

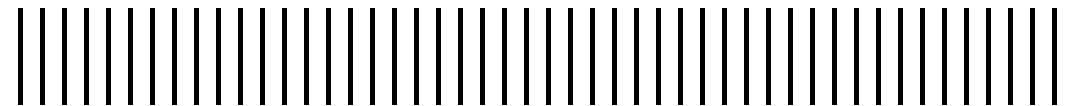


Watervliet Arsenal

Watervliet, New York

Vapor Intrusion Investigation Main Manufacturing Area Watervliet Arsenal, Watervliet New York

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1. Introduction

In accordance with the discussions and agreements between the Watervliet Arsenal (WVA), the New York State Department of Environmental Conservation (NYSDEC), and the New York State Department of Health (NYSDOH), at the meeting held at the WVA on January 15, 2008, the WVA performed a vapor intrusion investigation within, and adjacent to, the Main Manufacturing Area (MMA) and adjacent to the Siberia Area of the WVA, which is located in the City of Watervliet, New York (Figure 1). This work was performed in response to the results of the preliminary vapor intrusion evaluation performed at the WVA in November 2007, the results of which were provided to the agencies in the *Data Summary Report – 2007 Vapor Intrusion Evaluation, Main Manufacturing Area, Watervliet Arsenal, Watervliet, New York*, dated December 2007. The investigations were conducted under the Administrative Order on Consent between the WVA, the NYSDEC, and the United States Environmental Protection Agency (USEPA).

The vapor intrusion investigation was conducted in accordance with the approved:

- *Vapor Intrusion Evaluation Work Plan, Main Manufacturing Area, Watervliet Arsenal, Watervliet, New York*, dated June 2007 (Work Plan), as amended by a letter dated August 1, 2007 (Malcolm Pirnie, 2007); and
- *Vapor Intrusion Evaluation Work Plan Addendum, Main Manufacturing Area, Watervliet, New York*, dated January 25, 2008 (Work Plan Addendum), as supplemented by a letter dated February 8, 2008 (Malcolm Pirnie, 2008).

The purpose of the investigation was to assess whether chlorinated volatile organic compounds (CVOCs) are present in the sub-slab soil vapor beneath, and the indoor air within, 24 of the MMA buildings, including those that once contained degreasing operations, as well as three off-site private residences along the southeastern WVA property boundary. This evaluation also assessed whether soil vapor at the WVA southern property boundary and northern property boundary adjacent to the Siberia Area contains CVOCs. This Investigation Report presents the results of the 2008 supplemental vapor intrusion investigation.



2. Field Investigation

In accordance with the approved Work Plan Addendum, vapor intrusion evaluations were conducted at the following buildings/locations within the MMA and adjacent to the Siberia Area:

- WVA southern property boundary near Buildings 35, 125, and 135;
- Buildings 9, 15, 18, 19, 20, 21, 23, 24, 25, 35, 38, 44, 108, 110, 112, 114, 116, 120, 121, 123, 124, 126, and 130; and
- WVA northern boundary adjacent to the Siberia Area.

In addition to the above listed evaluations, soil vapor intrusion evaluations were conducted at the following off-site residential properties located adjacent to the WVA southeastern boundary:

- 307 9th Street;
- 319 9th Street; and
- 411 9th Street.

A soil vapor intrusion evaluation could not be performed at 401 9th Street because access to the residence could not be obtained prior to the end of the heating season despite numerous efforts by the WVA and the U.S. Army Corps of Engineers (USACE).

2.1. Pre-Sampling Inspection for Confounding Sources

Prior to initiating indoor air or sub-slab soil vapor sampling at all buildings, a visual pre-sampling inspection was conducted to evaluate whether any potential confounding sources were present in the buildings. However, due to the size and varying uses of the buildings (i.e., manufacturing, office, laboratory, etc.), a full inventory was not practical at a majority of the buildings in the MMA. Accordingly, chemical inventory lists of the chemicals utilized in each building were obtained from the Watervliet Arsenal Environmental Office. Based on a review of the chemical inventories and interviews with Watervliet Arsenal personnel, none of the chemicals of concern (see Section 2.2) are currently utilized at the Watervliet Arsenal. Copies of the chemical inventories are presented in Appendix A.

The residences in Buildings 9, 19, and the eastern end of Building 21, were sampled during the investigation. At the time of sampling, Building 9, Building 21, and the second floor in the south end of Building 19 were unoccupied and empty. Building 18 is used currently as a garage for housing motor vehicles of residents in neighboring apartments. At the time of sampling, there were no containers or presence of chemicals



or materials observed that may be potential confounding sources. The only areas that were occupied in these residences at the time of sampling were in Building 19. An indoor air sample was collected from the north end first floor apartment, which was occupied by a family and a sub-slab vapor sample was collected from the basement below this apartment, which is used as storage for recreational equipment, clothing, toys, etc. The NYSDOH Indoor Air Quality Questionnaire and Building Inventory (Questionnaire) for this portion of the building is included in Appendix A.

Questionnaires were filled out at the time of sampling for the off-site residences and are also included in Appendix A.

2.2. Sampling

Indoor air and sub-slab soil vapor sampling was conducted to evaluate the potential for soil vapor intrusion at each building and off-site residence. Soil vapor sampling was also conducted at the southern WVA property boundary near Buildings 35, 125, and 135 and the northern WVA property boundary adjacent to the Siberia Area to evaluate the potential for off-site vapor intrusion.

2.2.1. Indoor Air Sampling

The indoor air samples were collected from the buildings at the WVA between February 5, 2008 and February 22, 2008, while the indoor air samples were collected from the off-site residences on April 7, 2008. All indoor air samples were collected during normal business operating hours and under heating conditions. In accordance with the approved Work Plan Addendum and supplemental letter, a total of 45 indoor air samples were collected from 19 buildings in the MMA and one indoor air sample was collected from each off-site residence. Two duplicate samples were also collected, one each from Buildings 120 and 121, using a “T” splitting device. The number of indoor air samples in each building and residence is summarized in Table 1 and the sampling locations are shown on Figures 2 through 41.

Indoor air samples were collected using a Summa canister sampling train in accordance with the approved Work Plan. Flow regulators calibrated and supplied by the analytical laboratory were used to allow for continuous sampling over the eight-hour sampling period. All samples were analyzed by Air Toxics, Inc., a National Environmental Laboratory Accreditation Conference (NELAC)-accredited and NYSDOH-certified analytical laboratory. Full data packages were requested for all samples.

In accordance with the approved Work Plan, all samples were analyzed for the following compounds:

- Trichloroethene (TCE)
- Tetrachloroethene (PCE)
- cis-1,2-Dichloroethene (cDCE)
- trans-1,2-Dichloroethene (tDCE)



- | | |
|-------------------------------|------------------------|
| ■ 1,1,2,2-Tetrachloroethane | ■ 1,2-Dichloroethane |
| ■ 1,1,1-Trichloroethane (TCA) | ■ Chlorobenzene |
| ■ 1,1,2-Trichloroethane | ■ Carbon tetrachloride |
| ■ Chloromethane | ■ Chloroethane |
| ■ Vinyl chloride | ■ 1,1-Dichloroethane |
| ■ 1,1-Dichloroethene | |

2.2.2. Sub-Slab Soil Vapor Sampling

The sub-slab soil vapor samples were collected from the buildings at the WVA between February 8, 2008 and March 5, 2008, while the sub-slab soil vapor samples were collected from the off-site residences on April 8, 2008. Sub-slab soil vapor samples were collected after the completion of indoor air sampling. In accordance with the approved Work Plan Addendum and supplemental letter, a total of 67 sub-slab soil vapor samples were collected from 23 buildings in the MMA and one sub-slab soil vapor sample was collected from each off-site residence. Four duplicate samples were collected, one each from Buildings 15, 20, and 25 and one from off-site residence 319 9th Street. The number of sub-slab soil vapor samples in each building and residence is summarized in Table 2 and the sampling locations are shown on Figures 2 through 41.

Sub-slab samples were collected using a Summa canister sampling train. Each sample was collected over an eight-hour time period from just below the concrete slab of each building through a small-diameter vapor point constructed in accordance with the approved Work Plan. A helium tracer gas was used to verify the integrity of the soil vapor point seal. Helium concentrations in all of the soil vapor points were less than 10 percent during the testing. Soil vapor samples were analyzed by Air Toxics, Inc. by EPA Method Low Level TO-15 (GC/MS) SIM for the same list of CVOCs as the indoor air samples.

2.2.3. Permanent Sub-Slab Soil Vapor Points

Based on the vapor intrusion evaluation performed in November 2007, at least one sub-slab soil vapor sample from Buildings 20 and 25 contained concentrations of TCA, TCE, and/or PCE that fell within the “Mitigate” category in either Matrix 1 or Matrix 2 of the Final NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH Guidance) (NYSDOH, 2006). Based on these data, further investigation was conducted in Buildings 20 and 25 to delineate the extent and distribution of elevated TCA, TCE, and/or PCE concentrations underneath the slab in each building. As shown in Figures 6 and 17, a grid was developed across the first floors of Building 20 and Building 25 and permanent sub-slab soil vapor points were installed. The permanent sub-slab sampling points were installed and tested in the same manner as the temporary sub-slab soil vapor points. However, once the soil vapor sample was collected, the tubing was capped utilizing stainless steel “quick-connect” fittings and covered, so that the



sampling points were not a safety hazard for WVA personnel. These permanent sub-slab vapor points will be utilized to monitor pressures during remedial pilot tests and changes in CVOC concentrations over time during operation of mitigation systems.

2.2.4. Property Boundary Soil Vapor Sampling

Six soil vapor sampling points were installed along the southern and northern WVA property boundary on February 25, 2008. The locations of the soil vapor points are shown on Figures 40 and 41. The soil vapor points were installed using a direct-push drilling rig. The final depth for each of the soil vapor points was just above the groundwater table, with the exception of soil vapor point SG-2, which was located near the southeastern edge of Building 125. Refusal was encountered at approximately three feet below ground surface (bgs) in all three borings advanced for soil vapor point SG-2. As a result, a soil vapor point was constructed in one of the borings and set at three feet bgs. Each soil vapor point was completed with bentonite from the final depth of each point to the bottom of the screen; filter pack sand from the bottom of the screen to at least 0.5 feet above the screen; and at least one foot of grout from the top of the sand layer up to the ground surface. The screen was set at the bottom of each point and connected to Teflon[®]-lined tubing that extended to approximately three feet above the ground surface. The location and screened interval of each soil vapor point is summarized in Table 3, below.

Table 3 – Soil Vapor Point Construction

Soil Vapor Point ID	Location	Screened Interval (feet bgs)
SG-1	MMA – South of Bldg. 35	6.0 – 7.0
SG-2	MMA – South of Bldg. 125	1.25 – 2.25
SG-3	MMA – East of Bldg. 135	1.25 – 2.25
SG-4	North of Siberia Area (12 th Street)	1.5 – 2.5
SG-5	North of Siberia Area (Chestnut Street)	5.0 – 6.0
SG-6	North of Siberia Area (12 th Street)	2.0 – 3.0

Notes:

bgs – below ground surface

Soil vapor sampling and analysis was conducted using the same methods and procedures as those for sub-slab soil vapor sampling.



3. Sampling Results

The analytical results for the indoor air, sub-slab soil vapor, and property boundary soil vapor samples collected during the February/March 2008 investigation are presented in Tables 4 through 28. Laboratory reporting forms for all samples are presented in Appendix B.

As shown in Tables 4 through 28, sub-slab soil vapor concentrations of the seven CVOCs currently regulated by the NYSDOH were compared to decision matrices defined in the NYSDOH Guidance. The decision matrices defined in the NYSDOH Guidance were revised as stated in a letter, included in Appendix C, to the NYSDEC from the NYSDOH, dated June 25, 2007 (NYSDOH, 2007). These matrices utilize the relationship between indoor air and sub-slab soil vapor concentrations to define the recommended action (e.g., no further action, monitor, mitigate) for reducing potential and current human exposures to CVOCs. Concentrations of 1,1-dichloroethene, carbon tetrachloride, DCE, PCE, TCA, TCE, and vinyl chloride are compared to the matrices. In accordance with the approved Work Plan, there were no indoor air samples collected in Buildings 20, 35, 110, and 123 as these buildings are currently used for manufacturing activities. Indoor air concentrations of TCE and PCE were compared to the air guideline values defined in Table 3.1 in the NYSDOH Guidance (NYSDOH, 2006).

3.1. Building 9

3.1.1. Indoor Air

Concentrations of chloromethane (1.1 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) and carbon tetrachloride ($0.57 \mu\text{g}/\text{m}^3$) were detected at low levels in the indoor air sample (B9-A1) collected on the first floor of the southern apartment in Building 9.

3.1.2. Sub-Slab

As shown on Figure 2, sub-slab sample B9-SS1 was collected in the basement underneath the southern apartment in Building 9, approximately one level below the location of the indoor air sample. Carbon tetrachloride, TCA, TCE, and PCE were detected at concentrations that, based on the NYSDOH matrices, do not require any further actions at this location.

3.2. Building 15

3.2.1. Indoor Air

Two indoor air samples were collected in Building 15. Indoor air sample B15-A1 was collected from within an enclosed area on the west side of the building and indoor air sample B15-A2b was collected in the hallway on the west side of the building (Figure 3).



Both samples contained similar low level concentrations of chloromethane and carbon tetrachloride. The TCE and PCE concentrations in sample B15-A1 were slightly greater than the TCE and PCE concentrations in the B15-A2b sample, but were less than the air guideline values of $5 \mu\text{g}/\text{m}^3$ and $100 \mu\text{g}/\text{m}^3$, respectively.

3.2.2. Sub-Slab

Sub-slab sample B15-SS2 was collected in the northeast corner of the building (Figure 3). In accordance with the NYSDOH matrices, mitigation is recommended based on the indoor air and sub-slab sample concentrations in Building 15 listed below.

Sub-Slab Sample ID	Concentration	Action
<i>TCE (Max. Indoor Air Conc. = $2.1 \mu\text{g}/\text{m}^3$, B15-A1)</i>		
B15-SS2	$26 \mu\text{g}/\text{m}^3$	Monitor
<i>PCE (Max. Indoor Air Conc. = $6.3 \mu\text{g}/\text{m}^3$, B15-A1)</i>		
B15-SS2	$300 \mu\text{g}/\text{m}^3$	Monitor, Mitigate

These concentrations were confirmed in the field duplicate sample (SS-1) collected at this location.

3.3. Building 18

3.3.1. Indoor Air

Concentrations of chloromethane ($1.3 \mu\text{g}/\text{m}^3$) and carbon tetrachloride ($0.54 \mu\text{g}/\text{m}^3$) were detected at low levels in the indoor air sample (B18-A1) collected in the southwest corner of Building 18, which is used as a garage. At the time of sampling, the overhead door was closed.

3.3.2. Sub-Slab

As shown on Figure 4, sub-slab sample B18-SS1 was collected on the south side of the garage near the door. Carbon tetrachloride, TCE, and PCE were detected at concentrations that, based on the NYSDOH matrices, do not require any further actions at this location.

3.4. Building 19

3.4.1. Indoor Air

Two indoor air samples were collected in Building 19. Indoor air sample B19-A1 was collected from the first floor living room in the apartment along the west side of the building and indoor air sample B19-A2 was collected from the second floor of the unoccupied apartment on the east side of the building (Figure 5). Both samples contained similar low level concentrations of chloromethane and carbon tetrachloride. In addition,



1,2-dichloroethane ($0.17 \mu\text{g}/\text{m}^3$) was detected in indoor air sample B19-A1 and PCE ($0.24 \mu\text{g}/\text{m}^3$) was detected in indoor air sample B19-A2 at low level concentrations.

3.4.2. Sub-Slab

As shown on Figure 5, sub-slab sample B19-SS1 was collected on the west side of the building underneath the occupied first floor apartment. Carbon tetrachloride, cDCE, TCE, and PCE were detected at concentrations that, based on the NYSDOH matrices, do not require any further actions at this location. Chloromethane was also detected at a trace concentration ($0.54 \mu\text{g}/\text{m}^3$) in the sub-slab sample.

3.5. Building 20

3.5.1. Indoor Air

In accordance with the Work Plan Addendum, there were no indoor air samples collected in Building 20 during the supplemental vapor intrusion investigation.

3.5.2. Sub-Slab

As shown on Figure 6, 12 sub-slab samples, designated B20-SS1, -SS2, -SS3, -SS4, -SS5, -SS6, -SS7, -SS8, -SS9, -SS10, -SS11, and -SS12, and one duplicate sample (SS-2) at location B20-SS2, were collected in Building 20. The locations of the sub-slab sampling points were spaced at regular intervals across the first floor of the building. At least one CVOC was detected in each of the sub-slab samples. Carbon tetrachloride, cDCE, and TCE were detected in at least 50 percent of the samples, while TCA and PCE were detected in all 12 samples. The highest concentrations of TCA, TCE, and PCE were detected in the sub-slab samples along the east (B20-SS1 and B20-SS8) and south (B20-SS2 and B20-SS3) sides of the building. Chloromethane, chloroethane, 1,1-dichloroethane, 1,2-dichloroethane, tDCE, and vinyl chloride were also detected at low level concentrations in at least one of the sub-slab samples in Building 20. A former vapor degreaser was reported to have been located at the east end of Building 20 in the past.

In accordance with the NYSDOH matrices, mitigation is recommended based on the sub-slab sample concentrations in Building 20 listed below.

Sub-Slab Sample ID	Concentration	Action
TCA		
B20-SS8	$930 \mu\text{g}/\text{m}^3$	Monitor, Mitigate
TCE		
B20-SS1	$1,100 \mu\text{g}/\text{m}^3$	Mitigate
B20-SS2	$40 \mu\text{g}/\text{m}^3$	NFA, Monitor, Mitigate
B20-SS3	$82 \mu\text{g}/\text{m}^3$	Monitor, Mitigate
B20-SS8	$200 \mu\text{g}/\text{m}^3$	Monitor, Mitigate



PCE		
B20-SS1	150 µg/m ³	Monitor, Mitigate

Note: NFA – No Further Action required

3.6. Building 21

3.6.1. Indoor Air

Two indoor air samples were collected in Building 21. Indoor air sample B21-A1 was collected from the laundry room in the unoccupied apartment on the east end of the building and indoor air sample B21-A2 was collected from the large room on the west end of the building that was regularly used as a cafeteria in the past (Figure 7). Both samples contained similar low level concentrations of chloromethane and carbon tetrachloride. Indoor air sample B21-A1 also contained a trace concentration of 1,2-dichloroethane (0.19 µg/m³).

3.6.2. Sub-Slab

Sub-slab sample B21-SS1 was collected in the basement area located approximately below the residence and kitchen at the east end of Building 21 (Figure 8). Sub-slab sample B21-SS2 was collected from the former first floor bar area, which is adjacent to the former cafeteria (Figure 7). In accordance with the NYSDOH matrices, mitigation is recommended based on the indoor air and sub-slab sample concentrations in Building 21 listed below.

Sub-Slab Sample ID	Concentration	Action
<i>TCE (Not Detected in all Indoor Air Samples)</i>		
B21-SS1	2,500 µg/m ³	Mitigate
B21-SS2	300 µg/m ³	Mitigate

3.7. Building 23

3.7.1. Indoor Air

Three indoor air samples, designated B23-A1, -A2, and -A3 were collected in Building 23. As shown on Figures 9, 10, and 11, sample B23-A1 was collected on the first floor in a tool storage and minor maintenance room; sample B23-A2 was collected on the second floor in an office area; and sample B23-A3 was collected on the third floor in an open room used for storing paper files and old office equipment. Similar concentrations of TCA, TCE, PCE, chloromethane, and carbon tetrachloride were detected in all three indoor air samples. In addition, chlorobenzene (0.17 µg/m³) was detected at a trace concentration in sample B23-A1, and tDCE (0.87 µg/m³ and 1.7 µg/m³, respectively) was detected in samples B23-A1 and B23-A3.



3.7.2. Sub-Slab

Sub-slab sample B23-SS1 was collected in the basement of Building 23 (Figure 12), which is used for storing various machine parts and tools. Sub-slab sample B23-SS2 was not collected because groundwater was present in the sample tubing during the helium tracer test. In accordance with the NYSDOH matrices, monitoring is recommended based on the indoor air and sub-slab sample concentrations in Building 23 listed below.

Sub-Slab Sample ID	Concentration	Action
TCE (1st Floor Indoor Air Conc. = 0.75 µg/m³, B23-A1)		
B23-SS1	17 µg/m ³	Monitor

3.8. Building 24

3.8.1. Indoor Air

Three indoor air samples, designated B24-A1, -A2, and -A3 were collected in Building 24. As shown on Figures 13, 14, and 15, sample B24-A1 was collected on the first floor at the end of a hallway; sample B24-A2 was collected on the second floor in an office area; and sample B24-A3 was collected on the third floor in an office area, near the breezeway connecting Building 24 and Building 35. Similar concentrations of chloromethane and carbon tetrachloride were detected in all three indoor air samples. Indoor air sample B24-A3 also contained low level concentrations of 1,1-dichloroethane, 1,1-dichloroethene, PCE, and TCA.

3.8.2. Sub-Slab

As shown on Figure 13, sub-slab sample B24-SS1 was collected in the same location as indoor air sample B24-A1 and sub-slab sample B24-SS2 was collected in a closed room containing filing cabinets and paper files. Trace concentrations of TCA, TCE, chloromethane, and carbon tetrachloride were detected in both sub-slab samples, while sample B24-SS2 also contained trace concentrations of PCE and vinyl chloride. Based on the NYSDOH matrices, no further actions are required at this location.

3.9. Building 25

3.9.1. Indoor Air

As shown on Figure 16, 12 indoor air samples, designated B25-A1, -A2, -A3, -A4, -A5, -A6, -A7, -A8, -A9, -A10, -A11, and -A12 were collected in Building 25. At least one CVOC was detected in each of the indoor air samples. Carbon tetrachloride, chloromethane, TCE, and PCE were detected in at least 50 percent of the samples, while carbon tetrachloride and chloromethane were detected in all 12 samples. None of the indoor air samples in Building 25 contained detectable concentrations of TCA. The concentrations of carbon tetrachloride (0.54 – 0.6 µg/m³), chloromethane (0.8 – 1.2 µg/m³, except B25-A12 [4.5 µg/m³]), and PCE (0.41 – 0.53 µg/m³) were similar in all of



the indoor air samples. TCE was detected in sample B25-A8 at a concentration $8.4 \mu\text{g}/\text{m}^3$, which exceeded the NYSDOH air guideline value ($5 \mu\text{g}/\text{m}^3$). Indoor air sample B25-A8 was collected in the center of the building in a closed room that was empty at the time of sampling. Chloroethane, 1,2-dichloroethane, and vinyl chloride were also detected at low level concentrations in at least one of the indoor air samples in Building 25.

During the November 2007 vapor intrusion evaluation, indoor air sample B25-IA-01 and the duplicate sample of B25-IA-01 contained TCE concentrations ($420 \mu\text{g}/\text{m}^3$ and $430 \mu\text{g}/\text{m}^3$, respectively) that were much greater than the NYSDOH air guideline value. Indoor air sample B25-A5 was collected in the same location as B25-IA-01 in February 2008. The TCE concentration in February 2008 ($0.31 \mu\text{g}/\text{m}^3$) was significantly less than the November 2007 concentration and was less than the NYSDOH air guideline value.

3.9.2. Sub-Slab

As shown on Figure 17, 20 sub-slab samples, designated B25-SS1, -SS2, -SS3, -SS4, -SS5, -SS6, -SS7, -SS8, -SS9, -SS10, -SS11, and -SS12, and one duplicate sample (SS-3) at location B25-SS10, were collected in Building 25. The locations of the sub-slab sampling points were spaced at regular intervals across the first floor of the building. At least one CVOC was detected in each of the sub-slab samples. Carbon tetrachloride, 1,1-dichloroethene, TCE, and PCE were detected in at least 50 percent of the samples, while TCA was detected in all 20 samples. Chloromethane, 1,1-dichloroethane, cDCE, and vinyl chloride were also detected in at least one of the sub-slab samples in Building 25.

The highest concentration of PCE was detected in the north corner of the building (B25-SS20), but there were also elevated concentrations in the south-southeast portion of the building (B25-SS9 and B25-SS10). The highest concentrations of TCE were detected in sub-slab samples B25-SS1 and B25-SS3, which are located in the southern portion of the building. However, elevated concentrations of TCE were detected in sub-slab samples throughout most of the building, with the exception of the northwest corner. Similar to the pattern of TCE concentrations in Building 25, the highest concentrations of TCA were detected in samples B25-SS1 and B25-SS2, which are located in the southern portion of the building. In general, TCA concentrations remain elevated in samples collected from the south and southeast sides of the building and decrease as the distance from B25-SS1 and B25-SS2 increases. A former vapor degreaser was reported to have been located in the southeast portion of Building 25 in the past.

In accordance with the NYSDOH matrices, mitigation is recommended based on the indoor air and sub-slab sample concentrations in Building 25 listed below.



Sub-Slab Sample ID	Concentration	Action
1,1-Dichloroethene (Not Detected in all Indoor Air Samples)		
B25-SS1	340 µg/m ³	Monitor
TCA (Not Detected in all Indoor Air Samples)		
B25-SS1	12,000 µg/m ³	Mitigate
B25-SS2	2,600 µg/m ³	Mitigate
B25-SS3	580 µg/m ³	Monitor
B25-SS15	240 µg/m ³	Monitor
B25-SS16	200 µg/m ³	Monitor
B25-SS17	110 µg/m ³	Monitor
TCE (Max. Indoor Air Conc. = 8.4 µg/m³, B25-A8)		
B25-SS1	94,000 µg/m ³	Mitigate
B25-SS2	7,900 µg/m ³	Mitigate
B25-SS3	250 µg/m ³	Mitigate
B25-SS6	780 µg/m ³	Mitigate
B25-SS7	1,300 µg/m ³	Mitigate
B25-SS8	30 µg/m ³	Mitigate
B25-SS9	5,400 µg/m ³	Mitigate
B25-SS10	9,700 µg/m ³	Mitigate
B25-SS11	220 µg/m ³	Mitigate
B25-SS12	97 µg/m ³	Mitigate
B25-SS14	260 µg/m ³	Mitigate
B25-SS15	22 µg/m ³	Mitigate
B25-SS16	67 µg/m ³	Mitigate
B25-SS17	12 µg/m ³	Mitigate
B25-SS18	670 µg/m ³	Mitigate
B25-SS19	99 µg/m ³	Mitigate
B25-SS20	11 µg/m ³	Mitigate
PCE (Max. Indoor Air Conc. = 0.53 µg/m³, B25-A9)		
B25-SS7	170 µg/m ³	Monitor
B25-SS9	120 µg/m ³	Monitor
B25-SS10	270 µg/m ³	Monitor
B25-SS20	900 µg/m ³	Monitor

The concentrations in sub-slab sample B25-SS10 were confirmed in the field duplicate sample (SS-3) collected at this location.



3.10. Building 35

3.10.1. Indoor Air

In accordance with the Work Plan Addendum, there were no indoor air samples collected in Building 35 during the supplemental vapor intrusion investigation.

3.10.2. Sub-Slab

As shown in Figure 18, five sub-slab samples, designated B35-SS1, -SS2, -SS3, -SS4, and -SS5, were collected in Building 35. At least one CVOC was detected in each of the sub-slab samples. Carbon tetrachloride, TCE, and PCE were detected in all five sub-slab samples at varying concentrations. The highest concentrations of TCE and PCE were detected in sub-slab samples B35-SS2 and B35-SS4. Sub-slab sample B35-SS2 is located along the west side of the building, while sample B35-SS4 is located toward the south end of the building. Carbon tetrachloride, chloromethane, 1,1-dichloroethene, cDCE, and TCA were also detected in at least one of the sub-slab samples in Building 35.

In accordance with the NYSDOH matrices, monitoring or mitigation would be recommended based on the sub-slab sample concentrations in Building 35 listed below. However, since Building 35 is currently used for large-scale manufacturing operations, no further action is recommended.

Sub-Slab Sample ID	Concentration	Action
TCE		
B35-SS2	50 µg/m ³	Monitor, Mitigate
B35-SS4	110 µg/m ³	Monitor, Mitigate
B35-SS5	8.8 µg/m ³	NFA, Monitor, Mitigate
PCE		
B35-SS2	900 µg/m ³	Monitor, Mitigate
B35-SS4	200 µg/m ³	Monitor, Mitigate

Note: NFA – No Further Action required

3.11. Building 38

3.11.1. Indoor Air

Two indoor air samples were collected in Building 38. Indoor air sample B38-A1 was collected in the office area where the museum curators work during the day and indoor air sample B38-A2 was collected in a closed storage area on the second floor (Figure 19). Both samples contained similar low level concentrations of chloromethane, carbon tetrachloride, and TCA.



3.11.2. Sub-Slab

As shown on Figure 19, sub-slab sample B38-SS1 was collected in the front display area along the north side of the building and sub-slab sample B38-SS2 was collected in the open bay storage area used for storing historic cannons and artillery equipment. Low level concentrations of TCA (B38-SS1 and B38-SS2), chloromethane (B38-SS1), and carbon tetrachloride (B38-SS1) were detected in sub-slab samples collected from Building 38. Based on the NYSDOH matrices, no further actions are required at this location.

3.12. Building 44

3.12.1. Indoor Air

Concentrations of chloromethane ($1.2 \mu\text{g}/\text{m}^3$), carbon tetrachloride ($0.57 \mu\text{g}/\text{m}^3$), PCE ($0.46 \mu\text{g}/\text{m}^3$), and TCE ($0.33 \mu\text{g}/\text{m}^3$) were detected at low levels in the indoor air sample (B44-A1) collected in the hallway on the first floor of Building 44 (Figure 20).

3.12.2. Sub-Slab

Sub-slab sample B44-SS1 was collected from the basement of Building 44, near the center of the building (Figure 21). The chloromethane, carbon tetrachloride, PCE, and TCE concentrations in the sub-slab sample were similar to the concentrations in the indoor air sample. Based on the NYSDOH matrices, no further actions are required at this location.

3.13. Building 108

3.13.1. Indoor Air

Concentrations of chloromethane ($1.1 \mu\text{g}/\text{m}^3$), carbon tetrachloride ($0.61 \mu\text{g}/\text{m}^3$), PCE ($0.42 \mu\text{g}/\text{m}^3$), and TCE ($0.34 \mu\text{g}/\text{m}^3$) were detected at low levels in the indoor air sample (B108-A1) collected in the mailroom (Figure 22).

3.13.2. Sub-Slab

As shown on Figure 22, sub-slab sample B108-SS1 was collected at the south end of the building. Trace concentrations of TCA, 1,1,2,2,-tetrachloroethane, chloromethane, and carbon tetrachloride were detected in the sub-slab sample, while concentrations of TCE and PCE were slightly higher. Based on the NYSDOH matrices, no further actions are required at this location.

3.14. Building 110

3.14.1. Indoor Air

In accordance with the Work Plan Addendum, there were no indoor air samples collected in Building 110 during the supplemental vapor intrusion investigation.



3.14.2. Sub-Slab

As shown on Figures 23, 24, 25, and 26, six sub-slab samples, designated B110-SS1, -SS2, -SS3, -SS4, -SS5, and -SS6, were collected in Building 110. The locations of the sub-slab sampling points were spaced out regularly across the entire length of the building. At least one CVOC was detected in each of the sub-slab samples. Carbon tetrachloride, chloromethane, 1,1,2,2-tetrachloroethane, cDCE, TCA, and vinyl chloride were detected in at least 50 percent of the samples, while TCE and PCE were detected in all six samples. Chlorobenzene, chloroethane, tDCE, and 1,1-dichloroethene were also detected in at least one of the sub-slab samples in Building 110. The highest concentrations of many of the CVOCs detected were in sample B110-SS5, which is located toward the south end of the building. The concentrations of vinyl chloride, TCE, PCE, 1,1,2,2-tetrachloroethane, tDCE, and cDCE decreased significantly between sub-slab sample B110-SS5 and B110-SS4, which is located approximately 50 feet north of B110-SS5 (Figure 25).

In accordance with the NYSDOH matrices, monitoring or mitigation would be recommended based on the sub-slab sample concentrations in Building 110 listed below. However, since Building 110 is currently used for large-scale manufacturing activities, no further action is recommended.

Sub-Slab Sample ID	Concentration	Action
Vinyl Chloride		
B110-SS5	640 µg/m ³	Mitigate
cDCE		
B110-SS5	110 µg/m ³	Monitor, Mitigate
TCE		
B110-SS1	32 µg/m ³	NFA, Monitor, Mitigate
B110-SS3	19 µg/m ³	NFA, Monitor, Mitigate
B110-SS4	17 µg/m ³	NFA, Monitor, Mitigate
B110-SS5	110 µg/m ³	Monitor, Mitigate
B110-SS6	12 µg/m ³	NFA, Monitor, Mitigate
PCE		
B110-SS5	120 µg/m ³	Monitor, Mitigate

Note: NFA – No Further Action required

3.15. Building 112

3.15.1. Indoor Air

Concentrations of chloromethane, carbon tetrachloride, and TCA were detected at low levels in the indoor air sample (B112-A1) collected from the second floor office area (Figure 27). At the time of sampling, the office door was closed.



3.15.2. Sub-Slab

Sub-slab sample B112-SS1 was collected in the southeast corner of the building (Figure 28). The chloromethane, carbon tetrachloride, and TCA concentrations in the sub-slab sample were slightly less than the concentrations in the indoor air sample. In addition to the CVOCs detected in the indoor air sample, TCE, PCE, and 1,1,2,2-tetrachloroethane were detected in the sub-slab sample. Based on the NYSDOH matrices, no further actions are required at this location.

3.16. Building 114

3.16.1. Indoor Air

One indoor air sample (B114-A1) was collected from the hallway in the center of Building 114 (Figure 29). At the time of sampling, the building was unoccupied and locked. The rooms off of the hallway consist of office space and laboratories. The TCE concentration in the indoor air sample was $6.8 \mu\text{g}/\text{m}^3$, which exceeded the NYSDOH air guideline value ($5 \mu\text{g}/\text{m}^3$). Chloromethane, carbon tetrachloride, cDCE, and PCE were also detected at varying concentrations in sample B114-A1.

3.16.2. Sub-Slab

As shown in Figure 29, sub-slab sample B114-SS1 was collected in the hallway across from indoor air sample B114-A1. In accordance with the NYSDOH matrices, mitigation is recommended based on the indoor air and sub-slab sample concentrations in Building 114 listed below.

Sub-Slab Sample ID	Concentration	Action
<i>TCE (Indoor Air Conc. = $6.8 \mu\text{g}/\text{m}^3$)</i>		
B114-SS1	$1,400 \mu\text{g}/\text{m}^3$	Mitigate
<i>PCE (Indoor Air Conc. = $27 \mu\text{g}/\text{m}^3$)</i>		
B114-SS1	$8,300 \mu\text{g}/\text{m}^3$	Mitigate

There were no other CVOCs detected in the sub-slab sample collected in Building 114.

3.17. Building 116

3.17.1. Indoor Air

Historically, Building 116 was used to house multiple above ground storage tanks (ASTs) and underground storage tanks (USTs) containing solvents and oils. Indoor air sample B116-A1 was collected in the center of Building 116 on the upper level (Figure 30). Low level concentrations of chloromethane, carbon tetrachloride, cDCE, TCE, and PCE were detected in B116-A1.



3.17.2. Sub-Slab

Sub-slab sample B116-SS1 was collected adjacent to the indoor air sample (B116-A1), but on the lower level, where the ASTs were formally located. The TCE and PCE concentrations in B116-SS1 were significantly greater than the corresponding concentrations in B116-A1. In accordance with the NYSDOH matrices, monitoring or mitigation would be recommended based on indoor air and sub-slab sample concentrations in Building 116 listed below. However, no further action is recommended at this location as the building is locked and unoccupied, and there are no plans to use the building in the future.

Sub-Slab Sample ID	Concentration	Action
<i>TCE (Indoor Air Conc. = 1.6 µg/m³)</i>		
B116-SS1	180 µg/m ³	Mitigate
<i>PCE (Indoor Air Conc. = 27 µg/m³)</i>		
B116-SS1	530 µg/m ³	Monitor

3.18. Building 120

3.18.1. Indoor Air

As shown on Figures 31, 32, and 33, seven indoor air samples, designated B120-A1, -A2, -A3, -A4, -A5, -A6, -A7, and one duplicate sample (A-2) at location B110-A2, were collected on the three floors in Building 120. At least one CVOC was detected in each of the indoor air samples. Carbon tetrachloride, TCE, and 1,1-dichloroethene were detected in at least 50 percent of the samples, while chloromethane, TCA, and PCE were detected in all seven samples. In general, the low level concentrations of carbon tetrachloride, chloromethane, 1,1-dichloroethene, TCA, and TCE were similar on all three floors of Building 120. The highest concentration of PCE (4.4 µg/m³) was in indoor air sample B120-A2, which was located on the first floor toward the north side of the building. In contrast, the lowest concentration of PCE (0.57 µg/m³) was in indoor air sample B120-A1, which was located at ground level on the east side of the building. The duplicate sample results correlated well with the results in indoor air sample B120-A2, with the exception of TCE, which was only detected in the duplicate sample at a low level concentration (0.15 µg/m³).

3.18.2. Sub-Slab

As shown on Figure 31, two sub-slab samples were collected on the first floor in Building 120. Sub-slab sample B120-SS1 was collected approximately 10 feet south of indoor air sample B120-A2, located at the north end of the building, and sub-slab sample B120-SS2 was collected in the large room toward the southern end of the building. The concentrations of TCA, TCE, PCE and carbon tetrachloride in both sub-slab samples were greater than the corresponding CVOC concentrations in the indoor air samples. In



addition, a trace concentration of 1,1-dichloroethene ($0.1 \mu\text{g}/\text{m}^3$) was detected in sample B120-SS2. In accordance with the NYSDOH matrices, monitoring is recommended based on the use of the building for office space and the indoor air and sub-slab sample concentrations in Building 120 listed below.

Sub-Slab Sample ID	Concentration	Action
Carbon Tetrachloride (Max. 1st Floor Indoor Air Conc. = $0.61 \mu\text{g}/\text{m}^3$, B120-A2)		
B120-SS2	$12 \mu\text{g}/\text{m}^3$	Monitor

3.19. Building 121

3.19.1. Indoor Air

Two indoor air samples, including a duplicate sample, were collected in Building 121. Indoor air sample B121-A1 was collected in the office area in the northwest corner of the building, while the indoor air sample (B121-A2) and duplicate sample (A-1) were collected toward the center of the work area, adjacent to the west pit (Figure 34). Chloromethane, carbon tetrachloride, and TCA were detected at low level concentrations in all three indoor air samples. PCE and 1,1-dichloroethene were detected at trace concentrations in indoor air sample B121-A2 and the duplicate sample, but were not detected in the B121-A1 sample.

3.19.2. Sub-Slab

Sub-slab sample B121-SS1 was collected in the southwest corner of Building 121, while sub-slab sample B121-SS2 was collected in the work area toward the north side of the building. All CVOC concentrations (chloromethane, carbon tetrachloride, cDCE, TCA, TCE, and PCE) were greater in sample B121-SS1 than B121-SS2, with the exception of chloromethane, which was the same concentration ($0.22 \mu\text{g}/\text{m}^3$) in both samples. In accordance with the NYSDOH matrices, monitoring would be recommended based on indoor air and sub-slab sample concentrations in Building 121 listed below. However, based on the presence of CVOCs in the groundwater beneath the building, mitigation of the sub-slab is recommended.

Sub-Slab Sample ID	Concentration	Action
TCE (Not Detected in All Indoor Air Samples)		
B121-SS1	$65 \mu\text{g}/\text{m}^3$	Monitor

3.20. Building 123

3.20.1. Indoor Air

In accordance with the Work Plan Addendum, there were no indoor air samples collected in Building 123 during the supplemental vapor intrusion investigation.



3.20.2. Sub-Slab

As shown in Figure 35, sub-slab sample B123-SS1 was collected on the south side of Building 23, next to a pit that had been used for degreasing activities in the past. In addition to PCE and TCE, carbon tetrachloride ($2.2 \mu\text{g}/\text{m}^3$), chloromethane ($1.4 \mu\text{g}/\text{m}^3$), and TCA ($4.7 \mu\text{g}/\text{m}^3$) were detected in B123-SS1. In accordance with the NYSDOH matrices, monitoring or mitigation would be recommended based on sub-slab sample concentrations in Building 123 listed below. However, Building 123 is currently scheduled to be made available to the Arsenal Business and Technology Partnership for leasing to private entities. Accordingly, mitigation of the sub-slab is recommended.

Sub-Slab Sample ID	Concentration	Action
TCE		
B123-SS1	$43 \mu\text{g}/\text{m}^3$	Monitor, Mitigate
PCE		
B123-SS1	$840 \mu\text{g}/\text{m}^3$	Monitor, Mitigate

3.21. Building 124

3.21.1. Indoor Air

One indoor air sample (B124-A1) was collected from the second floor hallway in the center of Building 124 (Figure 36). Chloromethane, chloroethane, and carbon tetrachloride were detected at low level concentrations in sample B124-A1.

3.21.2. Sub-Slab

As shown on Figure 37, sub-slab sample B124-SS1 was collected from the first floor hallway. Chloromethane ($1.3 \mu\text{g}/\text{m}^3$), 1,1-dichloroethene ($0.091 \mu\text{g}/\text{m}^3$), carbon tetrachloride ($1 \mu\text{g}/\text{m}^3$), TCA ($0.32 \mu\text{g}/\text{m}^3$), TCE ($1.8 \mu\text{g}/\text{m}^3$), and PCE ($6.3 \mu\text{g}/\text{m}^3$) were detected at varying concentrations in the sub-slab sample. The chloromethane and carbon tetrachloride concentrations in B124-SS1 were similar to the corresponding concentrations in indoor air sample B124-A1. Based on the NYSDOH matrices, no further actions are required at this location.

3.22. Building 126

3.22.1. Indoor Air

Concentrations of chloromethane ($1.3 \mu\text{g}/\text{m}^3$) and carbon tetrachloride ($0.49 \mu\text{g}/\text{m}^3$) were detected at low levels in the indoor air sample (B126-A1) collected along the west side of Building 126.

3.22.2. Sub-Slab

As shown on Figure 38, sub-slab sample B126-SS1 was collected in the same location as indoor air sample B126-A1. All CVOCs detected in the sub-slab sample were not



detected in the indoor air sample, with the exception of chloromethane. The chloromethane concentration in B126-SS1 ($4.5 \mu\text{g}/\text{m}^3$) was greater than the chloromethane concentration in B126-A1 ($1.3 \mu\text{g}/\text{m}^3$). Chloroethane ($2.1 \mu\text{g}/\text{m}^3$) was also detected at a low level concentration in the sub-slab sample collected in February 2008. Based on the NYSDOH matrices, no further actions are required at this location.

3.23. Building 130

3.23.1. Indoor Air

An indoor air sample (B130-A1) was collected near the median between the two main rooms that are used for storing tools and equipment used at the WVA (Figure 39). Chloromethane, carbon tetrachloride, TCE, and PCE were detected at low level concentrations in the Building 130 indoor air sample.

3.23.2. Sub-Slab

Two sub-slab samples were collected in Building 130. Sub-slab sample B130-SS1 was collected in the center of the building and sub-slab sample B130-SS2 was collected toward the northwest corner of the building (Figure 39). TCA, TCE, and PCE were detected in both sub-slab samples. The TCE and PCE concentrations were significantly greater in B130-SS2 than in B130-SS1. Trace concentrations of chloromethane, chloroethane, and cDCE were also detected in B130-SS1. In accordance with the NYSDOH matrices, mitigation is recommended based on indoor air and sub-slab sample concentrations in Building 130 listed below.

Sub-Slab Sample ID	Concentration	Action
TCE (Indoor Air Conc. = $1.3 \mu\text{g}/\text{m}^3$)		
B130-SS2	$960 \mu\text{g}/\text{m}^3$	Mitigate
PCE (Indoor Air Conc. = $0.46 \mu\text{g}/\text{m}^3$)		
B130-SS2	$120 \mu\text{g}/\text{m}^3$	Monitor

3.24. Off-Site Residences

3.24.1. 307 9th Street

3.24.1.1. Indoor Air

Carbon tetrachloride ($0.55 \mu\text{g}/\text{m}^3$), chloromethane ($1.3 \mu\text{g}/\text{m}^3$), and PCE ($0.38 \mu\text{g}/\text{m}^3$) were detected at low level concentrations in the indoor air sample (307-IA-01) collected on the first floor of the residence at 307 9th Street (Figure 40).

3.24.1.2. Sub-Slab

Similar concentrations of carbon tetrachloride ($0.83 \mu\text{g}/\text{m}^3$) and chloromethane ($1.2 \mu\text{g}/\text{m}^3$) were detected in the sub-slab sample (307-SS-01) collected from the basement at



307 9th Street. The PCE concentration ($1.2 \mu\text{g}/\text{m}^3$) was slightly greater than the concentration in the indoor air sample. A trace concentration of TCA was also detected in the sub-slab sample 307-SS-01. The PCE, TCA, and carbon tetrachloride concentrations in the sample from 307 9th Street were detected at concentrations that, according to the matrices, do not require any further actions.

3.24.2. 319 9th Street

3.24.2.1. Indoor Air

Chloromethane ($1.1 \mu\text{g}/\text{m}^3$), carbon tetrachloride ($0.52 \mu\text{g}/\text{m}^3$), and 1,2-dichloroethane ($2.5 \mu\text{g}/\text{m}^3$) were detected at low level concentrations in the indoor air sample (319-IA-01) collected on the first floor of the residence at 319 9th Street (Figure 40). The chloromethane and carbon tetrachloride concentrations in the 319 9th Street residence were similar to the corresponding concentrations in the 307 9th Street residence.

3.24.2.2. Sub-Slab

Sub-slab sample 319-SS-01 and duplicate sample 999-SS-01 contained similar concentrations of chloromethane and TCA, however, the PCE concentration in the duplicate sample ($2.3 \mu\text{g}/\text{m}^3$) was greater than the PCE concentration in 319-SS-01 ($0.22 \mu\text{g}/\text{m}^3$). In addition, TCE was detected at a trace concentration in the duplicate sample. The PCE, TCE, and TCA in the sub-slab samples from 319 9th Street were detected at concentrations that, according to the matrices, do not require any further actions.

3.24.3. 411 9th Street

3.24.3.1. Indoor Air

Chloromethane ($1 \mu\text{g}/\text{m}^3$) and carbon tetrachloride ($0.51 \mu\text{g}/\text{m}^3$) were detected at low level concentrations in the indoor air sample (411-IA-01) collected on the first floor of the unoccupied residence at 411 9th Street (Figure 40). The chloromethane and carbon tetrachloride concentrations in the 411 9th Street residence were similar to the corresponding concentrations in the 319 and 307 9th Street residences.

3.24.3.2. Sub-Slab

Similar concentrations of carbon tetrachloride ($0.53 \mu\text{g}/\text{m}^3$) and chloromethane ($0.98 \mu\text{g}/\text{m}^3$) were detected in the sub-slab sample (411-SS-01) collected from the basement at 411 9th Street. The carbon tetrachloride concentration in the sample from 411 9th Street was detected at concentrations that, according to the matrices, do not require any further actions.



3.25. Property Boundary Soil Vapor

3.25.1. Southern Property Boundary

3.25.1.1. South of Building 35

PCE ($1.6 \mu\text{g}/\text{m}^3$) was the only CVOC detected in soil gas point SG-1, which was located in the grassed area across the street from Building 35, along the WVA boundary (Figure 40).

3.25.1.2. South of Building 125

Low level concentrations of carbon tetrachloride ($0.43 \mu\text{g}/\text{m}^3$), chloromethane ($0.63 \mu\text{g}/\text{m}^3$), cDCE ($0.15 \mu\text{g}/\text{m}^3$), TCA ($0.71 \mu\text{g}/\text{m}^3$), TCE ($0.52 \mu\text{g}/\text{m}^3$), and PCE ($1.7 \mu\text{g}/\text{m}^3$) were detected in soil gas point SG-2, which was located in the road at the southeastern corner of Building 125 (Figure 40).

3.25.1.3. East of Building 135

Carbon tetrachloride ($0.24 \mu\text{g}/\text{m}^3$), chloromethane ($0.33 \mu\text{g}/\text{m}^3$), PCE ($1.6 \mu\text{g}/\text{m}^3$), and TCA ($0.24 \mu\text{g}/\text{m}^3$) were detected at low level concentrations in soil gas point SG-3, which was located in road east of Building 135, along the WVA boundary (Figure 40).

3.25.2. Northern Property Boundary

Chloromethane ($1.2 \mu\text{g}/\text{m}^3$ and $1.7 \mu\text{g}/\text{m}^3$, respectively) and carbon tetrachloride ($0.55 \mu\text{g}/\text{m}^3$ and $0.55 \mu\text{g}/\text{m}^3$, respectively) were detected at low level concentrations in soil gas points SG-4 and SG-5. Soil gas point SG-4 also contained low level concentrations of vinyl chloride ($0.12 \mu\text{g}/\text{m}^3$), TCE ($0.34 \mu\text{g}/\text{m}^3$), PCE ($3.9 \mu\text{g}/\text{m}^3$), and chloroethane ($0.45 \mu\text{g}/\text{m}^3$). Both soil gas points were located in grassed areas across 21st Street from the WVA. There were no CVOC concentrations detected in soil gas point SG-6, which is located in a wet, grassed area at the end of 21st Street.

3.26. Data Validation

A third-party data validation subcontractor reviewed and validated the analytical data for all samples collected during this evaluation. The data was assessed by the validator for completeness and compliance with the appropriate state and federal protocols. Changes to the analytical data noted by the data validator are included in the data validation reports in Appendix D and have been included in Tables 4 through 28.



4. Recommendations / Proposed Actions

The proposed actions to be conducted at the WVA are based on the indoor air and sub-slab sampling results from the November 2007 and February 2008 soil vapor intrusion evaluations. A total of 25 buildings in the MMA were sampled during at least one of the two sampling events. As shown on Figure 42, no further action is recommended at Buildings 9, 18, 19, 23, 24, 38, 44, 108, 112, 115, 124, and 126. The proposed actions for the remaining buildings are also shown on Figure 42 and are summarized in Table 29 below.

Table 29 – Recommendations / Proposed Actions

Building	Media	Target CVOC(s)	Recommended Action
15	Sub-Slab	PCE	SSDS Recommended
20	Sub-Slab	PCE, TCE, TCA	SSDS Required
21	Sub-Slab	TCE	SSDS Required
22	Sub-Slab	TCE	SSDS Recommended
25	Indoor Air, Sub-Slab	TCE, TCA	SSDS Required
35	Sub-Slab	PCE, TCE	SSDS Not Recommended
110	Sub-Slab	PCE, TCE, cDCE, Vinyl Chloride	SSDS Not Recommended
114	Indoor Air, Sub-Slab	PCE, TCE	SSDS Required
116	Sub-Slab	TCE	SSDS Not Recommended
120	Sub-Slab	Carbon Tetrachloride	SSDS Recommended
121	Sub-Slab	TCE	SSDS Recommended
123	Sub-Slab	PCE	SSDS Recommended
130	Sub-Slab	TCE	SSDS Required

Notes:

SSDS – Sub-Slab Depressurization System

4.1. SSDS Not Recommended

In February 2008, sub-slab samples collected from Buildings 35, 110, and 116 contained at least one CVOC that was detected at a concentration in which a mitigation system, such as a SSDS, may be required. As discussed previously, Buildings 35 and 110 are large buildings currently used for large-scale manufacturing. These buildings have always been used for manufacturing and the WVA plans to continue this use in the future. Also, the WVA has no current plans for transferring these buildings to the



Arsenal Business and Technology Partnership. Based on these factors, installing a SSDS in each building is not recommended.

Building 116 is currently locked and unoccupied and the WVA plans on keeping this space as is, occasionally using it for storage of 55-gallon drums and 5-gallon buckets. Some of these drums and buckets are empty, while others are filled with sand, oil, paint, etc. Also, the WVA has no current plans for transferring this building to the Arsenal Business and Technology Partnership. In general, WVA personnel are rarely in this building and as a result, the installation of a SSDS is not recommended for this building.

4.2. SSDS Recommended

The TCE and PCE concentrations in the sub-slab sample collected from Building 22 in November 2007 and at least one CVOC concentration in sub-slab samples collected from Buildings 15, 120, 121, and 123 in February 2008 were at levels indicating that a mitigation system may be required at each of these buildings. Based on the other sub-slab sample collected in Building 121, the impacted area of the sub-slab seemed localized and limited to the south corner of the building. The CVOC concentration(s) in the indoor air samples collected from Buildings 15, 22, 120, and 121, do not reflect the elevated CVOC concentration(s) present in the sub-slab samples. However, mitigation systems are recommended for Buildings 15, 22, 120, and 121 because they are active non-manufacturing facilities with personnel who regularly spend full eight hour workdays within these buildings.

Mitigation is recommended for Building 123 based on the use of a pit that contained TCE along the south side of the building in the past. This building is currently being used by the WVA as a paint application room, but is planned to be transferred to the Arsenal Business and Technology Partnership. As a precautionary measure, the WVA recommends the installation of a SSDS. The use of this building once transferred to the Arsenal Business and Technology Partnership is not known at this time.

4.3. SSDS Required

According to the NYSDOH matrices, there was at least one sub-slab sample collected in Buildings 20, 21, 25, 114, and 130 that contained TCA, TCE, and/or PCE at a concentration for which mitigation is required.

4.3.1. Building 20

One sub-slab sample in Building 20 (B20-SS1), which is located north of Building 25, contained TCE at a concentration requiring the installation of a mitigation system. There were also detections of PCE (B20-SS1), TCE (B20-SS3 and B20-SS8), and TCA (B20-SS8) in additional sub-slab samples at concentrations for which monitoring or mitigation would be required. Sub-slab samples B20-SS1, B20-SS3, and B20-SS8 are located along



the south and east sides of Building 20 in an area where a former vapor degreaser may have been in the past.

4.3.2. Building 21

Both sub-slab samples collected in Building 21 (B21-SS1 and B21-SS2) contained TCE concentrations that require mitigation. The TCE concentration in basement sample B21-SS2 was nearly 10 times greater than the TCE concentration in the first floor sample B21-SS1. Building 21 is located east of Buildings 35 and 110, which have always been used for manufacturing, while Building 21 has been used, or is currently being used, as a cafeteria, kitchen, gathering hall, and residence.

4.3.3. Building 25

Several sub-slab samples in Building 25 contained TCA (B25-SS1, -SS2) and TCE (B25-SS1, -SS2, -SS3, -SS6 through -SS12, -SS14 through -SS20) at concentrations requiring that a mitigation system be installed. The highest concentrations of TCA and TCE were in the sub-slab samples in the southern corner of the building, where a former vapor degreaser is believed to have been located in the past. However, TCE is present at elevated concentrations in a majority of the sub-slab samples collected in Building 25. Also, the TCE concentration in indoor air sample B25-A8 exceeded the NYSDOH Air Guidance Value.

4.3.4. Building 114

Sub-slab sample B114-SS1 contained both TCE and PCE concentrations that indicate a mitigation system is required in Building 114. Also, the indoor air sample (B114-A1) contained a TCE concentration that exceeded the NYSDOH Air Guidance Value.

4.3.5. Building 130

One sub-slab sample in Building 130 (B130-SS2) contained TCE at a concentration that requires the installation of a mitigation system. The location of this sub-slab sample is toward the northern corner of the building. The TCE concentration in the sub-slab sample collected toward the center of the building (B130-SS1) was significantly less than in B130-SS2. Building 130 is the western-most building in the MMA.

4.4. Proposed Action Schedule

WVA will conduct pilot tests and prepare designs for the mitigation systems that will be installed in each of the 10 buildings listed in Sections 4.2 and 4.3. These activities will be conducted between July and September of 2008. The pilot tests will provide information, such as the radius of influence of the type of mitigation system proposed and the tightness of the slab. This information will be used in constructing the most efficient and effective mitigation system for each building.



The construction and operation of the SSDS mitigation systems will take place between October and December 2008.



5. References

Malcolm Pirnie 2007. *Vapor Intrusion Evaluation Work Plan, Main Manufacturing Area, Watervliet Arsenal, Watervliet, New York*, June 2007 (amended August 1, 2007 and approved September 20, 2007).

Malcolm Pirnie 2008. *Vapor Intrusion Evaluation Work Plan Addendum, Main Manufacturing Area, Watervliet Arsenal, Watervliet, New York*, January 2008 (supplemented February 8, 2008).

NYSDOH 2006. *New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006.

NYSDOH 2007. Letter to NYSDEC regarding “Soil Vapor/Indoor Air Matrices”, June 25, 2007.

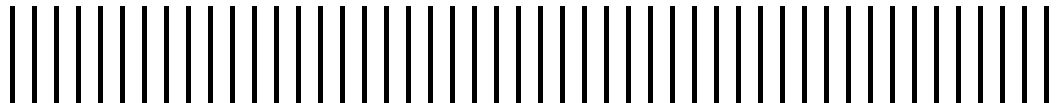




Watervliet Arsenal, Watervliet, New York

Vapor Intrusion Investigation

Figures





Age Group	Number of People
0-10	~3500
11-20	~2500
21-30	~1500
31-40	~1000
41-50	~800
51-60	~600
61-70	~400
71+	~200

WATERVLIET ARSENAL
WATERVLIET, NEW YORK

SITE LOCATION

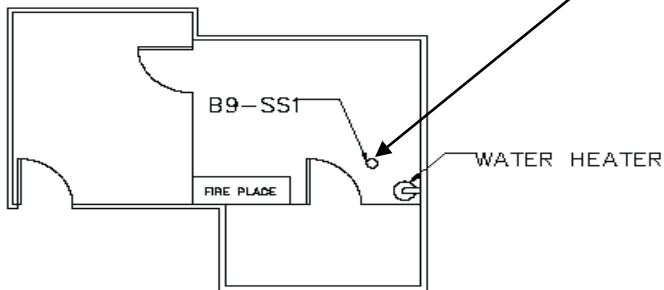
MALCOLM PIRNIC

WATERVLIET ARSENAL
WATERVLIET, NEW YORK
BUILDING 9 - BASEMENT
VOC CONCENTRATIONS
DATE: 2/11/2008
DRAWN BY: RMT
CHECKED BY: EMB
SUBMITTED BY: -
DATE: APRIL 2007
DRAWING NUMBER: 6002-24-1
SHEET: 1 OF 1

Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value



B9-A1 2/11/2008	
VOCs	Conc. (ug/m ³)
Chloromethane	1.1
Carbon Tetrachloride	0.57

Note: Air sample B9-A1 was collected on the first floor directly above the location of the sub-slab sample B9-SS1.

B9-SS1 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.3
TCE	0.64
PCE	4.9
Carbon Tetrachloride	0.35

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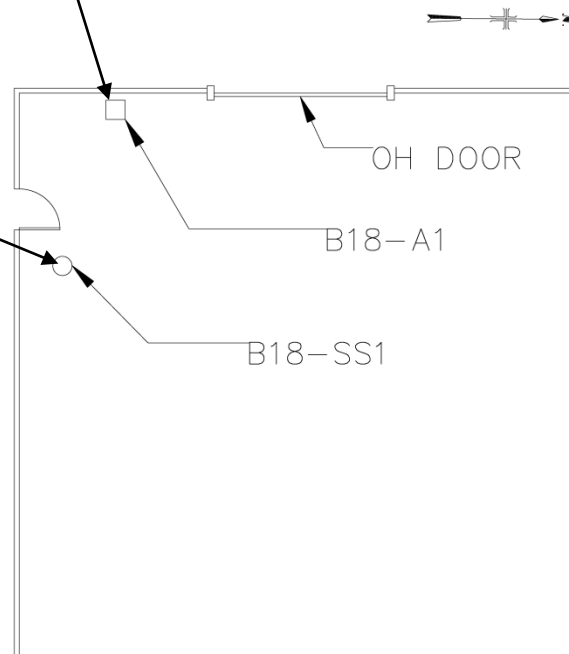
- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

SCALE 1/4" = 1'-0"

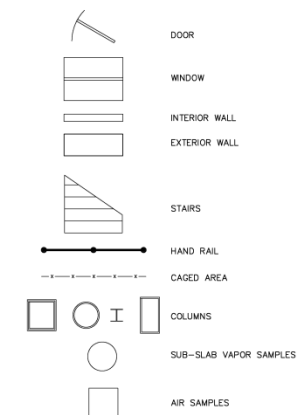
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WATERVLIET ARSENAL				
WATERVLIET, NEW YORK				
Name	Date	Rev.	Date	Description
DRAWN	RMT	-		
CHECKED	EMB	8/22/07		
SUBMITTED	-	-		
DATE: APRIL 2007			Drawing Number	
6002-24-1			Sheet	
1 OF 1				

B18-A1		2/11/2008
VOCs		Conc. (ug/m³)
Chloromethane		1.3
Carbon Tetrachloride		0.54

B18-SS1		2/20/2008
VOCs	Conc. (ug/m ³)	
TCE	0.51	
PCE	14	
Carbon Tetrachloride	0.38	



LEGEND:



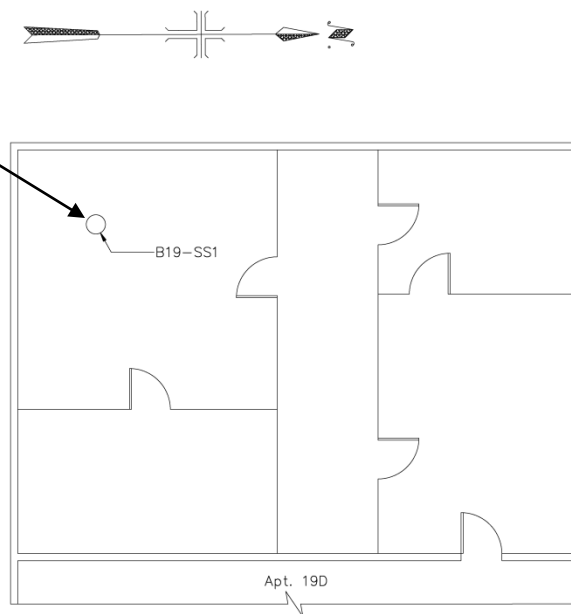
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|  | - Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 |
|  | - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 |
|  | - No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building) |

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

BUILDING 18-GARAGE					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
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CHECKED	EAG	-			
SUBMITTED	-	-	Scale: 1/4"=1'-0"		
			Date: MARCH 19, 2008		
CHIEF ENGINEERING DIVISION			Drawing Number		Sheet
			-		1 OF 1

B19-SS1		2/20/2008
VOCs	Conc. (ug/m ³)	
cDCE	0.25	
TCE	15	
PCE	38	
Chloromethane	0.54	
Carbon Tetrachloride	0.64	



B19-A1		2/11/2008
VOCs	Conc. (ug/m ³)	
1,2-DCA	0.17	
Chloromethane	1.3	
Carbon Tetrachloride	0.6	

Note: Air sample B19-A1 was collected on the first floor, in the west end apartment, in the corner of the living room, adjacent to the kitchen wall and stairwell.

B19-A2		2/11/2008
VOCs	Conc. (ug/m ³)	
PCE	0.24	
Chloromethane	1.2	
Carbon Tetrachloride	0.54	

Note: Air sample B19-A2 was collected on the second floor, in the vacant east end apartment, in the middle of the large room facing the east side of the building.

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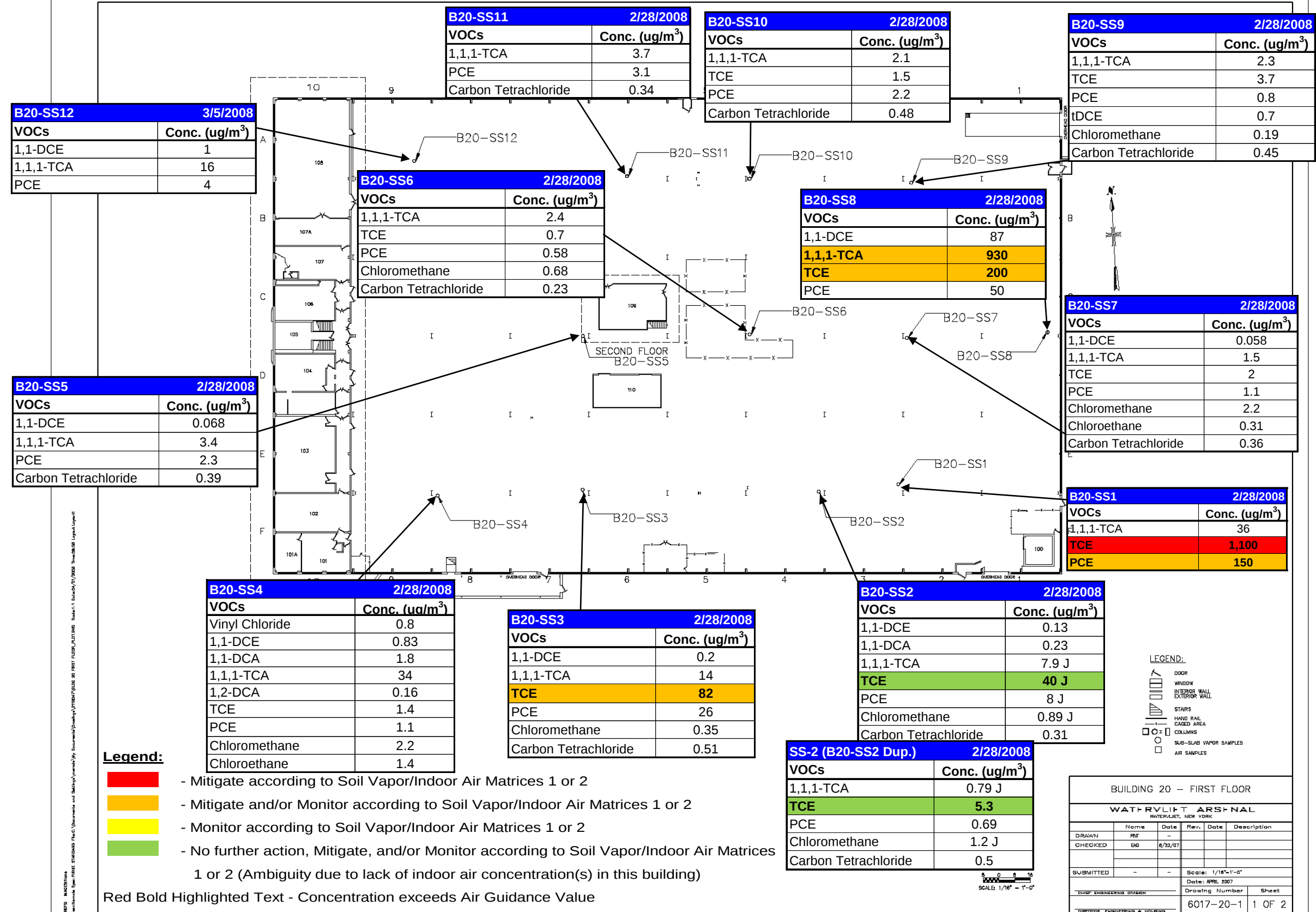
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|  | - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 |
|  | - No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building) |

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

LEGEND:

	DOOR
	WINDOW
	INTERIOR WALL
	EXTERIOR WALL
	STAIRS
	HAND RAIL
	CAGED AREA
	COLUMNS
	SUB-SLAB VAPOR SYMBOLS
	AIR SYMBOLS

BUILDING 19—BASEMENT/WEST					
WATERYLIET ARSENAL					
WATERYLIET, NEW YORK					
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DRAWN	JM	-			
CHECKED	-	-			
SUBMITTED	-	-			
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CHIEF ENGINEERING DIVISION			Drawing Number		Sheet
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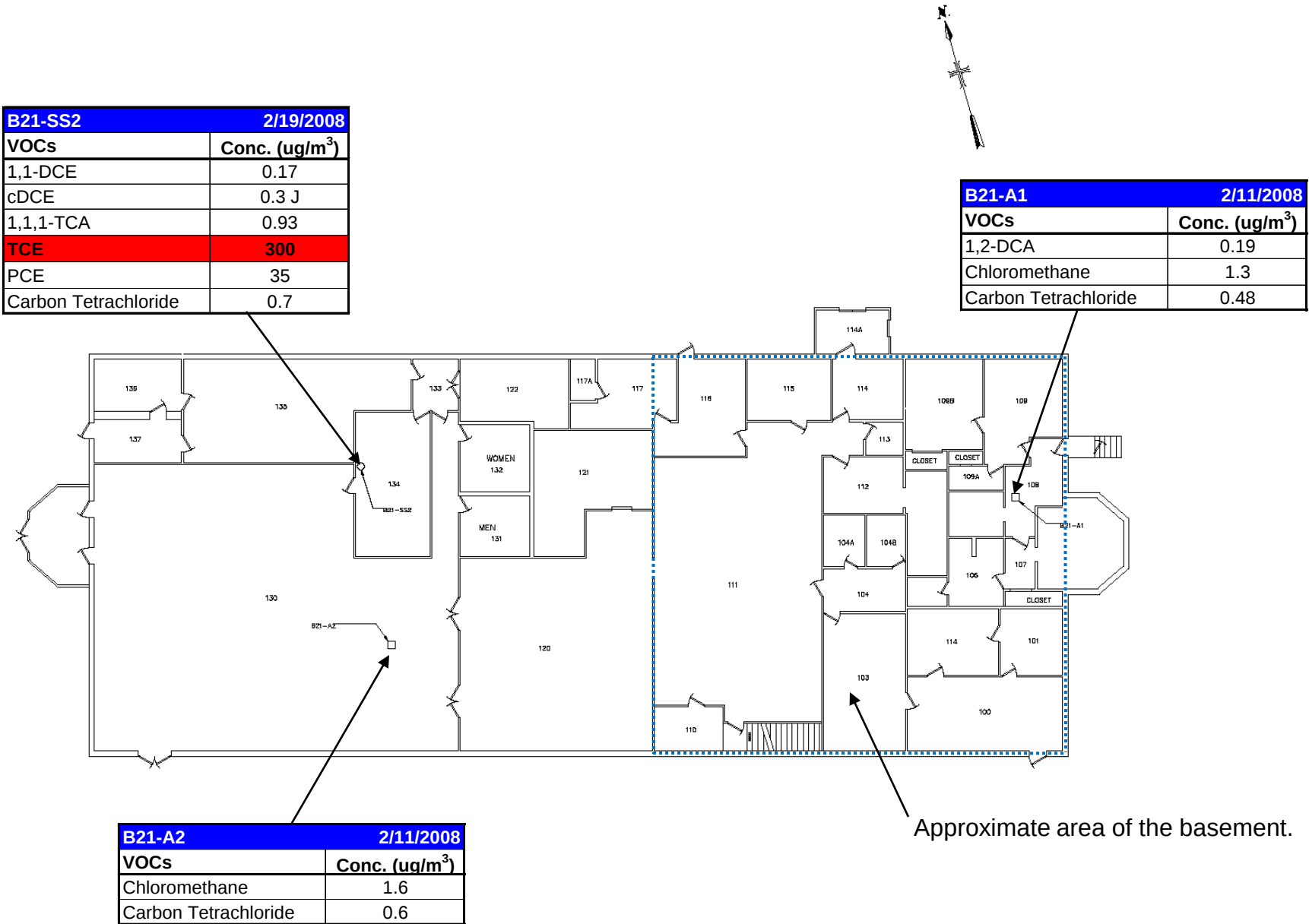


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- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

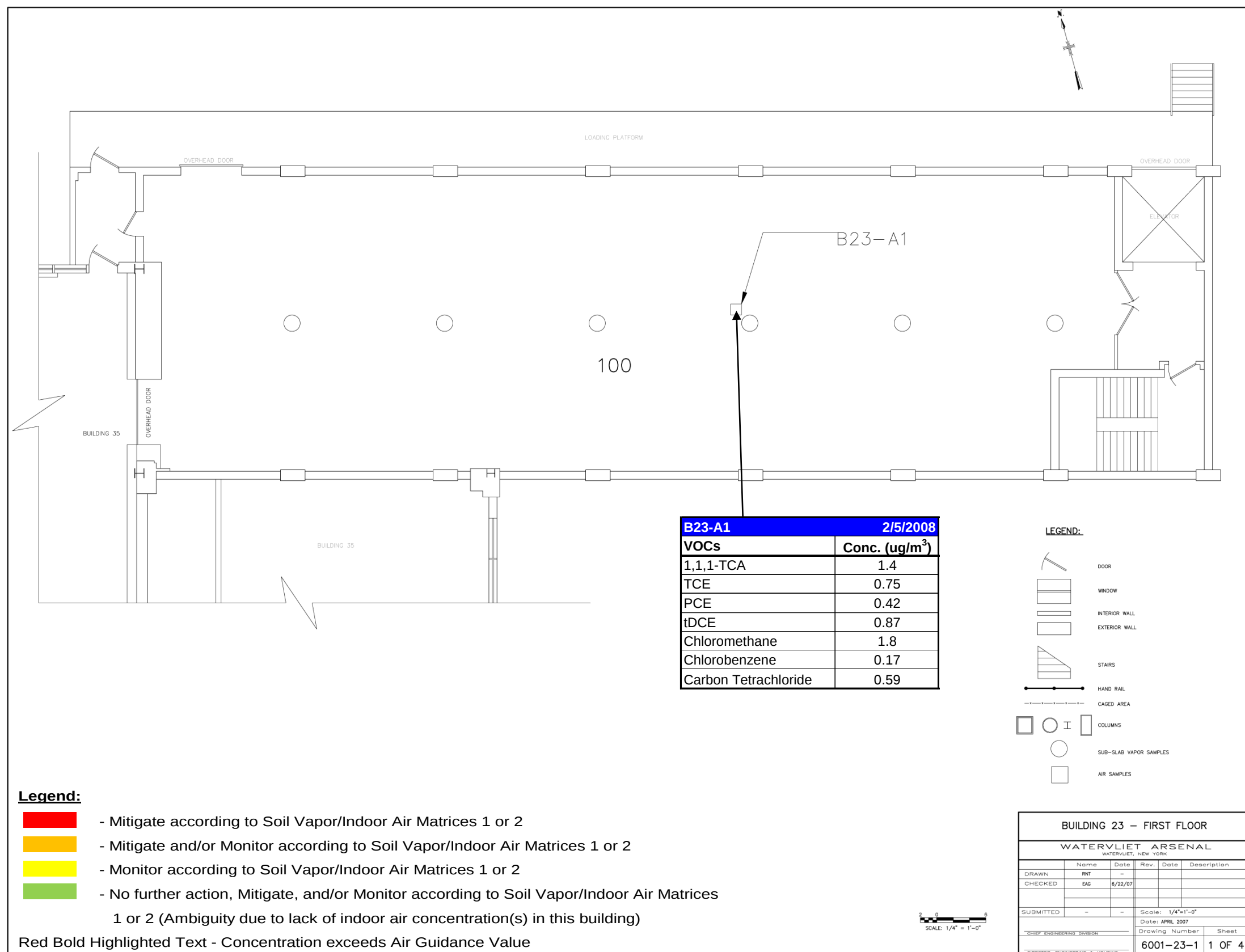


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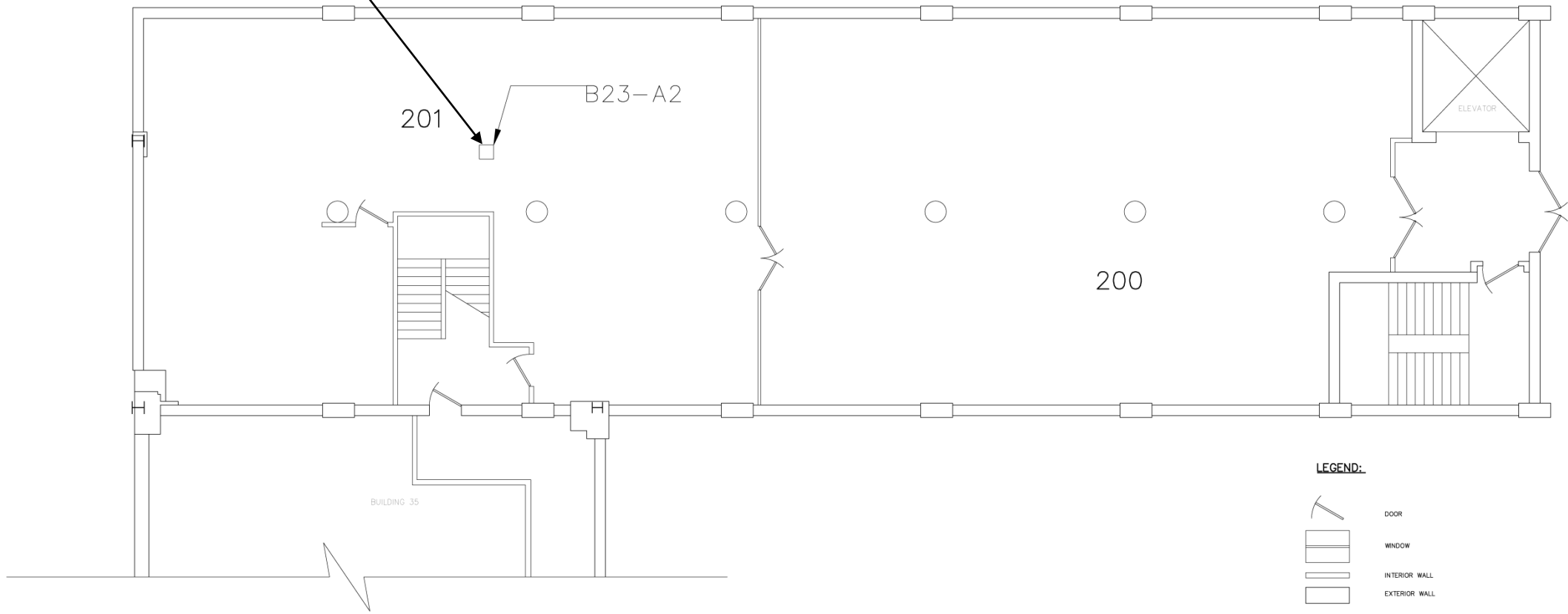
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- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CEDED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

SCALE: 1/8" = 1'-0"

BUILDING 21					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
	Name	Date	Rev.	Date	Description
DRAWN	TAL	-			
CHECKED	ENG	8/23/07			
SUBMITTED	-	-			
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			Date: DECEMBER 2007		
SHEET ENGINEERING DESIGN			Drawing Number	Sheet	
GENERAL ENGINEERING & HOUSING			6018-21-1	1 OF 1	



B23-A2 2/5/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	1.7
TCE	1.6
PCE	0.39
Chloromethane	1.2
Carbon Tetrachloride	0.56



Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

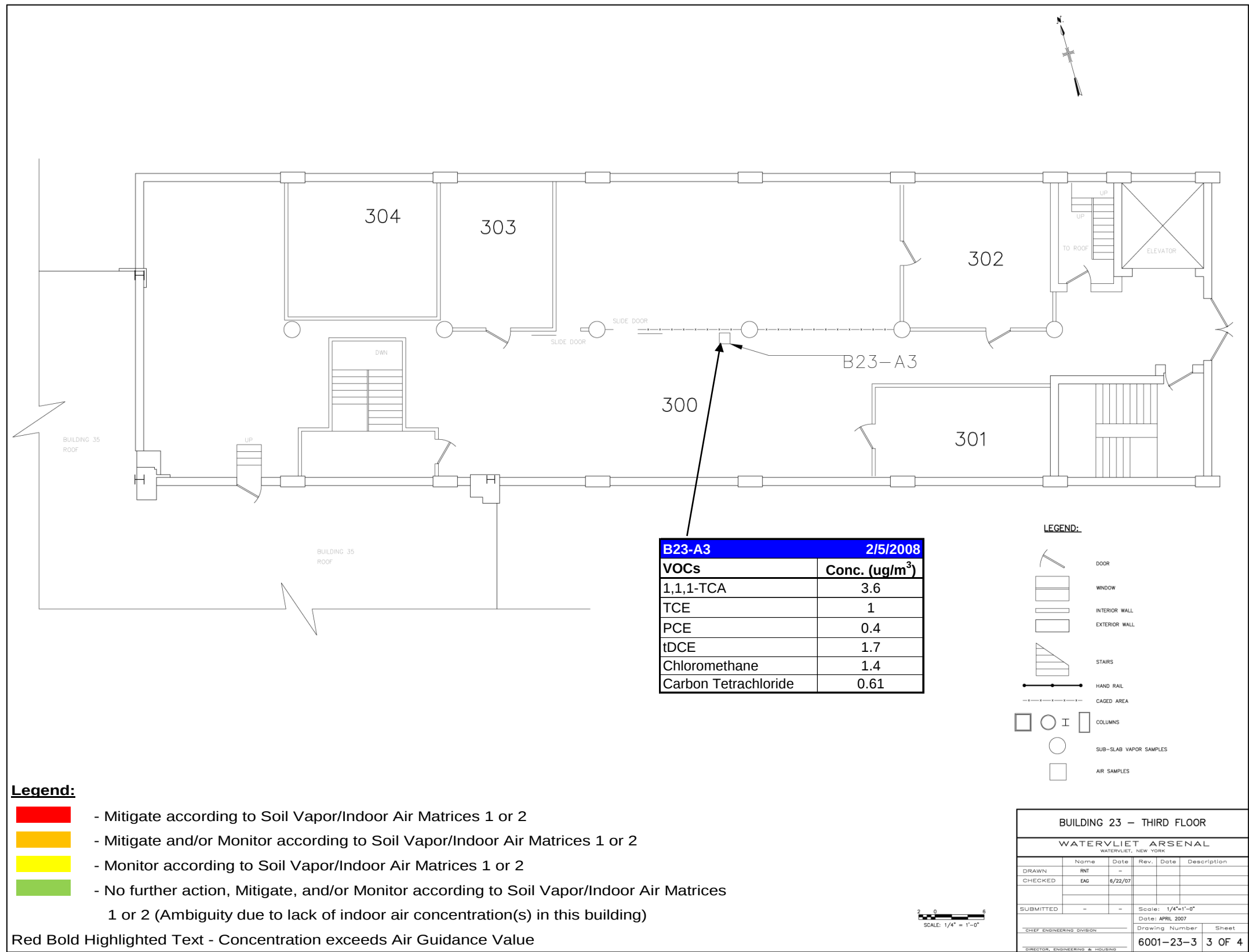
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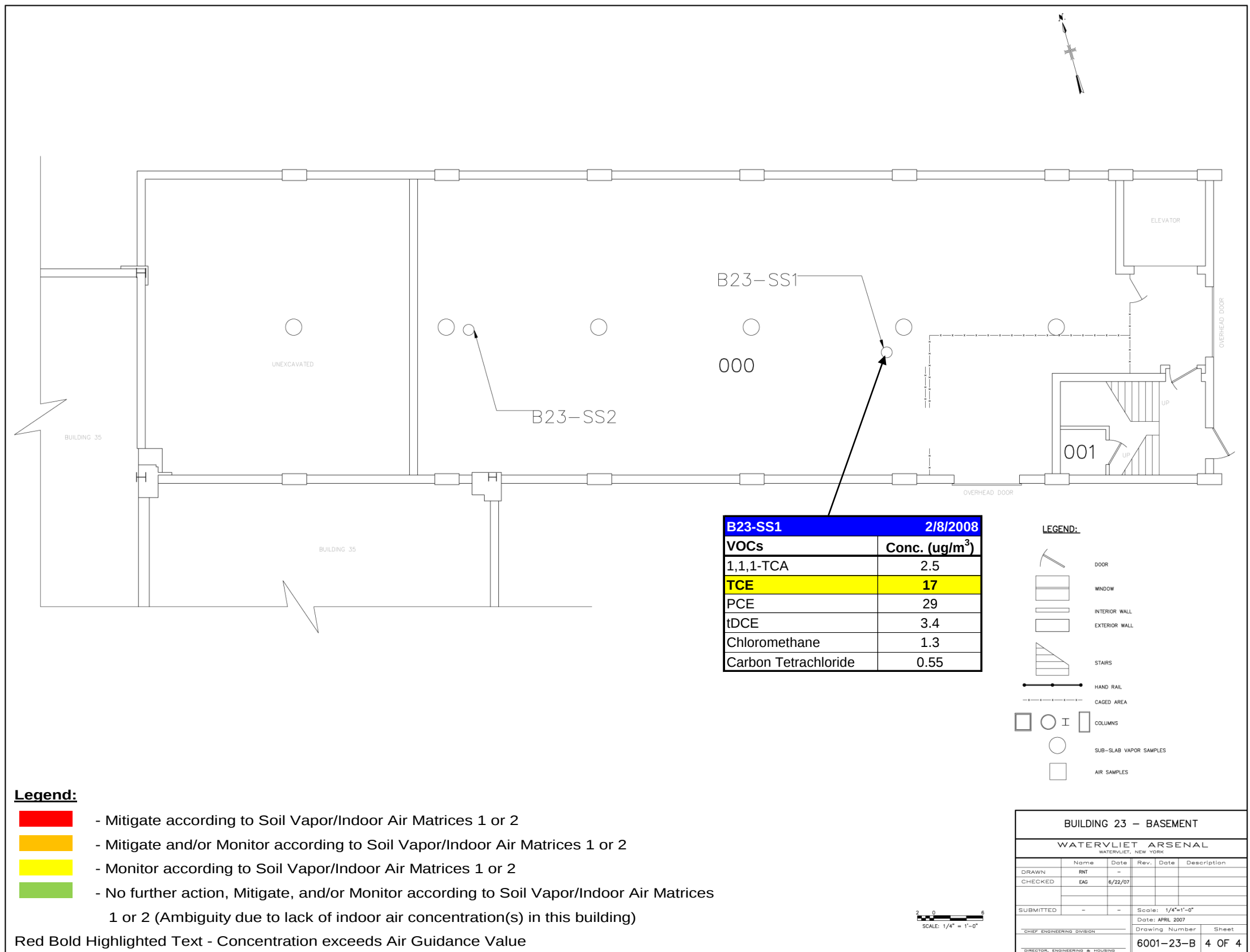
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- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

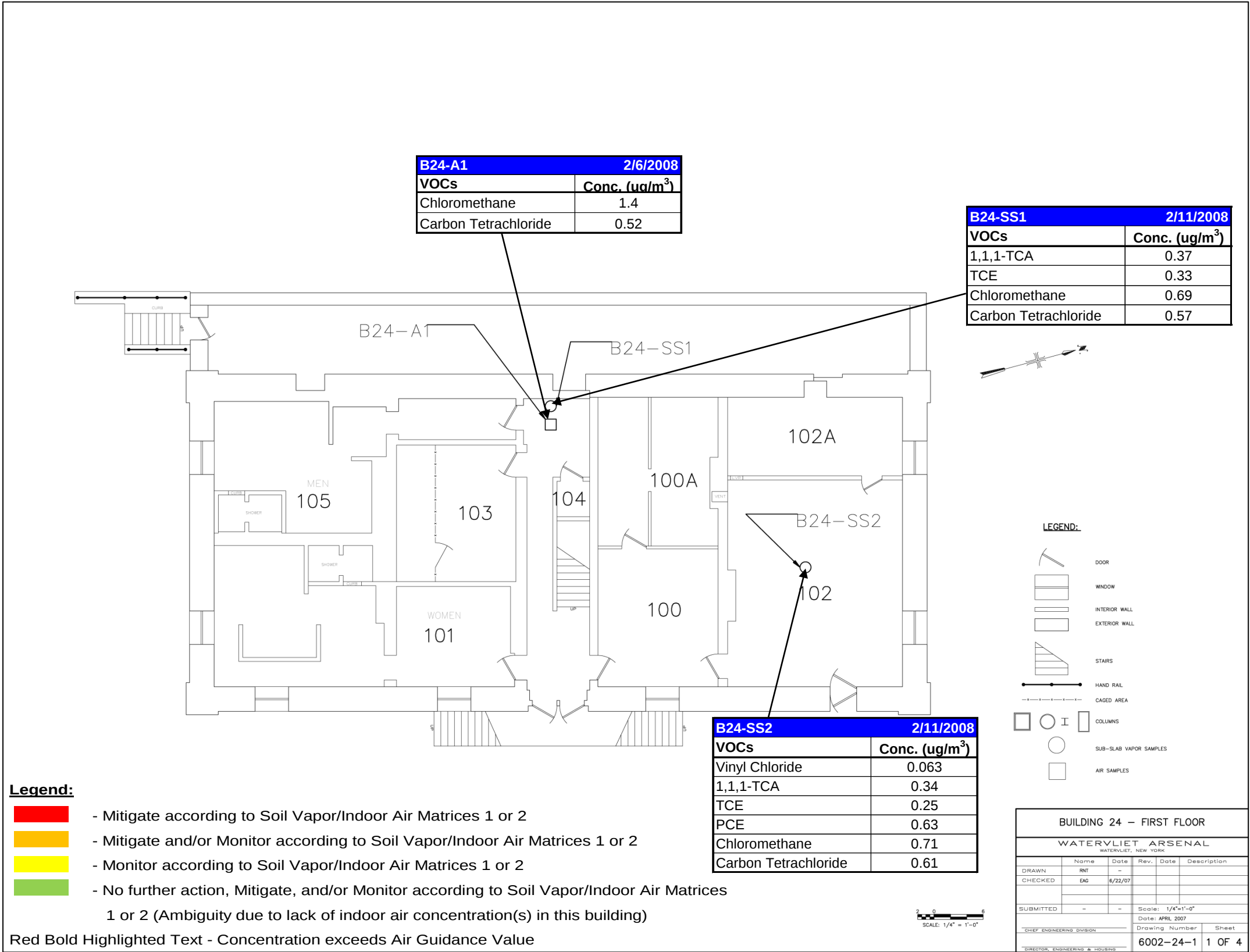
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SUBMITTED	-	-		
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DIRECTOR, ENGINEERING & HOUSING		Drawing Number: 6001-23-2		
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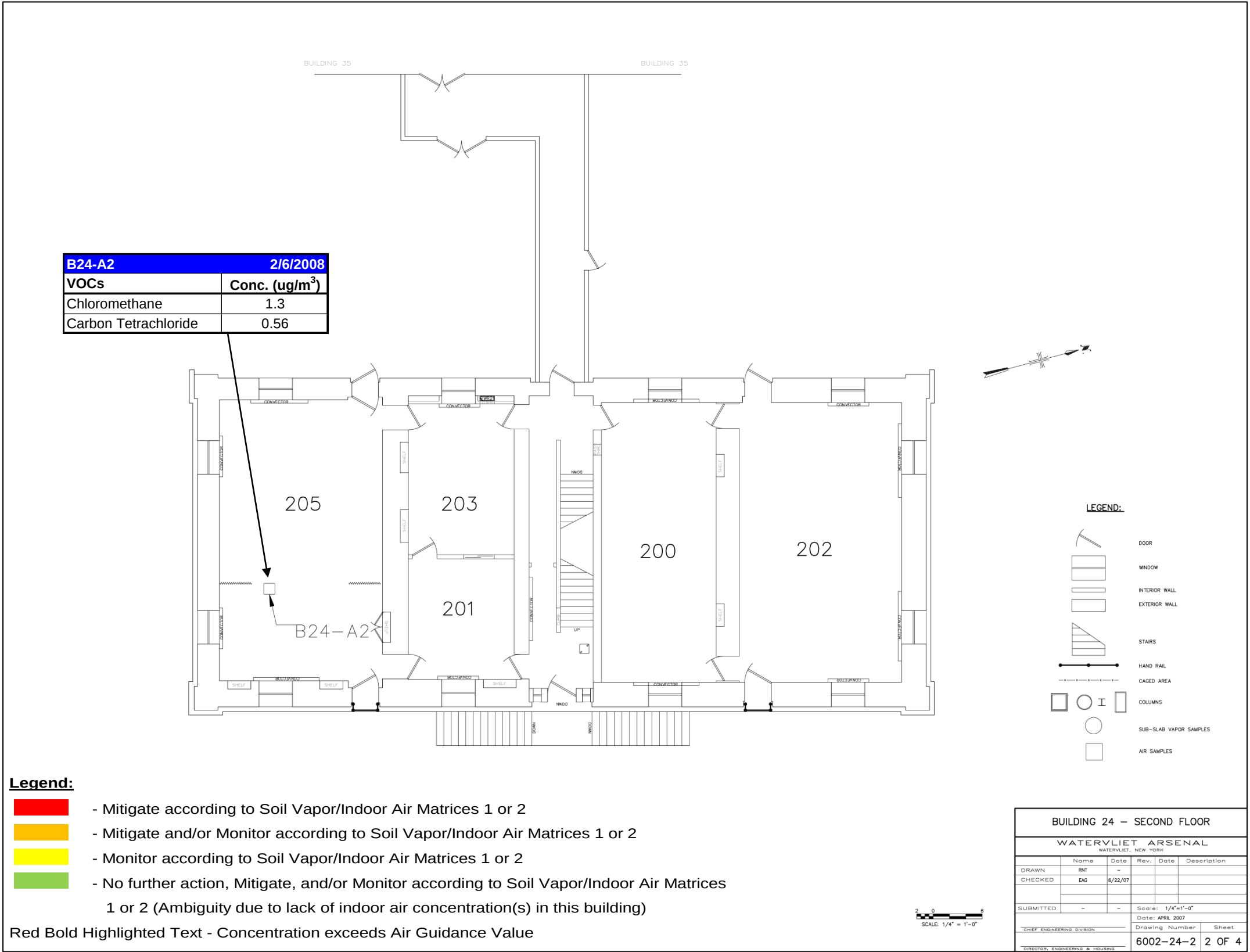
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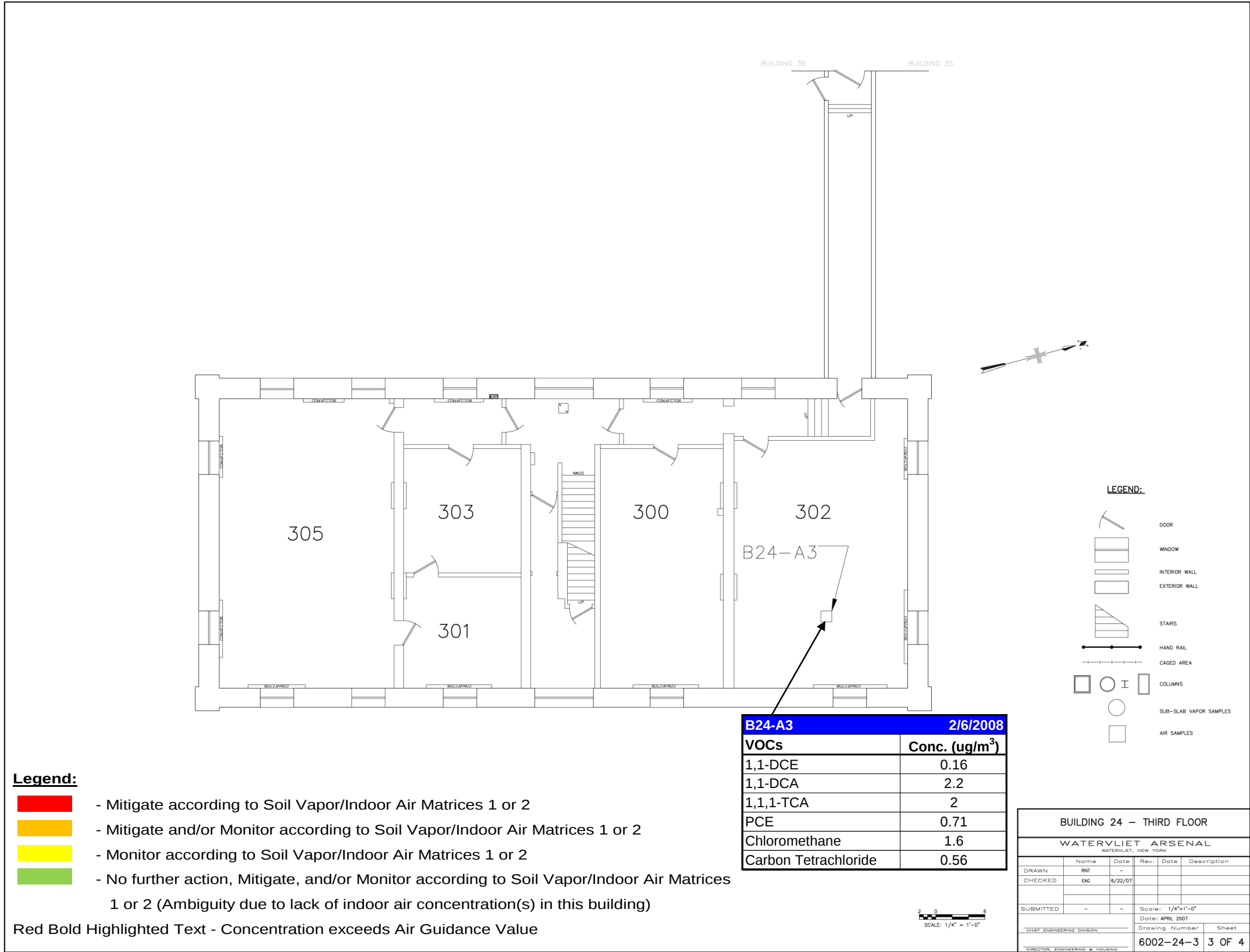


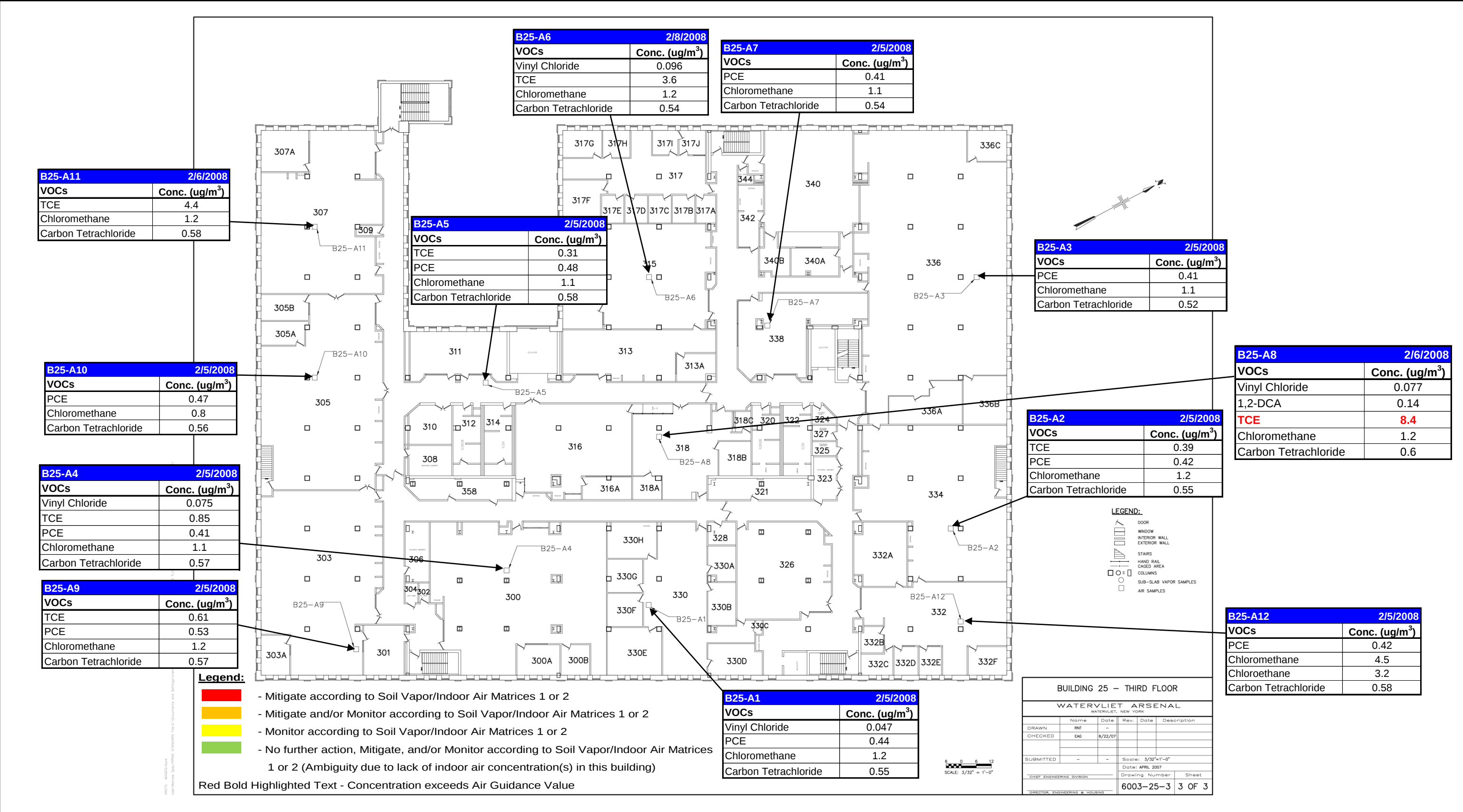


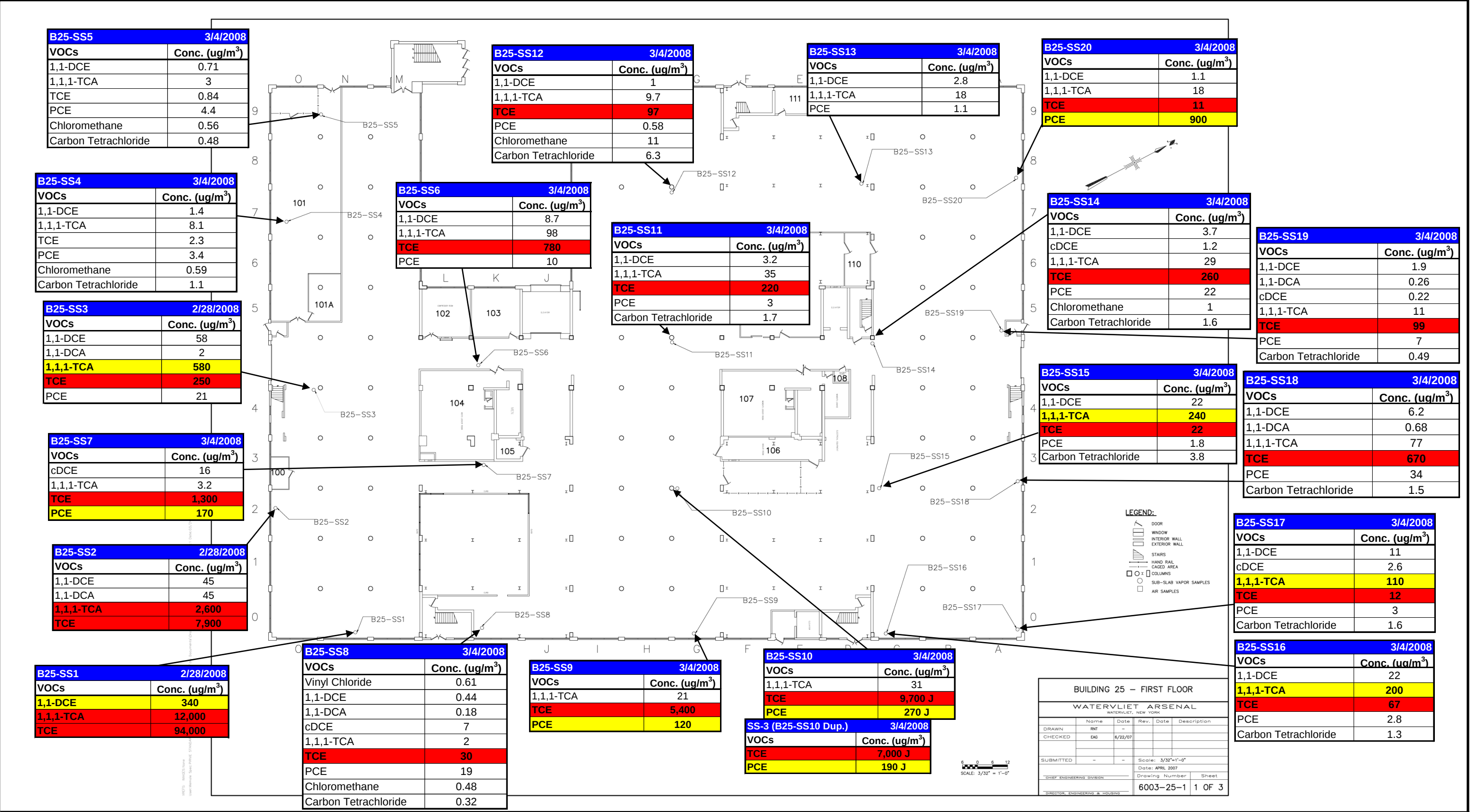


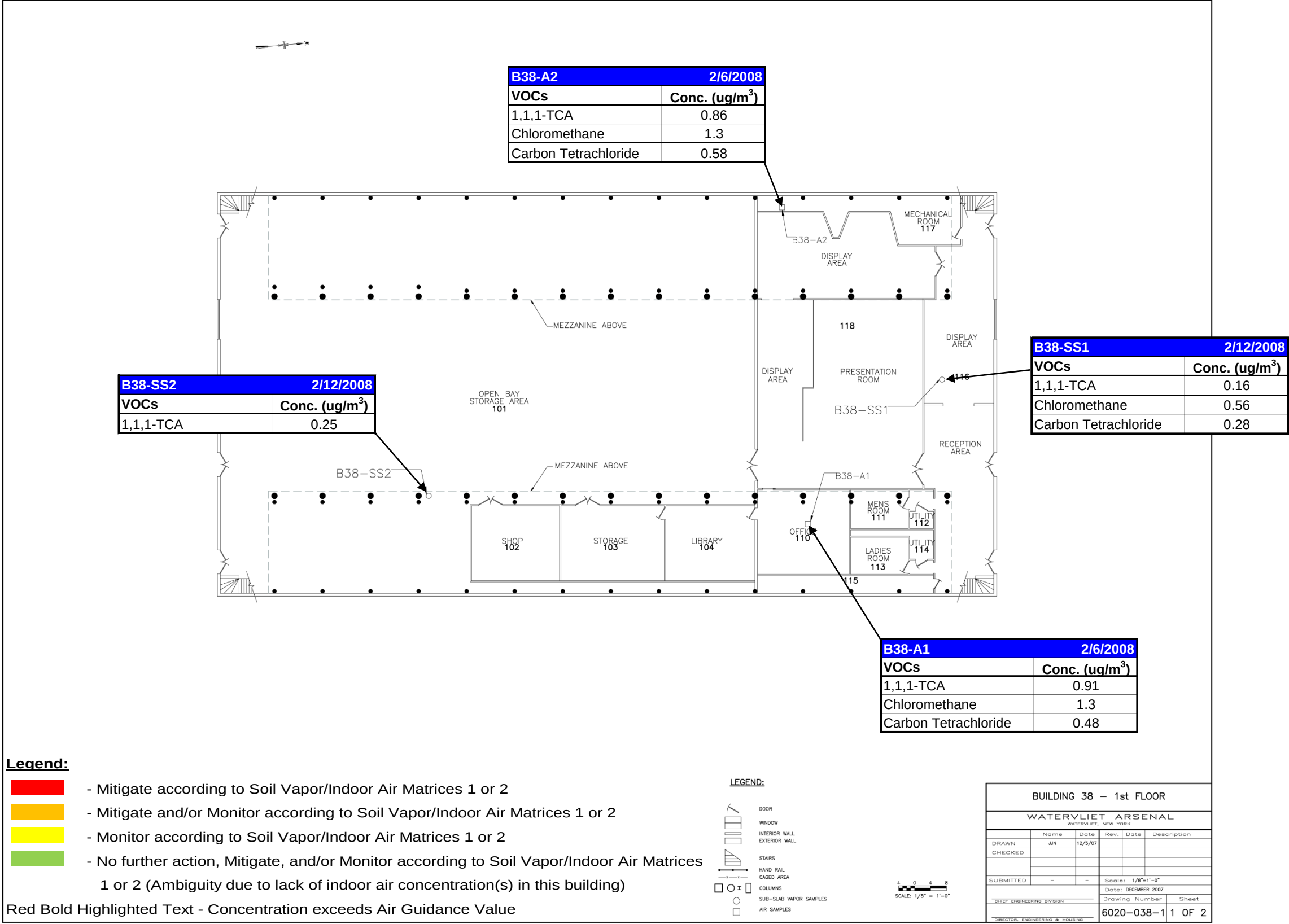


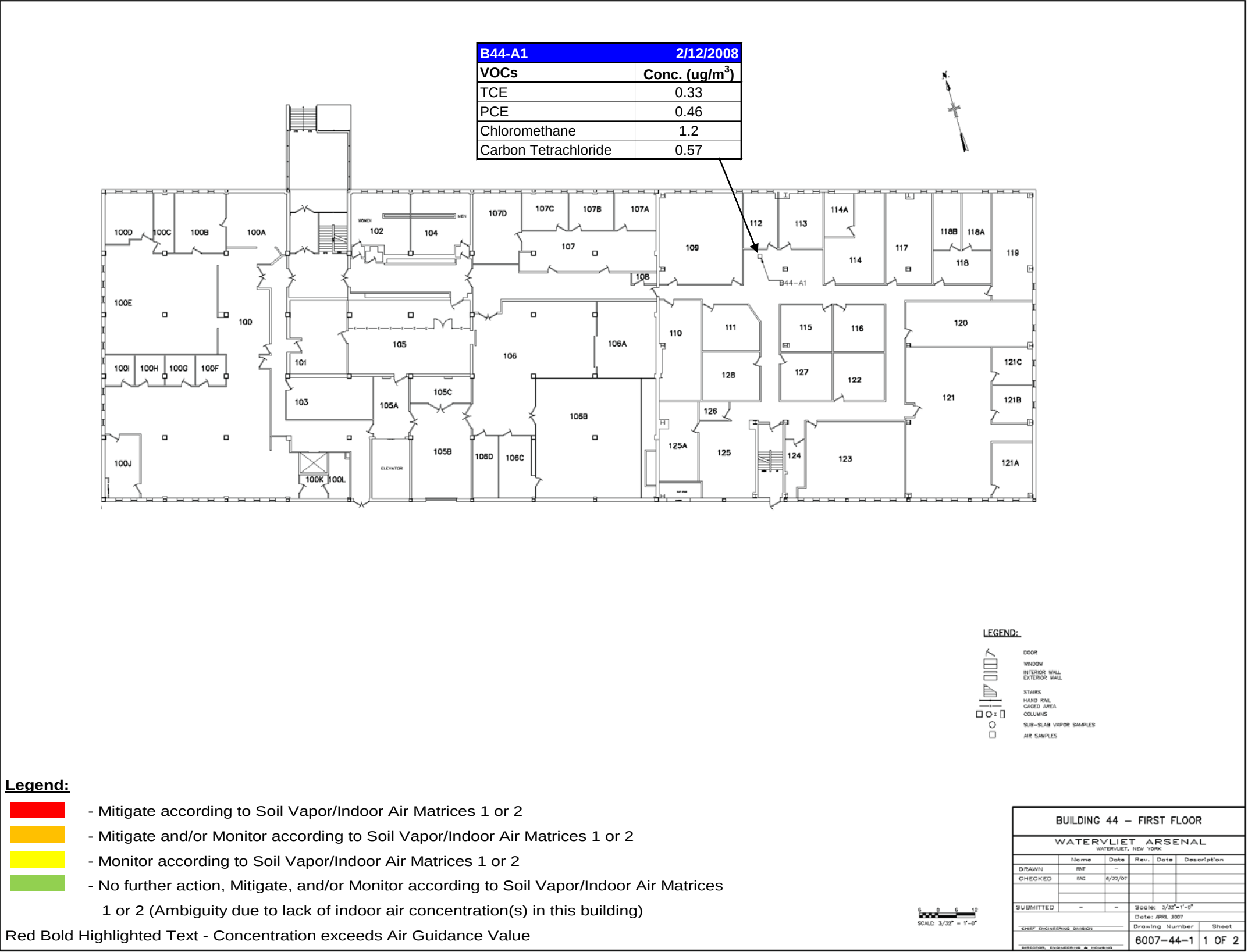
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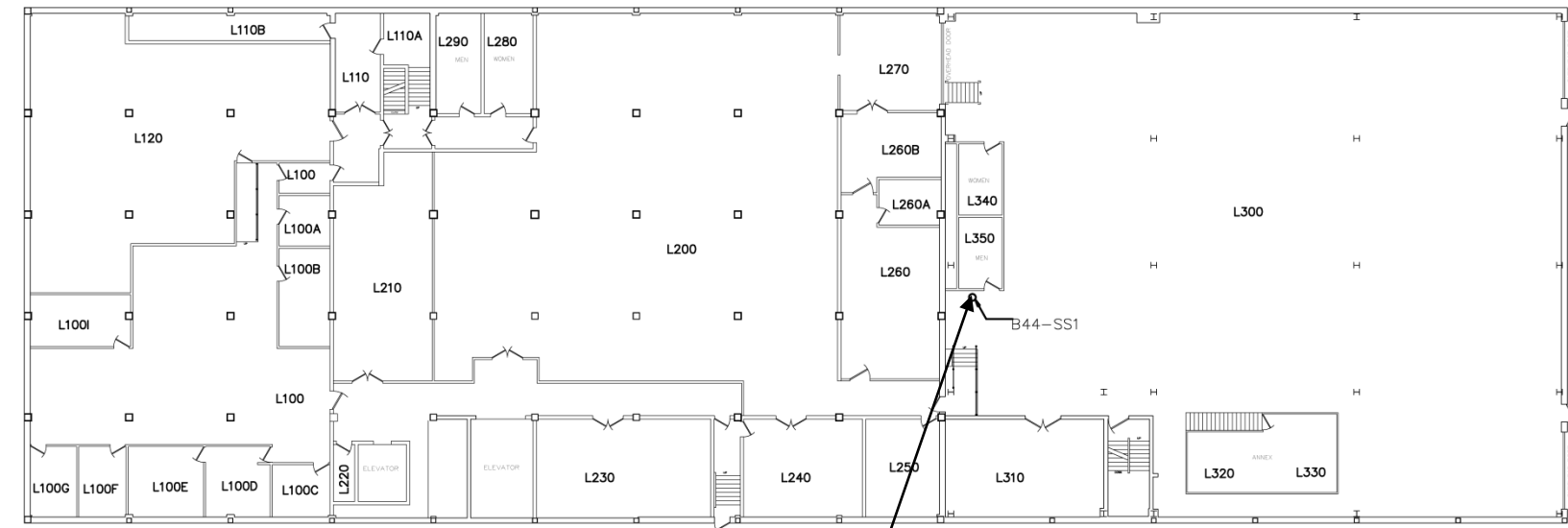
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Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices

1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value



B44-SS1 2/15/2008	
VOCs	Conc. (ug/m ³)
TCE	0.42
PCE	0.24
Chloromethane	0.64
Carbon Tetrachloride	0.54

LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

SCALE: 3/32" = 1'-0"

BUILDING 44 - BASEMENT				
WATERVLIET ARSENAL				
WATERVLIET, NEW YORK				
Drawn	Name	Date	Rev.	Description
DRAWN	RNT	-	-	-
CHECKED	EAG	6/22/07	-	-
SUBMITTED	-	-	-	-
Scale: 3/32"=1'-0"			Date: APRIL 2007	
Drawing Number			Sheet	
6007-44-B			2 OF 2	

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Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

B108-A1 2/12/2008	
VOCs	Conc. (ug/m ³)
TCE	0.34
PCE	0.42
Chloromethane	1.1
Carbon Tetrachloride	0.61

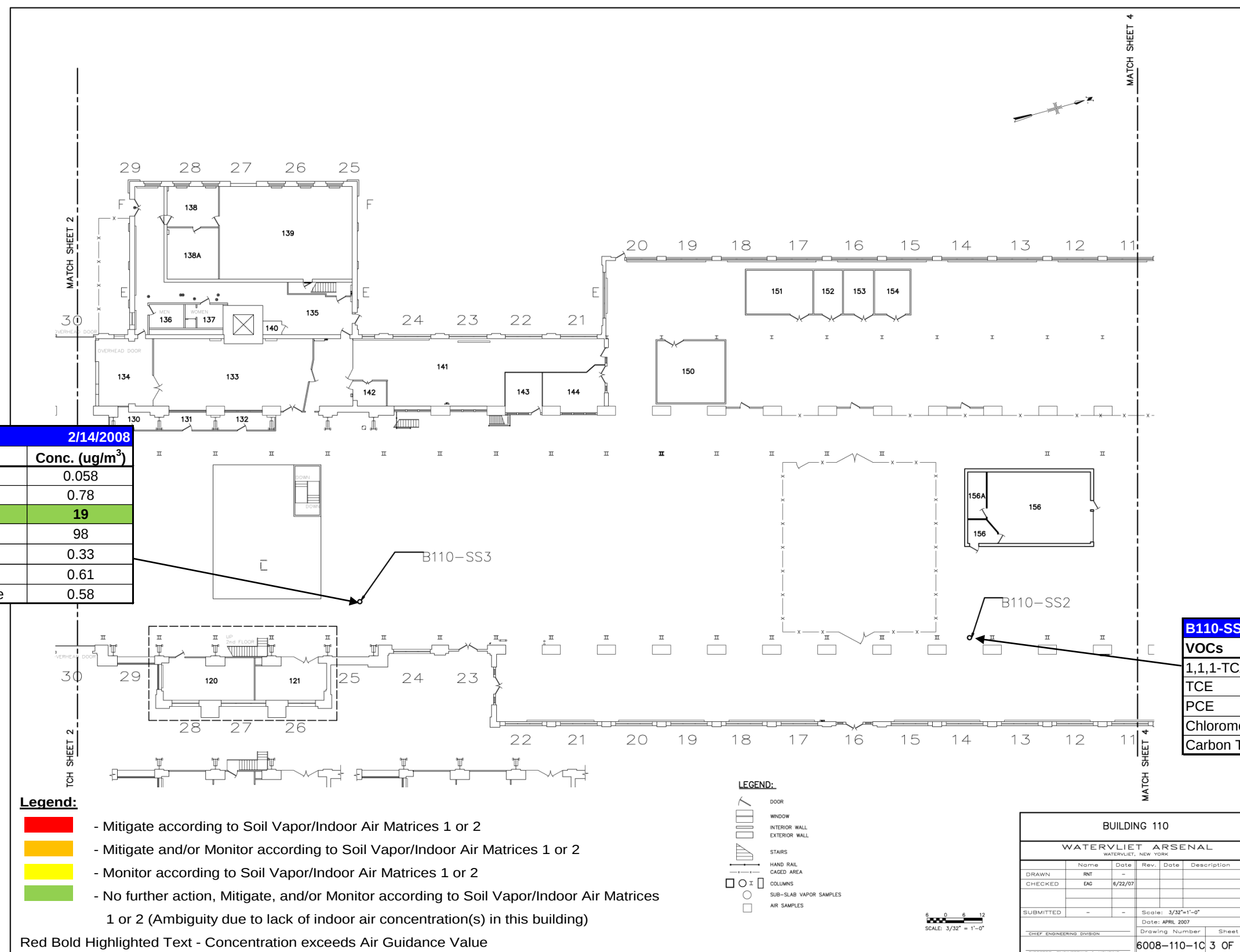
B108-SS1 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.23
TCE	1.1
PCE	6.4
1,1,2,2-PCA	0.25
Chloromethane	0.24
Carbon Tetrachloride	0.55

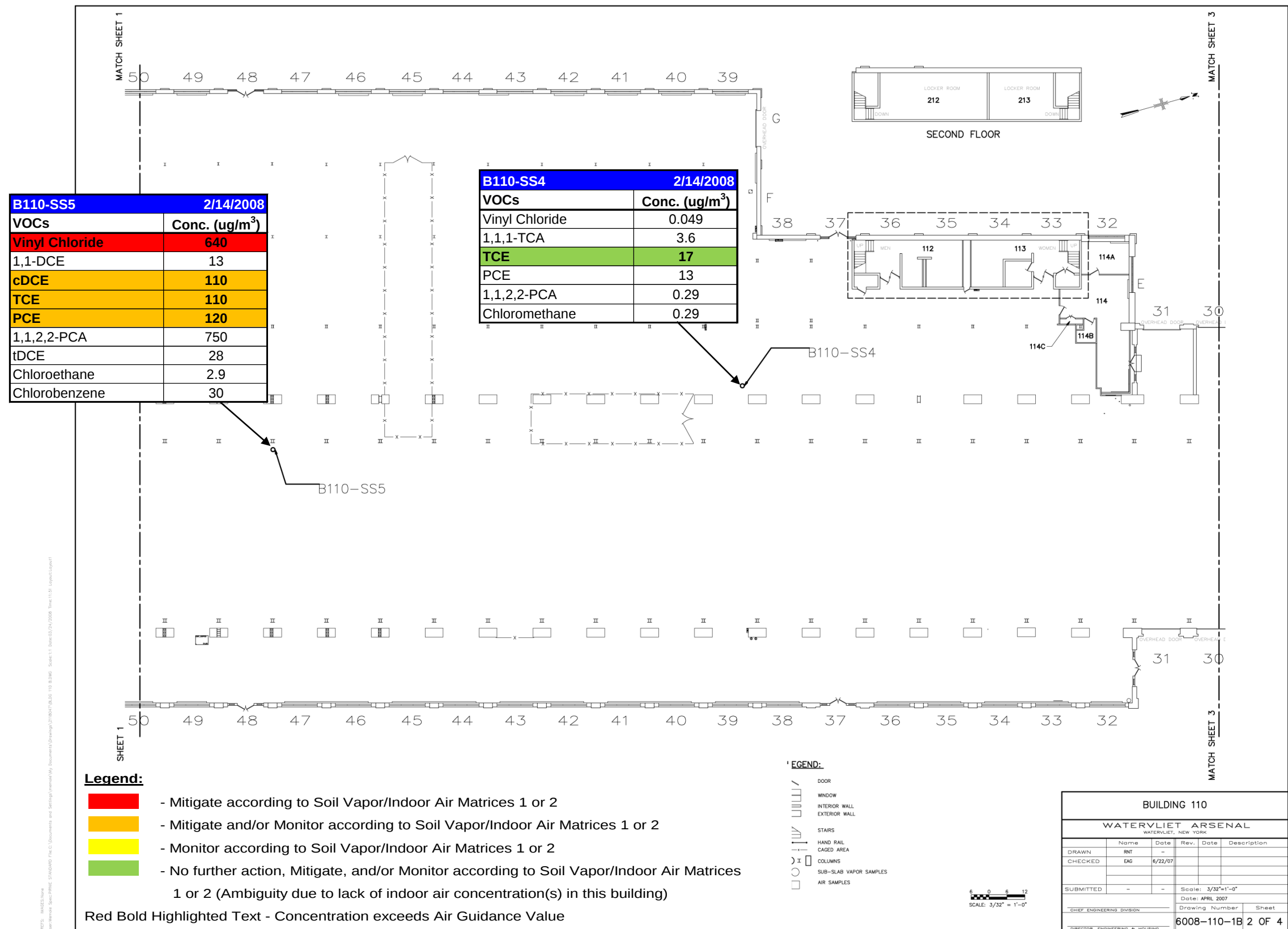
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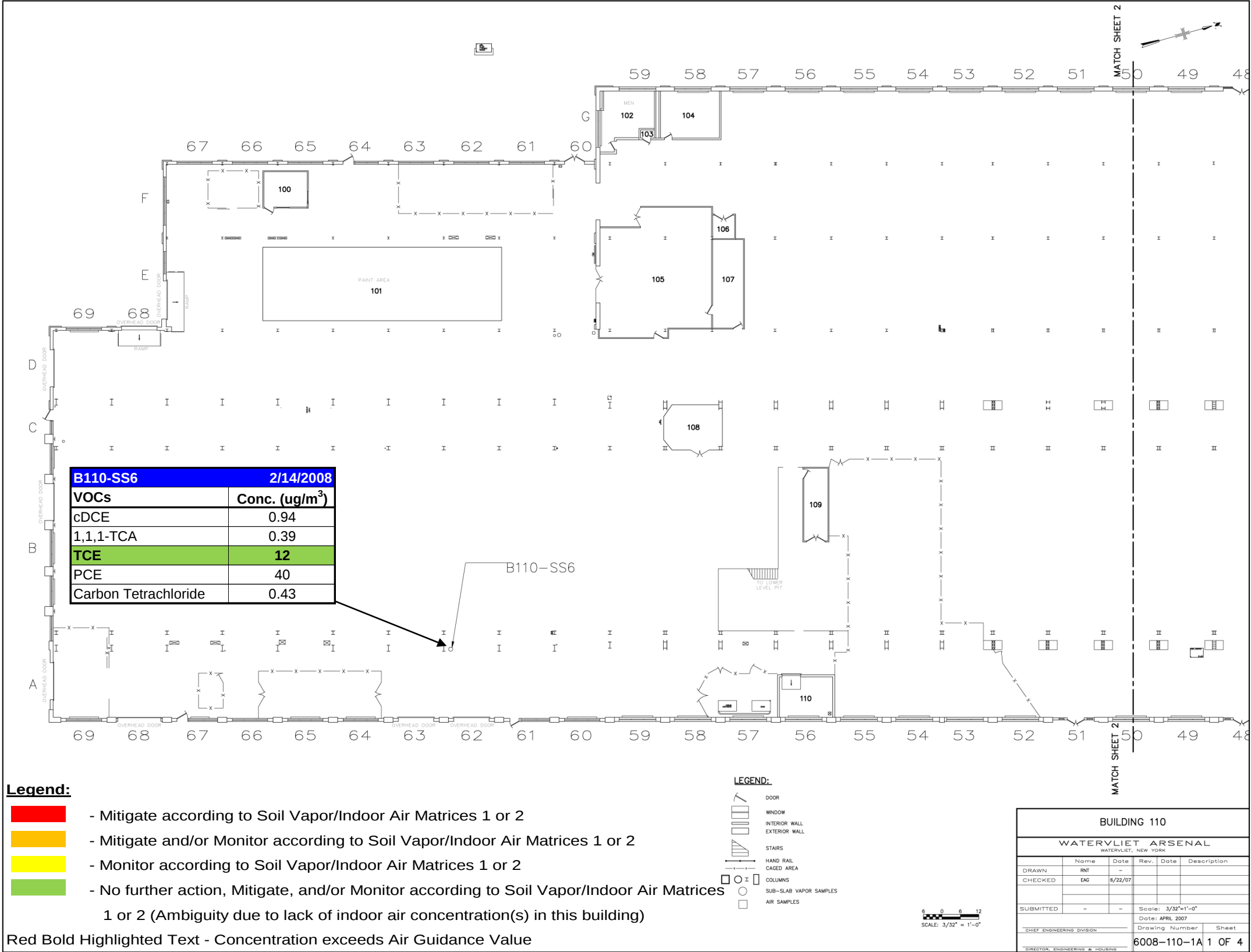
- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- Air Sample
- Sub-Slab Vapor Sample

SCALE: 1/4" = 1'-0"

BUILDING 108				
WATERVLIET ARSENAL				
	Name	Date	Rev.	Date
DRAWN	TAL	-		
CHECKED	EAG	6/22/07		
SUBMITTED	-	-		
			Scale: 1/4"=1'-0"	
			Date: DECEMBER 2007	
CHIEF ENGINEERING DIVISION			Drawing Number	Sheet
DIRECTOR, ENGINEERING & HOUSING			6022-108-1	1 OF 1

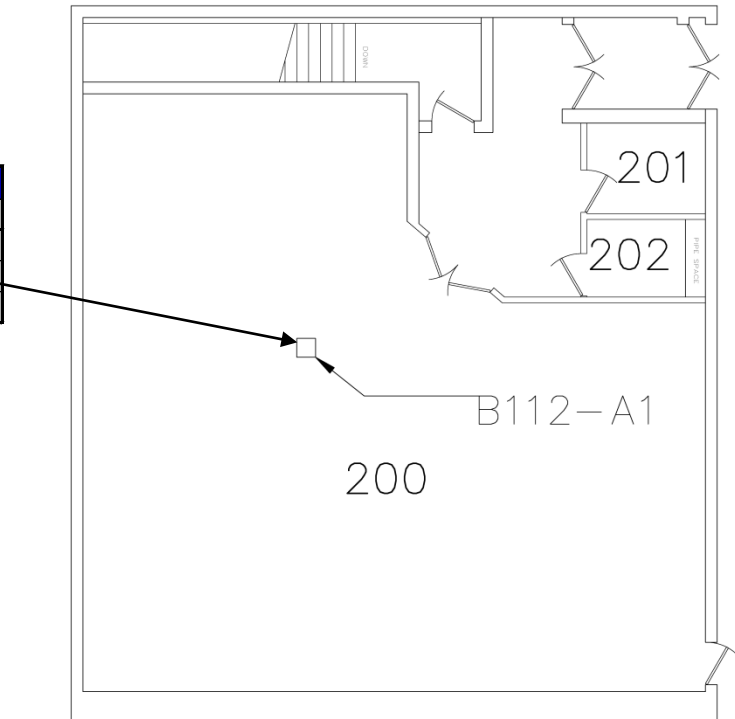






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B112-A1 2/12/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.31
Chloromethane	1.3
Carbon Tetrachloride	0.58



LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

SCALE: 1/2" = 1'-0"

BUILDING 112 - SECOND FLOOR					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
DRAWN	NAME	DATE	REV.	DATE	DESCRIPTION
CHECKED	RNT	-	-	-	-
	EAG	6/22/07	-	-	-
SUBMITTED	-	-	-	-	-
CHIEF ENGINEERING DIVISION			Scale: 1/4"=1'-0"		
DATE: APRIL 2007			Drawing Number		
6009-112-2			Sheet		
2 OF 2			DIRECTOR, ENGINEERING & HOUSING		



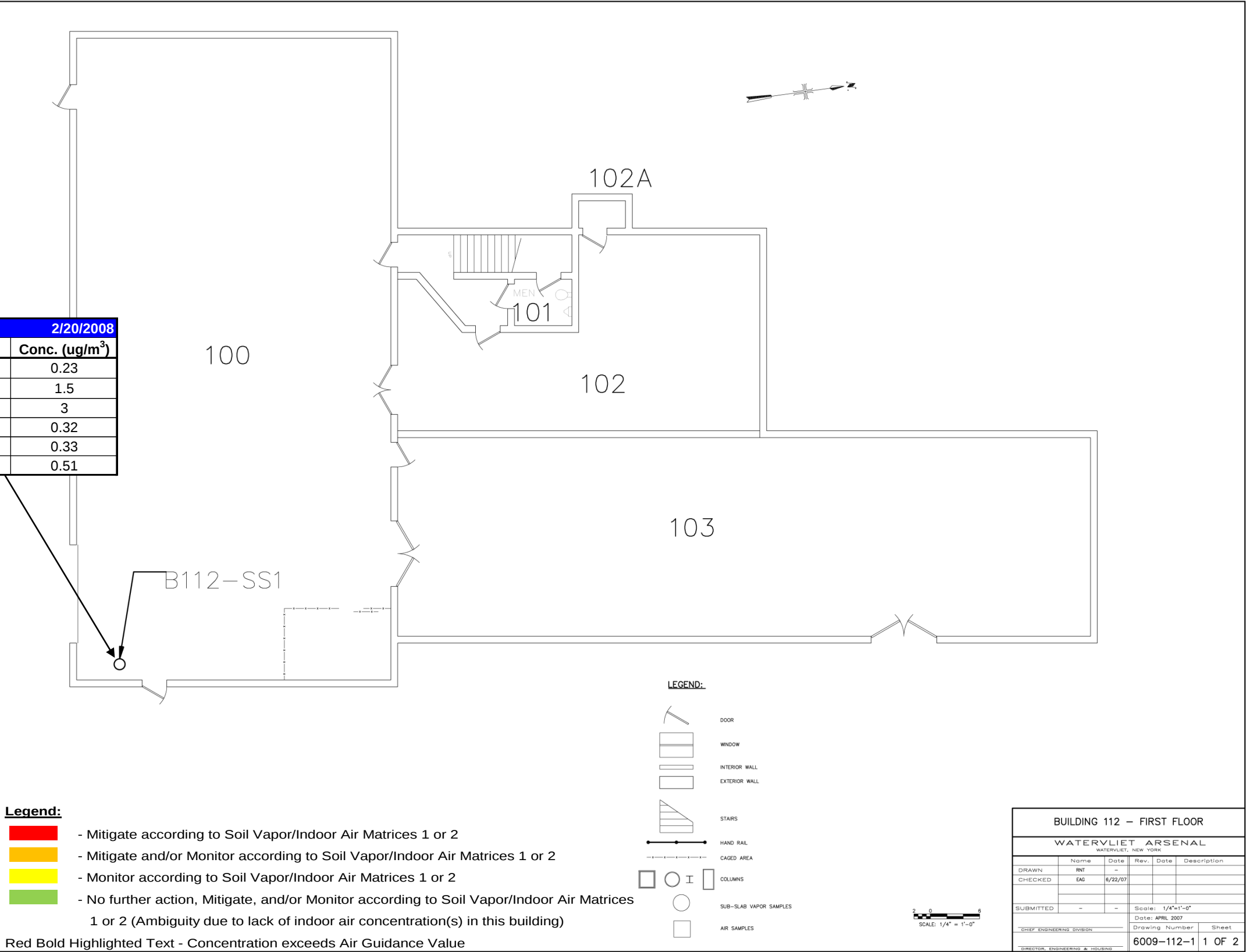
SUPPLEMENTAL VAPOR INTRUSION EVALUATION - 2008
WATERVLIET ARSENAL
WATERVLIET, NEW YORK
BUILDING 112

INDOOR AIR AND SUB-SLAB SOIL VAPOR
VOC CONCENTRATIONS

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Malcolm Pirnie, Inc.

FIGURE 27

B112-SS1 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.23
TCE	1.5
PCE	3
1,1,2,2-PCA	0.32
Chloromethane	0.33
Carbon Tetrachloride	0.51

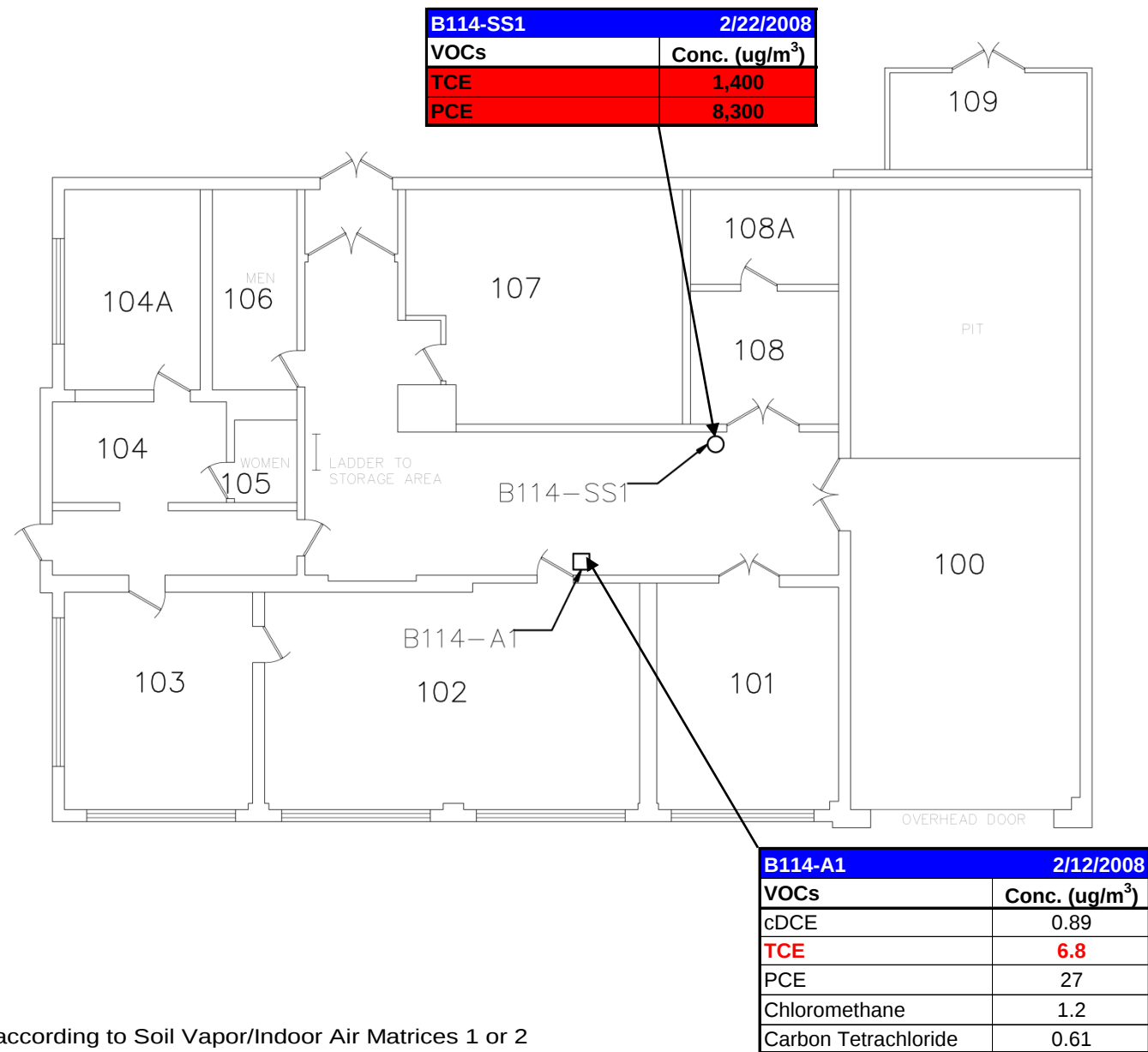


REVISED: 10/20/08
User: [redacted] Project: [redacted] File: [redacted] Path: [redacted] Date: 10/20/08 Time: 15:03 Layout: [redacted]

Legend:

[Red Box]	- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
[Orange Box]	- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
[Yellow Box]	- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
[Green Box]	- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

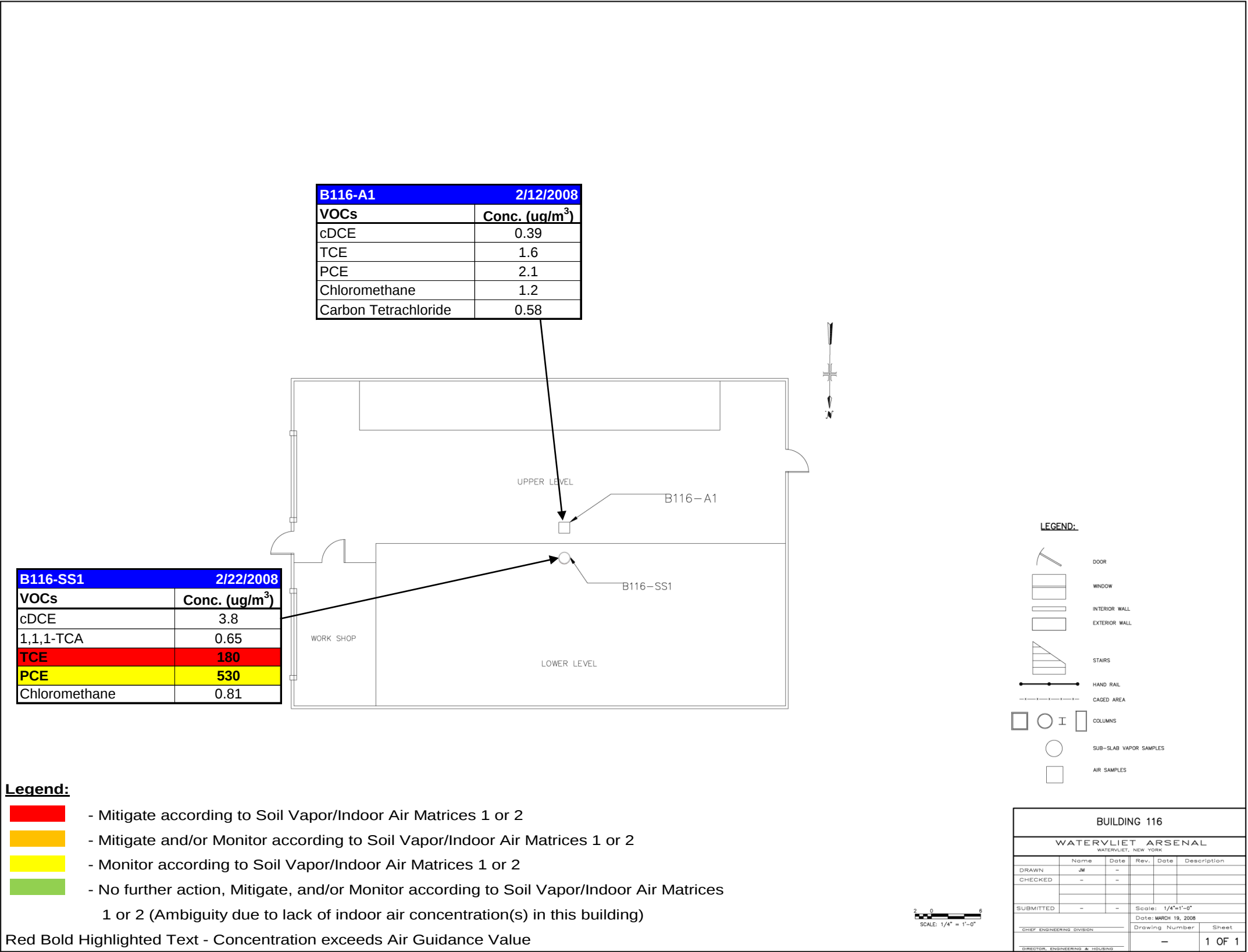


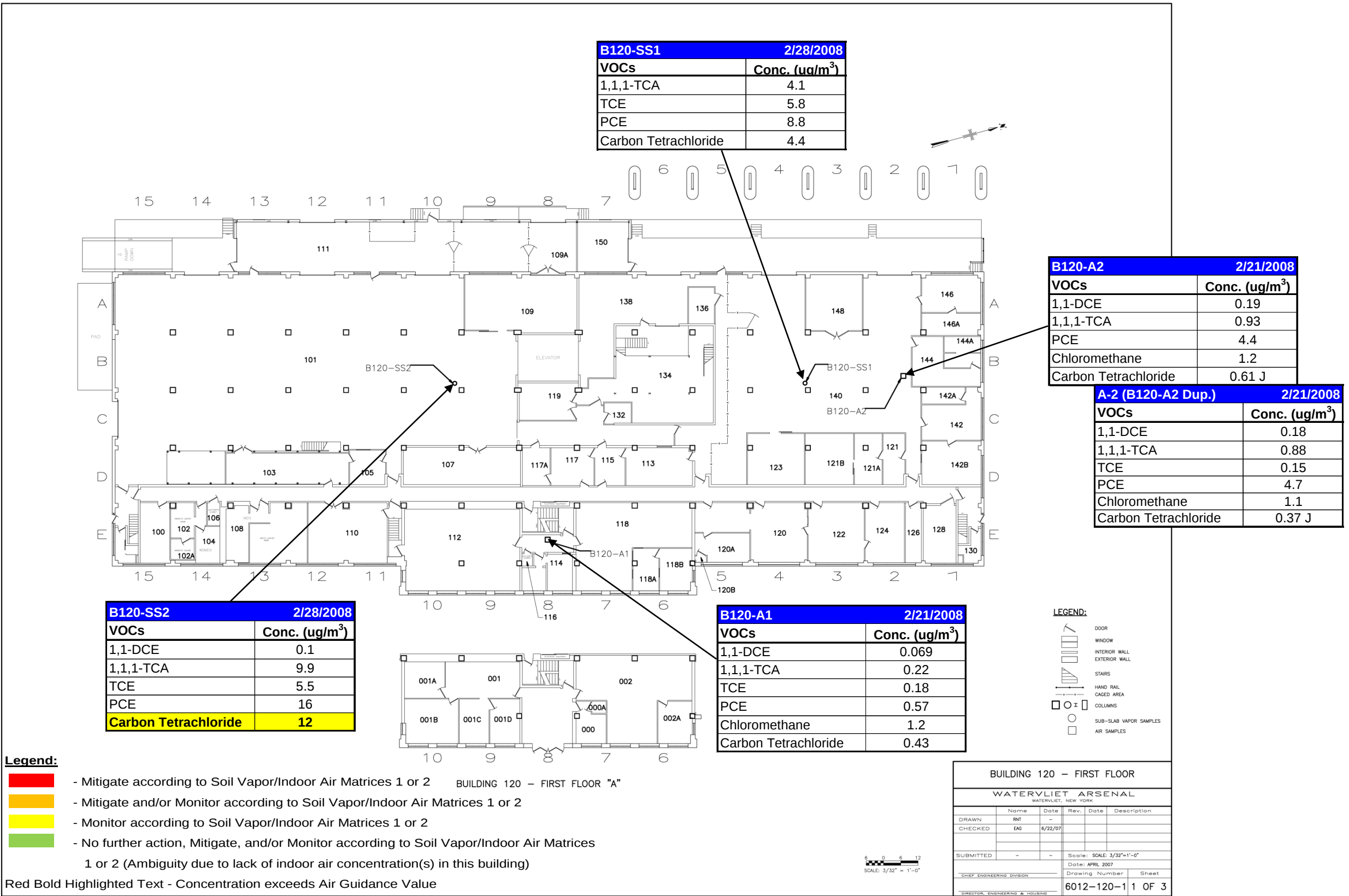
LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

BUILDING 114					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
Drawn	Name	Date	Rev.	Date	Description
DRAWN	RNT	-			
CHECKED	EAC	6/22/07			
SUBMITTED	-	-			
Scale: 1/4"=1'-0"			Date: APRIL 2007		
DRAFT ENGINEERING DIVISION			Drawing Number		Sheet
DIRECTOR, ENGINEERING & HOUSING			6010-114		1 OF 1

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B120-A5 2/21/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.37
TCE	0.18
PCE	0.95
Chloromethane	1
Carbon Tetrachloride	0.44

B120-A4 2/21/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.44
TCE	0.18
PCE	0.73
Chloromethane	1.2

B120-A3 2/21/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.55
PCE	1.1
Chloromethane	1.1
Carbon Tetrachloride	0.42

Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

0 2 4 6 8 10 12
SCALE: 3/32" = 1'-0"

LEGEND:

-  DOOR
-  WINDOW
-  INTERIOR WALL
-  EXTERIOR WALL
-  STAIRS
-  HAND RAIL
-  CAGED AREA
-  COLUMNS
-  SUB-SLAB VAPOR SAMPLE
-  AIR SAMPLE

BUILDING 120 - SECOND FLOOR				
WATERVLIET ARSENAL				
WATERVLIET, NEW YORK				
Drawn	Name	Date	Rev.	Description
DRAWN	RNT	-	-	-
CHECKED	EAG	6/22/07	-	-
SUBMITTED	-	-	-	-
Scale: SCALE: 3/32"=1'-0"			Date: APRIL 2007	
Drawing Number			Sheet	
6012-120-2			2 OF 3	

B120-A7		2/22/2008
VOCs		Conc. (ug/m ³)
1,1-DCE		0.4
1,1,1-TCA		1.3
TCE		0.34
PCE		2.6
Chloromethane		1.2
Carbon Tetrachloride		0.34

B120-A6		2/21/2008
VOCs		Conc. (ug/m ³)
1,1-DCE		0.18
1,1,1-TCA		1.1
PCE		1.6
Chloromethane		1.1
Carbon Tetrachloride		0.37

Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2

- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

BUILDING 120 - THIRD FLOOR					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
DRAWN	NAME	DATE	REV.	DATE	DESCRIPTION
CHECKED	ENG	6/22/07			
SUBMITTED					
			Scale: SCALE 3/32"=1'-0"		
			Date: APRIL 2007		
CHIEF ENGINEERING DIVISION			Drawing Number	Sheet	
DIRECTOR, ENGINEERING & HOUSING			6012-120-3	3 OF 3	

B121-SS1 2/25/2008	
VOCs	Conc. (ug/m ³)
cDCE	0.92
1,1,1-TCA	0.4
TCE	65
PCE	17
Chloromethane	0.22
Carbon Tetrachloride	0.32

B121-A2 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1-DCE	0.11
cDCE	0.15
1,1,1-TCA	0.7
PCE	0.88
Chloromethane	1.2

A-1 (B121-A2 Dup.) 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1-DCE	0.14 J
1,1,1-TCA	0.69
PCE	0.44
Chloromethane	1.4
Carbon Tetrachloride	0.41

B121-A1 2/20/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	0.7
Chloromethane	1.2
Carbon Tetrachloride	0.57

B121-SS2 2/25/2008	
VOCs	Conc. (ug/m ³)
cDCE	0.27
TCE	1.9
PCE	1.3
Chloromethane	0.22
Carbon Tetrachloride	0.45

Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

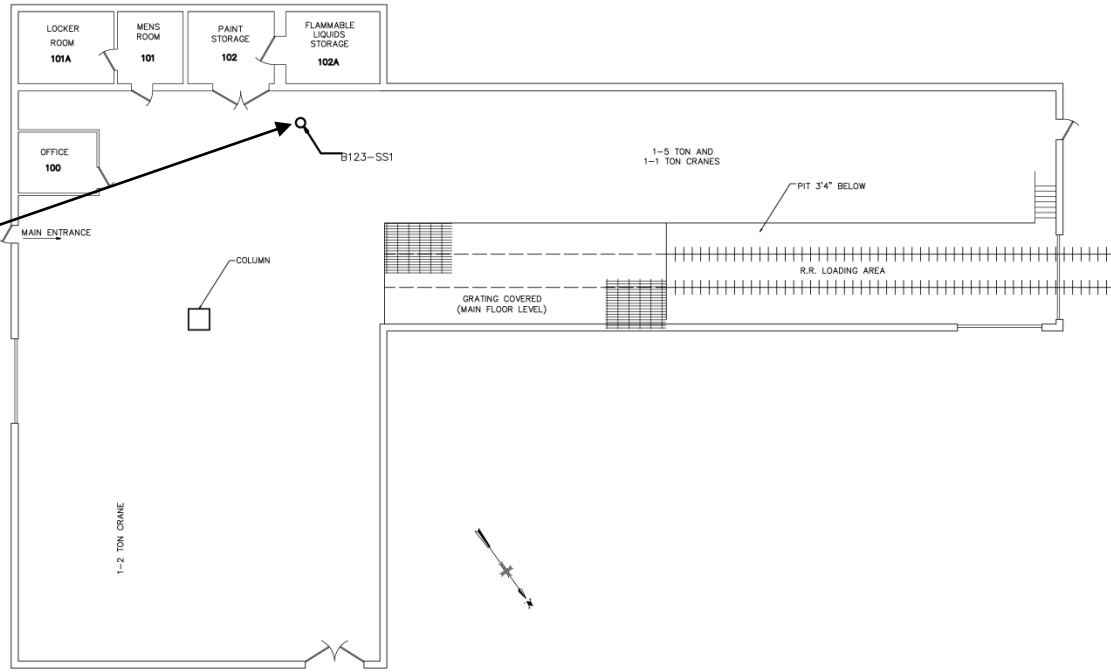
Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

BUILDING 121					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
DRAWN	Name	Date	Rev.	Date	Description
CHECKED	JUN	10/23/07			
SUBMITTED	-	-			
CHIEF ENGINEERING DIVISION			Scale: 1/4"=1'-0"		
DIRECTOR, ENGINEERING & HOUSING			Date: OCTOBER 2007		
			Drawing Number		
			Sheet		
			6023-121-1 1 OF 1		

B123-SS1 2/25/2008	
VOCs	Conc. (ug/m ³)
1,1,1-TCA	4.7
TCE	43
PCE	840
Chloromethane	1.4
Carbon Tetrachloride	2.2



Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

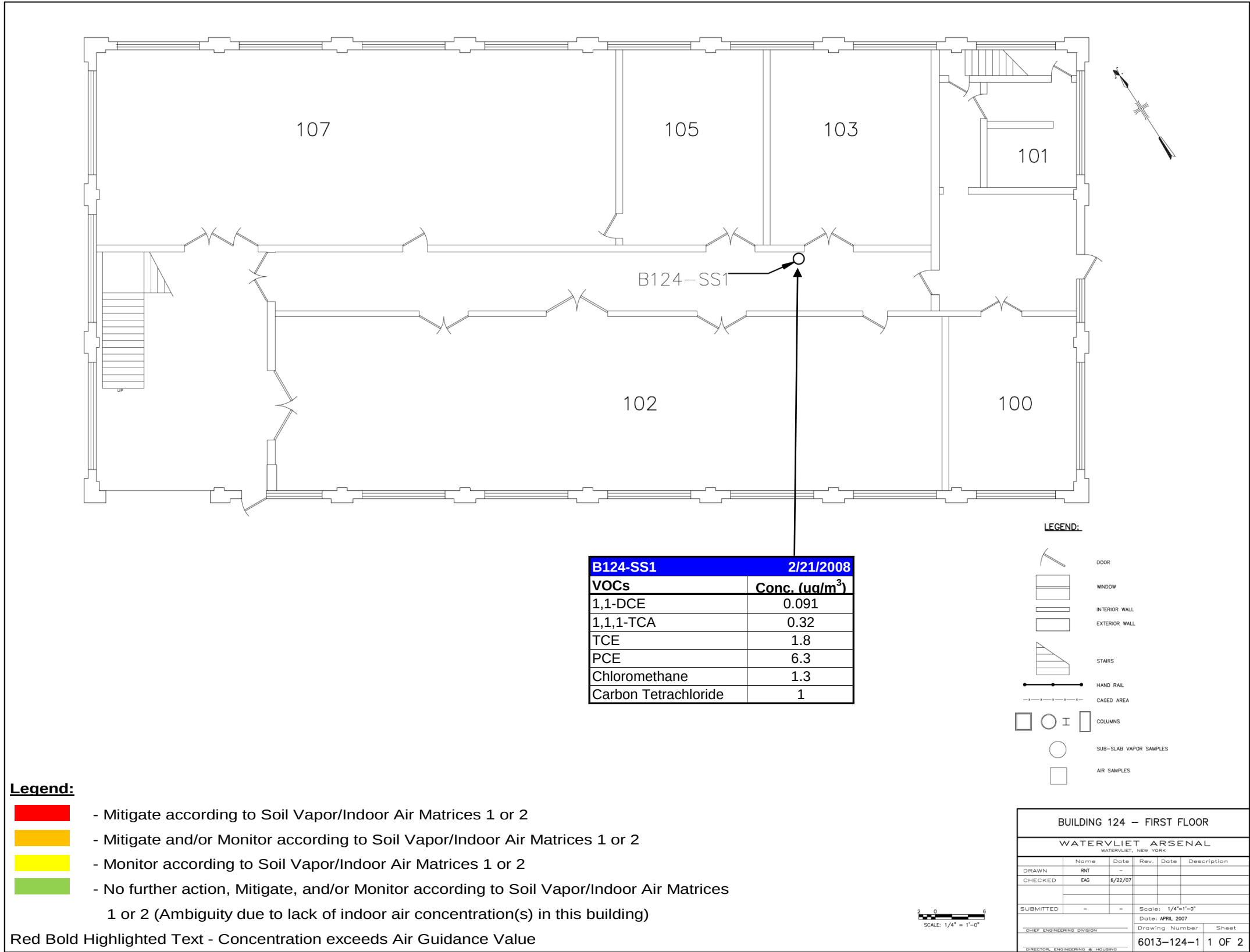
Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB VAPOR SAMPLES
- AIR SAMPLES

SCALE: 1/8" = 1'-0"

BUILDING 123					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
DRAWN	Name	Date	Rev.	Date	Description
CHECKED	JUN	10/23/07	-		
SUBMITTED	-	-			
CHIEF ENGINEERING DIVISION		Date: OCTOBER 2007		Drawing Number	Sheet
DIRECTOR, ENGINEERING & HOUSING		6025-123-1		1	OF 1

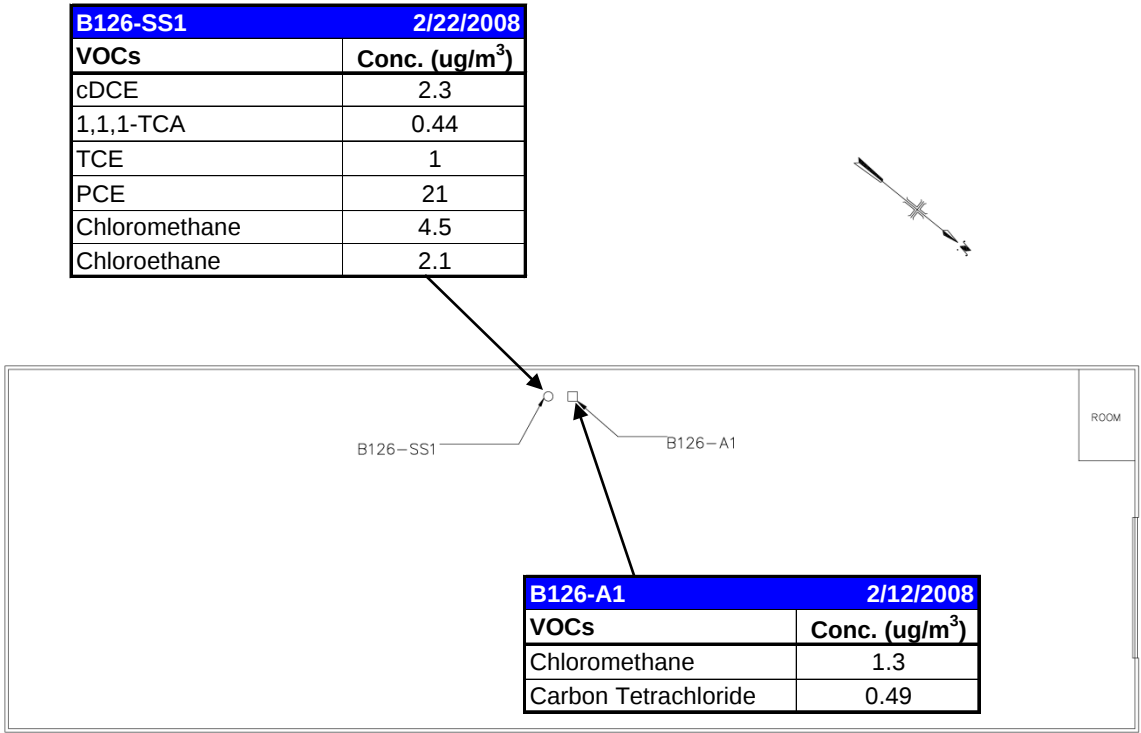


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Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2 (Ambiguity due to lack of indoor air concentration(s) in this building)

Red Bold Highlighted Text - Concentration exceeds Air Guidance Value

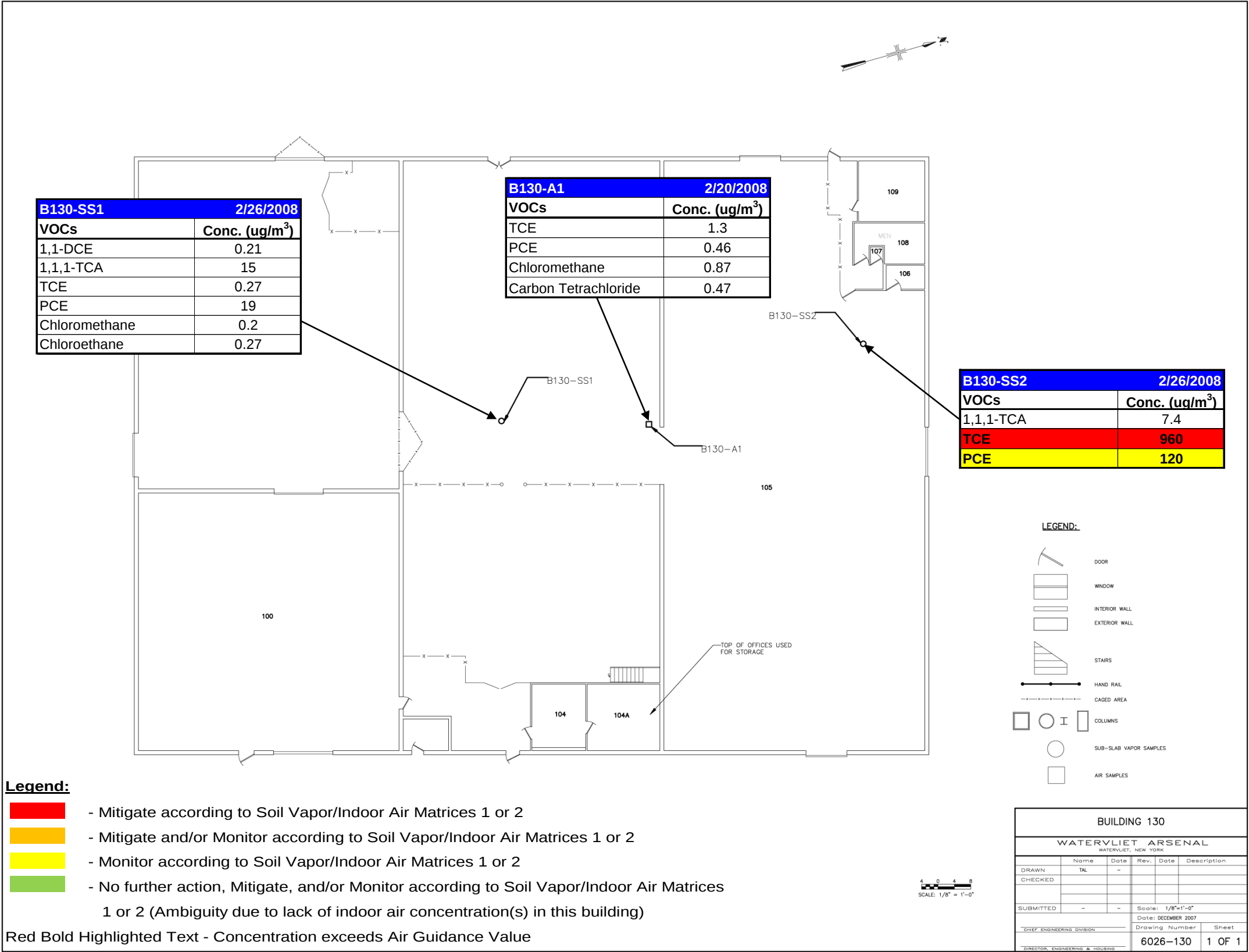


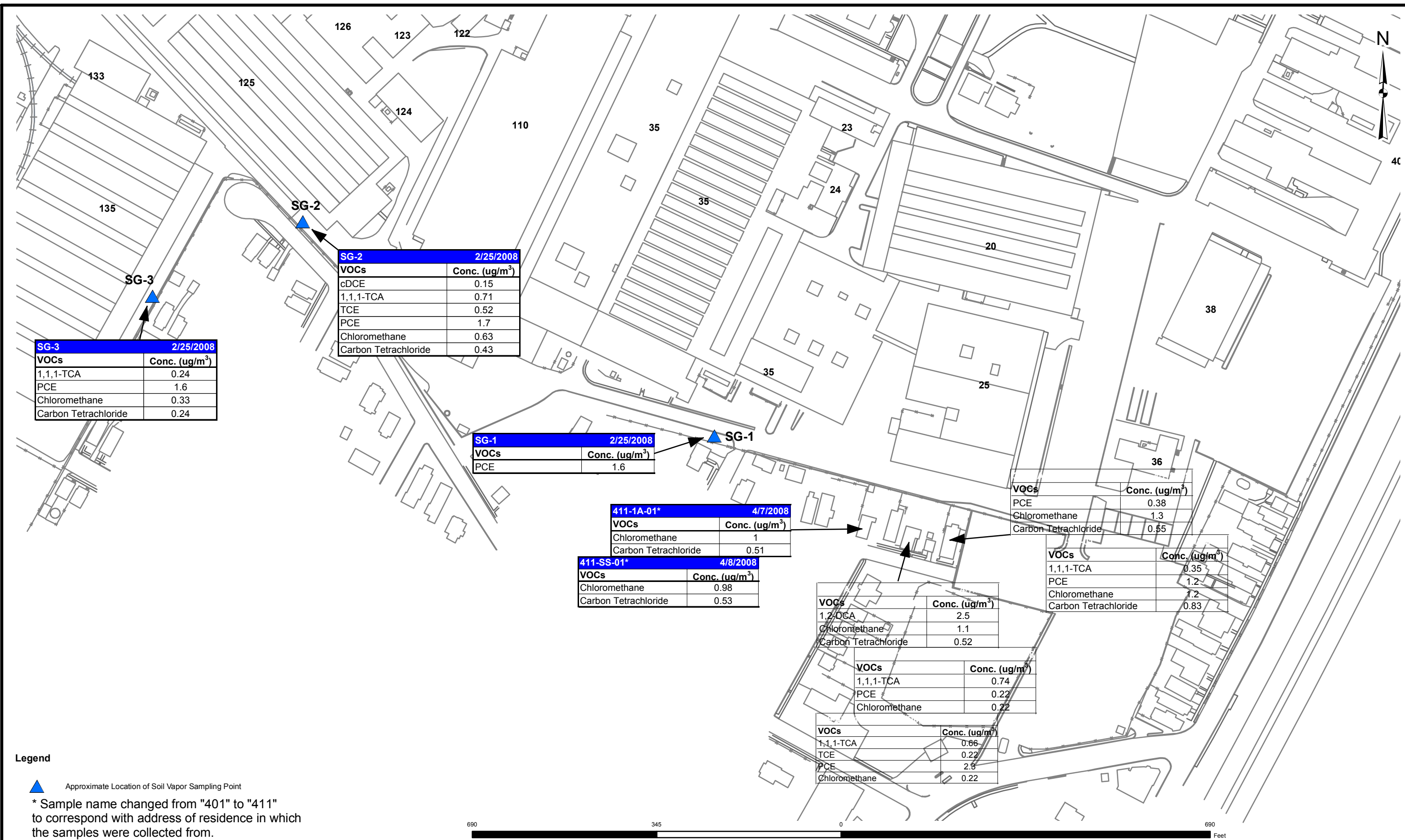
LEGEND:

- DOOR
- WINDOW
- INTERIOR WALL
- EXTERIOR WALL
- STAIRS
- HAND RAIL
- CAGED AREA
- COLUMNS
- SUB-SLAB SAMPLES
- AIR SAMPLES

SCALE: 1/8" = 1'-0"

BUILDING 126					
WATERVLIET ARSENAL					
WATERVLIET, NEW YORK					
	Name	Date	Rev.	Date	Description
DRAWN	JM	3/18/08			
CHECKED	-	-			
SUBMITTED	-	-			
				Scale: 1/8"=1'-0"	
				Date: MARCH 2008	
CHIEF ENGINEERING DIVISION				Drawing Number	Sheet
DIRECTOR, ENGINEERING & HOUSING				6016-15-1	1 OF 1





WATERVLIET ARSENAL MAIN MANUFACTURING AREA
WATERVLIET, NEW YORK

SOIL VAPOR SAMPLING RESULTS (SOUTH END OF THE WVA) AND OFFSITE PROPERTY VOC RESULTS

MALCOLM PIRNIE, INC.
AUGUST 2007

FIGURE 40



SG-6 2/25/2008	
VOCs	Conc. (ug/m ³)
-	-

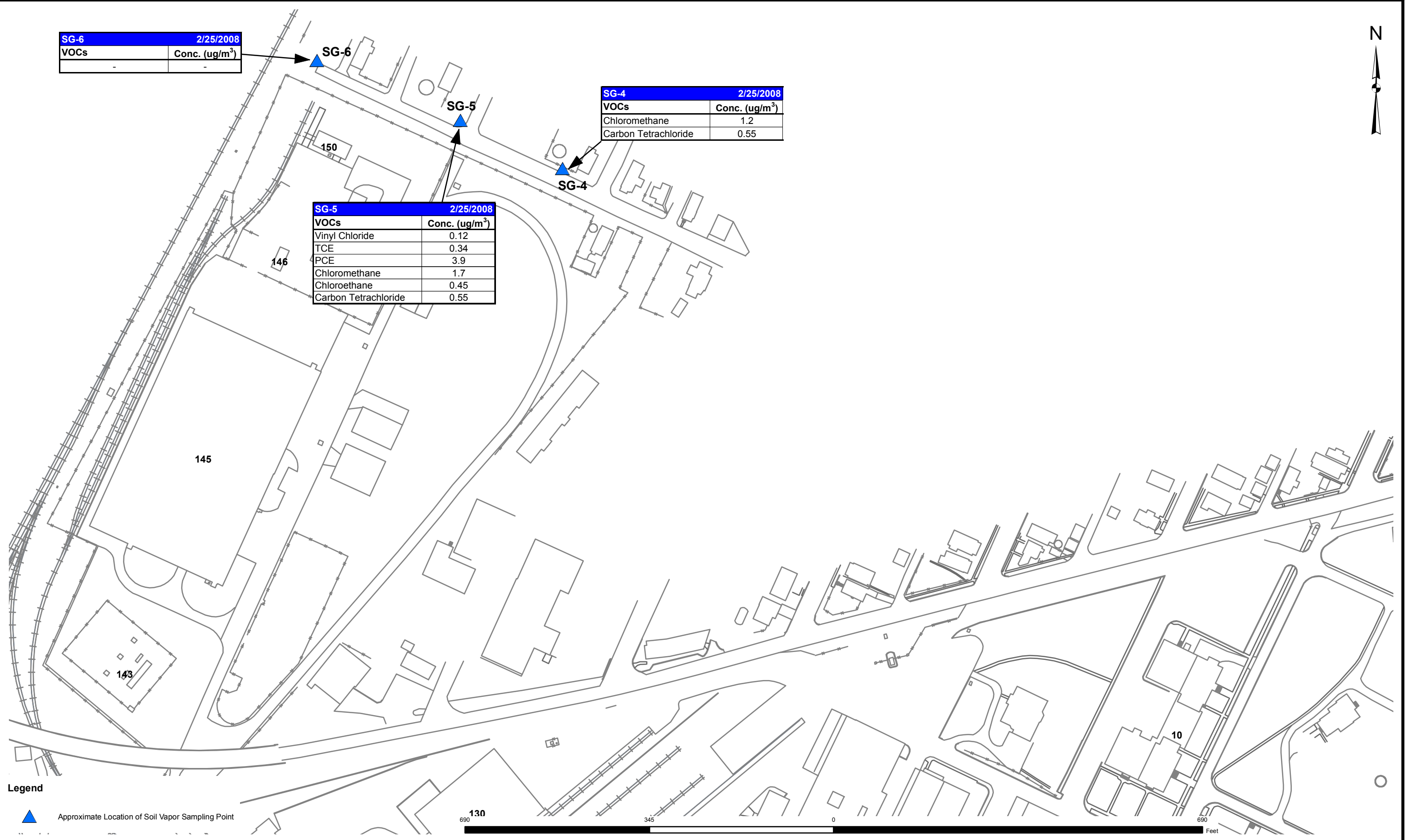
SG-6

SG-4 2/25/2008	
VOCs	Conc. (ug/m ³)
Chloromethane	1.2
Carbon Tetrachloride	0.55

SG-4

SG-5 2/25/2008	
VOCs	Conc. (ug/m ³)
Vinyl Chloride	0.12
TCE	0.34
PCE	3.9
Chloromethane	1.7
Chloroethane	0.45
Carbon Tetrachloride	0.55

SG-5

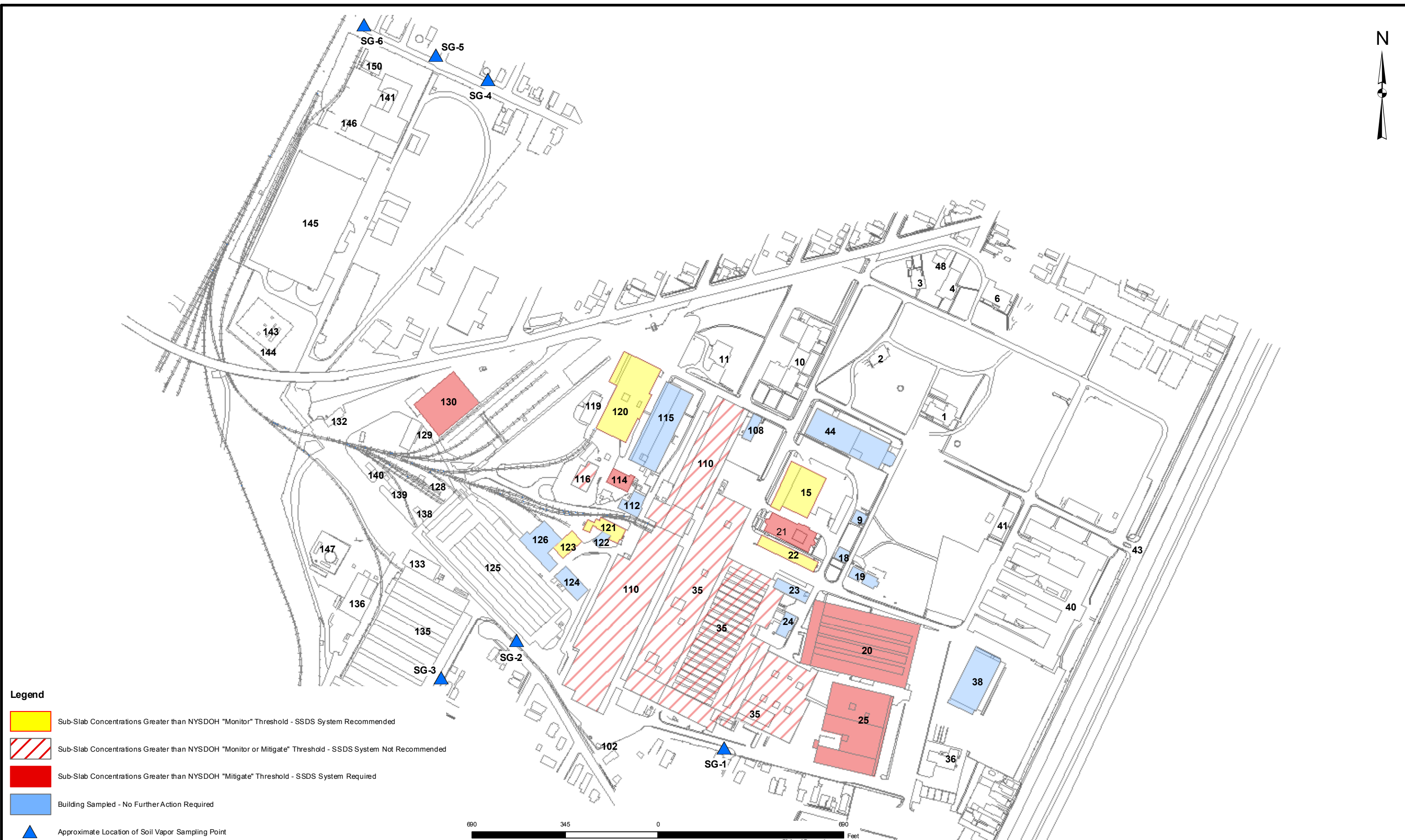


Legend
▲ Approximate Location of Soil Vapor Sampling Point



WATERVLIET ARSENAL MAIN MANUFACTURING AREA
WATERVLIET, NEW YORK
SOIL VAPOR SAMPLING RESULTS (NORTH END OF THE WVA)

MALCOLM PIRNIE, INC.
AUGUST 2007
FIGURE 41



Legend

-  Sub-Slab Concentrations Greater than NYSDOH "Monitor" Threshold - SSDS System Recommended
-  Sub-Slab Concentrations Greater than NYSDOH "Monitor or Mitigate" Threshold - SSDS System Not Recommended
-  Sub-Slab Concentrations Greater than NYSDOH "Mitigate" Threshold - SSDS System Required
-  Building Sampled - No Further Action Required
-  Approximate Location of Soil Vapor Sampling Point

690 345 0 690 Feet

**MALCOLM
PIRNIE**

**WATERVLiet ARSENAL MAIN MANUFACTURING AREA
WATERVLiet, NEW YORK**

SUMMARY OF SUB-SLAB SAMPLING RESULTS - SUPPLEMENTAL VAPOR INTRUSION EVALUATION

MALCOLM PIRNIE, INC.
JULY 2008

FIGURE 42



Watervliet Arsenal, Watervliet, New York

Vapor Intrusion Investigation

Tables

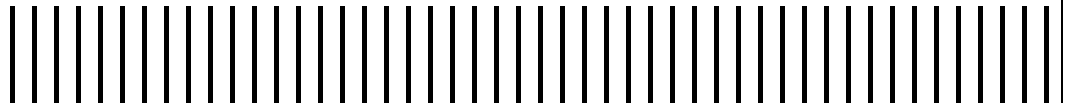


Table 1
Summary of Indoor Air Samples
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

Building	Current Use	No. Indoor Air Samples
9	Quarters	1
15	Motor Pool/Offices	2
18	Quarters	1
19	Quarters	2
20	Manufacturing/Office	-
21	Cafeteria/Meetings/Quarters	2
23	Office	3
24	Office	3
25	Manufacturing/Office/Lab	12
35	Manufacturing	-
38	Museum	2
44	Office (Arsenal Partnership)	1
108	Mail Room	1
110	Manufacturing	-
112	Laboratory/Office	1
114	Laboratory/Office	1
116	Unoccupied	1
120	Lab/DPW/Office	7
121	Laboratory	2
123	Paint Booths	-
124	National Guard	1
126	Storage	1
130	Storage	1
307 9th Street	Off-Site Residence	1
319 9th Street	Off-Site Residence	1
411 9th Street	Off-Site Residence	1

Total Indoor Air	48
Indoor Air QA/QC	2
Total	50

Note: Indoor air sample duplicates collected at Building 120 (one) and Building 121 (one)

Table 2
Summary of Sub-Slab Soil Vapor Samples
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

Building	Current Use	No. Sub-Slab Samples
9	Quarters	1
15	Motor Pool/Offices	1
18	Quarters	1
19	Quarters	1
20	Manufacturing/Office	12
21	Cafeteria/Meetings/Quarters	2
23	Office	1
24	Office	2
25	Manufacturing/Office/Lab	20
35	Manufacturing	5
38	Museum	2
44	Office (Arsenal Partnership)	1
108	Mail Room	1
110	Manufacturing	6
112	Laboratory/Office	1
114	Laboratory/Office	1
116	Unoccupied	1
120	Lab/DPW/Office	2
121	Laboratory	2
123	Paint Booths	1
124	National Guard	1
126	Storage	1
130	Storage	2
307 9th Street	Off-Site Residence	1
319 9th Street	Off-Site Residence	1
411 9th Street	Off-Site Residence	1

MMA	Property Boundary Soil Vapor	3
SA	Property Boundary Soil Vapor	3

Total Sub-Slab	70
Total Soil Vapor	6
Sub-slab/Soil Vapor QA/QC	4
Total	80

Note: Soil vapor sample duplicates collected at Building 15 (one), Building 20 (one), Building 25 (one), and 319 9th Street (one)

Table 4
Building 9 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B9-A1 2/11/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.044 U
	1,1-Dichloroethene	µg/m ³	0.068 U
	1,1-Dichloroethane	µg/m ³	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.19 U
	1,2-Dichloroethane	µg/m ³	0.14 U
	Trichloroethene	µg/m ³	0.18 U
	1,1,2-Trichloroethane	µg/m ³	0.19 U
	Tetrachloroethene	µg/m ³	0.23 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U
	Chloromethane	µg/m ³	1.10
	Chloroethane	µg/m ³	0.22 U
	Chlorobenzene	µg/m ³	0.16 U
	Carbon Tetrachloride	µg/m ³	0.57

SUB-SLAB	Sample ID Sample Date		B9-SS1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.040 U
	1,1-Dichloroethene	µg/m ³	0.063 U
	1,1-Dichloroethane	µg/m ³	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.30
	1,2-Dichloroethane	µg/m ³	0.13 U
	Trichloroethene	µg/m ³	0.64
	1,1,2-Trichloroethane	µg/m ³	0.17 U
	Tetrachloroethene	µg/m ³	4.90
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.63 U
	Chloromethane	µg/m ³	0.16 U
	Chloroethane	µg/m ³	0.21 U
	Chlorobenzene	µg/m ³	0.14 U
	Carbon Tetrachloride	µg/m ³	0.35

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 5
Building 15 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B15-A1 2/20/08	B15-A2b 2/19/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.040 U	0.045 U
	1,1-Dichloroethene	µg/m ³	0.063 U	0.069 U
	1,1-Dichloroethane	µg/m ³	0.13 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.12 U	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.17 U	0.19 U
	1,2-Dichloroethane	µg/m ³	0.13 U	0.14 U
	Trichloroethene	µg/m ³	2.10	0.53
	1,1,2-Trichloroethane	µg/m ³	0.17 U	0.19 U
	Tetrachloroethene	µg/m ³	6.30	3.50
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U	0.24 U
	trans-1,2-Dichloroethene	µg/m ³	0.63 U	0.69 U
	Chloromethane	µg/m ³	1.20	1.20
	Chloroethane	µg/m ³	0.21 U	0.23 U
	Chlorobenzene	µg/m ³	0.14 U	0.16 U
	Carbon Tetrachloride	µg/m ³	0.49	0.55

SUB-SLAB	Sample ID Sample Date		B15-SS2 2/20/08	SS-1 (B15-SS2 Dup.) 2/20/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.073 U	0.11 U
	1,1-Dichloroethene	µg/m ³	0.11 U	0.17 U
	1,1-Dichloroethane	µg/m ³	0.23 U	0.34 U
	cis-1,2-Dichloroethene	µg/m ³	0.22 U	0.33 U
	1,1,1-Trichloroethane	µg/m ³	5.00	5.10
	1,2-Dichloroethane	µg/m ³	0.23 U	0.34 U
	Trichloroethene	µg/m ³	26.0	26.0
	1,1,2-Trichloroethane	µg/m ³	0.31 U	0.46 U
	Tetrachloroethene	µg/m ³	300	300
	1,1,2,2-Tetrachloroethane	µg/m ³	0.39 U	0.58 U
	trans-1,2-Dichloroethene	µg/m ³	1.10 U	1.70 U
	Chloromethane	µg/m ³	0.29 U	0.43 U
	Chloroethane	µg/m ³	0.38 U	0.55 U
	Chlorobenzene	µg/m ³	0.26 U	0.39 U
	Carbon Tetrachloride	µg/m ³	1.60	1.70

Legend:

-  - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
-  - Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- U - Not detected at or greater than the Reporting Limit (RL)

Table 6
Building 18 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B18-A1 2/11/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.039 U
	1,1-Dichloroethene	µg/m ³	0.06 U
	1,1-Dichloroethane	µg/m ³	0.12 U
	cis-1,2-Dichloroethene	µg/m ³	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.16 U
	1,2-Dichloroethane	µg/m ³	0.12 U
	Trichloroethene	µg/m ³	0.16 U
	1,1,2-Trichloroethane	µg/m ³	0.16 U
	Tetrachloroethene	µg/m ³	0.21 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.21 U
	trans-1,2-Dichloroethene	µg/m ³	0.60 U
	Chloromethane	µg/m ³	1.30
	Chloroethane	µg/m ³	0.20 U
	Chlorobenzene	µg/m ³	0.14 U
	Carbon Tetrachloride	µg/m ³	0.54

SUB-SLAB	Sample ID Sample Date		B18-SS1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.037 U
	1,1-Dichloroethene	µg/m ³	0.058 U
	1,1-Dichloroethane	µg/m ³	0.12 U
	cis-1,2-Dichloroethene	µg/m ³	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.16 U
	1,2-Dichloroethane	µg/m ³	0.12 U
	Trichloroethene	µg/m ³	0.51
	1,1,2-Trichloroethane	µg/m ³	0.16 U
	Tetrachloroethene	µg/m ³	14.0
	1,1,2,2-Tetrachloroethane	µg/m ³	0.20 U
	trans-1,2-Dichloroethene	µg/m ³	0.58 U
	Chloromethane	µg/m ³	0.15 U
	Chloroethane	µg/m ³	0.19 UJ
	Chlorobenzene	µg/m ³	0.13 U
	Carbon Tetrachloride	µg/m ³	0.38

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 7
Building 19 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B19-A1 2/11/08	B19-A2 2/11/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.045 U	0.041 U
	1,1-Dichloroethene	µg/m ³	0.069 U	0.064 U
	1,1-Dichloroethane	µg/m ³	0.14 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.19 U	0.18 U
	1,2-Dichloroethane	µg/m ³	0.17	0.13 U
	Trichloroethene	µg/m ³	0.19 U	0.17 U
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.18 U
	Tetrachloroethene	µg/m ³	0.24 U	0.24
	1,1,2,2-Tetrachloroethane	µg/m ³	0.24 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.69 U	0.64 U
	Chloromethane	µg/m ³	1.30	1.20
	Chloroethane	µg/m ³	0.23 U	0.21 U
	Chlorobenzene	µg/m ³	0.16 U	0.15 U
	Carbon Tetrachloride	µg/m ³	0.60	0.54

SUB-SLAB	Sample ID Sample Date		B19-SS1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.042 U
	1,1-Dichloroethene	µg/m ³	0.065 U
	1,1-Dichloroethane	µg/m ³	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.25
	1,1,1-Trichloroethane	µg/m ³	0.18 U
	1,2-Dichloroethane	µg/m ³	0.13 U
	Trichloroethene	µg/m ³	15.0
	1,1,2-Trichloroethane	µg/m ³	0.18 U
	Tetrachloroethene	µg/m ³	38.0
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.65 U
	Chloromethane	µg/m ³	0.54
	Chloroethane	µg/m ³	0.22 UJ
	Chlorobenzene	µg/m ³	0.15 U
	Carbon Tetrachloride	µg/m ³	0.64

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 8
Building 20 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

SUB-SLAB	Sample ID Sample Date		B20-SS1 2/28/08	B20-SS2 2/28/08	SS-2 (B20-SS2 Dup.) 2/28/08	B20-SS3 2/28/08	B20-SS4 2/28/08	B20-SS5 2/28/08	B20-SS6 2/28/08	B20-SS7 2/28/08	B20-SS8 2/28/08	B20-SS9 2/28/08	B20-SS10 2/28/08	B20-SS11 2/28/08	B20-SS12 3/5/08
	COMPOUND	UNIT													
	Vinyl chloride	µg/m³	0.43 U	0.054 U	0.034 U	0.042 U	0.80	0.043 U	0.042 U	0.037 U	0.51 U	0.041 U	0.043 U	0.041 U	0.045 U
	1,1-Dichloroethene	µg/m³	0.67 U	0.13	0.053 U	0.20	0.83	0.068	0.065 U	0.058	87	0.064 U	0.067 U	0.064 U	1.0
	1,1-Dichloroethane	µg/m³	1.4 U	0.23	0.11 U	0.13 U	1.8	0.14 U	0.13 U	0.12 U	1.6 U	0.13 U	0.14 U	0.13 U	0.14 U
	cis-1,2-Dichloroethene	µg/m³	1.3 U	0.17 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	1.6 U	0.13 U	0.13 U	0.13 U	0.14 U
	1,1,1-Trichloroethane	µg/m³	36	7.9 J	0.79 J	14	34	3.4	2.4	1.5	930	2.3	2.1	3.7	16
	1,2-Dichloroethane	µg/m³	1.4 U	0.17 U	0.11 U	0.13 U	0.16	0.14 U	0.13 U	0.12 U	1.6 U	0.13 U	0.14 U	0.13 U	0.14 U
	Trichloroethene	µg/m³	1,100	40 J	5.3	82	1.4	0.18 U	0.70	2.0	200	3.7	1.5	0.17 U	0.19 U
	1,1,2-Trichloroethane	µg/m³	1.8 U	0.23 U	0.15 U	0.18 U	0.18 U	0.18 U	0.18 U	0.16 U	2.2 U	0.18 U	0.18 U	0.18 U	0.19 U
	Tetrachloroethene	µg/m³	150	8.0 J	0.69	26	1.1	2.3	0.58	1.1	50	0.80	2.2	3.1	4.0
	1,1,2,2-Tetrachloroethane	µg/m³	2.3 U	0.29 U	0.18 U	0.22 U	0.23 U	0.23 U	0.22 U	0.20 U	2.8 U	0.22 U	0.23 U	0.22 U	0.24 U
	trans-1,2-Dichloroethene	µg/m³	6.7 U	0.84 U	0.53 U	0.65 U	0.67 U	0.67 U	0.65 U	0.58 U	8.0 U	0.70	0.67 U	0.64 U	0.69 U
	Chloromethane	µg/m³	1.7 U	0.89 J	1.2 J	0.35	2.2	0.17 U	0.68	2.2	2.1 U	0.19	0.17 U	0.17 U	0.18 U
	Chloroethane	µg/m³	2.2 U	0.28 U	0.18 U	0.22 U	1.4	0.22 U	0.22 U	0.31	2.6 U	0.21 U	0.22 U	0.21 U	0.23 U
	Chlorobenzene	µg/m³	1.5 U	0.20 U	0.12 U	0.15 U	0.15 U	0.15 U	0.15 U	0.13 U	1.8 U	0.15 U	0.15 U	0.15 U	0.16 U
	Carbon Tetrachloride	µg/m³	2.1 U	0.31	0.50	0.51	0.21 U	0.39	0.23	0.36	2.5 U	0.45	0.48	0.34	0.22 U

Legend:

- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2

- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices

U - Not detected at or greater than the Reporting Limit (RL)
J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 9
Building 21 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B21-A1 2/11/08	B21-A2 2/12/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.036 U	0.044 U
	1,1-Dichloroethene	µg/m ³	0.055 U	0.068 U
	1,1-Dichloroethane	µg/m ³	0.11 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.11 U	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.15 U	0.19 U
	1,2-Dichloroethane	µg/m ³	0.19	0.14 U
	Trichloroethene	µg/m ³	0.15 U	0.18 U
	1,1,2-Trichloroethane	µg/m ³	0.15 U	0.19 U
	Tetrachloroethene	µg/m ³	0.19 U	0.23 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.19 U	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.55 U	0.68 U
	Chloromethane	µg/m ³	1.30	1.60
	Chloroethane	µg/m ³	0.18 U	0.22 U
	Chlorobenzene	µg/m ³	0.13 U	0.16 U
	Carbon Tetrachloride	µg/m ³	0.48	0.60

SUB-SLAB	Sample ID Sample Date		B21-SS1 2/19/08	B21-SS2 2/19/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	33 UJ	0.099 U
	1,1-Dichloroethene	µg/m ³	10 UJ	0.17
	1,1-Dichloroethane	µg/m ³	11 UJ	0.31 U
	cis-1,2-Dichloroethene	µg/m ³	16 UJ	0.30 J
	1,1,1-Trichloroethane	µg/m ³	16 UJ	0.93
	1,2-Dichloroethane	µg/m ³	16 UJ	0.31 U
	Trichloroethene	µg/m ³	2,500 J	300
	1,1,2-Trichloroethane	µg/m ³	22 UJ	0.42 U
	Tetrachloroethene	µg/m ³	25 UJ	35
	1,1,2,2-Tetrachloroethane	µg/m ³	16 UJ	0.53 U
	trans-1,2-Dichloroethene	µg/m ³	5,700 J	1.50 U
	Chloromethane	µg/m ³	22	0.40 U
	Chloroethane	µg/m ³	290 J	0.51 U
	Chlorobenzene	µg/m ³	18 UJ	0.36 U
	Carbon Tetrachloride	µg/m ³	28 UJ	0.70

Legend:

-  - Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- U - Not detected at or greater than the Reporting Limit (RL)
- J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 10
Building 23 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B23-A1 2/5/08	B23-A2 2/5/08	B23-A3 2/5/08
	COMPOUND	UNIT			
	Vinyl chloride	µg/m ³	0.044 U	0.042 U	0.044 U
	1,1-Dichloroethene	µg/m ³	0.068 U	0.065 U	0.068 U
	1,1-Dichloroethane	µg/m ³	0.14 U	0.13 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	0.13 U	0.14 U
	1,1,1-Trichloroethane	µg/m ³	1.40	1.70	3.60
	1,2-Dichloroethane	µg/m ³	0.14 U	0.13 U	0.14 U
	Trichloroethene	µg/m ³	0.75	1.60	1.00
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.18 U	0.19 U
	Tetrachloroethene	µg/m ³	0.42	0.39	0.40
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	0.22 U	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.87	0.65 U	1.70
	Chloromethane	µg/m ³	1.80	1.20	1.40
	Chloroethane	µg/m ³	0.22 U	0.22 U	0.22 U
	Chlorobenzene	µg/m ³	0.17	0.15 U	0.16 U
	Carbon Tetrachloride	µg/m ³	0.59	0.56	0.61

SUB-SLAB	Sample ID Sample Date		B23-SS1 2/8/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.066 U
	1,1-Dichloroethene	µg/m ³	0.10 U
	1,1-Dichloroethane	µg/m ³	0.21 U
	cis-1,2-Dichloroethene	µg/m ³	0.20 U
	1,1,1-Trichloroethane	µg/m ³	2.50
	1,2-Dichloroethane	µg/m ³	0.21 U
	Trichloroethene	µg/m ³	17.0
	1,1,2-Trichloroethane	µg/m ³	0.28 U
	Tetrachloroethene	µg/m ³	29.0
	1,1,2,2-Tetrachloroethane	µg/m ³	0.36 U
	trans-1,2-Dichloroethene	µg/m ³	3.40
	Chloromethane	µg/m ³	1.30
	Chloroethane	µg/m ³	0.34 U
	Chlorobenzene	µg/m ³	0.24 U
	Carbon Tetrachloride	µg/m ³	0.55

Legend:

 - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
 U - Not detected at or greater than the Reporting Limit (RL)

Table 11
Building 24 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B24-A1 2/6/08	B24-A2 2/6/08	B24-A3 2/6/08
	COMPOUND	UNIT			
	Vinyl chloride	µg/m ³	0.044 U	0.043 U	0.040 U
	1,1-Dichloroethene	µg/m ³	0.068 U	0.067 U	0.16
	1,1-Dichloroethane	µg/m ³	0.14 U	0.14 U	2.20
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	0.13 U	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.19 U	0.18 U	2.00
	1,2-Dichloroethane	µg/m ³	0.14 U	0.14 U	0.13 U
	Trichloroethene	µg/m ³	0.18 U	0.18 U	0.17 U
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.18 U	0.17 U
	Tetrachloroethene	µg/m ³	0.23 U	0.23 U	0.71
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	0.23 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U	0.67 U	0.63 U
	Chloromethane	µg/m ³	1.40	1.30	1.60
	Chloroethane	µg/m ³	0.22 U	0.22 U	0.21 U
	Chlorobenzene	µg/m ³	0.16 U	0.15 U	0.14 U
	Carbon Tetrachloride	µg/m ³	0.52	0.56	0.56

SUB-SLAB	Sample ID Sample Date		B24-SS1 2/11/08	B24-SS2 2/11/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.044 U	0.063
	1,1-Dichloroethene	µg/m ³	0.068 U	0.067 U
	1,1-Dichloroethane	µg/m ³	0.14 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.37	0.34
	1,2-Dichloroethane	µg/m ³	0.14 U	0.14 U
	Trichloroethene	µg/m ³	0.33	0.25
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.18 U
	Tetrachloroethene	µg/m ³	0.23 U	0.63
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U	0.67 U
	Chloromethane	µg/m ³	0.69	0.71
	Chloroethane	µg/m ³	0.22 U	0.22 U
	Chlorobenzene	µg/m ³	0.16 U	0.15 U
	Carbon Tetrachloride	µg/m ³	0.57	0.61

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 12
Building 25 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B25-A1 2/5/08	B25-A2 2/5/08	B25-A3 2/5/08	B25-A4 2/5/08	B25-A5 2/5/08	B25-A6 2/8/08	B25-A7 2/5/08	B25-A8 2/6/08	B25-A9 2/5/08	B25-A10 2/5/08	B25-A11 2/6/08	B25-A12 2/5/08
	COMPOUND	UNIT												
	Vinyl chloride	µg/m³	0.047	0.044 U	0.042 U	0.075	0.043 U	0.096	0.045 U	0.077	0.04 U	0.044 U	0.043 U	0.045 U
	1,1-Dichloroethene	µg/m³	0.068 U	0.068 U	0.065 U	0.065 U	0.067 U	0.065 U	0.069 U	0.067 U	0.07 U	0.068 U	0.067 U	0.069 U
	1,1-Dichloroethane	µg/m³	0.14 U	0.14 U	0.13 U	0.13 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
	cis-1,2-Dichloroethene	µg/m³	0.14 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.13 U	0.14 U	0.14 U	0.13 U	0.14 U
	1,1,1-Trichloroethane	µg/m³	0.19 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.19 U	0.19 U	0.18 U	0.19 U
	1,2-Dichloroethane	µg/m³	0.14 U	0.14 U	0.13 U	0.13 U	0.14 U	0.13 U	0.14 U	0.14	0.14 U	0.14 U	0.14 U	0.14 U
	Trichloroethene	µg/m³	0.19 U	0.39	0.18 U	0.85	0.31	3.60	0.2 U	8.40	0.61	0.18 U	4.40	0.19 U
	1,1,2-Trichloroethane	µg/m³	0.19 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.19 U	0.19 U	0.18 U	0.19 U
	Tetrachloroethene	µg/m³	0.44	0.42	0.41	0.41	0.48	0.22 U	0.41	0.23 U	0.53	0.47	0.23 U	0.42
	1,1,2,2-Tetrachloroethane	µg/m³	0.23 U	0.23 U	0.22 U	0.22 U	0.23 U	0.22 U	0.24 U	0.23 U	0.23 U	0.23 U	0.23 U	0.24 U
	trans-1,2-Dichloroethene	µg/m³	0.68 U	0.68 U	0.65 U	0.65 U	0.67 U	0.65 U	0.69 U	0.67 U	0.68 U	0.68 U	0.67 U	0.69 U
	Chloromethane	µg/m³	1.20	1.20	1.10	1.10	1.10	1.20	1.10	1.20	1.20	0.80	1.20	4.50

SUB-SLAB	Sample ID Sample Date		B25-SS1 2/28/08	B25-SS2 2/28/08	B25-SS3 2/28/08	B25-SS4 3/4/08	B25-SS5 3/4/08	B25-SS6 3/4/08	B25-SS7 3/4/08	B25-SS8 3/4/08	B25-SS9 3/4/08	B25-SS10 3/4/08	SS-3 (B25-SS10 Dup.) 3/4/08	B25-SS11 3/4/08	B25-SS12 3/4/08	B25-SS13 3/4/08	B25-SS14 3/4/08	B25-SS15 3/4/08	B25-SS16 3/4/08	B25-SS17 3/4/08	B25-SS18 3/4/08	B25-SS19 3/4/08	B25-SS20 3/4/08
	COMPOUND	UNIT																					
	Vinyl chloride	µg/m³	200 U	18 U	0.37 U	0.041 U	0.044 U	0.27 U	0.73 U	0.61	8.6 U	14 U	13 U	0.087 U	0.054 U	0.047 U	0.15 U	0.073 U	0.087 U	0.042 U	0.21 U	0.043 U	0.20 U
	1,1-Dichloroethene	µg/m³	340	45	58	1.4	0.71	8.7	1.1 U	0.44	13 U	23 U	20 U	3.2	1.0	2.8	3.7	22	22	11	6.2	1.9	1.1
	1,1-Dichloroethane	µg/m³	320 U	45	2.0	0.13 U	0.14 U	0.87 U	2.30 U	0.18	14 U	23 U	20 U	0.28 U	0.17 U	0.15 U	0.48 U	0.23 U	0.28 U	0.13 U	0.68	0.26	0.63 U
	cis-1,2-Dichloroethene	µg/m³	310 U	27 U	1.1 U	0.13 U	0.14 U	0.85 U	16	7.0	13 U	22 U	20 U	0.27 U	0.17 U	0.14 U	1.2	0.23 U	0.27 U	2.6	0.65 U	0.22	0.61 U
	1,1,1-Trichloroethane	µg/m³	12,000	2,600	580	8.1	3.0	98	3.2	2.0	21	31	28 U	35	9.7	18	29	240	200	110	77	11	18
	1,2-Dichloroethane	µg/m³	320 U	28 U	1.2 U	0.13 U	0.14 U	0.87 U	2.30 U	0.12 U	14 U	23 U	20 U	0.28 U	0.17 U	0.15 U	0.48 U	0.23 U	0.28 U	0.13 U	0.66 U	0.14 U	0.63 U
	Trichloroethene	µg/m³	94,000	7,900	250	2.3	0.84	780	1,300	30	5,400	9,700 J	7,000 J	220	97	0.20 U	260	22	67	12	670	99	11
	1,1,2-Trichloroethane	µg/m³	430 U	37 U	1.6 U	0.18 U	0.19 U	1.2 U	3.1 U	0.16 U	18 U	31 U	28 U	0.37 U	0.23 U	0.20 U	0.65 U	0.31 U	0.37 U	0.18 U	0.89 U	0.18 U	0.84 U
	Tetrachloroethene	µg/m³	540 U	46 U	21	3.4	4.4	10	170	19	120	270 J	190 J	3.0	0.58	1.1	22	1.8	2.8	3.0	34	7.0	900
	1,1,2,2-Tetrachloroethane	µg/m³	540 U	47 U	2.0 U	0.22 U	0.23 U	1.5 U	3.9 U	0.21 U	23 U	39 U	35 U	0.47 U	0.29 U	0.25 U	0.82 U	0.39 U	0.47 U	0.22 U	1.1 U	0.23 U	1.10 U
	trans-1,2-Dichloroethene	µg/m³	310 U	27 U	5.7 U	0.64 U	0.68 U	4.2 U	11 U	0.60 U	13 U	22 U	20 U	1.40 U	0.83 U	0.72 U	2.4 U	1.1 U	1.4 U	0.65 U	3.2 U	0.67 U	3.1 U
	Chloromethane	µg/m³	650 U	56 U	1.5 U	0.59	0.56	1.1 U	2.9 U	0.48	28 U	47 U	42 U	0.35 U	11	0.19 U	1.0	0.30 U	0.35 U	0.17 U	0.85 U	0.17 U	0.80 U
	Chloroethane	µg/m³	210 U	18 U	1.9 U	0.21 U	0.22 U	1.4 U	3.8 U	0.20 U	8.9 U	15.0 U	13 U	0.45 U	0.28 U	0.24 U	0.79 U	0.38 U	0.45 U	0.22 U	1.1 U	0.22 U	1.0 U
	Chlorobenzene	µg/m³	360 U	32 U	1.3 U	0.15 U	0.16 U	0.98 U	3 U	0.14 U	15 U	26 U	23 U	0.31 U	0.19 U	0.17 U	0.55 U	0.26 U	0.31 U	0.15 U	0.76 U	0.15 U	0.71 U
	Carbon Tetrachloride	µg/m³	500 U	43 U	1.8 U	1.1	0.48	1.3 U	3.6 U	0.32	21 U	36 U	32 U	1.7	6.3	0.23 U	1.6	3.8	1.3	1.6	1.5	0.49	0.98 U

Legend:
- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
Red Bold Highlighted Text - Concentration exceeds Air Guidance Value
U - Not detected at or greater than the Reporting Limit (RL)
J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 13
Building 35 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

SUB-SLAB	Sample ID Sample Date		B35-SS1 2/25/08	B35-SS2 2/25/08	B35-SS3 2/25/08	B35-SS4 2/25/08	B35-SS5 2/25/08
	COMPOUND	UNIT					
	Vinyl chloride	µg/m ³	0.044 U	0.20 U	0.036 U	0.060 U	0.041 U
	1,1-Dichloroethene	µg/m ³	0.068 U	0.32 U	0.21	0.093 U	0.064 U
	1,1-Dichloroethane	µg/m ³	0.14 U	0.65 U	0.11 U	0.19 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	23.00	0.11 U	0.18 U	0.13 U
	1,1,1-Trichloroethane	µg/m ³	5.20	0.88 U	18.0	6.20	2.10
	1,2-Dichloroethane	µg/m ³	0.14 U	0.65 U	0.11 U	0.19 U	0.13 U
	Trichloroethene	µg/m ³	4.40	50.0	1.60	110	8.80
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.88 U	0.15 U	0.29 U	0.18 U
	Tetrachloroethene	µg/m ³	30.0	900	4.90	200	17.00
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	1.10 U	0.19 U	0.32 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U	3.20 U	0.55 U	0.93 U	0.64 U
	Chloromethane	µg/m ³	0.18 U	0.83 U	0.79	0.39	0.25
	Chloroethane	µg/m ³	0.22 UJ	1.10 U	0.18 U	0.31 U	0.21 U
	Chlorobenzene	µg/m ³	0.16 U	0.74 U	0.13 U	0.22 U	0.15 U
	Carbon Tetrachloride	µg/m ³	0.41	3.30	0.71	1.20	1.00

Legend:

- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 14
Building 38 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B38-A1 2/6/08	B38-A2 2/6/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.041 U	0.044 U
	1,1-Dichloroethene	µg/m ³	0.064 U	0.068 U
	1,1-Dichloroethane	µg/m ³	0.13 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.91	0.86
	1,2-Dichloroethane	µg/m ³	0.13 U	0.14 U
	Trichloroethene	µg/m ³	0.17 U	0.18 U
	1,1,2-Trichloroethane	µg/m ³	0.18 U	0.19 U
	Tetrachloroethene	µg/m ³	0.22 U	0.23 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U	0.68 U
	Chloromethane	µg/m ³	1.30	1.30
	Chloroethane	µg/m ³	0.21 U	0.22 U
	Chlorobenzene	µg/m ³	0.15 U	0.16 U
	Carbon Tetrachloride	µg/m ³	0.48	0.58

SUB-SLAB	Sample ID Sample Date		B38-SS1 2/12/08	B38-SS2 2/12/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.036 U	0.040 U
	1,1-Dichloroethene	µg/m ³	0.055 U	0.061 U
	1,1-Dichloroethane	µg/m ³	0.11 U	0.12 U
	cis-1,2-Dichloroethene	µg/m ³	0.11 U	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.16	0.25
	1,2-Dichloroethane	µg/m ³	0.11 U	0.12 U
	Trichloroethene	µg/m ³	0.15 U	0.17 U
	1,1,2-Trichloroethane	µg/m ³	0.15 U	0.17 U
	Tetrachloroethene	µg/m ³	0.19 U	0.21 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.19 U	0.21 U
	trans-1,2-Dichloroethene	µg/m ³	0.55 U	0.31 U
	Chloromethane	µg/m ³	0.56	0.16 U
	Chloroethane	µg/m ³	0.18 U	0.20 U
	Chlorobenzene	µg/m ³	0.13 U	0.14 U
	Carbon Tetrachloride	µg/m ³	0.28	0.20 U

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 15
Building 44 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B44-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.047 U
	1,1-Dichloroethene	µg/m ³	0.072 U
	1,1-Dichloroethane	µg/m ³	0.15 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.20 U
	1,2-Dichloroethane	µg/m ³	0.15 U
	Trichloroethene	µg/m ³	0.33
	1,1,2-Trichloroethane	µg/m ³	0.20 U
	Tetrachloroethene	µg/m ³	0.46
	1,1,2,2-Tetrachloroethane	µg/m ³	0.25 U
	trans-1,2-Dichloroethene	µg/m ³	0.72 U
	Chloromethane	µg/m ³	1.20
	Chloroethane	µg/m ³	0.24 U
	Chlorobenzene	µg/m ³	0.17 U
	Carbon Tetrachloride	µg/m ³	0.57

SUB-SLAB	Sample ID Sample Date		B44-SS1 2/15/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.039 U
	1,1-Dichloroethene	µg/m ³	0.060 U
	1,1-Dichloroethane	µg/m ³	0.12 U
	cis-1,2-Dichloroethene	µg/m ³	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.16 U
	1,2-Dichloroethane	µg/m ³	0.12 U
	Trichloroethene	µg/m ³	0.42
	1,1,2-Trichloroethane	µg/m ³	0.16 U
	Tetrachloroethene	µg/m ³	0.24
	1,1,2,2-Tetrachloroethane	µg/m ³	0.21 U
	trans-1,2-Dichloroethene	µg/m ³	0.60 U
	Chloromethane	µg/m ³	0.64
	Chloroethane	µg/m ³	0.20 U
	Chlorobenzene	µg/m ³	0.14 U
	Carbon Tetrachloride	µg/m ³	0.54

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 16
Building 108 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B108-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.043 U
	1,1-Dichloroethene	µg/m ³	0.067 U
	1,1-Dichloroethane	µg/m ³	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.18 U
	1,2-Dichloroethane	µg/m ³	0.14 U
	Trichloroethene	µg/m ³	0.34
	1,1,2-Trichloroethane	µg/m ³	0.18 U
	Tetrachloroethene	µg/m ³	0.42
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.67 U
	Chloromethane	µg/m ³	1.1
	Chloroethane	µg/m ³	0.22 U
	Chlorobenzene	µg/m ³	0.15 U
	Carbon Tetrachloride	µg/m ³	0.61

SUB-SLAB	Sample ID Sample Date		B108-SS1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.041 U
	1,1-Dichloroethene	µg/m ³	0.064 U
	1,1-Dichloroethane	µg/m ³	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.23
	1,2-Dichloroethane	µg/m ³	0.13 U
	Trichloroethene	µg/m ³	1.10
	1,1,2-Trichloroethane	µg/m ³	0.18 U
	Tetrachloroethene	µg/m ³	6.40
	1,1,2,2-Tetrachloroethane	µg/m ³	0.25
	trans-1,2-Dichloroethene	µg/m ³	0.64 U
	Chloromethane	µg/m ³	0.24
	Chloroethane	µg/m ³	0.21 U
	Chlorobenzene	µg/m ³	0.15 U
	Carbon Tetrachloride	µg/m ³	0.55

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 17
Building 110 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

SUB-SLAB	Sample ID Sample Date		B110-SS1 2/14/08	B110-SS2 2/14/08	B110-SS3 2/14/08	B110-SS4 2/14/08	B110-SS5 2/14/08	B110-SS6 2/14/08
	COMPOUND	UNIT						
	Vinyl chloride	µg/m ³	0.070	0.041 U	0.058	0.049	640	0.05 U
	1,1-Dichloroethene	µg/m ³	0.064 U	0.064 U	0.061 U	0.069 U	13.00	0.07 U
	1,1-Dichloroethane	µg/m ³	0.13 U	0.13 U	0.12 U	0.14 U	1.30 U	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.18	0.13 U	0.12 U	0.14 U	110	0.94
	1,1,1-Trichloroethane	µg/m ³	0.47	0.52	0.78	3.60	1.80 U	0.39
	1,2-Dichloroethane	µg/m ³	0.13 U	0.13 U	0.12 U	0.14 U	1.30 U	0.14 U
	Trichloroethene	µg/m ³	32.0	0.30	19.0	17.0	110	12.00
	1,1,2-Trichloroethane	µg/m ³	0.18 U	0.18 U	0.17 U	0.19 U	1.80 U	0.20 U
	Tetrachloroethene	µg/m ³	83.0	5.60	98.0	13.0	120	40.0
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U	0.22 U	0.33	0.29	750	0.24 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U	0.64 U	0.61 U	0.69 U	28.0	0.71 U
	Chloromethane	µg/m ³	2.40	0.75	0.61	0.29	1.70 U	0.18 U
	Chloroethane	µg/m ³	0.52 J	0.21 U	0.20 U	0.23 U	2.90	0.24 U
	Chlorobenzene	µg/m ³	0.15 U	0.15 U	0.14 U	0.16 U	30.0	0.16 U
	Carbon Tetrachloride	µg/m ³	1.10	0.21	0.58	0.22 U	2.10 U	0.43

Legend:

- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices
- Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 18
Building 112 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B112-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.048 U
	1,1-Dichloroethene	µg/m ³	0.074 U
	1,1-Dichloroethane	µg/m ³	0.15 U
	cis-1,2-Dichloroethene	µg/m ³	0.15 U
	1,1,1-Trichloroethane	µg/m ³	0.31
	1,2-Dichloroethane	µg/m ³	0.15 U
	Trichloroethene	µg/m ³	0.20 U
	1,1,2-Trichloroethane	µg/m ³	0.20 U
	Tetrachloroethene	µg/m ³	0.25 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.26 U
	trans-1,2-Dichloroethene	µg/m ³	0.74 U
	Chloromethane	µg/m ³	1.30
	Chloroethane	µg/m ³	0.25 U
	Chlorobenzene	µg/m ³	0.17 U
	Carbon Tetrachloride	µg/m ³	0.58

SUB-SLAB	Sample ID Sample Date		B112-SS1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.046 U
	1,1-Dichloroethene	µg/m ³	0.071 U
	1,1-Dichloroethane	µg/m ³	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.23
	1,2-Dichloroethane	µg/m ³	0.14 U
	Trichloroethene	µg/m ³	1.50
	1,1,2-Trichloroethane	µg/m ³	0.20 U
	Tetrachloroethene	µg/m ³	3.00
	1,1,2,2-Tetrachloroethane	µg/m ³	0.32
	trans-1,2-Dichloroethene	µg/m ³	0.71 U
	Chloromethane	µg/m ³	0.33
	Chloroethane	µg/m ³	0.24 UJ
	Chlorobenzene	µg/m ³	0.16 U
	Carbon Tetrachloride	µg/m ³	0.51

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 19
Building 114 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B114-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m³	0.044 U
	1,1-Dichloroethene	µg/m³	0.068 U
	1,1-Dichloroethane	µg/m³	0.14 U
	cis-1,2-Dichloroethene	µg/m³	0.89
	1,1,1-Trichloroethane	µg/m³	0.19 U
	1,2-Dichloroethane	µg/m³	0.14 U
	Trichloroethene	µg/m³	6.80
	1,1,2-Trichloroethane	µg/m³	0.19 U
	Tetrachloroethene	µg/m³	27.00
	1,1,2,2-Tetrachloroethane	µg/m³	0.23 U
	trans-1,2-Dichloroethene	µg/m³	0.68 U
	Chloromethane	µg/m³	1.20
	Chloroethane	µg/m³	0.22 U
	Chlorobenzene	µg/m³	0.16 U
	Carbon Tetrachloride	µg/m³	0.61

SUB-SLAB	Sample ID Sample Date		B114-SS1 2/22/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m³	2.10 U
	1,1-Dichloroethene	µg/m³	3.30 U
	1,1-Dichloroethane	µg/m³	6.80 U
	cis-1,2-Dichloroethene	µg/m³	6.70 U
	1,1,1-Trichloroethane	µg/m³	9.20 U
	1,2-Dichloroethane	µg/m³	6.80 U
	Trichloroethene	µg/m³	1,400
	1,1,2-Trichloroethane	µg/m³	9.20 U
	Tetrachloroethene	µg/m³	8,300
	1,1,2,2-Tetrachloroethane	µg/m³	12.0 U
	trans-1,2-Dichloroethene	µg/m³	33.0 U
	Chloromethane	µg/m³	8.70 U
	Chloroethane	µg/m³	11.0 U
	Chlorobenzene	µg/m³	7.70 U
	Carbon Tetrachloride	µg/m³	10.0 U

Legend:

-  - Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2
- Red Bold Highlighted Text** - Concentration exceeds Air Guidance Value
- U - Not detected at or greater than the Reporting Limit (RL)

Table 20
Building 116 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B116-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.045 U
	1,1-Dichloroethene	µg/m ³	0.069 U
	1,1-Dichloroethane	µg/m ³	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.39
	1,1,1-Trichloroethane	µg/m ³	0.19 U
	1,2-Dichloroethane	µg/m ³	0.14 U
	Trichloroethene	µg/m ³	1.60
	1,1,2-Trichloroethane	µg/m ³	0.19 U
	Tetrachloroethene	µg/m ³	2.10
	1,1,2,2-Tetrachloroethane	µg/m ³	0.24 U
	trans-1,2-Dichloroethene	µg/m ³	0.69 U
	Chloromethane	µg/m ³	1.20
	Chloroethane	µg/m ³	0.23 U
	Chlorobenzene	µg/m ³	0.16 U
	Carbon Tetrachloride	µg/m ³	0.58

SUB-SLAB	Sample ID Sample Date		B116-SS1 2/22/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.14 U
	1,1-Dichloroethene	µg/m ³	0.21 U
	1,1-Dichloroethane	µg/m ³	0.43 U
	cis-1,2-Dichloroethene	µg/m ³	3.80
	1,1,1-Trichloroethane	µg/m ³	0.65
	1,2-Dichloroethane	µg/m ³	0.43 U
	Trichloroethene	µg/m ³	180
	1,1,2-Trichloroethane	µg/m ³	0.59 U
	Tetrachloroethene	µg/m ³	530
	1,1,2,2-Tetrachloroethane	µg/m ³	0.74 U
	trans-1,2-Dichloroethene	µg/m ³	2.10 U
	Chloromethane	µg/m ³	0.81
	Chloroethane	µg/m ³	0.71 U
	Chlorobenzene	µg/m ³	0.49 U
	Carbon Tetrachloride	µg/m ³	0.68 U

Legend:

 - Mitigate according to Soil Vapor/Indoor Air Matrices 1 or 2

 - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

U - Not detected at or greater than the Reporting Limit (RL)

Table 21
Building 120 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B120-A1 2/21/08	B120-A2 2/21/08	A-2 (B120-A2 Dup.) 2/21/08	B120-A3 2/21/08	B120-A4 2/21/08	B120-A5 2/21/08	B120-A6 2/21/08	B120-A7 2/22/08
	COMPOUND	UNIT								
	Vinyl chloride	µg/m ³	0.041 U	0.043 U	0.035 U	0.044 U	0.042 U	0.037 U	0.043 U	0.04 U
	1,1-Dichloroethene	µg/m ³	0.069	0.19	0.18	0.068 U	0.065 U	0.058 U	0.180	0.40
	1,1-Dichloroethane	µg/m ³	0.13 U	0.14 U	0.11 U	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U	0.13 U	0.11 U	0.14 U	0.13 U	0.12 U	0.13 U	0.12 U
	1,1,1-Trichloroethane	µg/m ³	0.22	0.93	0.88	0.55	0.44	0.37	1.10	1.30
	1,2-Dichloroethane	µg/m ³	0.13 U	0.14 U	0.11 U	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U
	Trichloroethene	µg/m ³	0.18	0.18 U	0.15	0.18 U	0.18	0.18	0.18 U	0.34
	1,1,2-Trichloroethane	µg/m ³	0.18 U	0.18 U	0.15 U	0.19 U	0.18 U	0.16 U	0.18 U	0.17 U
	Tetrachloroethene	µg/m ³	0.57	4.40	4.70	1.10	0.73	0.95	1.60	2.60
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U	0.23 U	0.19 U	0.23 U	0.22 U	0.20 U	0.23 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U	0.67 U	0.54 U	0.68 U	0.65 U	0.58 U	0.67 U	0.63 U
	Chloromethane	µg/m ³	1.20	1.20	1.10	1.10	1.20	1.00	1.10	1.20
	Chloroethane	µg/m ³	0.21 U	0.22 U	0.18 U	0.22 U	0.22 U	0.19 U	0.22 U	0.21 U
	Chlorobenzene	µg/m ³	0.15 U	0.15 U	0.12 U	0.16 U	0.15 U	0.13 U	0.15 U	0.14 U
	Carbon Tetrachloride	µg/m ³	0.43	0.61 J	0.37 J	0.42	0.21 U	0.44	0.37	0.34

SUB-SLAB	Sample ID Sample Date		B120-SS1 2/28/08	B120-SS2 2/28/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.041 U	0.042 U
	1,1-Dichloroethene	µg/m ³	0.064 U	0.10
	1,1-Dichloroethane	µg/m ³	0.13 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U	0.13 U
	1,1,1-Trichloroethane	µg/m ³	4.10	9.9
	1,2-Dichloroethane	µg/m ³	0.13 U	0.13 U
	Trichloroethene	µg/m ³	5.80	5.5
	1,1,2-Trichloroethane	µg/m ³	0.18 U	0.18 U
	Tetrachloroethene	µg/m ³	8.80	16
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U	0.65 U
	Chloromethane	µg/m ³	0.17 U	0.17 U
	Chloroethane	µg/m ³	0.21 U	0.22 U
	Chlorobenzene	µg/m ³	0.15 U	0.15 U
	Carbon Tetrachloride	µg/m ³	4.40	12

Legend:

 - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

Table 22
Building 121 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B121-A1 2/20/08	A-1 (B121-A1 Dup.) 2/20/08	B121-A2 2/20/08
	COMPOUND	UNIT			
	Vinyl chloride	µg/m ³	0.044 U	0.038 U	0.04 U
	1,1-Dichloroethene	µg/m ³	0.068 UJ	0.14 J	0.11
	1,1-Dichloroethane	µg/m ³	0.14 U	0.12 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	0.12 U	0.15
	1,1,1-Trichloroethane	µg/m ³	0.70	0.69	0.70
	1,2-Dichloroethane	µg/m ³	0.14 U	0.12 U	0.13 U
	Trichloroethene	µg/m ³	0.18 U	0.16 U	0.17 U
	1,1,2-Trichloroethane	µg/m ³	0.19 U	0.16 U	0.18 U
	Tetrachloroethene	µg/m ³	0.23 U	0.44	0.88
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	0.20 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U	0.59 U	0.64 U
	Chloromethane	µg/m ³	1.20	1.40	1.20
	Chloroethane	µg/m ³	0.22 UJ	0.20 U	0.21 U
	Chlorobenzene	µg/m ³	0.16 U	0.14 U	0.15 U
	Carbon Tetrachloride	µg/m ³	0.57	0.41	0.20 U

SUB-SLAB	Sample ID Sample Date		B121-SS1 2/25/08	B121-SS2 2/25/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.039 U	0.042 U
	1,1-Dichloroethene	µg/m ³	0.060 U	0.065 U
	1,1-Dichloroethane	µg/m ³	0.12 U	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.92	0.27
	1,1,1-Trichloroethane	µg/m ³	0.40	0.18 U
	1,2-Dichloroethane	µg/m ³	0.12 U	0.13 U
	Trichloroethene	µg/m ³	65.0	1.90
	1,1,2-Trichloroethane	µg/m ³	0.16 U	0.18 U
	Tetrachloroethene	µg/m ³	17.0	1.30
	1,1,2,2-Tetrachloroethane	µg/m ³	0.21 U	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.60 U	0.65 U
	Chloromethane	µg/m ³	0.22	0.22
	Chloroethane	µg/m ³	0.20 U	0.22 U
	Chlorobenzene	µg/m ³	0.14 U	0.15 U
	Carbon Tetrachloride	µg/m ³	0.32	0.45

Legend:

 - Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

Table 23
Building 123 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

SUB-SLAB	Sample ID Sample Date		B123-SS1 2/25/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.27 U
	1,1-Dichloroethene	µg/m ³	0.42 U
	1,1-Dichloroethane	µg/m ³	0.85 U
	cis-1,2-Dichloroethene	µg/m ³	0.83 U
	1,1,1-Trichloroethane	µg/m ³	4.70
	1,2-Dichloroethane	µg/m ³	0.85 U
	Trichloroethene	µg/m ³	43.0
	1,1,2-Trichloroethane	µg/m ³	1.10 U
	Tetrachloroethene	µg/m ³	840.0
	1,1,2,2-Tetrachloroethane	µg/m ³	1.40 U
	trans-1,2-Dichloroethene	µg/m ³	4.20 U
	Chloromethane	µg/m ³	1.40
	Chloroethane	µg/m ³	1.40 U
	Chlorobenzene	µg/m ³	0.97 U
	Carbon Tetrachloride	µg/m ³	2.20

Legend:

- Mitigate and/or Monitor according to Soil Vapor/Indoor Air Matrices 1 or 2
- No further action, Mitigate, and/or Monitor according to Soil Vapor/Indoor Air Matrices
- U - Not detected at or greater than the Reporting Limit (RL)

Table 24
Building 124 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B124-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.044 U
	1,1-Dichloroethene	µg/m ³	0.068 U
	1,1-Dichloroethane	µg/m ³	0.14 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U
	1,1,1-Trichloroethane	µg/m ³	0.19 U
	1,2-Dichloroethane	µg/m ³	0.14 U
	Trichloroethene	µg/m ³	0.18 U
	1,1,2-Trichloroethane	µg/m ³	0.19 U
	Tetrachloroethene	µg/m ³	0.23 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U
	Chloromethane	µg/m ³	1.10
	Chloroethane	µg/m ³	0.41
	Chlorobenzene	µg/m ³	0.16 U
	Carbon Tetrachloride	µg/m ³	0.61

SUB-SLAB	Sample ID Sample Date		B124-SS1 2/21/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.041 U
	1,1-Dichloroethene	µg/m ³	0.091
	1,1-Dichloroethane	µg/m ³	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.32
	1,2-Dichloroethane	µg/m ³	0.13 U
	Trichloroethene	µg/m ³	1.80
	1,1,2-Trichloroethane	µg/m ³	0.18 U
	Tetrachloroethene	µg/m ³	6.30
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U
	Chloromethane	µg/m ³	1.30
	Chloroethane	µg/m ³	0.21 U
	Chlorobenzene	µg/m ³	0.15 U
	Carbon Tetrachloride	µg/m ³	1.00

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 25
Building 126 Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B126-A1 2/12/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m³	0.044 U
	1,1-Dichloroethene	µg/m³	0.068 U
	1,1-Dichloroethane	µg/m³	0.14 U
	cis-1,2-Dichloroethene	µg/m³	0.14 U
	1,1,1-Trichloroethane	µg/m³	0.19 U
	1,2-Dichloroethane	µg/m³	0.14 U
	Trichloroethene	µg/m³	0.18 U
	1,1,2-Trichloroethane	µg/m³	0.19 U
	Tetrachloroethene	µg/m³	0.23 U
	1,1,2,2-Tetrachloroethane	µg/m³	0.23 U
	trans-1,2-Dichloroethene	µg/m³	0.68 U
	Chloromethane	µg/m³	1.30
	Chloroethane	µg/m³	0.22 U
	Chlorobenzene	µg/m³	0.16 U
	Carbon Tetrachloride	µg/m³	0.49

SUB-SLAB	Sample ID Sample Date		B126-SS1 2/22/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m³	0.041 U
	1,1-Dichloroethene	µg/m³	0.064 U
	1,1-Dichloroethane	µg/m³	0.13 U
	cis-1,2-Dichloroethene	µg/m³	2.30
	1,1,1-Trichloroethane	µg/m³	0.44
	1,2-Dichloroethane	µg/m³	0.13 U
	Trichloroethene	µg/m³	1.00
	1,1,2-Trichloroethane	µg/m³	0.18 U
	Tetrachloroethene	µg/m³	21.00
	1,1,2,2-Tetrachloroethane	µg/m³	0.22 U
	trans-1,2-Dichloroethene	µg/m³	0.64 U
	Chloromethane	µg/m³	4.50
	Chloroethane	µg/m³	2.10
	Chlorobenzene	µg/m³	0.15 U
	Carbon Tetrachloride	µg/m³	0.20 U

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 26
 Building 130 Sampling Results
 Supplemental Vapor Intrusion Evaluation - 2008
 Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		B130-A1 2/20/08
	COMPOUND	UNIT	
	Vinyl chloride	µg/m ³	0.041 U
	1,1-Dichloroethene	µg/m ³	0.064 U
	1,1-Dichloroethane	µg/m ³	0.13 U
	cis-1,2-Dichloroethene	µg/m ³	0.13 U
	1,1,1-Trichloroethane	µg/m ³	0.18 U
	1,2-Dichloroethane	µg/m ³	0.13 U
	Trichloroethene	µg/m ³	1.30
	1,1,2-Trichloroethane	µg/m ³	0.18 U
	Tetrachloroethene	µg/m ³	0.46
	1,1,2,2-Tetrachloroethane	µg/m ³	0.22 U
	trans-1,2-Dichloroethene	µg/m ³	0.64 U
	Chloromethane	µg/m ³	0.87
	Chloroethane	µg/m ³	0.21 U
	Chlorobenzene	µg/m ³	0.15 U
	Carbon Tetrachloride	µg/m ³	0.47

SUB-SLAB	Sample ID Sample Date		B130-SS1 2/26/08	B130-SS2 2/26/08
	COMPOUND	UNIT		
	Vinyl chloride	µg/m ³	0.044 U	0.43 U
	1,1-Dichloroethene	µg/m ³	0.21	0.67 U
	1,1-Dichloroethane	µg/m ³	0.14 U	1.40 U
	cis-1,2-Dichloroethene	µg/m ³	0.14 U	1.30 U
	1,1,1-Trichloroethane	µg/m ³	15.00	7.40
	1,2-Dichloroethane	µg/m ³	0.14 U	1.40 U
	Trichloroethene	µg/m ³	0.27	960
	1,1,2-Trichloroethane	µg/m ³	0.19 U	1.80 U
	Tetrachloroethene	µg/m ³	19.00	120
	1,1,2,2-Tetrachloroethane	µg/m ³	0.23 U	2.30 U
	trans-1,2-Dichloroethene	µg/m ³	0.68 U	6.70 U
	Chloromethane	µg/m ³	0.20	1.70 U
	Chloroethane	µg/m ³	0.22 U	2.20 U
	Chlorobenzene	µg/m ³	0.16 U	1.50 U
	Carbon Tetrachloride	µg/m ³	0.27	2.10 U

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

Table 27
Off-Site Residences Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

INDOOR AIR	Sample ID Sample Date		307-IA-01 4/7/08	319-IA-01 4/7/08	411-IA-01* 4/7/08
	COMPOUND	UNIT			
	Vinyl chloride	µg/m³	0.041 U	0.044 U	0.040 U
	1,1-Dichloroethene	µg/m³	0.064 U	0.068 U	0.061 U
	1,1-Dichloroethane	µg/m³	0.13 U	0.14 U	0.12 U
	cis-1,2-Dichloroethene	µg/m³	0.13 U	0.14 U	0.12 U
	1,1,1-Trichloroethane	µg/m³	0.18 U	0.19 U	0.17 U
	1,2-Dichloroethane	µg/m³	0.13 U	2.50	0.12 U
	Trichloroethene	µg/m³	0.17 U	0.18 U	0.17 U
	1,1,2-Trichloroethane	µg/m³	0.18 U	0.19 U	0.17 U
	Tetrachloroethene	µg/m³	0.38	0.23 U	0.21 U
	1,1,2,2-Tetrachloroethane	µg/m³	0.22 U	0.23 U	0.61 U
	trans-1,2-Dichloroethene	µg/m³	0.64 U	0.68 U	0.63 U
	Chloromethane	µg/m³	1.30	1.10	1.00
	Chloroethane	µg/m³	0.21 U	0.22 U	0.20 U
	Chlorobenzene	µg/m³	0.15 U	0.16 U	0.14 U
	Carbon Tetrachloride	µg/m³	0.55	0.52	0.51

SUB-SLAB	Sample ID Sample Date		307-SS-01 4/8/08	319-SS-01 4/8/08	999-SS-01 (319-SS-01 Dup.) 4/8/08	411-SS-01* 4/8/08
	COMPOUND	UNIT				
	Vinyl chloride	µg/m³	0.033 UJ	0.041 U	0.037 U	0.032 UJ
	1,1-Dichloroethene	µg/m³	0.051 UJ	0.064 U	0.058 U	0.050 UJ
	1,1-Dichloroethane	µg/m³	0.10 UJ	0.13 U	0.12 U	0.10 UJ
	cis-1,2-Dichloroethene	µg/m³	0.10 UJ	0.13 U	0.12 U	0.10 UJ
	1,1,1-Trichloroethane	µg/m³	0.35 J	0.74	0.66	0.14 UJ
	1,2-Dichloroethane	µg/m³	0.10 UJ	0.13 U	0.12 U	0.10 UJ
	Trichloroethene	µg/m³	0.14 UJ	0.17 U	0.22	0.14 UJ
	1,1,2-Trichloroethane	µg/m³	0.14 UJ	0.18 U	0.16 U	0.14 UJ
	Tetrachloroethene	µg/m³	1.20 J	0.22 J	2.3 J	0.17 UJ
	1,1,2,2-Tetrachloroethane	µg/m³	0.18 UJ	0.22 U	0.20 U	0.17 UJ
	trans-1,2-Dichloroethene	µg/m³	0.51 UJ	0.64 U	0.58 U	0.50 UJ
	Chloromethane	µg/m³	1.20 J	0.22	0.22	0.98 J
	Chloroethane	µg/m³	0.17 UJ	0.21 U	0.19 U	0.17 UJ
	Chlorobenzene	µg/m³	0.12 UJ	0.15 U	0.13 U	0.12 UJ
	Carbon Tetrachloride	µg/m³	0.83 J	0.20 U	0.18 U	0.53 J

Legend:

U - Not detected at or greater than the Reporting Limit (RL)

J - Concentration or RL estimated due to Quality Control criteria exceedance

* - Sample name changed from "401" to "411" to correspond with the address of the residence in which the samples were collected from.

Table 28
Property Boundary Sampling Results
Supplemental Vapor Intrusion Evaluation - 2008
Watervliet Arsenal, Watervliet, New York

SOIL VAPOR	Sample ID Sample Date		SG-1 2/28/08	SG-2 2/28/08	SG-3 2/28/08	SG-4 2/28/08	SG-5 2/28/08	SG-6 2/28/08
	COMPOUND	UNIT						
	Vinyl chloride	µg/m ³	0.090 U	0.033 U	0.040 U	0.036 U	0.120	120 U
	1,1-Dichloroethene	µg/m ³	0.140 U	0.052 U	0.061 U	0.055 U	0.061 U	39 U
	1,1-Dichloroethane	µg/m ³	0.28 U	0.10 U	0.12 U	0.11 U	0.12 U	40 U
	cis-1,2-Dichloroethene	µg/m ³	0.28 U	0.15	0.12 U	0.11 U	0.12 U	60 U
	1,1,1-Trichloroethane	µg/m ³	0.38 U	0.71	0.24	0.15 U	0.17 U	60 U
	1,2-Dichloroethane	µg/m ³	0.28 U	0.10 U	0.12 U	0.11 U	0.12 U	62 U
	Trichloroethene	µg/m ³	0.38 U	0.52	0.17 U	0.15 U	0.34	60 U
	1,1,2-Trichloroethane	µg/m ³	0.38 U	0.14 U	0.17 U	0.15 U	0.17 U	83 U
	Tetrachloroethene	µg/m ³	1.60	1.70	1.6	0.2 U	3.9	96 U
	1,1,2,2-Tetrachloroethane	µg/m ³	0.48 U	0.18 U	0.21 U	0.19 U	0.21 U	62 U
	trans-1,2-Dichloroethene	µg/m ³	1.40	0.52 U	0.61 U	0.55 U	0.61 U	82 U
	Chloromethane	µg/m ³	0.36 U	0.63	0.33	1.20	1.70	83 U
	Chloroethane	µg/m ³	0.46 U	0.17 U	0.20 U	0.18 U	0.45	100 U
	Chlorobenzene	µg/m ³	0.32 U	0.12 U	0.14 U	0.13 U	0.14 U	70 U
	Carbon Tetrachloride	µg/m ³	0.44 U	0.43	0.24	0.55	0.55	100 U

Legend:

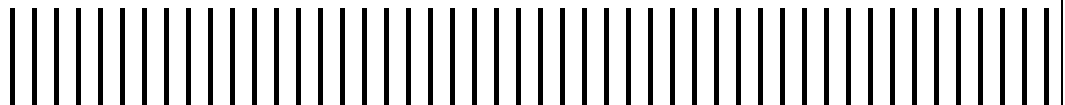
U - Not detected at or greater than the Reporting Limit (RL)



Watervliet Arsenal, Watervliet, New York

Vapor Intrusion Investigation

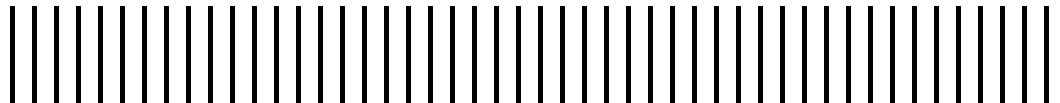
Appendix A – Chemical Inventories





Watervliet Arsenal, Watervliet, New York
Vapor Intrusion Investigation

Appendix B – Analytical Laboratory Reporting Forms





AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802215A

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/11/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	02/25/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B25-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
01AA	B25-A1 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
02A	B25-A2	Modified TO-15 SIM	6.5 "Hg	5 psi
03A	B25-A3	Modified TO-15 SIM	5.5 "Hg	5 psi
04A	B25-A4	Modified TO-15 SIM	5.5 "Hg	5 psi
05A	B25-A5	Modified TO-15 SIM	6.0 "Hg	5 psi
06A	B25-A7	Modified TO-15 SIM	7.0 "Hg	5 psi
07A	B25-A9	Modified TO-15 SIM	6.5 "Hg	5 psi
07AA	B25-A9 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
08A	B25-A10	Modified TO-15 SIM	6.5 "Hg	5 psi
09A	B25-A12	Modified TO-15 SIM	7.0 "Hg	5 psi
10A	B23-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
11A	B23-A2	Modified TO-15 SIM	5.5 "Hg	5 psi
12A	B23-A3	Modified TO-15 SIM	6.5 "Hg	5 psi
13A	B24-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
14A	B24-A2	Modified TO-15 SIM	6.0 "Hg	5 psi
15A	B24-A3	Modified TO-15 SIM	4.5 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802215A

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139

FAX: 518-782-0500

DATE RECEIVED: 02/11/2008

DATE COMPLETED: 02/25/2008

P.O. # 2118047

PROJECT # 2118047 WVA SVI Study

CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16A	B38-A1	Modified TO-15 SIM	5.0 "Hg	5 psi
17A	B38-A2	Modified TO-15 SIM	6.5 "Hg	5 psi
18A	Lab Blank	Modified TO-15 SIM	NA	NA
18B	Lab Blank	Modified TO-15 SIM	NA	NA
18C	Lab Blank	Modified TO-15 SIM	NA	NA
19A	CCV	Modified TO-15 SIM	NA	NA
19B	CCV	Modified TO-15 SIM	NA	NA
19C	CCV	Modified TO-15 SIM	NA	NA
20A	LCS	Modified TO-15 SIM	NA	NA
20B	LCS	Modified TO-15 SIM	NA	NA
20C	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 02/25/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15 SIM
Malcolm Pirnie
Workorder# 0802215A



Fifteen 6 Liter Summa Canister and two 6 Liter Summa Canister (100% Certified) samples were received on February 11, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-A1

Lab ID#: 0802215A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.018	0.044	0.047
Trichloroethene	0.034	0.035	0.18	0.19
Tetrachloroethene	0.034	0.065	0.23	0.44
Chloromethane	0.086	0.60	0.18	1.2
Carbon Tetrachloride	0.034	0.088	0.22	0.55

Client Sample ID: B25-A1 Lab Duplicate

Lab ID#: 0802215A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.018	0.044	0.046
Trichloroethene	0.034	0.035	0.18	0.19
Tetrachloroethene	0.034	0.065	0.23	0.44
Chloromethane	0.086	0.60	0.18	1.2
Carbon Tetrachloride	0.034	0.089	0.22	0.56

Client Sample ID: B25-A2

Lab ID#: 0802215A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.034	0.073	0.18	0.39
Tetrachloroethene	0.034	0.062	0.23	0.42
Chloromethane	0.086	0.58	0.18	1.2
Carbon Tetrachloride	0.034	0.087	0.22	0.55

Client Sample ID: B25-A3

Lab ID#: 0802215A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.033	0.061	0.22	0.41
Chloromethane	0.082	0.55	0.17	1.1
Carbon Tetrachloride	0.033	0.083	0.21	0.52



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-A4

Lab ID#: 0802215A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.029	0.042	0.075
Trichloroethene	0.033	0.16	0.18	0.85
Tetrachloroethene	0.033	0.061	0.22	0.41
Chloromethane	0.082	0.54	0.17	1.1
Carbon Tetrachloride	0.033	0.090	0.21	0.57

Client Sample ID: B25-A5

Lab ID#: 0802215A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.034	0.058	0.18	0.31
Tetrachloroethene	0.034	0.071	0.23	0.48
Chloromethane	0.084	0.55	0.17	1.1
Carbon Tetrachloride	0.034	0.091	0.21	0.58

Client Sample ID: B25-A7

Lab ID#: 0802215A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.035	0.061	0.24	0.41
Chloromethane	0.088	0.54	0.18	1.1
Carbon Tetrachloride	0.035	0.086	0.22	0.54

Client Sample ID: B25-A9

Lab ID#: 0802215A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.034	0.11	0.18	0.61
Tetrachloroethene	0.034	0.078	0.23	0.53
Chloromethane	0.086	0.56	0.18	1.2
Carbon Tetrachloride	0.034	0.091	0.22	0.57

Client Sample ID: B25-A9 Lab Duplicate

Lab ID#: 0802215A-07AA



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-A9 Lab Duplicate

Lab ID#: 0802215A-07AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.068	0.12	0.37	0.63
Tetrachloroethene	0.068	0.076	0.46	0.51
Chloromethane	0.17	0.58	0.35	1.2
Carbon Tetrachloride	0.068	0.090	0.43	0.56

Client Sample ID: B25-A10

Lab ID#: 0802215A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.034	0.069	0.23	0.47
Chloromethane	0.086	0.39	0.18	0.80
Carbon Tetrachloride	0.034	0.088	0.22	0.56

Client Sample ID: B25-A12

Lab ID#: 0802215A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.035	0.062	0.24	0.42
Chloromethane	0.088	2.2	0.18	4.5
Chloroethane	0.088	1.2	0.23	3.2
Carbon Tetrachloride	0.035	0.092	0.22	0.58

Client Sample ID: B23-A1

Lab ID#: 0802215A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.25	0.19	1.4
Trichloroethene	0.034	0.14	0.18	0.75
Tetrachloroethene	0.034	0.063	0.23	0.42
trans-1,2-Dichloroethene	0.17	0.22	0.68	0.87
Chloromethane	0.086	0.90	0.18	1.8
Chlorobenzene	0.034	0.038	0.16	0.17
Carbon Tetrachloride	0.034	0.094	0.22	0.59



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B23-A2

Lab ID#: 0802215A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.033	0.31	0.18	1.7
Trichloroethene	0.033	0.29	0.18	1.6
Tetrachloroethene	0.033	0.058	0.22	0.39
Chloromethane	0.082	0.61	0.17	1.2
Carbon Tetrachloride	0.033	0.088	0.21	0.56

Client Sample ID: B23-A3

Lab ID#: 0802215A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.67	0.19	3.6
Trichloroethene	0.034	0.20	0.18	1.0
Tetrachloroethene	0.034	0.059	0.23	0.40
trans-1,2-Dichloroethene	0.17	0.44	0.68	1.7
Chloromethane	0.086	0.67	0.18	1.4
Carbon Tetrachloride	0.034	0.097	0.22	0.61

Client Sample ID: B24-A1

Lab ID#: 0802215A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.086	0.67	0.18	1.4
Carbon Tetrachloride	0.034	0.082	0.22	0.52

Client Sample ID: B24-A2

Lab ID#: 0802215A-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.084	0.63	0.17	1.3
Carbon Tetrachloride	0.034	0.088	0.21	0.56

Client Sample ID: B24-A3

Lab ID#: 0802215A-15A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B24-A3

Lab ID#: 0802215A-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.040	0.063	0.16
1,1-Dichloroethane	0.032	0.54	0.13	2.2
1,1,1-Trichloroethane	0.032	0.36	0.17	2.0
Tetrachloroethene	0.032	0.10	0.21	0.71
Chloromethane	0.079	0.79	0.16	1.6
Carbon Tetrachloride	0.032	0.090	0.20	0.56

Client Sample ID: B38-A1

Lab ID#: 0802215A-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.17	0.18	0.91
Chloromethane	0.080	0.62	0.17	1.3
Carbon Tetrachloride	0.032	0.076	0.20	0.48

Client Sample ID: B38-A2

Lab ID#: 0802215A-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.16	0.19	0.86
Chloromethane	0.086	0.63	0.18	1.3
Carbon Tetrachloride	0.034	0.092	0.22	0.58



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A1

Lab ID#: 0802215A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022123	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 03:39 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.018	0.044	0.047
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.035	0.18	0.19
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.065	0.23	0.44
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.60	0.18	1.2
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.088	0.22	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A1 Lab Duplicate

Lab ID#: 0802215A-01AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022124	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 04:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.018	0.044	0.046
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.035	0.18	0.19
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.065	0.23	0.44
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.60	0.18	1.2
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.089	0.22	0.56

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A2

Lab ID#: 0802215A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022125	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 05:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.073	0.18	0.39
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.062	0.23	0.42
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.58	0.18	1.2
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.087	0.22	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A3

Lab ID#: 0802215A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022126	Date of Collection: 2/5/08
Dil. Factor:	1.64	Date of Analysis: 2/22/08 07:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.061	0.22	0.41
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.55	0.17	1.1
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.083	0.21	0.52

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A4

Lab ID#: 0802215A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022206	Date of Collection: 2/5/08
Dil. Factor:	1.64	Date of Analysis: 2/22/08 12:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.029	0.042	0.075
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.16	0.18	0.85
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.061	0.22	0.41
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.54	0.17	1.1
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.090	0.21	0.57

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A5

Lab ID#: 0802215A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022208	Date of Collection: 2/5/08
Dil. Factor:	1.68	Date of Analysis: 2/22/08 01:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.058	0.18	0.31
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.071	0.23	0.48
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.55	0.17	1.1
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.091	0.21	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A7

Lab ID#: 0802215A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022209	Date of Collection: 2/5/08
Dil. Factor:	1.75	Date of Analysis: 2/22/08 02:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.061	0.24	0.41
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.54	0.18	1.1
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	0.086	0.22	0.54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A9

Lab ID#: 0802215A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022217	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 11:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.11	0.18	0.61
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.078	0.23	0.53
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.56	0.18	1.2
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.091	0.22	0.57

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A9 Lab Duplicate

Lab ID#: 0802215A-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022216	Date of Collection: 2/5/08
Dil. Factor:	3.42	Date of Analysis: 2/22/08 10:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.087	Not Detected
1,1-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1-Dichloroethane	0.068	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.068	Not Detected	0.27	Not Detected
1,1,1-Trichloroethane	0.068	Not Detected	0.37	Not Detected
1,2-Dichloroethane	0.068	Not Detected	0.28	Not Detected
Trichloroethene	0.068	0.12	0.37	0.63
1,1,2-Trichloroethane	0.068	Not Detected	0.37	Not Detected
Tetrachloroethene	0.068	0.076	0.46	0.51
1,1,2,2-Tetrachloroethane	0.068	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
Chloromethane	0.17	0.58	0.35	1.2
Chloroethane	0.17	Not Detected	0.45	Not Detected
Chlorobenzene	0.068	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.068	0.090	0.43	0.56

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A10

Lab ID#: 0802215A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022211	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 06:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.069	0.23	0.47
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.39	0.18	0.80
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.088	0.22	0.56

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A12

Lab ID#: 0802215A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022213	Date of Collection: 2/5/08
Dil. Factor:	1.75	Date of Analysis: 2/22/08 08:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.062	0.24	0.42
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	2.2	0.18	4.5
Chloroethane	0.088	1.2	0.23	3.2
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	0.092	0.22	0.58

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B23-A1

Lab ID#: 0802215A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022214	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/22/08 08:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.25	0.19	1.4
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.14	0.18	0.75
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.063	0.23	0.42
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	0.22	0.68	0.87
Chloromethane	0.086	0.90	0.18	1.8
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	0.038	0.16	0.17
Carbon Tetrachloride	0.034	0.094	0.22	0.59

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B23-A2

Lab ID#: 0802215A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022221	Date of Collection: 2/5/08
Dil. Factor:	1.64	Date of Analysis: 2/23/08 03:45 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	0.31	0.18	1.7
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.29	0.18	1.6
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.058	0.22	0.39
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.61	0.17	1.2
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.088	0.21	0.56

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B23-A3

Lab ID#: 0802215A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022222	Date of Collection: 2/5/08
Dil. Factor:	1.71	Date of Analysis: 2/23/08 04:27 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.67	0.19	3.6
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.20	0.18	1.0
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.059	0.23	0.40
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	0.44	0.68	1.7
Chloromethane	0.086	0.67	0.18	1.4
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.097	0.22	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B24-A1

Lab ID#: 0802215A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022223	Date of Collection: 2/6/08
Dil. Factor:	1.71	Date of Analysis: 2/23/08 05:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.67	0.18	1.4
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.082	0.22	0.52

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B24-A2

Lab ID#: 0802215A-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022309	Date of Collection: 2/6/08
Dil. Factor:	1.68	Date of Analysis: 2/23/08 05:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.63	0.17	1.3
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.088	0.21	0.56

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B24-A3

Lab ID#: 0802215A-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022306	Date of Collection: 2/6/08
Dil. Factor:	1.58	Date of Analysis: 2/23/08 02:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	0.040	0.063	0.16
1,1-Dichloroethane	0.032	0.54	0.13	2.2
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	0.36	0.17	2.0
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.10	0.21	0.71
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloromethane	0.079	0.79	0.16	1.6
Chloroethane	0.079	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.032	0.090	0.20	0.56

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B38-A1

Lab ID#: 0802215A-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022307	Date of Collection: 2/6/08
Dil. Factor:	1.61	Date of Analysis: 2/23/08 03:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.17	0.18	0.91
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.62	0.17	1.3
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.076	0.20	0.48

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B38-A2

Lab ID#: 0802215A-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022308	Date of Collection: 2/6/08
Dil. Factor:	1.71	Date of Analysis: 2/23/08 04:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.16	0.19	0.86
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.63	0.18	1.3
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.092	0.22	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802215A-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022115	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 09:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802215A-18B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/08 11:25 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802215A-18C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 01:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802215A-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022111	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 06:50 PM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	109
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	90
1,2-Dichloroethane	93
Trichloroethene	79
1,1,2-Trichloroethane	98
Tetrachloroethene	86
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	103
Chloromethane	105
Chloroethane	82
Chlorobenzene	99
Carbon Tetrachloride	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802215A-19B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/08 09:12 AM

Compound	%Recovery
Vinyl Chloride	102
1,1-Dichloroethene	108
1,1-Dichloroethane	106
cis-1,2-Dichloroethene	95
1,1,1-Trichloroethane	92
1,2-Dichloroethane	100
Trichloroethene	82
1,1,2-Trichloroethane	102
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	108
trans-1,2-Dichloroethene	108
Chloromethane	107
Chloroethane	81
Chlorobenzene	103
Carbon Tetrachloride	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802215A-19C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 09:53 AM

Compound	%Recovery
Vinyl Chloride	98
1,1-Dichloroethene	107
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	90
1,2-Dichloroethane	101
Trichloroethene	78
1,1,2-Trichloroethane	100
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	103
Chloromethane	103
Chloroethane	77
Chlorobenzene	99
Carbon Tetrachloride	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802215A-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022112	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 07:34 PM

Compound	%Recovery
Vinyl Chloride	98
1,1-Dichloroethene	121
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	95
1,2-Dichloroethane	100
Trichloroethene	83
1,1,2-Trichloroethane	103
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	107
Chloromethane	97
Chloroethane	82
Chlorobenzene	103
Carbon Tetrachloride	115

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802215A-20B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/22/08 09:52 AM

Compound	%Recovery
Vinyl Chloride	108
1,1-Dichloroethene	107
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	107
1,2-Dichloroethane	105
Trichloroethene	83
1,1,2-Trichloroethane	104
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	110
trans-1,2-Dichloroethene	108
Chloromethane	107
Chloroethane	105
Chlorobenzene	105
Carbon Tetrachloride	121

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802215A-20C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 10:39 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	120
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	96
1,2-Dichloroethane	107
Trichloroethene	82
1,1,2-Trichloroethane	104
Tetrachloroethene	89
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	110
Chloromethane	101
Chloroethane	86
Chlorobenzene	103
Carbon Tetrachloride	119

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802215B

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/11/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	02/26/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
18A	B25-A6	Modified TO-15 SIM	5.5 "Hg	5 psi
19A	B25-A8	Modified TO-15 SIM	6.0 "Hg	5 psi
20A	B25-A11	Modified TO-15 SIM	6.0 "Hg	5 psi
21A	B23-SS1	Modified TO-15 SIM	14.5 "Hg	5 psi
22A	Lab Blank	Modified TO-15 SIM	NA	NA
22B	Lab Blank	Modified TO-15 SIM	NA	NA
23A	CCV	Modified TO-15 SIM	NA	NA
23B	CCV	Modified TO-15 SIM	NA	NA
24A	LCS	Modified TO-15 SIM	NA	NA
24B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 02/26/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802215B**

Four 6 Liter Summa Canister samples were received on February 11, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-A6

Lab ID#: 0802215B-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.037	0.042	0.096
Trichloroethene	0.033	0.67	0.18	3.6
Chloromethane	0.082	0.58	0.17	1.2
Carbon Tetrachloride	0.033	0.086	0.21	0.54

Client Sample ID: B25-A8

Lab ID#: 0802215B-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.030	0.043	0.077
1,2-Dichloroethane	0.034	0.034	0.14	0.14
Trichloroethene	0.034	1.6	0.18	8.4
Chloromethane	0.084	0.58	0.17	1.2
Carbon Tetrachloride	0.034	0.095	0.21	0.60

Client Sample ID: B25-A11

Lab ID#: 0802215B-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.034	0.82	0.18	4.4
Chloromethane	0.084	0.60	0.17	1.2
Carbon Tetrachloride	0.034	0.092	0.21	0.58

Client Sample ID: B23-SS1

Lab ID#: 0802215B-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.052	0.46	0.28	2.5
Trichloroethene	0.052	3.1	0.28	17
Tetrachloroethene	0.052	4.3	0.35	29
trans-1,2-Dichloroethene	0.26	0.85	1.0	3.4
Chloromethane	0.13	0.64	0.27	1.3
Carbon Tetrachloride	0.052	0.088	0.32	0.55



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A6

Lab ID#: 0802215B-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022106	Date of Collection: 2/8/08
Dil. Factor:	1.64	Date of Analysis: 2/21/08 01:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.037	0.042	0.096
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.67	0.18	3.6
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.58	0.17	1.2
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.086	0.21	0.54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A8

Lab ID#: 0802215B-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022117	Date of Collection: 2/6/08
Dil. Factor:	1.68	Date of Analysis: 2/21/08 11:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.030	0.043	0.077
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.034	0.034	0.14	0.14
Trichloroethene	0.034	1.6	0.18	8.4
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.58	0.17	1.2
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.095	0.21	0.60

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-A11

Lab ID#: 0802215B-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022118	Date of Collection: 2/6/08
Dil. Factor:	1.68	Date of Analysis: 2/22/08 12:13 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.82	0.18	4.4
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.60	0.17	1.2
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.092	0.21	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B23-SS1

Lab ID#: 0802215B-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022119	Date of Collection: 2/8/08
Dil. Factor:	2.59	Date of Analysis: 2/22/08 01:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.026	Not Detected	0.066	Not Detected
1,1-Dichloroethene	0.026	Not Detected	0.10	Not Detected
1,1-Dichloroethane	0.052	Not Detected	0.21	Not Detected
cis-1,2-Dichloroethene	0.052	Not Detected	0.20	Not Detected
1,1,1-Trichloroethane	0.052	0.46	0.28	2.5
1,2-Dichloroethane	0.052	Not Detected	0.21	Not Detected
Trichloroethene	0.052	3.1	0.28	17
1,1,2-Trichloroethane	0.052	Not Detected	0.28	Not Detected
Tetrachloroethene	0.052	4.3	0.35	29
1,1,2,2-Tetrachloroethane	0.052	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.26	0.85	1.0	3.4
Chloromethane	0.13	0.64	0.27	1.3
Chloroethane	0.13	Not Detected	0.34	Not Detected
Chlorobenzene	0.052	Not Detected	0.24	Not Detected
Carbon Tetrachloride	0.052	0.088	0.32	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802215B-22A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 12:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802215B-22B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022115	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 09:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802215B-23A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 10:17 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	109
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	90
1,2-Dichloroethane	93
Trichloroethene	79
1,1,2-Trichloroethane	98
Tetrachloroethene	86
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	103
Chloromethane	105
Chloroethane	82
Chlorobenzene	99
Carbon Tetrachloride	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802215B-23B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022111	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 06:50 PM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	109
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	90
1,2-Dichloroethane	93
Trichloroethene	79
1,1,2-Trichloroethane	98
Tetrachloroethene	86
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	103
Chloromethane	105
Chloroethane	82
Chlorobenzene	99
Carbon Tetrachloride	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802215B-24A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 10:56 AM

Compound	%Recovery
Vinyl Chloride	123
1,1-Dichloroethene	104
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	107
1,2-Dichloroethane	99
Trichloroethene	85
1,1,2-Trichloroethane	103
Tetrachloroethene	92
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	106
Chloromethane	116
Chloroethane	114
Chlorobenzene	106
Carbon Tetrachloride	119

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802215B-24B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022112	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/21/08 07:34 PM

Compound	%Recovery
Vinyl Chloride	98
1,1-Dichloroethene	121
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	95
1,2-Dichloroethane	100
Trichloroethene	83
1,1,2-Trichloroethane	103
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	107
Chloromethane	97
Chloroethane	82
Chlorobenzene	103
Carbon Tetrachloride	115

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802279

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 Study
DATE RECEIVED:	02/14/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	02/27/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B24-SS2	Modified TO-15 SIM	6.0 "Hg	5 psi
02A	B24-SS1	Modified TO-15 SIM	6.5 "Hg	5 psi
03A	B18-A1	Modified TO-15 SIM	3.5 "Hg	5 psi
04A	B19-A2	Modified TO-15 SIM	5.0 "Hg	5 psi
05A	B9-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
06A	B19-A1	Modified TO-15 SIM	7.0 "Hg	5 psi
07A	B21-A1	Modified TO-15 SIM	1.0 "Hg	5 psi
08A	B15-A1	Modified TO-15 SIM	4.5 "Hg	5 psi
09A	B112-A1	Modified TO-15 SIM	8.5 "Hg	5 psi
10A	B38-SS1	Modified TO-15 SIM	1.0 "Hg	5 psi
11A	B114-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
12A	B124-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
13A	B126-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
14A	B116-A1	Modified TO-15 SIM	7.0 "Hg	5 psi
15A	B44-A1	Modified TO-15 SIM	8.0 "Hg	5 psi
15AA	B44-A1 Lab Duplicate	Modified TO-15 SIM	8.0 "Hg	5 psi
16A	B108-A1	Modified TO-15 SIM	6.0 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802279

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PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 Study
DATE RECEIVED:	02/14/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	02/27/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
17A	Lab Blank	Modified TO-15 SIM	NA	NA
17B	Lab Blank	Modified TO-15 SIM	NA	NA
18A	CCV	Modified TO-15 SIM	NA	NA
18B	CCV	Modified TO-15 SIM	NA	NA
19A	LCS	Modified TO-15 SIM	NA	NA
19B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 02/28/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802279**

Fifteen 6 Liter Summa Canister and one 6 Liter Summa Canister (100% Certified) samples were received on February 14, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B24-SS2

Lab ID#: 0802279-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.025	0.043	0.063
1,1,1-Trichloroethane	0.034	0.061	0.18	0.34
Trichloroethene	0.034	0.047	0.18	0.25
Tetrachloroethene	0.034	0.093	0.23	0.63
Chloromethane	0.084	0.35	0.17	0.71
Carbon Tetrachloride	0.034	0.097	0.21	0.61

Client Sample ID: B24-SS1

Lab ID#: 0802279-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.068	0.19	0.37
Trichloroethene	0.034	0.061	0.18	0.33
Chloromethane	0.086	0.33	0.18	0.69
Carbon Tetrachloride	0.034	0.090	0.22	0.57

Client Sample ID: B18-A1

Lab ID#: 0802279-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.076	0.61	0.16	1.3
Carbon Tetrachloride	0.030	0.086	0.19	0.54

Client Sample ID: B19-A2

Lab ID#: 0802279-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.032	0.035	0.22	0.24
Chloromethane	0.080	0.57	0.17	1.2
Carbon Tetrachloride	0.032	0.086	0.20	0.54

Client Sample ID: B9-A1

Lab ID#: 0802279-05A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B9-A1

Lab ID#: 0802279-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.086	0.52	0.18	1.1
Carbon Tetrachloride	0.034	0.091	0.22	0.57

Client Sample ID: B19-A1

Lab ID#: 0802279-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,2-Dichloroethane	0.035	0.043	0.14	0.17
Chloromethane	0.088	0.64	0.18	1.3
Carbon Tetrachloride	0.035	0.095	0.22	0.60

Client Sample ID: B21-A1

Lab ID#: 0802279-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,2-Dichloroethane	0.028	0.047	0.11	0.19
Chloromethane	0.070	0.64	0.14	1.3
Carbon Tetrachloride	0.028	0.077	0.17	0.48

Client Sample ID: B15-A1

Lab ID#: 0802279-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.032	0.40	0.17	2.1
Tetrachloroethene	0.032	0.93	0.21	6.3
Chloromethane	0.079	0.57	0.16	1.2
Carbon Tetrachloride	0.032	0.078	0.20	0.49

Client Sample ID: B112-A1

Lab ID#: 0802279-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.057	0.20	0.31
Chloromethane	0.094	0.64	0.19	1.3



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B112-A1

Lab ID#: 0802279-09A

Carbon Tetrachloride	0.037	0.092	0.24	0.58
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Client Sample ID: B38-SS1

Lab ID#: 0802279-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.028	0.029	0.15	0.16
Chloromethane	0.070	0.27	0.14	0.56
Carbon Tetrachloride	0.028	0.045	0.17	0.28

Client Sample ID: B114-A1

Lab ID#: 0802279-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.034	0.22	0.14	0.89
Trichloroethene	0.034	1.3	0.18	6.8
Tetrachloroethene	0.034	3.9	0.23	27
Chloromethane	0.086	0.57	0.18	1.2
Carbon Tetrachloride	0.034	0.097	0.22	0.61

Client Sample ID: B124-A1

Lab ID#: 0802279-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.086	0.56	0.18	1.1
Chloroethane	0.086	0.15	0.22	0.41
Carbon Tetrachloride	0.034	0.098	0.22	0.61

Client Sample ID: B126-A1

Lab ID#: 0802279-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.086	0.64	0.18	1.3
Carbon Tetrachloride	0.034	0.077	0.22	0.49



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B116-A1

Lab ID#: 0802279-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.035	0.097	0.14	0.39
Trichloroethene	0.035	0.30	0.19	1.6
Tetrachloroethene	0.035	0.31	0.24	2.1
Chloromethane	0.088	0.56	0.18	1.2
Carbon Tetrachloride	0.035	0.092	0.22	0.58

Client Sample ID: B44-A1

Lab ID#: 0802279-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.037	0.061	0.20	0.33
Tetrachloroethene	0.037	0.068	0.25	0.46
Chloromethane	0.092	0.61	0.19	1.2
Carbon Tetrachloride	0.037	0.091	0.23	0.57

Client Sample ID: B44-A1 Lab Duplicate

Lab ID#: 0802279-15AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.037	0.059	0.20	0.32
Tetrachloroethene	0.037	0.067	0.25	0.46
Chloromethane	0.092	0.58	0.19	1.2
Carbon Tetrachloride	0.037	0.090	0.23	0.57

Client Sample ID: B108-A1

Lab ID#: 0802279-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.034	0.063	0.18	0.34
Tetrachloroethene	0.034	0.061	0.23	0.42
Chloromethane	0.084	0.54	0.17	1.1
Carbon Tetrachloride	0.034	0.097	0.21	0.61



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B24-SS2

Lab ID#: 0802279-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022312	Date of Collection: 2/11/08
Dil. Factor:	1.68	Date of Analysis: 2/23/08 07:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.025	0.043	0.063
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.061	0.18	0.34
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.047	0.18	0.25
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.093	0.23	0.63
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.35	0.17	0.71
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.097	0.21	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B24-SS1

Lab ID#: 0802279-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022313	Date of Collection: 2/11/08
Dil. Factor:	1.71	Date of Analysis: 2/23/08 08:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.068	0.19	0.37
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.061	0.18	0.33
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.33	0.18	0.69
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.090	0.22	0.57

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B18-A1

Lab ID#: 0802279-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022314	Date of Collection: 2/11/08
Dil. Factor:	1.52	Date of Analysis: 2/23/08 09:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloromethane	0.076	0.61	0.16	1.3
Chloroethane	0.076	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.086	0.19	0.54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B19-A2

Lab ID#: 0802279-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022315	Date of Collection: 2/11/08
Dil. Factor:	1.61	Date of Analysis: 2/23/08 09:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.035	0.22	0.24
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.57	0.17	1.2
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.086	0.20	0.54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B9-A1

Lab ID#: 0802279-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022316	Date of Collection: 2/11/08
Dil. Factor:	1.71	Date of Analysis: 2/23/08 10:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.52	0.18	1.1
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.091	0.22	0.57

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B19-A1

Lab ID#: 0802279-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022407	Date of Collection: 2/11/08
Dil. Factor:	1.75	Date of Analysis: 2/24/08 03:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.035	0.043	0.14	0.17
Trichloroethene	0.035	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.64	0.18	1.3
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	0.095	0.22	0.60

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B21-A1

Lab ID#: 0802279-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022408	Date of Collection: 2/11/08
Dil. Factor:	1.39	Date of Analysis: 2/24/08 03:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
1,2-Dichloroethane	0.028	0.047	0.11	0.19
Trichloroethene	0.028	Not Detected	0.15	Not Detected
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloromethane	0.070	0.64	0.14	1.3
Chloroethane	0.070	Not Detected	0.18	Not Detected
Chlorobenzene	0.028	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.028	0.077	0.17	0.48

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B15-A1

Lab ID#: 0802279-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022409	Date of Collection: 2/12/08
Dil. Factor:	1.58	Date of Analysis: 2/24/08 04:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.40	0.17	2.1
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.93	0.21	6.3
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloromethane	0.079	0.57	0.16	1.2
Chloroethane	0.079	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.032	0.078	0.20	0.49

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B112-A1

Lab ID#: 0802279-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022410	Date of Collection: 2/12/08
Dil. Factor:	1.87	Date of Analysis: 2/24/08 05:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	0.057	0.20	0.31
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Chloromethane	0.094	0.64	0.19	1.3
Chloroethane	0.094	Not Detected	0.25	Not Detected
Chlorobenzene	0.037	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.037	0.092	0.24	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B38-SS1

Lab ID#: 0802279-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022411	Date of Collection: 2/12/08
Dil. Factor:	1.39	Date of Analysis: 2/24/08 05:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.028	0.029	0.15	0.16
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloromethane	0.070	0.27	0.14	0.56
Chloroethane	0.070	Not Detected	0.18	Not Detected
Chlorobenzene	0.028	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.028	0.045	0.17	0.28

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B114-A1

Lab ID#: 0802279-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022412	Date of Collection: 2/12/08
Dil. Factor:	1.71	Date of Analysis: 2/24/08 06:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	0.22	0.14	0.89
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	1.3	0.18	6.8
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	3.9	0.23	27
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.57	0.18	1.2
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.097	0.22	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B124-A1

Lab ID#: 0802279-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022413	Date of Collection: 2/12/08
Dil. Factor:	1.71	Date of Analysis: 2/24/08 07:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.56	0.18	1.1
Chloroethane	0.086	0.15	0.22	0.41
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.098	0.22	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B126-A1

Lab ID#: 0802279-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022414	Date of Collection: 2/12/08
Dil. Factor:	1.71	Date of Analysis: 2/24/08 08:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.64	0.18	1.3
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.077	0.22	0.49

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B116-A1

Lab ID#: 0802279-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022415	Date of Collection: 2/12/08
Dil. Factor:	1.75	Date of Analysis: 2/24/08 08:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	0.097	0.14	0.39
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.30	0.19	1.6
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.31	0.24	2.1
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.56	0.18	1.2
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	0.092	0.22	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B44-A1

Lab ID#: 0802279-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022416	Date of Collection: 2/12/08
Dil. Factor:	1.83	Date of Analysis: 2/24/08 09:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.061	0.20	0.33
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.068	0.25	0.46
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloromethane	0.092	0.61	0.19	1.2
Chloroethane	0.092	Not Detected	0.24	Not Detected
Chlorobenzene	0.037	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.037	0.091	0.23	0.57

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B44-A1 Lab Duplicate

Lab ID#: 0802279-15AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022417	Date of Collection: 2/12/08
Dil. Factor:	1.83	Date of Analysis: 2/24/08 10:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.059	0.20	0.32
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.067	0.25	0.46
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloromethane	0.092	0.58	0.19	1.2
Chloroethane	0.092	Not Detected	0.24	Not Detected
Chlorobenzene	0.037	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.037	0.090	0.23	0.57

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B108-A1

Lab ID#: 0802279-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022418	Date of Collection: 2/12/08
Dil. Factor:	1.68	Date of Analysis: 2/24/08 11:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.063	0.18	0.34
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.061	0.23	0.42
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.54	0.17	1.1
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.097	0.21	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802279-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 01:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802279-17B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/08 01:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802279-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 09:53 AM

Compound	%Recovery
Vinyl Chloride	98
1,1-Dichloroethene	107
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	90
1,2-Dichloroethane	101
Trichloroethene	78
1,1,2-Trichloroethane	100
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	103
Chloromethane	103
Chloroethane	77
Chlorobenzene	99
Carbon Tetrachloride	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802279-18B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/08 09:56 AM

Compound	%Recovery
Vinyl Chloride	102
1,1-Dichloroethene	109
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	95
1,1,1-Trichloroethane	95
1,2-Dichloroethane	107
Trichloroethene	81
1,1,2-Trichloroethane	103
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	107
trans-1,2-Dichloroethene	108
Chloromethane	106
Chloroethane	81
Chlorobenzene	103
Carbon Tetrachloride	113

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802279-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/08 10:39 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	120
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	96
1,2-Dichloroethane	107
Trichloroethene	82
1,1,2-Trichloroethane	104
Tetrachloroethene	89
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	110
Chloromethane	101
Chloroethane	86
Chlorobenzene	103
Carbon Tetrachloride	119

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802279-19B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a022403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/24/08 10:36 AM

Compound	%Recovery
Vinyl Chloride	106
1,1-Dichloroethene	115
1,1-Dichloroethane	115
cis-1,2-Dichloroethene	99
1,1,1-Trichloroethane	101
1,2-Dichloroethane	111
Trichloroethene	83
1,1,2-Trichloroethane	106
Tetrachloroethene	89
1,1,2,2-Tetrachloroethane	109
trans-1,2-Dichloroethene	110
Chloromethane	105
Chloroethane	87
Chlorobenzene	105
Carbon Tetrachloride	122

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802406

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/20/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/04/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B38-SS 2	Modified TO-15 SIM	4.0 "Hg	5 psi
02A	B21-A2	Modified TO-15 SIM	6.5 "Hg	5 psi
03A	B15-A2b	Modified TO-15 SIM	7.0 "Hg	5 psi
04A	B44-SS1	Modified TO-15 SIM	3.5 "Hg	5 psi
05A	B110-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
06A	B110-SS2	Modified TO-15 SIM	5.0 "Hg	5 psi
07A	B110-SS3	Modified TO-15 SIM	4.0 "Hg	5 psi
08A	B110-SS4	Modified TO-15 SIM	7.0 "Hg	5 psi
08AA	B110-SS4 Lab Duplicate	Modified TO-15 SIM	7.0 "Hg	5 psi
09A	B110-SS5	Modified TO-15 SIM	5.5 "Hg	5 psi
10A	B110-SS6	Modified TO-15 SIM	7.5 "Hg	5 psi
11A	Lab Blank	Modified TO-15 SIM	NA	NA
11B	Lab Blank	Modified TO-15 SIM	NA	NA
11C	Lab Blank	Modified TO-15 SIM	NA	NA
12A	CCV	Modified TO-15 SIM	NA	NA
12B	CCV	Modified TO-15 SIM	NA	NA
12C	CCV	Modified TO-15 SIM	NA	NA

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802406

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/20/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/04/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
13A	LCS	Modified TO-15 SIM	NA	NA
13B	LCS	Modified TO-15 SIM	NA	NA
13C	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/04/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802406**

Five 6 Liter Summa Canister and five 6 Liter Summa Canister (100% Certified) samples were received on February 20, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B38-SS 2

Lab ID#: 0802406-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.031	0.046	0.17	0.25

Client Sample ID: B21-A2

Lab ID#: 0802406-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.086	0.77	0.18	1.6
Carbon Tetrachloride	0.034	0.096	0.22	0.60

Client Sample ID: B15-A2b

Lab ID#: 0802406-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.035	0.098	0.19	0.53
Tetrachloroethene	0.035	0.52	0.24	3.5
Chloromethane	0.088	0.60	0.18	1.2
Carbon Tetrachloride	0.035	0.088	0.22	0.55

Client Sample ID: B44-SS1

Lab ID#: 0802406-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.030	0.078	0.16	0.42
Tetrachloroethene	0.030	0.036	0.21	0.24
Chloromethane	0.076	0.31	0.16	0.64
Carbon Tetrachloride	0.030	0.086	0.19	0.54

Client Sample ID: B110-SS1

Lab ID#: 0802406-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.027	0.041	0.070
cis-1,2-Dichloroethene	0.032	0.044	0.13	0.18
1,1,1-Trichloroethane	0.032	0.085	0.18	0.47



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B110-SS1

Lab ID#: 0802406-05A

Trichloroethene	0.032	6.0	0.17	32
Tetrachloroethene	0.032	12	0.22	83
Chloromethane	0.080	1.2	0.17	2.4
Chloroethane	0.080	0.20 J	0.21	0.52 J
Carbon Tetrachloride	0.032	0.18	0.20	1.1

Client Sample ID: B110-SS2

Lab ID#: 0802406-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.095	0.18	0.52
Trichloroethene	0.032	0.056	0.17	0.30
Tetrachloroethene	0.032	0.83	0.22	5.6
Chloromethane	0.080	0.36	0.17	0.75
Carbon Tetrachloride	0.032	0.034	0.20	0.21

Client Sample ID: B110-SS3

Lab ID#: 0802406-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.023	0.040	0.058
1,1,1-Trichloroethane	0.031	0.14	0.17	0.78
Trichloroethene	0.031	3.6	0.17	19
Tetrachloroethene	0.031	14	0.21	98
1,1,2,2-Tetrachloroethane	0.031	0.048	0.21	0.33
Chloromethane	0.078	0.29	0.16	0.61
Carbon Tetrachloride	0.031	0.092	0.20	0.58

Client Sample ID: B110-SS4

Lab ID#: 0802406-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	0.019	0.045	0.049
1,1,1-Trichloroethane	0.035	0.65	0.19	3.6
Trichloroethene	0.035	3.2	0.19	17
Tetrachloroethene	0.035	1.9	0.24	13
1,1,2,2-Tetrachloroethane	0.035	0.042	0.24	0.29



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B110-SS4

Lab ID#: 0802406-08A

Chloromethane	0.088	0.14	0.18	0.29
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Client Sample ID: B110-SS4 Lab Duplicate

Lab ID#: 0802406-08AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	0.035	0.045	0.090
1,1,1-Trichloroethane	0.035	0.66	0.19	3.6
Trichloroethene	0.035	3.1	0.19	17
Tetrachloroethene	0.035	1.9	0.24	13
1,1,2,2-Tetrachloroethane	0.035	0.041	0.24	0.28
Chloromethane	0.088	0.15	0.18	0.31

Client Sample ID: B110-SS5

Lab ID#: 0802406-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.16	250	0.42	640
1,1-Dichloroethene	0.16	3.3	0.65	13
cis-1,2-Dichloroethene	0.33	27	1.3	110
Trichloroethene	0.33	20	1.8	110
Tetrachloroethene	0.33	17	2.2	120
1,1,2,2-Tetrachloroethane	0.33	110	2.2	750
trans-1,2-Dichloroethene	1.6	7.2	6.5	28
Chloroethane	0.82	1.1	2.2	2.9
Chlorobenzene	0.33	6.6	1.5	30

Client Sample ID: B110-SS6

Lab ID#: 0802406-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.036	0.24	0.14	0.94
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
Trichloroethene	0.036	2.3	0.19	12
Tetrachloroethene	0.036	5.9	0.24	40
Carbon Tetrachloride	0.036	0.069	0.22	0.43



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B38-SS 2

Lab ID#: 0802406-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030113	Date of Collection: 2/12/08
Dil. Factor:	1.55	Date of Analysis: 3/1/08 08:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.046	0.17	0.25
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	Not Detected	0.16	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B21-A2

Lab ID#: 0802406-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030114	Date of Collection: 2/13/08
Dil. Factor:	1.71	Date of Analysis: 3/1/08 09:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.77	0.18	1.6
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.096	0.22	0.60

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B15-A2b

Lab ID#: 0802406-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030115	Date of Collection: 2/19/08
Dil. Factor:	1.75	Date of Analysis: 3/1/08 10:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.098	0.19	0.53
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.52	0.24	3.5
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.60	0.18	1.2
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	0.088	0.22	0.55

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B44-SS1

Lab ID#: 0802406-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030206	Date of Collection: 2/15/08
Dil. Factor:	1.52	Date of Analysis: 3/2/08 02:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	0.078	0.16	0.42
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	0.036	0.21	0.24
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloromethane	0.076	0.31	0.16	0.64
Chloroethane	0.076	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.086	0.19	0.54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS1

Lab ID#: 0802406-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030207	Date of Collection: 2/14/08
Dil. Factor:	1.61	Date of Analysis: 3/2/08 03:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.027	0.041	0.070
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	0.044	0.13	0.18
1,1,1-Trichloroethane	0.032	0.085	0.18	0.47
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	6.0	0.17	32
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	12	0.22	83
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	1.2	0.17	2.4
Chloroethane	0.080	0.20 J	0.21	0.52 J
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.18	0.20	1.1

J = Estimated value due to bias in the CCV.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	109	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS2

Lab ID#: 0802406-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030307	Date of Collection: 2/14/08
Dil. Factor:	1.61	Date of Analysis: 3/3/08 03:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.095	0.18	0.52
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.056	0.17	0.30
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.83	0.22	5.6
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.36	0.17	0.75
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.034	0.20	0.21

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS3

Lab ID#: 0802406-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030309	Date of Collection: 2/14/08
Dil. Factor:	1.55	Date of Analysis: 3/3/08 04:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.023	0.040	0.058
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.14	0.17	0.78
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	3.6	0.17	19
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	14	0.21	98
1,1,2,2-Tetrachloroethane	0.031	0.048	0.21	0.33
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	0.29	0.16	0.61
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.092	0.20	0.58

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS4

Lab ID#: 0802406-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030310	Date of Collection: 2/14/08
Dil. Factor:	1.75	Date of Analysis: 3/3/08 05:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	0.019	0.045	0.049
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.65	0.19	3.6
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	3.2	0.19	17
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	1.9	0.24	13
1,1,2,2-Tetrachloroethane	0.035	0.042	0.24	0.29
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.14	0.18	0.29
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS4 Lab Duplicate

Lab ID#: 0802406-08AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030311	Date of Collection: 2/14/08		
Dil. Factor:	1.75	Date of Analysis: 3/3/08 06:19 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	0.035	0.045	0.090
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.66	0.19	3.6
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	3.1	0.19	17
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	1.9	0.24	13
1,1,2,2-Tetrachloroethane	0.035	0.041	0.24	0.28
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	0.15	0.18	0.31
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS5

Lab ID#: 0802406-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030316	Date of Collection: 2/14/08
Dil. Factor:	16.4	Date of Analysis: 3/3/08 11:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.16	250	0.42	640
1,1-Dichloroethene	0.16	3.3	0.65	13
1,1-Dichloroethane	0.33	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.33	27	1.3	110
1,1,1-Trichloroethane	0.33	Not Detected	1.8	Not Detected
1,2-Dichloroethane	0.33	Not Detected	1.3	Not Detected
Trichloroethene	0.33	20	1.8	110
1,1,2-Trichloroethane	0.33	Not Detected	1.8	Not Detected
Tetrachloroethene	0.33	17	2.2	120
1,1,2,2-Tetrachloroethane	0.33	110	2.2	750
trans-1,2-Dichloroethene	1.6	7.2	6.5	28
Chloromethane	0.82	Not Detected	1.7	Not Detected
Chloroethane	0.82	1.1	2.2	2.9
Chlorobenzene	0.33	6.6	1.5	30
Carbon Tetrachloride	0.33	Not Detected	2.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B110-SS6

Lab ID#: 0802406-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030317	Date of Collection: 2/14/08
Dil. Factor:	1.79	Date of Analysis: 3/4/08 12:32 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	0.24	0.14	0.94
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	2.3	0.19	12
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	5.9	0.24	40
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Chloromethane	0.090	Not Detected	0.18	Not Detected
Chloroethane	0.090	Not Detected	0.24	Not Detected
Chlorobenzene	0.036	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.036	0.069	0.22	0.43

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802406-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/08 01:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802406-11B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/2/08 01:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802406-11C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 01:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802406-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/08 10:07 AM

Compound	%Recovery
Vinyl Chloride	105
1,1-Dichloroethene	113
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	86
1,1,1-Trichloroethane	88
1,2-Dichloroethane	106
Trichloroethene	79
1,1,2-Trichloroethane	102
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	102
Chloromethane	110
Chloroethane	84
Chlorobenzene	100
Carbon Tetrachloride	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802406-12B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/2/08 10:10 AM

Compound	%Recovery
Vinyl Chloride	124
1,1-Dichloroethene	96
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	85
1,1,1-Trichloroethane	99
1,2-Dichloroethane	109
Trichloroethene	78
1,1,2-Trichloroethane	99
Tetrachloroethene	81
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	102
Chloromethane	120
Chloroethane	137 Q
Chlorobenzene	100
Carbon Tetrachloride	108

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802406-12C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 11:32 AM

Compound	%Recovery
Vinyl Chloride	96
1,1-Dichloroethene	108
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	89
1,1,1-Trichloroethane	88
1,2-Dichloroethane	98
Trichloroethene	82
1,1,2-Trichloroethane	102
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	100
Chloromethane	91
Chloroethane	107
Chlorobenzene	103
Carbon Tetrachloride	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802406-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/08 11:05 AM

Compound	%Recovery
Vinyl Chloride	103
1,1-Dichloroethene	122
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	92
1,2-Dichloroethane	113
Trichloroethene	81
1,1,2-Trichloroethane	105
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	104
Chloromethane	100
Chloroethane	94
Chlorobenzene	103
Carbon Tetrachloride	111

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802406-13B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/2/08 10:56 AM

Compound	%Recovery
Vinyl Chloride	126
1,1-Dichloroethene	123
1,1-Dichloroethane	112
cis-1,2-Dichloroethene	93
1,1,1-Trichloroethane	102
1,2-Dichloroethane	116
Trichloroethene	83
1,1,2-Trichloroethane	106
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	113
trans-1,2-Dichloroethene	111
Chloromethane	120
Chloroethane	146 Q
Chlorobenzene	105
Carbon Tetrachloride	118

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802406-13C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 12:10 PM

Compound	%Recovery
Vinyl Chloride	94
1,1-Dichloroethene	106
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	98
1,2-Dichloroethane	100
Trichloroethene	79
1,1,2-Trichloroethane	102
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	98
Chloromethane	89
Chloroethane	102
Chlorobenzene	100
Carbon Tetrachloride	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802484A

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139

FAX: 518-782-0500

DATE RECEIVED: 02/25/2008

DATE COMPLETED: 03/06/2008

P.O. # 2118047

PROJECT # 2118047 WVA SVI Study

CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B130-A1	Modified TO-15 SIM	5.0 "Hg	5 psi
02A	B9-SS1	Modified TO-15 SIM	4.5 "Hg	5 psi
03A	B15-SS2	Modified TO-15 SIM	6.5 "Hg	5 psi
03AA	B15-SS2 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
04A	SS-1	Modified TO-15 SIM	6.0 "Hg	5 psi
05A	B18-SS1	Modified TO-15 SIM	2.5 "Hg	5 psi
07A	B19-SS1	Modified TO-15 SIM	5.5 "Hg	5 psi
08A	B108-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
09A	B121-A1	Modified TO-15 SIM	6.5 "Hg	5 psi
10A	B112-SS1	Modified TO-15 SIM	7.5 "Hg	5 psi
11A	Lab Blank	Modified TO-15 SIM	NA	NA
11B	Lab Blank	Modified TO-15 SIM	NA	NA
12A	CCV	Modified TO-15 SIM	NA	NA
12B	CCV	Modified TO-15 SIM	NA	NA
13A	LCS	Modified TO-15 SIM	NA	NA
13B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/07/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15 SIM
Malcolm Pirnie
Workorder# 0802484A



Six 6 Liter Summa Canister and three 6 Liter Summa Canister (100% Certified) samples were received on February 25, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on sample B21-SS1 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B130-A1

Lab ID#: 0802484A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.032	0.24	0.17	1.3
Tetrachloroethene	0.032	0.067	0.22	0.46
Chloromethane	0.080	0.42	0.17	0.87
Carbon Tetrachloride	0.032	0.075	0.20	0.47

Client Sample ID: B9-SS1

Lab ID#: 0802484A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.055	0.17	0.30
Trichloroethene	0.032	0.12	0.17	0.64
Tetrachloroethene	0.032	0.72	0.21	4.9
Carbon Tetrachloride	0.032	0.056	0.20	0.35

Client Sample ID: B15-SS2

Lab ID#: 0802484A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.057	0.93	0.31	5.0
Trichloroethene	0.057	4.8	0.31	26
Tetrachloroethene	0.057	44	0.39	300
Carbon Tetrachloride	0.057	0.26	0.36	1.6

Client Sample ID: B15-SS2 Lab Duplicate

Lab ID#: 0802484A-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.034	0.040	0.14	0.16
1,1,1-Trichloroethane	0.034	0.90	0.19	4.9
Trichloroethene	0.034	4.8	0.18	26
Tetrachloroethene	0.034	44 E	0.23	300 E
Chloromethane	0.086	0.086	0.18	0.18
Carbon Tetrachloride	0.034	0.26	0.22	1.6



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SS-1

Lab ID#: 0802484A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.084	0.94	0.46	5.1
Trichloroethene	0.084	4.8	0.45	26
Tetrachloroethene	0.084	44	0.57	300
Carbon Tetrachloride	0.084	0.27	0.53	1.7

Client Sample ID: B18-SS1

Lab ID#: 0802484A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	0.029	0.094	0.16	0.51
Tetrachloroethene	0.029	2.1	0.20	14
Carbon Tetrachloride	0.029	0.061	0.18	0.38

Client Sample ID: B19-SS1

Lab ID#: 0802484A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.033	0.062	0.13	0.25
Trichloroethene	0.033	2.7	0.18	15
Tetrachloroethene	0.033	5.7	0.22	38
Chloromethane	0.082	0.26	0.17	0.54
Carbon Tetrachloride	0.033	0.10	0.21	0.64

Client Sample ID: B108-SS1

Lab ID#: 0802484A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.042	0.18	0.23
Trichloroethene	0.032	0.20	0.17	1.1
Tetrachloroethene	0.032	0.94	0.22	6.4
1,1,2,2-Tetrachloroethane	0.032	0.036	0.22	0.25
Chloromethane	0.080	0.12	0.17	0.24
Carbon Tetrachloride	0.032	0.088	0.20	0.55



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B121-A1

Lab ID#: 0802484A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.13	0.19	0.70
Chloromethane	0.086	0.59	0.18	1.2
Carbon Tetrachloride	0.034	0.091	0.22	0.57

Client Sample ID: B112-SS1

Lab ID#: 0802484A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.042	0.20	0.23
Trichloroethene	0.036	0.27	0.19	1.5
Tetrachloroethene	0.036	0.44	0.24	3.0
1,1,2,2-Tetrachloroethane	0.036	0.046	0.24	0.32
Chloromethane	0.090	0.16	0.18	0.33
Carbon Tetrachloride	0.036	0.082	0.22	0.51



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B130-A1

Lab ID#: 0802484A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030318	Date of Collection: 2/20/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 01:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.24	0.17	1.3
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.067	0.22	0.46
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.42	0.17	0.87
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.075	0.20	0.47

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B9-SS1

Lab ID#: 0802484A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030319	Date of Collection: 2/20/08
Dil. Factor:	1.58	Date of Analysis: 3/4/08 02:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	0.055	0.17	0.30
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.12	0.17	0.64
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.72	0.21	4.9
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloromethane	0.079	Not Detected	0.16	Not Detected
Chloroethane	0.079	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.032	0.056	0.20	0.35

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	81	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B15-SS2

Lab ID#: 0802484A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030322	Date of Collection: 2/20/08
Dil. Factor:	2.85	Date of Analysis: 3/4/08 05:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.028	Not Detected	0.073	Not Detected
1,1-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1-Dichloroethane	0.057	Not Detected	0.23	Not Detected
cis-1,2-Dichloroethene	0.057	Not Detected	0.22	Not Detected
1,1,1-Trichloroethane	0.057	0.93	0.31	5.0
1,2-Dichloroethane	0.057	Not Detected	0.23	Not Detected
Trichloroethene	0.057	4.8	0.31	26
1,1,2-Trichloroethane	0.057	Not Detected	0.31	Not Detected
Tetrachloroethene	0.057	44	0.39	300
1,1,2,2-Tetrachloroethane	0.057	Not Detected	0.39	Not Detected
trans-1,2-Dichloroethene	0.28	Not Detected	1.1	Not Detected
Chloromethane	0.14	Not Detected	0.29	Not Detected
Chloroethane	0.14	Not Detected	0.38	Not Detected
Chlorobenzene	0.057	Not Detected	0.26	Not Detected
Carbon Tetrachloride	0.057	0.26	0.36	1.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B15-SS2 Lab Duplicate

Lab ID#: 0802484A-03AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030320	Date of Collection: 2/20/08
Dil. Factor:	1.71	Date of Analysis: 3/4/08 03:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	0.040	0.14	0.16
1,1,1-Trichloroethane	0.034	0.90	0.19	4.9
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	4.8	0.18	26
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	44 E	0.23	300 E
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.086	0.18	0.18
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.26	0.22	1.6

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SS-1

Lab ID#: 0802484A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030323	Date of Collection: 2/20/08
Dil. Factor:	4.20	Date of Analysis: 3/4/08 06:32 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.042	Not Detected	0.11	Not Detected
1,1-Dichloroethene	0.042	Not Detected	0.17	Not Detected
1,1-Dichloroethane	0.084	Not Detected	0.34	Not Detected
cis-1,2-Dichloroethene	0.084	Not Detected	0.33	Not Detected
1,1,1-Trichloroethane	0.084	0.94	0.46	5.1
1,2-Dichloroethane	0.084	Not Detected	0.34	Not Detected
Trichloroethene	0.084	4.8	0.45	26
1,1,2-Trichloroethane	0.084	Not Detected	0.46	Not Detected
Tetrachloroethene	0.084	44	0.57	300
1,1,2,2-Tetrachloroethane	0.084	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.42	Not Detected	1.7	Not Detected
Chloromethane	0.21	Not Detected	0.43	Not Detected
Chloroethane	0.21	Not Detected	0.55	Not Detected
Chlorobenzene	0.084	Not Detected	0.39	Not Detected
Carbon Tetrachloride	0.084	0.27	0.53	1.7

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B18-SS1

Lab ID#: 0802484A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030520	Date of Collection: 2/20/08
Dil. Factor:	1.46	Date of Analysis: 3/5/08 11:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	0.094	0.16	0.51
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	2.1	0.20	14
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloromethane	0.073	Not Detected	0.15	Not Detected
Chloroethane	0.073	Not Detected U J	0.19	Not Detected U J
Chlorobenzene	0.029	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.029	0.061	0.18	0.38

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B19-SS1

Lab ID#: 0802484A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030521	Date of Collection: 2/20/08
Dil. Factor:	1.64	Date of Analysis: 3/6/08 01:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	0.062	0.13	0.25
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	2.7	0.18	15
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	5.7	0.22	38
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.26	0.17	0.54
Chloroethane	0.082	Not Detected U J	0.22	Not Detected U J
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.10	0.21	0.64

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B108-SS1

Lab ID#: 0802484A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030324	Date of Collection: 2/20/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 07:31 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.042	0.18	0.23
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.20	0.17	1.1
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.94	0.22	6.4
1,1,2,2-Tetrachloroethane	0.032	0.036	0.22	0.25
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.12	0.17	0.24
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.088	0.20	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B121-A1

Lab ID#: 0802484A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030522	Date of Collection: 2/20/08
Dil. Factor:	1.71	Date of Analysis: 3/6/08 01:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.13	0.19	0.70
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.59	0.18	1.2
Chloroethane	0.086	Not Detected U J	0.22	Not Detected U J
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.091	0.22	0.57

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	91	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B112-SS1

Lab ID#: 0802484A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030523	Date of Collection: 2/20/08
Dil. Factor:	1.79	Date of Analysis: 3/6/08 02:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.042	0.20	0.23
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	0.27	0.19	1.5
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.44	0.24	3.0
1,1,2,2-Tetrachloroethane	0.036	0.046	0.24	0.32
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Chloromethane	0.090	0.16	0.18	0.33
Chloroethane	0.090	Not Detected U J	0.24	Not Detected U J
Chlorobenzene	0.036	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.036	0.082	0.22	0.51

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802484A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 01:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802484A-11B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030506	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/5/08 11:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected U J	0.13	Not Detected U J
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802484A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 11:32 AM

Compound	%Recovery
Vinyl Chloride	96
1,1-Dichloroethene	108
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	89
1,1,1-Trichloroethane	88
1,2-Dichloroethane	98
Trichloroethene	82
1,1,2-Trichloroethane	102
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	100
Chloromethane	91
Chloroethane	107
Chlorobenzene	103
Carbon Tetrachloride	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802484A-12B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/5/08 09:21 AM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	115
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	89
1,1,1-Trichloroethane	90
1,2-Dichloroethane	103
Trichloroethene	82
1,1,2-Trichloroethane	108
Tetrachloroethene	89
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	104
Chloromethane	86
Chloroethane	66 Q
Chlorobenzene	103
Carbon Tetrachloride	104

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802484A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 12:10 PM

Compound	%Recovery
Vinyl Chloride	94
1,1-Dichloroethene	106
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	98
1,2-Dichloroethane	100
Trichloroethene	79
1,1,2-Trichloroethane	102
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	98
Chloromethane	89
Chloroethane	102
Chlorobenzene	100
Carbon Tetrachloride	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802484A-13B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/5/08 10:00 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	116
1,1-Dichloroethane	111
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	104
1,2-Dichloroethane	109
Trichloroethene	84
1,1,2-Trichloroethane	109
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	108
trans-1,2-Dichloroethene	107
Chloromethane	99
Chloroethane	108
Chlorobenzene	105
Carbon Tetrachloride	120

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802484B

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/25/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/07/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
11A	B121-A2	Modified TO-15 SIM	5.0 "Hg	5 psi
12A	A-1	Modified TO-15 SIM	3.0 "Hg	5 psi
13A	B120-A3	Modified TO-15 SIM	6.5 "Hg	5 psi
14A	B120-A6	Modified TO-15 SIM	6.0 "Hg	5 psi
15A	B120-A1	Modified TO-15 SIM	5.0 "Hg	5 psi
16A	B120-A5	Modified TO-15 SIM	2.5 "Hg	5 psi
17A	B120-A2	Modified TO-15 SIM	6.0 "Hg	5 psi
18A	B120-A4	Modified TO-15 SIM	5.5 "Hg	5 psi
19A	B124-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
19AA	B124-SS1 Lab Duplicate	Modified TO-15 SIM	5.0 "Hg	5 psi
20A	A-2	Modified TO-15 SIM	0.5 "Hg	5 psi
21A	B21-SS2	Modified TO-15 SIM	4.0 "Hg	5 psi
21AA	B21-SS2 Lab Duplicate	Modified TO-15 SIM	4.0 "Hg	5 psi
22A	B116-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
23A	B114-SS1	Modified TO-15 SIM	6.0 "Hg	5 psi
24A	B126-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
25A	B120-A7	Modified TO-15 SIM	4.5 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802484B

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	
FAX:	518-782-0500	PROJECT #	2118047 WVA SVI Study
DATE RECEIVED:	02/25/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/07/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
26A	Lab Blank	Modified TO-15 SIM	NA	NA
26B	Lab Blank	Modified TO-15 SIM	NA	NA
27A	CCV	Modified TO-15 SIM	NA	NA
27B	CCV	Modified TO-15 SIM	NA	NA
28A	LCS	Modified TO-15 SIM	NA	NA
28B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/07/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802484B**

Fifteen 6 Liter Summa Canister samples were received on February 25, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B121-A2

Lab ID#: 0802484B-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.029	0.064	0.11
cis-1,2-Dichloroethene	0.032	0.037	0.13	0.15
1,1,1-Trichloroethane	0.032	0.13	0.18	0.70
Tetrachloroethene	0.032	0.13	0.22	0.88
Chloromethane	0.080	0.57	0.17	1.2

Client Sample ID: A-1

Lab ID#: 0802484B-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.015	0.036	0.059	0.14
1,1,1-Trichloroethane	0.030	0.13	0.16	0.69
Tetrachloroethene	0.030	0.065	0.20	0.44
Chloromethane	0.074	0.70	0.15	1.4
Carbon Tetrachloride	0.030	0.065	0.19	0.41

Client Sample ID: B120-A3

Lab ID#: 0802484B-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.10	0.19	0.55
Tetrachloroethene	0.034	0.17	0.23	1.1
Chloromethane	0.086	0.53	0.18	1.1
Carbon Tetrachloride	0.034	0.067	0.22	0.42

Client Sample ID: B120-A6

Lab ID#: 0802484B-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.045	0.067	0.18
1,1,1-Trichloroethane	0.034	0.21	0.18	1.1
Tetrachloroethene	0.034	0.24	0.23	1.6
Chloromethane	0.084	0.52	0.17	1.1
Carbon Tetrachloride	0.034	0.059	0.21	0.37



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B120-A1

Lab ID#: 0802484B-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.018	0.064	0.069
1,1,1-Trichloroethane	0.032	0.041	0.18	0.22
Trichloroethene	0.032	0.034	0.17	0.18
Tetrachloroethene	0.032	0.085	0.22	0.57
Chloromethane	0.080	0.58	0.17	1.2
Carbon Tetrachloride	0.032	0.068	0.20	0.43

Client Sample ID: B120-A5

Lab ID#: 0802484B-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.029	0.067	0.16	0.37
Trichloroethene	0.029	0.034	0.16	0.18
Tetrachloroethene	0.029	0.14	0.20	0.95
Chloromethane	0.073	0.50	0.15	1.0
Carbon Tetrachloride	0.029	0.070	0.18	0.44

Client Sample ID: B120-A2

Lab ID#: 0802484B-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.047	0.067	0.19
1,1,1-Trichloroethane	0.034	0.17	0.18	0.93
Tetrachloroethene	0.034	0.65	0.23	4.4
Chloromethane	0.084	0.56	0.17	1.2
Carbon Tetrachloride	0.034	0.096	0.21	0.61

Client Sample ID: B120-A4

Lab ID#: 0802484B-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.033	0.082	0.18	0.44
Trichloroethene	0.033	0.034	0.18	0.18
Tetrachloroethene	0.033	0.11	0.22	0.73
Chloromethane	0.082	0.60	0.17	1.2



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B124-SS1

Lab ID#: 0802484B-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.023	0.064	0.091
1,1,1-Trichloroethane	0.032	0.058	0.18	0.32
Trichloroethene	0.032	0.33	0.17	1.8
Tetrachloroethene	0.032	0.93	0.22	6.3
Chloromethane	0.080	0.63	0.17	1.3
Carbon Tetrachloride	0.032	0.16	0.20	1.0

Client Sample ID: B124-SS1 Lab Duplicate

Lab ID#: 0802484B-19AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.020	0.064	0.079
1,1,1-Trichloroethane	0.032	0.057	0.18	0.31
Trichloroethene	0.032	0.34	0.17	1.8
Tetrachloroethene	0.032	0.93	0.22	6.3
Chloromethane	0.080	0.71	0.17	1.5
Carbon Tetrachloride	0.032	0.16	0.20	1.0

Client Sample ID: A-2

Lab ID#: 0802484B-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.014	0.044	0.054	0.18
1,1,1-Trichloroethane	0.027	0.16	0.15	0.88
Trichloroethene	0.027	0.029	0.15	0.15
Tetrachloroethene	0.027	0.70	0.18	4.7
Chloromethane	0.068	0.53	0.14	1.1
Carbon Tetrachloride	0.027	0.059	0.17	0.37

Client Sample ID: B21-SS2

Lab ID#: 0802484B-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.039	0.042	0.15	0.17
cis-1,2-Dichloroethene	0.078	0.077 J	0.31	0.30 J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B21-SS2

Lab ID#: 0802484B-21A

1,1,1-Trichloroethane	0.078	0.17	0.42	0.93
Trichloroethene	0.078	57	0.42	300
Tetrachloroethene	0.078	5.1	0.53	35
Carbon Tetrachloride	0.078	0.11	0.49	0.70

Client Sample ID: B21-SS2 Lab Duplicate

Lab ID#: 0802484B-21AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.042	0.061	0.16
cis-1,2-Dichloroethene	0.031	0.081	0.12	0.32
1,1,1-Trichloroethane	0.031	0.16	0.17	0.85
Trichloroethene	0.031	56 E	0.17	300 E
Tetrachloroethene	0.031	5.2	0.21	35
Carbon Tetrachloride	0.031	0.095	0.20	0.60

Client Sample ID: B116-SS1

Lab ID#: 0802484B-22A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.11	0.96	0.42	3.8
1,1,1-Trichloroethane	0.11	0.12	0.59	0.65
Trichloroethene	0.11	33	0.58	180
Tetrachloroethene	0.11	78	0.73	530
Chloromethane	0.27	0.39	0.55	0.81

Client Sample ID: B114-SS1

Lab ID#: 0802484B-23A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	1.7	260	9.0	1400
Tetrachloroethene	1.7	1200	11	8300

Client Sample ID: B126-SS1

Lab ID#: 0802484B-24A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B126-SS1

Lab ID#: 0802484B-24A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.032	0.58	0.13	2.3
1,1,1-Trichloroethane	0.032	0.080	0.18	0.44
Trichloroethene	0.032	0.20	0.17	1.0
Tetrachloroethene	0.032	3.1	0.22	21
Chloromethane	0.080	2.2	0.17	4.5
Chloroethane	0.080	0.80	0.21	2.1

Client Sample ID: B120-A7

Lab ID#: 0802484B-25A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.10	0.063	0.40
1,1,1-Trichloroethane	0.032	0.24	0.17	1.3
Trichloroethene	0.032	0.064	0.17	0.34
Tetrachloroethene	0.032	0.38	0.21	2.6
Chloromethane	0.079	0.56	0.16	1.2
Carbon Tetrachloride	0.032	0.054	0.20	0.34



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B121-A2

Lab ID#: 0802484B-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030321	Date of Collection: 2/20/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 01:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.029	0.064	0.11
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	0.037	0.13	0.15
1,1,1-Trichloroethane	0.032	0.13	0.18	0.70
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.13	0.22	0.88
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.57	0.17	1.2
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	86	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: A-1

Lab ID#: 0802484B-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030322	Date of Collection: 2/20/08
Dil. Factor:	1.49	Date of Analysis: 3/4/08 02:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	0.036	0.059	0.14
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	0.13	0.16	0.69
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	0.065	0.20	0.44
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Chloromethane	0.074	0.70	0.15	1.4
Chloroethane	0.074	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.065	0.19	0.41

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	86	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A3

Lab ID#: 0802484B-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030323	Date of Collection: 2/21/08
Dil. Factor:	1.71	Date of Analysis: 3/4/08 02:59 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.10	0.19	0.55
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.17	0.23	1.1
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.53	0.18	1.1
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.067	0.22	0.42

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A6

Lab ID#: 0802484B-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030324	Date of Collection: 2/21/08
Dil. Factor:	1.68	Date of Analysis: 3/4/08 03:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	0.045	0.067	0.18
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.21	0.18	1.1
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.24	0.23	1.6
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.52	0.17	1.1
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.059	0.21	0.37

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A1

Lab ID#: 0802484B-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030325	Date of Collection: 2/21/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 04:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.018	0.064	0.069
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.041	0.18	0.22
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.034	0.17	0.18
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.085	0.22	0.57
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.58	0.17	1.2
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.068	0.20	0.43

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A5

Lab ID#: 0802484B-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030326	Date of Collection: 2/21/08
Dil. Factor:	1.46	Date of Analysis: 3/4/08 05:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	0.067	0.16	0.37
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	0.034	0.16	0.18
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	0.14	0.20	0.95
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloromethane	0.073	0.50	0.15	1.0
Chloroethane	0.073	Not Detected	0.19	Not Detected
Chlorobenzene	0.029	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.029	0.070	0.18	0.44

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A2

Lab ID#: 0802484B-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030327	Date of Collection: 2/21/08
Dil. Factor:	1.68	Date of Analysis: 3/4/08 06:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	0.047	0.067	0.19
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.17	0.18	0.93
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.65	0.23	4.4
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	0.56	0.17	1.2
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.096	0.21	0.61

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A4

Lab ID#: 0802484B-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030407	Date of Collection: 2/21/08
Dil. Factor:	1.64	Date of Analysis: 3/4/08 04:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	0.082	0.18	0.44
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.034	0.18	0.18
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.11	0.22	0.73
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.60	0.17	1.2
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B124-SS1

Lab ID#: 0802484B-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030408	Date of Collection: 2/21/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 04:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.023	0.064	0.091
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.058	0.18	0.32
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.33	0.17	1.8
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.93	0.22	6.3
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.63	0.17	1.3
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.16	0.20	1.0

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B124-SS1 Lab Duplicate

Lab ID#: 0802484B-19AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030410	Date of Collection: 2/21/08
Dil. Factor:	1.61	Date of Analysis: 3/4/08 06:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.020	0.064	0.079
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.057	0.18	0.31
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.34	0.17	1.8
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.93	0.22	6.3
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.71	0.17	1.5
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.16	0.20	1.0

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: A-2

Lab ID#: 0802484B-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030409	Date of Collection: 2/21/08
Dil. Factor:	1.36	Date of Analysis: 3/4/08 05:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
1,1-Dichloroethene	0.014	0.044	0.054	0.18
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.16	0.15	0.88
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	0.029	0.15	0.15
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.70	0.18	4.7
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected
Chloromethane	0.068	0.53	0.14	1.1
Chloroethane	0.068	Not Detected	0.18	Not Detected
Chlorobenzene	0.027	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.027	0.059	0.17	0.37

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B21-SS2

Lab ID#: 0802484B-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030414	Date of Collection: 2/21/08
Dil. Factor:	3.88	Date of Analysis: 3/4/08 08:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.039	Not Detected	0.099	Not Detected
1,1-Dichloroethene	0.039	0.042	0.15	0.17
1,1-Dichloroethane	0.078	Not Detected	0.31	Not Detected
cis-1,2-Dichloroethene	0.078	0.077 J	0.31	0.30 J
1,1,1-Trichloroethane	0.078	0.17	0.42	0.93
1,2-Dichloroethane	0.078	Not Detected	0.31	Not Detected
Trichloroethene	0.078	57	0.42	300
1,1,2-Trichloroethane	0.078	Not Detected	0.42	Not Detected
Tetrachloroethene	0.078	5.1	0.53	35
1,1,2,2-Tetrachloroethane	0.078	Not Detected	0.53	Not Detected
trans-1,2-Dichloroethene	0.39	Not Detected	1.5	Not Detected
Chloromethane	0.19	Not Detected	0.40	Not Detected
Chloroethane	0.19	Not Detected	0.51	Not Detected
Chlorobenzene	0.078	Not Detected	0.36	Not Detected
Carbon Tetrachloride	0.078	0.11	0.49	0.70

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B21-SS2 Lab Duplicate

Lab ID#: 0802484B-21AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030411	Date of Collection: 2/21/08
Dil. Factor:	1.55	Date of Analysis: 3/4/08 06:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	0.042	0.061	0.16
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	0.081	0.12	0.32
1,1,1-Trichloroethane	0.031	0.16	0.17	0.85
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	56 E	0.17	300 E
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	5.2	0.21	35
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	Not Detected	0.16	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.095	0.20	0.60

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B116-SS1

Lab ID#: 0802484B-22A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030420	Date of Collection: 2/22/08
Dil. Factor:	5.37	Date of Analysis: 3/5/08 12:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.054	Not Detected	0.14	Not Detected
1,1-Dichloroethene	0.054	Not Detected	0.21	Not Detected
1,1-Dichloroethane	0.11	Not Detected	0.43	Not Detected
cis-1,2-Dichloroethene	0.11	0.96	0.42	3.8
1,1,1-Trichloroethane	0.11	0.12	0.59	0.65
1,2-Dichloroethane	0.11	Not Detected	0.43	Not Detected
Trichloroethene	0.11	33	0.58	180
1,1,2-Trichloroethane	0.11	Not Detected	0.59	Not Detected
Tetrachloroethene	0.11	78	0.73	530
1,1,2,2-Tetrachloroethane	0.11	Not Detected	0.74	Not Detected
trans-1,2-Dichloroethene	0.54	Not Detected	2.1	Not Detected
Chloromethane	0.27	0.39	0.55	0.81
Chloroethane	0.27	Not Detected	0.71	Not Detected
Chlorobenzene	0.11	Not Detected	0.49	Not Detected
Carbon Tetrachloride	0.11	Not Detected	0.68	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B114-SS1

Lab ID#: 0802484B-23A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030421	Date of Collection: 2/22/08
Dil. Factor:	84.0	Date of Analysis: 3/5/08 01:07 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1-Dichloroethane	1.7	Not Detected	6.8	Not Detected
cis-1,2-Dichloroethene	1.7	Not Detected	6.7	Not Detected
1,1,1-Trichloroethane	1.7	Not Detected	9.2	Not Detected
1,2-Dichloroethane	1.7	Not Detected	6.8	Not Detected
Trichloroethene	1.7	260	9.0	1400
1,1,2-Trichloroethane	1.7	Not Detected	9.2	Not Detected
Tetrachloroethene	1.7	1200	11	8300
1,1,2,2-Tetrachloroethane	1.7	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	8.4	Not Detected	33	Not Detected
Chloromethane	4.2	Not Detected	8.7	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Chlorobenzene	1.7	Not Detected	7.7	Not Detected
Carbon Tetrachloride	1.7	Not Detected	10	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B126-SS1

Lab ID#: 0802484B-24A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030422	Date of Collection: 2/22/08
Dil. Factor:	1.61	Date of Analysis: 3/5/08 01:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	0.58	0.13	2.3
1,1,1-Trichloroethane	0.032	0.080	0.18	0.44
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.20	0.17	1.0
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	3.1	0.22	21
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	2.2	0.17	4.5
Chloroethane	0.080	0.80	0.21	2.1
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-A7

Lab ID#: 0802484B-25A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030424	Date of Collection: 2/22/08
Dil. Factor:	1.58	Date of Analysis: 3/5/08 03:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	0.10	0.063	0.40
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	0.24	0.17	1.3
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.064	0.17	0.34
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.38	0.21	2.6
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloromethane	0.079	0.56	0.16	1.2
Chloroethane	0.079	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.032	0.054	0.20	0.34

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802484B-26A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030308	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 04:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802484B-26B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030406	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/4/08 02:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802484B-27A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 09:55 AM

Compound	%Recovery
Vinyl Chloride	113
1,1-Dichloroethene	106
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	101
1,2-Dichloroethane	115
Trichloroethene	94
1,1,2-Trichloroethane	98
Tetrachloroethene	96
1,1,2,2-Tetrachloroethane	100
trans-1,2-Dichloroethene	106
Chloromethane	127
Chloroethane	103
Chlorobenzene	97
Carbon Tetrachloride	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802484B-27B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/4/08 12:11 PM

Compound	%Recovery
Vinyl Chloride	113
1,1-Dichloroethene	108
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	102
1,2-Dichloroethane	118
Trichloroethene	98
1,1,2-Trichloroethane	103
Tetrachloroethene	102
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	107
Chloromethane	130
Chloroethane	102
Chlorobenzene	101
Carbon Tetrachloride	115

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802484B-28A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/3/08 10:42 AM

Compound	%Recovery
Vinyl Chloride	103
1,1-Dichloroethene	107
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	109
1,2-Dichloroethane	114
Trichloroethene	94
1,1,2-Trichloroethane	97
Tetrachloroethene	95
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	103
Chloromethane	114
Chloroethane	98
Chlorobenzene	94
Carbon Tetrachloride	115

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802484B-28B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1030405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/4/08 01:35 PM

Compound	%Recovery
Vinyl Chloride	110
1,1-Dichloroethene	110
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	110
1,2-Dichloroethane	114
Trichloroethene	94
1,1,2-Trichloroethane	97
Tetrachloroethene	95
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	104
Chloromethane	120
Chloroethane	102
Chlorobenzene	95
Carbon Tetrachloride	117

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802631A

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 Study
DATE RECEIVED:	02/29/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/13/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B35-SS1	Modified TO-15 SIM	6.5 "Hg	5 psi
01AA	B35-SS1 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
02A	B35-SS2	Modified TO-15 SIM	5.0 "Hg	5 psi
03A	B35-SS3	Modified TO-15 SIM	1.0 "Hg	5 psi
04A	B35-SS4	Modified TO-15 SIM	5.5 "Hg	5 psi
05A	B35-SS5	Modified TO-15 SIM	5.0 "Hg	5 psi
06A	B123-SS1	Modified TO-15 SIM	4.5 "Hg	5 psi
07A	B121-SS1	Modified TO-15 SIM	3.5 "Hg	5 psi
08A	B121-SS2	Modified TO-15 SIM	5.5 "Hg	5 psi
09A	B130-SS1	Modified TO-15 SIM	6.5 "Hg	5 psi
10A	B130-SS2	Modified TO-15 SIM	6.0 "Hg	5 psi
11A	SG-1	Modified TO-15 SIM	1.5 "Hg	5 psi
12A	SG-2	Modified TO-15 SIM	0.4 psi	5 psi
13A	B120-SS1	Modified TO-15 SIM	5.0 "Hg	5 psi
14A	Lab Blank	Modified TO-15 SIM	NA	NA
14B	Lab Blank	Modified TO-15 SIM	NA	NA
14C	Lab Blank	Modified TO-15 SIM	NA	NA

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802631A

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139

FAX: 518-782-0500

DATE RECEIVED: 02/29/2008

DATE COMPLETED: 03/13/2008

P.O. # 2118047

PROJECT # 2118047 WVA SV1 Study

CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
15A	CCV	Modified TO-15 SIM	NA	NA
15B	CCV	Modified TO-15 SIM	NA	NA
15C	CCV	Modified TO-15 SIM	NA	NA
16A	LCS	Modified TO-15 SIM	NA	NA
16B	LCS	Modified TO-15 SIM	NA	NA
16C	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/13/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802631A**

Ten 6 Liter Summa Canister and three 6 Liter Summa Canister (100% Certified) samples were received on February 29, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B35-SS1

Lab ID#: 0802631A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.96	0.19	5.2
Trichloroethene	0.034	0.83	0.18	4.4
Tetrachloroethene	0.034	4.5	0.23	30
Carbon Tetrachloride	0.034	0.065	0.22	0.41

Client Sample ID: B35-SS1 Lab Duplicate

Lab ID#: 0802631A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.96	0.19	5.2
Trichloroethene	0.034	0.80	0.18	4.3
Tetrachloroethene	0.034	4.4	0.23	30
Carbon Tetrachloride	0.034	0.067	0.22	0.42

Client Sample ID: B35-SS2

Lab ID#: 0802631A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.16	5.9	0.64	23
Trichloroethene	0.16	9.4	0.86	50
Tetrachloroethene	0.16	130	1.1	900
Carbon Tetrachloride	0.16	0.52	1.0	3.3

Client Sample ID: B35-SS3

Lab ID#: 0802631A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.014	0.053	0.055	0.21
1,1,1-Trichloroethane	0.028	3.3	0.15	18
Trichloroethene	0.028	0.30	0.15	1.6
Tetrachloroethene	0.028	0.72	0.19	4.9
Chloromethane	0.070	0.38	0.14	0.79
Carbon Tetrachloride	0.028	0.11	0.17	0.71



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B35-SS4

Lab ID#: 0802631A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.047	1.1	0.26	6.2
Trichloroethene	0.047	20	0.25	110
Tetrachloroethene	0.047	29	0.32	200
Chloromethane	0.12	0.19	0.24	0.39
Carbon Tetrachloride	0.047	0.20	0.29	1.2

Client Sample ID: B35-SS5

Lab ID#: 0802631A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.38	0.18	2.1
Trichloroethene	0.032	1.6	0.17	8.8
Tetrachloroethene	0.032	2.5	0.22	17
Chloromethane	0.080	0.12	0.17	0.25
Carbon Tetrachloride	0.032	0.17	0.20	1.0

Client Sample ID: B123-SS1

Lab ID#: 0802631A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.21	0.86	1.1	4.7
Trichloroethene	0.21	8.0	1.1	43
Tetrachloroethene	0.21	120	1.4	840
Chloromethane	0.52	0.70	1.1	1.4
Carbon Tetrachloride	0.21	0.36	1.3	2.2

Client Sample ID: B121-SS1

Lab ID#: 0802631A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.030	0.23	0.12	0.92
1,1,1-Trichloroethane	0.030	0.073	0.16	0.40
Trichloroethene	0.030	12	0.16	65
Tetrachloroethene	0.030	2.5	0.21	17
Chloromethane	0.076	0.10	0.16	0.22



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B121-SS1

Lab ID#: 0802631A-07A

Carbon Tetrachloride	0.030	0.051	0.19	0.32
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Client Sample ID: B121-SS2

Lab ID#: 0802631A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.033	0.068	0.13	0.27
Trichloroethene	0.033	0.36	0.18	1.9
Tetrachloroethene	0.033	0.20	0.22	1.3
Chloromethane	0.082	0.10	0.17	0.22
Carbon Tetrachloride	0.033	0.071	0.21	0.45

Client Sample ID: B130-SS1

Lab ID#: 0802631A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.053	0.068	0.21
1,1,1-Trichloroethane	0.034	2.8	0.19	15
Trichloroethene	0.034	0.051	0.18	0.27
Tetrachloroethene	0.034	2.8	0.23	19
Chloromethane	0.086	0.097	0.18	0.20
Carbon Tetrachloride	0.034	0.043	0.22	0.27

Client Sample ID: B130-SS2

Lab ID#: 0802631A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.34	1.4	1.8	7.4
Trichloroethene	0.34	180	1.8	960
Tetrachloroethene	0.34	17	2.3	120

Client Sample ID: SG-1

Lab ID#: 0802631A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.070	0.24	0.48	1.6



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SG-2

Lab ID#: 0802631A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.026	0.038	0.10	0.15
1,1,1-Trichloroethane	0.026	0.13	0.14	0.71
Trichloroethene	0.026	0.097	0.14	0.52
Tetrachloroethene	0.026	0.25	0.18	1.7
Chloromethane	0.065	0.31	0.13	0.63
Carbon Tetrachloride	0.026	0.069	0.16	0.43

Client Sample ID: B120-SS1

Lab ID#: 0802631A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.75	0.18	4.1
Trichloroethene	0.032	1.1	0.17	5.8
Tetrachloroethene	0.032	1.3	0.22	8.8
Carbon Tetrachloride	0.032	0.69	0.20	4.4



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS1

Lab ID#: 0802631A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030816	Date of Collection: 2/25/08
Dil. Factor:	1.71	Date of Analysis: 3/8/08 09:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.96	0.19	5.2
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.83	0.18	4.4
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	4.5	0.23	30
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	Not Detected	0.18	Not Detected
Chloroethane	0.086	Not Detected U J	0.22	Not Detected U J
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.065	0.22	0.41

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS1 Lab Duplicate

Lab ID#: 0802631A-01AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030817	Date of Collection: 2/25/08
Dil. Factor:	1.71	Date of Analysis: 3/8/08 09:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.96	0.19	5.2
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.80	0.18	4.3
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	4.4	0.23	30
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	Not Detected	0.18	Not Detected
Chloroethane	0.086	Not Detected U J	0.22	Not Detected U J
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.067	0.22	0.42

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS2

Lab ID#: 0802631A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030909	Date of Collection: 2/25/08
Dil. Factor:	8.05	Date of Analysis: 3/9/08 02:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.080	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.080	Not Detected	0.32	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.16	5.9	0.64	23
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Trichloroethene	0.16	9.4	0.86	50
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	130	1.1	900
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Chloromethane	0.40	Not Detected	0.83	Not Detected
Chloroethane	0.40	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Carbon Tetrachloride	0.16	0.52	1.0	3.3

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS3

Lab ID#: 0802631A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030908	Date of Collection: 2/25/08
Dil. Factor:	1.39	Date of Analysis: 3/9/08 01:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
1,1-Dichloroethene	0.014	0.053	0.055	0.21
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.028	3.3	0.15	18
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	0.30	0.15	1.6
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	0.72	0.19	4.9
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloromethane	0.070	0.38	0.14	0.79
Chloroethane	0.070	Not Detected	0.18	Not Detected
Chlorobenzene	0.028	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.028	0.11	0.17	0.71

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS4

Lab ID#: 0802631A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030914	Date of Collection: 2/25/08
Dil. Factor:	2.34	Date of Analysis: 3/9/08 05:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.023	Not Detected	0.060	Not Detected
1,1-Dichloroethene	0.023	Not Detected	0.093	Not Detected
1,1-Dichloroethane	0.047	Not Detected	0.19	Not Detected
cis-1,2-Dichloroethene	0.047	Not Detected	0.18	Not Detected
1,1,1-Trichloroethane	0.047	1.1	0.26	6.2
1,2-Dichloroethane	0.047	Not Detected	0.19	Not Detected
Trichloroethene	0.047	20	0.25	110
1,1,2-Trichloroethane	0.047	Not Detected	0.26	Not Detected
Tetrachloroethene	0.047	29	0.32	200
1,1,2,2-Tetrachloroethane	0.047	Not Detected	0.32	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.93	Not Detected
Chloromethane	0.12	0.19	0.24	0.39
Chloroethane	0.12	Not Detected	0.31	Not Detected
Chlorobenzene	0.047	Not Detected	0.22	Not Detected
Carbon Tetrachloride	0.047	0.20	0.29	1.2

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B35-SS5

Lab ID#: 0802631A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030910	Date of Collection: 2/25/08
Dil. Factor:	1.61	Date of Analysis: 3/9/08 02:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.38	0.18	2.1
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	1.6	0.17	8.8
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	2.5	0.22	17
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.12	0.17	0.25
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.17	0.20	1.0

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B123-SS1

Lab ID#: 0802631A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030917	Date of Collection: 2/25/08
Dil. Factor:	10.5	Date of Analysis: 3/9/08 08:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.10	Not Detected	0.27	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.42	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
1,1,1-Trichloroethane	0.21	0.86	1.1	4.7
1,2-Dichloroethane	0.21	Not Detected	0.85	Not Detected
Trichloroethene	0.21	8.0	1.1	43
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	120	1.4	840
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Chloromethane	0.52	0.70	1.1	1.4
Chloroethane	0.52	Not Detected	1.4	Not Detected
Chlorobenzene	0.21	Not Detected	0.97	Not Detected
Carbon Tetrachloride	0.21	0.36	1.3	2.2

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B121-SS1

Lab ID#: 0802631A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030918	Date of Collection: 2/25/08
Dil. Factor:	1.52	Date of Analysis: 3/9/08 09:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	0.23	0.12	0.92
1,1,1-Trichloroethane	0.030	0.073	0.16	0.40
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	12	0.16	65
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	2.5	0.21	17
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloromethane	0.076	0.10	0.16	0.22
Chloroethane	0.076	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.051	0.19	0.32

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B121-SS2

Lab ID#: 0802631A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030919	Date of Collection: 2/25/08
Dil. Factor:	1.64	Date of Analysis: 3/9/08 10:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	0.068	0.13	0.27
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.36	0.18	1.9
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.20	0.22	1.3
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.10	0.17	0.22
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.071	0.21	0.45

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B130-SS1

Lab ID#: 0802631A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030920	Date of Collection: 2/26/08
Dil. Factor:	1.71	Date of Analysis: 3/10/08 07:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	0.053	0.068	0.21
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	2.8	0.19	15
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.051	0.18	0.27
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	2.8	0.23	19
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.097	0.18	0.20
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.043	0.22	0.27

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B130-SS2

Lab ID#: 0802631A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031112	Date of Collection: 2/26/08
Dil. Factor:	16.8	Date of Analysis: 3/11/08 06:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
1,1-Dichloroethane	0.34	Not Detected	1.4	Not Detected
cis-1,2-Dichloroethene	0.34	Not Detected	1.3	Not Detected
1,1,1-Trichloroethane	0.34	1.4	1.8	7.4
1,2-Dichloroethane	0.34	Not Detected	1.4	Not Detected
Trichloroethene	0.34	180	1.8	960
1,1,2-Trichloroethane	0.34	Not Detected	1.8	Not Detected
Tetrachloroethene	0.34	17	2.3	120
1,1,2,2-Tetrachloroethane	0.34	Not Detected	2.3	Not Detected
trans-1,2-Dichloroethene	1.7	Not Detected	6.7	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Chlorobenzene	0.34	Not Detected	1.5	Not Detected
Carbon Tetrachloride	0.34	Not Detected	2.1	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-1

Lab ID#: 0802631A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030915	Date of Collection: 2/28/08
Dil. Factor:	3.52	Date of Analysis: 3/9/08 06:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.035	Not Detected	0.090	Not Detected
1,1-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1-Dichloroethane	0.070	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.070	Not Detected	0.28	Not Detected
1,1,1-Trichloroethane	0.070	Not Detected	0.38	Not Detected
1,2-Dichloroethane	0.070	Not Detected	0.28	Not Detected
Trichloroethene	0.070	Not Detected	0.38	Not Detected
1,1,2-Trichloroethane	0.070	Not Detected	0.38	Not Detected
Tetrachloroethene	0.070	0.24	0.48	1.6
1,1,2,2-Tetrachloroethane	0.070	Not Detected	0.48	Not Detected
trans-1,2-Dichloroethene	0.35	Not Detected	1.4	Not Detected
Chloromethane	0.18	Not Detected	0.36	Not Detected
Chloroethane	0.18	Not Detected	0.46	Not Detected
Chlorobenzene	0.070	Not Detected	0.32	Not Detected
Carbon Tetrachloride	0.070	Not Detected	0.44	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-2

Lab ID#: 0802631A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031113	Date of Collection: 2/28/08
Dil. Factor:	1.30	Date of Analysis: 3/11/08 06:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.033	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.052	Not Detected
1,1-Dichloroethane	0.026	Not Detected	0.10	Not Detected
cis-1,2-Dichloroethene	0.026	0.038	0.10	0.15
1,1,1-Trichloroethane	0.026	0.13	0.14	0.71
1,2-Dichloroethane	0.026	Not Detected	0.10	Not Detected
Trichloroethene	0.026	0.097	0.14	0.52
1,1,2-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Tetrachloroethene	0.026	0.25	0.18	1.7
1,1,2,2-Tetrachloroethane	0.026	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Chloromethane	0.065	0.31	0.13	0.63
Chloroethane	0.065	Not Detected	0.17	Not Detected
Chlorobenzene	0.026	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.026	0.069	0.16	0.43

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-SS1

Lab ID#: 0802631A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031114	Date of Collection: 2/28/08
Dil. Factor:	1.61	Date of Analysis: 3/11/08 07:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.75	0.18	4.1
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	1.1	0.17	5.8
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	1.3	0.22	8.8
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	Not Detected	0.17	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.69	0.20	4.4

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802631A-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030807	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/8/08 01:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected U J	0.13	Not Detected U J
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802631A-14B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/08 12:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802631A-14C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 12:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	82	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802631A-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/8/08 09:45 AM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	108
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	83
1,1,1-Trichloroethane	76
1,2-Dichloroethane	90
Trichloroethene	80
1,1,2-Trichloroethane	105
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	104
Chloromethane	82
Chloroethane	68 Q
Chlorobenzene	104
Carbon Tetrachloride	85

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802631A-15B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/08 09:39 AM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	111
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	84
1,1,1-Trichloroethane	75
1,2-Dichloroethane	89
Trichloroethene	80
1,1,2-Trichloroethane	106
Tetrachloroethene	85
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	104
Chloromethane	80
Chloroethane	72
Chlorobenzene	104
Carbon Tetrachloride	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802631A-15C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 09:21 AM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	94
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	77
1,1,1-Trichloroethane	76
1,2-Dichloroethane	87
Trichloroethene	78
1,1,2-Trichloroethane	106
Tetrachloroethene	82
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	98
Chloromethane	75
Chloroethane	98
Chlorobenzene	103
Carbon Tetrachloride	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631A-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/8/08 11:30 AM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	118
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	86
1,1,1-Trichloroethane	76
1,2-Dichloroethane	89
Trichloroethene	79
1,1,2-Trichloroethane	105
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	104
Chloromethane	82
Chloroethane	72
Chlorobenzene	101
Carbon Tetrachloride	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631A-16B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a030904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/08 10:24 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	111
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	91
1,2-Dichloroethane	94
Trichloroethene	81
1,1,2-Trichloroethane	106
Tetrachloroethene	84
1,1,2,2-Tetrachloroethane	108
trans-1,2-Dichloroethene	107
Chloromethane	92
Chloroethane	117
Chlorobenzene	105
Carbon Tetrachloride	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631A-16C

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 10:00 AM

Compound	%Recovery
Vinyl Chloride	93
1,1-Dichloroethene	103
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	81
1,1,1-Trichloroethane	88
1,2-Dichloroethane	91
Trichloroethene	78
1,1,2-Trichloroethane	108
Tetrachloroethene	83
1,1,2,2-Tetrachloroethane	111
trans-1,2-Dichloroethene	101
Chloromethane	88
Chloroethane	104
Chlorobenzene	103
Carbon Tetrachloride	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802631B

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 Study
DATE RECEIVED:	02/29/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/13/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
14A	B120-SS2	Modified TO-15 SIM	5.5 "Hg	5 psi
15A	B20-SS1	Modified TO-15 SIM	6.0 "Hg	5 psi
16A	B20-SS2	Modified TO-15 SIM	11.0 "Hg	5 psi
17A	B20-SS3	Modified TO-15 SIM	5.5 "Hg	5 psi
18A	B20-SS4	Modified TO-15 SIM	6.0 "Hg	5 psi
19A	B20-SS5	Modified TO-15 SIM	6.0 "Hg	5 psi
20A	B20-SS6	Modified TO-15 SIM	5.5 "Hg	5 psi
21A	B20-SS7	Modified TO-15 SIM	2.5 "Hg	5 psi
22A	B20-SS8	Modified TO-15 SIM	5.0 "Hg	5 psi
23A	B20-SS9	Modified TO-15 SIM	5.0 "Hg	5 psi
24A	B20-SS10	Modified TO-15 SIM	6.0 "Hg	5 psi
25A	B20-SS11	Modified TO-15 SIM	5.0 "Hg	5 psi
26A	SG-3	Modified TO-15 SIM	4.0 "Hg	5 psi
27A	SG-4	Modified TO-15 SIM	1.0 "Hg	5 psi
27AA	SG-4 Lab Duplicate	Modified TO-15 SIM	1.0 "Hg	5 psi
28A	SG-5	Modified TO-15 SIM	4.0 "Hg	5 psi
30A	SS-2	Modified TO-15 SIM	0.0 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802631B

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139

FAX: 518-782-0500

DATE RECEIVED: 02/29/2008

DATE COMPLETED: 03/13/2008

P.O. # 2118047

PROJECT # 2118047 WVA SV1 Study

CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
30AA	SS-2 Lab Duplicate	Modified TO-15 SIM	0.0 "Hg	5 psi
33A	B25-SS3	Modified TO-15 SIM	2.0 "Hg	5 psi
34A	Lab Blank	Modified TO-15 SIM	NA	NA
34B	Lab Blank	Modified TO-15 SIM	NA	NA
35A	CCV	Modified TO-15 SIM	NA	NA
35B	CCV	Modified TO-15 SIM	NA	NA
36A	LCS	Modified TO-15 SIM	NA	NA
36B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/13/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0802631B**

Fourteen 6 Liter Summa Canister and three 6 Liter Summa Canister (100% Certified) samples were received on February 29, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) information for sample B20-SS10 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

The Chain of Custody (COC) information for samples B20-SS1 and B20-SS9 did not match the information on the canisters with regard to canister identification. The client was notified of the discrepancy and the information on the canisters were used to process and report the samples.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B120-SS2

Lab ID#: 0802631B-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.026	0.065	0.10
1,1,1-Trichloroethane	0.033	1.8	0.18	9.9
Trichloroethene	0.033	1.0	0.18	5.5
Tetrachloroethene	0.033	2.4	0.22	16
Carbon Tetrachloride	0.033	1.9	0.21	12

Client Sample ID: B20-SS1

Lab ID#: 0802631B-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.34	6.6	1.8	36
Trichloroethene	0.34	200	1.8	1100
Tetrachloroethene	0.34	22	2.3	150

Client Sample ID: B20-SS2

Lab ID#: 0802631B-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.021	0.034	0.084	0.13
1,1-Dichloroethane	0.042	0.058	0.17	0.23
1,1,1-Trichloroethane	0.042	1.4	0.23	7.9
Trichloroethene	0.042	7.4	0.23	40
Tetrachloroethene	0.042	1.2	0.29	8.0
Chloromethane	0.11	0.43	0.22	0.89
Carbon Tetrachloride	0.042	0.049	0.27	0.31

Client Sample ID: B20-SS3

Lab ID#: 0802631B-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.049	0.065	0.20
1,1,1-Trichloroethane	0.033	2.6	0.18	14
Trichloroethene	0.033	15	0.18	82
Tetrachloroethene	0.033	3.9	0.22	26
Chloromethane	0.082	0.17	0.17	0.35



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B20-SS3

Lab ID#: 0802631B-17A

Carbon Tetrachloride	0.033	0.081	0.21	0.51
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Client Sample ID: B20-SS4

Lab ID#: 0802631B-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.31	0.043	0.80
1,1-Dichloroethene	0.017	0.21	0.067	0.83
1,1-Dichloroethane	0.034	0.44	0.14	1.8
1,1,1-Trichloroethane	0.034	6.3	0.18	34
1,2-Dichloroethane	0.034	0.041	0.14	0.16
Trichloroethene	0.034	0.25	0.18	1.4
Tetrachloroethene	0.034	0.16	0.23	1.1
Chloromethane	0.084	1.0	0.17	2.2
Chloroethane	0.084	0.52	0.22	1.4

Client Sample ID: B20-SS5

Lab ID#: 0802631B-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.017	0.067	0.068
1,1,1-Trichloroethane	0.034	0.63	0.18	3.4
Tetrachloroethene	0.034	0.33	0.23	2.3
Carbon Tetrachloride	0.034	0.063	0.21	0.39

Client Sample ID: B20-SS6

Lab ID#: 0802631B-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.033	0.43	0.18	2.4
Trichloroethene	0.033	0.13	0.18	0.70
Tetrachloroethene	0.033	0.086	0.22	0.58
Chloromethane	0.082	0.33	0.17	0.68
Carbon Tetrachloride	0.033	0.037	0.21	0.23



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B20-SS7

Lab ID#: 0802631B-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.015	0.015	0.058	0.058
1,1,1-Trichloroethane	0.029	0.27	0.16	1.5
Trichloroethene	0.029	0.37	0.16	2.0
Tetrachloroethene	0.029	0.16	0.20	1.1
Chloromethane	0.073	1.0	0.15	2.2
Chloroethane	0.073	0.12	0.19	0.31
Carbon Tetrachloride	0.029	0.057	0.18	0.36

Client Sample ID: B20-SS8

Lab ID#: 0802631B-22A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.20	22	0.80	87
1,1,1-Trichloroethane	0.40	170	2.2	930
Trichloroethene	0.40	37	2.2	200
Tetrachloroethene	0.40	7.4	2.7	50

Client Sample ID: B20-SS9

Lab ID#: 0802631B-23A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.42	0.18	2.3
Trichloroethene	0.032	0.69	0.17	3.7
Tetrachloroethene	0.032	0.12	0.22	0.80
trans-1,2-Dichloroethene	0.16	0.18	0.64	0.70
Chloromethane	0.080	0.090	0.17	0.19
Carbon Tetrachloride	0.032	0.071	0.20	0.45

Client Sample ID: B20-SS10

Lab ID#: 0802631B-24A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.38	0.18	2.1
Trichloroethene	0.034	0.27	0.18	1.5
Tetrachloroethene	0.034	0.33	0.23	2.2



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B20-SS10

Lab ID#: 0802631B-24A

Carbon Tetrachloride	0.034	0.076	0.21	0.48
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Client Sample ID: B20-SS11

Lab ID#: 0802631B-25A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.68	0.18	3.7
Tetrachloroethene	0.032	0.46	0.22	3.1
Carbon Tetrachloride	0.032	0.054	0.20	0.34

Client Sample ID: SG-3

Lab ID#: 0802631B-26A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.031	0.043	0.17	0.24
Tetrachloroethene	0.031	0.24	0.21	1.6
Chloromethane	0.078	0.16	0.16	0.33
Carbon Tetrachloride	0.031	0.038	0.20	0.24

Client Sample ID: SG-4

Lab ID#: 0802631B-27A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.070	0.61	0.14	1.2
Carbon Tetrachloride	0.028	0.087	0.17	0.55

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0802631B-27AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.070	0.62	0.14	1.3
Carbon Tetrachloride	0.028	0.092	0.17	0.58

Client Sample ID: SG-5

Lab ID#: 0802631B-28A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SG-5

Lab ID#: 0802631B-28A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.048	0.040	0.12
Trichloroethene	0.031	0.064	0.17	0.34
Tetrachloroethene	0.031	0.58	0.21	3.9
Chloromethane	0.078	0.80	0.16	1.7
Chloroethane	0.078	0.17	0.20	0.45
Carbon Tetrachloride	0.031	0.087	0.20	0.55

Client Sample ID: SS-2

Lab ID#: 0802631B-30A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.027	0.14	0.15	0.79
Trichloroethene	0.027	0.99	0.14	5.3
Tetrachloroethene	0.027	0.10	0.18	0.69
Chloromethane	0.067	0.58	0.14	1.2
Carbon Tetrachloride	0.027	0.079	0.17	0.50

Client Sample ID: SS-2 Lab Duplicate

Lab ID#: 0802631B-30AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.027	0.14	0.15	0.78
Trichloroethene	0.027	0.98	0.14	5.3
Tetrachloroethene	0.027	0.11	0.18	0.72
Chloromethane	0.067	0.56	0.14	1.2
Carbon Tetrachloride	0.027	0.079	0.17	0.50

Client Sample ID: B25-SS3

Lab ID#: 0802631B-33A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.14	14	0.57	58
1,1-Dichloroethane	0.29	0.49	1.2	2.0
1,1,1-Trichloroethane	0.29	110	1.6	580
Trichloroethene	0.29	46	1.5	250



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS3

Lab ID#: 0802631B-33A

Tetrachloroethene

0.29

3.0

2.0

21



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B120-SS2

Lab ID#: 0802631B-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031116	Date of Collection: 2/28/08
Dil. Factor:	1.64	Date of Analysis: 3/11/08 09:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	0.026	0.065	0.10
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	1.8	0.18	9.9
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	1.0	0.18	5.5
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	2.4	0.22	16
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	Not Detected	0.17	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	1.9	0.21	12

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS1

Lab ID#: 0802631B-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031117	Date of Collection: 2/28/08
Dil. Factor:	16.8	Date of Analysis: 3/11/08 09:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
1,1-Dichloroethane	0.34	Not Detected	1.4	Not Detected
cis-1,2-Dichloroethene	0.34	Not Detected	1.3	Not Detected
1,1,1-Trichloroethane	0.34	6.6	1.8	36
1,2-Dichloroethane	0.34	Not Detected	1.4	Not Detected
Trichloroethene	0.34	200	1.8	1100
1,1,2-Trichloroethane	0.34	Not Detected	1.8	Not Detected
Tetrachloroethene	0.34	22	2.3	150
1,1,2,2-Tetrachloroethane	0.34	Not Detected	2.3	Not Detected
trans-1,2-Dichloroethene	1.7	Not Detected	6.7	Not Detected
Chloromethane	0.84	Not Detected	1.7	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Chlorobenzene	0.34	Not Detected	1.5	Not Detected
Carbon Tetrachloride	0.34	Not Detected	2.1	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS2

Lab ID#: 0802631B-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031118	Date of Collection: 2/28/08
Dil. Factor:	2.12	Date of Analysis: 3/11/08 10:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.021	Not Detected	0.054	Not Detected
1,1-Dichloroethene	0.021	0.034	0.084	0.13
1,1-Dichloroethane	0.042	0.058	0.17	0.23
cis-1,2-Dichloroethene	0.042	Not Detected	0.17	Not Detected
1,1,1-Trichloroethane	0.042	1.4	0.23	7.9
1,2-Dichloroethane	0.042	Not Detected	0.17	Not Detected
Trichloroethene	0.042	7.4	0.23	40
1,1,2-Trichloroethane	0.042	Not Detected	0.23	Not Detected
Tetrachloroethene	0.042	1.2	0.29	8.0
1,1,2,2-Tetrachloroethane	0.042	Not Detected	0.29	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.84	Not Detected
Chloromethane	0.11	0.43	0.22	0.89
Chloroethane	0.11	Not Detected	0.28	Not Detected
Chlorobenzene	0.042	Not Detected	0.20	Not Detected
Carbon Tetrachloride	0.042	0.049	0.27	0.31

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS3

Lab ID#: 0802631B-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031119	Date of Collection: 2/28/08
Dil. Factor:	1.64	Date of Analysis: 3/12/08 12:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	0.049	0.065	0.20
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	2.6	0.18	14
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	15	0.18	82
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	3.9	0.22	26
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.17	0.17	0.35
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.081	0.21	0.51

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS4

Lab ID#: 0802631B-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031120	Date of Collection: 2/28/08
Dil. Factor:	1.68	Date of Analysis: 3/12/08 01:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	0.31	0.043	0.80
1,1-Dichloroethene	0.017	0.21	0.067	0.83
1,1-Dichloroethane	0.034	0.44	0.14	1.8
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	6.3	0.18	34
1,2-Dichloroethane	0.034	0.041	0.14	0.16
Trichloroethene	0.034	0.25	0.18	1.4
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.16	0.23	1.1
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	1.0	0.17	2.2
Chloroethane	0.084	0.52	0.22	1.4
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS5

Lab ID#: 0802631B-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031207	Date of Collection: 2/28/08
Dil. Factor:	1.68	Date of Analysis: 3/12/08 01:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	0.017	0.067	0.068
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.63	0.18	3.4
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.33	0.23	2.3
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	Not Detected	0.17	Not Detected
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.063	0.21	0.39

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS6

Lab ID#: 0802631B-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031208	Date of Collection: 2/28/08
Dil. Factor:	1.64	Date of Analysis: 3/12/08 01:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	0.43	0.18	2.4
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.13	0.18	0.70
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.086	0.22	0.58
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	0.33	0.17	0.68
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.037	0.21	0.23

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS7

Lab ID#: 0802631B-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031209	Date of Collection: 2/28/08
Dil. Factor:	1.46	Date of Analysis: 3/12/08 02:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	0.015	0.058	0.058
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	0.27	0.16	1.5
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	0.37	0.16	2.0
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	0.16	0.20	1.1
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloromethane	0.073	1.0	0.15	2.2
Chloroethane	0.073	0.12	0.19	0.31
Chlorobenzene	0.029	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.029	0.057	0.18	0.36

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS8

Lab ID#: 0802631B-22A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031210	Date of Collection: 2/28/08
Dil. Factor:	20.1	Date of Analysis: 3/12/08 03:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.20	Not Detected	0.51	Not Detected
1,1-Dichloroethene	0.20	22	0.80	87
1,1-Dichloroethane	0.40	Not Detected	1.6	Not Detected
cis-1,2-Dichloroethene	0.40	Not Detected	1.6	Not Detected
1,1,1-Trichloroethane	0.40	170	2.2	930
1,2-Dichloroethane	0.40	Not Detected	1.6	Not Detected
Trichloroethene	0.40	37	2.2	200
1,1,2-Trichloroethane	0.40	Not Detected	2.2	Not Detected
Tetrachloroethene	0.40	7.4	2.7	50
1,1,2,2-Tetrachloroethane	0.40	Not Detected	2.8	Not Detected
trans-1,2-Dichloroethene	2.0	Not Detected	8.0	Not Detected
Chloromethane	1.0	Not Detected	2.1	Not Detected
Chloroethane	1.0	Not Detected	2.6	Not Detected
Chlorobenzene	0.40	Not Detected	1.8	Not Detected
Carbon Tetrachloride	0.40	Not Detected	2.5	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	88	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS9

Lab ID#: 0802631B-23A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031212	Date of Collection: 2/28/08
Dil. Factor:	1.61	Date of Analysis: 3/12/08 04:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.42	0.18	2.3
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.69	0.17	3.7
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.12	0.22	0.80
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	0.18	0.64	0.70
Chloromethane	0.080	0.090	0.17	0.19
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.071	0.20	0.45

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	91	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS10

Lab ID#: 0802631B-24A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031213	Date of Collection: 2/28/08
Dil. Factor:	1.68	Date of Analysis: 3/12/08 05:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.38	0.18	2.1
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.27	0.18	1.5
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.33	0.23	2.2
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	Not Detected	0.17	Not Detected
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.076	0.21	0.48

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS11

Lab ID#: 0802631B-25A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031214	Date of Collection: 2/28/08
Dil. Factor:	1.61	Date of Analysis: 3/12/08 05:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.68	0.18	3.7
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.46	0.22	3.1
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	Not Detected	0.17	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.054	0.20	0.34

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-3

Lab ID#: 0802631B-26A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031215	Date of Collection: 2/28/08
Dil. Factor:	1.55	Date of Analysis: 3/12/08 06:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.043	0.17	0.24
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.24	0.21	1.6
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	0.16	0.16	0.33
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.038	0.20	0.24

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-4

Lab ID#: 0802631B-27A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031216	Date of Collection: 2/28/08
Dil. Factor:	1.39	Date of Analysis: 3/12/08 07:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloromethane	0.070	0.61	0.14	1.2
Chloroethane	0.070	Not Detected	0.18	Not Detected
Chlorobenzene	0.028	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.028	0.087	0.17	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	83	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-4 Lab Duplicate

Lab ID#: 0802631B-27AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031217	Date of Collection: 2/28/08
Dil. Factor:	1.39	Date of Analysis: 3/12/08 08:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloromethane	0.070	0.62	0.14	1.3
Chloroethane	0.070	Not Detected	0.18	Not Detected
Chlorobenzene	0.028	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.028	0.092	0.17	0.58

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	86	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-5

Lab ID#: 0802631B-28A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031219	Date of Collection: 2/28/08
Dil. Factor:	1.55	Date of Analysis: 3/12/08 09:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	0.048	0.040	0.12
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	0.064	0.17	0.34
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.58	0.21	3.9
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	0.80	0.16	1.7
Chloroethane	0.078	0.17	0.20	0.45
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.087	0.20	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SS-2

Lab ID#: 0802631B-30A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031220	Date of Collection: 2/28/08
Dil. Factor:	1.34	Date of Analysis: 3/12/08 10:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.14	0.15	0.79
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	0.99	0.14	5.3
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.10	0.18	0.69
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Chloromethane	0.067	0.58	0.14	1.2
Chloroethane	0.067	Not Detected	0.18	Not Detected
Chlorobenzene	0.027	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.027	0.079	0.17	0.50

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SS-2 Lab Duplicate

Lab ID#: 0802631B-30AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031221	Date of Collection: 2/28/08
Dil. Factor:	1.34	Date of Analysis: 3/12/08 11:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.14	0.15	0.78
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	0.98	0.14	5.3
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.11	0.18	0.72
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Chloromethane	0.067	0.56	0.14	1.2
Chloroethane	0.067	Not Detected	0.18	Not Detected
Chlorobenzene	0.027	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.027	0.079	0.17	0.50

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS3

Lab ID#: 0802631B-33A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031222	Date of Collection: 2/28/08
Dil. Factor:	14.4	Date of Analysis: 3/12/08 11:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.14	Not Detected	0.37	Not Detected
1,1-Dichloroethene	0.14	14	0.57	58
1,1-Dichloroethane	0.29	0.49	1.2	2.0
cis-1,2-Dichloroethene	0.29	Not Detected	1.1	Not Detected
1,1,1-Trichloroethane	0.29	110	1.6	580
1,2-Dichloroethane	0.29	Not Detected	1.2	Not Detected
Trichloroethene	0.29	46	1.5	250
1,1,2-Trichloroethane	0.29	Not Detected	1.6	Not Detected
Tetrachloroethene	0.29	3.0	2.0	21
1,1,2,2-Tetrachloroethane	0.29	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected
Chloromethane	0.72	Not Detected	1.5	Not Detected
Chloroethane	0.72	Not Detected	1.9	Not Detected
Chlorobenzene	0.29	Not Detected	1.3	Not Detected
Carbon Tetrachloride	0.29	Not Detected	1.8	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802631B-34A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031105	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 12:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	82	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0802631B-34B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031206	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 12:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	86	70-130



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Client Sample ID: CCV

Lab ID#: 0802631B-35A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 09:21 AM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	94
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	77
1,1,1-Trichloroethane	76
1,2-Dichloroethane	87
Trichloroethene	78
1,1,2-Trichloroethane	106
Tetrachloroethene	82
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	98
Chloromethane	75
Chloroethane	98
Chlorobenzene	103
Carbon Tetrachloride	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802631B-35B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 09:44 AM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	87
1,1-Dichloroethane	82
cis-1,2-Dichloroethene	74
1,1,1-Trichloroethane	82
1,2-Dichloroethane	83
Trichloroethene	75
1,1,2-Trichloroethane	96
Tetrachloroethene	77
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	90
Chloromethane	74
Chloroethane	107
Chlorobenzene	97
Carbon Tetrachloride	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631B-36A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/11/08 10:00 AM

Compound	%Recovery
Vinyl Chloride	93
1,1-Dichloroethene	103
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	81
1,1,1-Trichloroethane	88
1,2-Dichloroethane	91
Trichloroethene	78
1,1,2-Trichloroethane	108
Tetrachloroethene	83
1,1,2,2-Tetrachloroethane	111
trans-1,2-Dichloroethene	101
Chloromethane	88
Chloroethane	104
Chlorobenzene	103
Carbon Tetrachloride	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631B-36B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a031204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 10:23 AM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	110
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	82
1,1,1-Trichloroethane	88
1,2-Dichloroethane	90
Trichloroethene	78
1,1,2-Trichloroethane	102
Tetrachloroethene	82
1,1,2,2-Tetrachloroethane	101
trans-1,2-Dichloroethene	100
Chloromethane	80
Chloroethane	108
Chlorobenzene	101
Carbon Tetrachloride	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130



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- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0802631C

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirmie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirmie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139
FAX: 518-782-0500
DATE RECEIVED: 02/29/2008
DATE COMPLETED: 03/13/2008

P.O. # 2118047
PROJECT # 2118047 WVA SV1 Study
CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
29A	SG-6	Modified TO-15	3.5 "Hg	5 psi
31A	B25-SS1	Modified TO-15	4.5 "Hg	5 psi
32A	B25-SS2	Modified TO-15	6.5 "Hg	5 psi
33A	Lab Blank	Modified TO-15	NA	NA
34A	CCV	Modified TO-15	NA	NA
35A	LCS	Modified TO-15	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/13/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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LABORATORY NARRATIVE**Modified TO-15****Malcolm Pirnie****Workorder# 0802631C**

Three 6 Liter Summa Canister samples were received on February 29, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample SG-6 due to the presence of high level non-target species.

Samples SG-6, B25-SS1 and B25-SS2 were transferred from SIM/Low Level analysis to full scan TO-15 due to high levels of target/non-target compounds.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



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Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-6

Lab ID#: 0802631C-29A

No Detections Were Found.

Client Sample ID: B25-SS1

Lab ID#: 0802631C-31A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	79	86	310	340
1,1,1-Trichloroethane	79	2300	430	12000
Trichloroethene	79	17000	420	94000

Client Sample ID: B25-SS2

Lab ID#: 0802631C-32A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	6.8	11	28	45
cis-1,2-Dichloroethene	6.8	11	27	45
1,1,1-Trichloroethane	6.8	470	37	2600
Trichloroethene	6.8	1500	37	7900



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Client Sample ID: SG-6

Lab ID#: 0802631C-29A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031218	Date of Collection: 2/28/08
Dil. Factor:	30.4	Date of Analysis: 3/12/08 10:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	61	Not Detected	120	Not Detected
Vinyl Chloride	15	Not Detected	39	Not Detected
Chloroethane	15	Not Detected	40	Not Detected
1,1-Dichloroethene	15	Not Detected	60	Not Detected
trans-1,2-Dichloroethene	15	Not Detected	60	Not Detected
1,1-Dichloroethane	15	Not Detected	62	Not Detected
cis-1,2-Dichloroethene	15	Not Detected	60	Not Detected
1,1,1-Trichloroethane	15	Not Detected	83	Not Detected
Carbon Tetrachloride	15	Not Detected	96	Not Detected
1,2-Dichloroethane	15	Not Detected	62	Not Detected
Trichloroethene	15	Not Detected	82	Not Detected
1,1,2-Trichloroethane	15	Not Detected	83	Not Detected
Tetrachloroethene	15	Not Detected	100	Not Detected
Chlorobenzene	15	Not Detected	70	Not Detected
1,1,2,2-Tetrachloroethane	15	Not Detected	100	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	93	70-130



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Client Sample ID: B25-SS1

Lab ID#: 0802631C-31A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031219	Date of Collection: 2/28/08
Dil. Factor:	158	Date of Analysis: 3/12/08 11:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	320	Not Detected	650	Not Detected
Vinyl Chloride	79	Not Detected	200	Not Detected
Chloroethane	79	Not Detected	210	Not Detected
1,1-Dichloroethene	79	86	310	340
trans-1,2-Dichloroethene	79	Not Detected	310	Not Detected
1,1-Dichloroethane	79	Not Detected	320	Not Detected
cis-1,2-Dichloroethene	79	Not Detected	310	Not Detected
1,1,1-Trichloroethane	79	2300	430	12000
Carbon Tetrachloride	79	Not Detected	500	Not Detected
1,2-Dichloroethane	79	Not Detected	320	Not Detected
Trichloroethene	79	17000	420	94000
1,1,2-Trichloroethane	79	Not Detected	430	Not Detected
Tetrachloroethene	79	Not Detected	540	Not Detected
Chlorobenzene	79	Not Detected	360	Not Detected
1,1,2,2-Tetrachloroethane	79	Not Detected	540	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	93	70-130



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Client Sample ID: B25-SS2

Lab ID#: 0802631C-32A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031220	Date of Collection: 2/28/08
Dil. Factor:	13.7	Date of Analysis: 3/12/08 11:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	27	Not Detected	56	Not Detected
Vinyl Chloride	6.8	Not Detected	18	Not Detected
Chloroethane	6.8	Not Detected	18	Not Detected
1,1-Dichloroethene	6.8	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	6.8	Not Detected	27	Not Detected
1,1-Dichloroethane	6.8	11	28	45
cis-1,2-Dichloroethene	6.8	11	27	45
1,1,1-Trichloroethane	6.8	470	37	2600
Carbon Tetrachloride	6.8	Not Detected	43	Not Detected
1,2-Dichloroethane	6.8	Not Detected	28	Not Detected
Trichloroethene	6.8	1500	37	7900
1,1,2-Trichloroethane	6.8	Not Detected	37	Not Detected
Tetrachloroethene	6.8	Not Detected	46	Not Detected
Chlorobenzene	6.8	Not Detected	32	Not Detected
1,1,2,2-Tetrachloroethane	6.8	Not Detected	47	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	92	70-130



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Client Sample ID: Lab Blank

Lab ID#: 0802631C-33A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 01:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0802631C-34A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 11:22 AM

Compound	%Recovery
Chloromethane	77
Vinyl Chloride	73
Chloroethane	77
1,1-Dichloroethene	77
trans-1,2-Dichloroethene	78
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	84
1,1,1-Trichloroethane	86
Carbon Tetrachloride	92
1,2-Dichloroethane	93
Trichloroethene	85
1,1,2-Trichloroethane	93
Tetrachloroethene	88
Chlorobenzene	92
1,1,2,2-Tetrachloroethane	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0802631C-35A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8031204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/12/08 12:17 PM

Compound	%Recovery
Chloromethane	88
Vinyl Chloride	75
Chloroethane	84
1,1-Dichloroethene	92
trans-1,2-Dichloroethene	84
1,1-Dichloroethane	95
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	94
Carbon Tetrachloride	100
1,2-Dichloroethane	97
Trichloroethene	88
1,1,2-Trichloroethane	98
Tetrachloroethene	90
Chlorobenzene	91
1,1,2,2-Tetrachloroethane	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	100	70-130



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- Laboratory Narrative;
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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0803154A

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 - Study
DATE RECEIVED:	03/07/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/20/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B25-SS4	Modified TO-15 SIM	5.0 "Hg	5 psi
02A	B25-SS5	Modified TO-15 SIM	6.5 "Hg	5 psi
03A	B25-SS6	Modified TO-15 SIM	6.5 "Hg	5 psi
04A	B25-SS7	Modified TO-15 SIM	6.5 "Hg	5 psi
05A	B25-SS8	Modified TO-15 SIM	3.5 "Hg	5 psi
08A	B25-SS11	Modified TO-15 SIM	6.5 "Hg	5 psi
08AA	B25-SS11 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
09A	B25-SS12	Modified TO-15 SIM	6.0 "Hg	5 psi
10A	B25-SS13	Modified TO-15 SIM	8.0 "Hg	5 psi
11A	B25-SS14	Modified TO-15 SIM	4.0 "Hg	5 psi
12A	B25-SS15	Modified TO-15 SIM	6.5 "Hg	5 psi
13A	B25-SS16	Modified TO-15 SIM	6.5 "Hg	5 psi
14A	B25-SS17	Modified TO-15 SIM	5.5 "Hg	5 psi
15A	B25-SS18	Modified TO-15 SIM	5.5 "Hg	5 psi
16A	B25-SS19	Modified TO-15 SIM	6.0 "Hg	5 psi
16AA	B25-SS19 Lab Duplicate	Modified TO-15 SIM	6.0 "Hg	5 psi
17A	B25-SS20	Modified TO-15 SIM	4.0 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0803154A

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139
FAX: 518-782-0500
DATE RECEIVED: 03/07/2008
DATE COMPLETED: 03/20/2008

P.O. # 2118047
PROJECT # 2118047 WVA SV1 - Study
CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
18A	B20-SS12	Modified TO-15 SIM	7.0 "Hg	5 psi
19A	Lab Blank	Modified TO-15 SIM	NA	NA
19B	Lab Blank	Modified TO-15 SIM	NA	NA
20A	CCV	Modified TO-15 SIM	NA	NA
20B	CCV	Modified TO-15 SIM	NA	NA
21A	LCS	Modified TO-15 SIM	NA	NA
21B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/20/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0803154A**

Four 6 Liter Summa Canister (100% Certified) and twelve 6 Liter Summa Canister samples were received on March 07, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS4

Lab ID#: 0803154A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.35	0.064	1.4
1,1,1-Trichloroethane	0.032	1.5	0.18	8.1
Trichloroethene	0.032	0.42	0.17	2.3
Tetrachloroethene	0.032	0.50	0.22	3.4
Chloromethane	0.080	0.28	0.17	0.59
Carbon Tetrachloride	0.032	0.18	0.20	1.1

Client Sample ID: B25-SS5

Lab ID#: 0803154A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.18	0.068	0.71
1,1,1-Trichloroethane	0.034	0.56	0.19	3.0
Trichloroethene	0.034	0.16	0.18	0.84
Tetrachloroethene	0.034	0.65	0.23	4.4
Chloromethane	0.086	0.27	0.18	0.56
Carbon Tetrachloride	0.034	0.076	0.22	0.48

Client Sample ID: B25-SS6

Lab ID#: 0803154A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.11	2.2	0.42	8.7
1,1,1-Trichloroethane	0.21	18	1.2	98
Trichloroethene	0.21	140	1.2	780
Tetrachloroethene	0.21	1.5	1.4	10

Client Sample ID: B25-SS7

Lab ID#: 0803154A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.57	4.1	2.2	16
1,1,1-Trichloroethane	0.57	0.58	3.1	3.2
Trichloroethene	0.57	250	3.1	1300
Tetrachloroethene	0.57	25	3.9	170



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS8

Lab ID#: 0803154A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	0.24	0.039	0.61
1,1-Dichloroethene	0.015	0.11	0.060	0.44
1,1-Dichloroethane	0.030	0.045	0.12	0.18
cis-1,2-Dichloroethene	0.030	1.8	0.12	7.0
1,1,1-Trichloroethane	0.030	0.36	0.16	2.0
Trichloroethene	0.030	5.6	0.16	30
Tetrachloroethene	0.030	2.8	0.21	19
Chloromethane	0.076	0.23	0.16	0.48
Carbon Tetrachloride	0.030	0.051	0.19	0.32

Client Sample ID: B25-SS11

Lab ID#: 0803154A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	0.80	0.14	3.2
1,1,1-Trichloroethane	0.068	6.5	0.37	35
Trichloroethene	0.068	41	0.37	220
Tetrachloroethene	0.068	0.45	0.46	3.0
Carbon Tetrachloride	0.068	0.27	0.43	1.7

Client Sample ID: B25-SS11 Lab Duplicate

Lab ID#: 0803154A-08AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.17	0.78	0.68	3.1
1,1,1-Trichloroethane	0.34	7.1	1.9	38
Trichloroethene	0.34	40	1.8	220
Tetrachloroethene	0.34	0.47	2.3	3.2

Client Sample ID: B25-SS12

Lab ID#: 0803154A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.021	0.25	0.083	1.0
1,1,1-Trichloroethane	0.042	1.8	0.23	9.7



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS12

Lab ID#: 0803154A-09A

Trichloroethene	0.042	18	0.22	97
Tetrachloroethene	0.042	0.086	0.28	0.58
Chloromethane	0.10	5.4	0.22	11
Carbon Tetrachloride	0.042	1.0	0.26	6.3

Client Sample ID: B25-SS13

Lab ID#: 0803154A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.71	0.072	2.8
1,1,1-Trichloroethane	0.037	3.2	0.20	18
Tetrachloroethene	0.037	0.17	0.25	1.1

Client Sample ID: B25-SS14

Lab ID#: 0803154A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.060	0.94	0.24	3.7
cis-1,2-Dichloroethene	0.12	0.30	0.47	1.2
1,1,1-Trichloroethane	0.12	5.4	0.65	29
Trichloroethene	0.12	49	0.64	260
Tetrachloroethene	0.12	3.3	0.81	22
Chloromethane	0.30	0.51	0.62	1.0
Carbon Tetrachloride	0.12	0.26	0.75	1.6

Client Sample ID: B25-SS15

Lab ID#: 0803154A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.029	5.4	0.11	22
1,1,1-Trichloroethane	0.057	45	0.31	240
Trichloroethene	0.057	4.2	0.31	22
Tetrachloroethene	0.057	0.26	0.39	1.8
Carbon Tetrachloride	0.057	0.60	0.36	3.8



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Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS16

Lab ID#: 0803154A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	5.6	0.14	22
1,1,1-Trichloroethane	0.068	36	0.37	200
Trichloroethene	0.068	12	0.37	67
Tetrachloroethene	0.068	0.42	0.46	2.8
Carbon Tetrachloride	0.068	0.21	0.43	1.3

Client Sample ID: B25-SS17

Lab ID#: 0803154A-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	2.7	0.065	11
cis-1,2-Dichloroethene	0.033	0.64	0.13	2.6
1,1,1-Trichloroethane	0.033	21	0.18	110
Trichloroethene	0.033	2.3	0.18	12
Tetrachloroethene	0.033	0.44	0.22	3.0
Carbon Tetrachloride	0.033	0.25	0.21	1.6

Client Sample ID: B25-SS18

Lab ID#: 0803154A-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.082	1.6	0.32	6.2
1,1-Dichloroethane	0.16	0.17	0.66	0.68
1,1,1-Trichloroethane	0.16	14	0.89	77
Trichloroethene	0.16	120	0.88	670
Tetrachloroethene	0.16	5.0	1.1	34
Carbon Tetrachloride	0.16	0.24	1.0	1.5

Client Sample ID: B25-SS19

Lab ID#: 0803154A-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.48	0.067	1.9
1,1-Dichloroethane	0.034	0.065	0.14	0.26
cis-1,2-Dichloroethene	0.034	0.056	0.13	0.22



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS19

Lab ID#: 0803154A-16A

1,1,1-Trichloroethane	0.034	2.0	0.18	11
Trichloroethene	0.034	18	0.18	99
Tetrachloroethene	0.034	1.0	0.23	7.0
Carbon Tetrachloride	0.034	0.078	0.21	0.49

Client Sample ID: B25-SS19 Lab Duplicate

Lab ID#: 0803154A-16AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	0.40	0.13	1.6
1,1-Dichloroethane	0.067	0.076	0.27	0.31
cis-1,2-Dichloroethene	0.067	0.080	0.27	0.32
1,1,1-Trichloroethane	0.067	2.3	0.37	13
Trichloroethene	0.067	20	0.36	110
Tetrachloroethene	0.067	1.1	0.46	7.8
Carbon Tetrachloride	0.067	0.095	0.42	0.60

Client Sample ID: B25-SS20

Lab ID#: 0803154A-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.078	0.28	0.31	1.1
1,1,1-Trichloroethane	0.16	3.3	0.84	18
Trichloroethene	0.16	2.1	0.83	11
Tetrachloroethene	0.16	130	1.0	900

Client Sample ID: B20-SS12

Lab ID#: 0803154A-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.25	0.069	1.0
1,1,1-Trichloroethane	0.035	2.9	0.19	16
Tetrachloroethene	0.035	0.59	0.24	4.0



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS4

Lab ID#: 0803154A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031621	Date of Collection: 3/4/08
Dil. Factor:	1.61	Date of Analysis: 3/16/08 11:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.35	0.064	1.4
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	1.5	0.18	8.1
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.42	0.17	2.3
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.50	0.22	3.4
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.28	0.17	0.59
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.18	0.20	1.1

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS5

Lab ID#: 0803154A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031605	Date of Collection: 3/4/08
Dil. Factor:	1.71	Date of Analysis: 3/16/08 11:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	0.18	0.068	0.71
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.56	0.19	3.0
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.16	0.18	0.84
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.65	0.23	4.4
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.27	0.18	0.56
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.076	0.22	0.48

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS6

Lab ID#: 0803154A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031620	Date of Collection: 3/4/08
Dil. Factor:	10.7	Date of Analysis: 3/16/08 11:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.11	Not Detected	0.27	Not Detected
1,1-Dichloroethene	0.11	2.2	0.42	8.7
1,1-Dichloroethane	0.21	Not Detected	0.87	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
1,1,1-Trichloroethane	0.21	18	1.2	98
1,2-Dichloroethane	0.21	Not Detected	0.87	Not Detected
Trichloroethene	0.21	140	1.2	780
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	1.5	1.4	10
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Chloromethane	0.54	Not Detected	1.1	Not Detected
Chloroethane	0.54	Not Detected	1.4	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS7

Lab ID#: 0803154A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031626	Date of Collection: 3/4/08
Dil. Factor:	28.5	Date of Analysis: 3/17/08 03:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.28	Not Detected	0.73	Not Detected
1,1-Dichloroethene	0.28	Not Detected	1.1	Not Detected
1,1-Dichloroethane	0.57	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.57	4.1	2.2	16
1,1,1-Trichloroethane	0.57	0.58	3.1	3.2
1,2-Dichloroethane	0.57	Not Detected	2.3	Not Detected
Trichloroethene	0.57	250	3.1	1300
1,1,2-Trichloroethane	0.57	Not Detected	3.1	Not Detected
Tetrachloroethene	0.57	25	3.9	170
1,1,2,2-Tetrachloroethane	0.57	Not Detected	3.9	Not Detected
trans-1,2-Dichloroethene	2.8	Not Detected	11	Not Detected
Chloromethane	1.4	Not Detected	2.9	Not Detected
Chloroethane	1.4	Not Detected	3.8	Not Detected
Chlorobenzene	0.57	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.57	Not Detected	3.6	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS8

Lab ID#: 0803154A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031619	Date of Collection:	3/4/08
Dil. Factor:	1.52	Date of Analysis:	3/16/08 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	0.24	0.039	0.61
1,1-Dichloroethene	0.015	0.11	0.060	0.44
1,1-Dichloroethane	0.030	0.045	0.12	0.18
cis-1,2-Dichloroethene	0.030	1.8	0.12	7.0
1,1,1-Trichloroethane	0.030	0.36	0.16	2.0
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	5.6	0.16	30
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	2.8	0.21	19
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloromethane	0.076	0.23	0.16	0.48
Chloroethane	0.076	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.051	0.19	0.32

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS11

Lab ID#: 0803154A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031616	Date of Collection: 3/4/08
Dil. Factor:	3.42	Date of Analysis: 3/16/08 07:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.087	Not Detected
1,1-Dichloroethene	0.034	0.80	0.14	3.2
1,1-Dichloroethane	0.068	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.068	Not Detected	0.27	Not Detected
1,1,1-Trichloroethane	0.068	6.5	0.37	35
1,2-Dichloroethane	0.068	Not Detected	0.28	Not Detected
Trichloroethene	0.068	41	0.37	220
1,1,2-Trichloroethane	0.068	Not Detected	0.37	Not Detected
Tetrachloroethene	0.068	0.45	0.46	3.0
1,1,2,2-Tetrachloroethane	0.068	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Chlorobenzene	0.068	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.068	0.27	0.43	1.7

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS11 Lab Duplicate

Lab ID#: 0803154A-08AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031615	Date of Collection: 3/4/08
Dil. Factor:	17.1	Date of Analysis: 3/16/08 06:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,1-Dichloroethene	0.17	0.78	0.68	3.1
1,1-Dichloroethane	0.34	Not Detected	1.4	Not Detected
cis-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
1,1,1-Trichloroethane	0.34	7.1	1.9	38
1,2-Dichloroethane	0.34	Not Detected	1.4	Not Detected
Trichloroethene	0.34	40	1.8	220
1,1,2-Trichloroethane	0.34	Not Detected	1.9	Not Detected
Tetrachloroethene	0.34	0.47	2.3	3.2
1,1,2,2-Tetrachloroethane	0.34	Not Detected	2.3	Not Detected
trans-1,2-Dichloroethene	1.7	Not Detected	6.8	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Chloroethane	0.86	Not Detected	2.2	Not Detected
Chlorobenzene	0.34	Not Detected	1.6	Not Detected
Carbon Tetrachloride	0.34	Not Detected	2.2	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS12

Lab ID#: 0803154A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031618	Date of Collection: 3/4/08
Dil. Factor:	2.10	Date of Analysis: 3/16/08 08:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.021	Not Detected	0.054	Not Detected
1,1-Dichloroethene	0.021	0.25	0.083	1.0
1,1-Dichloroethane	0.042	Not Detected	0.17	Not Detected
cis-1,2-Dichloroethene	0.042	Not Detected	0.17	Not Detected
1,1,1-Trichloroethane	0.042	1.8	0.23	9.7
1,2-Dichloroethane	0.042	Not Detected	0.17	Not Detected
Trichloroethene	0.042	18	0.22	97
1,1,2-Trichloroethane	0.042	Not Detected	0.23	Not Detected
Tetrachloroethene	0.042	0.086	0.28	0.58
1,1,2,2-Tetrachloroethane	0.042	Not Detected	0.29	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Chloromethane	0.10	5.4	0.22	11
Chloroethane	0.10	Not Detected	0.28	Not Detected
Chlorobenzene	0.042	Not Detected	0.19	Not Detected
Carbon Tetrachloride	0.042	1.0	0.26	6.3

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS13

Lab ID#: 0803154A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031625	Date of Collection: 3/4/08
Dil. Factor:	1.83	Date of Analysis: 3/17/08 02:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	0.71	0.072	2.8
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	3.2	0.20	18
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.17	0.25	1.1
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloromethane	0.092	Not Detected	0.19	Not Detected
Chloroethane	0.092	Not Detected	0.24	Not Detected
Chlorobenzene	0.037	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.037	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS14

Lab ID#: 0803154A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031624	Date of Collection: 3/4/08
Dil. Factor:	5.96	Date of Analysis: 3/17/08 01:56 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.060	Not Detected	0.15	Not Detected
1,1-Dichloroethene	0.060	0.94	0.24	3.7
1,1-Dichloroethane	0.12	Not Detected	0.48	Not Detected
cis-1,2-Dichloroethene	0.12	0.30	0.47	1.2
1,1,1-Trichloroethane	0.12	5.4	0.65	29
1,2-Dichloroethane	0.12	Not Detected	0.48	Not Detected
Trichloroethene	0.12	49	0.64	260
1,1,2-Trichloroethane	0.12	Not Detected	0.65	Not Detected
Tetrachloroethene	0.12	3.3	0.81	22
1,1,2,2-Tetrachloroethane	0.12	Not Detected	0.82	Not Detected
trans-1,2-Dichloroethene	0.60	Not Detected	2.4	Not Detected
Chloromethane	0.30	0.51	0.62	1.0
Chloroethane	0.30	Not Detected	0.79	Not Detected
Chlorobenzene	0.12	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.12	0.26	0.75	1.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS15

Lab ID#: 0803154A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031612	Date of Collection: 3/4/08
Dil. Factor:	2.86	Date of Analysis: 3/16/08 04:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.029	Not Detected	0.073	Not Detected
1,1-Dichloroethene	0.029	5.4	0.11	22
1,1-Dichloroethane	0.057	Not Detected	0.23	Not Detected
cis-1,2-Dichloroethene	0.057	Not Detected	0.23	Not Detected
1,1,1-Trichloroethane	0.057	45	0.31	240
1,2-Dichloroethane	0.057	Not Detected	0.23	Not Detected
Trichloroethene	0.057	4.2	0.31	22
1,1,2-Trichloroethane	0.057	Not Detected	0.31	Not Detected
Tetrachloroethene	0.057	0.26	0.39	1.8
1,1,2,2-Tetrachloroethane	0.057	Not Detected	0.39	Not Detected
trans-1,2-Dichloroethene	0.29	Not Detected	1.1	Not Detected
Chloromethane	0.14	Not Detected	0.30	Not Detected
Chloroethane	0.14	Not Detected	0.38	Not Detected
Chlorobenzene	0.057	Not Detected	0.26	Not Detected
Carbon Tetrachloride	0.057	0.60	0.36	3.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS16

Lab ID#: 0803154A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031623	Date of Collection: 3/4/08
Dil. Factor:	3.42	Date of Analysis: 3/17/08 01:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.087	Not Detected
1,1-Dichloroethene	0.034	5.6	0.14	22
1,1-Dichloroethane	0.068	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.068	Not Detected	0.27	Not Detected
1,1,1-Trichloroethane	0.068	36	0.37	200
1,2-Dichloroethane	0.068	Not Detected	0.28	Not Detected
Trichloroethene	0.068	12	0.37	67
1,1,2-Trichloroethane	0.068	Not Detected	0.37	Not Detected
Tetrachloroethene	0.068	0.42	0.46	2.8
1,1,2,2-Tetrachloroethane	0.068	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Chlorobenzene	0.068	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.068	0.21	0.43	1.3

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS17

Lab ID#: 0803154A-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031613	Date of Collection: 3/4/08
Dil. Factor:	1.64	Date of Analysis: 3/16/08 05:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	2.7	0.065	11
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	0.64	0.13	2.6
1,1,1-Trichloroethane	0.033	21	0.18	110
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	2.3	0.18	12
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.44	0.22	3.0
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	Not Detected	0.17	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.25	0.21	1.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS18

Lab ID#: 0803154A-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031611	Date of Collection: 3/4/08
Dil. Factor:	8.20	Date of Analysis: 3/16/08 03:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.082	Not Detected	0.21	Not Detected
1,1-Dichloroethene	0.082	1.6	0.32	6.2
1,1-Dichloroethane	0.16	0.17	0.66	0.68
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	14	0.89	77
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	120	0.88	670
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	5.0	1.1	34
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Chloromethane	0.41	Not Detected	0.85	Not Detected
Chloroethane	0.41	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Carbon Tetrachloride	0.16	0.24	1.0	1.5

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS19

Lab ID#: 0803154A-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031518	Date of Collection: 3/4/08
Dil. Factor:	1.68	Date of Analysis: 3/16/08 12:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	0.48	0.067	1.9
1,1-Dichloroethane	0.034	0.065	0.14	0.26
cis-1,2-Dichloroethene	0.034	0.056	0.13	0.22
1,1,1-Trichloroethane	0.034	2.0	0.18	11
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	18	0.18	99
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	1.0	0.23	7.0
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	Not Detected	0.17	Not Detected
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.078	0.21	0.49

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS19 Lab Duplicate

Lab ID#: 0803154A-16AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031517	Date of Collection: 3/4/08
Dil. Factor:	3.36	Date of Analysis: 3/15/08 09:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.086	Not Detected
1,1-Dichloroethene	0.034	0.40	0.13	1.6
1,1-Dichloroethane	0.067	0.076	0.27	0.31
cis-1,2-Dichloroethene	0.067	0.080	0.27	0.32
1,1,1-Trichloroethane	0.067	2.3	0.37	13
1,2-Dichloroethane	0.067	Not Detected	0.27	Not Detected
Trichloroethene	0.067	20	0.36	110
1,1,2-Trichloroethane	0.067	Not Detected	0.37	Not Detected
Tetrachloroethene	0.067	1.1	0.46	7.8
1,1,2,2-Tetrachloroethane	0.067	Not Detected	0.46	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.3	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.44	Not Detected
Chlorobenzene	0.067	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.067	0.095	0.42	0.60

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS20

Lab ID#: 0803154A-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031614	Date of Collection: 3/4/08
Dil. Factor:	7.75	Date of Analysis: 3/16/08 05:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.078	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.078	0.28	0.31	1.1
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
1,1,1-Trichloroethane	0.16	3.3	0.84	18
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Trichloroethene	0.16	2.1	0.83	11
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	130	1.0	900
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Chloromethane	0.39	Not Detected	0.80	Not Detected
Chloroethane	0.39	Not Detected	1.0	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS12

Lab ID#: 0803154A-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031617	Date of Collection: 3/5/08
Dil. Factor:	1.75	Date of Analysis: 3/16/08 07:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	0.25	0.069	1.0
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	2.9	0.19	16
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.59	0.24	4.0
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	Not Detected	0.18	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0803154A-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 10:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0803154A-19B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 10:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0803154A-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 08:50 AM

Compound	%Recovery
Vinyl Chloride	107
1,1-Dichloroethene	101
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	98
1,2-Dichloroethane	102
Trichloroethene	85
1,1,2-Trichloroethane	95
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	96
Chloromethane	100
Chloroethane	101
Chlorobenzene	93
Carbon Tetrachloride	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0803154A-20B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 08:51 AM

Compound	%Recovery
Vinyl Chloride	112
1,1-Dichloroethene	102
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	100
1,2-Dichloroethane	100
Trichloroethene	80
1,1,2-Trichloroethane	92
Tetrachloroethene	87
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	96
Chloromethane	106
Chloroethane	104
Chlorobenzene	90
Carbon Tetrachloride	105

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0803154A-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 09:44 AM

Compound	%Recovery
Vinyl Chloride	103
1,1-Dichloroethene	110
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	97
1,2-Dichloroethane	102
Trichloroethene	84
1,1,2-Trichloroethane	92
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	94
trans-1,2-Dichloroethene	94
Chloromethane	95
Chloroethane	96
Chlorobenzene	90
Carbon Tetrachloride	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0803154A-21B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 09:39 AM

Compound	%Recovery
Vinyl Chloride	108
1,1-Dichloroethene	116
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	103
1,1,1-Trichloroethane	104
1,2-Dichloroethane	110
Trichloroethene	87
1,1,2-Trichloroethane	98
Tetrachloroethene	94
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	99
Chloromethane	101
Chloroethane	102
Chlorobenzene	94
Carbon Tetrachloride	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0803154AR1

Work Order Summary

CLIENT:	Mr. Andy Vitolins Malcolm Pirnie 43 British American Blvd. Latham, NY 12110	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2139	P.O. #	2118047
FAX:	518-782-0500	PROJECT #	2118047 WVA SV1 - Study
DATE RECEIVED:	03/07/2008	CONTACT:	Bryanna Langley
DATE COMPLETED:	03/20/2008		
DATE REISSUED:	06/02/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	B25-SS4	Modified TO-15 SIM	5.0 "Hg	5 psi
02A	B25-SS5	Modified TO-15 SIM	6.5 "Hg	5 psi
03A	B25-SS6	Modified TO-15 SIM	6.5 "Hg	5 psi
04A	B25-SS7	Modified TO-15 SIM	6.5 "Hg	5 psi
05A	B25-SS8	Modified TO-15 SIM	3.5 "Hg	5 psi
08A	B25-SS11	Modified TO-15 SIM	6.5 "Hg	5 psi
08AA	B25-SS11 Lab Duplicate	Modified TO-15 SIM	6.5 "Hg	5 psi
09A	B25-SS12	Modified TO-15 SIM	6.0 "Hg	5 psi
10A	B25-SS13	Modified TO-15 SIM	8.0 "Hg	5 psi
11A	B25-SS14	Modified TO-15 SIM	4.0 "Hg	5 psi
12A	B25-SS15	Modified TO-15 SIM	6.5 "Hg	5 psi
13A	B25-SS16	Modified TO-15 SIM	6.5 "Hg	5 psi
14A	B25-SS17	Modified TO-15 SIM	5.5 "Hg	5 psi
15A	B25-SS18	Modified TO-15 SIM	5.5 "Hg	5 psi
16A	B25-SS19	Modified TO-15 SIM	6.0 "Hg	5 psi
16AA	B25-SS19 Lab Duplicate	Modified TO-15 SIM	6.0 "Hg	5 psi
17A	B25-SS20	Modified TO-15 SIM	4.0 "Hg	5 psi

Continued on next page



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0803154AR1

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139

FAX: 518-782-0500

DATE RECEIVED: 03/07/2008

DATE COMPLETED: 03/20/2008

DATE REISSUED: 06/02/2008

P.O. # 2118047

PROJECT # 2118047 WVA SV1 - Study

CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
18A	B20-SS12	Modified TO-15 SIM	7.0 "Hg	5 psi
19A	Lab Blank	Modified TO-15 SIM	NA	NA
19B	Lab Blank	Modified TO-15 SIM	NA	NA
20A	CCV	Modified TO-15 SIM	NA	NA
20B	CCV	Modified TO-15 SIM	NA	NA
21A	LCS	Modified TO-15 SIM	NA	NA
21B	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/02/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15 SIM
Malcolm Pirnie
Workorder# 0803154AR1

Four 6 Liter Summa Canister (100% Certified) and twelve 6 Liter Summa Canister samples were received on March 07, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

There were no analytical discrepancies.

DUE TO LABORATORY ERROR, THE REPORT WAS RE-ISSUED ON 6/2/08 TO REPORT VINYL CHLORIDE IN SAMPLE B25-SS12. THE RESULT WAS INCORECTLY OMITTED FROM THE ORIGINAL REPORT. THE OMISSION WAS FOUND AS PART OF THE QUALITY REVIEW PROCESS.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS4

Lab ID#: 0803154AR1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	0.35	0.064	1.4
1,1,1-Trichloroethane	0.032	1.5	0.18	8.1
Trichloroethene	0.032	0.42	0.17	2.3
Tetrachloroethene	0.032	0.50	0.22	3.4
Chloromethane	0.080	0.28	0.17	0.59
Carbon Tetrachloride	0.032	0.18	0.20	1.1

Client Sample ID: B25-SS5

Lab ID#: 0803154AR1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.18	0.068	0.71
1,1,1-Trichloroethane	0.034	0.56	0.19	3.0
Trichloroethene	0.034	0.16	0.18	0.84
Tetrachloroethene	0.034	0.65	0.23	4.4
Chloromethane	0.086	0.27	0.18	0.56
Carbon Tetrachloride	0.034	0.076	0.22	0.48

Client Sample ID: B25-SS6

Lab ID#: 0803154AR1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.11	2.2	0.42	8.7
1,1,1-Trichloroethane	0.21	18	1.2	98
Trichloroethene	0.21	140	1.2	780
Tetrachloroethene	0.21	1.5	1.4	10

Client Sample ID: B25-SS7

Lab ID#: 0803154AR1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.57	4.1	2.2	16
1,1,1-Trichloroethane	0.57	0.58	3.1	3.2
Trichloroethene	0.57	250	3.1	1300
Tetrachloroethene	0.57	25	3.9	170



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS8

Lab ID#: 0803154AR1-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	0.24	0.039	0.61
1,1-Dichloroethene	0.015	0.11	0.060	0.44
1,1-Dichloroethane	0.030	0.045	0.12	0.18
cis-1,2-Dichloroethene	0.030	1.8	0.12	7.0
1,1,1-Trichloroethane	0.030	0.36	0.16	2.0
Trichloroethene	0.030	5.6	0.16	30
Tetrachloroethene	0.030	2.8	0.21	19
Chloromethane	0.076	0.23	0.16	0.48
Carbon Tetrachloride	0.030	0.051	0.19	0.32

Client Sample ID: B25-SS11

Lab ID#: 0803154AR1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	0.80	0.14	3.2
1,1,1-Trichloroethane	0.068	6.5	0.37	35
Trichloroethene	0.068	41	0.37	220
Tetrachloroethene	0.068	0.45	0.46	3.0
Carbon Tetrachloride	0.068	0.27	0.43	1.7

Client Sample ID: B25-SS11 Lab Duplicate

Lab ID#: 0803154AR1-08AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.17	0.78	0.68	3.1
1,1,1-Trichloroethane	0.34	7.1	1.9	38
Trichloroethene	0.34	40	1.8	220
Tetrachloroethene	0.34	0.47	2.3	3.2

Client Sample ID: B25-SS12

Lab ID#: 0803154AR1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.021	0.034	0.054	0.086
1,1-Dichloroethene	0.021	0.25	0.083	1.0



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS12

Lab ID#: 0803154AR1-09A

1,1,1-Trichloroethane	0.042	1.8	0.23	9.7
Trichloroethene	0.042	18	0.22	97
Tetrachloroethene	0.042	0.086	0.28	0.58
Chloromethane	0.10	5.4	0.22	11
Carbon Tetrachloride	0.042	1.0	0.26	6.3

Client Sample ID: B25-SS13

Lab ID#: 0803154AR1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.71	0.072	2.8
1,1,1-Trichloroethane	0.037	3.2	0.20	18
Tetrachloroethene	0.037	0.17	0.25	1.1

Client Sample ID: B25-SS14

Lab ID#: 0803154AR1-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.060	0.94	0.24	3.7
cis-1,2-Dichloroethene	0.12	0.30	0.47	1.2
1,1,1-Trichloroethane	0.12	5.4	0.65	29
Trichloroethene	0.12	49	0.64	260
Tetrachloroethene	0.12	3.3	0.81	22
Chloromethane	0.30	0.51	0.62	1.0
Carbon Tetrachloride	0.12	0.26	0.75	1.6

Client Sample ID: B25-SS15

Lab ID#: 0803154AR1-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.029	5.4	0.11	22
1,1,1-Trichloroethane	0.057	45	0.31	240
Trichloroethene	0.057	4.2	0.31	22
Tetrachloroethene	0.057	0.26	0.39	1.8
Carbon Tetrachloride	0.057	0.60	0.36	3.8



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS16

Lab ID#: 0803154AR1-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	5.6	0.14	22
1,1,1-Trichloroethane	0.068	36	0.37	200
Trichloroethene	0.068	12	0.37	67
Tetrachloroethene	0.068	0.42	0.46	2.8
Carbon Tetrachloride	0.068	0.21	0.43	1.3

Client Sample ID: B25-SS17

Lab ID#: 0803154AR1-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.016	2.7	0.065	11
cis-1,2-Dichloroethene	0.033	0.64	0.13	2.6
1,1,1-Trichloroethane	0.033	21	0.18	110
Trichloroethene	0.033	2.3	0.18	12
Tetrachloroethene	0.033	0.44	0.22	3.0
Carbon Tetrachloride	0.033	0.25	0.21	1.6

Client Sample ID: B25-SS18

Lab ID#: 0803154AR1-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.082	1.6	0.32	6.2
1,1-Dichloroethane	0.16	0.17	0.66	0.68
1,1,1-Trichloroethane	0.16	14	0.89	77
Trichloroethene	0.16	120	0.88	670
Tetrachloroethene	0.16	5.0	1.1	34
Carbon Tetrachloride	0.16	0.24	1.0	1.5

Client Sample ID: B25-SS19

Lab ID#: 0803154AR1-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.48	0.067	1.9
1,1-Dichloroethane	0.034	0.065	0.14	0.26
cis-1,2-Dichloroethene	0.034	0.056	0.13	0.22



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: B25-SS19

Lab ID#: 0803154AR1-16A

1,1,1-Trichloroethane	0.034	2.0	0.18	11
Trichloroethene	0.034	18	0.18	99
Tetrachloroethene	0.034	1.0	0.23	7.0
Carbon Tetrachloride	0.034	0.078	0.21	0.49

Client Sample ID: B25-SS19 Lab Duplicate

Lab ID#: 0803154AR1-16AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.034	0.40	0.13	1.6
1,1-Dichloroethane	0.067	0.076	0.27	0.31
cis-1,2-Dichloroethene	0.067	0.080	0.27	0.32
1,1,1-Trichloroethane	0.067	2.3	0.37	13
Trichloroethene	0.067	20	0.36	110
Tetrachloroethene	0.067	1.1	0.46	7.8
Carbon Tetrachloride	0.067	0.095	0.42	0.60

Client Sample ID: B25-SS20

Lab ID#: 0803154AR1-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.078	0.28	0.31	1.1
1,1,1-Trichloroethane	0.16	3.3	0.84	18
Trichloroethene	0.16	2.1	0.83	11
Tetrachloroethene	0.16	130	1.0	900

Client Sample ID: B20-SS12

Lab ID#: 0803154AR1-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.25	0.069	1.0
1,1,1-Trichloroethane	0.035	2.9	0.19	16
Tetrachloroethene	0.035	0.59	0.24	4.0



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS4

Lab ID#: 0803154AR1-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031621	Date of Collection: 3/4/08
Dil. Factor:	1.61	Date of Analysis: 3/16/08 11:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	0.35	0.064	1.4
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	1.5	0.18	8.1
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.42	0.17	2.3
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.50	0.22	3.4
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.28	0.17	0.59
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.18	0.20	1.1

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS5

Lab ID#: 0803154AR1-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031605	Date of Collection: 3/4/08
Dil. Factor:	1.71	Date of Analysis: 3/16/08 11:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	0.18	0.068	0.71
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.56	0.19	3.0
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.16	0.18	0.84
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.65	0.23	4.4
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.27	0.18	0.56
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.076	0.22	0.48

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS6

Lab ID#: 0803154AR1-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031620	Date of Collection:	3/4/08
Dil. Factor:	10.7	Date of Analysis:	3/16/08 11:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.11	Not Detected	0.27	Not Detected
1,1-Dichloroethene	0.11	2.2	0.42	8.7
1,1-Dichloroethane	0.21	Not Detected	0.87	Not Detected
cis-1,2-Dichloroethene	0.21	Not Detected	0.85	Not Detected
1,1,1-Trichloroethane	0.21	18	1.2	98
1,2-Dichloroethane	0.21	Not Detected	0.87	Not Detected
Trichloroethene	0.21	140	1.2	780
1,1,2-Trichloroethane	0.21	Not Detected	1.2	Not Detected
Tetrachloroethene	0.21	1.5	1.4	10
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.5	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Chloromethane	0.54	Not Detected	1.1	Not Detected
Chloroethane	0.54	Not Detected	1.4	Not Detected
Chlorobenzene	0.21	Not Detected	0.98	Not Detected
Carbon Tetrachloride	0.21	Not Detected	1.3	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS7

Lab ID#: 0803154AR1-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031626	Date of Collection: 3/4/08
Dil. Factor:	28.5	Date of Analysis: 3/17/08 03:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.28	Not Detected	0.73	Not Detected
1,1-Dichloroethene	0.28	Not Detected	1.1	Not Detected
1,1-Dichloroethane	0.57	Not Detected	2.3	Not Detected
cis-1,2-Dichloroethene	0.57	4.1	2.2	16
1,1,1-Trichloroethane	0.57	0.58	3.1	3.2
1,2-Dichloroethane	0.57	Not Detected	2.3	Not Detected
Trichloroethene	0.57	250	3.1	1300
1,1,2-Trichloroethane	0.57	Not Detected	3.1	Not Detected
Tetrachloroethene	0.57	25	3.9	170
1,1,2,2-Tetrachloroethane	0.57	Not Detected	3.9	Not Detected
trans-1,2-Dichloroethene	2.8	Not Detected	11	Not Detected
Chloromethane	1.4	Not Detected	2.9	Not Detected
Chloroethane	1.4	Not Detected	3.8	Not Detected
Chlorobenzene	0.57	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.57	Not Detected	3.6	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS8

Lab ID#: 0803154AR1-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031619	Date of Collection: 3/4/08
Dil. Factor:	1.52	Date of Analysis: 3/16/08 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	0.24	0.039	0.61
1,1-Dichloroethene	0.015	0.11	0.060	0.44
1,1-Dichloroethane	0.030	0.045	0.12	0.18
cis-1,2-Dichloroethene	0.030	1.8	0.12	7.0
1,1,1-Trichloroethane	0.030	0.36	0.16	2.0
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	5.6	0.16	30
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	2.8	0.21	19
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloromethane	0.076	0.23	0.16	0.48
Chloroethane	0.076	Not Detected	0.20	Not Detected
Chlorobenzene	0.030	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.030	0.051	0.19	0.32

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS11

Lab ID#: 0803154AR1-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031616	Date of Collection: 3/4/08
Dil. Factor:	3.42	Date of Analysis: 3/16/08 07:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.087	Not Detected
1,1-Dichloroethene	0.034	0.80	0.14	3.2
1,1-Dichloroethane	0.068	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.068	Not Detected	0.27	Not Detected
1,1,1-Trichloroethane	0.068	6.5	0.37	35
1,2-Dichloroethane	0.068	Not Detected	0.28	Not Detected
Trichloroethene	0.068	41	0.37	220
1,1,2-Trichloroethane	0.068	Not Detected	0.37	Not Detected
Tetrachloroethene	0.068	0.45	0.46	3.0
1,1,2,2-Tetrachloroethane	0.068	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Chlorobenzene	0.068	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.068	0.27	0.43	1.7

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS11 Lab Duplicate

Lab ID#: 0803154AR1-08AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031615	Date of Collection: 3/4/08
Dil. Factor:	17.1	Date of Analysis: 3/16/08 06:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,1-Dichloroethene	0.17	0.78	0.68	3.1
1,1-Dichloroethane	0.34	Not Detected	1.4	Not Detected
cis-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
1,1,1-Trichloroethane	0.34	7.1	1.9	38
1,2-Dichloroethane	0.34	Not Detected	1.4	Not Detected
Trichloroethene	0.34	40	1.8	220
1,1,2-Trichloroethane	0.34	Not Detected	1.9	Not Detected
Tetrachloroethene	0.34	0.47	2.3	3.2
1,1,2,2-Tetrachloroethane	0.34	Not Detected	2.3	Not Detected
trans-1,2-Dichloroethene	1.7	Not Detected	6.8	Not Detected
Chloromethane	0.86	Not Detected	1.8	Not Detected
Chloroethane	0.86	Not Detected	2.2	Not Detected
Chlorobenzene	0.34	Not Detected	1.6	Not Detected
Carbon Tetrachloride	0.34	Not Detected	2.2	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS12

Lab ID#: 0803154AR1-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031618R1	Date of Collection: 3/4/08
Dil. Factor:	2.10	Date of Analysis: 3/16/08 08:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.021	0.034	0.054	0.086
1,1-Dichloroethene	0.021	0.25	0.083	1.0
1,1-Dichloroethane	0.042	Not Detected	0.17	Not Detected
cis-1,2-Dichloroethene	0.042	Not Detected	0.17	Not Detected
1,1,1-Trichloroethane	0.042	1.8	0.23	9.7
1,2-Dichloroethane	0.042	Not Detected	0.17	Not Detected
Trichloroethene	0.042	18	0.22	97
1,1,2-Trichloroethane	0.042	Not Detected	0.23	Not Detected
Tetrachloroethene	0.042	0.086	0.28	0.58
1,1,2,2-Tetrachloroethane	0.042	Not Detected	0.29	Not Detected
trans-1,2-Dichloroethene	0.21	Not Detected	0.83	Not Detected
Chloromethane	0.10	5.4	0.22	11
Chloroethane	0.10	Not Detected	0.28	Not Detected
Chlorobenzene	0.042	Not Detected	0.19	Not Detected
Carbon Tetrachloride	0.042	1.0	0.26	6.3

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS13

Lab ID#: 0803154AR1-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031625	Date of Collection: 3/4/08
Dil. Factor:	1.83	Date of Analysis: 3/17/08 02:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	0.71	0.072	2.8
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	3.2	0.20	18
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.17	0.25	1.1
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloromethane	0.092	Not Detected	0.19	Not Detected
Chloroethane	0.092	Not Detected	0.24	Not Detected
Chlorobenzene	0.037	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.037	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS14

Lab ID#: 0803154AR1-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031624	Date of Collection: 3/4/08
Dil. Factor:	5.96	Date of Analysis: 3/17/08 01:56 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.060	Not Detected	0.15	Not Detected
1,1-Dichloroethene	0.060	0.94	0.24	3.7
1,1-Dichloroethane	0.12	Not Detected	0.48	Not Detected
cis-1,2-Dichloroethene	0.12	0.30	0.47	1.2
1,1,1-Trichloroethane	0.12	5.4	0.65	29
1,2-Dichloroethane	0.12	Not Detected	0.48	Not Detected
Trichloroethene	0.12	49	0.64	260
1,1,2-Trichloroethane	0.12	Not Detected	0.65	Not Detected
Tetrachloroethene	0.12	3.3	0.81	22
1,1,2,2-Tetrachloroethane	0.12	Not Detected	0.82	Not Detected
trans-1,2-Dichloroethene	0.60	Not Detected	2.4	Not Detected
Chloromethane	0.30	0.51	0.62	1.0
Chloroethane	0.30	Not Detected	0.79	Not Detected
Chlorobenzene	0.12	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.12	0.26	0.75	1.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS15

Lab ID#: 0803154AR1-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031612	Date of Collection: 3/4/08
Dil. Factor:	2.86	Date of Analysis: 3/16/08 04:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.029	Not Detected	0.073	Not Detected
1,1-Dichloroethene	0.029	5.4	0.11	22
1,1-Dichloroethane	0.057	Not Detected	0.23	Not Detected
cis-1,2-Dichloroethene	0.057	Not Detected	0.23	Not Detected
1,1,1-Trichloroethane	0.057	45	0.31	240
1,2-Dichloroethane	0.057	Not Detected	0.23	Not Detected
Trichloroethene	0.057	4.2	0.31	22
1,1,2-Trichloroethane	0.057	Not Detected	0.31	Not Detected
Tetrachloroethene	0.057	0.26	0.39	1.8
1,1,2,2-Tetrachloroethane	0.057	Not Detected	0.39	Not Detected
trans-1,2-Dichloroethene	0.29	Not Detected	1.1	Not Detected
Chloromethane	0.14	Not Detected	0.30	Not Detected
Chloroethane	0.14	Not Detected	0.38	Not Detected
Chlorobenzene	0.057	Not Detected	0.26	Not Detected
Carbon Tetrachloride	0.057	0.60	0.36	3.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS16

Lab ID#: 0803154AR1-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031623	Date of Collection: 3/4/08
Dil. Factor:	3.42	Date of Analysis: 3/17/08 01:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.087	Not Detected
1,1-Dichloroethene	0.034	5.6	0.14	22
1,1-Dichloroethane	0.068	Not Detected	0.28	Not Detected
cis-1,2-Dichloroethene	0.068	Not Detected	0.27	Not Detected
1,1,1-Trichloroethane	0.068	36	0.37	200
1,2-Dichloroethane	0.068	Not Detected	0.28	Not Detected
Trichloroethene	0.068	12	0.37	67
1,1,2-Trichloroethane	0.068	Not Detected	0.37	Not Detected
Tetrachloroethene	0.068	0.42	0.46	2.8
1,1,2,2-Tetrachloroethane	0.068	Not Detected	0.47	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.4	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.45	Not Detected
Chlorobenzene	0.068	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.068	0.21	0.43	1.3

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS17

Lab ID#: 0803154AR1-14A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031613	Date of Collection: 3/4/08
Dil. Factor:	1.64	Date of Analysis: 3/16/08 05:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	2.7	0.065	11
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	0.64	0.13	2.6
1,1,1-Trichloroethane	0.033	21	0.18	110
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	2.3	0.18	12
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.44	0.22	3.0
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloromethane	0.082	Not Detected	0.17	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected
Chlorobenzene	0.033	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.033	0.25	0.21	1.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS18

Lab ID#: 0803154AR1-15A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031611	Date of Collection: 3/4/08
Dil. Factor:	8.20	Date of Analysis: 3/16/08 03:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.082	Not Detected	0.21	Not Detected
1,1-Dichloroethene	0.082	1.6	0.32	6.2
1,1-Dichloroethane	0.16	0.17	0.66	0.68
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	14	0.89	77
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Trichloroethene	0.16	120	0.88	670
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	5.0	1.1	34
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Chloromethane	0.41	Not Detected	0.85	Not Detected
Chloroethane	0.41	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Carbon Tetrachloride	0.16	0.24	1.0	1.5

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS19

Lab ID#: 0803154AR1-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031518	Date of Collection: 3/4/08
Dil. Factor:	1.68	Date of Analysis: 3/16/08 12:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	0.48	0.067	1.9
1,1-Dichloroethane	0.034	0.065	0.14	0.26
cis-1,2-Dichloroethene	0.034	0.056	0.13	0.22
1,1,1-Trichloroethane	0.034	2.0	0.18	11
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	18	0.18	99
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	1.0	0.23	7.0
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloromethane	0.084	Not Detected	0.17	Not Detected
Chloroethane	0.084	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.034	0.078	0.21	0.49

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS19 Lab Duplicate

Lab ID#: 0803154AR1-16AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031517	Date of Collection: 3/4/08
Dil. Factor:	3.36	Date of Analysis: 3/15/08 09:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.034	Not Detected	0.086	Not Detected
1,1-Dichloroethene	0.034	0.40	0.13	1.6
1,1-Dichloroethane	0.067	0.076	0.27	0.31
cis-1,2-Dichloroethene	0.067	0.080	0.27	0.32
1,1,1-Trichloroethane	0.067	2.3	0.37	13
1,2-Dichloroethane	0.067	Not Detected	0.27	Not Detected
Trichloroethene	0.067	20	0.36	110
1,1,2-Trichloroethane	0.067	Not Detected	0.37	Not Detected
Tetrachloroethene	0.067	1.1	0.46	7.8
1,1,2,2-Tetrachloroethane	0.067	Not Detected	0.46	Not Detected
trans-1,2-Dichloroethene	0.34	Not Detected	1.3	Not Detected
Chloromethane	0.17	Not Detected	0.35	Not Detected
Chloroethane	0.17	Not Detected	0.44	Not Detected
Chlorobenzene	0.067	Not Detected	0.31	Not Detected
Carbon Tetrachloride	0.067	0.095	0.42	0.60

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS20

Lab ID#: 0803154AR1-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031614	Date of Collection: 3/4/08
Dil. Factor:	7.75	Date of Analysis: 3/16/08 05:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.078	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.078	0.28	0.31	1.1
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
1,1,1-Trichloroethane	0.16	3.3	0.84	18
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Trichloroethene	0.16	2.1	0.83	11
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	130	1.0	900
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Chloromethane	0.39	Not Detected	0.80	Not Detected
Chloroethane	0.39	Not Detected	1.0	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Carbon Tetrachloride	0.16	Not Detected	0.98	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B20-SS12

Lab ID#: 0803154AR1-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031617	Date of Collection: 3/5/08
Dil. Factor:	1.75	Date of Analysis: 3/16/08 07:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	0.25	0.069	1.0
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	2.9	0.19	16
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.59	0.24	4.0
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloromethane	0.088	Not Detected	0.18	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected
Chlorobenzene	0.035	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.035	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0803154AR1-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 10:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0803154AR1-19B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 10:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0803154AR1-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 08:50 AM

Compound	%Recovery
Vinyl Chloride	107
1,1-Dichloroethene	101
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	98
1,2-Dichloroethane	102
Trichloroethene	85
1,1,2-Trichloroethane	95
Tetrachloroethene	90
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	96
Chloromethane	100
Chloroethane	101
Chlorobenzene	93
Carbon Tetrachloride	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0803154AR1-20B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 08:51 AM

Compound	%Recovery
Vinyl Chloride	112
1,1-Dichloroethene	102
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	100
1,2-Dichloroethane	100
Trichloroethene	80
1,1,2-Trichloroethane	92
Tetrachloroethene	87
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	96
Chloromethane	106
Chloroethane	104
Chlorobenzene	90
Carbon Tetrachloride	105

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0803154AR1-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/15/08 09:44 AM

Compound	%Recovery
Vinyl Chloride	103
1,1-Dichloroethene	110
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	97
1,2-Dichloroethane	102
Trichloroethene	84
1,1,2-Trichloroethane	92
Tetrachloroethene	88
1,1,2,2-Tetrachloroethane	94
trans-1,2-Dichloroethene	94
Chloromethane	95
Chloroethane	96
Chlorobenzene	90
Carbon Tetrachloride	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0803154AR1-21B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	1031603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/16/08 09:39 AM

Compound	%Recovery
Vinyl Chloride	108
1,1-Dichloroethene	116
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	103
1,1,1-Trichloroethane	104
1,2-Dichloroethane	110
Trichloroethene	87
1,1,2-Trichloroethane	98
Tetrachloroethene	94
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	99
Chloromethane	101
Chloroethane	102
Chlorobenzene	94
Carbon Tetrachloride	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0803154B

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139
FAX: 518-782-0500
DATE RECEIVED: 03/07/2008
DATE COMPLETED: 03/19/2008

P.O. # 2118047
PROJECT # 2118047 WVA SV1 - Study
CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
06A	B25-SS9	Modified TO-15	6.0 "Hg	5 psi
07A	B25-SS10	Modified TO-15	6.5 "Hg	5 psi
19A	SS-3	Modified TO-15	3.5 "Hg	5 psi
20A	Lab Blank	Modified TO-15	NA	NA
21A	CCV	Modified TO-15	NA	NA
22A	LCS	Modified TO-15	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 03/20/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15****Malcolm Pirnie****Workorder# 0803154B**

Three 6 Liter Summa Canister samples were received on March 07, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B25-SS9

Lab ID#: 0803154B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	3.4	3.8	18	21
Trichloroethene	3.4	1000	18	5400
Tetrachloroethene	3.4	18	23	120

Client Sample ID: B25-SS10

Lab ID#: 0803154B-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	5.7	1800	31	9700
Tetrachloroethene	5.7	39	39	270

Client Sample ID: SS-3

Lab ID#: 0803154B-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Trichloroethene	5.0	1300	27	7000
Tetrachloroethene	5.0	28	34	190



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS9

Lab ID#: 0803154B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031827	Date of Collection: 3/4/08
Dil. Factor:	6.72	Date of Analysis: 3/19/08 01:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	13	Not Detected	28	Not Detected
Vinyl Chloride	3.4	Not Detected	8.6	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	3.4	Not Detected	13	Not Detected
trans-1,2-Dichloroethene	3.4	Not Detected	13	Not Detected
1,1-Dichloroethane	3.4	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	3.4	Not Detected	13	Not Detected
1,1,1-Trichloroethane	3.4	3.8	18	21
Carbon Tetrachloride	3.4	Not Detected	21	Not Detected
1,2-Dichloroethane	3.4	Not Detected	14	Not Detected
Trichloroethene	3.4	1000	18	5400
1,1,2-Trichloroethane	3.4	Not Detected	18	Not Detected
Tetrachloroethene	3.4	18	23	120
Chlorobenzene	3.4	Not Detected	15	Not Detected
1,1,2,2-Tetrachloroethane	3.4	Not Detected	23	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130
1,2-Dichloroethane-d4	75	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: B25-SS10

Lab ID#: 0803154B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031828	Date of Collection: 3/4/08
Dil. Factor:	11.4	Date of Analysis: 3/19/08 02:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	23	Not Detected	47	Not Detected
Vinyl Chloride	5.7	Not Detected	14	Not Detected
Chloroethane	5.7	Not Detected	15	Not Detected
1,1-Dichloroethene	5.7	Not Detected	23	Not Detected
trans-1,2-Dichloroethene	5.7	Not Detected	22	Not Detected
1,1-Dichloroethane	5.7	Not Detected	23	Not Detected
cis-1,2-Dichloroethene	5.7	Not Detected	22	Not Detected
1,1,1-Trichloroethane	5.7	Not Detected	31	Not Detected
Carbon Tetrachloride	5.7	Not Detected	36	Not Detected
1,2-Dichloroethane	5.7	Not Detected	23	Not Detected
Trichloroethene	5.7	1800	31	9700
1,1,2-Trichloroethane	5.7	Not Detected	31	Not Detected
Tetrachloroethene	5.7	39	39	270
Chlorobenzene	5.7	Not Detected	26	Not Detected
1,1,2,2-Tetrachloroethane	5.7	Not Detected	39	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	78	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SS-3

Lab ID#: 0803154B-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031829	Date of Collection: 3/4/08
Dil. Factor:	10.1	Date of Analysis: 3/19/08 02:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	20	Not Detected	42	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	28	Not Detected
Carbon Tetrachloride	5.0	Not Detected	32	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	1300	27	7000
1,1,2-Trichloroethane	5.0	Not Detected	28	Not Detected
Tetrachloroethene	5.0	28	34	190
Chlorobenzene	5.0	Not Detected	23	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	35	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	80	70-130
4-Bromofluorobenzene	89	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0803154B-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031808	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/18/08 01:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	78	70-130
4-Bromofluorobenzene	90	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0803154B-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/18/08 11:53 AM

Compound	%Recovery
Chloromethane	105
Vinyl Chloride	124
Chloroethane	125
1,1-Dichloroethene	107
trans-1,2-Dichloroethene	119
1,1-Dichloroethane	107
cis-1,2-Dichloroethene	108
1,1,1-Trichloroethane	99
Carbon Tetrachloride	91
1,2-Dichloroethane	90
Trichloroethene	104
1,1,2-Trichloroethane	117
Tetrachloroethene	111
Chlorobenzene	110
1,1,2,2-Tetrachloroethane	120

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	79	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0803154B-22A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5031807	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/18/08 12:22 PM

Compound	%Recovery
Chloromethane	90
Vinyl Chloride	106
Chloroethane	105
1,1-Dichloroethene	103
trans-1,2-Dichloroethene	104
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	90
Carbon Tetrachloride	82
1,2-Dichloroethane	80
Trichloroethene	92
1,1,2-Trichloroethane	104
Tetrachloroethene	100
Chlorobenzene	100
1,1,2,2-Tetrachloroethane	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	81	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0804334

Work Order Summary

CLIENT: Mr. Andy Vitolins
Malcolm Pirnie
43 British American Blvd.
Latham, NY 12110

BILL TO: Ms. Accounts Payable
Malcolm Pirnie
P.O. Box 1240
White Plains, NY 10602-1240

PHONE: 518-782-2139
FAX: 518-782-0500
DATE RECEIVED: 04/15/2008
DATE COMPLETED: 04/27/2008

P.O. # 2118047
PROJECT # 2118047 WVA SVI Study
CONTACT: Bryanna Langley

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	319-IA-01	Modified TO-15 SIM	6.5 "Hg	5 psi
02A	307-IA-01	Modified TO-15 SIM	5.0 "Hg	5 psi
03A	401-IA-01	Modified TO-15 SIM	4.0 "Hg	5 psi
03AA	401-IA-01 Lab Duplicate	Modified TO-15 SIM	4.0 "Hg	5 psi
04A	319-SS-01	Modified TO-15 SIM	5.0 "Hg	5 psi
05A	307-SS-01	Modified TO-15 SIM	0.6 psi	5 psi
06A	401-SS-01	Modified TO-15 SIM	0.8 psi	5 psi
07A	999-SS-01	Modified TO-15 SIM	2.5 "Hg	5 psi
08A	Lab Blank	Modified TO-15 SIM	NA	NA
09A	CCV	Modified TO-15 SIM	NA	NA
10A	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

Laboratory Director

DATE: 04/28/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE**Modified TO-15 SIM****Malcolm Pirnie****Workorder# 0804334**

Seven 6 Liter Summa Canister samples were received on April 15, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: 319-IA-01

Lab ID#: 0804334-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,2-Dichloroethane	0.034	0.62	0.14	2.5
Chloromethane	0.086	0.55	0.18	1.1
Carbon Tetrachloride	0.034	0.083	0.22	0.52

Client Sample ID: 307-IA-01

Lab ID#: 0804334-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.032	0.056	0.22	0.38
Chloromethane	0.080	0.62	0.17	1.3
Carbon Tetrachloride	0.032	0.088	0.20	0.55

Client Sample ID: 401-IA-01

Lab ID#: 0804334-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.078	0.51	0.16	1.0
Carbon Tetrachloride	0.031	0.082	0.20	0.51

Client Sample ID: 401-IA-01 Lab Duplicate

Lab ID#: 0804334-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.078	0.58	0.16	1.2
Carbon Tetrachloride	0.031	0.083	0.20	0.52

Client Sample ID: 319-SS-01

Lab ID#: 0804334-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.032	0.13	0.18	0.74
Tetrachloroethene	0.032	0.032	0.22	0.22
Chloromethane	0.080	0.11	0.17	0.22



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: 307-SS-01

Lab ID#: 0804334-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.026	0.065	0.14	0.35
Tetrachloroethene	0.026	0.18	0.18	1.2
Chloromethane	0.064	0.58	0.13	1.2
Carbon Tetrachloride	0.026	0.13	0.16	0.83

Client Sample ID: 401-SS-01

Lab ID#: 0804334-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	0.064	0.47	0.13	0.98
Carbon Tetrachloride	0.025	0.084	0.16	0.53

Client Sample ID: 999-SS-01

Lab ID#: 0804334-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.029	0.12	0.16	0.66
Trichloroethene	0.029	0.040	0.16	0.22
Tetrachloroethene	0.029	0.34	0.20	2.3
Chloromethane	0.073	0.10	0.15	0.22



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 319-IA-01

Lab ID#: 0804334-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042012	Date of Collection: 4/7/08
Dil. Factor:	1.71	Date of Analysis: 4/20/08 06:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
1,2-Dichloroethane	0.034	0.62	0.14	2.5
Trichloroethene	0.034	Not Detected	0.18	Not Detected
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Chloromethane	0.086	0.55	0.18	1.1
Chloroethane	0.086	Not Detected	0.22	Not Detected
Chlorobenzene	0.034	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.034	0.083	0.22	0.52

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 307-IA-01

Lab ID#: 0804334-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042014	Date of Collection: 4/7/08
Dil. Factor:	1.61	Date of Analysis: 4/20/08 08:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.056	0.22	0.38
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.62	0.17	1.3
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	0.088	0.20	0.55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 401-IA-01

Lab ID#: 0804334-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042017	Date of Collection: 4/7/08
Dil. Factor:	1.55	Date of Analysis: 4/20/08 10:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	0.51	0.16	1.0
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.082	0.20	0.51

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 401-IA-01 Lab Duplicate

Lab ID#: 0804334-03AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042022	Date of Collection: 4/7/08
Dil. Factor:	1.55	Date of Analysis: 4/21/08 08:39 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloromethane	0.078	0.58	0.16	1.2
Chloroethane	0.078	Not Detected	0.20	Not Detected
Chlorobenzene	0.031	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.031	0.083	0.20	0.52

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 319-SS-01

Lab ID#: 0804334-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042016	Date of Collection: 4/8/08
Dil. Factor:	1.61	Date of Analysis: 4/20/08 09:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	0.13	0.18	0.74
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	0.032	0.22	0.22
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloromethane	0.080	0.11	0.17	0.22
Chloroethane	0.080	Not Detected	0.21	Not Detected
Chlorobenzene	0.032	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.032	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 307-SS-01

Lab ID#: 0804334-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042019	Date of Collection: 4/8/08
Dil. Factor:	1.29	Date of Analysis: 4/21/08 12:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.033	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.051	Not Detected
1,1-Dichloroethane	0.026	Not Detected	0.10	Not Detected
cis-1,2-Dichloroethene	0.026	Not Detected	0.10	Not Detected
1,1,1-Trichloroethane	0.026	0.065	0.14	0.35
1,2-Dichloroethane	0.026	Not Detected	0.10	Not Detected
Trichloroethene	0.026	Not Detected	0.14	Not Detected
1,1,2-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Tetrachloroethene	0.026	0.18	0.18	1.2
1,1,2,2-Tetrachloroethane	0.026	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.51	Not Detected
Chloromethane	0.064	0.58	0.13	1.2
Chloroethane	0.064	Not Detected	0.17	Not Detected
Chlorobenzene	0.026	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.026	0.13	0.16	0.83

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 401-SS-01

Lab ID#: 0804334-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042020	Date of Collection: 4/8/08
Dil. Factor:	1.27	Date of Analysis: 4/21/08 02:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.032	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.050	Not Detected
1,1-Dichloroethane	0.025	Not Detected	0.10	Not Detected
cis-1,2-Dichloroethene	0.025	Not Detected	0.10	Not Detected
1,1,1-Trichloroethane	0.025	Not Detected	0.14	Not Detected
1,2-Dichloroethane	0.025	Not Detected	0.10	Not Detected
Trichloroethene	0.025	Not Detected	0.14	Not Detected
1,1,2-Trichloroethane	0.025	Not Detected	0.14	Not Detected
Tetrachloroethene	0.025	Not Detected	0.17	Not Detected
1,1,2,2-Tetrachloroethane	0.025	Not Detected	0.17	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.50	Not Detected
Chloromethane	0.064	0.47	0.13	0.98
Chloroethane	0.064	Not Detected	0.17	Not Detected
Chlorobenzene	0.025	Not Detected	0.12	Not Detected
Carbon Tetrachloride	0.025	0.084	0.16	0.53

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 999-SS-01

Lab ID#: 0804334-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042021	Date of Collection: 4/8/08
Dil. Factor:	1.46	Date of Analysis: 4/21/08 04:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	0.12	0.16	0.66
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	0.040	0.16	0.22
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	0.34	0.20	2.3
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloromethane	0.073	0.10	0.15	0.22
Chloroethane	0.073	Not Detected	0.19	Not Detected
Chlorobenzene	0.029	Not Detected	0.13	Not Detected
Carbon Tetrachloride	0.029	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0804334-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042006	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/20/08 02:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloromethane	0.050	Not Detected	0.10	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
Chlorobenzene	0.020	Not Detected	0.092	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0804334-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/20/08 10:24 AM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	112
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	83
1,2-Dichloroethane	100
Trichloroethene	93
1,1,2-Trichloroethane	91
Tetrachloroethene	91
1,1,2,2-Tetrachloroethane	96
trans-1,2-Dichloroethene	103
Chloromethane	100
Chloroethane	70
Chlorobenzene	94
Carbon Tetrachloride	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0804334-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a042003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/20/08 11:17 AM

Compound	%Recovery
Vinyl Chloride	110
1,1-Dichloroethene	104
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	99
1,1,1-Trichloroethane	99
1,2-Dichloroethane	100
Trichloroethene	90
1,1,2-Trichloroethane	91
Tetrachloroethene	92
1,1,2,2-Tetrachloroethane	94
trans-1,2-Dichloroethene	100
Chloromethane	105
Chloroethane	83
Chlorobenzene	92
Carbon Tetrachloride	101

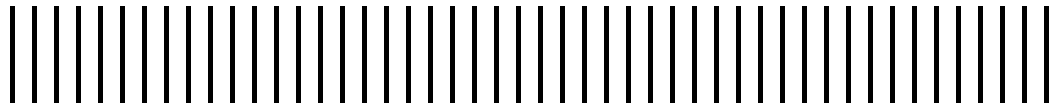
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130



Watervliet Arsenal, Watervliet, New York
Vapor Intrusion Investigation

**Appendix C – Revised NYSDOH
Decision Matrices Letter**





STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

June 25, 2007

Mr. Dale Desnoyers, Director
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway — 12th Floor
Albany, NY 12233-7011

Re: Soil Vapor/Indoor Air Matrices

Dear Mr. Desnoyers,

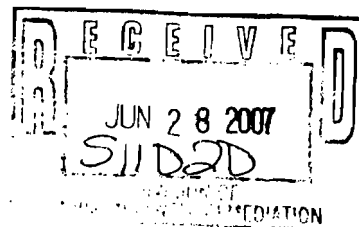
In the wake of recent investigations of soil vapor intrusion at remedial sites, I would like to advise you that the Department has assigned three new volatile chemicals to our existing soil vapor/indoor air decision matrices: vinyl chloride to Matrix 1, and 1,1-dichloroethene and *cis*-1,2-dichloroethene to Matrix 2.

The NYSDOH has made these assignments on the basis of several factors that are consistent with those listed in the *Guidance for Evaluating Soil Vapor Intrusion in New York State* (NYSDOH 2006):

- human health risks, including such factors as a chemical's ability to cause cancer, reproductive, developmental, liver, kidney, nervous system, immune system or other effects, in animals and humans and the doses that may cause those effects;
- the data gaps in a chemical's toxicologic database;
- background concentrations of a chemical in indoor air; and
- analytical capabilities currently available.

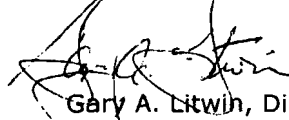
With the assignment of these three volatile chemicals, the decision matrices now provide recommendations for a total of seven chemicals. The following table summarizes the assignments to date:

Volatile Chemical	Soil Vapor/Indoor Air Matrix
carbon tetrachloride	Matrix 1
1,1-dichloroethene	Matrix 2
<i>cis</i> -1,2-dichloroethene	Matrix 2
tetrachloroethene	Matrix 2
1,1,1-trichloroethane	Matrix 2
trichloroethene	Matrix 1
vinyl chloride	Matrix 1



If you have any questions about this information, please feel free to contact me at 402-7850.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary A. Litwin", written over a horizontal line.

Gary A. Litwin, Director
Bureau of Environmental Exposure Investigation

cc: N. Kim, Ph.D.
G. A. Carlson, Ph.D./A. Salame-Alfie, Ph.D.
E. Horn, Ph.D./A. Grey, Ph.D.
D. Luttinger, Ph.D.
S. Bates

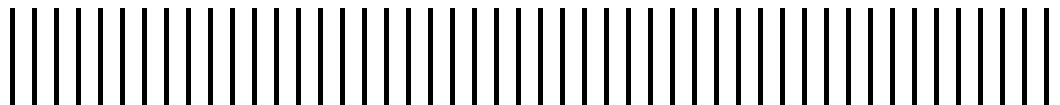
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Watervliet Arsenal, Watervliet, New York

Vapor Intrusion Investigation

Appendix D – Data Validation Reports



25 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802215A

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air samples collected at the Watervliet Arsenal site. The samples were collected 5 and 6 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B25-A1	B23-A1
B25-A2	B23-A2
B25-A3	B23-A3
B25-A4	B24-A1
B25-A5	B24-A2
B25-A7	B24-A3
B25-A9	B38-A1
B25-A10	B38-A2
B25-A12	

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL).

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits.

Qualifications

Qualification was not required for the sample results reported in this WO#.

Conclusion

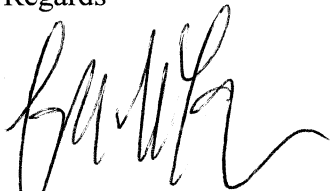
This report presents the results of the data validation of air samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards

A handwritten signature in black ink, appearing to read 'Joe Loeper', with a stylized flourish at the end.

Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

24 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802215B

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 6 and 8 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B25-A6	B25-A11
B25-A8	B23-SS1

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment.

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL).

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. A clerical error with the date of collection on the report form for one sample was corrected by the laboratory. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits.

Qualifications

Data qualification was not required for the samples in this WO#.

Conclusion

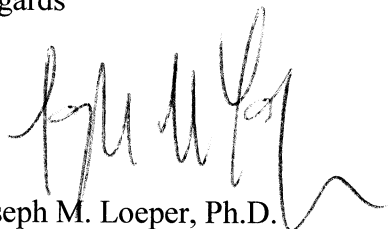
This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

18 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802279

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 11 and 12 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B24-SS2	B112-A1
B24-SS1	B38-SS1
B18-A1	B114-A1
B19-A2	B124-A1
B9-A1	B126-A1
B19-A1	B116-A1
B21-A1	B44-A1
B15-A1	B108-A1

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all air samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the method detection limit (MDL).

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits.

Qualifications

Data qualification was not required for the samples in this WO#.

Conclusion

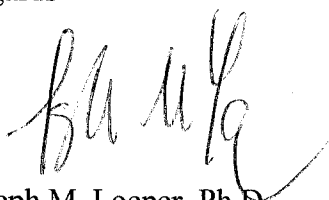
This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the MDL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

16 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802406

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 12 through 15 and 19 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B38-SS2	B110-SS2
B21-A2	B110-SS3
B15-A2b	B110-SS4
B44-SS1	B110-SS5
B110-SS1	B110-SS6

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all ambient air samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the method detection limit (MDL). The “J” qualifier was applied to all positive results or “non-detect” Reporting Limits (RLs) that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs) and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits. A high recovery was observed for chloroethane with one continuing calibration verification (CCV) standard and one LCS, and associated sample results were qualified. The recoveries for all other compounds with LCS and CCV standards were acceptable.

Sample B110-SS5 was analyzed with a dilution as it contained high concentrations of target compounds. The diluted analysis of this sample resulted in elevated RLs for those compounds that were not detected in this sample. These elevated RLs should be noted when assessing the “non-detect” results for sample B110-SS5.

Qualifications

The recoveries for chloroethane in the CCV standard analyzed on 2 March 2008 at 1010 and the associated LCS were above the upper QC limits. These high recoveries are an indication of instrument instability for this compound, and the positive result or “non-detect” RL for this compound in samples B44-SS1 and B110-SS1 have been qualified “J” or “UJ”, respectively, to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the MDL.

J – The reported concentration or RL was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

18 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802484A

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 20 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B130-A1	B19-SS1
B9-SS1	B108-SS1
B15-SS2	B121-A1
SS-1 (Field duplicate of B15-SS2)	A-1 (Field duplicate of B121-A1)*
B18-SS1	B112-SS1

*The laboratory reported sample A-1 with WO# 0802484B, but it is referenced with this data validation report along with its field duplicate sample.

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all air samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory and field duplicate

sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, blind field duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The “J” qualifier was applied to all “non-detect” RLs or positive results that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The field sampler’s signature documenting release of the samples to the courier was not present on the chain-of-custody. However, documentation in the field sampler’s notebook regarding the date of sample collection and the overnight courier’s air bill presenting the date of sample shipment to the laboratory provides confirmation of the sample custody for this WO#.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits. A low recovery was observed for chloroethane with one continuing calibration verification (CCV) standard, and associated sample RLs were qualified. The recoveries for all other compounds with CCV standards were acceptable.

Samples B115-SS2 and SS-1 were analyzed with dilutions since they contained high concentrations of target compounds. The diluted analysis of these samples yielded elevated RLs for those compounds that were not detected in these samples. These elevated RLs should be noted when assessing the “non-detect” results for samples B115-SS2 and SS-1.

Qualifications

The recovery for chloroethane in the CCV standard analyzed on 5 March 2008 at 0921 was below the lower QC limit. This low recovery is an indication of instrument instability resulting in a possible low bias for this compound, and the “non-detect” RLs for this compound in samples B118-SS1, B19-SS1, B121-A1, and B112-SS1 have been qualified “UJ”. These biased low RLs for chloroethane should be noted when assessing the “non-detect” results for this compound in the affected samples.

Samples B15-SS2 and B121-A1 and their blind field duplicate samples, SS-1 and A-1, respectively, were submitted to the laboratory to evaluate sampling and laboratory precision for those target compounds that were determined to be confidently detected. All compounds detected in these duplicate pairs met the NYSDEC criteria for field duplicate samples, with the exception of 1,1-dichloroethene in the samples collected at location B121-A1. The positive result and RL for 1,1-dichloroethene in this duplicate pair have been qualified "J" and "UJ", respectively, to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

J – The reported RL or positive result was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

18 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802484B

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 20 and 21 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B121-A2	B120-A4
B120-A3	B124-SS1
B120-A6	B21-SS2
B120-A1	B116-SS1
B120-A5	B114-SS1
B120-A2	B126-SS1
A-2 (Field duplicate of B120-A2)	B120-A7

Sample A-1 was reported in this laboratory WO# but is included in the data validation report for WO# 0802484A, along with its field duplicate sample.

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all air samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory and field duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, blind field duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The "J" qualifier was applied to all results that were quantitatively estimated because of QC criteria exceedances or because they were measured at a concentration below the RL.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The field sampler's signature documenting release of the samples to the courier was not present on the chain-of-custody. However, documentation in the field sampler's notebook regarding the date of sample collection and the overnight courier's air bill presenting the date of sample shipment to the laboratory provides confirmation of the sample custody for this WO#.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits. The initial calibration (IC) included five calibration levels analyzed on 13 February 2008 along with two additional calibration levels analyzed on 14 February 2008. Qualification was not performed as the first calibration day included the required minimum of five calibration standards and acceptable instrument stability was observed with the subsequent calibration data from the second day.

Samples B21-SS2, B116-SS1, and B114-SS1 were analyzed with dilutions since they contained high concentrations of target compounds. The diluted analysis of these samples yielded elevated RLs for those compounds that were not detected in these samples. These elevated RLs should be noted when assessing the "non-detect" results for samples B21-SS2, B116-SS1, and B114-SS1.

Qualifications

The positive result reported for cis-1,2-dichloroethene in sample B21-SS2 was at a concentration below the RL and has been qualified "J" to indicate that it is a quantitative estimate.

Sample B120-A2 and its blind field duplicate sample, A-2, were submitted to the laboratory to evaluate sampling and laboratory precision for those target compounds that were determined to be confidently detected. All compounds detected in this duplicate pair met the NYSDEC criteria for field duplicate samples, with the exception of carbon tetrachloride. The positive results reported for this compound in this duplicate pair have been qualified "J" to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

J – The reported result was quantitatively estimated because of QC criteria exceedances or because it was reported at a concentration less than the RL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

18 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802484C

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for a soil vapor sample collected at the Watervliet Arsenal site. The sample was collected 20 February 2008 in a six liter summa canister and submitted to Air Toxics Ltd. (ATL), of Folsom, California. The sample was analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the full scan mode rather than the Selected Ion Monitoring (SIM) mode since the sample contained high concentrations of target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The sample included in the referenced ATL work order number is as follows:

B21-SS1

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for the referenced sample. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment.

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The “J” qualifier was applied to all positive results or “non-detect” RLs that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The field sampler’s signature documenting release of the sample to the courier was not present on the chain-of-custody. However, documentation in the field sampler’s notebook regarding the date of sample collection and the overnight courier’s air bill presenting the date of sample shipment to the laboratory provides confirmation of the sample custody for this WO#.

The canister received by the laboratory was in acceptable condition. The sample analysis was performed within the method required holding time. There was no method blank contamination identified. The continuing calibration verification (CCV) standards and BFB instrument checks were acceptable. The surrogate recoveries, LCS recoveries, and internal standard responses were within method QC limits. The initial calibration (IC) for this WO# was performed on two separate days.

Sample B21-SS1 was analyzed with a dilution as it contained high concentrations of target compounds. The diluted analysis of this sample resulted in elevated RLs for those compounds that were not detected in this sample. These elevated RLs should be noted when assessing the “non-detect” results for sample B21-SS1.

Qualifications

The IC for this WO# was not completed within a single analytical sequence, with four of the IC standards analyzed on 19 January 2008 and three additional IC standards analyzed on 27 January 2008. The positive results and “non-detect” RLs for the sample have been qualified “J” and “UJ”, respectively, since the IC was not completed within a single 24-hour analytical sequence. Evaluation of the individual Relative Response Factors (RRFs) for all of the IC standards indicates that the instrument operation was stable for these two dates and the modified calibration did not have a significant impact upon the quantitation of sample results for this WO#.

Conclusion

This report presents the results of the data validation of air and soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

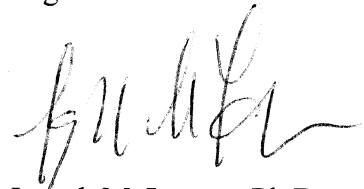
U – The compound was analyzed for but not detected at or above the RL.

J – The reported concentration or RL was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

24 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802631A

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 25, 26, and 28 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B35-SS1	B121-SS2
B35-SS2	B130-SS1
B35-SS3	B130-SS2
B35-SS4	SG-1
B35-SS5	SG-2
B123-SS1	B120-SS1
B121-SS1	

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory duplicate sample analysis was evaluated on the basis of the

criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The “J” qualifier was applied to all “non-detect” RLs that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits. A low recovery was observed for chloroethane with one continuing calibration verification (CCV) standard, and the associated sample RL was qualified. The recoveries for all other compounds with CCV standards were acceptable.

Samples B35-SS2, B35-SS4, B123-SS1, and SG-1 were analyzed with dilutions since they contained high concentrations of target and/or non-target compounds. The diluted analysis of these samples yielded elevated RLs for those compounds that were not detected in these samples. These elevated RLs should be noted when assessing the “non-detect” results for samples B35-SS2, B35-SS4, B123-SS1, and SG-1.

Qualifications

The recovery for chloroethane in the CCV standard analyzed on 8 March 2008 at 0945 was below the lower QC limit. This low recovery is an indication of instrument instability resulting in a possible low bias for this compound, and the “non-detect” RL for this compound in sample B35-SS1 has been qualified “UJ”. This biased low RL for chloroethane should be noted when assessing the “non-detect” result for this compound in the affected sample.

Conclusion

This report presents the results of the data validation of soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

J – The reported RL was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

22 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0802631B

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 28 February 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B120-SS2	B20-SS8
B20-SS1	B20-SS9
B20-SS2	B20-SS10
SS-2 (Duplicate of B20-SS2)	B20-SS11
B20-SS3	SG-3
B20-SS4	SG-4
B20-SS5	SG-5
B20-SS6	B25-SS3
B20-SS7	

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for laboratory and field duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, blind field duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The "J" qualifier was applied to all positive results that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters with this sample group indicated that the accompanying group of canisters was acceptable for use.

The group of canisters received by the laboratory was in acceptable condition. Labeling discrepancies with three of the canisters were resolved upon receipt of the samples at the laboratory. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. The initial calibration (IC), continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits.

Samples B20-SS1, B20-SS8, and B25-SS3 were analyzed with dilutions since they contained high concentrations of target compounds. The diluted analysis of these samples yielded elevated RLs for those compounds that were not detected in these samples. These elevated RLs should be noted when assessing the "non-detect" results for samples B20-SS1, B20-SS8, and B25-SS3.

Qualifications

Sample B20-SS2 and its blind field duplicate sample, SS-2, were submitted to the laboratory to evaluate sampling and laboratory precision for those target compounds that were determined to be confidently detected. All compounds detected in this duplicate pair met the NYSDEC criteria for field duplicate samples, with the exception of chloromethane, 1,1,1-trichloroethane, trichloroethene, and tetrachloroethene. The positive results for these compounds in this duplicate pair have been qualified "J" to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

J – The reported positive result was quantitatively estimated because of QC criteria exceedances.

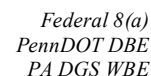
In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist



Phone 610-286-0100 • Fax 610-286-0110

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL).

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The canisters received by the laboratory were in acceptable condition. The sample analysis was performed within the method required holding time. There was no method blank contamination identified. The initial calibration (IC), continuing calibration verification (CCV) standards, and BFB instrument checks were acceptable. The surrogate recoveries, LCS recoveries, and internal standard responses were within method QC limits.

All samples in this WO# were analyzed with dilutions as they contained high concentrations of target and/or non-target compounds. These diluted analyses resulted in elevated RLs for those compounds that were not detected in the samples. These elevated RLs should be noted when assessing the “non-detect” results for the samples reported in this WO#.

Qualifications

Qualification of sample results was not required for the analysis reported in this WO#.

Conclusion

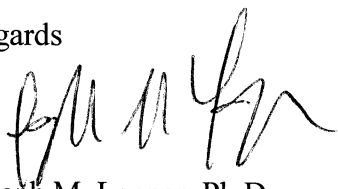
This report presents the results of the data validation of soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

25 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 SIM Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0803154A

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 4 and 5 March 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. All samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B25-SS4	B25-SS14
B25-SS5	B25-SS15
B25-SS6	B25-SS16
B25-SS7	B25-SS17
B25-SS8	B25-SS18
B25-SS11	B25-SS19
B25-SS12	B25-SS20
B25-SS13	B20-SS12

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for all samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the

reviewer's professional judgment. The precision for laboratory duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, laboratory duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The "U" qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL).

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The field sampler's signature documenting release of the samples to the courier was not present on the chain-of-custody. However, documentation in the field sampler's notebook regarding the date of sample collection and the overnight courier's air bill presenting the date of sample shipment to the laboratory provides confirmation of the sample custody for this WO#.

The group of canisters received by the laboratory was in acceptable condition. All sample analyses were performed within the method required holding time. There was no method blank contamination identified. All initial calibrations (ICs), continuing calibration verification (CCV) standards, LCS recoveries, laboratory duplicate sample results, and BFB instrument checks were acceptable. The surrogate recoveries and internal standard responses for all samples were within method QC limits.

Samples B25-SS6, B25-SS7, B25-SS11, B25-SS12, B25-SS14, B25-SS15, B25-SS18, and B20-SS20 were analyzed with dilutions since they contained high concentrations of target compounds. The diluted analysis of these samples yielded elevated RLs for those compounds that were not detected in these samples. These elevated RLs should be noted when assessing the "non-detect" results for these samples.

Qualifications

Qualification was not required for the sample results reported in this WO#.

Conclusion

This report presents the results of the data validation of soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

U – The compound was analyzed for but not detected at or above the RL.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards



Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

25 April 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0803154B

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for soil vapor samples collected at the Watervliet Arsenal site. The samples were collected 4 March 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. The samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "*Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106*". ATL performed the analysis in the full scan mode rather than the Selected Ion Monitoring (SIM) mode since the samples contained high concentrations of target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

B25-SS9 B25-SS10
SS-3 (Duplicate of B25-SS10)

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for the referenced samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for blind field duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS)

recoveries, blind field duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The “J” qualifier was applied to all positive results that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. The documentation provided for the certified canisters indicated that the accompanying group of canisters was acceptable for use.

The field sampler’s signature documenting release of the samples to the courier was not present on the chain-of-custody. However, documentation in the field sampler’s notebook regarding the date of sample collection and the overnight courier’s air bill presenting the date of sample shipment to the laboratory provides confirmation of the sample custody for this WO#.

The canisters received by the laboratory were in acceptable condition. The sample analysis was performed within the method required holding time. There was no method blank contamination identified. The initial calibration (IC), continuing calibration verification (CCV) standards, and BFB instrument checks were acceptable. The surrogate recoveries, LCS recoveries, and internal standard responses were within method QC limits.

All samples in this WO# were analyzed with dilutions as they contained high concentrations of target compounds. These diluted analyses resulted in elevated RLs for those compounds that were not detected in the samples. These elevated RLs should be noted when assessing the “non-detect” results for the samples reported in this WO#.

Qualifications

Sample B25-SS10 and its blind field duplicate sample, SS-3, were submitted to the laboratory to evaluate sampling and laboratory precision for those target compounds that were determined to be confidently detected. The relative percent difference of the positive results reported for trichloroethene and tetrachloroethene in this duplicate pair was outside of the QC limits provided in the NYSDEC guidelines. The positive results reported for these compounds in this duplicate pair have been marked with “J” qualifiers to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of soil vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

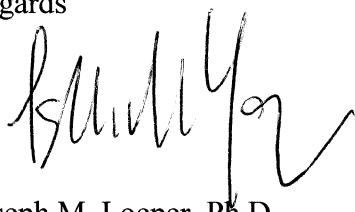
U – The compound was analyzed for but not detected at or above the RL.

J – The reported concentration was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards

A handwritten signature in black ink, appearing to read 'Joe Loeper', with a stylized flourish at the end.

Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist

10 June 2008

Andy Vitolins
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Data Validation Report
Modified TO-15 Analysis, Watervliet Arsenal
Air Toxics Ltd. Work Order 0804334

Dear Mr. Vitolins:

Stell Environmental Enterprises, Inc. (SEE) is pleased to provide this validation report to Malcolm Pirnie, Inc. (MP) which presents the findings of a quality assurance review of the analytical data generated for air and sub-slab vapor samples collected at the Watervliet Arsenal site. The samples were collected 7 and 8 April 2008 in six liter summa canisters and submitted to Air Toxics Ltd. (ATL), of Folsom, California. The samples were analyzed for selected volatile organic compounds (VOCs) in accordance with "Methods for the Determination of Toxic Organic Compounds in Air, Compendium Method TO-15, EPA/625/R-96/0106". ATL performed the analysis in the Selected Ion Monitoring (SIM) mode to obtain improved sensitivity for the target compounds. Minor modifications to the method are identified in the case narrative, and these modifications have no impact on the usability of the data.

The samples included in the referenced ATL work order number are as follows:

319-1A-01	307-SS-01
307-1A-01	401-SS-01
401-1A-01	999-SS-01 (Duplicate of 319-SS-01)
319-SS-01	

Data Validation Summary

The findings offered in this report are based on a comprehensive review of the data for the referenced samples. The data have been validated and qualified according to the protocols and quality control (QC) requirements of the analytical method, the Region II validation SOP # HW-31 (Revision #4, October 2006), and the reviewer's professional judgment. The precision for blind field duplicate sample analysis was evaluated on the basis of the criteria provided in the NYSDEC Modifications to EPA Region 9 TO-15 QA/QC Criteria (July 2005).

The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method blank results, surrogate compound recoveries, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration data, internal standard performance, laboratory control sample (LCS) recoveries, blind field duplicate sample analysis, quantitation of results, and qualitative mass spectral interpretations.

Data validation qualifiers, consistent with the referenced Region II validation guidance, were applied as required. The “U” qualifier was applied to all results in which the compound was analyzed for, but not detected above the Reporting Limit (RL). The “J” qualifier was applied to all positive results or “non-detect” RLs that were quantitatively estimated because of QC criteria exceedances.

The laboratory case narrative, the laboratory summary of samples received, and any QC summary forms with outliers resulting in data qualification are presented as Validation Support Documents in Appendix A of this report. The laboratory report forms with data validation qualifiers added by hand annotation are presented in Appendix B of this report.

Data Validation Results

General Comments

The summa canisters utilized with this sample group underwent batch certification, based upon testing of a subset of a group of canisters. Canisters for two sample locations were at ambient pressure at the conclusion of the sampling period, and positive results and “non-detect” RLs for these samples were qualified. All other canisters received by the laboratory were in acceptable condition. The sample analysis was performed within the method required holding time. There was no method blank contamination identified. The initial calibration (IC), continuing calibration verification (CCV) standards, and BFB instrument checks were acceptable. The surrogate recoveries, LCS recoveries, and internal standard responses were within method QC limits.

Qualifications

The canisters for air samples collected at locations 307-SS-01 and 401-SS-01 were at ambient pressures at the conclusion of the eight hour sampling period. The absence of vacuum in these canisters indicates that samples for these locations may not be representative composites of the desired eight hour period. The positive results and “non-detect” reporting limits for these samples have been marked “J” and “UJ”, respectively, to indicate that they are quantitative estimates.

Sample 319-SS-01 and its blind field duplicate sample, 999-SS-01, were submitted to the laboratory to evaluate sampling and laboratory precision for those target compounds that were determined to be confidently detected. The relative percent difference of the positive results reported for tetrachloroethene in this duplicate pair was outside of the QC limits provided in the NYSDEC guidelines. The positive results reported for tetrachloroethene in this duplicate pair have been marked with “J” qualifiers to indicate that they are quantitative estimates.

Conclusion

This report presents the results of the data validation of air and sub-slab vapor samples collected at the Watervliet Arsenal Site and analyzed and reported in the referenced ATL work order number. The following data validation qualifiers were applied as appropriate:

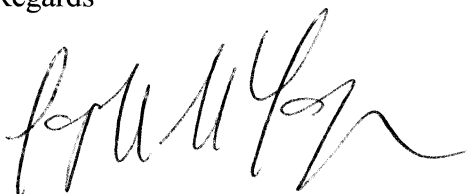
U – The compound was analyzed for but not detected at or above the RL.

J – The reported concentration or “non-detect” RL was quantitatively estimated because of QC criteria exceedances.

In summary, the laboratory analyses were performed acceptably, and all data in the referenced work order are valid and usable with qualifications as described in this data validation report.

In the event that you have questions or require additional information, please feel free to contact me at 610-329-1307.

Regards

A handwritten signature in black ink, appearing to read 'Joe Loeper', with a stylized flourish at the end.

Joseph M. Loeper, Ph.D.
Senior Quality Assurance Chemist