SANBORN HEAD ENGINEERING

Building Trust. Engineering Success.

REPORT OF FINDINGS - ADDITIONAL INVESTIGATIONS

BUILDING 320B

IBM East Fishkill Facility
Hopewell Junction, New York

East Fishkill, New York

Prepared for IBM Corporation
File No. 2999.00
May 2014

Hudson Valley Research Park
2070 Route 52
Hopewell Junction, NY 12533-6531
D.E. Speed Zip 65A

May 27, 2014

Alex G. Czuhanich
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E
625 Broadway, 12th Floor
Albany, NY 12233-7017

Re: Report of Findings – Additional Investigations
Building 320B
RFI Work Plan Implementation
IBM East Fishkill Facility, Hopewell Junction, New York
EPA ID No. NYD000707901

Dear Mr. Czuhanich:

The enclosed report presents the results of additional investigations to evaluate the source of certain volatile organic compounds (VOCs) detected in indoor air in portions of Building 320B at the IBM East Fishkill facility. The scope of this work and progress updates have been communicated to the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) (collectively, the Agencies) through regular correspondence and meetings. The validated indoor air data has been posted for review by the building occupants.

If you wish to further discuss this report or have questions, please contact me at (845) 892-3176.

Sincerely,

David E. Speed, Ph.D.
Systems and Technology Group
International Business Machines Corporation

cc: N. Walz (NYSDOH)
G. Marone (IBM)
J. Ulrich (IBM)

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REPORT OF FINDINGS - ADDITIONAL INVESTIGATIONS

Building 320B
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Sanborn, Head Engineering, P.C.

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Report of Findings – Additional Investigations
Building 320B
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1.0 INTRODUCTION

This report presents the results of additional investigations to evaluate the source of certain volatile organic compounds (VOCs) detected in indoor air in portions of Building 320B at the IBM East Fishkill facility (the Site). A Site Locus Plan is provided as Figure 1, and the Building 320B location on the Site is shown on Figure 2.

As documented in a May 2010 report[1], low-level concentrations of vinyl chloride (VC) were detected in the indoor air within the western and southern portions of Building 320B centered on the C4 Clean Room. As requested in a March 13, 2013 letter from the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) (collectively, the Agencies), IBM has completed additional investigations to attempt to identify the source(s) of the low-level VC detections within portions of the C4 Clean Room. This report presents the results.

As a separate initiative, this report also presents the results of supplemental investigations associated with an unoccupied portion of Building 320B known as the C4 Expansion Area. In 2012, IBM began remodeling this area for future clean room manufacturing activities. As part of this remodeling, former infrastructure was removed, the floor slab and associated features (e.g., trenches and sumps) were exposed and sealed, and new heating, ventilation, and air conditioning (HVAC) systems were installed. While chlorinated volatile organic compounds (CVOCs) were not detected in indoor air in this portion of Building 320B in 2010, IBM voluntarily performed additional investigations before and after remodeling activities to evaluate whether floor penetrations and other features could serve as preferential pathways for VOC vapor entry. This report presents the results. Although remodeling is complete, a date for re-occupying the area has not been established.

Sanborn, Head Engineering P.C. (SHPC), with assistance from IBM personnel, conducted this work consistent with the objectives and procedures described in IBM's Resource Conservation and Recovery Act (RCRA) Facility Investigation Work Plan (the Work Plan)[2], approved by the Agencies. The investigations and this report are subject to the standard limitations of this type of work, as provided in Appendix A.

This report is organized into the following sections:

Section 2 presents an overview of investigation activities and results associated with the low-level VC detections in the C4 Clean Room.

Section 3 presents an overview of investigation activities and results in the C4 Expansion Area.

Analytical laboratory data reports for samples collected since submittal of the May 2010 report are provided in Appendix B.

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1 Sanborn Head Engineering, P.C., *Confirmatory Sampling Results Buildings 308, 320B, and 334, VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York,* May 2010.

2 IBM Corporation and Sanborn Head Engineering, P.C., *Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York*, June 15, 2009.

2.0 C4 CLEAN ROOM ASSESSMENT AND RESULTS

To verify the March 2010 detections of VC, another round of indoor air samples was collected on April 19, 2012 in the western and southern portions of Building 320B at the five locations where VC was previously observed (see Figure 3). Samples were collected into 6-liter Summa® canisters using 8-hour flow controllers and submitted to Eurofins Air Toxics, Inc. (EATI) of Folsom, California for laboratory analysis of the Site-specific list of 22 VOCs by USEPA Method TO-15 Hi/Lo[3].

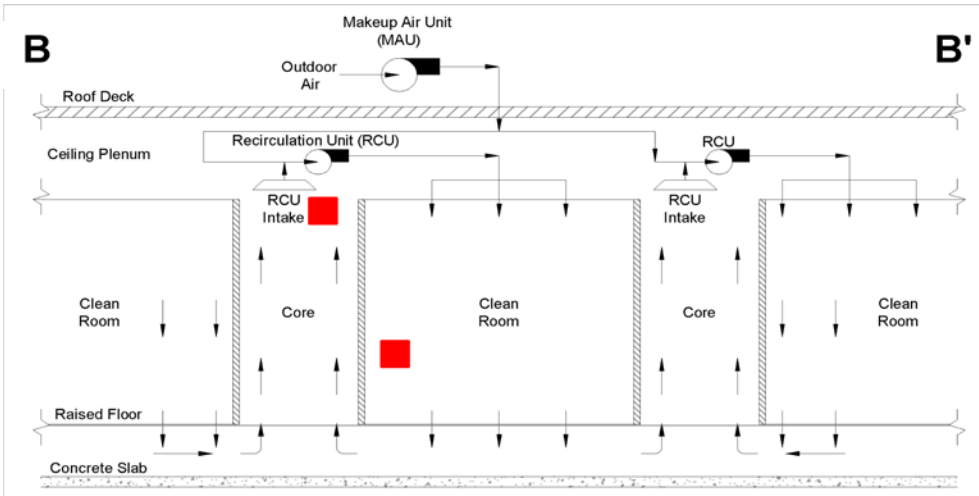
VC was detected in the April 2012 samples at concentrations ranging from 0.12 to 1.1 micrograms per cubic meter (µg/m^3), similar to the concentrations detected in the March 2010 samples. In both March 2010 and April 2012, the highest concentrations of VC were detected in samples collected at location IA0710, which is located within the southeast portion of the C4 Clean Room. The results of the March 2010 and April 2012 samples are provided in Table 1, and summarized on Figure 3. The analytical laboratory data report for the April 2012 indoor air samples is provided in Appendix B.

As a result of the March 2010 and April 2012 VC data, a program of additional investigations for potential VC sources was completed within the C4 Clean Room, which included an assessment of the HVAC system operations, areas of chemical and manufactured product storage, manufacturing equipment/tools, and building materials. The results of these assessments are summarized in the sections below.

2.1 HVAC System Review and Sampling

As shown on Figure 4, six "Core" areas are located within the C4 Clean Room that contain tools and support equipment for the manufacturing activities that occur in this portion of the building. The Core areas are also used to return and/or recycle air as shown in the schematic cross-section presented as Exhibit A, below.

Exhibit A: C4 Clean Room Schematic Cross-Section



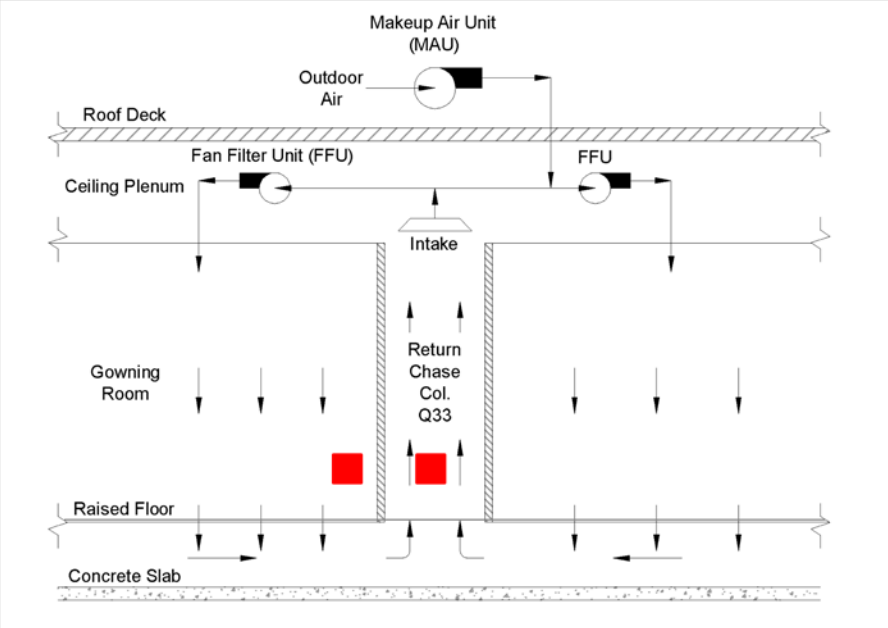
Red squares denote typical locations of targeted air samples within the C4 Clean Room, as described below.

[3] Samples were analyzed using gas chromatograph/mass spectrometry (GC/MS) techniques. Trichloroethene, vinyl chloride, and carbon tetrachloride were also analyzed in Selective Ion Monitoring (SIM) mode.

As shown in Exhibit A, and typical of many clean room HVAC systems, supply air (a mixture of outside air and return air) is delivered to the Clean Room by recirculation units (RCUs) located above the ceiling. Air flows downward from the ceiling and passes through perforations in the raised floor. Then, the air flows in the space between the floor slab and the raised floor to the Core areas, where it flows upward and back to the RCUs. As shown conceptually in Exhibit A and further discussed below, targeted air samples were collected from the Clean Room and the intake to the RCUs within the Core areas to evaluate whether VOC vapor entry was occurring along the air flow path.

Additional evaluations were also completed for the HVAC system in the Gowning Room portion of the Clean Room. As shown in Exhibit B, within the Gowning Room, supply air is delivered from ceiling-mounted fan filter unit (FFU) downward through raised and perforated floor. Air flows in the space between the raised floor and the concrete floor slab to a return air chase where it is collected by the FFU and redistributed. As shown conceptually in Exhibit B and further discussed below, targeted air samples were collected from the Gowning Room and from within the return air chase to evaluate whether VOC vapor entry was occurring along the air flow path.

Exhibit B: Gowning Room Schematic Cross Section



Red squares denote typical locations of targeted air samples within the C4 Clean Room, as described below.

On April 19, 2012, eight targeted air samples were collected at the locations shown on Figure 4 (teal triangle symbols) in the C4 Clean Room /Core Areas and the Gowning Room/return chase. The samples included the following:

- Three pairs of samples (total of six samples) were collected from various C4 Clean Room/Core Area locations.
- One pair of samples (two samples) was collected from the Gowning Room. One of the samples was collected in a return air chase adjacent to the Gowning Room, with a corresponding sample collected from inside the Gowning Room.

In addition, one sample was collected from the return duct for HVAC zone HVAC 304 (not depicted on figures) which serves a break area outside the C4 Clean Room to evaluate potential VOC vapor entry in this area that could be contributing to the occurrence of VC previously detected at sample location IA0709.

Samples were collected into 6-liter Summa® canisters equipped with 1-hour flow controllers and submitted to EATI for laboratory analysis of the Site-specific list of 22 VOCs by USEPA Method TO-15 Hi/Lo. Analytical results for the targeted air samples are provided in Table 2, and the analytical laboratory data report is provided in Appendix B.

VC was not detected in any of the targeted samples. These results suggest that the HVAC configuration and operations are not the principal cause of the previous indoor air VC detections in the C4 Clean Room.

Trichloroethene (TCE) was detected at approximately equivalent low-level concentrations (about 0.6 µg/m^3) in both samples collected from the Gowning Room and adjacent return air chase. The TCE concentrations observed in the 2012 Gowning Room samples were approximately equivalent to the levels observed in the 2010 indoor air sample collected from the adjacent storage area at sample location IA0707.

2.2 Source Assessment Sampling

On February 13, 2013, an Inficon HAPSITE portable gas chromatograph/mass spectrometer (GC/MS), pictured below in Exhibit C, was used to screen locations in the C4 Clean Room. These screening samples are collected over an approximately one-minute duration. Screening focused on manufacturing equipment, HVAC system features, and building materials in near proximity to former solvent Solid Waste Management Units (SWMUs) as potential sources for VC in the C4 Clean Room. Locations were screened for a targeted list of CVOCs, including tetrachloroethene (PCE), TCE, 1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and VC.

Exhibit C: HAPSITE Portable GC/MS Instrument

For data comparison purposes, grab air samples were collected into 6-liter Summa® canisters at locations TA-1052 (adjacent to a plating reservoir within one of the core areas) and TA-1055 (collected near location IA0710) at approximately the same time as the

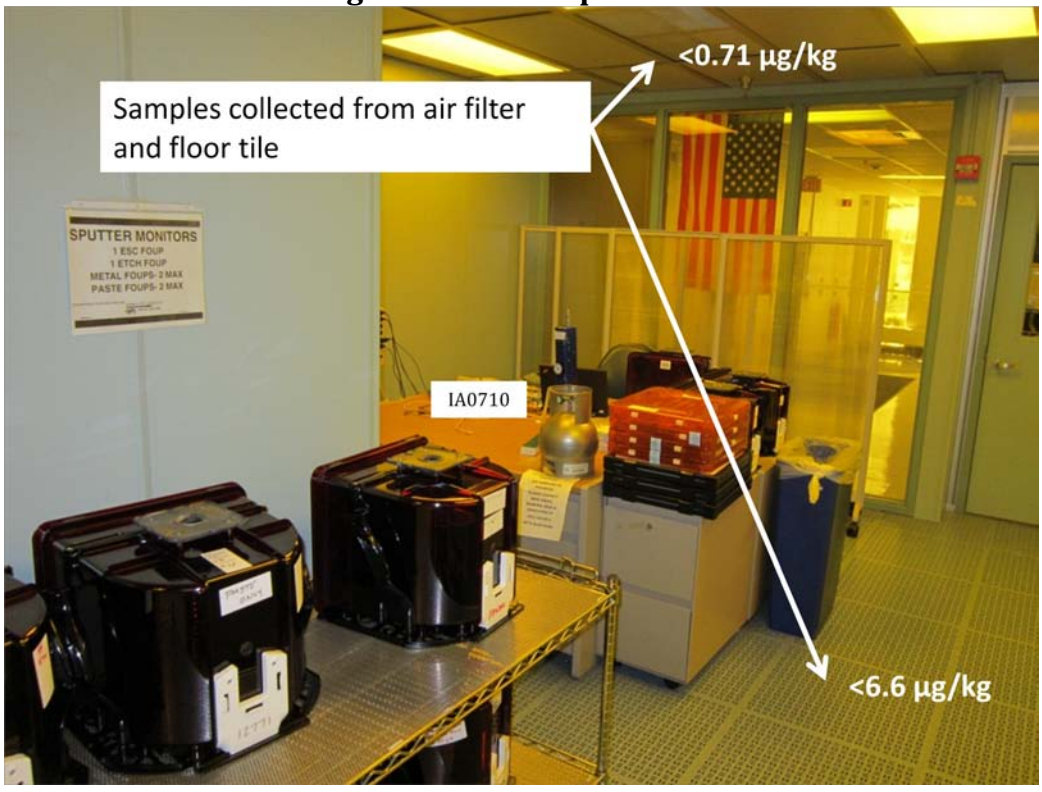
portable GC/MS screening, and submitted to EATI for analysis of the Site-specific list of 22 VOCs by USPEA Method TO-15 Hi/Lo.

As summarized on Figure 4, VC was not recorded by the portable GC/MS at any of the screening locations in near proximity to various manufacturing equipment or the HVAC system features. VC was detected in the grab Summa sample collected at indoor air location IA0710 at a concentration of 1 µg/m^3, similar to that observed in previous indoor air samples collected at this location. VC was also detected in one targeted grab Summa sample collected from the vicinity of a manufactured product storage container (TA-1055) at a concentration of 0.46 µg/m^3, which is lower than the results from nearby indoor air location IA0710, suggesting that the manufactured product container is not the source of VC observed in indoor air sample IA0710.

On May 1, 2013, samples of building materials were collected from a filter for an HVAC vent (designated as BM1001) and a floor tile (designated as BM1000) in the vicinity of indoor air sample location IA0710 to evaluate whether these building materials (located in near proximity to sample IA0710 and former SWMUs) might be potential sources of VC observed in indoor air. Samples were submitted to Alpha Analytical (Alpha) of Westborough, Massachusetts for analysis of VOCs by USEPA Method 8260C. As shown in Exhibit D, VC was not detected in either the floor tile or air filter sample. Analytical results for these building material samples are provided in Table 4.

In addition, the building material samples were screened with the portable GC/MS for the targeted list of VOCs and VC was not recorded, which suggests that these building materials in the vicinity of location IA0710 are not the source of VC observed in indoor air.

Exhibit D: Building Materials Sample Locations and Results



2.3 Additional Indoor Air Sampling

Additional indoor air samples were collected on November 25, 2013 at seven locations in the C4 Clean Room. Samples were collected as 8-hour, time-integrated samples using 6-liter Summa® canisters in near proximity to manufacturing equipment and from location IA0710. These samples were collected to obtain 8-hr, time-integrated samples throughout the C4 Clean Room, and to evaluate the extent of the low-level VC at detection limits below those that were achievable with the portable GC/MS. Samples were submitted to EATI for laboratory analysis of the Site-specific list of 22 VOCs by USEPA Method TO-15 Hi/Lo.

VC was detected at levels similar to or slightly lower than those observed in prior indoor air samples. Concentrations ranged from 0.42 to 0.68 $\mu g/m^3$, with the highest concentration reported at sample location IA0710, where all previous maximum VC concentrations have been detected. The results of this sampling round are summarized in Table 1, and VC detections are depicted on Figure 3.

3.0 C4 EXPANSION AREA ASSESSMENT AND RESULTS

As described above, IBM began remodeling the C4 Expansion Area in 2012. As part of remodeling activities, former infrastructure was removed, the floor slab and associated features (e.g., trenches and sumps) were exposed and sealed (see highlighted area on Figure 5), raised flooring was re-installed, and new HVAC systems were installed. While CVOCs were not detected in the indoor air sample collected in 2010 in this portion of the building, IBM elected to voluntarily perform additional investigations before and after remodeling activities to assess whether floor penetrations or other features could serve as preferential pathways for VOC vapor entry once remodeling activities were complete.

The screening locations were grouped into two categories: those screened approximately 4 to 5 feet above the concrete floor and designated as indoor air samples (prefixed with IA), and those screened at a specific feature in the concrete floor (e.g. an expansion joint, or from within a sub-grade trench) and designated as targeted air samples (prefixed with TA).

As shown on Table 3, portable GC/MS screening samples were collected multiple times at several locations. Figure 5 presents TCE screening results from the first and last measurements corresponding to before and after floor sealing activities (where completed). TCE was generally detected at higher concentrations and greater frequency than other analytes and therefore Figure 5 and the following discussion focus on this analyte. For comparison purposes, co-located grab samples were collected into 6-liter Summa® canisters at three locations at approximately the same time as the portable GC/MS screening, and submitted to EATI for analysis by USPEA Method TO-15 Hi/Lo.

3.1 Initial Assessment Results

Initial screening was conducted in February 2013 after the old raised floors were removed and the concrete floors were exposed in order to identify potential preferential vapor intrusion pathways. Screening was conducted with particular attention to floor penetrations and subsurface features. In addition, indoor air screening samples were collected throughout the C4 Expansion Area.

As shown on Figure 5, TCE was detected at concentrations in the 10s of µg/m^3 in the initial screening at several construction/expansion joints in the concrete floor, and at several utility clean-out locations. Some of these features were located in near proximity to future return air ducts where air pressure differentials could facilitate vapor intrusion of VOCs into indoor air once the new HVAC system becomes operational. TCE was not detected in any of the initial indoor air screening samples collected from the C4 Expansion Area.

VC was not detected during the initial screening. Although the reporting limit for VC for the portable GC/MS is not as low as can be achieved by off-site analysis of Summa® canister samples, VC concentrations detected in grab samples collected into Summa canisters at targeted construction joints TA-1012 and TA-1029 were 0.18 and 0.12 µg/m^3, respectively (see Table 3); these low levels are not indicative of a source of VC.

3.2 Results Following Floor Sealing Activities

As a precautionary measure, IBM elected to seal the concrete floor in April 2013 in a portion of the C4 Expansion Area that would be covered by raised flooring, as shown by the orange shaded area on Figure 5, using a chemical resistant floor sealing system. Floors were not sealed in those portions of the C4 Expansion Area that are not currently intended for future clean room manufacturing operations.

Following completion of floor sealing activities, TCE was not detected at the construction/expansion joints where it was previously observed above reporting limits (TA-1031 and TA-1029), indicating that floor sealing activities were successful in eliminating this potential vapor intrusion pathway. Following floor sealing activities, TCE was detected at relatively low concentrations (1.7 and 2.8 µg/m^3 at TA1015 and TA-1032, respectively) at two utility clean-out penetrations. These features were subsequently re-sealed. Although another round of screening was not performed at these locations, the relatively low TCE concentrations and success of the construction joint floor sealing activities suggest that they are unlikely to be continued preferential vapor intrusion pathways.

TCE and VC were not detected in any of the indoor air screening samples collected following floor sealing activities. VC was detected in the Summa canister grab sample at location IA-0708, but at a low-level concentration (0.45 µg/m^3) consistent with previous detections of VC in the vicinity.

4.0 CONCLUSIONS

As requested by the Agencies, IBM completed additional investigations to attempt to identify the source of low-level concentrations of VC observed in indoor air samples within Building 320B. These investigations included additional indoor air sampling rounds, targeted sampling of HVAC air flow patterns, targeted screening of certain manufacturing equipment and tools that could be emitting VC, and sampling of building materials in the vicinity of the indoor air detections. The results of these investigations did not identify the source of VC. While the sampling was extensive, it was not exhaustive, and VC could be associated with intermittent off-gassing from manufacturing processes that was not captured during the sampling program.

Although the source of the VC was not identified, it is also unclear whether the VC is attributable to vapor intrusion from a subslab/subsurface source. Based on the collective experience of Sanborn Head and IBM with vapor intrusion at many sites, we are unaware of a situation where VC vapor intrusion was occurring without concurrent vapor intrusion by related parent compounds at similar of higher concentrations than VC, such as PCE, TCE, and cDCE. Review of the Building 320B data indicates no detections of cDCE in any indoor air samples, and only sporadic detections of TCE and one detection of PCE, but all at concentrations less than the highest detections of VC. In aggregate, this data set is inconsistent with our experience with vapor intrusion; rather, we would expect PCE, TCE, and cDCE detections to be more prevalent and at higher concentrations than VC when vapor intrusion from a subslab/subsurface source is present.

Given that the VC concentrations are very low, and that the aggregate data set is inconsistent with our experience with vapor intrusion, we believe that further assessment is not warranted at this time. However, in recognition of an unresolved potential source for VC, if future use of the C4 Clean Room changes, or if HVAC operations are modified, IBM will undertake further assessment and actions, if appropriate.

Under a separate initiative, IBM elected to evaluate and address potential VOC vapor entry in the C4 Expansion Area. While VC was not detected in initial indoor air sampling in this area, subsequent screening of floor features indicated potential for VOC vapor entry. Therefore, as part of the fit-up of this space for future manufacturing, a sealant was applied to the concrete floor slab. Subsequent screening and sampling indicated that the sealant was successful in reducing VOC concentrations at potential pathways for vapor entry.

TABLES

TABLE 1
Building 320B Indoor Air Samping Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m^3																										
	Field Blank					Ambient Outdoor Air						Indoor Air															
	FB01			FB-03		AA0711 HVAC Intake for HVAC-1			AA0712 HVAC Intake for HVAC-4			IA0700 Former Office/ Former Clean Room Entrance			IA0701 Clean Room			IA0702 Clean Room			IA0703 Former Manufacturing Area			IA0703 Dup. Former Manufacturing Area			IA0703 Former Manufacturing Area	
	03/16/10			04/19/12		03/16/10			03/16/10			03/16/10			03/16/10			03/16/10			03/16/10			03/16/10			04/19/12	
	Result	Qualifier	Bias	Result	Qualifier	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier
Tetrachloroethene (PCE)	<1.0	U		<1.3	U	<1.1	U		<2.7	U		<1.1	U		<1.1	U		<1.2	U		<1.0	U		<1.1	U		<1.1	U
Trichloroethene (TCE)	<0.17	U		<0.21	U	<0.17	U		<0.42	U		<0.17	U		<0.17	U		<0.18	U		<0.17	U		<0.18	U		**0.21**	
cis-1,2-Dichloroethene (cDCE)	<0.61	U		<0.79	U	<0.63	U		<1.6	U		<0.64	U		<0.64	U		<0.68	U		<0.61	U		<0.65	U		<0.64	U
1,1-Dichloroethene (DCE)	<0.61	U		<0.79	U	<0.63	U		<1.6	U		<0.64	U		<0.64	U		<0.68	U		<0.61	U		<0.65	U		<0.64	U
Vinyl chloride (VC)	**0.048**			**0.28**		<0.040	U		<0.10	U		<0.041	U		<0.041	U		<0.044	U		**0.15**	EB	H	**0.15**	EB	H	**0.12**	
1,1,1-Trichloroethane (TCA)	<0.84	U		<1.1	U	<0.86	U		<2.2	U		<0.88	U		<0.88	U		<0.93	U		<0.84	U		<0.89	U		<0.88	U
Carbon tetrachloride	<0.20	U		<0.25	U	**0.38**			<0.50	U		**0.40**			**0.40**			**0.45**			**0.44**			**0.44**			**0.71**	
Methylene chloride (MeCl)	<1.1	U		<1.4	U	<1.1	U		<2.7	U		<1.1	U		<1.1	U		<1.2	U		<1.1	U		<1.1	U		<1.1	U
Chlorobenzene	<0.71	U		<0.92	U	<0.73	U		<1.8	U		<0.74	U		<0.74	U		<0.79	U		<0.71	U		<0.76	U		<0.74	U
1,2,4-Trichlorobenzene	<5.8	U		<7.4	U	<5.9	U		<15	U		<6.0	U		<6.0	U		<6.3	U		<5.8	U		<6.1	U		<6.0	U
1,2-Dichlorobenzene	<0.93	U		<1.2	U	<0.95	U		<2.4	U		<0.97	U		<0.97	U		<1.0	U		<0.93	U		<0.99	U		<0.97	U
1,3-Dichlorobenzene	<0.93	U		<1.2	U	<0.95	U		<2.4	U		<0.97	U		<0.97	U		<1.0	U		<0.93	U		<0.99	U		<0.97	U
1,4-Dichlorobenzene	<0.93	U		<1.2	U	<0.95	U		<2.4	U		<0.97	U		<0.97	U		<1.0	U		<0.93	U		<0.99	U		<0.97	U
Acetone	**2.1**			<2.4	U	**88**			**230**			**9.5**	EB	H	**92**			**27**			**17**			**19**			**12**	
Benzene	<0.50	U		<0.64	U	<0.50	U		<1.3	U		<0.51	U		<0.51	U		<0.55	U		<0.50	U		<0.52	U		**0.52**	
Ethylbenzene	<0.67	U		<0.86	U	<0.69	U		<1.7	U		<0.70	U		<0.70	U		<0.74	U		<0.67	U		<0.71	U		<0.70	U
m,p-Xylene	<0.67	U		<0.86	U	<0.69	U		<1.7	U		<0.70	U		<0.70	U		<0.74	U		<0.67	U		<0.71	U		<0.70	U
o-Xylene	<0.67	U		<0.86	U	<0.69	U		<1.7	U		<0.70	U		<0.70	U		<0.74	U		<0.67	U		<0.71	U		<0.70	U
Toluene	<0.58	U		<0.75	U	<0.60	U		<1.5	U		**1.4**			**7.2**			**5.2**			**1.3**			**1.6**			**2.0**	
Trichlorofluoromethane (Freon 11)	<0.87	U		<1.1	U	**1.3**			<2.2	U		**2.4**			**3.0**			**3.4**			**6.9**			**7.4**			**9.2**	
Dichlorodifluoromethane (Freon 12)	<0.77	U		<0.98	U	**2.5**			**2.0**			**2.0**			**2.2**			**2.7**			**3.0**			**3.1**			**2.8**	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<1.2	U		<1.5	U	<1.2	U		<3.0	U		<1.2	U		<1.2	U		<1.3	U		**3.5**			**3.3**			**3.6**	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel on the dates indicated. Samples were collected using 6-liter Summa® canisters equipped with 8-hour flow controllers. Refer to figures for sample locations.

2. Sample analysis was completed by Eurofins Air Toxics, Inc. (EATI) of Folsom, California using United States Environmental Protection Agency (USEPA) Method TO-15 (Hi/Lo). Trichloroethene, vinyl chloride, and carbon tetrachloride were analyzed in Selective Ion Monitoring (SIM) mode.

3. "<" indicates a non-detection at the reporting limit shown.

4. New Environmental Horizons, Inc. (NEH) performed an independent validation of the 2010 analytical data, as described in their Data Usability Report, dated April 12, 2010. All results were considered acceptable, with the understanding of the potential uncertainty (bias) in the qualified results. In some cases, NEH assigned the following qualifiers and biases to the data:
"EB" - The associated numerical value is biased due to the presence of the analyte in the equipment blank sample FB01, which was collected March 16, 2010.
"J" - The associated numerical value is an estimated quantity due to quality control criteria exceedance(s). The value is usable for project objectives with the documentation of the uncertainty, bias, and/or imprecision.
"U" - The compound was analyzed for, but was not detected. The associated numerical value is the sample-specific reporting limit. The value is usable for project decisions as a non-detect result at the reporting limit.
"UJ" - The non-detect is estimated at the practical quantitation limit (PQL).
"H" High bias.
"L" Low bias.

5. **Bold** values indicate the analyte was detected above reporting limits.

TABLE 1
Building 320B Indoor Air Samping Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m3																						
	Indoor Air																						
	IA0704			IA0705			IA0706					IA0707					IA0708			IA0709			
	Former Clean Room			Former Clean Room			Former Manufacturing Area					Construction Area					Former Clean Room			Break Room			
	03/16/10			03/16/10			03/16/10			04/19/12		03/16/10			04/19/12		03/16/10			03/16/10			04/19/12	
	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Result	Qualifier	Bias	Result	Qualifier	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier
Tetrachloroethene (PCE)	**1.4**			<1.1	U		<1.1	U		<1.1	U	<1.1	U		<1.1	U	<0.96	UJ	L	<1.1	U		<1.1	U
Trichloroethene (TCE)	**1.0**			<0.17	U		**0.50**			**0.68**		**0.62**			**0.76**		<0.15	UJ	L	<0.18	U		<0.17	U
cis-1,2-Dichloroethene (cDCE)	<0.65	U		<0.64	U		<0.67	U		<0.66	U	<0.64	U		<0.67	U	<0.56	UJ	L	<0.67	U		<0.64	U
1,1-Dichloroethene (DCE)	<0.65	U		<0.64	U		<0.67	U		<0.66	U	<0.64	U		<0.67	U	<0.56	UJ	L	<0.67	U		<0.64	U
Vinyl chloride (VC)	<0.042	U		<0.041	U		**0.083**	EB	H	**0.12**		**0.28**			**0.43**		<0.036	UJ	L	**0.31**			**0.31**	
1,1,1-Trichloroethane (TCA)	<0.89	U		<0.88	U		<0.92	U		<0.90	U	<0.88	U		<0.92	U	<0.77	UJ	L	<0.92	U		<0.88	U
Carbon tetrachloride	**0.27**			**0.42**			**0.40**			**0.75**		**0.42**			**0.72**		**0.41**	J	L	**0.44**			**0.76**	
Methylene chloride (MeCl)	<1.1	U		<1.1	U		<1.2	U		<1.2	U	<1.1	U		<1.2	U	**4.8**	J	L	<1.2	U		<1.1	U
Chlorobenzene	<0.76	U		<0.74	U		<0.77	U		<0.76	U	<0.74	U		<0.77	U	<0.65	UJ	L	<0.77	U		<0.74	U
1,2,4-Trichlorobenzene	<6.1	U		<6.0	U		<6.2	U		<6.2	U	<6.0	U		<6.2	U	<5.2	UJ	L	<6.2	U		<6.0	U
1,2-Dichlorobenzene	<0.99	U		<0.97	U		<1.0	U		<1.0	U	<0.97	U		<1.0	U	<0.85	UJ	L	<1.0	U		<0.97	U
1,3-Dichlorobenzene	<0.99	U		<0.97	U		<1.0	U		<1.0	U	<0.97	U		<1.0	U	<0.85	UJ	L	<1.0	U		<0.97	U
1,4-Dichlorobenzene	<0.99	U		<0.97	U		<1.0	U		<1.0	U	<0.97	U		<1.0	U	<0.85	UJ	L	<1.0	U		<0.97	U
Acetone	**6.3**	EB	H	**3.7**	EB	H	**34**			**11**		**55**			**33**		**12**	J	L	**12**			**7.5**	
Benzene	<0.52	U		<0.51	U		<0.54	U		**0.62**		<0.51	U		<0.54	U	**0.53**	J	L	<0.54	U		<0.52	U
Ethylbenzene	<0.71	U		<0.70	U		<0.73	U		<0.72	U	**3.8**			<0.73	U	<0.61	UJ	L	<0.73	U		<0.70	U
m,p-Xylene	<0.71	U		<0.70	U		<0.73	U		<0.72	U	**11**			**0.77**		**0.65**	J	L	**1.4**			<0.70	U
o-Xylene	<0.71	U		<0.70	U		<0.73	U		<0.72	U	**2.2**			<0.73	U	<0.61	UJ	L	<0.73	U		<0.70	U
Toluene	**1.6**			**1.3**			**1.8**			**3.3**		**7.3**			**2.0**		**2.5**	J	L	**3.5**			**0.80**	
Trichlorofluoromethane (Freon 11)	**2.3**			**1.8**			**19**			**19**		**5.0**			**2.0**		**1.7**	J	L	**6.7**			**1.8**	
Dichlorodifluoromethane (Freon 12)	**2.3**			**2.2**			**2.4**			**2.8**		**3.0**			**2.7**		**2.2**	J	L	**2.9**			**2.6**	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<1.2	U		<1.2	U		**11**			**9.9**		**11**			**12**		<1.1	UJ	L	<1.3	U		**1.7**	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel on the dates indicated. Samples were collected using 6-liter Summa® canisters equipped with 8-hour flow controllers. Refer to figures for sample locations.

2. Sample analysis was completed by Eurofins Air Toxics, Inc. (EATI) of Folsom, California using United States Environmental Protection Agency (USEPA) Method TO-15 (Hi/Lo). Trichloroethene, vinyl chloride, and carbon tetrachloride were analyzed in Selective Ion Monitoring (SIM) mode.

3. "<" indicates a non-detection at the reporting limit shown.

4. New Environmental Horizons, Inc. (NEH) performed an independent validation of the 2010 analytical data, as described in their Data Usability Report, dated April 12, 2010. All results were considered acceptable, with the understanding of the potential uncertainty (bias) in the qualified results. In some cases, NEH assigned the following qualifiers and biases to the data:
"EB" - The associated numerical value is biased due to the presence of the analyte in the equipment blank sample FB01, which was collected March 16, 2010.
"J" - The associated numerical value is an estimated quantity due to quality control criteria exceedance(s). The value is usable for project objectives with the documentation of the uncertainty, bias, and/or imprecision.
"U" - The compound was analyzed for, but was not detected. The associated numerical value is the sample-specific reporting limit. The value is usable for project decisions as a non-detect result at the reporting limit.
"UJ" - The non-detect is estimated at the practical quantitation limit (PQL).
"H" High bias.
"L" Low bias.

5. **Bold** values indicate the analyte was detected above reporting limits.

TABLE 1
Building 320B Indoor Air Samping Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m3																			
	Indoor Air																			
	IA0710							IA0710 Dup.		IA0730		IA0731		IA0732		IA0733		IA0734		IA0735	
	Clean Room Break Area									Clean Room		Clean Room (Core Area)		Clean Room		Clean Room (Core Area)		Clean Room (Core Area)		Clean Room	
	03/16/10			04/19/12		11/25/2013		11/25/2013		11/25/2013		11/25/2013		11/25/2013		11/25/2013		11/25/2013		11/25/2013	
	Result	Qualifier	Bias	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene (PCE)	<1.1	U		<1.2	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U
Trichloroethene (TCE)	<0.18	U		<0.18	U	<0.17	U	<0.17	U	<0.18	U	<0.17	U	<0.18	U	<0.17	U	<0.18	U	<0.18	U
cis-1,2-Dichloroethene (cDCE)	<0.67	U		<0.68	U	<0.63	U	<0.64	U	<0.65	U	<0.64	U	<0.66	U	<0.64	U	<0.65	U	<0.65	U
1,1-Dichloroethene (DCE)	<0.67	U		<0.68	U	<0.63	U	<0.64	U	<0.65	U	<0.64	U	<0.66	U	<0.64	U	<0.65	U	<0.65	U
Vinyl chloride (VC)	**1.6**			**1.1**		**0.68**		**0.55**		**0.55**		**0.61**		**0.57**		**0.55**		**0.42**		**0.53**	
1,1,1-Trichloroethane (TCA)	<0.92	U		<0.94	U	<0.86	U	<0.88	U	<0.9	U	<0.88	U	<0.9	U	<0.88	U	<0.89	U	<0.89	U
Carbon tetrachloride	**0.44**			**0.70**		**0.92**		**0.54**		**0.53**		**0.50**		**0.51**		**0.44**		**0.54**		**0.47**	
Methylene chloride (MeCl)	<1.2	U		<1.2	U	**1.5**		<1.1	U	<1.1	U	<1.1	U	<1.2	U	<1.1	U	<1.1	U	<1.1	U
Chlorobenzene	<0.77	U		<0.79	U	<0.73	U	<0.74	U	<0.76	U	<0.74	U	<0.76	U	<0.74	U	<0.75	U	<0.76	U
1,2,4-Trichlorobenzene	<6.2	U		<6.4	U	<5.9	U	<6	U	<6.1	U	<6	U	<6.2	U	<6	U	<6	U	<6.1	U
1,2-Dichlorobenzene	<1.0	U		<1.0	U	<0.95	U	<0.97	U	<0.99	U	<0.97	U	<1	U	<0.97	U	<0.98	U	<0.99	U
1,3-Dichlorobenzene	<1.0	U		<1.0	U	<0.95	U	<0.97	U	<0.99	U	<0.97	U	<1	U	<0.97	U	<0.98	U	<0.99	U
1,4-Dichlorobenzene	<1.0	U		<1.0	U	<0.95	U	<0.97	U	<0.99	U	<0.97	U	<1	U	<0.97	U	<0.98	U	<0.99	U
Acetone	**9.5**	EB	H	**7.1**		**5.1**		**11**		**3.7**		**6.0**		**5.9**		**5.4**		**4.9**		**4.8**	
Benzene	<0.54	U		<0.55	U	**0.60**		<0.52	U	<0.53	U	<0.51	U	<0.53	U	<0.52	U	**0.69**		<0.52	U
Ethylbenzene	<0.73	U		<0.75	U	<0.69	U	<0.7	U	<0.72	U	<0.7	U	<0.72	U	<0.7	U	<0.71	U	<0.71	U
m,p-Xylene	<0.73	U		<0.75	U	**0.70**		<0.7	U	<0.72	U	<0.7	U	<0.72	U	<0.7	U	<0.71	U	<0.71	U
o-Xylene	<0.73	U		<0.75	U	<0.69	U	<0.7	U	<0.72	U	<0.7	U	<0.72	U	<0.7	U	<0.71	U	<0.71	U
Toluene	**10**			<0.65	U	**4.8**		<0.61	U	<0.62	U	<0.61	U	**1.2**		<0.61	U	**1.2**		<0.62	U
Trichlorofluoromethane (Freon 11)	**2.0**			**1.4**		**1.0**		**1.1**		**0.98**		**1.0**		**0.99**		**1.1**		**1.1**		**1.0**	
Dichlorodifluoromethane (Freon 12)	**2.3**			**2.6**		**2.1**		**2.0**		**1.9**		**2.0**		**2.1**		**2.0**		**2.1**		**2.0**	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<1.3	U		<1.3	U	<1.2	U	<1.2	U	<1.3	U	<1.2	U	<1.3	U	**1.2**		**1.4**		<1.2	U

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel on the dates indicated. Samples were collected using 6-liter Summa® canisters equipped with 8-hour flow controllers. Refer to figures for sample locations.

2. Sample analysis was completed by Eurofins Air Toxics, Inc. (EATI) of Folsom, California using United States Environmental Protection Agency (USEPA) Method TO-15 (Hi/Lo). Trichloroethene, vinyl chloride, and carbon tetrachloride were analyzed in Selective Ion Monitoring (SIM) mode.

3. "<" indicates a non-detection at the reporting limit shown.

4. New Environmental Horizons, Inc. (NEH) performed an independent validation of the 2010 analytical data, as described in t heir Data Usability Report, dated April 12, 2010. All results were considered acceptable, with the understanding of the potential uncertainty (bias) in the qualified results. In some cases, NEH assigned the following qualifiers and biases to the data:
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"UJ" - The non-detect is estimated at the practical quantitation limit (PQL).
"H" High bias.
"L" Low bias.

5. **Bold** values indicate the analyte was detected above reporting limits.

TABLE 2
C4 Clean Room Targeted Air Sampling Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m³																	
	Targeted Indoor Air																	
	TA1001		TA1002		TA1003		TA1004		TA1005		TA1006		TA1007		TA1008		TA1009	
	HVAC 304 Return		Gowning Room Return Air Chase		Gowning Room		Clean Room Core 9 Intake		Clean Room Near Core 9		Clean Room Core 7 Intake		Clean Room Near Core 7		Clean Room Core 3 Intake		Clean Room Near Core 3	
	4/19/2012		4/19/2012		4/19/2012		4/19/2012		4/19/2012		4/19/2012		4/19/2012		4/19/2012		4/19/2012	
	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Tetrachloroethene (PCE)	<1.3	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U
Trichloroethene (TCE)	<0.20	U	**0.66**		**0.62**		<0.17	U	<0.17	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
cis-1,2-Dichloroethene (cDCE)	<0.75	U	<0.64	U	<0.62	U	<0.63	U	<0.63	U	<0.66	U	<0.67	U	<0.65	U	<0.65	U
1,1-Dichloroethene (DCE)	<0.75	U	<0.64	U	<0.62	U	<0.63	U	<0.63	U	<0.66	U	<0.67	U	<0.65	U	<0.65	U
Vinyl chloride (VC)	<0.048	U	<0.041	U	<0.04	U	<0.04	U	<0.041	U	<0.042	U	<0.043	U	<0.042	U	<0.042	U
1,1,1-Trichloroethane (TCA)	<1.0	U	<0.88	U	<0.86	U	<0.86	U	<0.87	U	<0.90	U	<0.92	U	<0.89	U	<0.90	U
Carbon tetrachloride	**0.74**		**0.78**		**0.72**		**0.76**		**0.77**		**0.78**		**0.81**		**0.80**		**0.66**	
Methylene chloride (MeCl)	<1.3	U	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.2	U	<1.2	U	<1.1	U	<1.1	U
Chlorobenzene	<0.87	U	<0.74	U	<0.72	U	<0.73	U	<0.74	U	<0.76	U	<0.78	U	<0.75	U	<0.76	U
1,2,4-Trichlorobenzene	<7.0	U	<6.0	U	<5.8	U	<5.9	U	<5.9	U	<6.2	U	<6.3	U	<6.0	U	<6.1	U
1,2-Dichlorobenzene	<1.1	U	<0.97	U	<0.94	U	<0.95	U	<0.96	U	<1.0	U	<1.0	U	<0.98	U	<0.99	U
1,3-Dichlorobenzene	<1.1	U	<0.97	U	<0.94	U	<0.95	U	<0.96	U	<1.0	U	<1.0	U	<0.98	U	<0.99	U
1,4-Dichlorobenzene	<1.1	U	<0.97	U	<0.94	U	<0.95	U	<0.96	U	<1.0	U	<1.0	U	<0.98	U	<0.99	U
Acetone	**10**		**18**		**19**		**7.2**		**7.8**		**23**		**9.1**		**5.4**		**5.2**	
Benzene	**0.88**		**0.55**		**0.55**		<0.50	U	<0.51	U	<0.53	U	<0.54	U	<0.52	U	<0.53	U
Ethylbenzene	<0.82	U	<0.70	U	<0.68	U	<0.69	U	<0.69	U	<0.72	U	<0.73	U	<0.71	U	<0.72	U
m,p-Xylene	**0.97**		**0.75**		**0.80**		<0.69	U	<0.69	U	<0.72	U	<0.73	U	<0.71	U	<0.72	U
o-Xylene	<0.82	U	<0.70	U	<0.68	U	<0.69	U	<0.69	U	<0.72	U	<0.73	U	<0.71	U	<0.72	U
Toluene	**1.6**		**1.3**		**1.5**		**0.8**		**0.81**		**0.80**		**0.70**		**0.75**		**0.94**	
Trichlorofluoromethane (Freon 11)	**2.1**		**1.5**		**1.5**		**1.3**		**1.4**		**1.4**		**1.4**		**1.5**		**1.5**	
Dichlorodifluoromethane (Freon 12)	**2.8**		**2.6**		**2.6**		**2.6**		**2.7**		**2.8**		**2.8**		**2.9**		**3.0**	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	**2.2**		**19**		**19**		<1.2	U	<1.2	U	<1.3	U	<1.3	U	<1.2	U	<1.3	U

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel on the dates indicated. Samples were collected using 6-Liter Summa® canisters equipped with 1-hour flow controllers.

2. Sample analysis was completed by Eurofins Air Toxics, Inc. (EATI) of Folsom, California using United States Environmental Protection Agency (USEPA) Method TO-15 (Hi/Lo). Trichloroethene, vinyl chloride, and carbon tetrachloride were analyzed in Selective Ion Monitoring (SIM) mode.

3. "<" indicates a non-detection at the reporting limit shown.
"U" indicates the compound was analyzed for, but not detected. The associated numerical value is the sample-specific reporting limit.

4. **Bold** values indicate the analyte was detected above reporting limits.

TABLE 3
Portable GC/MS Screening Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Sample Location	Sample Type	Collection Date	Collection Time	PCE	TCE	DCA	DCE	cDCE	tDCE	VC
Clean Room										
Indoor Air Samples										
IA0710	HAPSITE - Indoor Air	2/13/2013	09:51	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
		5/1/2013	10:50	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	SUMMA Grab - Indoor Air	5/1/2013	10:40	<1.0	<0.16	–	<0.60	<0.6	–	1.0
IA0720	HAPSITE - Indoor Air	2/13/2013	09:59	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0721	HAPSITE - Indoor Air	2/13/2013	10:59	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0722	HAPSITE - Indoor Air	2/13/2013	11:36	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0723	HAPSITE - Indoor Air	2/13/2013	12:09	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0724	HAPSITE - Indoor Air	2/13/2013	13:50	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0725	HAPSITE - Indoor Air	2/13/2013	13:58	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0726	HAPSITE - Indoor Air	2/13/2013	14:33	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0727	HAPSITE - Indoor Air	2/13/2013	15:06	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0728	HAPSITE - Indoor Air	2/13/2013	15:15	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0729	HAPSITE - Indoor Air	2/13/2013	15:23	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
Targeted Air Samples										
TA-1038	HAPSITE - HVAC Ceiling Vent	2/13/2013	10:07	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1039	HAPSITE - Raised Floor	2/13/2013	10:16	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1040	HAPSITE - Machine (APLY2)	2/13/2013	10:25	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1041	HAPSITE - Machine (DEV01)	2/13/2013	10:33	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1042	HAPSITE - Machine (SPT-01)	2/13/2013	10:41	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1043	HAPSITE - Machine (PBO01)	2/13/2013	10:51	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1044	HAPSITE - Machine (SPT-01)	2/13/2013	11:08	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1045	HAPSITE - Calibration Canisters	2/13/2013	11:19	<0.68	<0.54	<0.40	0.52	<0.40	<0.40	<2.6
TA-1046	HAPSITE - Disc/Wafer Storage	2/13/2013	11:27	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1047	HAPSITE - Fire Extinguisher	2/13/2013	11:45	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1048	HAPSITE - Fire Extinguisher	2/13/2013	11:53	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1049	HAPSITE - Plating Area	2/13/2013	12:20	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1050	HAPSITE - PGMEA Bottle	2/13/2013	13:41	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1051	HAPSITE - Plating Reservoir	2/13/2013	13:33	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1052	HAPSITE - Plating Reservoir	2/13/2013	14:48	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	SUMMA Grab - Plating Reservoir	2/13/2013	14:30	<6.0	<0.96	–	<3.5	<3.5	–	<0.23
TA-1053	HAPSITE - Ceiling Above IA0710	2/13/2013	15:32	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Ceiling Above IA0710	5/1/2013	11:08	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1054	HAPSITE - Raised Floor	2/13/2013	15:40	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Raised Floor	5/1/2013	11:00	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1055	HAPSITE - Manufactured Product Storage Boxes	2/13/2013	15:54	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	SUMMA Grab - Manufactured Product Storage Boxes	2/13/2013	16:00	<1.2	<0.20	–	<0.72	<0.72	–	0.46
TA-1056	HAPSITE - HVAC Ceiling Vent	5/1/2013	11:16	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
C4 Expansion Area										
Indoor Air Samples										
IA0708	HAPSITE - Indoor Air	2/12/2013	11:47	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	16:15	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	SUMMA Grab - Indoor Air	4/30/2013	16:36	<1.0	<0.16	–	<0.58	<0.58	–	0.45
IA0713	HAPSITE - Indoor Air	2/12/2013	11:12	<0.68	<0.54	<0.40	0.44	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	14:56	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	4/30/2013	20:13	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	5/1/2013	12:47	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
IA0714	HAPSITE - Indoor Air	2/12/2013	11:26	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	14:46	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
IA0715	HAPSITE - Indoor Air	2/12/2013	11:56	<0.68	<0.54	<0.40	0.63	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	11:15	<3.4	<2.7	<2.0	2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	4/30/2013	20:30	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	5/1/2013	12:55	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
IA0716	HAPSITE - Indoor Air	2/12/2013	12:06	<0.68	<0.54	<0.40	0.87	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	10:25	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	4/30/2013	20:41	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Indoor Air	5/1/2013	13:04	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
IA0717	HAPSITE - Indoor Air	2/12/2013	12:17	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Indoor Air	4/30/2013	10:40	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
IA0718	HAPSITE - Indoor Air	2/12/2013	12:28	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
IA0719	HAPSITE - Indoor Air	2/12/2013	18:15	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
Targeted Air Samples in Areas without Floor Sealant										
TA-1012	HAPSITE - Expansion Joint	2/12/2013	12:49	8.1	83	<0.40	<0.40	0.56	<0.40	<2.6
	SUMMA Grab - Expansion Joint	2/12/2013	17:30	3.2	24	–	<0.68	<0.68	–	0.18
	HAPSITE - Expansion Joint	4/30/2013	13:05	11	97	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Expansion Joint	4/30/2013	21:07	11	91	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Expansion Joint	5/1/2013	13:20	10	86	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1014	HAPSITE - Cleanout	2/12/2013	13:09	1.7	22	<0.40	<0.40	0.71	<0.40	<2.6
	HAPSITE - Cleanout	4/30/2013	15:30	<3.4	20	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Cleanout	4/30/2013	20:57	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Cleanout	5/1/2013	13:14	<3.4	49	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1016	HAPSITE - Cleanout	2/12/2013	13:29	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1018	HAPSITE - Trench Sump	2/12/2013	14:41	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1019	HAPSITE - Concrete Cut	2/12/2013	14:50	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1020	HAPSITE - Concrete Core	2/12/2013	14:58	<0.68	<0.54	<0.40	0.48	<0.40	<0.40	<2.6
	HAPSITE - Concrete Core	4/30/2013	21:25	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1021	HAPSITE - Trench	2/12/2013	15:08	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Trench	4/30/2013	11:00	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1022	HAPSITE - Trench Sump	2/12/2013	15:19	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1023	HAPSITE - Trench Sump	2/12/2013	15:28	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1024	HAPSITE - Trench	2/12/2013	15:36	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1025	HASPITE - Trench	2/12/2013	15:46	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1026	HASPITE - Trench	2/12/2013	15:56	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1033	HAPSITE - Trench	2/12/2013	17:17	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1037	HAPSITE - Cleanout	2/12/2013	18:05	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
Targeted Air Samples in Areas with Floor Sealant										
TA-1010	HAPSITE - Trench	2/12/2013	11:37	<0.68	<0.54	<0.40	0.91	<0.40	<0.40	<2.6
	HAPSITE - Trench	4/30/2013	15:50	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Trench	4/30/2013	20:06	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1011	HAPSITE - Trench Crack	2/12/2013	12:39	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1013	HAPSITE - Trench Flashing	2/12/2013	13:00	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1015	HAPSITE - Cleanout	2/12/2013	13:19	1.6	0.97	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Cleanout	4/30/2013	15:20	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Cleanout	4/30/2013	20:49	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1017	HAPSITE - Column Weld Cut	2/12/2013	14:31	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1027	HASPITE - Trench	2/12/2013	16:06	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HASPITE - Trench	4/30/2013	11:25	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1028	HAPSITE - Cleanout	2/12/2013	16:16	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1029	HAPSITE - Construction Joint	2/12/2013	16:25	10	63	<0.40	<0.40	<0.40	<0.40	<2.6
	SUMMA Grab - Construction Joint	2/12/2013	17:15	<1.1	0.63	–	<0.67	<0.67	–	0.12
	HAPSITE - Construction Joint	4/30/2013	14:38	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Construction Joint	4/30/2013	19:57	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1030	HAPSITE - Floor Penetration	2/12/2013	16:36	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Floor Penetration	4/30/2013	14:21	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Floor Penetration	4/30/2013	19:41	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1031	HAPSITE - Construction Joint	2/12/2013	16:46	11	69	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Construction Joint	4/30/2013	14:30	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Construction Joint	4/30/2013	19:49	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1032	HAPSITE - Cleanout (Covered)	2/12/2013	17:00	<0.68	1.8	<0.40	<0.40	<0.40	<0.40	<2.6
	HAPSITE - Cleanout (Uncovered)	4/30/2013	13:30	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Cleanout (Uncovered)	4/30/2013	19:30	<3.4	2.8	<2.0	<2.0	<2.0	<2.0	<1.3
	HAPSITE - Cleanout (Uncovered)	5/1/2014	12:16	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
TA-1034	HAPSITE - Cleanout	2/12/2013	17:34	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1035	HAPSITE - Cleanout	2/12/2013	17:43	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
TA-1036	HAPSITE - Trench	2/12/2013	17:55	<0.68	<0.54	<0.40	<0.40	<0.40	<0.40	<2.6
HVAC System										
AA0729	HAPSITE - Outside Air Intake	4/30/2013	17:07	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
AA0730	HAPSITE - Recirculation Unit	4/30/2013	17:32	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3
AA0731	HAPSITE - Recirculation Unit	4/30/2013	17:21	<3.4	<2.7	<2.0	<2.0	<2.0	<2.0	<1.3

TABLE 3
Portable GC/MS Screening Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Notes:

1. This table summarizes data recorded during field screening at indoor air and targeted air locations using an Inficon HAPSITE SmartPlus portable gas chromatograph/mass spectrometer (GC/MS), manufactured by Inficon. The field samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel directly into the portable GC/MS sampling probe over a one-minute timeframe from the locations and on the dates noted in the table. The samples were screened using the portable GC/MS in selective ion monitoring (SIM) mode for tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC). Results were converted to micrograms per cubic meter ($\mu g/m^3$) using standard temperature (25°C) and pressure (1 atmosphere) for the conversion. Results were rounded to two significant figures.

2. The portable GC/MS was used as a field screening tool; therefore, the data should be considered estimated and not suitable for independent validation and decision-making. The findings should be considered in conjunction with the results of samples analyzed by a fixed laboratory.

3. SUMMA Grab samples were collected by Sanborn Head personnel as grab samples into 6-liter Summa® canisters and submitted to Eurofins Air Toxics, Inc. (EATI) for laboratory analysis of the site-specific list of 22 VOCs by United States Environmental Protection Agency (USEPA) Method TO-15 Hi/Lo. Trichloroethene, vinyl chloride, and carbon tetrachloride (not tabulated) were analyzed in SIM mode.

4. "<" - The method reporting limit was considered to be 1 ppbv (February 2013) and 0.5 ppbv (April and May 2013) for the portable GC/MS measurements. Sanborn Head reviewed the quality of the data, and the results of the review are presented in this table.

5. "NA" indicates not analyzed for the indicated parameter.

TABLE 4
C4 Clean Room Building Material Sampling Results
Report of Findings – Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/kg	
	BM1000	BM1001
	Floor Tile	HVAC Vent Filter
	5/1/2013	5/1/2013
Tetrachloroethene (PCE)	<6.5	<0.70
Trichloroethene (TCE)	<7.1	<0.76
cis-1,2-Dichloroethene (cDCE)	<6.9	<0.75
1,1-Dichloroethene (DCE)	<9.6	<1.0
Vinyl chloride (VC)	<6.6	<0.71
1,1,1-Trichloroethane (TCA)	<5.1	<0.55
Carbon tetrachloride	<9.8	<1.0
Methylene chloride (MeCI)	<93	<10
Chlorobenzene	<16	<1.7
1,2,4-Trichlorobenzene	<37	<3.9
1,2-Dichlorobenzene	<8.5	<0.92
1,3-Dichlorobenzene	<8.5	<0.92
1,4-Dichlorobenzene	<11	<1.2
Acetone	<140	**180**
Benzene	<5.5	<0.59
Ethylbenzene	<6.8	<0.74
m,p-Xylene	<15	<1.6
o-Xylene	<12	<1.4
Toluene	**14 J**	<0.56
Trichlorofluoromethane (Freon 11)	<5.6	<0.61
Dichlorodifluoromethane (Freon 12)	<10	<1.1
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<13	<1.4

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) personnel on the date indicated and submitted to Alpha Analytical of Westborough, Massachusetts for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C.

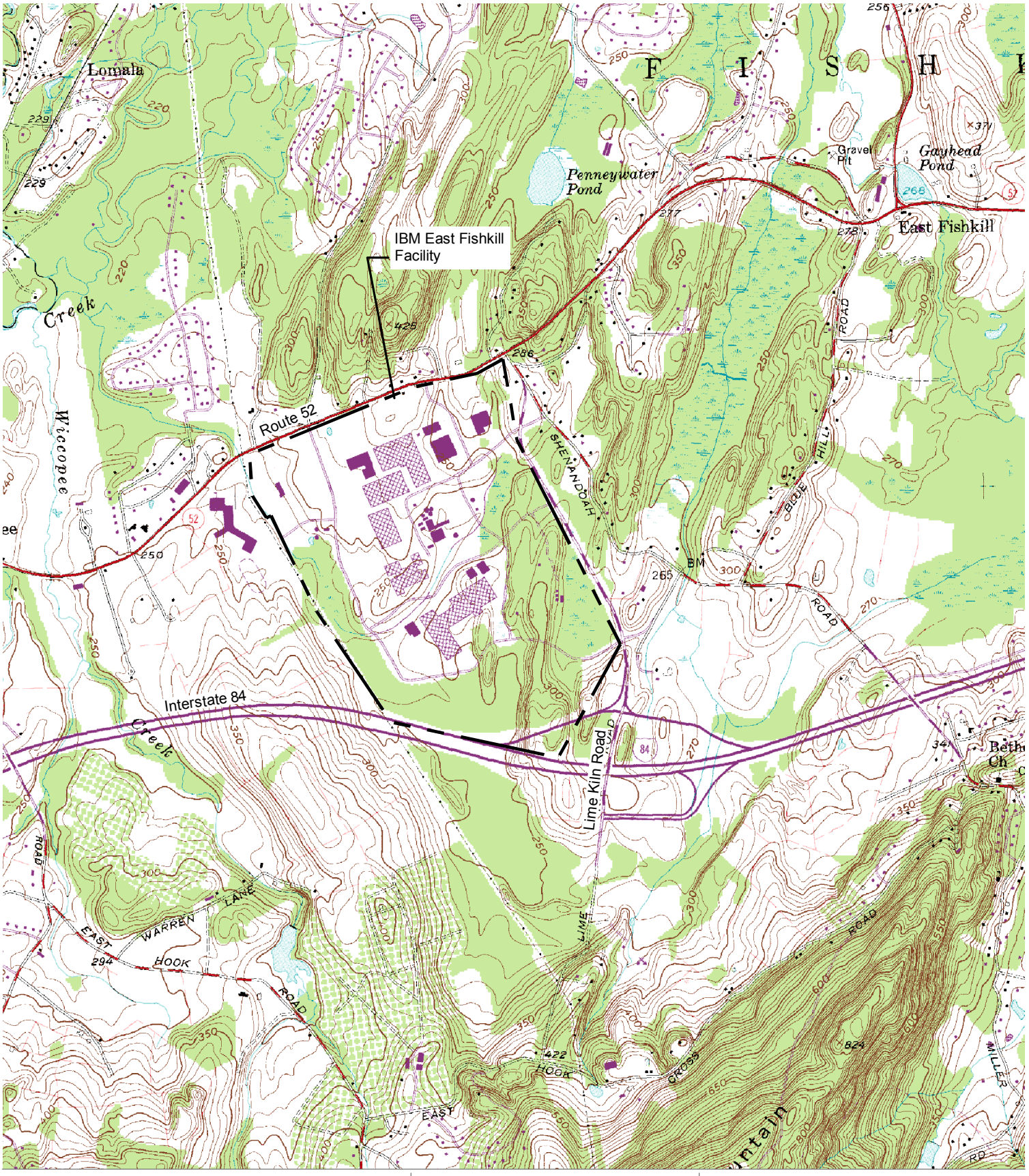
2. Concentrations are presented in micrograms per kilogram (µg/kg), which are equivalent to parts per billion (ppb).

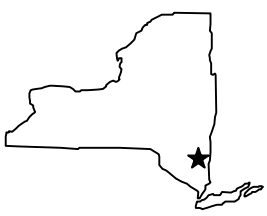
3. All non-detect or estimated (J-qualified) concentrations were quantitated to the indicated method detection limit (MDL). Concentrations detected below the laboratory reporting limit (RL) are qualified as estimated (J). "<" indicates not detected at or above the indicated method detection limit.

4. **Bold** indicates a detected concentration.

5. Refer to the analytical laboratory report for additional information.

FIGURES





Notes:
Base map taken from 7.5 minute USGS Quadrangle Maps: Hopewell Junction, New York, Dated 1957, Photorevised in 1981.

Drawn By: E. Wright
Designed By: L. Atwell
Reviewed By: B. Green
Project No: 2999.00
Date: May 2014

1000' 0 2000' Feet

SANBORN HEAD ENGINEERING

Figure 1

Locus Plan

Report of Findings - Additional Investigations
Building 320B
IBM East Fishkill Facility
Hopewell Junction, New York

Figure 2

Building Location Plan

Report of Findings -
Additional Investigations
Building 320B

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: L. Atwell
Reviewed By: B. Green
Project No: 2999.00
Date: May 2014

Figure Narrative

This figure shows the buildings at the IBM East Fishkill facility. Building 320B is highlighted.

Legend

IBM Property Line

Unlabeled features include wastewater treatment tanks, pump houses, trailers, and other structures and features not intended for human occupancy

B320B Indicates building number

Indicates the location of Building 320B

N
W E
S

200' 100' 0 200' 400' Feet

SANBORN HEAD ENGINEERING

Figure 3

Indoor Air Sampling Results for Vinyl Chloride

Report of Findings -
Additional Investigations
Building 320B

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: L. Atwell
Reviewed By: B. Green
Project No: 2999.00
Date: May 2014

Figure Narrative

This figure shows the locations of indoor air and ambient air samples collected in Building 320B on the dates indicated below and on Table 1. Refer to Table 1 for complete results.

Samples were collected into 6-liter Summa® canisters with 8-hour flow controllers. Samples were analyzed by Eurofins Air Toxics, Inc. (EATI) using USEPA Method TO-15 Hi/Lo for the site-specific list of 22 analytes. Vinyl chloride (VC) results are presented in units of micrograms per cubic meter (µg/m^3).

Legend

- IA0708 Indoor air sample
- AA0712 Ambient air sample
- 157C SO Solid Waste Management Unit
- HVAC zone
- C4 Clean Room
- C4 Expansion Area

IA0700	Sample Location
<0.041	2010 results
NS	2012 results
NS	2013 results

"NS" indicates the location was not sampled.

"<" indicates VC was not detected above the compound-specific reporting limit displayed.

Feet
25' 12.5' 0 25' 50'

SANBORN HEAD ENGINEERING

File:S:\RANDATA\2900s\2999.00\Graphics Files\CAD\B320B\Rpt of Findings\B-320B_VCdataFig4.dwg Plot Date: 3-31-14

CHEMICAL STORAGE

Gowning Room

PbSn PLATING

CROSSWALK

RESERVOIR

TA1008 TA1009 TA1007 TA1006 TA1052 TA1049 TA1051 TA1050 TA1041 TA1040 TA1043 TA1042 TA1044 TA1005 TA1004 TA1046 TA1045 TA1002 TA1003

IA0726 IA0725 IA0724 IA0720 IA0723 IA0727 IA0728 IA0721 IA0729 IA0722

320B LS IW 320B LS SO

IA0710	5/1/2013
Summa Grab	1.0

TA1055	2/13/2013
Summa Grab	0.46

Figure Extent

N

8' 4' 0 8' 16'

Feet

Legend

- IA0726 — Indoor air screening location (portable GC/MS and/or Grab Summa®)
- TA1049 — Targeted air screening location (portable GC/MS)
- TA1004 — Targeted air location (1-hour Summa®)
- 2/13/2013 / 0.46 — Sample Date; Vinyl chloride result in µg/m^3 No data table at a sample location indicates vinyl chloride was not detected above the instrument or laboratory reporting limit
- Core Area

SANBORN HEAD ENGINEERING

Figure Narrative

This figure shows field screening and fixed laboratory sample locations collected to assess potential sources of the vinyl chloride (VC) in indoor air. VC was only detected at two of the field screening and fixed laboratory sample locations (IA0710 and TA1055).

- Various machinery, chemical storage, and building materials were field screened with a portable gas chromatograph/mass spectrometer (GC/MS) on February 13, 2013 and May 1, 2013 (and designated with blue symbols as TA-1###).
- Samples for fixed laboratory analysis were collected from heating, ventilation, and air conditioning (HVAC) components on April 19, 2012 (and designated with teal symbols as TA-1###). Samples were collected as 1-hour time integrated samples into 6-liter Summa® canisters and submitted to Eurofins Air Toxics, Inc. (EATI) for analysis of the site-specific list of 22 volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Method TO-15.
- Indoor air locations were field screened with the portable GC/MS, and for comparison purposes, corresponding grab samples were collected for laboratory analysis into 6-liter Summa® canisters and submitted to EATI for analysis (designated with yellow symbols as IA07##).

Figure 4

Targeted Vinyl Chloride Results in the C4 Clean Room

Report of Findings - Additional Investigations Building 320B

IBM East Fishkill Facility

Hopewell Junction, New York

Drawn By: E. Wright
Designed By: L. Atwell
Reviewed By: B. Green
Project No: 2999.00
Date: May 2014

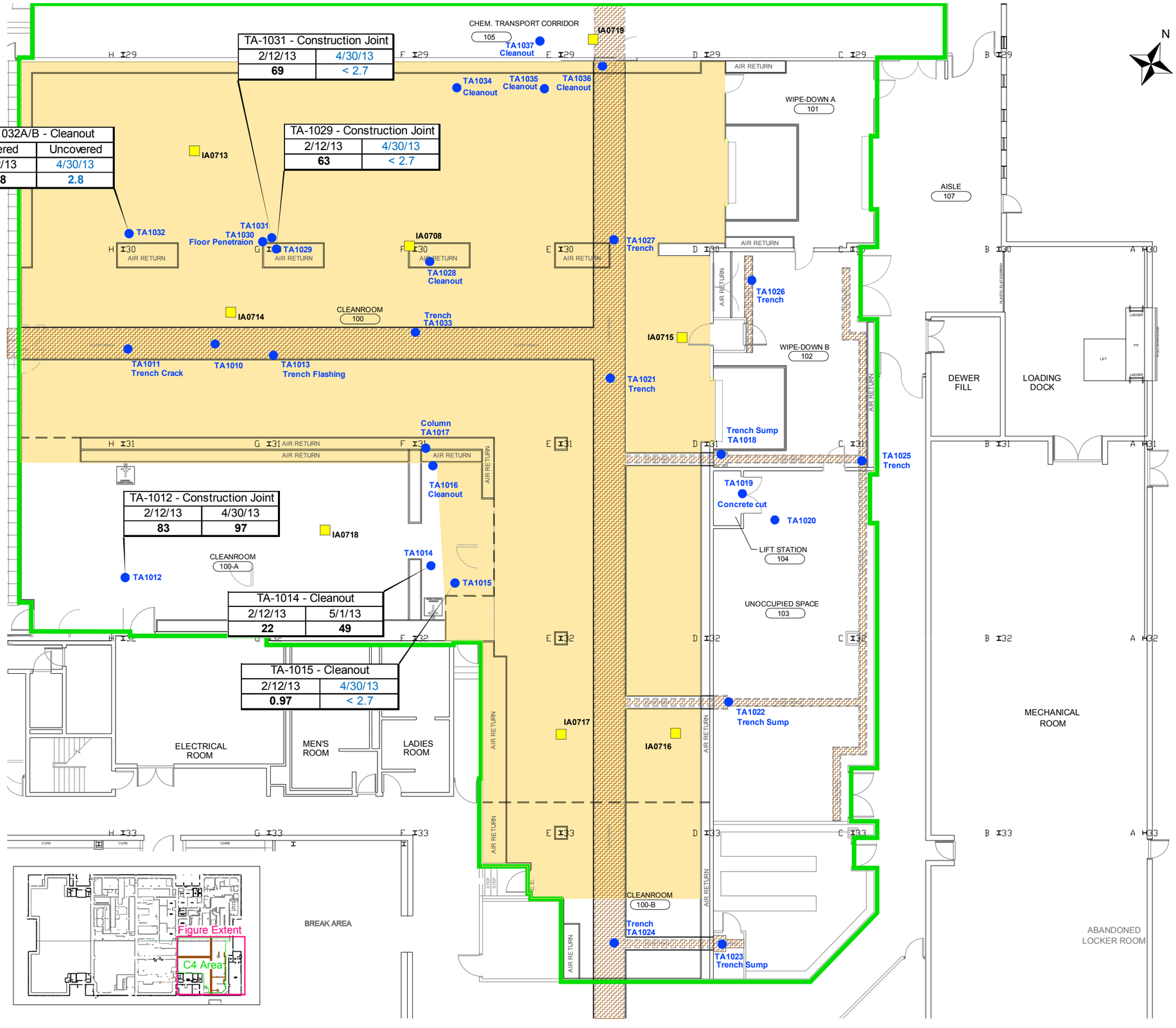


Figure 5

TCE Screening Results - C4 Expansion Area

Report of Findings - Additional Investigations Building 320B

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: L. Atwell
Reviewed By: B. Green
Project No: 2999.00
Date: May 2014

Figure Narrative

This figure shows TCE results from screening using a portable gas chromatograph/mass spectrometer (GC/MS) in the C4 Expansion Area. Indoor and targeted air locations were screened before (February 12, 2013) and after (April 30 and May 1, 2013) floors were sealed. See Table 3 for full screening results.

Legend

- IA0726 Indoor air location
- TA1049 Targeted air location
- C4 Expansion Area
- Location of subgrade trench
- Areas where floors were sealed

TA-1029 - Construction Joint	
2/12/13	4/30/13
63	< 0.59

Portable GC/MS sample results ($\mu g/m^3$) for select analytes. No data table at a sample location indicates TCE was not detected above the instrument reporting limit

Blue text indicates samples were collected after the floor was sealed.

8' 4' 0 8' 16' Feet

SANBORN HEAD ENGINEERING

APPENDIX A

LIMITATIONS

APPENDIX A
LIMITATIONS

1. The findings and conclusions described in this report are based in part on the data obtained from a finite number of samples from widely spaced locations. The figures are intended to depict inferred conditions during a given period of time, consistent with available information. The actual conditions will vary from that shown, both spatially and temporally. Other interpretations are possible. The nature and extent of variations between sampling locations may not become evident until further investigation is initiated. If variations or other latent conditions then appear evident, it may be necessary to re-evaluate the conclusions of this report.

2. The conclusions contained in this report are based in part upon various types of chemical data, as well as historical and hydrogeologic information developed by previous investigators. While SHPC has reviewed that data available to us at the time the report was prepared and information as stated in this report, any of SHPC's interpretations and conclusions that have relied on that information will be contingent on its validity. SHPC has not performed an independent assessment of the reliability of the data; should additional chemical data, historical information, or hydrogeologic information become available in the future, such information should be reviewed by SHPC and the interpretations and conclusions presented herein may be modified accordingly.

3. Sampling and quantitative laboratory testing was performed by others as part of the investigation as noted within the report. Where such analyses have been conducted by an outside laboratory, unless otherwise stated in the report, SHPC has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data. It must be noted that additional compounds not searched for during the current study may be present in indoor and ambient air at the site. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their distribution within indoor and ambient air may occur due to the passage of time, seasonal water table fluctuations, recharge events, and other factors.

4. This report has been prepared for the exclusive use of IBM for specific application to Building 320B at the East Fishkill facility in accordance with generally accepted engineering and scientific practices. No warranty, expressed or implied, is made. The contents of this report should not be relied on by any other party without the express written consent of SHPC.

5. In preparing this report, SHPC has endeavored to conform to generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area. SHPC has attempted to observe a degree of care and skill generally exercised by the technical community under similar circumstances and conditions.

APPENDIX B

ANALYTICAL LABORATORY DATA REPORTS

(ENCLOSED ON CD ONLY)

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5/8/2012

Mr. Brad Green

Sanborn, Head & Associates

20 Foundry Street

Concord NH 03301

Project Name: IBM - EFK Building 320B

Project #: 2999

Workorder #: 1204500

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 4/24/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1204500

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 IBM - EFK Building 320B
DATE RECEIVED:	04/24/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	05/07/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA0703	Modified TO-15	5.0 "Hg	5 psi
01B	IA0703	Modified TO-15	5.0 "Hg	5 psi
02A	IA0706	Modified TO-15	5.8 "Hg	5 psi
02B	IA0706	Modified TO-15	5.8 "Hg	5 psi
03A	IA0707	Modified TO-15	6.0 "Hg	5 psi
03B	IA0707	Modified TO-15	6.0 "Hg	5 psi
04A	IA0709	Modified TO-15	5.2 "Hg	5 psi
04B	IA0709	Modified TO-15	5.2 "Hg	5 psi
05A	IA0710	Modified TO-15	6.6 "Hg	5 psi
05B	IA0710	Modified TO-15	6.6 "Hg	5 psi
06A	FB-03	Modified TO-15	9.8 "Hg	5 psi
06B	FB-03	Modified TO-15	9.8 "Hg	5 psi
07A	Lab Blank	Modified TO-15	NA	NA
07B	Lab Blank	Modified TO-15	NA	NA
07C	Lab Blank	Modified TO-15	NA	NA
07D	Lab Blank	Modified TO-15	NA	NA
08A	CCV	Modified TO-15	NA	NA
08B	CCV	Modified TO-15	NA	NA
08C	CCV	Modified TO-15	NA	NA
08D	CCV	Modified TO-15	NA	NA
09A	LCS	Modified TO-15	NA	NA
09AA	LCSD	Modified TO-15	NA	NA
09B	LCS	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1204500

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 IBM - EFK Building 320B
DATE RECEIVED:	04/24/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	05/07/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
09BB	LCSD	Modified TO-15	NA	NA
09C	LCS	Modified TO-15	NA	NA
09CC	LCSD	Modified TO-15	NA	NA
09D	LCS	Modified TO-15	NA	NA
09DD	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 05/07/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Sanborn, Head & Associates
Workorder# 1204500

Six 6 Liter Summa Canister (SIM Certified) samples were received on April 24, 2012. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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 exceedances 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.

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

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 and/or LCS.

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 SIM/FULL SCAN

Client Sample ID: IA0703

Lab ID#: 1204500-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.57	0.80	2.8
Freon 11	0.16	1.6	0.90	9.2
Freon 113	0.16	0.48	1.2	3.6
Acetone	0.80	5.1	1.9	12
Benzene	0.16	0.16	0.51	0.52
Toluene	0.16	0.53	0.61	2.0

Client Sample ID: IA0703

Lab ID#: 1204500-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.048	0.041	0.12
Carbon Tetrachloride	0.032	0.11	0.20	0.71
Trichloroethene	0.032	0.040	0.17	0.21

Client Sample ID: IA0706

Lab ID#: 1204500-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.58	0.82	2.8
Freon 11	0.17	3.4	0.93	19
Freon 113	0.17	1.3	1.3	9.9
Acetone	0.83	4.6	2.0	11
Benzene	0.17	0.19	0.53	0.62
Toluene	0.17	0.86	0.62	3.3

Client Sample ID: IA0706

Lab ID#: 1204500-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.048	0.042	0.12
Carbon Tetrachloride	0.033	0.12	0.21	0.75

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

Client Sample ID: IA0706

Lab ID#: 1204500-02B

Trichloroethene	0.033	0.12	0.18	0.68

Client Sample ID: IA0707

Lab ID#: 1204500-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.55	0.83	2.7
Freon 11	0.17	0.36	0.94	2.0
Freon 113	0.17	1.6	1.3	12
Acetone	0.84	14	2.0	33
Toluene	0.17	0.54	0.63	2.0
m,p-Xylene	0.17	0.18	0.73	0.77

Client Sample ID: IA0707

Lab ID#: 1204500-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.17	0.043	0.43
Carbon Tetrachloride	0.034	0.11	0.21	0.72
Trichloroethene	0.034	0.14	0.18	0.76

Client Sample ID: IA0709

Lab ID#: 1204500-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 11	0.16	0.31	0.91	1.8
Freon 113	0.16	0.22	1.2	1.7
Acetone	0.81	3.2	1.9	7.5
Toluene	0.16	0.21	0.61	0.80

Client Sample ID: IA0709

Lab ID#: 1204500-04B

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

Client Sample ID: IA0709

Lab ID#: 1204500-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.12	0.041	0.31
Carbon Tetrachloride	0.032	0.12	0.20	0.76

Client Sample ID: IA0710

Lab ID#: 1204500-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.85	2.6
Freon 11	0.17	0.25	0.97	1.4
Acetone	0.86	3.0	2.0	7.1

Client Sample ID: IA0710

Lab ID#: 1204500-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.42	0.044	1.1
Carbon Tetrachloride	0.034	0.11	0.22	0.70

Client Sample ID: FB-03

Lab ID#: 1204500-06A

No Detections Were Found.

Client Sample ID: FB-03

Lab ID#: 1204500-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.020	0.11	0.051	0.28

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Client Sample ID: IA0703

Lab ID#: 1204500-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042612**	**Date of Collection:**	**4/19/12 4:32:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**4/26/12 06:12 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.57	0.80	2.8
Freon 11	0.16	1.6	0.90	9.2
Freon 113	0.16	0.48	1.2	3.6
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	5.1	1.9	12
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	0.16	0.51	0.52
Toluene	0.16	0.53	0.61	2.0
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: IA0703

Lab ID#: 1204500-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042612sim**	**Date of Collection: 4/19/12 4:32:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 4/26/12 06:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.048	0.041	0.12
Carbon Tetrachloride	0.032	0.11	0.20	0.71
Trichloroethene	0.032	0.040	0.17	0.21

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: IA0706

Lab ID#: 1204500-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042613**	**Date of Collection:**	**4/19/12 4:30:00 PM**
Dil. Factor:	**1.66**	**Date of Analysis:**	**4/26/12 06:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.58	0.82	2.8
Freon 11	0.17	3.4	0.93	19
Freon 113	0.17	1.3	1.3	9.9
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	4.6	2.0	11
Methylene Chloride	0.33	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Benzene	0.17	0.19	0.53	0.62
Toluene	0.17	0.86	0.62	3.3
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.76	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected	6.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: IA0706

Lab ID#: 1204500-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042613sim**	**Date of Collection: 4/19/12 4:30:00 PM**	
Dil. Factor:	**1.66**	**Date of Analysis: 4/26/12 06:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.048	0.042	0.12
Carbon Tetrachloride	0.033	0.12	0.21	0.75
Trichloroethene	0.033	0.12	0.18	0.68

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: IA0707

Lab ID#: 1204500-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042614**	**Date of Collection:**	**4/19/12 4:27:00 PM**
Dil. Factor:	**1.68**	**Date of Analysis:**	**4/26/12 07:42 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.55	0.83	2.7
Freon 11	0.17	0.36	0.94	2.0
Freon 113	0.17	1.6	1.3	12
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	14	2.0	33
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Benzene	0.17	Not Detected	0.54	Not Detected
Toluene	0.17	0.54	0.63	2.0
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	0.18	0.73	0.77
o-Xylene	0.17	Not Detected	0.73	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	112	70-130

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Client Sample ID: IA0707

Lab ID#: 1204500-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042614sim**	**Date of Collection: 4/19/12 4:27:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 4/26/12 07:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.17	0.043	0.43
Carbon Tetrachloride	0.034	0.11	0.21	0.72
Trichloroethene	0.034	0.14	0.18	0.76

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: IA0709

Lab ID#: 1204500-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042616**	**Date of Collection: 4/19/12 4:22:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 4/26/12 09:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.80	2.6
Freon 11	0.16	0.31	0.91	1.8
Freon 113	0.16	0.22	1.2	1.7
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	3.2	1.9	7.5
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	0.21	0.61	0.80
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected	6.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: IA0709

Lab ID#: 1204500-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042616sim**	**Date of Collection: 4/19/12 4:22:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 4/26/12 09:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.12	0.041	0.31
Carbon Tetrachloride	0.032	0.12	0.20	0.76
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: IA0710

Lab ID#: 1204500-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042615**	**Date of Collection:**	**4/19/12 4:20:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**4/26/12 08:25 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.52	0.85	2.6
Freon 11	0.17	0.25	0.97	1.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	3.0	2.0	7.1
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Benzene	0.17	Not Detected	0.55	Not Detected
Toluene	0.17	Not Detected	0.65	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.75	Not Detected
m,p-Xylene	0.17	Not Detected	0.75	Not Detected
o-Xylene	0.17	Not Detected	0.75	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: IA0710

Lab ID#: 1204500-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042615sim**	**Date of Collection: 4/19/12 4:20:00 PM**	
Dil. Factor:	**1.72**	**Date of Analysis: 4/26/12 08:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.42	0.044	1.1
Carbon Tetrachloride	0.034	0.11	0.22	0.70
Trichloroethene	0.034	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: FB-03

Lab ID#: 1204500-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042614**	**Date of Collection:**	**4/19/12 12:30:00 PM**
Dil. Factor:	**1.99**	**Date of Analysis:**	**4/26/12 08:18 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.20	Not Detected	0.98	Not Detected
Freon 11	0.20	Not Detected	1.1	Not Detected
Freon 113	0.20	Not Detected	1.5	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.79	Not Detected
Acetone	1.0	Not Detected	2.4	Not Detected
Methylene Chloride	0.40	Not Detected	1.4	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.79	Not Detected
1,1,1-Trichloroethane	0.20	Not Detected	1.1	Not Detected
Benzene	0.20	Not Detected	0.64	Not Detected
Toluene	0.20	Not Detected	0.75	Not Detected
Tetrachloroethene	0.20	Not Detected	1.3	Not Detected
Chlorobenzene	0.20	Not Detected	0.92	Not Detected
Ethyl Benzene	0.20	Not Detected	0.86	Not Detected
m,p-Xylene	0.20	Not Detected	0.86	Not Detected
o-Xylene	0.20	Not Detected	0.86	Not Detected
1,3-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,4-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2-Dichlorobenzene	0.20	Not Detected	1.2	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected	7.4	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: FB-03

Lab ID#: 1204500-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042614sim**	**Date of Collection: 4/19/12 12:30:00 PM**	
Dil. Factor:	**1.99**	**Date of Analysis: 4/26/12 08:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.020	0.11	0.051	0.28
Carbon Tetrachloride	0.040	Not Detected	0.25	Not Detected
Trichloroethene	0.040	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204500-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:51 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204500-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042606sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:51 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	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	106	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204500-07C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042608**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 02:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

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

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Client Sample ID: Lab Blank

Lab ID#: 1204500-07D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042608asim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 02:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	130	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 1204500-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 09:44 AM**	

Compound	%Recovery
Freon 12	97
Freon 11	97
Freon 113	104
1,1-Dichloroethene	102
Acetone	97
Methylene Chloride	103
cis-1,2-Dichloroethene	109
1,1,1-Trichloroethane	100
Benzene	105
Toluene	105
Tetrachloroethene	112
Chlorobenzene	104
Ethyl Benzene	108
m,p-Xylene	110
o-Xylene	110
1,3-Dichlorobenzene	114
1,4-Dichlorobenzene	111
1,2-Dichlorobenzene	114
1,2,4-Trichlorobenzene	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1204500-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042602sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 09:44 AM**	

Compound	**%Recovery**
Vinyl Chloride	102
Carbon Tetrachloride	92
Trichloroethene	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: CCV

Lab ID#: 1204500-08C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 10:30 AM**	

Compound	%Recovery
Freon 12	136 Q
Freon 11	116
Freon 113	109
1,1-Dichloroethene	104
Acetone	87
Methylene Chloride	106
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	108
Benzene	92
Toluene	116
Tetrachloroethene	96
Chlorobenzene	94
Ethyl Benzene	94
m,p-Xylene	91
o-Xylene	95
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	87
1,2-Dichlorobenzene	85
1,2,4-Trichlorobenzene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	122	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 1204500-08D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042602sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 10:30 AM**	

Compound	**%Recovery**
Vinyl Chloride	89
Carbon Tetrachloride	122
Trichloroethene	85

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	123	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 1204500-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 10:33 AM**	

Compound	%Recovery
Freon 12	100
Freon 11	101
Freon 113	108
1,1-Dichloroethene	111
Acetone	98
Methylene Chloride	104
cis-1,2-Dichloroethene	115
1,1,1-Trichloroethane	104
Benzene	106
Toluene	108
Tetrachloroethene	114
Chlorobenzene	109
Ethyl Benzene	111
m,p-Xylene	116
o-Xylene	115
1,3-Dichlorobenzene	117
1,4-Dichlorobenzene	112
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1204500-09AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 11:12 AM**	

Compound	%Recovery
Freon 12	98
Freon 11	98
Freon 113	106
1,1-Dichloroethene	110
Acetone	98
Methylene Chloride	102
cis-1,2-Dichloroethene	113
1,1,1-Trichloroethane	103
Benzene	104
Toluene	105
Tetrachloroethene	111
Chlorobenzene	106
Ethyl Benzene	108
m,p-Xylene	111
o-Xylene	111
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	106
1,2-Dichlorobenzene	112
1,2,4-Trichlorobenzene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1204500-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042603sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 10:33 AM**	

Compound	**%Recovery**
Vinyl Chloride	104
Carbon Tetrachloride	100
Trichloroethene	102

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 1204500-09BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042604sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 11:12 AM**	

Compound	%Recovery
Vinyl Chloride	102
Carbon Tetrachloride	98
Trichloroethene	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1204500-09C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042605**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:23 PM**	

Compound	%Recovery
Freon 12	119
Freon 11	107
Freon 113	99
1,1-Dichloroethene	100
Acetone	81
Methylene Chloride	92
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	104
Benzene	96
Toluene	112
Tetrachloroethene	90
Chlorobenzene	92
Ethyl Benzene	92
m,p-Xylene	91
o-Xylene	95
1,3-Dichlorobenzene	86
1,4-Dichlorobenzene	87
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	126	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1204500-09CC

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:59 PM**	

Compound	%Recovery
Freon 12	98
Freon 11	101
Freon 113	96
1,1-Dichloroethene	96
Acetone	77
Methylene Chloride	82
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	100
Benzene	86
Toluene	88
Tetrachloroethene	92
Chlorobenzene	89
Ethyl Benzene	88
m,p-Xylene	84
o-Xylene	86
1,3-Dichlorobenzene	80
1,4-Dichlorobenzene	79
1,2-Dichlorobenzene	78
1,2,4-Trichlorobenzene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCS

Lab ID#: 1204500-09D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042605sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:23 PM**	

Compound	**%Recovery**
Vinyl Chloride	103
Carbon Tetrachloride	94
Trichloroethene	90

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 1204500-09DD

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042606sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/26/12 12:59 PM**	

Compound	**%Recovery**
Vinyl Chloride	104
Carbon Tetrachloride	96
Trichloroethene	84

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAZ (916) 985-1020

120400

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

Custody Seal Intact?
(Y) N None Temp N/A
UPS

SHA
IMPROVING EARTH
20 Foundry Street
Concord, NH 03301
(603) 229-1900 FAX (603) 229-1919

Project Info:

Project Manager: Brad Green
Email: bgreen@sanbornhead.com; latwell@sanbornhead.com; kdubois@sanbornhead.com
P.O#
Project # 2999
Project Name: IBM - EFK Building 320B
Analyses: 1 = TO-15 H/L See attached analyte list

Turn Around Time

Normal x
Rush

specify

Relinquished by: (signature) Date/Time: 4/23/12 1400
Received By: (signature) Date/Time: 4/24/12 1000
Relinquished by: (signature) Date/Time:
Received By: (signature) Date/Time:
Relinquished by: (signature) Date/Time:
Received By: (signature) Date/Time:

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final (psi)
01AB	IA0703	5591	04/19/2012	1632	30	6.5	1		
02AB	IA0706	12951	04/19/2012	1630	30	6.5	1		
03AB	IA0707	94945	04/19/2012	1627	30	6.5	1		
04AB	IA0709	4589	04/19/2012	1622	30	6.5	1		
05AB	IA0710	33325	04/19/2012	1620	30	7	1		
06AB	FB-03	1559	04/19/2012	1230	30	10	1		

Analysis

1 = TO-15 Modified

1204500

Analyte List	CAS #
Tetrachloroethene (PCE)	127-18-4
Trichloroethene (TCE)	79-01-6
cis-1,2-Dichloroethene (cDCE)	156-59-2
1,1-Dichloroethene (DCE)	75-35-4
Vinyl chloride (VC)	75-01-4
1,1,1-Trichloroethane (TCA)	71-55-6
Carbon tetrachloride	56-23-5
Methylene chloride (MeCl)	75-09-2
Chlorobenzene	108-90-7
1,2,4-Trichlorobenzene	120-82-1
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Acetone	67-64-1
Benzene	71-43-2
Ethylbenzene	100-41-4
m-Xylene	108-38-3
p-Xylene	106-42-3
o-Xylene	95-47-6
Toluene	108-88-3
Trichlorofluoromethane (Freon 11)	75-69-4
Dichlorodifluoromethane (Freon 12)	75-71-8
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1

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5/8/2012

Mr. Brad Green

Sanborn, Head & Associates

20 Foundry Street

Concord NH 03301

Project Name: IBM - EFK Building 320B

Project #: 2999

Workorder #: 1204488

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 4/23/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1204488

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 IBM - EFK Building 320B
DATE RECEIVED:	04/23/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	05/07/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	TA-1001	Modified TO-15	8.8 "Hg	5 psi
01B	TA-1001	Modified TO-15	8.8 "Hg	5 psi
02A	TA-1002	Modified TO-15	5.0 "Hg	5 psi
02B	TA-1002	Modified TO-15	5.0 "Hg	5 psi
03A	TA-1003	Modified TO-15	4.4 "Hg	5 psi
03B	TA-1003	Modified TO-15	4.4 "Hg	5 psi
04A	TA-1004	Modified TO-15	4.6 "Hg	5 psi
04B	TA-1004	Modified TO-15	4.6 "Hg	5 psi
05A	TA-1005	Modified TO-15	4.8 "Hg	5 psi
05B	TA-1005	Modified TO-15	4.8 "Hg	5 psi
06A	TA-1006	Modified TO-15	5.8 "Hg	5 psi
06B	TA-1006	Modified TO-15	5.8 "Hg	5 psi
07A	TA-1007	Modified TO-15	6.2 "Hg	5 psi
07B	TA-1007	Modified TO-15	6.2 "Hg	5 psi
08A	TA-1008	Modified TO-15	5.4 "Hg	5 psi
08B	TA-1008	Modified TO-15	5.4 "Hg	5 psi
09A	TA-1009	Modified TO-15	5.6 "Hg	5 psi
09B	TA-1009	Modified TO-15	5.6 "Hg	5 psi
10A	Lab Blank	Modified TO-15	NA	NA
10B	Lab Blank	Modified TO-15	NA	NA
10C	Lab Blank	Modified TO-15	NA	NA
10D	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1204488

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 IBM - EFK Building 320B
DATE RECEIVED:	04/23/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	05/07/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
11B	CCV	Modified TO-15	NA	NA
11C	CCV	Modified TO-15	NA	NA
11D	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12AA	LCSD	Modified TO-15	NA	NA
12B	LCS	Modified TO-15	NA	NA
12BB	LCSD	Modified TO-15	NA	NA
12C	LCS	Modified TO-15	NA	NA
12CC	LCSD	Modified TO-15	NA	NA
12D	LCS	Modified TO-15	NA	NA
12DD	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 05/07/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Sanborn, Head & Associates
Workorder# 1204488

Nine 6 Liter Summa Canister (SIM Certified) samples were received on April 23, 2012. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

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 and/or LCS.

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 SIM/FULL SCAN

Client Sample ID: TA-1001

Lab ID#: 1204488-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.56	0.94	2.8
Freon 11	0.19	0.38	1.1	2.1
Freon 113	0.19	0.29	1.4	2.2
Acetone	0.95	4.4	2.2	10
Benzene	0.19	0.27	0.61	0.88
Toluene	0.19	0.41	0.72	1.6
m,p-Xylene	0.19	0.22	0.82	0.97

Client Sample ID: TA-1001

Lab ID#: 1204488-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.038	0.12	0.24	0.74

Client Sample ID: TA-1002

Lab ID#: 1204488-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.52	0.80	2.6
Freon 11	0.16	0.27	0.90	1.5
Freon 113	0.16	2.5	1.2	19
Acetone	0.80	7.6	1.9	18
Benzene	0.16	0.17	0.51	0.55
Toluene	0.16	0.36	0.61	1.3
m,p-Xylene	0.16	0.17	0.70	0.75

Client Sample ID: TA-1002

Lab ID#: 1204488-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.12	0.20	0.78
Trichloroethene	0.032	0.12	0.17	0.66

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

Client Sample ID: TA-1003

Lab ID#: 1204488-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.78	2.6
Freon 11	0.16	0.26	0.88	1.5
Freon 113	0.16	2.5	1.2	19
Acetone	0.78	8.2	1.9	19
Benzene	0.16	0.17	0.50	0.55
Toluene	0.16	0.40	0.59	1.5
m,p-Xylene	0.16	0.18	0.68	0.80

Client Sample ID: TA-1003

Lab ID#: 1204488-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.031	0.11	0.20	0.72
Trichloroethene	0.031	0.12	0.17	0.62

Client Sample ID: TA-1004

Lab ID#: 1204488-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.78	2.6
Freon 11	0.16	0.24	0.89	1.3
Acetone	0.79	3.0	1.9	7.2
Toluene	0.16	0.21	0.60	0.80

Client Sample ID: TA-1004

Lab ID#: 1204488-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.12	0.20	0.76

Client Sample ID: TA-1005

Lab ID#: 1204488-05A

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

Client Sample ID: TA-1005

Lab ID#: 1204488-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.55	0.79	2.7
Freon 11	0.16	0.26	0.90	1.4
Acetone	0.80	3.3	1.9	7.8
Toluene	0.16	0.22	0.60	0.81

Client Sample ID: TA-1005

Lab ID#: 1204488-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.12	0.20	0.77

Client Sample ID: TA-1006

Lab ID#: 1204488-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.57	0.82	2.8
Freon 11	0.17	0.26	0.93	1.4
Acetone	0.83	9.8	2.0	23
Toluene	0.17	0.21	0.62	0.80

Client Sample ID: TA-1006

Lab ID#: 1204488-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.033	0.12	0.21	0.78

Client Sample ID: TA-1007

Lab ID#: 1204488-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.57	0.84	2.8
Freon 11	0.17	0.25	0.95	1.4

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

Client Sample ID: TA-1007

Lab ID#: 1204488-07A

Acetone	0.84	3.8	2.0	9.1
Toluene	0.17	0.19	0.64	0.70

Client Sample ID: TA-1007

Lab ID#: 1204488-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.034	0.13	0.21	0.81

Client Sample ID: TA-1008

Lab ID#: 1204488-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.58	0.81	2.9
Freon 11	0.16	0.27	0.92	1.5
Acetone	0.82	2.2	1.9	5.4
Toluene	0.16	0.20	0.61	0.75

Client Sample ID: TA-1008

Lab ID#: 1204488-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.033	0.13	0.20	0.80

Client Sample ID: TA-1009

Lab ID#: 1204488-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.82	3.0
Freon 11	0.16	0.27	0.93	1.5
Acetone	0.82	2.2	2.0	5.2
Toluene	0.16	0.25	0.62	0.94

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

Client Sample ID: TA-1009

Lab ID#: 1204488-09B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.033	0.10	0.21	0.66

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Client Sample ID: TA-1001

Lab ID#: 1204488-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042507**	**Date of Collection:**	**4/19/12 8:30:00 AM**
Dil. Factor:	**1.90**	**Date of Analysis:**	**4/25/12 03:43 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.56	0.94	2.8
Freon 11	0.19	0.38	1.1	2.1
Freon 113	0.19	0.29	1.4	2.2
1,1-Dichloroethene	0.19	Not Detected	0.75	Not Detected
Acetone	0.95	4.4	2.2	10
Methylene Chloride	0.38	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.75	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Benzene	0.19	0.27	0.61	0.88
Toluene	0.19	0.41	0.72	1.6
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
Chlorobenzene	0.19	Not Detected	0.87	Not Detected
Ethyl Benzene	0.19	Not Detected	0.82	Not Detected
m,p-Xylene	0.19	0.22	0.82	0.97
o-Xylene	0.19	Not Detected	0.82	Not Detected
1,3-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.95	Not Detected	7.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: TA-1001

Lab ID#: 1204488-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042507sim**	**Date of Collection: 4/19/12 8:30:00 AM**	
Dil. Factor:	**1.90**	**Date of Analysis: 4/25/12 03:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
Carbon Tetrachloride	0.038	0.12	0.24	0.74
Trichloroethene	0.038	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: TA-1002

Lab ID#: 1204488-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042508**	**Date of Collection: 4/19/12 10:02:00 AM**	
Dil. Factor:	**1.61**	**Date of Analysis: 4/25/12 04:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.52	0.80	2.6
Freon 11	0.16	0.27	0.90	1.5
Freon 113	0.16	2.5	1.2	19
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	7.6	1.9	18
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	0.17	0.51	0.55
Toluene	0.16	0.36	0.61	1.3
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	0.17	0.70	0.75
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: TA-1002

Lab ID#: 1204488-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042508sim**	**Date of Collection: 4/19/12 10:02:00 AM**	
Dil. Factor:	**1.61**	**Date of Analysis: 4/25/12 04:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
Carbon Tetrachloride	0.032	0.12	0.20	0.78
Trichloroethene	0.032	0.12	0.17	0.66

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: TA-1003

Lab ID#: 1204488-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042509**	**Date of Collection:**	**4/19/12 10:03:00 AM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**4/25/12 05:23 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.78	2.6
Freon 11	0.16	0.26	0.88	1.5
Freon 113	0.16	2.5	1.2	19
1,1-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Acetone	0.78	8.2	1.9	19
Methylene Chloride	0.31	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Benzene	0.16	0.17	0.50	0.55
Toluene	0.16	0.40	0.59	1.5
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.72	Not Detected
Ethyl Benzene	0.16	Not Detected	0.68	Not Detected
m,p-Xylene	0.16	0.18	0.68	0.80
o-Xylene	0.16	Not Detected	0.68	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.94	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: TA-1003

Lab ID#: 1204488-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042509sim**	**Date of Collection: 4/19/12 10:03:00 AM**	
Dil. Factor:	**1.57**	**Date of Analysis: 4/25/12 05:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
Carbon Tetrachloride	0.031	0.11	0.20	0.72
Trichloroethene	0.031	0.12	0.17	0.62

Container Type: 6 Liter Summa Canister (SIM Certified)

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

eurofins | Air Toxics

Client Sample ID: TA-1004

Lab ID#: 1204488-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042510**	**Date of Collection:**	**4/19/12 10:06:00 AM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**4/25/12 06:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.53	0.78	2.6
Freon 11	0.16	0.24	0.89	1.3
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	3.0	1.9	7.2
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Benzene	0.16	Not Detected	0.50	Not Detected
Toluene	0.16	0.21	0.60	0.80
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected	5.9	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: TA-1004

Lab ID#: 1204488-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042510sim**	**Date of Collection: 4/19/12 10:06:00 AM**	
Dil. Factor:	**1.58**	**Date of Analysis: 4/25/12 06:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
Carbon Tetrachloride	0.032	0.12	0.20	0.76
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: TA-1005

Lab ID#: 1204488-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042511**	**Date of Collection:**	**4/19/12 10:05:00 AM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**4/25/12 06:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.55	0.79	2.7
Freon 11	0.16	0.26	0.90	1.4
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.80	3.3	1.9	7.8
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Benzene	0.16	Not Detected	0.51	Not Detected
Toluene	0.16	0.22	0.60	0.81
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	Not Detected	0.69	Not Detected
o-Xylene	0.16	Not Detected	0.69	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.96	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	5.9	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: TA-1005

Lab ID#: 1204488-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042511sim**	**Date of Collection: 4/19/12 10:05:00 AM**	
Dil. Factor:	**1.60**	**Date of Analysis: 4/25/12 06:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
Carbon Tetrachloride	0.032	0.12	0.20	0.77
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: TA-1006

Lab ID#: 1204488-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042512**	**Date of Collection:**	**4/19/12 10:00:00 AM**
Dil. Factor:	**1.66**	**Date of Analysis:**	**4/25/12 07:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.57	0.82	2.8
Freon 11	0.17	0.26	0.93	1.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	9.8	2.0	23
Methylene Chloride	0.33	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Benzene	0.17	Not Detected	0.53	Not Detected
Toluene	0.17	0.21	0.62	0.80
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.76	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected	6.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: TA-1006

Lab ID#: 1204488-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042512sim**	**Date of Collection: 4/19/12 10:00:00 AM**	
Dil. Factor:	**1.66**	**Date of Analysis: 4/25/12 07:44 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.042	Not Detected
Carbon Tetrachloride	0.033	0.12	0.21	0.78
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: TA-1007

Lab ID#: 1204488-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042513**	**Date of Collection:**	**4/19/12 10:01:00 AM**
Dil. Factor:	**1.69**	**Date of Analysis:**	**4/25/12 08:28 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.57	0.84	2.8
Freon 11	0.17	0.25	0.95	1.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	3.8	2.0	9.1
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Benzene	0.17	Not Detected	0.54	Not Detected
Toluene	0.17	0.19	0.64	0.70
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.78	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	Not Detected	0.73	Not Detected
o-Xylene	0.17	Not Detected	0.73	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.3	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: TA-1007

Lab ID#: 1204488-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042513sim**	**Date of Collection: 4/19/12 10:01:00 AM**	
Dil. Factor:	**1.69**	**Date of Analysis: 4/25/12 08:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
Carbon Tetrachloride	0.034	0.13	0.21	0.81
Trichloroethene	0.034	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: TA-1008

Lab ID#: 1204488-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042514**	**Date of Collection:**	**4/19/12 10:08:00 AM**
Dil. Factor:	**1.63**	**Date of Analysis:**	**4/25/12 09:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.58	0.81	2.9
Freon 11	0.16	0.27	0.92	1.5
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.2	1.9	5.4
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	0.20	0.61	0.75
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.75	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: TA-1008

Lab ID#: 1204488-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042514sim**	**Date of Collection: 4/19/12 10:08:00 AM**	
Dil. Factor:	**1.63**	**Date of Analysis: 4/25/12 09:11 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
Carbon Tetrachloride	0.033	0.13	0.20	0.80
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: TA-1009

Lab ID#: 1204488-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042513**	**Date of Collection:**	**4/19/12 10:09:00 AM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**4/25/12 09:51 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.60	0.82	3.0
Freon 11	0.16	0.27	0.93	1.5
Freon 113	0.16	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.2	2.0	5.2
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Benzene	0.16	Not Detected	0.53	Not Detected
Toluene	0.16	0.25	0.62	0.94
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.72	Not Detected
m,p-Xylene	0.16	Not Detected	0.72	Not Detected
o-Xylene	0.16	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	127	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: TA-1009

Lab ID#: 1204488-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042513sim**	**Date of Collection: 4/19/12 10:09:00 AM**	
Dil. Factor:	**1.65**	**Date of Analysis: 4/25/12 09:51 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
Carbon Tetrachloride	0.033	0.10	0.21	0.66
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	128	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204488-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042506**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 01:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204488-10B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042506sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 01:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204488-10C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042506a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 04:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	120	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1204488-10D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042506asim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 04:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	121	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1204488-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 09:55 AM**	

Compound	%Recovery
Freon 12	102
Freon 11	104
Freon 113	110
1,1-Dichloroethene	105
Acetone	99
Methylene Chloride	106
cis-1,2-Dichloroethene	111
1,1,1-Trichloroethane	101
Benzene	104
Toluene	105
Tetrachloroethene	110
Chlorobenzene	101
Ethyl Benzene	104
m,p-Xylene	107
o-Xylene	106
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	106
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1204488-11B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042502sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 09:55 AM**	

Compound	**%Recovery**
Vinyl Chloride	100
Carbon Tetrachloride	95
Trichloroethene	98

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: CCV

Lab ID#: 1204488-11C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 01:36 PM**	

Compound	%Recovery
Freon 12	117
Freon 11	108
Freon 113	98
1,1-Dichloroethene	92
Acetone	78
Methylene Chloride	92
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	97
Benzene	89
Toluene	96
Tetrachloroethene	88
Chlorobenzene	90
Ethyl Benzene	90
m,p-Xylene	89
o-Xylene	93
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	85
1,2-Dichlorobenzene	83
1,2,4-Trichlorobenzene	79

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1204488-11D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042502sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 01:36 PM**	

Compound	**%Recovery**
Vinyl Chloride	82
Carbon Tetrachloride	110
Trichloroethene	83

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCS

Lab ID#: 1204488-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 10:41 AM**	

Compound	%Recovery
Freon 12	108
Freon 11	111
Freon 113	116
1,1-Dichloroethene	119
Acetone	104
Methylene Chloride	113
cis-1,2-Dichloroethene	120
1,1,1-Trichloroethane	113
Benzene	107
Toluene	107
Tetrachloroethene	115
Chlorobenzene	108
Ethyl Benzene	110
m,p-Xylene	115
o-Xylene	116
1,3-Dichlorobenzene	115
1,4-Dichlorobenzene	110
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 1204488-12AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 11:41 AM**	

Compound	%Recovery
Freon 12	105
Freon 11	107
Freon 113	113
1,1-Dichloroethene	114
Acetone	98
Methylene Chloride	109
cis-1,2-Dichloroethene	116
1,1,1-Trichloroethane	108
Benzene	110
Toluene	109
Tetrachloroethene	117
Chlorobenzene	111
Ethyl Benzene	114
m,p-Xylene	117
o-Xylene	116
1,3-Dichlorobenzene	119
1,4-Dichlorobenzene	112
1,2-Dichlorobenzene	117
1,2,4-Trichlorobenzene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1204488-12B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042503sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 10:41 AM**	

Compound	**%Recovery**
Vinyl Chloride	104
Carbon Tetrachloride	105
Trichloroethene	103

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCSD

Lab ID#: 1204488-12BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e042504sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 11:41 AM**	

Compound	%Recovery
Vinyl Chloride	105
Carbon Tetrachloride	106
Trichloroethene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1204488-12C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 02:24 PM**	

Compound	%Recovery
Freon 12	117
Freon 11	99
Freon 113	99
1,1-Dichloroethene	97
Acetone	79
Methylene Chloride	93
cis-1,2-Dichloroethene	89
1,1,1-Trichloroethane	98
Benzene	92
Toluene	96
Tetrachloroethene	91
Chlorobenzene	91
Ethyl Benzene	89
m,p-Xylene	87
o-Xylene	89
1,3-Dichlorobenzene	82
1,4-Dichlorobenzene	83
1,2-Dichlorobenzene	83
1,2,4-Trichlorobenzene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1204488-12CC

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 03:09 PM**	

Compound	%Recovery
Freon 12	109
Freon 11	93
Freon 113	93
1,1-Dichloroethene	92
Acetone	73
Methylene Chloride	80
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	97
Benzene	92
Toluene	105
Tetrachloroethene	93
Chlorobenzene	92
Ethyl Benzene	92
m,p-Xylene	90
o-Xylene	92
1,3-Dichlorobenzene	84
1,4-Dichlorobenzene	85
1,2-Dichlorobenzene	83
1,2,4-Trichlorobenzene	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCS

Lab ID#: 1204488-12D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042503sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 02:24 PM**	

Compound	**%Recovery**
Vinyl Chloride	82
Carbon Tetrachloride	96
Trichloroethene	83

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 1204488-12DD

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v042504sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/25/12 03:09 PM**	

Compound	**%Recovery**
Vinyl Chloride	74
Carbon Tetrachloride	89
Trichloroethene	85

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	116	70-130
4-Bromofluorobenzene	98	70-130

1204488

Air Toxics LTD.

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAZ (916) 985-1020

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

Custody Seal Intact?
Y N None Temp N/A
Fedex

SHA IMPROVING EARTH

20 Foundry Street
Concord, NH 03301
(603) 229-1900 FAX (603) 229-1919

Project Info:	Turn Around Time	Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Project Manager: Brad Green Email: bgreen@sanbornhead.com; latwell@sanbornhead.com; kdubois@sanbornhead.com P.O# Project # 2999 Project Name: IBM - EFK Building 320B Analyses: 1 = TO-15 H/L See attached analyte list.	Normal x Rush specify	[signature] 04/20/12 Relinquished by: (signature) Date/Time Relinquished by: (signature) Date/Time	B. Whittelsey ATL 4/23/12 0900 Received By: (signature) Date/Time Received By: (signature) Date/Time

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final (psi)
01AB	TA-1001	33939	04/19/2012	0830	28	8.5	1		
02AB	TA-1002	34748	04/19/2012	1002	30	6	1		
03AB	TA-1003	5596	04/19/2012	1003	29.5	4.5	1		
04AB	TA-1004	9925	04/19/2012	1006	30	5	1		
05AB	TA-1005	25276	04/19/2012	1005	29.5	3.5	1		
06AB	TA-1006	34742	04/19/2012	1000	30	3.5	1		
07AB	TA-1007	34436	04/19/2012	1001	<30	7.5	1		
08AB	TA-1008	33962	04/19/2012	1008	<30	6	1		
09AB	TA-1009	33381	04/19/2012	1009	29.5	6	1		

Analysis

1 = TO-15 Modified

Analyte List	CAS #
Tetrachloroethene (PCE)	127-18-4
Trichloroethene (TCE)	79-01-6
cis-1,2-Dichloroethene (cDCE)	156-59-2
1,1-Dichloroethene (DCE)	75-35-4
Vinyl chloride (VC)	75-01-4
1,1,1-Trichloroethane (TCA)	71-55-6
Carbon tetrachloride	56-23-5
Methylene chloride (MeCl)	75-09-2
Chlorobenzene	108-90-7
1,2,4-Trichlorobenzene	120-82-1
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Acetone	67-64-1
Benzene	71-43-2
Ethylbenzene	100-41-4
m-Xylene	108-38-3
p-Xylene	106-42-3
o-Xylene	95-47-6
Toluene	108-88-3
Trichlorofluoromethane (Freon 11)	75-69-4
Dichlorodifluoromethane (Freon 12)	75-71-8
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1

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3/14/2013
Mr. Brad Green
Sanborn, Head & Associates
20 Foundry Street

Concord NH 03301

Project Name: IBM East Fishkill
Project #: 2999.00
Workorder #: 1302287R1

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 2/16/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1302287R1

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999.00 IBM East Fishkill
DATE RECEIVED:	02/16/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	03/14/2013		
DATE REISSUED:	03/07/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	TA1029\G	Modified TO-15	6.0 "Hg	5 psi
01B	TA1029\G	Modified TO-15	6.0 "Hg	5 psi
02A	TA1012\G	Modified TO-15	6.5 "Hg	5 psi
02B	TA1012\G	Modified TO-15	6.5 "Hg	5 psi
03A	TA1052\G	Modified TO-15	25.5 "Hg	5 psi
03B	TA1052\G	Modified TO-15	25.5 "Hg	5 psi
04A	TA1055\G	Modified TO-15	8.0 "Hg	5 psi
04B	TA1055\G	Modified TO-15	8.0 "Hg	5 psi
04C	TA1055\G	Modified TO-15	8.0 "Hg	5 psi
05A	Lab Blank	Modified TO-15	NA	NA
05B	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
06B	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA
07B	LCS	Modified TO-15	NA	NA
07BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 03/14/13

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Sanborn, Head & Associates
Workorder# 1302287R1

Four 6 Liter Summa Canister (SIM Certified) samples were received on February 16, 2013. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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

Sample TA1052\G was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

THE WORK ORDER WAS REISSUED ON 3/14/2013 TO CORRECT IDATE OF COLLECTION FOR SAMPLESTA1052\G AND TA1055\G DUE TO LABORATORY TRANSCRIPTION ERROR.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

Due to high-level target compounds, sample TA1055\G was analyzed twice. In the "C" fraction, the sample was diluted to bring the highest-level compounds within the calibration range. The "A" fraction is also reported by client request and may be reported with "E" flags indicating the compound exceeds the calibration range. Both runs and associated QC are reported.

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 and/or LCS.

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 SIM/FULL SCAN

Client Sample ID: TA1029\G

Lab ID#: 1302287R1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.56	0.83	2.8
Freon 11	0.17	0.48	0.94	2.7
Freon 113	0.17	1.2	1.3	9.6
Acetone	0.84	4.6	2.0	11
Benzene	0.17	0.18	0.54	0.57
m,p-Xylene	0.17	0.22	0.73	0.93

Client Sample ID: TA1029\G

Lab ID#: 1302287R1-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.049	0.043	0.12
Carbon Tetrachloride	0.034	0.086	0.21	0.54
Trichloroethene	0.034	0.12	0.18	0.63

Client Sample ID: TA1012\G

Lab ID#: 1302287R1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.65	0.84	3.2
Freon 11	0.17	0.65	0.96	3.7
Freon 113	0.17	6.1	1.3	47
Acetone	0.86	5.0	2.0	12
Benzene	0.17	0.17	0.55	0.54
Tetrachloroethene	0.17	0.47	1.2	3.2
m,p-Xylene	0.17	0.38	0.74	1.6

Client Sample ID: TA1012\G

Lab ID#: 1302287R1-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.072	0.044	0.18

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

Client Sample ID: TA1012\G

Lab ID#: 1302287R1-02B

Carbon Tetrachloride	0.034	0.091	0.22	0.57
Trichloroethene	0.034	4.5	0.18	24

Client Sample ID: TA1052\G

Lab ID#: 1302287R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	4.5	15	11	35

Client Sample ID: TA1052\G

Lab ID#: 1302287R1-03B

No Detections Were Found.

Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.46	0.90	2.3
Freon 11	0.18	0.20	1.0	1.1
Acetone	0.92	360 E	2.2	840 E
Methylene Chloride	0.37	12	1.3	40
Toluene	0.18	0.60	0.69	2.3
m,p-Xylene	0.18	0.45	0.79	1.9

Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	0.18	0.047	0.46
Carbon Tetrachloride	0.037	0.073	0.23	0.46

Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04C

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

Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04C

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	6.6	340	16	800

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Client Sample ID: TA1029\G

Lab ID#: 1302287R1-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022208**	**Date of Collection: 2/12/13 5:15:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/22/13 01:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.56	0.83	2.8
Freon 11	0.17	0.48	0.94	2.7
Freon 113	0.17	1.2	1.3	9.6
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	4.6	2.0	11
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Benzene	0.17	0.18	0.54	0.57
Toluene	0.17	Not Detected	0.63	Not Detected
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	0.22	0.73	0.93
o-Xylene	0.17	Not Detected	0.73	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.84	Not Detected	6.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: TA1029\G

Lab ID#: 1302287R1-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022208sim**	**Date of Collection: 2/12/13 5:15:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/22/13 01:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.049	0.043	0.12
Carbon Tetrachloride	0.034	0.086	0.21	0.54
Trichloroethene	0.034	0.12	0.18	0.63

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: TA1012\G

Lab ID#: 1302287R1-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022209**	**Date of Collection: 2/12/13 5:30:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 2/22/13 02:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.65	0.84	3.2
Freon 11	0.17	0.65	0.96	3.7
Freon 113	0.17	6.1	1.3	47
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	5.0	2.0	12
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Benzene	0.17	0.17	0.55	0.54
Toluene	0.17	Not Detected	0.64	Not Detected
Tetrachloroethene	0.17	0.47	1.2	3.2
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.74	Not Detected
m,p-Xylene	0.17	0.38	0.74	1.6
o-Xylene	0.17	Not Detected	0.74	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: TA1012\G

Lab ID#: 1302287R1-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022209sim**	**Date of Collection: 2/12/13 5:30:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 2/22/13 02:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.072	0.044	0.18
Carbon Tetrachloride	0.034	0.091	0.22	0.57
Trichloroethene	0.034	4.5	0.18	24

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: TA1052\G

Lab ID#: 1302287R1-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022210**	**Date of Collection: 2/13/13 2:30:00 PM**	
Dil. Factor:	**8.93**	**Date of Analysis: 2/22/13 03:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.89	Not Detected	4.4	Not Detected
Freon 11	0.89	Not Detected	5.0	Not Detected
Freon 113	0.89	Not Detected	6.8	Not Detected
1,1-Dichloroethene	0.89	Not Detected	3.5	Not Detected
Acetone	4.5	15	11	35
Methylene Chloride	1.8	Not Detected	6.2	Not Detected
cis-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.89	Not Detected	4.9	Not Detected
Benzene	0.89	Not Detected	2.8	Not Detected
Toluene	0.89	Not Detected	3.4	Not Detected
Tetrachloroethene	0.89	Not Detected	6.0	Not Detected
Chlorobenzene	0.89	Not Detected	4.1	Not Detected
Ethyl Benzene	0.89	Not Detected	3.9	Not Detected
m,p-Xylene	0.89	Not Detected	3.9	Not Detected
o-Xylene	0.89	Not Detected	3.9	Not Detected
1,3-Dichlorobenzene	0.89	Not Detected	5.4	Not Detected
1,4-Dichlorobenzene	0.89	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	0.89	Not Detected	5.4	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: TA1052\G

Lab ID#: 1302287R1-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022210sim**	**Date of Collection: 2/13/13 2:30:00 PM**	
Dil. Factor:	**8.93**	**Date of Analysis: 2/22/13 03:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.089	Not Detected	0.23	Not Detected
Carbon Tetrachloride	0.18	Not Detected	1.1	Not Detected
Trichloroethene	0.18	Not Detected	0.96	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022211**	**Date of Collection: 2/13/13 4:00:00 PM**	
Dil. Factor:	**1.83**	**Date of Analysis: 2/22/13 04:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.46	0.90	2.3
Freon 11	0.18	0.20	1.0	1.1
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.92	360 E	2.2	840 E
Methylene Chloride	0.37	12	1.3	40
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
Toluene	0.18	0.60	0.69	2.3
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	0.45	0.79	1.9
o-Xylene	0.18	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,2,4-Trichlorobenzene	0.92	Not Detected	6.8	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	89	70-130

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Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022211sim**	**Date of Collection:**	**2/13/13 4:00:00 PM**
Dil. Factor:	**1.83**	**Date of Analysis:**	**2/22/13 04:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	0.18	0.047	0.46
Carbon Tetrachloride	0.037	0.073	0.23	0.46
Trichloroethene	0.037	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: TA1055\G

Lab ID#: 1302287R1-04C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a022212**	**Date of Collection: 2/13/13 4:00:00 PM**	
Dil. Factor:	**13.1**	**Date of Analysis: 2/22/13 05:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	6.6	340	16	800

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	85	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1302287R1-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022206**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 11:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1302287R1-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022206sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 11:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1302287R1-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 08:18 AM**	

Compound	%Recovery
Freon 12	89
Freon 11	86
Freon 113	95
1,1-Dichloroethene	95
Acetone	86
Methylene Chloride	88
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	86
Benzene	93
Toluene	94
Tetrachloroethene	102
Chlorobenzene	98
Ethyl Benzene	100
m,p-Xylene	97
o-Xylene	94
1,3-Dichlorobenzene	80
1,4-Dichlorobenzene	79
1,2-Dichlorobenzene	81
1,2,4-Trichlorobenzene	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: CCV

Lab ID#: 1302287R1-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022202sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 08:18 AM**	

Compound	%Recovery
Vinyl Chloride	93
Carbon Tetrachloride	97
Trichloroethene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCS

Lab ID#: 1302287R1-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 09:05 AM**	

Compound	%Recovery
Freon 12	96
Freon 11	93
Freon 113	103
1,1-Dichloroethene	109
Acetone	91
Methylene Chloride	94
cis-1,2-Dichloroethene	108
1,1,1-Trichloroethane	96
Benzene	96
Toluene	98
Tetrachloroethene	100
Chlorobenzene	102
Ethyl Benzene	106
m,p-Xylene	105
o-Xylene	99
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	89
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1302287R1-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 09:46 AM**	

Compound	%Recovery
Freon 12	90
Freon 11	88
Freon 113	96
1,1-Dichloroethene	103
Acetone	86
Methylene Chloride	87
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	88
Benzene	99
Toluene	99
Tetrachloroethene	104
Chlorobenzene	104
Ethyl Benzene	107
m,p-Xylene	108
o-Xylene	101
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	87
1,2-Dichlorobenzene	90
1,2,4-Trichlorobenzene	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCS

Lab ID#: 1302287R1-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022203sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 09:05 AM**	

Compound	%Recovery
Vinyl Chloride	96
Carbon Tetrachloride	107
Trichloroethene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1302287R1-07BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**a022204sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/22/13 09:46 AM**	

Compound	**%Recovery**
Vinyl Chloride	94
Carbon Tetrachloride	106
Trichloroethene	96

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.

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Concord, NH 03301
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1302287

Project Info:	Turn Around Time	Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Project Manager: Brad Green Email: bgreen@sanbornhead.com latwell@sanbornhead.com, kdubois@sanbornhead.com P.O# Project # 2999.00 Project Name: IBM East Fishkill Analyses: 1 = TO-15 H/L 2 =	Normal X Rush specify	Regan Gates 2/15/13, 0830 Relinquished by: (signature) Date/Time Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time Received By: (signature) Date/Time Received By: (signature) Date/Time

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final (psi)
01AB	TA1029\G	33580	2/12/2013	1715	30	6.5	1		
02AB	TA1012\G	34234	2/12/2013	1730	30	7.5	1		
03AB	TA1052\G	34231	2/13/2013	1430	30	Unk.	1		
04AB	TA1055\G	9541	2/13/2013	1600	30	8.5	1		

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WO # 1302207

Analysis

1 = TO-15 Modified

Analyte List	CAS #
Tetrachloroethene (PCE)	127-18-4
Trichloroethene (TCE)	79-01-6
cis-1,2-Dichloroethene (cDCE)	156-59-2
1,1-Dichloroethene (DCE)	75-35-4
Vinyl chloride (VC)	75-01-4
1,1,1-Trichloroethane (TCA)	71-55-6
Carbon tetrachloride	56-23-5
Methylene chloride (MeCl)	75-09-2
Chlorobenzene	108-90-7
1,2,4-Trichlorobenzene	120-82-1
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Acetone	67-64-1
Benzene	71-43-2
Ethylbenzene	100-41-4
m-Xylene	108-38-3
p-Xylene	106-42-3
o-Xylene	95-47-6
Toluene	108-88-3
Trichlorofluoromethane (Freon 11)	75-69-4
Dichlorodifluoromethane (Freon 12)	75-71-8
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1

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5/16/2013
Mr. Brad Green
Sanborn, Head & Associates
20 Foundry Street

Concord NH 03301

Project Name: IBM - East Fishkill
Project #: 2999.00
Workorder #: 1305059

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 5/3/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1305059

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999.00 IBM - East Fishkill
DATE RECEIVED:	05/03/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	05/16/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA0708\G	Modified TO-15	2.6 "Hg	5 psi
01B	IA0708\G	Modified TO-15	2.6 "Hg	5 psi
02A	IA0710\G	Modified TO-15	3.5 "Hg	5.1 psi
02B	IA0710\G	Modified TO-15	3.5 "Hg	5.1 psi
03A	Lab Blank	Modified TO-15	NA	NA
03B	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
04B	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA
05B	LCS	Modified TO-15	NA	NA
05BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 05/16/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Sanborn, Head & Associates
Workorder# 1305059

Two 6 Liter Summa Canister (SIM Certified) samples were received on May 03, 2013. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

A Method Detection Limit (MDL) study is not maintained for non-standard compounds. As such a

Method Detection Limit (MDL) study was not performed for Carbon Tetrachloride by TO-15 SIM analysis.

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

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

Client Sample ID: IA0708\G

Lab ID#: 1305059-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.73	2.7
Freon 11	0.15	0.54	0.82	3.0
Acetone	0.74	20	1.7	48
Toluene	0.15	0.73	0.55	2.8
Ethyl Benzene	0.15	0.21	0.64	0.92
m,p-Xylene	0.15	0.92	0.64	4.0
o-Xylene	0.15	0.29	0.64	1.2

Client Sample ID: IA0708\G

Lab ID#: 1305059-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	0.18	0.038	0.45
Carbon Tetrachloride	0.029	0.050	0.18	0.31

Client Sample ID: IA0710\G

Lab ID#: 1305059-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.75	2.8
Freon 11	0.15	0.25	0.85	1.4
Acetone	0.76	6.8	1.8	16
Toluene	0.15	0.46	0.57	1.7

Client Sample ID: IA0710\G

Lab ID#: 1305059-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	0.41	0.039	1.0
Carbon Tetrachloride	0.030	0.086	0.19	0.54

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Client Sample ID: IA0708\G

Lab ID#: 1305059-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051407**	**Date of Collection:**	**4/30/13 4:36:00 PM**
Dil. Factor:	**1.47**	**Date of Analysis:**	**5/14/13 11:43 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.73	2.7
Freon 11	0.15	0.54	0.82	3.0
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Acetone	0.74	20	1.7	48
Methylene Chloride	0.29	Not Detected	1.0	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Benzene	0.15	Not Detected	0.47	Not Detected
Toluene	0.15	0.73	0.55	2.8
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
Chlorobenzene	0.15	Not Detected	0.68	Not Detected
Ethyl Benzene	0.15	0.21	0.64	0.92
m,p-Xylene	0.15	0.92	0.64	4.0
o-Xylene	0.15	0.29	0.64	1.2
1,3-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2,4-Trichlorobenzene	0.74	Not Detected	5.4	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: IA0708\G

Lab ID#: 1305059-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051407sim**	**Date of Collection: 4/30/13 4:36:00 PM**	
Dil. Factor:	**1.47**	**Date of Analysis: 5/14/13 11:43 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	0.18	0.038	0.45
Carbon Tetrachloride	0.029	0.050	0.18	0.31
Trichloroethene	0.029	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: IA0710\G

Lab ID#: 1305059-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051408**	**Date of Collection: 5/1/13 10:40:00 AM**	
Dil. Factor:	**1.52**	**Date of Analysis: 5/14/13 12:33 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.56	0.75	2.8
Freon 11	0.15	0.25	0.85	1.4
Freon 113	0.15	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Acetone	0.76	6.8	1.8	16
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
cis-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.83	Not Detected
Benzene	0.15	Not Detected	0.48	Not Detected
Toluene	0.15	0.46	0.57	1.7
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
Chlorobenzene	0.15	Not Detected	0.70	Not Detected
Ethyl Benzene	0.15	Not Detected	0.66	Not Detected
m,p-Xylene	0.15	Not Detected	0.66	Not Detected
o-Xylene	0.15	Not Detected	0.66	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.91	Not Detected
1,2,4-Trichlorobenzene	0.76	Not Detected	5.6	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: IA0710\G

Lab ID#: 1305059-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051408sim**	**Date of Collection: 5/1/13 10:40:00 AM**	
Dil. Factor:	**1.52**	**Date of Analysis: 5/14/13 12:33 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	0.41	0.039	1.0
Carbon Tetrachloride	0.030	0.086	0.19	0.54
Trichloroethene	0.030	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1305059-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051406**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 10:55 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1305059-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051406sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 10:55 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 1305059-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 07:16 AM**	

Compound	%Recovery
Freon 12	96
Freon 11	96
Freon 113	92
1,1-Dichloroethene	95
Acetone	94
Methylene Chloride	92
cis-1,2-Dichloroethene	103
1,1,1-Trichloroethane	98
Benzene	95
Toluene	94
Tetrachloroethene	104
Chlorobenzene	98
Ethyl Benzene	108
m,p-Xylene	107
o-Xylene	110
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	93
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	97

Container Type: NA - Not Applicable

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

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Client Sample ID: CCV

Lab ID#: 1305059-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051402sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 07:16 AM**	

Compound	**%Recovery**
Vinyl Chloride	86
Carbon Tetrachloride	129
Trichloroethene	87

Container Type: NA - Not Applicable

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

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Client Sample ID: LCS

Lab ID#: 1305059-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 08:36 AM**	

Compound	%Recovery
Freon 12	93
Freon 11	94
Freon 113	92
1,1-Dichloroethene	96
Acetone	95
Methylene Chloride	91
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	96
Benzene	94
Toluene	89
Tetrachloroethene	102
Chlorobenzene	96
Ethyl Benzene	101
m,p-Xylene	103
o-Xylene	102
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	86
1,2-Dichlorobenzene	87
1,2,4-Trichlorobenzene	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 1305059-05AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 09:15 AM**	

Compound	%Recovery
Freon 12	89
Freon 11	92
Freon 113	90
1,1-Dichloroethene	98
Acetone	93
Methylene Chloride	91
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	95
Benzene	92
Toluene	90
Tetrachloroethene	97
Chlorobenzene	93
Ethyl Benzene	100
m,p-Xylene	101
o-Xylene	102
1,3-Dichlorobenzene	89
1,4-Dichlorobenzene	85
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCS

Lab ID#: 1305059-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051403sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 08:36 AM**	

Compound	**%Recovery**
Vinyl Chloride	85
Carbon Tetrachloride	115
Trichloroethene	87

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCSD

Lab ID#: 1305059-05BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**c051404sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/14/13 09:15 AM**	

Compound	%Recovery
Vinyl Chloride	83
Carbon Tetrachloride	114
Trichloroethene	84

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.

180 BLUE RAVINE ROAD, SUITE B
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1305059

Fedex

Custody Seal Intact?
Y N None Temp N/A

SHA
IMPROVING EARTH

20 Foundry Street
Concord, NH 03301
(603) 229-1900 FAX (603) 229-1919

Sample Transportation Notice

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Project Info:

Project Manager: Brad Green
Email: bgreen@sanbornhead.com
latwell@sanbornhead.com, kdubois@sanbornhead.com
P.O#
Project # 2999.00
Project Name: IBM East Fishkill
Analyses: 1 = TO-15 H/L site specific
2 =

Turn Around Time

Normal X
Rush

specify

Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Regan Welch 05-02-13 10:30	BWSutton ATL 5/3/13 0945
Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final (psi)
01A	IA0708\G	4380	04.30.2013	1636	30	3.5	1		
02A	IA0710\G	5673	05.01.2013	1040	30	4.5	1		

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(916) 985-1000 FAZ (916) 985-1020

20 Foundry Street
Concord, NH 03301
(603) 229-1900 FAX (603) 229-1919

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Method : Modified TO-15 Hi/Lo (Sh)/SpRL-SHA (IBM Fishkill)-Carbon Tet, TCE & VC @ SIM

CAS Number	Compound	Rpt. Limit (ppbv)
75-01-4	Vinyl Chloride	0.010
56-23-5	Carbon Tetrachloride	0.020
79-01-6	Trichloroethene	0.020
75-71-8	Freon 12	0.10
75-69-4	Freon 11	0.10
76-13-1	Freon 113	0.10
75-35-4	1,1-Dichloroethene	0.10
67-64-1	Acetone	0.50
75-09-2	Methylene Chloride	0.20
156-59-2	cis-1,2-Dichloroethene	0.10
71-55-6	1,1,1-Trichloroethane	0.10
71-43-2	Benzene	0.10
108-88-3	Toluene	0.10
127-18-4	Tetrachloroethene	0.10
108-90-7	Chlorobenzene	0.10
100-41-4	Ethyl Benzene	0.10
108-38-3	m,p-Xylene	0.10
95-47-6	o-Xylene	0.10
541-73-1	1,3-Dichlorobenzene	0.10
106-46-7	1,4-Dichlorobenzene	0.10
95-50-1	1,2-Dichlorobenzene	0.10
120-82-1	1,2,4-Trichlorobenzene	0.50

CAS Number	Surrogate	Method Limits
17060-07-0	1,2-Dichloroethane-d4	0.0-0.0
2037-26-5	Toluene-d8	0.0-0.0
460-00-4	4-Bromofluorobenzene	0.0-0.0

ANALYTICAL REPORT

Lab Number:	L1307936
Client:	Sanborn, Head & Associates, Inc. 20 Foundry Street Concord, NH 03301
ATTN:	LeaAnne Atwell
Phone:	(603) 229-1900
Project Name:	EFK - 320B
Project Number:	2999.00
Report Date:	05/10/13

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1307936-01	BM1000	E. FISHKILL, NY	05/01/13 09:30
L1307936-02	BM1001	E. FISHKILL, NY	05/01/13 09:30

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: EFK - 320B
Project Number: 2999.00
Lab Number: L1307936
Report Date: 05/10/13

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1307936-01: The sample was soaked overnight in a volume of Methanol equal to the sample weight. A 100uL aliquot of the Methanol was then sampled.

L1307936-02: A 1g aliquot of sample was prepped in the laboratory due to matrix issues.

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

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 05/10/13

ORGANICS

VOLATILES

Project Name: EFK - 320B
Lab Number: L1307936
Project Number: 2999.00
Report Date: 05/10/13

SAMPLE RESULTS

Lab ID: L1307936-01
Client ID: BM1000
Sample Location: E. FISHKILL, NY
Matrix: Solid
Analytical Method: 1,8260C
Analytical Date: 05/08/13 13:50
Analyst: BN
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 05/01/13 09:30
Date Received: 05/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	460	93.	1
Carbon tetrachloride	ND		ug/kg	46	9.8	1
Tetrachloroethene	ND		ug/kg	46	6.5	1
Chlorobenzene	ND		ug/kg	46	16.	1
Trichlorofluoromethane	ND		ug/kg	230	5.6	1
1,1,1-Trichloroethane	ND		ug/kg	46	5.1	1
Benzene	ND		ug/kg	46	5.5	1
Toluene	14	J	ug/kg	70	5.2	1
Ethylbenzene	ND		ug/kg	46	6.8	1
Vinyl chloride	ND		ug/kg	93	6.6	1
1,1-Dichloroethene	ND		ug/kg	46	9.6	1
Trichloroethene	ND		ug/kg	46	7.1	1
1,2-Dichlorobenzene	ND		ug/kg	230	8.5	1
1,3-Dichlorobenzene	ND		ug/kg	230	8.5	1
1,4-Dichlorobenzene	ND		ug/kg	230	11.	1
p/m-Xylene	ND		ug/kg	93	15.	1
o-Xylene	ND		ug/kg	93	12.	1
cis-1,2-Dichloroethene	ND		ug/kg	46	6.9	1
Dichlorodifluoromethane	ND		ug/kg	460	10.	1
Acetone	ND		ug/kg	460	140	1
1,2,4-Trichlorobenzene	ND		ug/kg	230	37.	1
Freon-113	ND		ug/kg	930	13.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

Project Name: EFK - 320B **Lab Number:** L1307936

Project Number: 2999.00 **Report Date:** 05/10/13

SAMPLE RESULTS

Lab ID: L1307936-02
Client ID: BM1001
Sample Location: E. FISHKILL, NY
Matrix: Solid
Analytical Method: 1,8260C
Analytical Date: 05/06/13 16:03
Analyst: BN
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 05/01/13 09:30
Date Received: 05/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	5000	1000	1
Carbon tetrachloride	ND		ug/kg	500	100	1
Tetrachloroethene	ND		ug/kg	500	70.	1
Chlorobenzene	ND		ug/kg	500	170	1
Trichlorofluoromethane	ND		ug/kg	2500	61.	1
1,1,1-Trichloroethane	ND		ug/kg	500	55.	1
Benzene	ND		ug/kg	500	59.	1
Toluene	ND		ug/kg	750	56.	1
Ethylbenzene	ND		ug/kg	500	74.	1
Vinyl chloride	ND		ug/kg	1000	71.	1
1,1-Dichloroethene	ND		ug/kg	500	100	1
Trichloroethene	ND		ug/kg	500	76.	1
1,2-Dichlorobenzene	ND		ug/kg	2500	92.	1
1,3-Dichlorobenzene	ND		ug/kg	2500	92.	1
1,4-Dichlorobenzene	ND		ug/kg	2500	120	1
p/m-Xylene	ND		ug/kg	1000	160	1
o-Xylene	ND		ug/kg	1000	140	1
cis-1,2-Dichloroethene	ND		ug/kg	500	75.	1
Dichlorodifluoromethane	ND		ug/kg	5000	110	1
Acetone	ND		ug/kg	5000	1600	1
1,2,4-Trichlorobenzene	ND		ug/kg	2500	390	1
Freon-113	ND		ug/kg	10000	140	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

Project Name: EFK - 320B **Lab Number:** L1307936

Project Number: 2999.00 **Report Date:** 05/10/13

SAMPLE RESULTS

Lab ID: L1307936-02
Client ID: BM1001
Sample Location: E. FISHKILL, NY
Matrix: Solid
Analytical Method: 1,8260C
Analytical Date: 05/06/13 16:31
Analyst: BN
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 05/01/13 09:30
Date Received: 05/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	50	10.	1
Carbon tetrachloride	ND		ug/kg	5.0	1.0	1
Tetrachloroethene	ND		ug/kg	5.0	0.70	1
Chlorobenzene	ND		ug/kg	5.0	1.7	1
Trichlorofluoromethane	ND		ug/kg	25	0.61	1
1,1,1-Trichloroethane	ND		ug/kg	5.0	0.55	1
Benzene	ND		ug/kg	5.0	0.59	1
Toluene	ND		ug/kg	7.5	0.56	1
Ethylbenzene	ND		ug/kg	5.0	0.74	1
Vinyl chloride	ND		ug/kg	10	0.71	1
1,1-Dichloroethene	ND		ug/kg	5.0	1.0	1
Trichloroethene	ND		ug/kg	5.0	0.76	1
1,2-Dichlorobenzene	ND		ug/kg	25	0.92	1
1,3-Dichlorobenzene	ND		ug/kg	25	0.92	1
1,4-Dichlorobenzene	ND		ug/kg	25	1.2	1
p/m-Xylene	ND		ug/kg	10	1.6	1
o-Xylene	ND		ug/kg	10	1.4	1
cis-1,2-Dichloroethene	ND		ug/kg	5.0	0.75	1
Dichlorodifluoromethane	ND		ug/kg	50	1.1	1
Acetone	180		ug/kg	50	16.	1
1,2,4-Trichlorobenzene	ND		ug/kg	25	3.9	1
Freon-113	ND		ug/kg	100	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	108		70-130

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/13 09:33
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG606284-3					
Methylene chloride	ND		ug/kg	500	100
Carbon tetrachloride	ND		ug/kg	50	10.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	6.1
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	5.6
Ethylbenzene	ND		ug/kg	50	7.4
Vinyl chloride	ND		ug/kg	100	7.1
1,1-Dichloroethene	ND		ug/kg	50	10.
Trichloroethene	ND		ug/kg	50	7.6
1,2-Dichlorobenzene	ND		ug/kg	250	9.2
1,3-Dichlorobenzene	ND		ug/kg	250	9.2
1,4-Dichlorobenzene	ND		ug/kg	250	12.
p/m-Xylene	ND		ug/kg	100	16.
o-Xylene	ND		ug/kg	100	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	7.5
Dichlorodifluoromethane	ND		ug/kg	500	11.
Acetone	ND		ug/kg	500	160
1,2,4-Trichlorobenzene	ND		ug/kg	250	39.
Freon-113	ND		ug/kg	1000	14.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	103		70-130

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/13 09:33
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG606287-3					
Methylene chloride	ND		ug/kg	10	2.0
Carbon tetrachloride	ND		ug/kg	1.0	0.21
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Vinyl chloride	ND		ug/kg	2.0	0.14
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
Freon-113	ND		ug/kg	20	0.27

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	103		70-130

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/08/13 08:41
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG606779-3					
Methylene chloride	ND		ug/kg	500	100
Carbon tetrachloride	ND		ug/kg	50	10.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	6.1
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	5.6
Ethylbenzene	ND		ug/kg	50	7.4
Vinyl chloride	ND		ug/kg	100	7.1
1,1-Dichloroethene	ND		ug/kg	50	10.
Trichloroethene	ND		ug/kg	50	7.6
1,2-Dichlorobenzene	ND		ug/kg	250	9.2
1,3-Dichlorobenzene	ND		ug/kg	250	9.2
1,4-Dichlorobenzene	ND		ug/kg	250	12.
p/m-Xylene	ND		ug/kg	100	16.
o-Xylene	ND		ug/kg	100	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	7.5
Dichlorodifluoromethane	ND		ug/kg	500	11.
Acetone	ND		ug/kg	500	160
1,2,4-Trichlorobenzene	ND		ug/kg	250	39.
Freon-113	ND		ug/kg	1000	14.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG606284-1 WG606284-2								
Methylene chloride	97		96		70-130	1		30
1,1-Dichloroethane	110		105		70-130	5		30
Chloroform	104		102		70-130	2		30
Carbon tetrachloride	106		103		70-130	3		30
1,2-Dichloropropane	104		102		70-130	2		30
Dibromochloromethane	93		93		70-130	0		30
2-Chloroethylvinyl ether	104		102			2		30
1,1,2-Trichloroethane	92		92		70-130	0		30
Tetrachloroethene	106		102		70-130	4		30
Chlorobenzene	102		99		70-130	3		30
Trichlorofluoromethane	103		100		70-139	3		30
1,2-Dichloroethane	97		97		70-130	0		30
1,1,1-Trichloroethane	106		103		70-130	3		30
Bromodichloromethane	100		99		70-130	1		30
trans-1,3-Dichloropropene	96		96		70-130	0		30
cis-1,3-Dichloropropene	96		95		70-130	1		30
1,1-Dichloropropene	108		104		70-130	4		30
Bromoform	81		83		70-130	2		30
1,1,2,2-Tetrachloroethane	85		86		70-130	1		30
Benzene	104		101		70-130	3		30
Toluene	99		98		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG606284-1 WG606284-2								
Ethylbenzene	104		100		70-130	4		30
Chloromethane	122		119		52-130	2		30
Bromomethane	91		92		57-147	1		30
Vinyl chloride	115		112		67-130	3		30
Chloroethane	102		101		50-151	1		30
1,1-Dichloroethene	110		106		65-135	4		30
trans-1,2-Dichloroethene	106		104		70-130	2		30
Trichloroethene	101		98		70-130	3		30
1,2-Dichlorobenzene	99		99		70-130	0		30
1,3-Dichlorobenzene	101		100		70-130	1		30
1,4-Dichlorobenzene	102		99		70-130	3		30
Methyl tert butyl ether	88		89		66-130	1		30
p/m-Xylene	106		102		70-130	4		30
o-Xylene	102		98		70-130	4		30
cis-1,2-Dichloroethene	101		100		70-130	1		30
Dibromomethane	94		93		70-130	1		30
Styrene	99		96		70-130	3		30
Dichlorodifluoromethane	113		110		30-146	3		30
Acetone	79		77		54-140	3		30
Carbon disulfide	104		101		59-130	3		30
2-Butanone	85		84		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG606284-1 WG606284-2								
Vinyl acetate	87		88		70-130	1		30
4-Methyl-2-pentanone	70		72		70-130	3		30
1,2,3-Trichloropropane	85		86		68-130	1		30
2-Hexanone	**69**	Q	71		70-130	3		30
Bromochloromethane	100		100		70-130	0		30
2,2-Dichloropropane	107		102		70-130	5		30
1,2-Dibromoethane	90		91		70-130	1		30
1,3-Dichloropropane	94		95		69-130	1		30
1,1,1,2-Tetrachloroethane	98		95		70-130	3		30
Bromobenzene	99		96		70-130	3		30
n-Butylbenzene	111		108		70-130	3		30
sec-Butylbenzene	108		105		70-130	3		30
tert-Butylbenzene	108		106		70-130	2		30
o-Chlorotoluene	110		108		70-130	2		30
p-Chlorotoluene	104		102		70-130	2		30
1,2-Dibromo-3-chloropropane	**66**	Q	86		68-130	26		30
Hexachlorobutadiene	114		113		67-130	1		30
Isopropylbenzene	104		102		70-130	2		30
p-Isopropyltoluene	108		105		70-130	3		30
Naphthalene	84		87		70-130	4		30
Acrylonitrile	87		87		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG606284-1 WG606284-2								
Isopropyl Ether	105		102		66-130	3		30
tert-Butyl Alcohol	72		73		70-130	1		30
n-Propylbenzene	106		103		70-130	3		30
1,2,3-Trichlorobenzene	98		99		70-130	1		30
1,2,4-Trichlorobenzene	103		101		70-130	2		30
1,3,5-Trimethylbenzene	107		104		70-130	3		30
1,2,4-Trimethylbenzene	107		104		70-130	3		30
Methyl Acetate	83		86		51-146	4		30
Ethyl Acetate	82		83		70-130	1		30
Acrolein	84		86		70-130	2		30
Cyclohexane	113		109		59-142	4		30
1,4-Dioxane	84		85		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		106		50-139	4		30
1,4-Diethylbenzene	106		105		70-130	1		30
4-Ethyltoluene	105		102		70-130	3		30
1,2,4,5-Tetramethylbenzene	104		103		70-130	1		30
Tetrahydrofuran	82		83		66-130	1		30
Ethyl ether	92		92		67-130	0		30
trans-1,4-Dichloro-2-butene	80		84		70-130	5		30
Methyl cyclohexane	108		105		70-130	3		30
Ethyl-Tert-Butyl-Ether	97		96		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG606284-1 WG606284-2								
Tertiary-Amyl Methyl Ether	90		90		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		97		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	102		101		70-130

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG606287-1 WG606287-2								
Methylene chloride	97		96		70-130	1		30
1,1-Dichloroethane	110		105		70-130	5		30
Chloroform	104		102		70-130	2		30
Carbon tetrachloride	106		103		70-130	3		30
1,2-Dichloropropane	104		102		70-130	2		30
Dibromochloromethane	93		93		70-130	0		30
2-Chloroethylvinyl ether	104		102			2		30
1,1,2-Trichloroethane	92		92		70-130	0		30
Tetrachloroethene	106		102		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG606287-1 WG606287-2								
Chlorobenzene	102		99		70-130	3		30
Trichlorofluoromethane	103		100		70-139	3		30
1,2-Dichloroethane	97		97		70-130	0		30
1,1,1-Trichloroethane	106		103		70-130	3		30
Bromodichloromethane	100		99		70-130	1		30
trans-1,3-Dichloropropene	96		96		70-130	0		30
cis-1,3-Dichloropropene	96		95		70-130	1		30
1,1-Dichloropropene	108		104		70-130	4		30
Bromoform	81		83		70-130	2		30
1,1,2,2-Tetrachloroethane	85		86		70-130	1		30
Benzene	104		101		70-130	3		30
Toluene	99		98		70-130	1		30
Ethylbenzene	104		100		70-130	4		30
Chloromethane	122		119		52-130	2		30
Bromomethane	91		92		57-147	1		30
Vinyl chloride	115		112		67-130	3		30
Chloroethane	102		101		50-151	1		30
1,1-Dichloroethene	110		106		65-135	4		30
trans-1,2-Dichloroethene	106		104		70-130	2		30
Trichloroethene	101		98		70-130	3		30
1,2-Dichlorobenzene	99		99		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG606287-1 WG606287-2								
1,3-Dichlorobenzene	101		100		70-130	1		30
1,4-Dichlorobenzene	102		99		70-130	3		30
Methyl tert butyl ether	88		89		66-130	1		30
p/m-Xylene	106		102		70-130	4		30
o-Xylene	102		98		70-130	4		30
cis-1,2-Dichloroethene	101		100		70-130	1		30
Dibromomethane	94		93		70-130	1		30
Styrene	99		96		70-130	3		30
Dichlorodifluoromethane	113		110		30-146	3		30
Acetone	79		77		54-140	3		30
Carbon disulfide	104		101		59-130	3		30
2-Butanone	85		84		70-130	1		30
Vinyl acetate	87		88		70-130	1		30
4-Methyl-2-pentanone	70		72		70-130	3		30
1,2,3-Trichloropropane	85		86		68-130	1		30
2-Hexanone	**69**	Q	71		70-130	3		30
Bromochloromethane	100		100		70-130	0		30
2,2-Dichloropropane	107		102		70-130	5		30
1,2-Dibromoethane	90		91		70-130	1		30
1,3-Dichloropropane	94		95		69-130	1		30
1,1,1,2-Tetrachloroethane	98		95		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG606287-1 WG606287-2								
Bromobenzene	99		96		70-130	3		30
n-Butylbenzene	111		108		70-130	3		30
sec-Butylbenzene	108		105		70-130	3		30
tert-Butylbenzene	108		106		70-130	2		30
o-Chlorotoluene	110		108		70-130	2		30
p-Chlorotoluene	104		102		70-130	2		30
1,2-Dibromo-3-chloropropane	**66**	Q	86		68-130	26		30
Hexachlorobutadiene	114		113		67-130	1		30
Isopropylbenzene	104		102		70-130	2		30
p-Isopropyltoluene	108		105		70-130	3		30
Naphthalene	84		87		70-130	4		30
Acrylonitrile	87		87		70-130	0		30
Isopropyl Ether	105		102		66-130	3		30
tert-Butyl Alcohol	72		73		70-130	1		30
n-Propylbenzene	106		103		70-130	3		30
1,2,3-Trichlorobenzene	98		99		70-130	1		30
1,2,4-Trichlorobenzene	103		101		70-130	2		30
1,3,5-Trimethylbenzene	107		104		70-130	3		30
1,2,4-Trimethylbenzene	107		104		70-130	3		30
Methyl Acetate	83		86		51-146	4		30
Ethyl Acetate	82		83		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG606287-1 WG606287-2								
Acrolein	84		86		70-130	2		30
Cyclohexane	113		109		59-142	4		30
1,4-Dioxane	84		85		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		106		50-139	4		30
1,4-Diethylbenzene	106		105		70-130	1		30
4-Ethyltoluene	105		102		70-130	3		30
1,2,4,5-Tetramethylbenzene	104		103		70-130	1		30
Tetrahydrofuran	82		83		66-130	1		30
Ethyl ether	92		92		67-130	0		30
trans-1,4-Dichloro-2-butene	80		84		70-130	5		30
Methyl cyclohexane	108		105		70-130	3		30
Ethyl-Tert-Butyl-Ether	97		96		70-130	1		30
Tertiary-Amyl Methyl Ether	90		90		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		97		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	99		101		70-130
Dibromofluoromethane	102		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG606779-1 WG606779-2								
Methylene chloride	91		89		70-130	2		30
1,1-Dichloroethane	92		87		70-130	6		30
Chloroform	92		88		70-130	4		30
Carbon tetrachloride	95		87		70-130	9		30
1,2-Dichloropropane	90		88		70-130	2		30
Dibromochloromethane	83		84		70-130	1		30
2-Chloroethylvinyl ether	90		88			2		30
1,1,2-Trichloroethane	85		85		70-130	0		30
Tetrachloroethene	86		79		70-130	8		30
Chlorobenzene	85		82		70-130	4		30
Trichlorofluoromethane	107		98		70-139	9		30
1,2-Dichloroethane	94		92		70-130	2		30
1,1,1-Trichloroethane	93		86		70-130	8		30
Bromodichloromethane	89		88		70-130	1		30
trans-1,3-Dichloropropene	86		86		70-130	0		30
cis-1,3-Dichloropropene	92		90		70-130	2		30
1,1-Dichloropropene	94		87		70-130	8		30
Bromoform	78		80		70-130	3		30
1,1,2,2-Tetrachloroethane	81		83		70-130	2		30
Benzene	90		85		70-130	6		30
Toluene	83		80		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG606779-1 WG606779-2								
Ethylbenzene	86		82		70-130	5		30
Chloromethane	78		76		52-130	3		30
Bromomethane	104		97		57-147	7		30
Vinyl chloride	94		84		67-130	11		30
Chloroethane	96		89		50-151	8		30
1,1-Dichloroethene	93		87		65-135	7		30
trans-1,2-Dichloroethene	90		84		70-130	7		30
Trichloroethene	91		84		70-130	8		30
1,2-Dichlorobenzene	82		81		70-130	1		30
1,3-Dichlorobenzene	83		82		70-130	1		30
1,4-Dichlorobenzene	82		81		70-130	1		30
Methyl tert butyl ether	89		90		66-130	1		30
p/m-Xylene	86		82		70-130	5		30
o-Xylene	87		85		70-130	2		30
cis-1,2-Dichloroethene	90		87		70-130	3		30
Dibromomethane	89		90		70-130	1		30
Styrene	88		86		70-130	2		30
Dichlorodifluoromethane	98		87		30-146	12		30
Acetone	**157**	Q	**149**	Q	54-140	5		30
Carbon disulfide	90		83		59-130	8		30
2-Butanone	118		111		70-130	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG606779-1 WG606779-2								
Vinyl acetate	100		101		70-130	1		30
4-Methyl-2-pentanone	84		88		70-130	5		30
1,2,3-Trichloropropane	82		84		68-130	2		30
2-Hexanone	96		95		70-130	1		30
Bromochloromethane	94		93		70-130	1		30
2,2-Dichloropropane	94		88		70-130	7		30
1,2-Dibromoethane	83		85		70-130	2		30
1,3-Dichloropropane	84		85		69-130	1		30
1,1,1,2-Tetrachloroethane	84		83		70-130	1		30
Bromobenzene	82		82		70-130	0		30
n-Butylbenzene	87		82		70-130	6		30
sec-Butylbenzene	86		82		70-130	5		30
tert-Butylbenzene	85		80		70-130	6		30
o-Chlorotoluene	84		82		70-130	2		30
p-Chlorotoluene	85		82		70-130	4		30
1,2-Dibromo-3-chloropropane	80		84		68-130	5		30
Hexachlorobutadiene	84		79		67-130	6		30
Isopropylbenzene	85		80		70-130	6		30
p-Isopropyltoluene	86		82		70-130	5		30
Naphthalene	80		82		70-130	2		30
Acrylonitrile	92		98		70-130	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG606779-1 WG606779-2								
Isopropyl Ether	93		91		66-130	2		30
tert-Butyl Alcohol	87		94		70-130	8		30
n-Propylbenzene	86		82		70-130	5		30
1,2,3-Trichlorobenzene	82		82		70-130	0		30
1,2,4-Trichlorobenzene	84		82		70-130	2		30
1,3,5-Trimethylbenzene	86		82		70-130	5		30
1,2,4-Trimethylbenzene	86		83		70-130	4		30
Methyl Acetate	88		91		51-146	3		30
Ethyl Acetate	87		92		70-130	6		30
Acrolein	88		91		70-130	3		30
Cyclohexane	102		94		59-142	8		30
1,4-Dioxane	94		100		65-136	6		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		93		50-139	9		30
1,4-Diethylbenzene	85		80		70-130	6		30
4-Ethyltoluene	85		82		70-130	4		30
1,2,4,5-Tetramethylbenzene	84		82		70-130	2		30
Tetrahydrofuran	79		94		66-130	17		30
Ethyl ether	92		94		67-130	2		30
trans-1,4-Dichloro-2-butene	88		92		70-130	4		30
Methyl cyclohexane	91		82		70-130	10		30
Ethyl-Tert-Butyl-Ether	92		93		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: EFK - 320B

Project Number: 2999.00

Lab Number: L1307936

Report Date: 05/10/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG606779-1 WG606779-2								
Tertiary-Amyl Methyl Ether	89		90		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		101		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	100		99		70-130

Project Name: EFK - 320B
Project Number: 2999.00

Lab Number: L1307936
Report Date: 05/10/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307936-01A	Amber 500ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260H(14)
L1307936-02A	Amber 500ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260HLW(2),NYTCL-8260H(14)

*Values in parentheses indicate holding time in days

Project Name:	EFK - 320B	**Lab Number:**	L1307936
Project Number:	2999.00	**Report Date:**	05/10/13

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

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

Terms

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

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers

Project Name:	EFK - 320B	**Lab Number:**	L1307936
Project Number:	2999.00	**Report Date:**	05/10/13

Data Qualifiers

due to obvious interference.

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with "J" Qualifiers

Project Name:	EFK - 320B	**Lab Number:**	L1307936
Project Number:	2999.00	**Report Date:**	05/10/13

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

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

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

Certificate/Approval Program Summary

Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum , Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform -MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD , COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters : PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TC LP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H +B, 4500NO3-F, EPA 200.7, EPA 200. 8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351. 1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 4 26C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500 Norg-C, 4500 NH3-B, 4500 NH3-G, 4500 NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200. 8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9 012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd, Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM 4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water (*Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,C r,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,F e,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2 540C, 2340 B, 2320B, 4 500CL-E, 4 500F-BC, 426 C, SM450 0NH3-BH, (EP A 350.1 for: Ammonia -N), LACHAT 10-107-06-1-B f or A mmonia-N, SM4500NO3-F, 353.2 for Ni trate-N, SM4500NH3-B C-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 53 10C, 4500CL-D, EPA 1664, SM14 510A C, EPA 420.1, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B , EPA 200.7, 200. 8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353. 2, 410.4, 420.1, 426C, 1664A, S W-846 9010B, 9010C, 9 030, 9040B, 9040C, SM2 120B, 2310B, 2320B, 2 340B, 2540B, 2540D, 4 500H+B, 4500CL-E, 4 500CN-E, 4 500NH3-H, 4500NO3-F, 4500 NO2-B, 4500P -E, 4500 -S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2 540C, 4 500F-C, 53 10C, 5540C, LA CHAT 1 0-204-00-1-A, LACHAT 10-107-06-2-D, 3 060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330 , EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 901 4, 9030B, 9040C, 904 5C, 9045D, 90 50, 9065, 9251, 1311, 1312, 300 5A, 3050B, 3060A. Orga nic Parameters: SW-8 46 3 540C, 3 546, 3 050B, 35 80A, 3620 D, 36 30C, 50 30B, 5 035, 82 60C, 8270D, 82 70D-SIM, 83 30, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Param eters: SM922 2B, 9221E, 9 223B, 9215B, 4 500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 2 00.7, 200.8, 24 5.1, 254 0C, SM2120B, 2320B, 25 10B, 531 0C, SM 4500H-B. Organic Pa rameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500 Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-P E, EPA 420.1, SM510AB C, SM450 0P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B , SM2520B, S M15 4 26C, 9 222D, 922 1B, 9221 C, 92 21E, 9222B , 9 215B, 23 10B, 2320B, 45 00NH3-H, 4 500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 602 0A, 7196A, 3060A, SW-846 901 0C, 9030B. Organic Parameters: SW-8 46 8 260B, 8260 C, 8270C, 82 70D, 827 0C-SIM, 8270 D-SIM, 3510 C, E PA 608, 62 4, 625, SW-8 46 3630C, 5030B, 8011, 8 015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 103 0, 1311, 1312, 3005A, 305 0B, 7471A, 7471B, 9010 C, 9012B, 9014, 9038, 904 0B, 9040C, 9 045C, 9045 D, 9050A, 9065, 925 1. Organic Pa rameters: SW-8 46 8015B, 8 015C, 8081A, 8081B, 808 2, 80 82A, 81 51A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameter rs: SM9223B, 9222B, 9215B, EPA 200.8, 200. 7, 245.2, SM5310C, EPA 332. 0, SM2320B, E PA 300.0, S M2120B, 4 500CN-E, 4 500F-C, 4500NO3-F, 2540C, SM 2510B. Org anic Parameters : EP A 524.2, 504.1.)

Non-Potable Water (Inorganic Pa rameters: SM9221E, 9222D, 9221B, 9222 B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, S M4500CL-E, 4500F-C, SM 15 426C, EPA 350.1, SM 4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EP A 353.2, SM 4500-NO3-F, 450 0-NO2-B, 4500P -E, 2540 C, 2540B , 2540D, EP A 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245. 1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. Organic Parameters: EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A , 3050B, 9010C, 90 30B, 9040C, 9045D. Organic Parameters: EPA 8260B, 8260C, 827 0C, 8270 D, 8 270C-SIM, 8270 D-SIM, 8015B , 8015 C, 8081A, 808 1B, 8151A, 8330, 80 82 8082A, 354 0C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010 C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NJ-DEP.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310 C, 2130B, 2320B, 2540 C, 3005A, 3015, 9010B , 9056, 7196A, 3500-Cr-D. Organic Parameters : EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C,

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:
EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1, 4-Diphenylhydrazine (Azobenzene). **EPA 625 :** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/3/13

ALPHA Job #: L1307936

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Sanborn Head
Address: 20 Foundry St
Concord, NH 03301
Phone: 603-229-1900
Fax:
Email: latwell@sanbornhead.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: EFK-320B
Project Location: E. Fishkill, NY
Project #: 2999.00
Project Manager: L. Atwell
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 5/3/13 Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: 8260B Hi level - MeOH	8260B Lo level - water	Sample Specific Comments	TOTAL # BOTTLES
67936 1	BM1000	5/1/13	0930	X1	JWC	X		Please analyze each sample (2 total) for 8260B analytes Hi and Lo level (with MeOH/H2O as applicable) Call Lea Anne Atwell with questions 603-415-6145	1
2	BM1001	5/1/13	0930	X1	REW	X			1
1	BM1000	5/1/13	0930	X1	JWC		X		1
2	BM1001	5/1/13	0930	X1	REW		X		1

SAMPLE HANDLING
Filtration
☐ Done ☐ Not needed ☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Container Type	A		
Preservative	A		

Relinquished By:	Date/Time	Received By:	Date/Time
Regan Calek	5/1/13 1300	BG	5/3/13 9:57

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

FORM NO: 101-09 (rev. 27-SEP-10)

MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/3/13

ALPHA Job #: L1307936

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: Sanborn Head
Address: 20 Foundry St
Concord, NH 03301
Phone: 603-229-1900
Fax:
Email: latwell@sanbornhead.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: EFK-320B
Project Location: E. Fishkill, NY
Project #: 2999.00
Project Manager: L. Atwell
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 5/3/13 Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: 8260B Hi level - MeOH	8260B Lo level - water	Sample Specific Comments	TOTAL # BOTTLES
67936 1	BM1000	5/1/13	0930	X1	JWC	X		Please analyze each sample (2 total) for 8260B analytes Hi and Lo level (with MeOH/H2O as applicable) Call Lea Anne Atwell with questions 603-415-6145	1
2	BM1001	5/1/13	0930	X1	REW	X			1
1	BM1000	5/1/13	0930	X1	JWC		X		1
2	BM1001	5/1/13	0930	X1	REW		X		1

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Container Type	A
Preservative	A

Relinquished By:	Date/Time	Received By:	Date/Time
Regan Calder	5/1/13 1300	BG	5/3/13 9:57

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

FORM NO: 101-09 (rev. 27-SEP-10)

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12/17/2013
Mr. Brad Green
Sanborn, Head & Associates
20 Foundry Street

Concord NH 03301

Project Name: IBM - East Fishkill
Project #: 2999 T110
Workorder #: 1312028

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 12/3/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1312028

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 T110 IBM - East Fishkill
DATE RECEIVED:	12/03/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	12/16/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA0710	Modified TO-15	4.1 "Hg	5.4 psi
01B	IA0710	Modified TO-15	4.1 "Hg	5.4 psi
02A	DUP20946	Modified TO-15	5.1 "Hg	5.1 psi
02B	DUP20946	Modified TO-15	5.1 "Hg	5.1 psi
03A	IA0730	Modified TO-15	5.5 "Hg	5.1 psi
03B	IA0730	Modified TO-15	5.5 "Hg	5.1 psi
04A	IA0731	Modified TO-15	5.1 "Hg	5 psi
04B	IA0731	Modified TO-15	5.1 "Hg	5 psi
05A	IA0732	Modified TO-15	5.3 "Hg	5.4 psi
05B	IA0732	Modified TO-15	5.3 "Hg	5.4 psi
06A	IA0733	Modified TO-15	5.3 "Hg	4.9 psi
06B	IA0733	Modified TO-15	5.3 "Hg	4.9 psi
07A	IA0734	Modified TO-15	5.3 "Hg	5 psi
07B	IA0734	Modified TO-15	5.3 "Hg	5 psi
08A	IA0735	Modified TO-15	5.3 "Hg	5.1 psi
08B	IA0735	Modified TO-15	5.3 "Hg	5.1 psi
09A	Lab Blank	Modified TO-15	NA	NA
09B	Lab Blank	Modified TO-15	NA	NA
10A	CCV	Modified TO-15	NA	NA
10B	CCV	Modified TO-15	NA	NA
11A	LCS	Modified TO-15	NA	NA
11AA	LCSD	Modified TO-15	NA	NA
11B	LCS	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1312028

Work Order Summary

CLIENT:	Mr. Brad Green Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	603-229-1900	**P.O. #**	
FAX:	603-229-1919	**PROJECT #**	2999 T110 IBM - East Fishkill
DATE RECEIVED:	12/03/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	12/16/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
11BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 12/16/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Sanborn, Head & Associates
Workorder# 1312028

Eight 6 Liter Summa Canister (SIM Certified) samples were received on December 03, 2013. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 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	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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 IA0710 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.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

All Quality Control Limit exceedances 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.

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

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

Client Sample ID: IA0710

Lab ID#: 1312028-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.78	2.1
Freon 11	0.16	0.18	0.89	1.0
Acetone	0.79	2.2	1.9	5.1
Methylene Chloride	0.32	0.43	1.1	1.5
Benzene	0.16	0.19	0.50	0.60
Toluene	0.16	1.3	0.60	4.8
m,p-Xylene	0.16	0.16	0.69	0.70

Client Sample ID: IA0710

Lab ID#: 1312028-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.26	0.040	0.68
Carbon Tetrachloride	0.032	0.15	0.20	0.92

Client Sample ID: DUP20946

Lab ID#: 1312028-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Freon 11	0.16	0.20	0.91	1.1
Acetone	0.81	4.6	1.9	11

Client Sample ID: DUP20946

Lab ID#: 1312028-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.22	0.041	0.55
Carbon Tetrachloride	0.032	0.085	0.20	0.54

Client Sample ID: IA0730

Lab ID#: 1312028-03A

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

Client Sample ID: IA0730

Lab ID#: 1312028-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.39	0.82	1.9
Freon 11	0.16	0.17	0.93	0.98
Acetone	0.82	1.5	2.0	3.7

Client Sample ID: IA0730

Lab ID#: 1312028-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.21	0.042	0.55
Carbon Tetrachloride	0.033	0.084	0.21	0.53

Client Sample ID: IA0731

Lab ID#: 1312028-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Freon 11	0.16	0.19	0.90	1.0
Acetone	0.80	2.5	1.9	6.0

Client Sample ID: IA0731

Lab ID#: 1312028-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.24	0.041	0.61
Carbon Tetrachloride	0.032	0.080	0.20	0.50

Client Sample ID: IA0732

Lab ID#: 1312028-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.82	2.1
Freon 11	0.17	0.18	0.93	0.99

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

Client Sample ID: IA0732

Lab ID#: 1312028-05A

Acetone	0.83	2.5	2.0	5.9
Toluene	0.17	0.31	0.62	1.2

Client Sample ID: IA0732

Lab ID#: 1312028-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.22	0.042	0.57
Carbon Tetrachloride	0.033	0.082	0.21	0.51

Client Sample ID: IA0733

Lab ID#: 1312028-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.80	2.0
Freon 11	0.16	0.20	0.91	1.1
Freon 113	0.16	0.16	1.2	1.2
Acetone	0.81	2.3	1.9	5.4

Client Sample ID: IA0733

Lab ID#: 1312028-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.22	0.041	0.55
Carbon Tetrachloride	0.032	0.069	0.20	0.44

Client Sample ID: IA0734

Lab ID#: 1312028-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
Freon 11	0.16	0.19	0.92	1.1
Freon 113	0.16	0.19	1.2	1.4
Acetone	0.82	2.0	1.9	4.9

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

Client Sample ID: IA0734

Lab ID#: 1312028-07A

Benzene	0.16	0.22	0.52	0.69
Toluene	0.16	0.31	0.61	1.2

Client Sample ID: IA0734

Lab ID#: 1312028-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.16	0.042	0.42
Carbon Tetrachloride	0.033	0.085	0.20	0.54

Client Sample ID: IA0735

Lab ID#: 1312028-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Freon 11	0.16	0.18	0.92	1.0
Acetone	0.82	2.0	1.9	4.8

Client Sample ID: IA0735

Lab ID#: 1312028-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.21	0.042	0.53
Carbon Tetrachloride	0.033	0.074	0.21	0.47

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Client Sample ID: IA0710

Lab ID#: 1312028-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121308**	**Date of Collection: 11/25/13 7:23:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 12/13/13 12:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.78	2.1
Freon 11	0.16	0.18	0.89	1.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	2.2	1.9	5.1
Methylene Chloride	0.32	0.43	1.1	1.5
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Benzene	0.16	0.19	0.50	0.60
Toluene	0.16	1.3	0.60	4.8
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.73	Not Detected
Ethyl Benzene	0.16	Not Detected	0.69	Not Detected
m,p-Xylene	0.16	0.16	0.69	0.70
o-Xylene	0.16	Not Detected	0.69	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,2,4-Trichlorobenzene	0.79	Not Detected UJ	5.9	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: IA0710

Lab ID#: 1312028-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121308sim**	**Date of Collection: 11/25/13 7:23:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 12/13/13 12:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.26	0.040	0.68
Carbon Tetrachloride	0.032	0.15	0.20	0.92
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: DUP20946

Lab ID#: 1312028-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121309**	**Date of Collection: 11/25/13 7:23:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 12/13/13 01:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Freon 11	0.16	0.20	0.91	1.1
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	4.6	1.9	11
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	Not Detected	0.61	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected UJ	6.0	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: DUP20946

Lab ID#: 1312028-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121309sim**	**Date of Collection: 11/25/13 7:23:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 12/13/13 01:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.22	0.041	0.55
Carbon Tetrachloride	0.032	0.085	0.20	0.54
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: IA0730

Lab ID#: 1312028-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121310**	**Date of Collection: 11/25/13 7:34:00 PM**	
Dil. Factor:	**1.65**	**Date of Analysis: 12/13/13 01:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.39	0.82	1.9
Freon 11	0.16	0.17	0.93	0.98
Freon 113	0.16	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	1.5	2.0	3.7
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.90	Not Detected
Benzene	0.16	Not Detected	0.53	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.72	Not Detected
m,p-Xylene	0.16	Not Detected	0.72	Not Detected
o-Xylene	0.16	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected UJ	6.1	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: IA0730

Lab ID#: 1312028-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121310sim**	**Date of Collection: 11/25/13 7:34:00 PM**	
Dil. Factor:	**1.65**	**Date of Analysis: 12/13/13 01:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.21	0.042	0.55
Carbon Tetrachloride	0.033	0.084	0.21	0.53
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: IA0731

Lab ID#: 1312028-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121311**	**Date of Collection: 11/25/13 7:36:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 12/13/13 02:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Freon 11	0.16	0.19	0.90	1.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	2.5	1.9	6.0
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	Not Detected	0.51	Not Detected
Toluene	0.16	Not Detected	0.61	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected UJ	6.0	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: IA0731

Lab ID#: 1312028-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121311sim**	**Date of Collection: 11/25/13 7:36:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 12/13/13 02:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.24	0.041	0.61
Carbon Tetrachloride	0.032	0.080	0.20	0.50
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: IA0732

Lab ID#: 1312028-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121312**	**Date of Collection: 11/25/13 7:30:00 PM**	
Dil. Factor:	**1.66**	**Date of Analysis: 12/13/13 03:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.82	2.1
Freon 11	0.17	0.18	0.93	0.99
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.66	Not Detected
Acetone	0.83	2.5	2.0	5.9
Methylene Chloride	0.33	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	Not Detected	0.66	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.90	Not Detected
Benzene	0.17	Not Detected	0.53	Not Detected
Toluene	0.17	0.31	0.62	1.2
Tetrachloroethene	0.17	Not Detected	1.1	Not Detected
Chlorobenzene	0.17	Not Detected	0.76	Not Detected
Ethyl Benzene	0.17	Not Detected	0.72	Not Detected
m,p-Xylene	0.17	Not Detected	0.72	Not Detected
o-Xylene	0.17	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.83	Not Detected UJ	6.2	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: IA0732

Lab ID#: 1312028-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121312sim**	**Date of Collection: 11/25/13 7:30:00 PM**	
Dil. Factor:	**1.66**	**Date of Analysis: 12/13/13 03:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.22	0.042	0.57
Carbon Tetrachloride	0.033	0.082	0.21	0.51
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: IA0733

Lab ID#: 1312028-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121313**	**Date of Collection: 11/25/13 7:51:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 12/13/13 03:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.80	2.0
Freon 11	0.16	0.20	0.91	1.1
Freon 113	0.16	0.16	1.2	1.2
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.81	2.3	1.9	5.4
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	Not Detected	0.61	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	Not Detected	0.70	Not Detected
o-Xylene	0.16	Not Detected	0.70	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.81	Not Detected UJ	6.0	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	87	70-130

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Client Sample ID: IA0733

Lab ID#: 1312028-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121313sim**	**Date of Collection: 11/25/13 7:51:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 12/13/13 03:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.22	0.041	0.55
Carbon Tetrachloride	0.032	0.069	0.20	0.44
Trichloroethene	0.032	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: IA0734

Lab ID#: 1312028-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121315**	**Date of Collection: 11/25/13 7:39:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 12/13/13 05:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
Freon 11	0.16	0.19	0.92	1.1
Freon 113	0.16	0.19	1.2	1.4
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.0	1.9	4.9
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Benzene	0.16	0.22	0.52	0.69
Toluene	0.16	0.31	0.61	1.2
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.75	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.98	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected UJ	6.0	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: IA0734

Lab ID#: 1312028-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121315sim**	**Date of Collection: 11/25/13 7:39:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 12/13/13 05:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.16	0.042	0.42
Carbon Tetrachloride	0.033	0.085	0.20	0.54
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: IA0735

Lab ID#: 1312028-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121317**	**Date of Collection: 11/25/13 7:46:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 12/13/13 07:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Freon 11	0.16	0.18	0.92	1.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.0	1.9	4.8
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected UJ	6.1	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: IA0735

Lab ID#: 1312028-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121317sim**	**Date of Collection: 11/25/13 7:46:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 12/13/13 07:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	0.21	0.042	0.53
Carbon Tetrachloride	0.033	0.074	0.21	0.47
Trichloroethene	0.033	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	89	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1312028-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121307**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 11:52 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected UJ	3.7	Not Detected UJ

UJ = Non-detected compound associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1312028-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121307sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 11:52 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: CCV

Lab ID#: 1312028-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 08:30 AM**	

Compound	%Recovery
Freon 12	106
Freon 11	88
Freon 113	105
1,1-Dichloroethene	112
Acetone	79
Methylene Chloride	108
cis-1,2-Dichloroethene	109
1,1,1-Trichloroethane	96
Benzene	95
Toluene	98
Tetrachloroethene	104
Chlorobenzene	98
Ethyl Benzene	98
m,p-Xylene	99
o-Xylene	97
1,3-Dichlorobenzene	88
1,4-Dichlorobenzene	81
1,2-Dichlorobenzene	83
1,2,4-Trichlorobenzene	68 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1312028-10B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121302sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 08:30 AM**	

Compound	%Recovery
Vinyl Chloride	116
Carbon Tetrachloride	108
Trichloroethene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCS

Lab ID#: 1312028-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 09:11 AM**	

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 11	88	70-130
Freon 113	116	70-130
1,1-Dichloroethene	121	70-130
Acetone	78	70-130
Methylene Chloride	112	70-130
cis-1,2-Dichloroethene	118	70-130
1,1,1-Trichloroethane	92	70-130
Benzene	98	70-130
Toluene	100	70-130
Tetrachloroethene	104	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	105	70-130
o-Xylene	97	70-130
1,3-Dichlorobenzene	90	70-130
1,4-Dichlorobenzene	86	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	78	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCSD

Lab ID#: 1312028-11AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 09:52 AM**	

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 11	85	70-130
Freon 113	113	70-130
1,1-Dichloroethene	117	70-130
Acetone	77	70-130
Methylene Chloride	109	70-130
cis-1,2-Dichloroethene	117	70-130
1,1,1-Trichloroethane	89	70-130
Benzene	99	70-130
Toluene	98	70-130
Tetrachloroethene	108	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	102	70-130
o-Xylene	97	70-130
1,3-Dichlorobenzene	87	70-130
1,4-Dichlorobenzene	82	70-130
1,2-Dichlorobenzene	85	70-130
1,2,4-Trichlorobenzene	76	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	78	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCS

Lab ID#: 1312028-11B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121303sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 09:11 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	116	70-130
Carbon Tetrachloride	110	60-140
Trichloroethene	95	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCSD

Lab ID#: 1312028-11BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v121304sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/13/13 09:52 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	112	70-130
Carbon Tetrachloride	110	60-140
Trichloroethene	95	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

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Project # 2999 T110
Project Name: IBM East Fishkill
Analyses: 1 = TO-15 H/L Refer to attached analyte list
2 =

Turn Around Time
Normal X
Rush
specify

Relinquished By: (signature) Date/Time 12/2/13 1530
Received By: (signature) Date/Time AR 12/3/13 0945
Relinquished By: (signature) Date/Time
Received By: (signature) Date/Time
Relinquished by: (signature) Date/Time
Received By: (signature) Date/Time

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final (psi)
01A	IA0710	34487	11/25/2013	1923	30.5	6.5	1		
02A	DUP20946	20946	11/25/2013	1923	30	6	1		
03A	IA0730	34365	11/25/2013	1934	30	6	1		
04A	IA0731	25257	11/25/2013	1936	32	6.5	1		
05A	IA0732	33882	11/25/2013	1930	27	5.5	1		
06A	IA0733	~~3536~~ 5736	11/25/2013	1951	31	6.5	1		
07A	IA0734	12951	11/25/2013	1939	30	6.5	1		
08A	IA0735	11301	11/25/2013	1946	30	4.5	1		

1312028

Custody Seal Intact?
Y N (None) Temp NA
Fedex

Revised COC received 12.5.13

Air Toxics LTD.

180 BLUE RAVINE ROAD, SUITE B
FOLSON, CA 95630-4719
(916) 985-1000 FAZ (916) 985-1020

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

SHA
IMPROVING EARTH

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Concord, NH 03301
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Project Info:

Project Manager: Brad Green
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P.O#
Project # 2999 T110
Project Name: IBM East Fishkill
Analyses: 1 = TO-15 H/L Refer to attached analyte list
2 =

Turn Around Time

Normal X
Rush

specify

Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
	ATL 12/3/13 0945
Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time

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