0.036	**U**
156-59-2	cis-1,2-Dichloroethene	0.087	0.10	0.087	0.038	**U**
71-55-6	1,1,1-Trichloroethane	0.091	0.10	0.091	0.024	**U**
56-23-5	Carbon Tetrachloride	**0.43**	0.10	0.087	0.050	
79-01-6	Trichloroethene	**0.073**	0.10	0.087	0.035	**J**
127-18-4	Tetrachloroethene	**0.082**	0.10	0.087	0.034	**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 IA-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-009

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01466
Initial Pressure (psig): 0.14 Final Pressure (psig): 4.50

Container Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.032	0.027	0.0098	**U**
75-35-4	1,1-Dichloroethene	0.027	0.032	0.027	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.027	0.032	0.027	0.012	**U**
71-55-6	1,1,1-Trichloroethane	**0.012**	0.032	0.028	0.0076	**J**
56-23-5	Carbon Tetrachloride	**0.40**	0.032	0.027	0.015	
79-01-6	Trichloroethene	**0.045**	0.032	0.027	0.011	
127-18-4	Tetrachloroethene	**0.074**	0.032	0.027	0.011	

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 IA-2** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-010

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: AS00678
Initial Pressure (psig): -1.03 Final Pressure (psig): 3.78

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	0.057	0.068	0.057	0.021	**U**
75-35-4	1,1-Dichloroethene	0.057	0.068	0.057	0.023	**U**
156-59-2	cis-1,2-Dichloroethene	0.057	0.068	0.057	0.025	**U**
71-55-6	1,1,1-Trichloroethane	0.059	0.068	0.059	0.016	**U**
56-23-5	Carbon Tetrachloride	**0.45**	0.068	0.057	0.032	
79-01-6	Trichloroethene	**0.060**	0.068	0.057	0.023	**J**
127-18-4	Tetrachloroethene	**0.14**	0.068	0.057	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.
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 IA-3** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-011

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00506
Initial Pressure (psig): 0.60 Final Pressure (psig): 4.24

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	0.026	0.031	0.026	0.0094	**U**
75-35-4	1,1-Dichloroethene	0.026	0.031	0.026	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.011	**U**
71-55-6	1,1,1-Trichloroethane	**0.014**	0.031	0.027	0.0073	**J**
56-23-5	Carbon Tetrachloride	**0.42**	0.031	0.026	0.015	
79-01-6	Trichloroethene	**0.083**	0.031	0.026	0.011	
127-18-4	Tetrachloroethene	**0.092**	0.031	0.026	0.010	

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 IA-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-012

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes:
Container ID: SC01535
Initial Pressure (psig): 0.32 Final Pressure (psig): 3.70

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	0.052	0.062	0.052	0.019	**U**
75-35-4	1,1-Dichloroethene	0.052	0.062	0.052	0.021	**U**
156-59-2	cis-1,2-Dichloroethene	0.052	0.062	0.052	0.023	**U**
71-55-6	1,1,1-Trichloroethane	0.054	0.062	0.054	0.015	**U**
56-23-5	Carbon Tetrachloride	**0.43**	0.062	0.052	0.030	
79-01-6	Trichloroethene	**0.045**	0.062	0.052	0.021	**J**
127-18-4	Tetrachloroethene	**0.075**	0.062	0.052	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 IA-2** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-013

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02408

Initial Pressure (psig): -13.50 Final Pressure (psig): 3.68

Container Dilution Factor: 15.32

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.32	0.38	0.32	0.12	**U**
75-35-4	1,1-Dichloroethene	0.32	0.38	0.32	0.13	**U**
156-59-2	cis-1,2-Dichloroethene	0.32	0.38	0.32	0.14	**U**
71-55-6	1,1,1-Trichloroethane	0.34	0.38	0.34	0.090	**U**
56-23-5	Carbon Tetrachloride	0.32	0.38	0.32	0.18	**U**
79-01-6	Trichloroethene	0.32	0.38	0.32	0.13	**U**
127-18-4	Tetrachloroethene	0.32	0.38	0.32	0.13	**U**

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 IA-3** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-014

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01569
Initial Pressure (psig): 1.15 Final Pressure (psig): 4.06

Container Dilution Factor: 1.18

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.025	0.030	0.025	0.0090	**U**
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	**U**
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	**U**
71-55-6	1,1,1-Trichloroethane	**0.0099**	0.030	0.026	0.0070	**J**
56-23-5	Carbon Tetrachloride	**0.40**	0.030	0.025	0.014	
79-01-6	Trichloroethene	**0.057**	0.030	0.025	0.010	
127-18-4	Tetrachloroethene	**0.084**	0.030	0.025	0.0097	

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: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-015

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00995
Initial Pressure (psig): -6.67 Final Pressure (psig): 5.15

Container Dilution Factor: 2.47

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.052	0.062	0.052	0.019	**U**
75-35-4	1,1-Dichloroethene	0.052	0.062	0.052	0.021	**U**
156-59-2	cis-1,2-Dichloroethene	0.052	0.062	0.052	0.023	**U**
71-55-6	1,1,1-Trichloroethane	0.054	0.062	0.054	0.015	**U**
56-23-5	Carbon Tetrachloride	**0.41**	0.062	0.052	0.030	
79-01-6	Trichloroethene	**0.025**	0.062	0.052	0.021	**J**
127-18-4	Tetrachloroethene	**0.069**	0.062	0.052	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: **Method Blank** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P200130-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.021	0.025	0.021	0.0076	**U**
75-35-4	1,1-Dichloroethene	0.021	0.025	0.021	0.0086	**U**
156-59-2	cis-1,2-Dichloroethene	0.021	0.025	0.021	0.0092	**U**
71-55-6	1,1,1-Trichloroethane	0.022	0.025	0.022	0.0059	**U**
56-23-5	Carbon Tetrachloride	0.021	0.025	0.021	0.012	**U**
79-01-6	Trichloroethene	0.021	0.025	0.021	0.0085	**U**
127-18-4	Tetrachloroethene	0.021	0.025	0.021	0.0082	**U**

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: **Method Blank** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P200131-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.021	0.025	0.021	0.0076	**U**
75-35-4	1,1-Dichloroethene	0.021	0.025	0.021	0.0086	**U**
156-59-2	cis-1,2-Dichloroethene	0.021	0.025	0.021	0.0092	**U**
71-55-6	1,1,1-Trichloroethane	0.022	0.025	0.022	0.0059	**U**
56-23-5	Carbon Tetrachloride	0.021	0.025	0.021	0.012	**U**
79-01-6	Trichloroethene	0.021	0.025	0.021	0.0085	**U**
127-18-4	Tetrachloroethene	0.021	0.025	0.021	0.0082	**U**

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

SURROGATE SPIKE RECOVERY RESULTS

Client: **AECOM**
Client Project ID: **Scotia / 60440641** ALS Project ID: P2000369

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 1/15/20
Analyst: Topacio De Leon Date(s) Received: 1/22/20
Sample Type: 6.0 L Summa Canister(s) / 6.0 L Silonite Canister(s) Date(s) Analyzed: 1/30 - 1/31/20
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P200130-MB	**106**	**103**	**89**	70-130	
Method Blank	P200131-MB	**106**	**104**	**90**	70-130	
Lab Control Sample	P200130-LCS	**106**	**100**	**98**	70-130	
Lab Control Sample	P200131-LCS	**107**	**101**	**99**	70-130	
Duplicate Lab Control Sample	P200130-DLCS	**106**	**99**	**97**	70-130	
Duplicate Lab Control Sample	P200131-DLCS	**106**	**101**	**99**	70-130	
Dup-1	P2000369-001	**104**	**88**	**98**	70-130	
Dup-2	P2000369-002	**105**	**89**	**91**	70-130	
201 IA-1	P2000369-003	**106**	**78**	**98**	70-130	
201 IA-2	P2000369-004	**102**	**87**	**98**	70-130	
201 IA-3	P2000369-005	**108**	**87**	**98**	70-130	
202 IA-1	P2000369-006	**102**	**79**	**100**	70-130	
202 IA-2	P2000369-007	**107**	**86**	**99**	70-130	
202 IA-3	P2000369-008	**107**	**88**	**100**	70-130	
203 IA-1	P2000369-009	**105**	**83**	**100**	70-130	
203 IA-2	P2000369-010	**107**	**83**	**98**	70-130	
203 IA-3	P2000369-011	**107**	**84**	**100**	70-130	
204 IA-1	P2000369-012	**108**	**85**	**98**	70-130	
204 IA-2	P2000369-013	**106**	**75**	**96**	70-130	
204 IA-3	P2000369-014	**104**	**85**	**92**	70-130	
OA-1	P2000369-015	**106**	**87**	**98**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **AECOM**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P200130-DLCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.48	8.28	8.46	**98**	**100**	64-127	2	25	
75-35-4	1,1-Dichloroethene	8.56	8.01	8.17	**94**	**95**	61-133	1	25	
156-59-2	cis-1,2-Dichloroethene	8.48	8.23	8.33	**97**	**98**	70-121	1	25	
71-55-6	1,1,1-Trichloroethane	8.56	8.91	8.94	**104**	**104**	68-125	0	25	
56-23-5	Carbon Tetrachloride	8.32	8.33	8.35	**100**	**100**	68-132	0	25	
79-01-6	Trichloroethene	8.64	8.19	8.25	**95**	**95**	71-123	0	25	
127-18-4	Tetrachloroethene	8.32	7.82	7.82	**94**	**94**	66-124	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **AECOM**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P200131-DLCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 1/31/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.48	8.48	8.05	**100**	**95**	64-127	5	25	
75-35-4	1,1-Dichloroethene	8.56	9.82	9.34	**115**	**109**	61-133	5	25	
156-59-2	cis-1,2-Dichloroethene	8.48	8.66	8.08	**102**	**95**	70-121	7	25	
71-55-6	1,1,1-Trichloroethane	8.56	9.41	8.73	**110**	**102**	68-125	8	25	
56-23-5	Carbon Tetrachloride	8.32	8.69	8.17	**104**	**98**	68-132	6	25	
79-01-6	Trichloroethene	8.64	8.68	7.98	**100**	**92**	71-123	8	25	
127-18-4	Tetrachloroethene	8.32	8.32	7.60	**100**	**91**	66-124	9	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **AECOM**

Client Project ID: **Scotia / 60440641** ALS Project ID: P2000369

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 01302002.D

Analyst: Topacio De Leon Date Analyzed: 1/30/20

Sample Type: 6.0 L Summa Canister(s) Time Analyzed: 04:07

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	15456		9.60	72426		11.56		23700		15.90	
	Upper Limit	21638		9.93	101396		11.89		33180		16.23	
	Lower Limit	9274		9.27	43456		11.23		14220		15.57	
	Client Sample ID											
01	Method Blank	14228		9.63	63467		11.57		21692		15.91	
02	Lab Control Sample	14088		9.61	65964		11.57		21792		15.91	
03	Duplicate Lab Control Sample	14295		9.61	66889		11.57		21993		15.91	
04	Dup-1	16539		9.60	88016		11.56		25605		15.90	
05	Dup-2	15971		9.61	85414		11.57		29460		15.91	
06	201 IA-1	16715		9.61	99844		11.57		25825		15.91	
07	201 IA-2	17499		9.61	88738		11.57		26035		15.91	
08	201 IA-3	16515		9.61	90373		11.57		26505		15.91	
09	202 IA-1	17084		9.61	101087		11.57		27006		15.91	
10	202 IA-2	17685		9.61	94959		11.57		27070		15.91	
11	203 IA-1	17173		9.61	98743		11.57		29066		15.91	
12	204 IA-3	16866		9.61	93837		11.57		31810		15.91	
13	OA-1	17512		9.61	92408		11.57		27585		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.

Client: **AECOM**

Client Project ID: **Scotia / 60440641** ALS Project ID: P2000369

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 01312002.D

Analyst: Topacio De Leon Date Analyzed: 1/31/20

Sample Type: 6.0 L Summa Canister(s) Time Analyzed: 03:27

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	15424		9.61	72627		11.56		23837		15.91	
	Upper Limit	21594		9.94	101678		11.89		33372		16.24	
	Lower Limit	9254		9.28	43576		11.23		14302		15.58	
	Client Sample ID											
01	Method Blank	13833		9.62	61505		11.57		21232		15.91	
02	Lab Control Sample	14597		9.61	68317		11.57		22770		15.91	
03	Duplicate Lab Control Sample	14862		9.61	69198		11.57		22887		15.91	
04	202 IA-3	15896		9.60	84308		11.57		24008		15.91	
05	203 IA-2	16352		9.61	92285		11.57		26137		15.91	
06	203 IA-3	16263		9.61	92961		11.57		26566		15.91	
07	204 IA-1	16770		9.61	91436		11.57		26564		15.91	
08	204 IA-2	15618		9.61	97856		11.57		24739		15.91	
09												
10												
11												
12												
13												
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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **2041A-2** ALS Project ID: P2000586
Client Project ID: **Scotia Navy Depot / 60440641** ALS Sample ID: P2000586-001

Test Code: EPA TO-15 SIM Date Collected: 1/23/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/31/20
Analyst: Topacio De Leon Date Analyzed: 2/4/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.30 Liter(s)
Test Notes:
Container ID: SSC00271
Initial Pressure (psig): -0.32 ›sig): 3.64

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	0.090	0.11	0.090	0.032	**U**
75-35-4	1,1-Dichloroethene	0.090	0.11	0.090	0.037	**U**
156-59-2	cis-1,2-Dichloroethene	0.090	0.11	0.090	0.039	**U**
71-55-6	1,1,1-Trichloroethane	0.094	0.11	0.094	0.025	**U**
56-23-5	Carbon Tetrachloride	**0.56**	0.11	0.090	0.051	
79-01-6	Trichloroethene	**0.079**	0.11	0.090	0.036	**J**
127-18-4	Tetrachloroethene	**0.083**	0.11	0.090	0.035	**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.

Verified By:_____Date:_____

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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www.alsglobal.com

LABORATORY REPORT

February 21, 2020

Gerlinde Wolf
AECOM
40 British American Boulevard
Latham, NY 12110

RE: Scotia Navy Depot / 60440641

Dear Gerlinde:

Enclosed are the results of the sample submitted to our laboratory on January 31, 2020. For your reference, this analysis has been assigned our service request number P2000586.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 11:14 am, Feb 21, 2020

For Kate Kaneko
Project Manager

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

Client: AECOM
Project: Scotia Navy Depot / 60440641

Service Request No: P2000586
New York Lab ID: 11221

CASE NARRATIVE

The sample was received intact under chain of custody on January 31, 2020 and was 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 sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was 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 #2 and #3 internal standard in 2041A-2 was outside control criteria because of suspected matrix interference. The sample was diluted in an attempt to eliminate the effects of the matrix interference. The results are reported from this dilution; therefore, the associated method reporting limits are elevated.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 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.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: AECOM
Service Request: P2000586
Project ID: Scotia Navy Depot / 60440641

Date Received: 1/31/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
2041A-2	P2000586-001	Air	1/23/2020	09:00	SSC00271	-0.32	3.64	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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. P1000586

Company Name & Address (Reporting Information)
AECOM
40 British American Blvd
Latham NY 12118

Project Name: Scotia Navy Depot
Project Number: 60644061

Project Manager: Geninde Wolf

P.O. # / Billing Information

Phone | Fax

Email Address for Result Reporting: geninde.wolf@aecom.com

Sampler (Print & Sign): Alexandra Holden

ALS Contact:

Analysis Method: 14-day

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
2041A-2		1/23/20	0900	SSC00271	FCS00123	-22.5 "Hg	1.0		

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

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:
Alexandra Holden	1/23/20	1700		1/31/20	915
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2000586

Project: Scotia Navy Depot / 60440641

Sample(s) received on: 01/31/20 Date opened: 01/31/20 by: DENISE.POSADA

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
P2000586-001.01	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

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **2041A-2** ALS Project ID: P2000586
Client Project ID: **Scotia Navy Depot / 60440641** ALS Sample ID: P2000586-001

Test Code: EPA TO-15 SIM Date Collected: 1/23/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/31/20
Analyst: Topacio De Leon Date Analyzed: 2/4/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.30 Liter(s)
Test Notes:
Container ID: SSC00271
Initial Pressure (psig): -0.32 Final Pressure (psig): 3.64

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	0.090	0.11	0.090	0.032	**U**
75-35-4	1,1-Dichloroethene	0.090	0.11	0.090	0.037	**U**
156-59-2	cis-1,2-Dichloroethene	0.090	0.11	0.090	0.039	**U**
71-55-6	1,1,1-Trichloroethane	0.094	0.11	0.094	0.025	**U**
56-23-5	Carbon Tetrachloride	**0.56**	0.11	0.090	0.051	
79-01-6	Trichloroethene	**0.079**	0.11	0.090	0.036	**J**
127-18-4	Tetrachloroethene	**0.083**	0.11	0.090	0.035	**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: **Method Blank** ALS Project ID: P2000586
Client Project ID: **Scotia Navy Depot / 60440641** ALS Sample ID: P200204-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 2/4/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.021	0.025	0.021	0.0076	**U**
75-35-4	1,1-Dichloroethene	0.021	0.025	0.021	0.0086	**U**
156-59-2	cis-1,2-Dichloroethene	0.021	0.025	0.021	0.0092	**U**
71-55-6	1,1,1-Trichloroethane	0.022	0.025	0.022	0.0059	**U**
56-23-5	Carbon Tetrachloride	0.021	0.025	0.021	0.012	**U**
79-01-6	Trichloroethene	0.021	0.025	0.021	0.0085	**U**
127-18-4	Tetrachloroethene	0.021	0.025	0.021	0.0082	**U**

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

SURROGATE SPIKE RECOVERY RESULTS

Client: **AECOM**
Client Project ID: **Scotia Navy Depot / 60440641** ALS Project ID: P2000586

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 1/23/20
Analyst: Topacio De Leon Date(s) Received: 1/31/20
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 2/4/20
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P200204-MB	**107**	**103**	**87**	70-130	
Lab Control Sample	P200204-LCS	**106**	**100**	**97**	70-130	
Duplicate Lab Control Sample	P200204-DLCS	**107**	**100**	**97**	70-130	
2041A-2	P2000586-001	**109**	**79**	**99**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **AECOM**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **Scotia Navy Depot / 60440641**

ALS Project ID: P2000586
ALS Sample ID: P200204-DLCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/4/20
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.48	7.78	7.89	**92**	**93**	64-127	1	25	
75-35-4	1,1-Dichloroethene	8.56	8.91	9.08	**104**	**106**	61-133	2	25	
156-59-2	cis-1,2-Dichloroethene	8.48	7.80	7.88	**92**	**93**	70-121	1	25	
71-55-6	1,1,1-Trichloroethane	8.56	8.44	8.49	**99**	**99**	68-125	0	25	
56-23-5	Carbon Tetrachloride	8.32	7.90	7.95	**95**	**96**	68-132	1	25	
79-01-6	Trichloroethene	8.64	7.81	7.83	**90**	**91**	71-123	1	25	
127-18-4	Tetrachloroethene	8.32	7.42	7.39	**89**	**89**	66-124	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **AECOM**

Client Project ID: **Scotia Navy Depot / 60440641** ALS Project ID: P2000586

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 02042002.D
Analyst: Topacio De Leon Date Analyzed: 2/4/20
Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 04:07
Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	15553		9.61	72893		11.56		23660		15.91	
	Upper Limit	21774		9.94	102050		11.89		33124		16.24	
	Lower Limit	9332		9.28	43736		11.23		14196		15.58	
	Client Sample ID											
01	Method Blank	13535		9.62	59998		11.57		20410		15.91	
02	Lab Control Sample	14342		9.61	66840		11.56		21990		15.91	
03	Duplicate Lab Control Sample	14658		9.61	68349		11.57		22365		15.91	
04	2041A-2	16262		9.61	99393		11.57		29250		15.91	
05												
06												
07												
08												
09												
10												
11												
12												
13												
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.

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www.alsglobal.com

LABORATORY REPORT

April 21, 2020

Gerlinde Wolf
AECOM
40 British American Boulevard
Latham, NY 12110

RE: SCOTIA NAVY DEPOT / 60440641

Dear Gerlinde:

Enclosed are the results of the samples submitted to our laboratory on April 2, 2020. For your reference, these analyses have been assigned our service request number P2001835.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
Apr 21, 2020, 3:33 pm

Kate Kaneko
Project Manager

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

Client: AECOM
Project: SCOTIA NAVY DEPOT / 60440641

Service Request No: P2001835
New York Lab ID: 11221

CASE NARRATIVE

The samples were received intact under chain of custody on April 2, 2020 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.

Manual integrations were performed on the following sample and analytes. Refer to the raw data for additional information.

Sample Identification	Analytes
P2001835-002	1,1,1-trichloroethane and trichloroethene

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 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.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: AECOM
Service Request: P2001835
Project ID: SCOTIA NAVY DEPOT / 60440641

Date Received: 4/2/2020
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
OA3-26-20	P2001835-001	Air	3/26/2020	10:30	AS01136	-0.75	4.11	X
DUP	P2001835-002	Air	3/26/2020	00:00	SSC00077	-1.21	4.28	X
IA201-2-3-26-20	P2001835-003	Air	3/26/2020	10:25	SSC00144	0.02	4.24	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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. P2001835

ALS Contact:

Company Name & Address (Reporting Information)	Project Name	Analysis Method
AECOM 40 British American Blvd Latham NY 12110	SCOTIA NAVY DEPOT	TO-15 SIM
Project Manager: Gerlinde Wolf	Project Number: 60440641	
Phone: 518 951 2370 Fax:	P.O. # / Billing Information	
Email Address for Result Reporting: gerlinde.wolf@aecom.com	Sampler (Print & Sign): Alexandra Golden	

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	Analysis Method		Comments e.g. Actual Preservative or specific instructions
OA 3-26-20	1	3/26/20	1030	AS01131	FCR00242	30	4		X		
DUP	2	↓	—	SSC00077	FCR00316	30	5		↓		
IA 201-2-3-26-20	3	↓	1025	SSC00144	FCR00242	29	2		↓		

5 of 103

Report Tier Levels - please select

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

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:
Alexandra Golden	03/27/20	1230			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				4-2-20	0700

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2001835

Project: SCOTIA NAVY DEPOT / 60440641

Sample(s) received on: 04/02/20 Date opened: 04/02/20 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
P2001835-001.01	6.0 L Silonite Can					
P2001835-002.01	6.0 L Silonite Can					
P2001835-003.01	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

RESULTS OF ANALYSIS

Client: **AECOM**
Client Sample ID: **OA3-26-20** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-001

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01136
Initial Pressure (psig): -0.75 Final Pressure (psig): 4.11

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	0.010	**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	0.012	**U**
71-55-6	1,1,1-Trichloroethane	0.028	0.034	0.028	0.0080	**U**
56-23-5	Carbon Tetrachloride	**0.39**	0.034	0.028	0.016	
79-01-6	Trichloroethene	0.028	0.034	0.028	0.011	**U**
127-18-4	Tetrachloroethene	**0.074**	0.034	0.028	0.011	

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: **DUP** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-002

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00077
Initial Pressure (psig): -1.21 Final Pressure (psig): 4.28

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.031	0.035	0.031	0.011	**U**
75-35-4	1,1-Dichloroethene	0.031	0.035	0.031	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.030	0.035	0.030	0.013	**U**
71-55-6	1,1,1-Trichloroethane	**0.0087**	0.035	0.030	0.0083	**J**
56-23-5	Carbon Tetrachloride	**0.37**	0.035	0.030	0.017	
79-01-6	Trichloroethene	**0.015**	0.035	0.030	0.012	**J**
127-18-4	Tetrachloroethene	**0.097**	0.035	0.030	0.012	

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: **IA201-2-3-26-20** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-003

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00144
Initial Pressure (psig): 0.02 Final Pressure (psig): 4.24

Container Dilution Factor: 1.29

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	0.0098	**U**
75-35-4	1,1-Dichloroethene	0.028	0.032	0.028	0.011	**U**
156-59-2	cis-1,2-Dichloroethene	**0.022**	0.032	0.027	0.012	**J**
71-55-6	1,1,1-Trichloroethane	**0.0090**	0.032	0.027	0.0076	**J**
56-23-5	Carbon Tetrachloride	**0.38**	0.032	0.027	0.015	
79-01-6	Trichloroethene	**0.021**	0.032	0.027	0.011	**J**
127-18-4	Tetrachloroethene	**0.098**	0.032	0.027	0.011	

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: **Method Blank** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P200407-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.022	0.025	0.022	0.0076	**U**
75-35-4	1,1-Dichloroethene	0.022	0.025	0.022	0.0086	**U**
156-59-2	cis-1,2-Dichloroethene	0.021	0.025	0.021	0.0092	**U**
71-55-6	1,1,1-Trichloroethane	0.021	0.025	0.021	0.0059	**U**
56-23-5	Carbon Tetrachloride	0.021	0.025	0.021	0.012	**U**
79-01-6	Trichloroethene	0.021	0.025	0.021	0.0085	**U**
127-18-4	Tetrachloroethene	0.021	0.025	0.021	0.0082	**U**

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

SURROGATE SPIKE RECOVERY RESULTS

Client: **AECOM**
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Project ID: P2001835

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 3/26/20
Analyst: Topacio De Leon Date(s) Received: 4/2/20
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 4/7/20
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P200407-MB	**103**	**109**	**86**	70-130	
Lab Control Sample	P200407-LCS	**104**	**103**	**103**	70-130	
Duplicate Lab Control Sample	P200407-DLCS	**102**	**103**	**102**	70-130	
OA3-26-20	P2001835-001	**102**	**107**	**98**	70-130	
DUP	P2001835-002	**99**	**95**	**97**	70-130	
IA201-2-3-26-20	P2001835-003	**101**	**88**	**101**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **AECOM**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P200407-DLCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.48	7.13	7.03	**84**	**83**	64-127	1	25	
75-35-4	1,1-Dichloroethene	8.56	9.00	8.88	**105**	**104**	61-133	1	25	
156-59-2	cis-1,2-Dichloroethene	8.48	7.55	7.36	**89**	**87**	70-121	2	25	
71-55-6	1,1,1-Trichloroethane	8.56	7.74	7.48	**90**	**87**	68-125	3	25	
56-23-5	Carbon Tetrachloride	8.32	7.57	7.27	**91**	**87**	68-132	4	25	
79-01-6	Trichloroethene	8.64	7.57	7.45	**88**	**86**	71-123	2	25	
127-18-4	Tetrachloroethene	8.32	7.53	7.37	**91**	**89**	66-124	2	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **AECOM**
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Project ID: P2001835

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19 Lab File ID: 04072002.D
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 02:07
Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	19257		9.61	90503		11.57		29697		15.91	
	Upper Limit	26960		9.94	126704		11.90		41576		16.24	
	Lower Limit	11554		9.28	54302		11.24		17818		15.58	
	Client Sample ID											
01	Method Blank	16779		9.63	70431		11.57		25531		15.91	
02	Lab Control Sample	19543		9.61	92767		11.57		30802		15.91	
03	Duplicate Lab Control Sample	20881		9.61	97508		11.57		32355		15.91	
04	OA3-26-20	20057		9.61	89571		11.57		31246		15.91	
05	DUP	22512		9.60	111806		11.57		37263		15.91	
06	IA201-2-3-26-20	21384		9.61	117509		11.57		33492		15.91	
07												
08												
09												
10												
11												
12												
13												
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 F: AECOM Data Usability Summary Report (DUSR)

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

Prepared by:
AECOM
Pittsburgh, PA
60440641-21
April 2020

Data Usability Summary Report
Defense National Stockpile Center
Scotia Depot
ALS Service Request Numbers: P2000369, P2000586, P2001835
January and March 2020 Air Samples
Final

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

Prepared by:
AECOM
Pittsburgh, PA
60440641-21
April 2020

Data Usability Summary Report
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Scotia Depot
ALS Service Request Numbers: P2000369, P2000586, P2001835
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Final

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Contents

List of Appendices

Executive Summary

Data validation was performed by Gregory A. Malzone of AECOM – Pittsburgh on two data reports from ALS, 2655 Park Center Dr., Suite A, Simi Valley, CA 93065 (ALS) for the analysis of indoor and outdoor air samples collected on January 15 and 23, 2020 and March 26, 2020 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 two sample delivery groups (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
DUP-1 [202-IA-1]	P2000369-001	Indoor Air (QC)	1/15/2020
DUP-2 [201-IA-1]	P2000369-002	Indoor Air (QC)	1/15/2020
201-IA-1-011520	P2000369-003	Indoor Air	1/15/2020
201-IA-2-011520	P2000369-004	Indoor Air	1/15/2020
201-IA-3-011520	P2000369-005	Indoor Air	1/15/2020
202-IA-1-011520	P2000369-006	Indoor Air	1/15/2020
202-IA-2-011520	P2000369-007	Indoor Air	1/15/2020
202-IA-3-011520	P2000369-008	Indoor Air	1/15/2020
203-IA-1-011520	P2000369-009	Indoor Air	1/15/2020
203-IA-2-011520	P2000369-010	Indoor Air	1/15/2020
203-IA-3-011520	P2000369-011	Indoor Air	1/15/2020
204-IA-1-011520	P2000369-012	Indoor Air	1/15/2020
204-IA-2-011520	P2000369-013	Indoor Air	1/15/2020
204-IA-3-011520	P2000369-014	Indoor Air	1/15/2020
OA1-011520	P2000369-015	Outdoor Air	1/15/2020
204-IA-2-012320	P2000586-001	Indoor Air	1/23/2020
OA3-26-20	P2001835-001	Outdoor Air	3/26/2020
DUP-3-26-20	P2001835-002	Indoor Air (QC)	3/26/2020
IA201-2-3-26-20	P2001835-003	Indoor Air	3/26/2020

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) 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.

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.

Initial Field Vacuum Checks (P2000586, p. 5): The initial canister vacuum readings measured in the field were greater than -25 “Hg, with one exception. The canister SSC00271 start pressure for sample 204-IA-2 (P2000586-001) was -22.5 “Hg. ALS determined that the sample canister still contained sample from the site and could still be analyzed. Based on professional judgment, all positive and non-detect results for sample 204-IA-2 (P2000586-001) were qualified “J” and “UJ,” as estimates, because of the sample integrity issue.

Residual Laboratory Vacuum Checks (P2000369, pp. 4-5; P2000586, pp. 4-5; P2001835, pp. 4-5): All residual vacuum check measurements taken upon receipt at ALS were greater than 1.0 “Hg and less than 10 “Hg with the following exceptions.

The residual vacuum check measurement taken upon receipt at ALS for sample 204-IA-2 (P2000369-013) was -27.5 “Hg. Little or no sample entered the can. The results for this sample were not reported. The point was resampled on 01/23/20 as 204-IA-2 (P2000586-001). The resample results were reported.

The residual vacuum measurements taken upon receipt at ALS for samples Dup-2, 201-IA-3, 202-IA-1, 202-IA-2, 202-IA-3, 203-IA-1, 203-IA-3, 204-IA-1, 204-IA-2, 204-IA-3, OA-1 and IA201-2-3-26-20 were less than 1.0 “Hg, greater than 10 “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” 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 samples Dup-2, 201-IA-3, 202-IA-1, 202-IA-2, 202-IA-3, 203-IA-1, 203-IA-3, 204-IA-1,

204-IA-3, OA-1 and IA201-2-3-26-20 were qualified "J" and "UJ," as estimates, because of the sample integrity issue.

Quantitation Limits (P2000369, pp. 28-29; P2000586, p. 11): The 1,4-difluorobenzene (IS2) internal standard area in samples 202 IA-3, 203 IA-2, 204 IA-1 and 203 IA-3, and the 1,4-difluorobenzene (IS2) and chlorobenzene-d5 (IS3) internal standard areas in sample 204-IA-2, were outside the method-specification limits because of matrix interference. The samples were reanalyzed at a higher dilution factor to minimize the matrix interference. The internal standard areas were acceptable upon reanalysis at a higher dilution factor. The reanalysis results were reported at elevated MDLs and LOQs as required.

Field Duplicate Precision (P2000369, pp. 8-9, 10, 13): Field duplicate samples were collected for samples 202-IA-1-011520 and 201-IA-1-011520. The results for the parent and field duplicate samples were non-detected, with exception to those listed in Table 2A, 2B and 2C 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. Field sampling/laboratory precision and sample homogeneity were acceptable except for tetrachloroethene. The tetrachloroethene results associated with a nonconforming RPDs 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
Quals: Qualifier(s) required
NC: RPD could not be calculated

Table 2A
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	202-IA-1-011520	DUP-1-011520	RPD (%)	Qual
1,1,1-Trichloroethane	µg/m3	0.012 J	0.013 J	8.0	None
Carbon tetrachloride	µg/m3	0.41	0.39	5.0	None
Trichloroethene	µg/m3	0.028 J	0.031 J	10	None
Tetrachloroethene	µg/m3	0.078	0.57	152	J

Table 2B
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	201-IA-1-011520	DUP-2-011520	RPD (%)	Qual
1,1,1-Trichloroethane	µg/m3	0.048 U	0.0087 J	NC	±2LOQ, None
Carbon tetrachloride	µg/m3	0.39	0.41	5.0	None
Trichloroethene	µg/m3	0.025 J	0.014 J	56	±2LOQ, None
Tetrachloroethene	µg/m3	0.30	0.092	106	J

Table 2C
Field Duplicate Precision - Scotia Depot Air Samples

Parameter	Units	IA201-2-3-26-20	DUP3-26-20	RPD (%)	Qual
cis-1,2-Dichloroethene	µg/m3	0.022 J	0.035 U	NC	±2LOQ, None
1,1,1-Trichloroethane	µg/m3	0.0090 J	0.0087 J	3.4	None
Carbon tetrachloride	µg/m3	0.38	0.37	2.7	None
Trichloroethene	µg/m3	0.021 J	0.015 J	33	±2LOQ, None
Tetrachloroethene	µg/m3	0.098	0.097	1.0	None

2.0 Notes

Data Reporting: Non-detect results were reported to the limits of detection (LODs) 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: **Dup-1** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-001

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02295

Initial Pressure (psig): -2.49 Final Pressure (psig): 4.59

Container Dilution Factor: 1.58

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.033	0.040	0.033	0.012	U
75-35-4	1,1-Dichloroethene	0.033	0.040	0.033	0.014	U
156-59-2	cis-1,2-Dichloroethene	0.033	0.040	0.033	0.015	U
71-55-6	1,1,1-Trichloroethane	**0.013**	0.040	0.035	0.0093	J
56-23-5	Carbon Tetrachloride	**0.39**	0.040	0.033	0.019	
79-01-6	Trichloroethene	**0.031**	0.040	0.033	0.013	J
127-18-4	Tetrachloroethene	**0.57**	0.040	0.033	0.013	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: **Dup-2**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-002

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01848

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.80 Final Pressure (psig): 4.01

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	0.025	0.030	0.025	0.0092	U J
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	U J
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	U J
71-55-6	1,1,1-Trichloroethane	**0.0087**	0.030	0.027	0.0071	**J**
56-23-5	Carbon Tetrachloride	**0.41**	0.030	0.025	0.015	J
79-01-6	Trichloroethene	**0.014**	0.030	0.025	0.010	**J**
127-18-4	Tetrachloroethene	**0.092**	0.030	0.025	0.0099	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 IA-1**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-003

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01010

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.65 Final Pressure (psig): 4.51

Container Dilution Factor: 1.91

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.040	0.048	0.040	0.015	U
75-35-4	1,1-Dichloroethene	0.040	0.048	0.040	0.016	U
156-59-2	cis-1,2-Dichloroethene	0.040	0.048	0.040	0.018	U
71-55-6	1,1,1-Trichloroethane	0.042	0.048	0.042	0.011	U
56-23-5	Carbon Tetrachloride	**0.39**	0.048	0.040	0.023	
79-01-6	Trichloroethene	**0.025**	0.048	0.040	0.016	J
127-18-4	Tetrachloroethene	**0.30**	0.048	0.040	0.016	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 IA-2**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-004

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00240

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.05 Final Pressure (psig): 6.13

Container Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.032	0.038	0.032	0.012	U
75-35-4	1,1-Dichloroethene	0.032	0.038	0.032	0.013	U
156-59-2	cis-1,2-Dichloroethene	0.032	0.038	0.032	0.014	U
71-55-6	1,1,1-Trichloroethane	**0.025**	0.038	0.034	0.0090	J
56-23-5	Carbon Tetrachloride	**2.1**	0.038	0.032	0.018	
79-01-6	Trichloroethene	**0.020**	0.038	0.032	0.013	J
127-18-4	Tetrachloroethene	**0.10**	0.038	0.032	0.013	

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 IA-3**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-005

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01062

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.89 Final Pressure (psig): 4.06

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	0.025	0.030	0.025	0.0091	U J
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	U J
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	U J
71-55-6	1,1,1-Trichloroethane	**0.011**	0.030	0.026	0.0071	J
56-23-5	Carbon Tetrachloride	**0.43**	0.030	0.025	0.014	J
79-01-6	Trichloroethene	**0.026**	0.030	0.025	0.010	J
127-18-4	Tetrachloroethene	**0.11**	0.030	0.025	0.0098	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 IA-1**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-006

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00381

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.37 Final Pressure (psig): 3.99

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	0.026	0.031	0.026	0.0094	UJ
75-35-4	1,1-Dichloroethene	0.026	0.031	0.026	0.011	UJ
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.011	UJ
71-55-6	1,1,1-Trichloroethane	**0.012**	0.031	0.027	0.0073	J
56-23-5	Carbon Tetrachloride	**0.41**	0.031	0.026	0.015	J
79-01-6	Trichloroethene	**0.028**	0.031	0.026	0.011	J
127-18-4	Tetrachloroethene	**0.078**	0.031	0.026	0.010	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 IA-2**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-007

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02134

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.54 Final Pressure (psig): 4.48

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	0.026	0.032	0.026	0.0096	U J
75-35-4	1,1-Dichloroethene	0.026	0.032	0.026	0.011	U J
156-59-2	cis-1,2-Dichloroethene	0.026	0.032	0.026	0.012	U J
71-55-6	1,1,1-Trichloroethane	**0.010**	0.032	0.028	0.0074	**J**
56-23-5	Carbon Tetrachloride	**0.43**	0.032	0.026	0.015	J
79-01-6	Trichloroethene	**0.021**	0.032	0.026	0.011	**J**
127-18-4	Tetrachloroethene	**0.11**	0.032	0.026	0.010	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 IA-3**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-008

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02078

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/31/20
Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -5.82 Final Pressure (psig): 3.71

Container Dilution Factor: 2.07

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.087	0.10	0.087	0.031	UJ
75-35-4	1,1-Dichloroethene	0.087	0.10	0.087	0.036	UJ
156-59-2	cis-1,2-Dichloroethene	0.087	0.10	0.087	0.038	UJ
71-55-6	1,1,1-Trichloroethane	0.091	0.10	0.091	0.024	UJ
56-23-5	Carbon Tetrachloride	**0.43**	0.10	0.087	0.050	J
79-01-6	Trichloroethene	**0.073**	0.10	0.087	0.035	**J**
127-18-4	Tetrachloroethene	**0.082**	0.10	0.087	0.034	**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 IA-1**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-009

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01466

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.14 Final Pressure (psig): 4.50

Container Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.027	0.032	0.027	0.0098	UJ
75-35-4	1,1-Dichloroethene	0.027	0.032	0.027	0.011	UJ
156-59-2	cis-1,2-Dichloroethene	0.027	0.032	0.027	0.012	UJ
71-55-6	1,1,1-Trichloroethane	**0.012**	0.032	0.028	0.0076	**J**
56-23-5	Carbon Tetrachloride	**0.40**	0.032	0.027	0.015	J
79-01-6	Trichloroethene	**0.045**	0.032	0.027	0.011	J
127-18-4	Tetrachloroethene	**0.074**	0.032	0.027	0.011	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 IA-2**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-010

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00678

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/31/20
Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -1.03 Final Pressure (psig): 3.78

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	0.057	0.068	0.057	0.021	U
75-35-4	1,1-Dichloroethene	0.057	0.068	0.057	0.023	U
156-59-2	cis-1,2-Dichloroethene	0.057	0.068	0.057	0.025	U
71-55-6	1,1,1-Trichloroethane	0.059	0.068	0.059	0.016	U
56-23-5	Carbon Tetrachloride	**0.45**	0.068	0.057	0.032	
79-01-6	Trichloroethene	**0.060**	0.068	0.057	0.023	J
127-18-4	Tetrachloroethene	**0.14**	0.068	0.057	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.
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 IA-3**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-011

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00506

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/31/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.60 Final Pressure (psig): 4.24

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	0.026	0.031	0.026	0.0094	UJ
75-35-4	1,1-Dichloroethene	0.026	0.031	0.026	0.011	UJ
156-59-2	cis-1,2-Dichloroethene	0.026	0.031	0.026	0.011	UJ
71-55-6	1,1,1-Trichloroethane	**0.014**	0.031	0.027	0.0073	**J**
56-23-5	Carbon Tetrachloride	**0.42**	0.031	0.026	0.015	J
79-01-6	Trichloroethene	**0.083**	0.031	0.026	0.011	J
127-18-4	Tetrachloroethene	**0.092**	0.031	0.026	0.010	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 IA-1**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-012

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01535

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/31/20
Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): 0.32 Final Pressure (psig): 3.70

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	0.052	0.062	0.052	0.019	UJ
75-35-4	1,1-Dichloroethene	0.052	0.062	0.052	0.021	UJ
156-59-2	cis-1,2-Dichloroethene	0.052	0.062	0.052	0.023	UJ
71-55-6	1,1,1-Trichloroethane	0.054	0.062	0.054	0.015	UJ
56-23-5	Carbon Tetrachloride	**0.43**	0.062	0.052	0.030	J
79-01-6	Trichloroethene	**0.045**	0.062	0.052	0.021	**J**
127-18-4	Tetrachloroethene	**0.075**	0.062	0.052	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: ~~2041A-2~~ 204-IA-2
Client Project ID: **Scotia Navy Depot / 60440641**

ALS Project ID: P2000586
ALS Sample ID: P2000586-001

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00271

Date Collected: 1/23/20
Date Received: 1/31/20
Date Analyzed: 2/4/20
Volume(s) Analyzed: 0.30 Liter(s)

Initial Pressure (psig): -0.32 Final Pressure (psig): 3.64

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	0.090	0.11	0.090	0.032	U J
75-35-4	1,1-Dichloroethene	0.090	0.11	0.090	0.037	U J
156-59-2	cis-1,2-Dichloroethene	0.090	0.11	0.090	0.039	U J
71-55-6	1,1,1-Trichloroethane	0.094	0.11	0.094	0.025	U J
56-23-5	Carbon Tetrachloride	**0.56**	0.11	0.090	0.051	J
79-01-6	Trichloroethene	**0.079**	0.11	0.090	0.036	**J**
127-18-4	Tetrachloroethene	**0.083**	0.11	0.090	0.035	**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

Not reported.

Client: **AECOM**
Client Sample ID: **204 IA-2**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-013

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02408

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/31/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -13.50 Final Pressure (psig): 3.68

Container Dilution Factor: 15.32

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.32	0.38	0.32	0.12	U
75-35-4	1,1-Dichloroethene	0.32	0.38	0.32	0.13	U
156-59-2	cis-1,2-Dichloroethene	0.32	0.38	0.32	0.14	U
71-55-6	1,1,1-Trichloroethane	0.34	0.38	0.34	0.090	U
56-23-5	Carbon Tetrachloride	0.32	0.38	0.32	0.18	U
79-01-6	Trichloroethene	0.32	0.38	0.32	0.13	U
127-18-4	Tetrachloroethene	0.32	0.38	0.32	0.13	U

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 IA-3** ALS Project ID: P2000369
Client Project ID: **Scotia / 60440641** ALS Sample ID: P2000369-014

Test Code: EPA TO-15 SIM Date Collected: 1/15/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 1/22/20
Analyst: Topacio De Leon Date Analyzed: 1/30/20
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01569

Initial Pressure (psig): 1.15 Final Pressure (psig): 4.06

Container Dilution Factor: 1.18

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.025	0.030	0.025	0.0090	UJ
75-35-4	1,1-Dichloroethene	0.025	0.030	0.025	0.010	UJ
156-59-2	cis-1,2-Dichloroethene	0.025	0.030	0.025	0.011	UJ
71-55-6	1,1,1-Trichloroethane	**0.0099**	0.030	0.026	0.0070	**J**
56-23-5	Carbon Tetrachloride	**0.40**	0.030	0.025	0.014	J
79-01-6	Trichloroethene	**0.057**	0.030	0.025	0.010	J
127-18-4	Tetrachloroethene	**0.084**	0.030	0.025	0.0097	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**
Client Project ID: **Scotia / 60440641**

ALS Project ID: P2000369
ALS Sample ID: P2000369-015

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00995

Date Collected: 1/15/20
Date Received: 1/22/20
Date Analyzed: 1/30/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.67 Final Pressure (psig): 5.15

Container Dilution Factor: 2.47

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.052	0.062	0.052	0.019	UJ
75-35-4	1,1-Dichloroethene	0.052	0.062	0.052	0.021	UJ
156-59-2	cis-1,2-Dichloroethene	0.052	0.062	0.052	0.023	UJ
71-55-6	1,1,1-Trichloroethane	0.054	0.062	0.054	0.015	UJ
56-23-5	Carbon Tetrachloride	**0.41**	0.062	0.052	0.030	J
79-01-6	Trichloroethene	**0.025**	0.062	0.052	0.021	**J**
127-18-4	Tetrachloroethene	**0.069**	0.062	0.052	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: **OA3-26-20** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-001

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01136
Initial Pressure (psig): -0.75 Final Pressure (psig): 4.11

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	0.010	**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	0.012	**U**
71-55-6	1,1,1-Trichloroethane	0.028	0.034	0.028	0.0080	**U**
56-23-5	Carbon Tetrachloride	**0.39**	0.034	0.028	0.016	
79-01-6	Trichloroethene	0.028	0.034	0.028	0.011	**U**
127-18-4	Tetrachloroethene	**0.074**	0.034	0.028	0.011	

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: **DUP** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-002

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00077
Initial Pressure (psig): -1.21 Final Pressure (psig): 4.28

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	LOQ µg/m³	LOD µg/m³	MDL µg/m³	Data Qualifier
75-01-4	Vinyl Chloride	0.031	0.035	0.031	0.011	**U**
75-35-4	1,1-Dichloroethene	0.031	0.035	0.031	0.012	**U**
156-59-2	cis-1,2-Dichloroethene	0.030	0.035	0.030	0.013	**U**
71-55-6	1,1,1-Trichloroethane	**0.0087**	0.035	0.030	0.0083	**J**
56-23-5	Carbon Tetrachloride	**0.37**	0.035	0.030	0.017	
79-01-6	Trichloroethene	**0.015**	0.035	0.030	0.012	**J**
127-18-4	Tetrachloroethene	**0.097**	0.035	0.030	0.012	

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: **IA201-2-3-26-20** ALS Project ID: P2001835
Client Project ID: **SCOTIA NAVY DEPOT / 60440641** ALS Sample ID: P2001835-003

Test Code: EPA TO-15 SIM Date Collected: 3/26/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/2/20
Analyst: Topacio De Leon Date Analyzed: 4/7/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SSC00144
Initial Pressure (psig): 0.02 Final Pressure (psig): 4.24

Container Dilution Factor: 1.29

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	0.0098	**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	**0.022**	0.032	0.027	0.012	**J**
71-55-6	1,1,1-Trichloroethane	**0.0090**	0.032	0.027	0.0076	**J**
56-23-5	Carbon Tetrachloride	**0.38**	0.032	0.027	0.015	J
79-01-6	Trichloroethene	**0.021**	0.032	0.027	0.011	**J**
127-18-4	Tetrachloroethene	**0.098**	0.032	0.027	0.011	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.

Appendix C

Support Documentation

Air - Chain of Custody Record & Analytical Service Request

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. P2000369

Company Name & Address (Reporting Information): AECOM 40 British American Blvd Latham NY [redacted] 12110

Project Name: Scotia

Project Number: 60440641

Project Manager: Dan Servetas

P.O. # / Billing Information

Phone: 518 369 6024 Fax:

Email Address for Result Reporting: gerlinde.wolf@AECOM.com, daniel.servetas@AECOM.com

Sampler (Print & Sign): Gerlinde Wolf

ALS Contact: Kate Kaneko

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	Analysis Method: TO-15 SIM		Comments e.g. Actual Preservative or specific instructions
Dup-1	1	1/15/20	[redacted]	AC02295	FCA01023	30	7	6L			
Dup-2	2		[redacted]	SC01848	FCS00007	30	1				
201 1A-1	3		1015	AS01010	FCA00990	29	11				
201 1A-2	4		1055	SSC00240	FCS00049	30	4				
201 1A-3	5		1105	SC01062	FCA00737	30	0				
202 1A-1	6		1025	SC00381	FCA00854	29	2				
202 1A-2	7		1300	AC02134	FCA00929	28.5	0				
202 1A-3	8		1255	SC02078	FCS00101	30	13				
203 1A-1	9		1340	AC01466	FCA00610	29.5	2				
203 1A-2	10		1325	AS00678	FCS00121	30	4.5				
2031A-3	11		1310	SSC00506	FCA00706	29	1				
204 1A-1	12		1410	SC01535	FCA00636	30	1				
204 1A-2	13		1405	AC02408	FCS00113	30	29				
2041A-3	14		1355	SC01569	FCA00506	29	0				

5.01 122

Report Tier Levels - please select

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

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:
Gerlinde Wolf	1/15/20	1600	[signature]	1-22-20	900
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

Page 2 of 2

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. P1000369

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

Project Name: Scotia

Project Number: 60440641

Project Manager: Dan Servetas

P.O. # / Billing Information

Phone: 518-369-6024 Fax:

Email Address for Result Reporting: gerlinde.wolff@aecom.com, Dan.Servetas@AECOM.com

Sampler (Print & Sign): Gerlinde Wolff

ALS Contact: Kate Kaneko

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 SIM		Comments e.g. Actual Preservative or specific instructions
OA-1	15	1/15/20	1350	SC00995	FCA00707	30	16	6L			

6 of 22

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) X

Tier II (Results + QC Summaries) ____ Tier IV (Data Validation Package) 10% Surcharge ____

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:
Gerlinde Wolff	1/15/20	1600		1-22-20	900
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2000369

Project: Scotia / 60440641

Sample(s) received on: 01/22/20 Date opened: 01/22/20 by: DENISE.POSADA

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
P2000369-001.01	6.0 L Ambient Can					
P2000369-002.01	6.0 L Source Can					
P2000369-003.01	6.0 L Silonite Can					
P2000369-004.01	6.0 L Silonite Can					
P2000369-005.01	6.0 L Source Can					
P2000369-006.01	6.0 L Source Can					
P2000369-007.01	6.0 L Ambient Can					
P2000369-008.01	6.0 L Source Can					
P2000369-009.01	6.0 L Ambient Can					
P2000369-010.01	6.0 L Silonite Can					
P2000369-011.01	6.0 L Silonite Can					
P2000369-012.01	6.0 L Source Can					
P2000369-013.01	6.0 L Ambient Can					
P2000369-014.01	6.0 L Source Can					
P2000369-015.01	6.0 L Source Can					

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

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

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: AECOM
Project ID: Scotia / 60440641

Service Request: P2000369

Date Received: 1/22/2020
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC SIM
Dup-1	P2000369-001	Air	1/15/2020	00:00	AC02295	-2.49	4.59	X
Dup-2	P2000369-002	Air	1/15/2020	00:00	SC01848	0.80	4.01	X
201 IA-1	P2000369-003	Air	1/15/2020	10:15	AS01010	-4.65	4.51	X
201 IA-2	P2000369-004	Air	1/15/2020	10:55	SSC00240	-1.05	6.13	X
201 IA-3	P2000369-005	Air	1/15/2020	11:05	SC01062	0.89	4.06	X
202 IA-1	P2000369-006	Air	1/15/2020	10:25	SC00381	0.37	3.99	X
202 IA-2	P2000369-007	Air	1/15/2020	13:00	AC02134	0.54	4.48	X
202 IA-3	P2000369-008	Air	1/15/2020	12:55	SC02078	-5.82	3.71	X
203 IA-1	P2000369-009	Air	1/15/2020	13:40	AC01466	0.14	4.50	X
203 IA-2	P2000369-010	Air	1/15/2020	13:25	AS00678	-1.03	3.78	X
203 IA-3	P2000369-011	Air	1/15/2020	13:10	SSC00506	0.60	4.24	X
204 IA-1	P2000369-012	Air	1/15/2020	14:10	SC01535	0.32	3.70	X
204 IA-2	P2000369-013	Air	1/15/2020	14:05	AC02408	-13.50	3.68	X
204 IA-3	P2000369-014	Air	1/15/2020	13:55	SC01569	1.15	4.06	X
OA-1	P2000369-015	Air	1/15/2020	13:50	SC00995	-6.67	5.15	X

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Client: AECOM
Project: Scotia / 60440641

Service Request No: P2000369
New York Lab ID: 11221

CASE NARRATIVE

The samples were received intact under chain of custody on January 22, 2020 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 #2 internal standard in samples 202 IA-3, 203 IA-2, 204 IA-1 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 this 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 5.1 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.

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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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. P1000586

Company Name & Address (Reporting Information)
AECOM
40 British American Blvd
Latham NY 12118

Project Name: Scotia Navy Depot
Project Number: 60644061 41

ALS Contact:

Project Manager: Geninde Wolf

P.O. # / Billing Information

Phone | Fax

Email Address for Result Reporting: geninde.wolf@aecom.com

Sampler (Print & Sign): Alexandra Holden

Analysis Method: 14-day

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
2041A-2		1/23/20	0900	SSC00271	FC500123	-22.5 "Hg	1.0		

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

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:
Alexandra Holden	1/23/20	1700		1/31/20	915
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2000586

Project: Scotia Navy Depot / 60440641

Sample(s) received on: 01/31/20 Date opened: 01/31/20 by: DENISE.POSADA

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
P2000586-001.01	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

DETAIL SUMMARY REPORT

Client: AECOM
Project ID: Scotia Navy Depot / 60440641

Service Request: P2000586

Date Received: 1/31/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
2041A-2	P2000586-001	Air	1/23/2020	09:00	SSC00271	-0.32	3.64	X

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Simi Valley, CA 93065
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www.alsglobal.com

Client: AECOM
Project: Scotia Navy Depot / 60440641

Service Request No: P2000586
New York Lab ID: 11221

CASE NARRATIVE

The sample was received intact under chain of custody on January 31, 2020 and was 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 sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was 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 #2 and #3 internal standard in 2041A-2 was outside control criteria because of suspected matrix interference. The sample was diluted in an attempt to eliminate the effects of the matrix interference. The results are reported from this dilution; therefore, the associated method reporting limits are elevated.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 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.

QC Certification

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065
Ph. 805-526-7161
Fax

Container IDs	Cleaned Date	Date Analyzed	QC Results	Comments
AC01466	1/6/20	1/4/20	Pass w/ Conditions	TO-15 (client specified)
AC01782	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
AC02134	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
AC02295	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
AC02408	1/8/20	1/7/20	Pass w/ Conditions	TO-15 (client specified)
AS00678	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
AS01010	1/8/20	1/7/20	Pass w/ Conditions	TO-15 (client specified)
FCA00363	4/10/12	4/11/12		
FCA00401	2/28/15	2/28/15		
FCA00506	8/21/14	8/21/14		
FCA00610	4/13/15	4/13/15		
FCA00706	3/4/15	3/6/15		
FCA00707	3/6/15	3/6/15		
FCA00737	2/18/15	2/18/15		
FCA00827	2/26/15	2/26/15		
FCA00854	3/4/15	3/6/15		
FCA00929	10/7/14	10/8/14		
FCS00007	2/18/15	2/18/15		
FCS00049	3/12/15	3/12/15		
FCS00101	2/18/15	2/18/15		
FCS00113	3/12/15	3/12/15		
FCS00121	3/12/15	3/12/15		
FCS00123	3/12/15	3/12/15		
SC00381	1/8/20	1/7/20	Pass w/ Conditions	TO-15 (client specified)
SC00995	1/6/20	1/4/20	Pass w/ Conditions	TO-15 (client specified)
SC01062	1/8/20	1/7/20	Pass w/ Conditions	TO-15 (client specified)
SC01535	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
SC01569	1/6/20	1/3/20	Pass w/ Conditions	TO-15 (client specified)

*** QC Canister**

Container IDs	Cleaned Date	Date Analyzed	QC Results	Comments
SC01848	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
SC02078	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
SSC00127	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)
SSC00240	1/8/20	1/7/20	Pass w/ Conditions	TO-15 (client specified)
SSC00271	1/6/20	1/3/20	Pass w/ Conditions	TO-15 (client specified)
SSC00506	1/7/20	1/6/20	Pass w/ Conditions	TO-15 (client specified)

*** QC Canister**

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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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. P2001835

ALS Contact:

Company Name & Address (Reporting Information)	Project Name	Analysis Method
AECOM 40 British American Blvd Latham NY 12110	SCOTIA NAVY DEPOT	TO-15 SIM
Project Manager: Gerlinde Wolf	Project Number: 60440641	
Phone: 518 951 2370 Fax:	P.O. # / Billing Information	
Email Address for Result Reporting: gerlinde.wolf@aecom.com	Sampler (Print & Sign): Alexandra Golden	

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	Analysis Method		Comments e.g. Actual Preservative or specific instructions
OA 3-26-20	1	3/26/20	1030	AS01131	FCR00242	30	4		X		
DUP	2	↓	—	SSC00077	FCR00316	30	5		↓		
IA 201-2-3-26-20	3	↓	1025	SSC00144	FCR00242	29	2		↓		

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Report Tier Levels - please select

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

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:
Alexandra Golden	03/27/20	1230			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				4-2-20	0700

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: AECOM Work order: P2001835

Project: SCOTIA NAVY DEPOT / 60440641

Sample(s) received on: 04/02/20 Date opened: 04/02/20 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
P2001835-001.01	6.0 L Silonite Can					
P2001835-002.01	6.0 L Silonite Can					
P2001835-003.01	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)

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Client: AECOM
Project: SCOTIA NAVY DEPOT / 60440641

Service Request No: P2001835
New York Lab ID: 11221

CASE NARRATIVE

The samples were received intact under chain of custody on April 2, 2020 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.

Manual integrations were performed on the following sample and analytes. Refer to the raw data for additional information.

Sample Identification	Analytes
P2001835-002	1,1,1-trichloroethane and trichloroethene

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 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
Service Request: P2001835
Project ID: SCOTIA NAVY DEPOT / 60440641

Date Received: 4/2/2020
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
OA3-26-20	P2001835-001	Air	3/26/2020	10:30	AS01136	-0.75	4.11	X
DUP	P2001835-002	Air	3/26/2020	00:00	SSC00077	-1.21	4.28	X
IA201-2-3-26-20	P2001835-003	Air	3/26/2020	10:25	SSC00144	0.02	4.24	X

APPENDIX G: NYSDOH Decision Matrices

Soil Vapor Intrusion Mitigation System Annual Report

Former Scotia Naval Depot

Appendix G

NYSDOH Decision Matrix 1

Sub-Slab Vapor ($\mu g/m^3$)	Indoor Air ($\mu g/m^3$)			
	<0.25	**0.25 to <1**	**1 to <5**	**5 and above**
<5	NFA	IR	IR	IR
5 to <50	NFA	MO	MO	MI
50 to <250	MO	MO/MI	MI	MI
250 and above	MI	MI	MI	MI

NFA – No Further Action
IR – Identify and Reduce
MO – Monitor Only
MI – Mitigate

NYSDOH Decision Matrix 2

Sub-Slab Vapor ($\mu g/m^3$)	Indoor Air ($\mu g/m^3$)			
	<3	**3 to <30**	**30 to <100**	**100 and above**
<100	NFA	IR	IR	IR
100 to <1,000	MO	MO/MI	MI	MI
1,000 and above	MI	MI	MI	MI

Chlorinated Compounds Regulated by NYSDOH

Chlorinated Compound	Decision Matrix
Carbon Tetrachloride	Matrix 1
1,1-Dichloroethene	Matrix 2
Cis-1,2-Dichloroethene	Matrix 2
Tetrachloroethene	Matrix 2
1,1,1-Trichloroethane	Matrix 2
Trichloroethene	Matrix 1
Vinyl Chloride	Matrix 1

APPENDIX H: Site-Wide Semi-Annual Inspection Form- January 2020

Site-Wide Semi-Annual Inspection Form

The Defense National Stockpile Center Scotia Depot
Glenville, New York

Engineering Control (s): SSDS Inspection Date: 1/13/2020

Item	Yes	No	N/A	Comments
Does the Engineering Control continue to perform as designed?	X			
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			
Have there been any modifications made to the remedial or monitoring system?		X		
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			New tennants have moved into some buildings, but they are still commercial/industrial tennants.
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: Gerlinde Wolf
Inspector's Company: AECOM

Signature of Inspector: Gerlinde Wolf
Date: 1/13/2020

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