Hudson Valley Research Park
2070 Route 52
Hopewell Junction, NY 12533-3507
D.E. Speed Z/325

September 21, 2009

Mr. Alex G. Czuhanich
New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
625 Broadway
Albany, NY 12233-7258

Re: Data Transmittal for Indoor Air Sampling at Buildings 309, 316, and 386
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 indoor air sampling at Buildings 309, 316, and 386 at the IBM East Fishkill facility. These buildings comprise 3 of 11 buildings planned for sampling in accordance with IBM's RFI Work Plan dated June 15, 2009. The sampling results for other buildings will be provided in subsequent reports.

Also enclosed are the notices IBM intends to use to report the sample results to the occupants of each building sampled.

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

Sincerely,

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

Attachments: Confirmatory Sampling Results – Buildings 309, 316, and 386
Notices of Sampling Results

cc: H. Wilkie (NYSDEC)
E. Dassatti (NYSDEC)
N. Walz (NYSDOH)
G. Litwin (NYSDOH)
S. Hawkins (IBM)

SANBORN, HEAD ENGINEERING, PC
20 Foundry Street ▪ Concord, NH 03301
P (603) 229-1900 ▪ F (603) 229-1919

LABORATORY DATA
CONFIRMATORY SAMPLING RESULTS
BUILDINGS 309, 316, AND 386

VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Prepared for
IBM Corporation

Prepared by
Sanborn, Head Engineering, P.C.

File 2999.00
September 2009

CONFIRMATORY SAMPLING RESULTS
BUILDINGS 309, 316, AND 386
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

TABLE OF CONTENTS

TABLES

FIGURES

ATTACHMENTS

1.0 INTRODUCTION

This report presents a summary of observations and data of confirmatory sampling conducted at Buildings 309, 316, and 386 at the IBM East Fishkill facility. The work was conducted as one part of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan dated June 15, 2009 (Work Plan). Buildings 309, 316, and 386 comprise 3 of 11 buildings planned for confirmatory sampling under the Work Plan. The confirmatory sampling results for other buildings will be provided in subsequent reports.

Buildings 309, 316, and 386 were among the buildings identified in the Work Plan for confirmatory indoor air sampling based on one or more of the following considerations:

- The 2007 indoor air samples indicated tetrachloroethene (PCE) concentrations similar to or greater than concentrations in outdoor air samples;
- The buildings overlie overburden groundwater containing volatile organic compounds (VOCs);
- The buildings are currently occupied; or
- Solvents were historically used or stored inside the building.

Samples were collected from Buildings 309, 316, and 386 by Sanborn, Head & Associates, Inc. (SHA) personnel on July 8, 2009. Descriptions of field observations and a summary of analytical data for this sampling event are presented in Section 3.

2.0 SUMMARY OF FIELD AND SAMPLING ACTIVITIES

A total of 15 indoor and ambient outdoor air samples were collected from Buildings 309, 316, and 386. Indoor air samples were collected from the ground floor[1] of each building at heights ranging from 4.5 to 6.5 feet above the floor. One outside, ambient outdoor air sample was collected from the roof of each building. For Quality Assurance / Quality Control (QA/QC) purposes, one field blank and one blind field duplicate[2] were collected as well. Samples were collected at the locations depicted on Figures 1 (Building 309), Figure 2 (Building 316), and Figure 3 (Building 386). Information regarding the sample locations in each building is summarized in the table below.

[1] The ground floors of Buildings 309, 316, and 386 are the lowest occupied levels of each building.

[2] A field duplicate sample is collected at the same time and location as another sample. The purpose of a field duplicate sample is to assess the precision (repeatability) of the laboratory analysis. A field blank is a sampling canister, which is certified clean by the laboratory and filled in the field with laboratory grade nitrogen. The purpose of a field blank sample is to assess for the the presence of target compounds that could be due to equipment preparation and transportation of equipment to and from the field. The field duplicate and field blank samples are submitted to the laboratory for analysis with the other samples.

Exhibit 1: Summary of Sample Locations

Building	General Building Use(s)	Areas Targeted for Sampling	# of Samples
309	Warehousing for virgin chemical storage and hazardous waste storage; offices for warehouse personnel.	Offices, Solvent Storage / Management area, and Drum Storage Areas (both hazardous and non-hazardous)	(6) Indoor, (1) Ambient Outdoor Air
316	Part of the facility's central utility plant, with water treatment, including the Central Carbon treatment for VOC-containing groundwater, and boilers/chillers, with some offices for operations personnel.	Office area in Control Room	(1) Indoor, (1) Ambient Outdoor Air
386	Fluoride waste treatment facility, with some offices for operations personnel.	Offices, Break Room, Work / Storage Room	(4) Indoor, (1) Ambient Outdoor Air

During sampling, SHA observed the vicinity of each location for general use (e.g., offices, drum storage), floor condition (e.g., sumps, drains, cracks, staining), chemicals stored / used, and other features Photographs of sample locations are provided on Figures 1, 2, and 3, and field observations for each sample location are provided in Table 1.

Each building has several heating, ventilation, and air conditioning (HVAC) zones. The ground floor HVAC zones for each building are depicted on Figures 1 through 3. As presented on Table 1 and Figures 1 through 3, SHA collected one ambient outdoor air sample proximate to the outside air intake for one of the HVAC air handling units (AHUs) on the roof of each building.

In Buildings 316 and 386, the outside air intake dampers on the AHUs of the HVAC zones sampled automatically modulate position to achieve set points for air temperature and/or humidity; hence, the outside air flow rate into an HVAC zone may vary, along with the outside air changes per hour (ACH). However, the outside air dampers are configured or programmed with a minimum open position so that sufficient outdoor air is continuously introduced to the building space. To obtain samples under conservative conditions, the outside air dampers on the AHUs serving the HVAC zones being sampled were set at their minimum open position and not allowed to vary.

At Building 309, the AHU outside air damper positions were not changed because they do not modulate and are in fixed position. The dampers are set this way to achieve a continuous ventilation rate (constant ACH) due to the use of the building as a warehouse for virgin chemical and waste storage. One of the AHUs has two intake dampers in series; the first (inner) damper on the AHU is fixed at 100% open, and the second (outer) damper on the wall intake is fixed at about 25% open. The dampers on all the other AHUs are fixed at 100% open.

At Buildings 316 and 386, AHU outside air dampers were set at least 24 hours prior to sampling to allow equilibration prior to sample collection. To confirm that the dampers remain fixed up to and during the sampling period, SHA installed nylon wire ties and masking tape on the damper actuators, which were designed to break if the damper position changed. The damper positions remained fixed during the sampling period. Attachment A includes information about AHU damper settings during the sampling event.

Samples were collected as 8-hour, time-integrated samples using Summa® canisters (6L) in accordance with the procedures described in the RFI Work Plan, Appendix A.1. Sample canisters were deployed approximately simultaneously, with the exception of sample IA0200 (Building 309), which was redeployed approximately three hours later due to a faulty flow controller on the initial canister deployed at this location. We submitted the samples to Air Toxics Limited (ATL) of Folsom, California for laboratory analysis of the site-specific list of 22 VOCs by United States Environmental Protection Agency (USEPA) Method TO-15 Hi\Lo[3]. Additional sample information, including sample collection times, initial and final canister pressures, canister identification numbers, and field screening values, is provided in Table 1.

Analytical data were provided to New Environmental Horizons, Inc. (NEH) for a third-party, independent data validation evaluation. NEH's data validation report is included as Attachment C. NEH found the data to be useable in accordance with the project data quality objectives (DQOs), subject to few minor qualifications discussed in Section 4.0.

3.0 SUMMARY OF FIELD OBSERVATIONS AND ANALYTICAL DATA

Our field observations during sampling related to building features and chemical use/presence are summarized below to provide context for the results.

A summary of validated analytical results are provided in Tables 2A (Building 309), Table 2B (Building 316), and Table 2C (Building 386). Analytes detected at concentrations greater than laboratory reporting limits are depicted on Figure 1 (Building 309), Figure 2 (Building 316), and Figure 3 (Building 386). Analytical laboratory data reports and third-party data validation reports are provided as Attachments B and C, respectively.

Figures 1 through 3 summarize sample results where target analytes (on a location-by-location basis) were detected at concentrations greater than laboratory reporting limits. To provide context to the indoor air sample results, the figures and tables also show concentrations detected in concurrent ambient outdoor air samples.

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

3.1 Building 309

Building 309 houses the facility's shipping and receiving operations for virgin chemicals and chemical wastes. Most of the building consists of warehouse space used for this purpose (sample locations IA0200, IA0201, IA0204). Virgin solvents from bulk storage areas are repackaged into drums and containers in a room at the northwest portion of the building. Waste solvents are repackaged/consolidated in an adjacent room (sample IA0202). Office areas are located in the northeast portion of the building (sample IA0203). A trash compactor room is located in the southeast corner (sample IA0205).

Table 1 summarizes our field observations, including chemicals observed near each sample location. Several solvent-related Solid Waste Management Units (SWMUs) are located in and around the building, including inaccessible below-ground solvent waste pipelines and several former solvent underground storage tanks (USTs)[4], which are located northwest of the building.

The following VOCs detected in one or more indoor air samples were not detected in the ambient outdoor air sample: PCE, trichloroethene (TCE), 1,1-dichloroethene (DCE), and 1,1,1-trichloroethane (TCA).

3.2 Building 316

Building 316 houses the central utility plant, including boilers and chiller units that serve the entire East Fishkill facility. It also houses the central carbon treatment facility that treats several million gallons of VOC-containing groundwater daily, and downstream industrial process water treatment units. In 2008, approximately 6,800 pounds of halogenated solvents (primarily PCE, TCE, and cis-1,2-dichloroethene [cDCE]) were adsorbed onto the granular activated carbon treatment material used in Building 316[5].

No chemical use or storage, or potential points of facilitated vapor entry from the subsurface, were observed in the immediate vicinity of the indoor sampling location (IA0600), which is located in an office area of the Control Room.

As presented on Table 2B and Figure 2, similar analytes were detected in all samples collected at Building 316 (one indoor air, one field duplicate indoor air, and one ambient outdoor air). PCE, TCE, cDCE, vinyl chloride, carbon tetrachloride, toluene, Freon 11, and Freon 12 were detected in the indoor air sample (and/or field duplicate sample) at concentrations slightly greater than that observed in the ambient outdoor air sample.

---

[4] Based on historical building use information contained in IBM's RCRA Corrective Action Permit Module III, dated September 29, 1995 and associated mapping.

[5] As indicated in the 2008 Annual Corrective Action Status Report, prepared by IBM Environmental Engineering and Groundwater Sciences Corporation, dated May 27, 2009.

3.3 Building 386

Building 386 houses operations for treatment of aqueous fluoride wastes from industrial processes. As summarized on Table 1, aside from small quantities of cleaning supplies observed near sample location IA0303, no solvent use or storage was observed at the indoor sample locations in Building 386. No obvious routes of facilitated entry from the subsurface were observed (subsurface sumps, pits, cracked floors, or drain lines) in the vicinity of these sample locations.

As presented on Table 2C and Figure 3, similar analytes were detected in the indoor air and ambient outdoor air samples collected at Building 386. Carbon tetrachloride, acetone, toluene, Freon 11, and Freon 12 were detected in indoor air samples at concentrations slightly greater than that observed in the concurrent ambient outdoor air sample.

4.0 QUALITY ASSURANCE / QUALITY CONTROL

Analytical data were provided to NEH for a third-party independent data validation evaluation. NEH's data validation report is presented as Attachment C.

NEH's evaluation included an in-depth data usability review of sample data, including raw data, to verify that the laboratory performed the analyses in compliance with the analytical methods specified in the RFI Work Plan laboratory procedures, the RFI Work Plan, and USEPA and New York State Department of Environmental Conservation (NYSDEC) guidelines for data validation of organic data. NEH prepared a report that summarized the quality control (QC) issues that required action (qualification of data) and compared QA/QC criteria to the DQOs described in the RFI Work Plan.

In summary, NEH found the data to be useable in accordance with the project data quality objectives subject to a few minor qualifications. The following QA/QC considerations were noted by NEH:

- Canister vacuums were considered acceptable for all samples, except the field blank sample, which was received at the laboratory with a vacuum that was significantly different (> ± 5 inches of mercury [Hg]) than the final vacuum measured in the field. As a result, NEH considered all results from this sample to be estimated (i.e., J flagged), with an indeterminate bias[6]. However, no analytes were detected above their respective target reporting limits (as defined in the RFI Work Plan) in this sample, which indicates that the field blank results are still useful in concluding that target analytes were not likely introduced into the equipment due to the preparation and/or transportation of the sampling equipment.

- The initial laboratory calibration (a metric used to evaluate accuracy) for 1,2,4-trichlorobenzene was slightly outside the established relative percent difference in the

[6] The data could be biased, but the available information does not allow the data validator to determine if the bias is high or low relative to the true value.

laboratory control sample criteria (32.5% as compared to the 30% criteria). Further, the laboratory control sample (LCS) % recovery (another metric used to evaluate accuracy) for 1,2,4-trichlorobenzene was also slightly low (60% as compared to the 70% criteria). As a result, NEH considered all 1,2,4-trichlorobenzene results to be estimated (i.e., J flagged), with an indeterminate bias (i.e., the accuracy of the 1,2,4-trichlorobenzene results were slightly outside the acceptance criteria). However, 1,2,4-trichlorobezene was not detected in any of the samples submitted for analysis nor was the relative percent difference of the field duplicate sample unacceptable, which indicates that the precision (i.e., the degree of agreement between repeated measurements) for the 1,2,4-trichlorobenzene results was reliable.

- The field duplicate and primary sample (collected at location IA0600) met all QA/QC criteria except for a slight exceedence of the acceptance criteria for relative percent difference (RPD – a metric used to evaluate precision) for Freon 12 (21% compared to the 20% acceptance criteria). Therefore, NEH considered the results in both samples to be estimated values (i.e., J flagged), with indeterminate bias. The reported concentrations for the field duplicate and IA0600 samples were 5.8 and 4.7 µg/m^3, respectively.

- Acetone in sample AA0206 was reported at a level above the instrument calibration range (a metric used to evaluate accuracy) and flagged as an estimated value by the analytical laboratory. NEH qualified this result as estimated (i.e., J flagged), with an indeterminate bias. The instrument was calibrated to an upper limit of approximately 95 µg/m^3 and the reported acetone concentration for sample AA0206 was 390 µg/m^3, which indicates that the accuracy of the acetone result is outside of the acceptance criteria.

- Reporting limits for sample IA0205 were approximately 30% to 60% higher than the target reporting limits defined in the RFI Work Plan due to the presence of non-target compounds in the sample. Non-target compounds in sample IA0205 were not identified by the laboratory. All other samples had reporting limits similar to the target reporting limits anticipated and presented in the RFI Work Plan.

S:\CONDATA\2900s\2999.00\Originals\B309_316_386 Data Submittal\20090921_B309_316_386_Text.redline.doc

TABLES

TABLE 1
Summary of Sample Information – Confirmatory Sampling Results
RFI Work Plan Implementation
IBM East Fishkill Facility
Hopewell Junction, New York

Sample ID	Building Floor	Sample Type	Canister Number	Sample Height (ft above floor)	Start Time (hrs)	Start Pressure (in. Hg)	End Time (hrs)	End Pressure (in. Hg)	PID Reading (ppbv)	Odor	Temperature (F°)	Location Description	Chemicals Observed Near Sample Location	Other Observations
Building 309														
AA0206	Roof	Ambient Air	1578	NA	0807	>30	1616	8.5	0	No	75	Outside air intake for HVAC unit HVAC-1	None observed	
IA0200	Ground	Indoor Air	11885	6	1122	30	2031	9.5	0	No	70	Virgin Product Storage	Drums (55-gallons each) - Isopropyl alcohol, MIBK, NMP, and methanol	Sump approximatley 4 ft by 4ft and 3 to 5 ft deep adjacent to sample location was covered with a metal plate. We did not observe the construction of the sump during sampling.
IA0201	Ground	Indoor Air	35251	6.5	0850	29	1651	6	180	No	70	Drum Storage (Hazardous and Non-Hazardous)	Drums (55-gallons) in immediate vicinity of sample - hazardous and non-hazardous waste drums containing: ethylene glycol, flammable waste, hazardous waste, and solvent contaminated solids (hazardous).	
IA0202	Ground	Indoor Air	3734	5	0859	>30	1700	5.5	0	No	70	Solvent Storage / Management	Three drums in immediate vicinity - 1) Resits and solvents (may contain NMP, acetone, isopropyl alcohol, n-butylacetate, and cyclohexane), 2) Solvent containing solids (may contain color paper, rags, plastics, glass cleaning rags, gloves, speedi-dry), and 3) Lab pack chemicals (5 gallons) - fluoroalkyl/copolymer.	Sump approximately 3 ft from sample location, approximately 5 ft by 4 ft and 5 ft deep was covered with a metal plate. We did not observe the construction of the sump during sampling.. Brown oily staining with "oil dry" on floor.
IA0203	Ground	Indoor Air	20935	6.5	0828	29	1702	7	0	No	70	Office	None observed	
IA0204	Ground	Indoor Air	12335	6	0845	30	1648	7	250	Yes - "sweet" odor	70	Drum Storage (Non-Hazardous)	Drums (55 gallons) of cobalt plating bath (cobalt sulfide, tungsten oxide, hypophosphorous acid, citirc acid, boric acid, maleic acid, DMAB, and TMAH); molybdenum and copper plating bath (also ink oil, lexanol, ethyl cellulose, olal sarkosine, thixein R, butyl carbitol acetate), potassium iodide, and empty solvent cans.	
IA0205	Ground	Indoor Air	33678	4.5	0835	>30	1636	5	0	No	70	Trash Compactor Room	None observed	Sumps / tanks for "industrial waste ejector" (2,000-gallons) and "sanitary waste ejector" (3,500-gallons) adjacent to sample location were covered with metal plates. We did not observe the construction of the sumps during sampling.
Building 316														
AA0601	Roof	Ambient Air	34746	NA	0735	>30	1541	8	0	No	75	Outside air intake for HVAC unit HVAC-2	None observed	
IA0600	Ground	Indoor Air	14000	4.5	0730	>30	1534	6.55	0	No	70	Control Room (office area)	None observed	
23888 (IA0600 Dup)	Ground	Duplicate	23888	4.5	0730	>30	1534	5.82	0	No	70	Control Room (office area)	None observed	
Building 386														
AA0304	Roof	Ambient Air	33912	NA	0758	>30	1554	5	0	?	75	Outside air intake for HVAC unit AHU-1	None observed	
IA0300	Ground	Indoor Air	14010	5	0806	28	1553	5	0	No	71	Work / Storage Room	None observed	Sump and drain connected to pipes labeled "industrial waste" adjacent to sample location was covered with a metal plate. We did not observe the construction of the sump during sampling. Orange staining on floor near sump.
IA0301	Ground	Indoor Air	24479	4.5	0810	>30	1600	6.01	0	No	71	Offices	None observed	
IA0302	Ground	Indoor Air	35972	4.5	0818	>30	1625	7	0	No	71	Control Room (office area)	None observed	
IA0303	Ground	Indoor Air	34218	5	0813	>30	1557	6.5	0	No	71	Break Room	Small quantities of cleaning fluids (soaps and abrasives) under sink.	

Notes:
1. Samples were collected on July 8, 2009 by Sanborn, Head & Associates, Inc. (SHA) personnel.
2. Samples were collected into 6-liter, stainless steel, pre-evacuated Summa® canisters using 8-hour metering regulators and inline 2-micron filters. Canisters and regulators were laboratory-certified clean (100% certification).
3. PID screening was conducted using a ppbRAE, calibrated to a 10 parts per million by volume (ppmv) isobutylene-in-air standard.

TABLE 2A
Building 309
Confirmatory Sampling Results
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m^3																										
	Field Blank			Ambient Outdoor Air			Indoor Air																		Indoor Air		
	FB20090708			AA0206 HVAC Intake			IA0200 Drum Storage Area			IA0201 Drum Storage Area			IA0202 Solvent Management Area			IA0203 Office Area			IA0204 Drum Storage Area			IA0205 Trash Compactor Room					
	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Max	Min	Median
Tetrachloroethene (PCE)	<0.68	UJ	I	<1.3	U		**1.9**			**1.2**			**2.4**			**3.4**			**1.2**			<2.1	U		**3.4**	**1.2**	**1.9**
Trichloroethene (TCE)	<0.11	UJ	I	<0.20	U		**0.25**			<0.18	U		**0.37**			**6.7**			<0.18	U		<0.33	U		**6.7**	**0.25**	**0.37**
cis-1,2-Dichloroethene (cDCE)	<0.40	UJ	I	<0.74	U		<0.74	U		<0.67	U		<0.64	U		<0.68	U		<0.65	U		<1.2	U		<1.2	<0.64	ND
1,1-Dichloroethene (DCE)	<0.40	UJ	I	<0.74	U		<0.74	U		<0.67	U		<0.64	U		**0.71**			<0.65	U		<1.2	U		**0.71**	**0.71**	**0.71**
Vinyl chloride (VC)	<0.026	UJ	I	<0.048	U		<0.048	U		<0.043	U		<0.041	U		<0.044	U		<0.042	U		<0.079	U		<0.079	<0.041	ND
1,1,1-Trichloroethane (TCA)	<0.54	UJ	I	<1.0	U		<1.0	U		<0.92	U		<0.88	U		**5.2**			<0.89	U		<1.7	U		**5.2**	**5.2**	**5.2**
Carbon tetrachloride	<0.12	UJ	I	**0.52**			**0.53**			**0.54**			**0.56**			**0.61**			**0.52**			**0.47**			**0.61**	**0.47**	**0.54**
Methylene chloride (MeCl)	<0.69	UJ	I	<1.3	U		<1.3	U		<1.2	U		<1.1	U		<1.2	U		<1.1	U		<2.2	U		<2.2	<1.1	ND
Chlorobenzene	<0.46	UJ	I	<0.86	U		<0.86	U		<0.77	U		<0.74	U		<0.79	U		<0.76	U		<1.4	U		<1.4	<0.74	ND
1,2,4-Trichlorobenzene	<3.7	UJ	I	<6.9	UJ	I	<6.9	UJ	I	<6.2	UJ	I	<6.0	UJ	I	<6.3	UJ	I	<6.1	UJ	I	<12	UJ	I	<12	<6.0	ND
1,2-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.1	U		<1.0	U		<0.97	U		<1.0	U		<0.99	U		<1.9	U		<1.9	<0.97	ND
1,3-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.1	U		<1.0	U		<0.97	U		<1.0	U		<0.99	U		<1.9	U		<1.9	<0.97	ND
1,4-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.1	U		<1.0	U		<0.97	U		<1.0	U		<0.99	U		<1.9	U		<1.9	<0.97	ND
Acetone	<1.2	UJ	I	**390**	J	I	**5.1**			**37**			**53**			**5.9**			**4.2**			**22**			**53**	**4.2**	**14**
Benzene	<0.32	UJ	I	**0.66**			<0.60	U		<0.54	U		<0.51	U		<0.55	U		<0.52	U		<0.99	U		<0.99	<0.51	ND
Ethylbenzene	<0.43	UJ	I	<0.81	U		<0.81	U		<0.73	U		<0.70	U		**2.2**			<0.71	U		<1.3	U		**2.2**	**2.2**	**2.2**
m,p-Xylene	<0.43	UJ	I	**1.9**			**2.6**			**1.8**			**2.3**			**1.6**			<0.71	U		**2.4**			**2.6**	**1.6**	**2.3**
o-Xylene	<0.43	UJ	I	**1.1**			**0.87**			<0.73	U		**1.2**			<0.74	U		<0.71	U		<1.3	U		**1.2**	**0.87**	**1.0**
Toluene	<0.38	UJ	I	**2.1**			<0.7	U		<0.63	U		**2.0**			<0.64	U		<0.62	U		**1.8**			**2.0**	**1.8**	**1.9**
Trichlorofluoromethane (Freon 11)	<0.56	UJ	I	**1.3**			**1.1**			**1.6**			**1.5**			**1.4**			**1.8**			<1.7	U		**1.8**	**1.1**	**1.5**
Dichlorodifluoromethane (Freon 12)	<0.49	UJ	I	**2.1**			**1.7**			**1.9**			**2.2**			**2.1**			**2.3**			**2.5**			**2.5**	**1.7**	**2.2**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.77	UJ	I	<1.4	U		<1.4	U		<1.3	U		<1.2	U		<1.3	U		<1.2	U		<2.4	U		<2.4	<1.2	ND

Notes:

1. Samples were collected by SHA personnel on July 8, 2009 using 6-liter summa canisters equipped with 8-hour flow controllers.

2. Sample analysis was completed by Air Toxics Limited (ATL) of Folsom, CA 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 analytical data, as described in their In-Depth Data Usability Review, dated August 7, 2009 and provided as Attachment D. 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:
"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 compound was analyzed for, but was not detected. The sample-specific quantitation (reporting) limit is estimated. The non-detect result is usable for project objectives with documentation of the bias or uncertainty in the result.
"I" Indeterminate bias.

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

6. "Max" indicates the maximum detected concentration in the indoor air samples. For those analytes that were not detected in any of the samples, the maximum reporting limit value is presented.
"Min" indicates the minimum detected concentration in the indoor air samples. For those analytes that were not detected in any of the samples, the minimum reporting limit value is presented. For those analytes that were detected, the reporting limit values were not considered when calculating the minimum values.
"Median" indicates the median detected concentration in the indoor air samples. "ND" indicates that the analyte was not detected above laboratory reporting limits in any of the indoor air samples.

TABLE 2B
Building 316
Confirmatory Sampling Results
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m^3											
	Field Blank			Ambient Outdoor Air			Indoor Air					
	FB20090708			AA0601			IA0600			IA0600 Dup		
				HVAC Intake			Office Area			Office Area		
	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias
Tetrachloroethene (PCE)	<0.68	UJ	I	**5.0**			**12**			**12**		
Trichloroethene (TCE)	<0.11	UJ	I	**1.6**			**1.5**			**1.7**		
cis-1,2-Dichloroethene (cDCE)	<0.40	UJ	I	<0.72	U		**0.72**			**0.72**		
1,1-Dichloroethene (DCE)	<0.40	UJ	I	<0.72	U		<0.69	U		<0.67	U	
Vinyl chloride (VC)	<0.026	UJ	I	<0.047	U		**0.056**			**0.070**		
1,1,1-Trichloroethane (TCA)	<0.54	UJ	I	<1.0	U		<0.95	U		<0.92	U	
Carbon tetrachloride	<0.12	UJ	I	**0.48**			**0.50**			**0.48**		
Methylene chloride (MeCl)	<0.69	UJ	I	<1.3	U		<1.2	U		<1.2	U	
Chlorobenzene	<0.46	UJ	I	<0.84	U		<0.80	U		<0.77	U	
1,2,4-Trichlorobenzene	<3.7	UJ	I	<6.8	UJ	I	<6.5	UJ	I	<6.2	UJ	I
1,2-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.0	U		<1.0	U	
1,3-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.0	U		<1.0	U	
1,4-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<1.0	U		<1.0	U	
Acetone	<1.2	UJ	I	**7.9**			**4.4**			**5.4**		
Benzene	<0.32	UJ	I	**0.74**			<0.56	U		<0.54	U	
Ethylbenzene	<0.43	UJ	I	<0.79	U		<0.76	U		<0.73	U	
m,p-Xylene	<0.43	UJ	I	<0.79	U		<0.76	U		<0.73	U	
o-Xylene	<0.43	UJ	I	<0.79	U		<0.76	U		<0.73	U	
Toluene	<0.38	UJ	I	**1.2**			**1.4**			**1.3**		
Trichlorofluoromethane (Freon 11)	<0.56	UJ	I	**1.6**			**2.0**			**2.4**		
Dichlorodifluoromethane (Freon 12)	<0.49	UJ	I	**2.4**			**4.7**	J	I	**5.8**	J	I
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.77	UJ	I	<1.4	U		<1.3	U		<1.3	U	

Notes:

1. Samples were collected by SHA personnel on July 8, 2009 using 6-liter summa canisters equipped with 8-hour flow controllers.

2. Sample analysis was completed by Air Toxics Limited (ATL) of Folsom, CA 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 analytical data, as described in their In-Depth Data Usability Review, dated August 7, 2009 and provided as Attachment D. 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:
"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 compound was analyzed for, but was not detected. The sample-specific quantitation (reporting) limit is estimated. The non-detect result is usable for project objectives with documentation of the bias or uncertainty in the result.
"I" Indeterminate bias.

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

6. The sample designation for the field duplicate sample collected at IA0600 was 23888.

TABLE 2C
Building 386
Confirmatory Sampling Results
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Analyte Name	Concentrations in µg/m^3																		Indoor Air		
	Field Blank			Ambient Outdoor Air			Indoor Air														
	FB20090708			AA0304			IA0300			IA0301			IA0302			IA0303					
				HVAC Intake			Work Room / Storage			Office Area			Office Area			Break Room			Max	Min	Median
	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias	Result	Qualifier	Bias			
Tetrachloroethene (PCE)	<0.68	UJ	I	<1.2	U		<1.1	U		<1.1	U		<1.2	U		<1.1	U		<1.2	<1.1	ND
Trichloroethene (TCE)	<0.11	UJ	I	<0.19	U		<0.17	U		<0.18	U		<0.19	U		<0.17	U		<0.19	<0.17	ND
cis-1,2-Dichloroethene (cDCE)	<0.40	UJ	I	<0.71	U		<0.64	U		<0.67	U		<0.69	U		<0.63	U		<0.69	<0.63	ND
1,1-Dichloroethene (DCE)	<0.40	UJ	I	<0.71	U		<0.64	U		<0.67	U		<0.69	U		<0.63	U		<0.69	<0.63	ND
Vinyl chloride (VC)	<0.026	UJ	I	<0.046	U		<0.041	U		<0.043	U		<0.045	U		<0.040	U		<0.045	<0.041	ND
1,1,1-Trichloroethane (TCA)	<0.54	UJ	I	<0.98	U		<0.88	U		<0.92	U		<0.95	U		<0.86	U		<0.95	<0.86	ND
Carbon tetrachloride	<0.12	UJ	I	**0.36**			**0.46**			**0.47**			**0.44**			**0.47**			**0.47**	**0.44**	**0.47**
Methylene chloride (MeCl)	<0.69	UJ	I	<1.2	U		<1.1	U		<1.2	U		<1.2	U		<1.1	U		<1.2	<1.1	ND
Chlorobenzene	<0.46	UJ	I	<0.82	U		<0.74	U		<0.77	U		<0.80	U		<0.73	U		<0.8	<0.73	ND
1,2,4-Trichlorobenzene	<3.7	UJ	I	<6.6	UJ	I	<6.0	UJ	I	<6.2	UJ	I	<6.5	UJ	I	<5.9	UJ	I	<6.5	<5.9	ND
1,2-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<0.97	U		<1.0	U		<1.0	U		<0.95	U		<1.0	<0.95	ND
1,3-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<0.97	U		<1.0	U		<1.0	U		<0.95	U		<1.0	<0.95	ND
1,4-Dichlorobenzene	<0.60	UJ	I	<1.1	U		<0.97	U		<1.0	U		<1.0	U		<0.95	U		<1.0	<0.95	ND
Acetone	<1.2	UJ	I	**16**			**5.8**			**4.9**			**20**			**11**			**20**	**4.9**	**8.4**
Benzene	<0.32	UJ	I	**0.82**			<0.51	U		<0.54	U		**0.69**			**0.71**			**0.71**	**0.69**	**0.70**
Ethylbenzene	<0.43	UJ	I	<0.78	U		<0.70	U		<0.73	U		<0.76	U		<0.69	U		<0.76	<0.69	ND
m,p-Xylene	<0.43	UJ	I	<0.78	U		<0.70	U		<0.73	U		<0.76	U		<0.69	U		<0.76	<0.69	ND
o-Xylene	<0.43	UJ	I	<0.78	U		<0.70	U		<0.73	U		<0.76	U		<0.69	U		<0.76	<0.69	ND
Toluene	<0.38	UJ	I	**1.4**			**0.87**			<0.63	U		**1.8**			**1.3**			**1.8**	**0.87**	**1.3**
Trichlorofluoromethane (Freon 11)	<0.56	UJ	I	**1.6**			**4.0**			**5.5**			**5.3**			**7.0**			**7.0**	**4.0**	**5.4**
Dichlorodifluoromethane (Freon 12)	<0.49	UJ	I	**2.0**			**1.8**			**2.4**			**2.3**			**2.4**			**2.4**	**1.8**	**2.4**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.77	UJ	I	<1.4	U		<1.2	U		<1.3	U		<1.3	U		<1.2	U		<1.3	<1.2	ND

Notes:

1. Samples were collected by SHA personnel on July 8, 2009 using 6-liter summa canisters equipped with 8-hour flow controllers.

2. Sample analysis was completed by Air Toxics Limited (ATL) of Folsom, CA 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 analytical data, as described in their In-Depth Data Usability Review, dated August 7, 2009 and provided as Attachment D. 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:
"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 compound was analyzed for, but was not detected. The sample-specific quantitation (reporting) limit is estimated. The non-detect result is usable for project objectives with documentation of the bias or uncertainty in the result.
"I" Indeterminate bias.

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

6. "Max" indicates the maximum detected concentration in the indoor air samples. For those analytes that were not detected in any of the samples, the maximum reporting limit value is presented.
"Min" indicates the minimum detected concentration in the indoor air samples. For those analytes that were not detected in any of the samples, the minimum reporting limit value is presented. For those analytes that were detected, the reporting limit values were not considered when calculating the minimum values.
"Median" indicates the median detected concentration in the indoor air samples. "ND" indicates that the analyte was not detected above laboratory reporting limits in any of the indoor air samples.

FIGURES

NAME: latwell

Building 303

IA0201 - 7/8/09

PCE:	1.2
Carbon Tet:	0.54
Acetone:	37
m,p-Xylenes:	1.8
Freon 11:	1.6
Freon 12:	1.9

IA0203 - 7/8/09

PCE:	3.4
TCE:	6.7
DCE:	0.71
TCA:	5.2
Carbon Tet:	0.61
Acetone:	5.9
Ethylbenzene:	2.2
m,p-Xylenes:	1.6
Freon 11:	1.4
Freon 12:	2.1

IA0200 - 7/8/09

PCE:	1.9
TCE:	0.25
Carbon Tet:	0.53
Acetone:	5.1
m,p-Xylenes:	2.6
o-Xylenes:	0.87
Freon 11:	1.1
Freon 12:	1.7

IA0205 - 7/8/09

Carbon Tet:	0.47
Acetone:	22
m,p-Xylenes:	2.4
Toluene:	1.8
Freon 12:	2.5

IA0202 - 7/8/09

PCE:	2.4
TCE:	0.37
Carbon Tet:	0.56
Acetone:	53
m,p-Xylenes:	2.3
o-Xylenes:	1.2
Toluene:	2.0
Freon 11:	1.5
Freon 12:	2.2

AA0206 - 7/8/09

Carbon Tet:	0.52
Acetone:	390
Benzene:	0.66
m,p-Xylenes:	1.9
o-Xylenes:	1.1
Toluene:	2.1
Freon 11:	1.3
Freon 12:	2.1

IA0204 - 7/8/09

PCE:	1.2
Carbon Tet:	0.52
Acetone:	4.2
Freon 11:	1.8
Freon 12:	2.3

Building 310

Drum Storage (Hazardous and Non-Hazardous)

Drum Storage (Non-Hazardous)

Consolidation Room

Office

Trash Compactor Room

Loading Dock

Spill Containment Sump

Virgin Product Drum Storage

Solvent Storage/ Management

Spill Containment Sump

(2) Waste Ejector Pit Sumps - Industrial & Sanitary

HVAC-1

HVAC-2

HVAC-3

HVAC-4

HV-101

309 RM 8 CS

309 RM 7 CS

309 RM 11 CS&L/UL

309 RM 9 CS

309 RM 5 CS

309 RM 2 CS

309 RM 23 CS

309 DOCK CS&L/UL

103 SW

104 SW

105 SW

106 SW

5 SO

3226 SO

138 SO

139 SO

143 SO

N

W

E

S

0 20 40 Feet

Figure 1

Building 309

Confirmatory Sampling Results VOC Source Assessment

IBM East Fishkill Facility
Hopewell Junction, New York

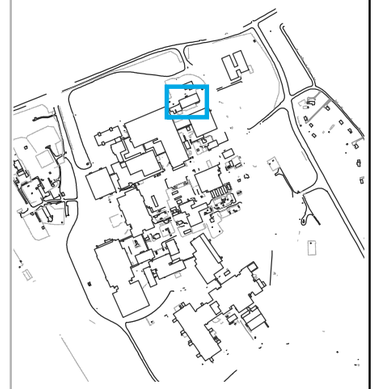
Drawn by :	E. Wright / N. Marchillo
Designed by :	L. Atwell
Reviewed by :	B. Green
Date :	September 2009

Figure Narrative

This figure shows the results of indoor and ambient air sampling. Air samples were collected into 6-liter Summa Canisters equipped with flow controller to obtain 8-hr time integrated samples. The samples were analyzed for site-specific list of volatile organic compounds (VOCs) by Air Toxics Ltd. of Folsom, CA using USEPA Method TO-15 Hi/Lo. Sample results are presented in units of micrograms per cubic meter (µg/m3).

Legend

- AA0206 — Ambient Air Sampling Location and Designation
- IA0200 — Indoor Air Sampling Location and Designation
- 3226 SO — Solid Waste Management Unit
- HVAC Zone



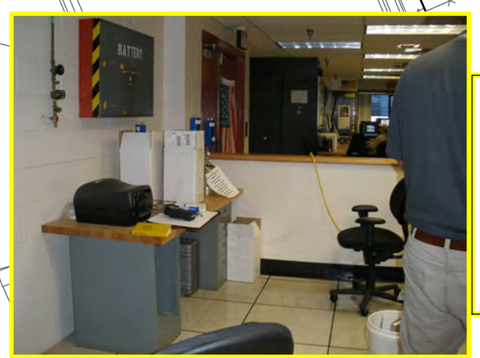
SHPC ENGINEERS

FILE: \\192.168.127.29\condata\condata\2900s\2999.00\arcfiles\figures\final\july09_confirm_b309.mxd

NAME: latwell

AA0601 - 7/8/09

PCE:	5.0
TCE:	1.6
Carbon Tet:	0.48
Acetone:	7.9
Benzene:	0.74
Toluene:	1.2
Freon 11:	1.6
Freon 12:	2.4



IA0600 - 7/8/09

PCE:	12
TCE:	1.5
cDCE:	0.72
VC:	0.056
Carbon Tet:	0.50
Acetone:	4.4
Toluene:	1.4
Freon 11:	2.0
Freon 12:	4.7

Overhead Pipes
Tank
Tank
Water Treatment
Central Carbon Treatment
Boilers
Boilers
Control Room
316 Dock
CW L/UL
589 IW
555 IW
529 IW
578 IW
579 IW
581 IW
582 IW
3072 IW
3074 IW
3094 IW
3095 IW
3096 IW

FILE: \\192.168.127.29\condata\condata\2900s\2999.00\arcfiles\figures\final\july09_confirm_b316.mxd

Figure 2

Building 316

Confirmatory Sampling Results VOC Source Assessment

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn by :	E. Wright / N. Marchillo
Designed by :	L. Atwell
Reviewed by :	B. Green
Date :	August 2009

Figure Narrative

This figure shows the results of indoor and ambient air sampling. Air samples were collected into 6-liter Summa Canisters equipped with flow controller to obtain 8-hr time integrated samples. The samples were analyzed for site-specific list of volatile organic compounds (VOCs) by Air Toxics Ltd. of Folsom, CA using USEPA Method TO-15 Hi/Lo. Sample results are presented in units of micrograms per cubic meter (µg/m3).

Legend

- AA0601 — Ambient Air Sampling Location and Designation
- IA0600 — Indoor Air Sampling Location and Designation
- 529 IW — Solid Waste Management Unit

0 20 40 Feet

SHPC ENGINEERS

NAME: latwell

N
W E
S

Tank
Tank
Tank
Tank
Tank

IA0300 - 7/8/09

Carbon Tet:	0.46
Acetone:	5.8
Toluene:	0.87
Freon 11:	4.0
Freon 12:	1.8

Maintenance Shop

3069 IW
3071 IW

Work Storage Room

Sump / Drain for "Industrial Waste' Pipe

AHU-1

Offices
Offices
Offices

Break Room

Control Room

AHU-2

Process Area

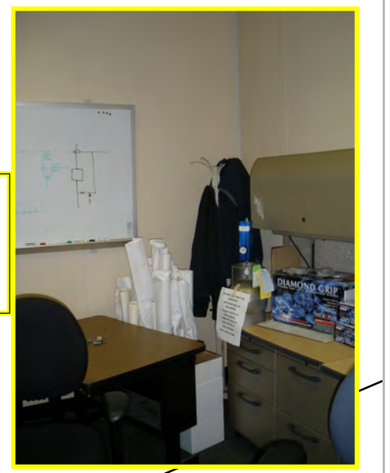
3064 IW
3065 IW

Filter Press Dumpster Room

386 FP-2 IW

IA0301 - 7/8/09

Carbon Tet:	0.47
Acetone:	4.9
Freon 11:	5.5
Freon 12:	2.4



IA0303 - 7/8/09

Carbon Tet:	0.47
Acetone:	11
Benzene:	0.71
Toluene:	1.3
Freon 11:	7.0
Freon 12:	2.4

AA0304 - 7/8/09

Carbon Tet:	0.36
Acetone:	16
Benzene:	0.82
Toluene:	1.4
Freon 11:	1.6
Freon 12:	2.0

IA0302 - 7/8/09

Carbon Tet:	0.44
Acetone:	20
Benzene:	0.69
Toluene:	1.8
Freon 11:	5.3
Freon 12:	2.3

FILE: \\192.168.127.29\condata\condata2900s\2999.00\arcfiles\figures\final\julv09_confirm_b386.mxd

Figure 3

Building 386

Confirmatory Sampling Results VOC Source Assessment

IBM East Fishkill Facility
Hopewell Junction, New York

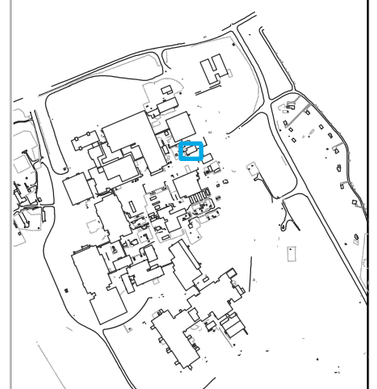
Drawn by :	E. Wright / N. Marchillo
Designed by :	L. Atwell
Reviewed by :	B. Green
Date :	August 2009

Figure Narrative

This figure shows the results of indoor and ambient air sampling. Air samples were collected into 6-liter Summa Canisters equipped with flow controller to obtain 8-hr time integrated samples. The samples were analyzed for site-specific list of volatile organic compounds (VOCs) by Air Toxics Ltd. of Folsom, CA using USEPA Method TO-15 Hi/Lo. Sample results are presented in units of micrograms per cubic meter (µg/m3).

Legend

- AA0304 — Ambient Air Sampling Location and Designation
- IA0300 — Indoor Air Sampling Location and Designation
- 3069 IW — Solid Waste Management Unit
- HVAC Zone



0 10 20 Feet

SHPC ENGINEERS

ATTACHMENT A

HVAC OPERATIONS DURING SAMPLING

SHPC ENGINEERS

Table A-1
Summary of HVAC Unit Outside Air Damper Positions
Confirmatory Sampling Results
VOC Source Assessment
IBM East Fishkill
Hopewell Junction, New York

HVAC Unit	Outside Air Damper - Normal Operating Position	Outside Air Damper Minimum Position (% Open)	Source of Information Regarding Minimum Position
Building 309			
HVAC-1	Fixed - no variation	100	Facilities Staff
HVAC-2	Fixed - no variation	100 (inner) / 25 (outer)	Facilities Staff
HVAC-4	Fixed - no variation	100	Facilities Staff
HV-101	Fixed - no variation	100	Facilities Staff
Building 316			
HVAC-2	Auto - variable	15	Control System
Building 386			
AHU-1	Auto - variable	20	Control System

Notes:

1. This table summarizes the normal operating configration for the outside air dampers for each heating, ventilation and air conditioning (HVAC) unit serving the zones sampled. For dampers that automatically modulate, these dampers were set and fixed in their minimum position at least 24 hours prior to and during sampling.

Table A-2
Summary of Damper Position Survey During Sampling
Confirmatory Sampling Results
VOC Source Assessment
IBM East Fishkill
Hopewell Junction, New York

HVAC Unit	Date and Time of Inspection				
Building 309					
HVAC-1	HVAC units in this building normally operate with the outside air dampers 100% open. No changes to outside air damper positions were made, and no fusible links were installed on units in this building.				
HVAC-2					
HVAC-4					
HV-101					
Building 316					
HVAC-2	07/06/09	07/07/09	07/08/09		
	1100 hrs	1000 hrs	0715 hrs	1140 hrs	1630 hrs
	Visual only[3]	✓	✓	✓	✓
Building 386					
AHU-1	07/06/09	07/07/09	07/08/09		
	1130 hrs	1010 hrs	0730 hrs	1150 hrs	1640 hrs
	Installed	✓	✓	✓	✓

Notes:

1. Fusible links were constructed from nylon zip ties, fine gauged metal wire, and masking tape. Dampers were inspected several times during sampling to determine if outside air dampers changed positions .

2. "✓" indicates that during inspection, the damper positions were observed to be in the position set prior to sampling.

3. Due to height constraints, fusible links were not installed on HVAC-2 in Building 316. Instead, the damper positions were visually assessed after the initial adjustment and during each subsequent inspection.

ATTACHMENT B

ANALYTICAL LABORATORY DATA REPORTS

SHPC ENGINEERS

7/29/2009
Mr. Brad Green
Sanborn, Head & Associates
20 Foundry Street

Concord NH 03301

Project Name: EFK
Project #: 2999.00.010
Workorder #: 0907203AR1

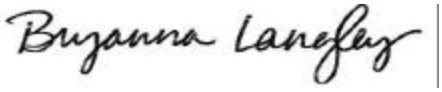
Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 7/10/2009 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: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

WORK ORDER #: 0907203AR1

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 #**	2999.00.010 EFK
DATE RECEIVED:	07/10/2009	**CONTACT:**	Bryanna Langley
DATE COMPLETED:	07/22/2009		
DATE REISSUED:	07/29/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA0300	Modified TO-15	5.0 "Hg	5 psi
01B	IA0300	Modified TO-15	5.0 "Hg	5 psi
02A	IA0301	Modified TO-15	6.0 "Hg	5 psi
02B	IA0301	Modified TO-15	6.0 "Hg	5 psi
03A	IA0302	Modified TO-15	7.0 "Hg	5 psi
03B	IA0302	Modified TO-15	7.0 "Hg	5 psi
04A	IA0303	Modified TO-15	4.5 "Hg	5 psi
04B	IA0303	Modified TO-15	4.5 "Hg	5 psi
05A	AA0304	Modified TO-15	7.5 "Hg	5 psi
05B	AA0304	Modified TO-15	7.5 "Hg	5 psi
06A	IA0600	Modified TO-15	7.0 "Hg	5 psi
06B	IA0600	Modified TO-15	7.0 "Hg	5 psi
07A	23888	Modified TO-15	6.0 "Hg	5 psi
07B	23888	Modified TO-15	6.0 "Hg	5 psi
08A	AA0601	Modified TO-15	8.0 "Hg	5 psi
08B	AA0601	Modified TO-15	8.0 "Hg	5 psi
09A	IA0200	Modified TO-15	8.5 "Hg	5 psi

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0907203AR1

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 #**	2999.00.010 EFK
DATE RECEIVED:	07/10/2009	**CONTACT:**	Bryanna Langley
DATE COMPLETED:	07/22/2009		
DATE REISSUED:	07/29/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
09B	IA0200	Modified TO-15	8.5 "Hg	5 psi
10A	IA0201	Modified TO-15	6.0 "Hg	5 psi
10B	IA0201	Modified TO-15	6.0 "Hg	5 psi
11A	Lab Blank	Modified TO-15	NA	NA
11B	Lab Blank	Modified TO-15	NA	NA
11C	Lab Blank	Modified TO-15	NA	NA
11D	Lab Blank	Modified TO-15	NA	NA
12A	CCV	Modified TO-15	NA	NA
12B	CCV	Modified TO-15	NA	NA
12C	CCV	Modified TO-15	NA	NA
12D	CCV	Modified TO-15	NA	NA
13A	LCS	Modified TO-15	NA	NA
13B	LCS	Modified TO-15	NA	NA
13C	LCS	Modified TO-15	NA	NA
13D	LCS	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 07/29/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
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# 0907203AR1

Ten 6 Liter Summa Canister (SIM Certified) samples were received on July 10, 2009. 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 WORK ORDER REISSUED ON 07/29/09 FOR THE FOLLOWING REASON:

AS AN AMENDED COC WAS RECEIVED ON 07/24/09, THE RECEIVING NARRATIVE WAS AMENDED TO SAY THE FOLLOWING:

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

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

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0300

Lab ID#: 0907203AR1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.80	1.8
Freon 11	0.16	0.71	0.90	4.0
Acetone	0.80	2.4	1.9	5.8
Toluene	0.16	0.23	0.61	0.87

Client Sample ID: IA0300

Lab ID#: 0907203AR1-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.072	0.20	0.46

Client Sample ID: IA0301

Lab ID#: 0907203AR1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.48	0.83	2.4
Freon 11	0.17	0.98	0.94	5.5
Acetone	0.84	2.0	2.0	4.9

Client Sample ID: IA0301

Lab ID#: 0907203AR1-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.034	0.074	0.21	0.47

Client Sample ID: IA0302

Lab ID#: 0907203AR1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.86	2.3
Freon 11	0.18	0.94	0.98	5.3
Acetone	0.88	8.3	2.1	20
Benzene	0.18	0.22	0.56	0.69
Toluene	0.18	0.49	0.66	1.8

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0302

Lab ID#: 0907203AR1-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.035	0.071	0.22	0.44

Client Sample ID: IA0303

Lab ID#: 0907203AR1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.78	2.4
Freon 11	0.16	1.2	0.89	7.0
Acetone	0.79	4.8	1.9	11
Benzene	0.16	0.22	0.50	0.71
Toluene	0.16	0.35	0.60	1.3

Client Sample ID: IA0303

Lab ID#: 0907203AR1-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.075	0.20	0.47

Client Sample ID: AA0304

Lab ID#: 0907203AR1-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.40	0.88	2.0
Freon 11	0.18	0.29	1.0	1.6
Acetone	0.90	6.9	2.1	16
Benzene	0.18	0.26	0.57	0.82
Toluene	0.18	0.36	0.67	1.4

Client Sample ID: AA0304

Lab ID#: 0907203AR1-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.036	0.057	0.22	0.36

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0600

Lab ID#: 0907203AR1-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.95	0.86	4.7
Freon 11	0.18	0.36	0.98	2.0
Acetone	0.88	1.8	2.1	4.4
cis-1,2-Dichloroethene	0.18	0.18	0.69	0.72
Toluene	0.18	0.38	0.66	1.4
Tetrachloroethene	0.18	1.8	1.2	12

Client Sample ID: IA0600

Lab ID#: 0907203AR1-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	0.022	0.045	0.056
Carbon Tetrachloride	0.035	0.080	0.22	0.50
Trichloroethene	0.035	0.28	0.19	1.5

Client Sample ID: 23888

Lab ID#: 0907203AR1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	1.2	0.83	5.8
Freon 11	0.17	0.44	0.94	2.4
Acetone	0.84	2.3	2.0	5.4
cis-1,2-Dichloroethene	0.17	0.18	0.67	0.72
Toluene	0.17	0.36	0.63	1.3
Tetrachloroethene	0.17	1.7	1.1	12

Client Sample ID: 23888

Lab ID#: 0907203AR1-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.028	0.043	0.070
Carbon Tetrachloride	0.034	0.077	0.21	0.48
Trichloroethene	0.034	0.31	0.18	1.7

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: AA0601

Lab ID#: 0907203AR1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.49	0.90	2.4
Freon 11	0.18	0.28	1.0	1.6
Acetone	0.92	3.3	2.2	7.9
Benzene	0.18	0.23	0.58	0.74
Toluene	0.18	0.33	0.69	1.2
Tetrachloroethene	0.18	0.73	1.2	5.0

Client Sample ID: AA0601

Lab ID#: 0907203AR1-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.037	0.076	0.23	0.48
Trichloroethene	0.037	0.31	0.20	1.6

Client Sample ID: IA0200

Lab ID#: 0907203AR1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.34	0.92	1.7
Freon 11	0.19	0.20	1.0	1.1
Acetone	0.94	2.1	2.2	5.1
Tetrachloroethene	0.19	0.28	1.3	1.9
m,p-Xylene	0.19	0.60	0.81	2.6
o-Xylene	0.19	0.20	0.81	0.87

Client Sample ID: IA0200

Lab ID#: 0907203AR1-09B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.037	0.085	0.24	0.53
Trichloroethene	0.037	0.047	0.20	0.25

Client Sample ID: IA0201

Lab ID#: 0907203AR1-10A

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0201

Lab ID#: 0907203AR1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.39	0.83	1.9
Freon 11	0.17	0.28	0.94	1.6
Acetone	0.84	16	2.0	37
Tetrachloroethene	0.17	0.18	1.1	1.2
m,p-Xylene	0.17	0.43	0.73	1.8

Client Sample ID: IA0201

Lab ID#: 0907203AR1-10B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.034	0.085	0.21	0.54

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0300

Lab ID#: 0907203AR1-01A

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

File Name:	**s072014**	**Date of Collection: 7/8/09 3:53:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 7/20/09 02:54 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.37	0.80	1.8
Freon 11	0.16	0.71	0.90	4.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	2.4	1.9	5.8
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	0.23	0.61	0.87
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	96	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0300

Lab ID#: 0907203AR1-01B

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

File Name:	**s072014sim**	**Date of Collection: 7/8/09 3:53:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 7/20/09 02:54 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	0.072	0.20	0.46
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	101	70-130
Toluene-d8	81	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0301

Lab ID#: 0907203AR1-02A

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

File Name:	**s072016**	**Date of Collection: 7/8/09 4:00:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/20/09 04:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.48	0.83	2.4
Freon 11	0.17	0.98	0.94	5.5
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	2.0	2.0	4.9
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	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	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	6.2	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	101	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0301

Lab ID#: 0907203AR1-02B

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

File Name:	**s072016sim**	**Date of Collection: 7/8/09 4:00:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/20/09 04:25 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	0.074	0.21	0.47
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	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0302

Lab ID#: 0907203AR1-03A

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

File Name:	**s072028**	**Date of Collection: 7/8/09 4:25:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 7/21/09 12:06 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.47	0.86	2.3
Freon 11	0.18	0.94	0.98	5.3
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Acetone	0.88	8.3	2.1	20
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.95	Not Detected
Benzene	0.18	0.22	0.56	0.69
Toluene	0.18	0.49	0.66	1.8
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Chlorobenzene	0.18	Not Detected	0.80	Not Detected
Ethyl Benzene	0.18	Not Detected	0.76	Not Detected
m,p-Xylene	0.18	Not Detected	0.76	Not Detected
o-Xylene	0.18	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.88	Not Detected	6.5	Not Detected

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	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0302

Lab ID#: 0907203AR1-03B

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

File Name:	**s072028sim**	**Date of Collection: 7/8/09 4:25:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 7/21/09 12:06 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
Carbon Tetrachloride	0.035	0.071	0.22	0.44
Trichloroethene	0.035	Not Detected	0.19	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0303

Lab ID#: 0907203AR1-04A

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

File Name:	**s072018**	**Date of Collection: 7/8/09 3:57:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 7/20/09 05:35 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.48	0.78	2.4
Freon 11	0.16	1.2	0.89	7.0
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Acetone	0.79	4.8	1.9	11
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	0.22	0.50	0.71
Toluene	0.16	0.35	0.60	1.3
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	99	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0303

Lab ID#: 0907203AR1-04B

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

File Name:	**s072018sim**	**Date of Collection: 7/8/09 3:57:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 7/20/09 05:35 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	0.075	0.20	0.47
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	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0304

Lab ID#: 0907203AR1-05A

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

File Name:	**s072019**	**Date of Collection: 7/8/09 3:54:00 PM**	
Dil. Factor:	**1.79**	**Date of Analysis: 7/20/09 06:11 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.40	0.88	2.0
Freon 11	0.18	0.29	1.0	1.6
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Acetone	0.90	6.9	2.1	16
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Benzene	0.18	0.26	0.57	0.82
Toluene	0.18	0.36	0.67	1.4
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Chlorobenzene	0.18	Not Detected	0.82	Not Detected
Ethyl Benzene	0.18	Not Detected	0.78	Not Detected
m,p-Xylene	0.18	Not Detected	0.78	Not Detected
o-Xylene	0.18	Not Detected	0.78	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	0.90	Not Detected	6.6	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	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0304

Lab ID#: 0907203AR1-05B

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

File Name:	**s072019sim**	**Date of Collection: 7/8/09 3:54:00 PM**	
Dil. Factor:	**1.79**	**Date of Analysis: 7/20/09 06:11 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
Carbon Tetrachloride	0.036	0.057	0.22	0.36
Trichloroethene	0.036	Not Detected	0.19	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0600

Lab ID#: 0907203AR1-06A

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

File Name:	**s072020**	**Date of Collection: 7/8/09 3:34:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 7/20/09 06:53 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.95	0.86	4.7
Freon 11	0.18	0.36	0.98	2.0
Freon 113	0.18	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Acetone	0.88	1.8	2.1	4.4
Methylene Chloride	0.35	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.18	0.18	0.69	0.72
1,1,1-Trichloroethane	0.18	Not Detected	0.95	Not Detected
Benzene	0.18	Not Detected	0.56	Not Detected
Toluene	0.18	0.38	0.66	1.4
Tetrachloroethene	0.18	1.8	1.2	12
Chlorobenzene	0.18	Not Detected	0.80	Not Detected
Ethyl Benzene	0.18	Not Detected	0.76	Not Detected
m,p-Xylene	0.18	Not Detected	0.76	Not Detected
o-Xylene	0.18	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,2-Dichlorobenzene	0.18	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.88	Not Detected	6.5	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0600

Lab ID#: 0907203AR1-06B

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

File Name:	**s072020sim**	**Date of Collection: 7/8/09 3:34:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 7/20/09 06:53 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	0.022	0.045	0.056
Carbon Tetrachloride	0.035	0.080	0.22	0.50
Trichloroethene	0.035	0.28	0.19	1.5

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	85	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 23888

Lab ID#: 0907203AR1-07A

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

File Name:	**s072110**	**Date of Collection: 7/8/09 3:34:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/21/09 01:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	1.2	0.83	5.8
Freon 11	0.17	0.44	0.94	2.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	2.3	2.0	5.4
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
cis-1,2-Dichloroethene	0.17	0.18	0.67	0.72
1,1,1-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Benzene	0.17	Not Detected	0.54	Not Detected
Toluene	0.17	0.36	0.63	1.3
Tetrachloroethene	0.17	1.7	1.1	12
Chlorobenzene	0.17	Not Detected	0.77	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	6.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	114	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 23888

Lab ID#: 0907203AR1-07B

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

File Name:	**s072110sim**	**Date of Collection: 7/8/09 3:34:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/21/09 01:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	0.028	0.043	0.070
Carbon Tetrachloride	0.034	0.077	0.21	0.48
Trichloroethene	0.034	0.31	0.18	1.7

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	112	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0601

Lab ID#: 0907203AR1-08A

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

File Name:	**s072030**	**Date of Collection: 7/8/09 3:41:00 PM**	
Dil. Factor:	**1.83**	**Date of Analysis: 7/21/09 06:13 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.49	0.90	2.4
Freon 11	0.18	0.28	1.0	1.6
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Acetone	0.92	3.3	2.2	7.9
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
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	0.23	0.58	0.74
Toluene	0.18	0.33	0.69	1.2
Tetrachloroethene	0.18	0.73	1.2	5.0
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
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

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	106	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0601

Lab ID#: 0907203AR1-08B

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

File Name:	**s072030sim**	**Date of Collection: 7/8/09 3:41:00 PM**	
Dil. Factor:	**1.83**	**Date of Analysis: 7/21/09 06:13 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
Carbon Tetrachloride	0.037	0.076	0.23	0.48
Trichloroethene	0.037	0.31	0.20	1.6

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0200

Lab ID#: 0907203AR1-09A

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

File Name:	**s072111**	**Date of Collection: 7/8/09 8:31:00 PM**	
Dil. Factor:	**1.87**	**Date of Analysis: 7/21/09 02:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.34	0.92	1.7
Freon 11	0.19	0.20	1.0	1.1
Freon 113	0.19	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Acetone	0.94	2.1	2.2	5.1
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Benzene	0.19	Not Detected	0.60	Not Detected
Toluene	0.19	Not Detected	0.70	Not Detected
Tetrachloroethene	0.19	0.28	1.3	1.9
Chlorobenzene	0.19	Not Detected	0.86	Not Detected
Ethyl Benzene	0.19	Not Detected	0.81	Not Detected
m,p-Xylene	0.19	0.60	0.81	2.6
o-Xylene	0.19	0.20	0.81	0.87
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	0.94	Not Detected	6.9	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	79	70-130
4-Bromofluorobenzene	115	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0200

Lab ID#: 0907203AR1-09B

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

File Name:	**s072111sim**	**Date of Collection: 7/8/09 8:31:00 PM**	
Dil. Factor:	**1.87**	**Date of Analysis: 7/21/09 02:05 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	0.037	0.085	0.24	0.53
Trichloroethene	0.037	0.047	0.20	0.25

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	85	70-130
4-Bromofluorobenzene	114	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0201

Lab ID#: 0907203AR1-10A

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

File Name:	**s072112**	**Date of Collection: 7/8/09 4:51:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/21/09 03:06 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.39	0.83	1.9
Freon 11	0.17	0.28	0.94	1.6
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Acetone	0.84	16	2.0	37
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	Not Detected	0.63	Not Detected
Tetrachloroethene	0.17	0.18	1.1	1.2
Chlorobenzene	0.17	Not Detected	0.77	Not Detected
Ethyl Benzene	0.17	Not Detected	0.73	Not Detected
m,p-Xylene	0.17	0.43	0.73	1.8
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	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0201

Lab ID#: 0907203AR1-10B

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

File Name:	**s072112sim**	**Date of Collection: 7/8/09 4:51:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 7/21/09 03:06 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	0.085	0.21	0.54
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	115	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	108	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203AR1-11A

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

File Name:	**s072009**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 11:24 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	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203AR1-11B

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

File Name:	**s072009sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 11:24 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	100	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203AR1-11C

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

File Name:	**s072108**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 11:56 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	103	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	110	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203AR1-11D

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

File Name:	**s072108sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 11:56 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	110	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	110	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203AR1-12A

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

File Name:	**s072005**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 08:57 AM**	

Compound	%Recovery
Freon 12	106
Freon 11	105
Freon 113	105
1,1-Dichloroethene	104
Acetone	122
Methylene Chloride	99
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	99
Benzene	92
Toluene	94
Tetrachloroethene	104
Chlorobenzene	99
Ethyl Benzene	99
m,p-Xylene	99
o-Xylene	99
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	96
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203AR1-12B

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

File Name:	**s072005sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 08:57 AM**	

Compound	**%Recovery**
Vinyl Chloride	106
Carbon Tetrachloride	116
Trichloroethene	103

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203AR1-12C

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

File Name:	**s072105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:48 AM**	

Compound	%Recovery
Freon 12	116
Freon 11	114
Freon 113	108
1,1-Dichloroethene	100
Acetone	95
Methylene Chloride	98
cis-1,2-Dichloroethene	101
1,1,1-Trichloroethane	105
Benzene	88
Toluene	91
Tetrachloroethene	95
Chlorobenzene	98
Ethyl Benzene	97
m,p-Xylene	100
o-Xylene	102
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	97
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	72

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203AR1-12D

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

File Name:	**s072105sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:48 AM**	

Compound	%Recovery
Vinyl Chloride	105
Carbon Tetrachloride	122
Trichloroethene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203AR1-13A

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

File Name:	**s072006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 09:29 AM**	

Compound	**%Recovery**
Freon 12	102
Freon 11	101
Freon 113	112
1,1-Dichloroethene	114
Acetone	101
Methylene Chloride	108
cis-1,2-Dichloroethene	105
1,1,1-Trichloroethane	100
Benzene	88
Toluene	92
Tetrachloroethene	101
Chlorobenzene	96
Ethyl Benzene	94
m,p-Xylene	95
o-Xylene	94
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	86
1,2-Dichlorobenzene	85
1,2,4-Trichlorobenzene	68 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203AR1-13B

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

File Name:	**s072006sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/20/09 09:29 AM**	

Compound	**%Recovery**
Vinyl Chloride	103
Carbon Tetrachloride	110
Trichloroethene	101

Container Type: NA - Not Applicable

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203AR1-13C

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

File Name:	**s072106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 10:21 AM**	

Compound	%Recovery
Freon 12	114
Freon 11	114
Freon 113	122
1,1-Dichloroethene	115
Acetone	97
Methylene Chloride	106
cis-1,2-Dichloroethene	104
1,1,1-Trichloroethane	109
Benzene	90
Toluene	95
Tetrachloroethene	94
Chlorobenzene	96
Ethyl Benzene	96
m,p-Xylene	98
o-Xylene	101
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	92
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	109	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203AR1-13D

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

File Name:	**s072106sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 10:21 AM**	

Compound	%Recovery
Vinyl Chloride	104
Carbon Tetrachloride	118
Trichloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	106	70-130

Air Toxics LTD.

0907203

SHA

[illegible address]

Sample Transportation Notice

[illegible fine print]

Project Info:	Turn Around Time	Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Project Manager: [illegible]	Normal X	[signature] 7/?/09	Monica Grozen #AL 7/10/09 835
Email: [illegible]	Rush	Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
PO#:	Comments: [illegible]		
Project #: [illegible]		Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Project Name: [illegible]			
Analyses: [illegible]			

Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis
LAK ~~[illegible]A0300~~	14010	07/08/2009	1553	28	5	1
LAK ~~[illegible]A0301~~	244/9	07/08/2009	1600	>30	6.01	1
LAK [illegible]A0302	35277	07/08/2009	1625	>30	7	1
LAK [illegible]A0303	34218	07/08/2009	1557	>30	6.5	1
LAK [illegible]A0304	33312	07/08/2009	1554	>30	5	1
LAK [illegible]A0500	14000	07/08/2009	1534	>30	5.55	1
LAK [illegible] 23566	23588	07/08/2009	1534	>30	5.82	1
LAK [illegible]A0501	34748	07/08/2009	1541	>30	5	1
LAK ~~[illegible]A0200~~	11385	07/08/2009	2031	30	9.5	1
LAK ~~[illegible]A0201~~	35251	07/08/2009	1751	29	6	1
LAK ~~[illegible]A0202~~	3734	07/08/2009	1700	>30	5.5	1
LAK [illegible]A0203	20935	07/08/2009	1792	29	7	1
LAK [illegible]A0204	12335	07/08/2009	1648	30	7	1
LAK [illegible]A0205	33573	07/08/2009	1656	>30	5	1
LAK [illegible]A0206	1578	07/08/2009	1615	>30	8.5	1
FB20090708	34485	07/08/2009	1737	28	3.5	1
7/29/09						

MC 7/10/09

FedEx

Page 1 of 1

Box 1 of 5

Revised COC Received 7/24/09

Air Toxics Ltd.

Receipt vfie 7/11/09

0907203

SHA
IMPROVING EARTH

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

Sample Transportation Notice
Relinquishing signature on this document indicates that sample labeling shipped in compliance with all applicable local, State, Federal, and International laws, regulations, and well owners 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

[illegible] Beverly Street
Concord, NH 03301
(603) 229-1900 FAX (603) 226-1919

Project Info:	Turn Around Time	Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Project Manager: Ryan Green	Normal X	7/9/09 1500	7/10/09 835
Email: rgreen@sacramento.com	Rush	Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
P.O#	Comments: Please provide an EDP for this data. ** ONLY CARBON TET, TCE AND VINYL CHLORIDE **	Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Project # 2959.00.010			
Project Name: EFK			
Analyses: 1 = TO-15 4/L			

Lab ID	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis	Receipt	Final
01AB	B386IA0300	14010	07/08/2009	1553	28	5	1	30	5
02AB	B386IA0301	24479	07/08/2009	1600	>30	6.01	1	30	6
03AB	B386IA0302	35972	07/08/2009	1625	>30	7	1	30	7
04AB	B386IA0303	34218	07/08/2009	1557	>30	6.5	1	30	6.5
05AB	B386AA0304	33912	07/08/2009	1554	>30	5	1	30	5
06AB	B316IA0600	14000	07/08/2009	1534	>30	6.55	1	30	6.5
07AB	B316IA0600D	23888	07/08/2009	1534	>30	5.82	1	30	5.5
08AB	B316AA0601	34746	07/08/2009	1541	>30	8	1	30	8
09AB	B309IA0200	11285	07/08/2009	2031	30	9.5	1	30	9.5
10AB	B309IA0201	35251	07/08/2009	1651	29	6	1	30	6
11A	B309IA0202	3734	07/08/2009	1700	>30	5.5	1	30	5
12A	B309IA0203	20935	07/08/2009	1707	29	7	1		
13A	B309IA0204	12335	07/08/2009	1648	30	7	1		
14A	B309IA0205	33678	07/08/2009	1636	>30	5	1		
15A	B309AA0206	1578	07/08/2009	1616	>30	8.5	1		
16A	FB20090708	34485	07/08/2009	1737	28	3.5	1		

CUSTODY SEAL INTACT? Y N (NONE) TEMP MA

MC 7/10/09

Box 1 of 5

Air Toxics LTD.
Laboratory Services Since 1989

7/29/2009

Mr. Brad Green
Sanborn, Head & Associates
20 Foundry Street

Concord NH 03301

Project Name: EFK
Project #: 2999.00.010
Workorder #: 0907203BR1

Dear Mr. Brad Green

The following report includes the data for the above referenced project for sample(s) received on 7/10/2009 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: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Bryanna Langley
Project Manager

WORK ORDER #: 0907203BR1

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
FAX: 603-229-1919

DATE RECEIVED: 07/10/2009
DATE COMPLETED: 07/22/2009
DATE REISSUED: 07/29/2009

P.O. #
PROJECT # 2999.00.010 EFK
CONTACT: Bryanna Langley

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
11A	IA0202	Modified TO-15	5.0 "Hg	5 psi
11B	IA0202	Modified TO-15	5.0 "Hg	5 psi
12A	IA0203	Modified TO-15	6.5 "Hg	5 psi
12B	IA0203	Modified TO-15	6.5 "Hg	5 psi
13A	IA0204	Modified TO-15	5.5 "Hg	5 psi
13AA	IA0204 Lab Duplicate	Modified TO-15	5.5 "Hg	5 psi
13B	IA0204	Modified TO-15	5.5 "Hg	5 psi
13BB	IA0204 Lab Duplicate	Modified TO-15	5.5 "Hg	5 psi
14A	IA0205	Modified TO-15	4.0 "Hg	5 psi
14AA	IA0205 Lab Duplicate	Modified TO-15	4.0 "Hg	5 psi
14B	IA0205	Modified TO-15	4.0 "Hg	5 psi
14BB	IA0205 Lab Duplicate	Modified TO-15	4.0 "Hg	5 psi
15A	AA0206	Modified TO-15	8.5 "Hg	5 psi
15B	AA0206	Modified TO-15	8.5 "Hg	5 psi
16A	FB20090708	Modified TO-15	15.0psi	10 psi
16B	FB20090708	Modified TO-15	15.0psi	10 psi
17A	Lab Blank	Modified TO-15	NA	NA

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0907203BR1

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 #**	2999.00.010 EFK
DATE RECEIVED:	07/10/2009	**CONTACT:**	Bryanna Langley
DATE COMPLETED:	07/22/2009		
DATE REISSUED:	07/29/2009		

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

CERTIFIED BY: Linda D. Fruman DATE: 07/29/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
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# 0907203BR1

Six 6 Liter Summa Canister (SIM Certified) samples were received on July 10, 2009. 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 WORK ORDER REISSUED ON 07/29/09 FOR THE FOLLOWING REASON:

AS AN AMENDED COC WAS RECEIVED ON 07/24/09, THE RECEIVING NARRATIVE WAS AMENDED TO SAY THE FOLLOWING:

There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) for sample FB20090708. Therefore the vacuum measured in the laboratory was used to calculate results.

Sample FB20090708 arrived at ambient pressure yet flow controllers were used for sample collection.

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.

Dilution was performed on sample IA0205 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0202

Lab ID#: 0907203BR1-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.80	2.2
Freon 11	0.16	0.27	0.90	1.5
Acetone	0.80	22	1.9	53
Toluene	0.16	0.52	0.61	2.0
Tetrachloroethene	0.16	0.35	1.1	2.4
m,p-Xylene	0.16	0.52	0.70	2.3
o-Xylene	0.16	0.28	0.70	1.2

Client Sample ID: IA0202

Lab ID#: 0907203BR1-11B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.032	0.090	0.20	0.56
Trichloroethene	0.032	0.069	0.17	0.37

Client Sample ID: IA0203

Lab ID#: 0907203BR1-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.84	2.1
Freon 11	0.17	0.25	0.96	1.4
1,1-Dichloroethene	0.17	0.18	0.68	0.71
Acetone	0.86	2.5	2.0	5.9
1,1,1-Trichloroethane	0.17	0.94	0.93	5.2
Tetrachloroethene	0.17	0.50	1.2	3.4
Ethyl Benzene	0.17	0.50	0.74	2.2
m,p-Xylene	0.17	0.37	0.74	1.6

Client Sample ID: IA0203

Lab ID#: 0907203BR1-12B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.034	0.097	0.22	0.61
Trichloroethene	0.034	1.2	0.18	6.7

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0204

Lab ID#: 0907203BR1-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.47	0.81	2.3
Freon 11	0.16	0.31	0.92	1.8
Acetone	0.82	1.8	1.9	4.2
Tetrachloroethene	0.16	0.18	1.1	1.2

Client Sample ID: IA0204 Lab Duplicate

Lab ID#: 0907203BR1-13AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.81	2.0
Freon 11	0.16	0.33	0.92	1.8
Acetone	0.82	2.8	1.9	6.6
Tetrachloroethene	0.16	0.18	1.1	1.2

Client Sample ID: IA0204

Lab ID#: 0907203BR1-13B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.033	0.083	0.21	0.52

Client Sample ID: IA0204 Lab Duplicate

Lab ID#: 0907203BR1-13BB

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.033	0.081	0.21	0.51

Client Sample ID: IA0205

Lab ID#: 0907203BR1-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.31	0.51	1.5	2.5
Acetone	1.6	9.1	3.7	22
Toluene	0.31	0.49	1.2	1.8
m,p-Xylene	0.31	0.56	1.3	2.4

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA0205 Lab Duplicate

Lab ID#: 0907203BR1-14AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.31	0.49	1.5	2.4
Acetone	1.6	9.1	3.7	22
Toluene	0.31	0.47	1.2	1.8
m,p-Xylene	0.31	0.50	1.3	2.2

Client Sample ID: IA0205

Lab ID#: 0907203BR1-14B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.062	0.075	0.39	0.47

Client Sample ID: IA0205 Lab Duplicate

Lab ID#: 0907203BR1-14BB

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.062	0.085	0.39	0.53

Client Sample ID: AA0206

Lab ID#: 0907203BR1-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.42	0.92	2.1
Freon 11	0.19	0.23	1.0	1.3
Acetone	0.94	160 E	2.2	390 E
Benzene	0.19	0.21	0.60	0.66
Toluene	0.19	0.56	0.70	2.1
m,p-Xylene	0.19	0.44	0.81	1.9
o-Xylene	0.19	0.26	0.81	1.1

Client Sample ID: AA0206

Lab ID#: 0907203BR1-15B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Tetrachloride	0.037	0.082	0.24	0.52

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

Client Sample ID: FB20090708

Lab ID#: 0907203BR1-16A

No Detections Were Found.

Client Sample ID: FB20090708

Lab ID#: 0907203BR1-16B

No Detections Were Found.

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0202

Lab ID#: 0907203BR1-11A

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

File Name:	**s072113**	**Date of Collection: 7/8/09 5:00:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 7/21/09 03:48 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.44	0.80	2.2
Freon 11	0.16	0.27	0.90	1.5
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	22	1.9	53
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	0.52	0.61	2.0
Tetrachloroethene	0.16	0.35	1.1	2.4
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	0.52	0.70	2.3
o-Xylene	0.16	0.28	0.70	1.2
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	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0202

Lab ID#: 0907203BR1-11B

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

File Name:	**s072113sim**	**Date of Collection: 7/8/09 5:00:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 7/21/09 03:48 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	0.090	0.20	0.56
Trichloroethene	0.032	0.069	0.17	0.37

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0203

Lab ID#: 0907203BR1-12A

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

File Name:	**s072118**	**Date of Collection: 7/8/09 5:02:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 7/21/09 07:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.42	0.84	2.1
Freon 11	0.17	0.25	0.96	1.4
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	0.18	0.68	0.71
Acetone	0.86	2.5	2.0	5.9
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	0.94	0.93	5.2
Benzene	0.17	Not Detected	0.55	Not Detected
Toluene	0.17	Not Detected	0.64	Not Detected
Tetrachloroethene	0.17	0.50	1.2	3.4
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	0.50	0.74	2.2
m,p-Xylene	0.17	0.37	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	109	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0203

Lab ID#: 0907203BR1-12B

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

File Name:	**s072118sim**	**Date of Collection: 7/8/09 5:02:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 7/21/09 07:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
Carbon Tetrachloride	0.034	0.097	0.22	0.61
Trichloroethene	0.034	1.2	0.18	6.7

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	107	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0204

Lab ID#: 0907203BR1-13A

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

File Name:	**s072119**	**Date of Collection: 7/8/09 4:48:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 7/21/09 08:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.47	0.81	2.3
Freon 11	0.16	0.31	0.92	1.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	1.8	1.9	4.2
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	0.89	Not Detected
Benzene	0.16	Not Detected	0.52	Not Detected
Toluene	0.16	Not Detected	0.62	Not Detected
Tetrachloroethene	0.16	0.18	1.1	1.2
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	6.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	113	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0204 Lab Duplicate

Lab ID#: 0907203BR1-13AA

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

File Name:	**s072115**	**Date of Collection: 7/8/09 4:48:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 7/21/09 05:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.81	2.0
Freon 11	0.16	0.33	0.92	1.8
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	2.8	1.9	6.6
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	0.18	1.1	1.2
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	6.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	112	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0204

Lab ID#: 0907203BR1-13B

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

File Name:	**s072119sim**	**Date of Collection: 7/8/09 4:48:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 7/21/09 08:23 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	0.083	0.21	0.52
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	119	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	115	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0204 Lab Duplicate

Lab ID#: 0907203BR1-13BB

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

File Name:	**s072115sim**	**Date of Collection: 7/8/09 4:48:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 7/21/09 05:14 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	0.081	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	115	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	110	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0205

Lab ID#: 0907203BR1-14A

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

File Name:	**s072116**	**Date of Collection: 7/8/09 4:36:00 PM**	
Dil. Factor:	**3.10**	**Date of Analysis: 7/21/09 05:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.31	0.51	1.5	2.5
Freon 11	0.31	Not Detected	1.7	Not Detected
Freon 113	0.31	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.31	Not Detected	1.2	Not Detected
Acetone	1.6	9.1	3.7	22
Methylene Chloride	0.62	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.31	Not Detected	1.2	Not Detected
1,1,1-Trichloroethane	0.31	Not Detected	1.7	Not Detected
Benzene	0.31	Not Detected	0.99	Not Detected
Toluene	0.31	0.49	1.2	1.8
Tetrachloroethene	0.31	Not Detected	2.1	Not Detected
Chlorobenzene	0.31	Not Detected	1.4	Not Detected
Ethyl Benzene	0.31	Not Detected	1.3	Not Detected
m,p-Xylene	0.31	0.56	1.3	2.4
o-Xylene	0.31	Not Detected	1.3	Not Detected
1,3-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,4-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,2-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,2,4-Trichlorobenzene	1.6	Not Detected	12	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	112	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0205 Lab Duplicate

Lab ID#: 0907203BR1-14AA

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

File Name:	**s072124**	**Date of Collection: 7/8/09 4:36:00 PM**	
Dil. Factor:	**3.10**	**Date of Analysis: 7/22/09 12:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.31	0.49	1.5	2.4
Freon 11	0.31	Not Detected	1.7	Not Detected
Freon 113	0.31	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.31	Not Detected	1.2	Not Detected
Acetone	1.6	9.1	3.7	22
Methylene Chloride	0.62	Not Detected	2.2	Not Detected
cis-1,2-Dichloroethene	0.31	Not Detected	1.2	Not Detected
1,1,1-Trichloroethane	0.31	Not Detected	1.7	Not Detected
Benzene	0.31	Not Detected	0.99	Not Detected
Toluene	0.31	0.47	1.2	1.8
Tetrachloroethene	0.31	Not Detected	2.1	Not Detected
Chlorobenzene	0.31	Not Detected	1.4	Not Detected
Ethyl Benzene	0.31	Not Detected	1.3	Not Detected
m,p-Xylene	0.31	0.50	1.3	2.2
o-Xylene	0.31	Not Detected	1.3	Not Detected
1,3-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,4-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,2-Dichlorobenzene	0.31	Not Detected	1.9	Not Detected
1,2,4-Trichlorobenzene	1.6	Not Detected	12	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	109	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0205

Lab ID#: 0907203BR1-14B

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

File Name:	**s072116sim**	**Date of Collection: 7/8/09 4:36:00 PM**	
Dil. Factor:	**3.10**	**Date of Analysis: 7/21/09 05:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.031	Not Detected	0.079	Not Detected
Carbon Tetrachloride	0.062	0.075	0.39	0.47
Trichloroethene	0.062	Not Detected	0.33	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	111	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA0205 Lab Duplicate

Lab ID#: 0907203BR1-14BB

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

File Name:	**s072124sim**	**Date of Collection: 7/8/09 4:36:00 PM**	
Dil. Factor:	**3.10**	**Date of Analysis: 7/22/09 12:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.031	Not Detected	0.079	Not Detected
Carbon Tetrachloride	0.062	0.085	0.39	0.53
Trichloroethene	0.062	Not Detected	0.33	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	108	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0206

Lab ID#: 0907203BR1-15A

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

File Name:	**s072123**	**Date of Collection: 7/8/09 4:16:00 PM**	
Dil. Factor:	**1.87**	**Date of Analysis: 7/21/09 11:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.42	0.92	2.1
Freon 11	0.19	0.23	1.0	1.3
Freon 113	0.19	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Acetone	0.94	160 E	2.2	390 E
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Benzene	0.19	0.21	0.60	0.66
Toluene	0.19	0.56	0.70	2.1
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
Chlorobenzene	0.19	Not Detected	0.86	Not Detected
Ethyl Benzene	0.19	Not Detected	0.81	Not Detected
m,p-Xylene	0.19	0.44	0.81	1.9
o-Xylene	0.19	0.26	0.81	1.1
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	0.94	Not Detected	6.9	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	107	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: AA0206

Lab ID#: 0907203BR1-15B

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

File Name:	**s072123sim**	**Date of Collection: 7/8/09 4:16:00 PM**	
Dil. Factor:	**1.87**	**Date of Analysis: 7/21/09 11:39 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	0.037	0.082	0.24	0.52
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	115	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: FB20090708

Lab ID#: 0907203BR1-16A

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

File Name:	**s072121**	**Date of Collection: 7/8/09 5:37:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:51 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: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	111	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: FB20090708

Lab ID#: 0907203BR1-16B

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

File Name:	**s072121sim**	**Date of Collection: 7/8/09 5:37:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:51 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: 6 Liter Summa Canister (SIM Certified)

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203BR1-17A

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

File Name:	**s072108**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 11:56 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	103	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	110	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0907203BR1-17B

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

File Name:	**s072108sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 11:56 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	110	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	110	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203BR1-18A

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

File Name:	**s072105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:48 AM**	

Compound	**%Recovery**
Freon 12	116
Freon 11	114
Freon 113	108
1,1-Dichloroethene	100
Acetone	95
Methylene Chloride	98
cis-1,2-Dichloroethene	101
1,1,1-Trichloroethane	105
Benzene	88
Toluene	91
Tetrachloroethene	95
Chlorobenzene	98
Ethyl Benzene	97
m,p-Xylene	100
o-Xylene	102
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	97
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	72

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907203BR1-18B

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

File Name:	**s072105sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 09:48 AM**	

Compound	%Recovery
Vinyl Chloride	105
Carbon Tetrachloride	122
Trichloroethene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203BR1-19A

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

File Name:	**s072106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 10:21 AM**	

Compound	**%Recovery**
Freon 12	114
Freon 11	114
Freon 113	122
1,1-Dichloroethene	115
Acetone	97
Methylene Chloride	106
cis-1,2-Dichloroethene	104
1,1,1-Trichloroethane	109
Benzene	90
Toluene	95
Tetrachloroethene	94
Chlorobenzene	96
Ethyl Benzene	96
m,p-Xylene	98
o-Xylene	101
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	92
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	109	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907203BR1-19B

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

File Name:	**s072106sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/21/09 10:21 AM**	

Compound	%Recovery
Vinyl Chloride	104
Carbon Tetrachloride	118
Trichloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	106	70-130

Air Toxics LTD.

0907203

SHA

Sample Transportation Notice

Project Info:

Turn Around Time: Normal / Rush

Relinquished by: (signature) Date/Time 7/1/09 — Received by: (signature) Date/Time Monica Grayson AT 7/10/09 835

Relinquished by: (signature) Date/Time — Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time — Received by: (signature) Date/Time

Comments:

Lab I.D.	Field Sample I.D.	Can #	Collection Date	Collection Time	Initial	Final	Analysis
[illegible]	LAK ~~B308AA0300~~	14010	07/08/2009	1555	28	5	1
[illegible]	LAK ~~B308AA0301~~	24449	07/08/2009	1630	>30	6.01	1
[illegible]	LAK ~~B308AA0302~~	35972	07/08/2009	1625	>30	7	1
[illegible]	LAK ~~B308AA0303~~	34215	07/08/2009	1557	>30	6.5	1
[illegible]	LAK ~~B308AA0304~~	38312	07/08/2009	1554	>30	9	1
[illegible]	LAK ~~B308AA0500~~	14000	07/08/2009	1534	>30	6.55	1
[illegible]	LAK ~~B308AA0000~~ 2.3640	23888	07/08/2009	1534	>30	5.82	1
[illegible]	LAK B346AA0601	34746	07/08/2009	1541	>30	5	1
[illegible]	LAK ~~B308AA0200~~	11365	07/08/2009	2031	30	9.5	1
[illegible]	LAK ~~B308AA0201~~	35751	07/08/2009	1651	29	5	1
[illegible]	LAK ~~B308AA0202~~	3734	07/08/2009	1700	>30	5.5	1
[illegible]	LAK ~~B308AA0203~~	20995	07/08/2009	1702	29	7	1
[illegible]	LAK ~~B308AA0204~~	12335	07/08/2009	1648	30	7	1
[illegible]	LAK ~~B308AA0205~~	35678	07/08/2009	1626	>30	5	1
[illegible]	LAK ~~B308AA0206~~	1578	07/08/2009	1626	>30	8.5	1
[illegible]	7620090708	34485	07/08/2009	1737	28	5.5	1
	7/24/09						

MG 7/24/09

11AB
12AB
13AB MG
14AB 7/24/09
15AB
16AB

CUSTODY SEAL INTACT? Y N NONE TEMP NA

Page 1 of 1

Box 1 of 5

Revised COC Received 7/24/09

Air Toxics LTD. Receipt VFR 7/11/09 0907203 SHA IMPROVING EARTH

180 BLUE RAVINE ROAD, SUITE B
FOLSON, CA 95630-4719
(916) 985-1000 FAX (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

20 Foundry Street
Concord, NH 03301
(603) 225-1930 FAX (603) 229-1913

Project Info:	Turn Around Time	Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Project Manager: Brad Green	Normal X	[signature] 7/9/09 1500	Monica Gregzen ATL 7/10/09 835
Email: bgreen@sanbornhead.com	Rush		
P.O.#		Relinquished by: (signature) Date/Time	Received By: (signature) Date/Time
Project # 2999.00.010	Comments: Please provide an EDVP for this data.		
Project Name: EFK			
Analyses: 1 = TO-15 SIM	** ONLY CARBON TET, TCE AND VC BY SIM**	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	B386IA0300	14010	07/08/2009	1553	28	5	1		
02A	B386IA0301	24479	07/08/2009	1600	>30	6.01	1		
03A	B386IA0302	35972	07/08/2009	1625	>30	7	1		
04A	B386IA0303	34218	07/08/2009	1557	>30	6.5	1		
05A	B386AA0304	33912	07/08/2009	1554	>30	5	1		
06A	B316IA0600	14000	07/08/2009	1534	>30	6.55	1		
07A	B316IA0600D	23888	07/08/2009	1534	>30	5.82	1		
08A	B316AA0601	34746	07/08/2009	1541	>30	8	1		
09A	B309IA0200	11885	07/08/2009	2031	30	9.5	1		
10A	B309IA0201	35251	07/08/2009	1551	29	6	1		
11AB	B309IA0202	3734	07/08/2009	1700	>30	5.5	1	[illegible]	5psig
12AB	B309IA0203	20935	07/08/2009	1702	29	7	1	[illegible]	
13AB	B309IA0204	12335	07/08/2009	1648	30	7	1	[illegible]	
14AB	B309IA0205	33678	07/08/2009	1636	>30	5	1	[illegible]	
15AB	B309AA0206	1578	07/08/2009	1616	>30	8.5	1	[illegible]	
16AB	FB20090708	34485	07/08/2009	1737	28	3.5	1	[illegible]	10psig

MG 7/10/09

CUSTODY SEAL INTACT? Y N NONE TEMP N/A

Fed Ex

Box 1 of 5

ATTACHMENT C

NEH DATA VALIDATION REPORTS

SHPC ENGINEERS

In- Depth Data Usability Review
Method TO-15 Hi/Lo Analysis

Client/Company:	Sanborn, Head, & Associates, Inc., Concord, New Hampshire (SHA)
Site/Project Name:	IBM – East Fishkill Facility, Hopewell Junction, New York
Laboratory:	Air Toxics Ltd, Folsom, California (ATL)
Work Orders:	0907203AR1 & 0907203BR1
Date(s) of Collection:	July 8, 2009
Number and type Samples & analyses:	12 Indoor Air, 3 Ambient Air, and 1 field blank sample for twenty-two project-specific VOCs by Method TO-15 Hi/Lo
Senior Data Reviewers:	Dr. Nancy C. Rothman, New Environmental Horizons, Inc. Susan D. Chapnick, New Environmental Horizons, Inc.
Date Completed:	August 7, 2009

An In-Depth Data Usability Review (DUR) was performed on the Work Orders identified with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment IBM East Fishkill Facility, Hopewell Junction, New York*, prepared by Sanborn, Head & Associates, June 2009; NYSDEC Analytical Services Protocol, June 2005 with NYSDEC Modifications to the EPA Region 9 TO-15 QA/QC Criteria, February 2008; USEPA Region II SOP HW-31, *Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canisters by Method TO-15*, Rev. 4, October 2006; Method TO-15, *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*, Publication EPA/625/R-96/010b, January 1999; and *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*; Publication USEPA540/R-07/003, July 2007; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to update the project database with appropriate data quality qualifiers.

34 Pheasant Run Drive, Skillman, NJ 08558 ◊ 2 Farmer's Circle, Arlington, MA 02474
Phone: (908) 874-5686 ◊ (781) 643-4294
Email:nrothman_NEH@comcast.net ◊ s.chapnick@comcast.net
www.neh-inc.com

I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification of MS/MSD/MD, FD, EB, TB, if applicable, and the analytical parameters reviewed in this In-Depth data usability review are listed in Table 1. Any deviations noted for sample collection or receipt (*e.g.*, temperature or preservation issues) are included in Section III, below.

Table 1. Sample Descriptions and Analytical Parameters

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
IA0300	0907203AR1-01	7/8/09	Indoor Air	VOCs	Field Sample
IA0301	0907203AR1-02	7/8/09	Indoor Air	VOCs	Field Sample
IA0302	0907203AR1-03	7/8/09	Indoor Air	VOCs	Field Sample
IA0303	0907203AR1-04	7/8/09	Indoor Air	VOCs	Field Sample
AA0304	0907203AR1-05	7/8/09	Ambient Air	VOCs	Field Sample
IA0600	0907203AR1-06	7/8/09	Indoor Air	VOCs	Field Sample
23888	0907203AR1-07	7/8/09	Indoor Air	VOCs	Field Duplicate of IA0600
AA0601	0907203AR1-08	7/8/09	Ambient Air	VOCs	Field Sample
IA0200	0907203AR1-09	7/8/09	Indoor Air	VOCs	Field Sample
IA0201	0907203AR1-10	7/8/09	Indoor Air	VOCs	Field Sample
IA0202	0907203BR1-11	7/8/09	Indoor Air	VOCs	Field Sample
IA0203	0907203BR1-12	7/8/09	Indoor Air	VOCs	Field Sample
IA0204	0907203BR1-13	7/8/09	Indoor Air	VOCs	Field Sample
IA0205	0907203BR1-14	7/8/09	Indoor Air	VOCs	Field Sample
AA0206	0907203BR1-15	7/8/09	Ambient Air	VOCs	Field Sample
FB20090708	0907203BR1-16	7/8/09	Air	VOCs	Field Blank

Analytical method references:

VOC: TO-15 Hi/Lo – Method TO-15 with simultaneous Full Scan and Selected Ion Monitoring (SIM) analysis for twenty-two project-specific VOCs

II. Data Deficiencies, Analytical Protocol Deviations, and Quality Control Problems

The following QC elements, as applicable to the analytical methods, were reviewed during this validation:

- Data package completeness and reporting protocols
- Sample receipt, holding times, and canister condition
- Calibration criteria (instrument tuning, initial and continuing calibration verifications)
- Method and field blank results
- Laboratory Control Sample (LCS) recoveries
- Surrogate Recoveries
- Internal Standard (IS) Recoveries
- Sample/Laboratory Duplicate (LD) or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including reporting limits and units)
- Other method-specific QC if applicable and reported
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

During this review of VOCs, several results were estimated (J and UJ) due to QC issues. Table 2 summarizes the actions taken during this review. NEH generated a validated data spreadsheet based on the electronic project database file received from ATL for these Work Orders. There were no rejected results; therefore, all results were considered acceptable compared to QAPP and method criteria, with the understanding of the potential uncertainty (bias) in the qualified results.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
IA0600 & 23888	Freon 12	J	I	FD imprecision
FB20090708	All VOCs except: 1,2,4-Trichlorobenzene	UJ	I	Field final and Receipt vacuums disagree
FB20090708	1,2,4-Trichlorobenzene	UJ	I	Field final and Receipt vacuums disagree + ICAL %RSD outside criteria + Low LCS recovery
All 15 Air Samples	1,2,4-Trichlorobenzene	UJ	I	ICAL %RSD outside criteria + Low LCS recovery
AA0206	Acetone	J	I	Result uncertain above the calibration range

Qualifiers: U = Analyte is non-detect at the "DV Result" value; UJ = Non-detect is estimated; J = Result is estimated; R = Result is rejected and is unusable for project decisions.

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
LCS = Laboratory Control Sample
FD = Field Duplicate

The following sections document the QC reviewed and the issues that required action or affected the data certainty in terms of the project data quality objectives (DQO) of accuracy, precision, representativeness, comparability, and sensitivity. The attached In-Depth Data Usability Review Checklist includes all QA/QC reviewed during validation (including QC results that were acceptable) and details on the justification for actions taken. The DQO of completeness can be evaluated by the project manager after all data are generated.

Data Package Completeness and Reporting Protocols

- A single Chain-of-Custody (COC) was submitted to ATL; however, the laboratory split the samples into two Work Orders: 0907203A and 0907203B.
- The sample IDs on the canister tags did not match the sample IDs as they appeared on the COC. Additionally, SHA changed the sample ID for one canister after receipt from "IA0600D" to "23888". The original reports for these Work Orders indicated that the sample IDs on the canister tags were used for identification of the samples. On July 24, 2009, a revised COC was sent from SHA to ATL with the sample IDs corrected to match the canister tags. The laboratory re-issued the data packages as 0907203AR1 and 0907203BR1 revising the laboratory narratives by removing any issues related to the COC discrepancies.
- The laboratory reported results for all 22 compounds listed in Table B.1 of the Work Plan from a single analysis with two mass spectrometer (MS) detectors, each operated in a different detection mode: one operated in the full scan electron impact mode and the other operated in the Selected Ion Monitoring (SIM) mode. This analysis, called TO-15 Hi/Lo by ATL, allowed the sensitivity requirements of the project, unless otherwise discussed in this report, to be met for all of the compounds. All compounds except trichloroethene, vinyl chloride, and carbon tetrachloride were reported using the full scan detector while SIM analysis was used for these three compounds. The full scan analysis was reported with an "A" suffix and the SIM analysis with a "B" suffix appended to the laboratory sample ID (e.g., Full Scan of sample IA0300 reported as 0907203AR1-01A and SIM as 0907203AR1-01B).
- The laboratory narratives were incomplete in that they did not indicate two specific quality issues: 1) the initial calibration for 1,2,4-trichlorobenzene was outside criteria and the LCS recoveries were all low for this one compound; and 2) Acetone was reported at a level exceeding the instrument calibration range in sample AA0206 (flagged "E" by the lab).
- The initial and continuing calibrations for VOCs contained many compounds in addition to the targets requested. During this review, only the target compounds were assessed.
- The laboratory performed instrument tuning every 24 hours as specified in Method TO-15, EPA Region II SOP HW-31, and in the ATL Laboratory SOP. However, the NYSDEC Modifications to the EPA Region 9 TO-15 QA/QC Criteria (February 2008) indicate that the QA/QC acceptance criteria specified in "VOLATILE ORGANIC COMPOUNDS (VOCs) in Air (Ambient Air/Soil Vapor/Stack Gas) Samples Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectroscopy (GC/MS)" (USEPA, Region 9, January 2000) should be followed with certain NYSDEC modifications (as specified in 2008). The Region 9 document indicates that GC/MS tuning must be performed every 12 hours.

Based on technical and professional judgment, the 24-hour tune criterion for Method TO-15 is considered acceptable; therefore, no action was taken based this issue.

Sample Receipt, Holding Times, and Canister Condition

- The samples were received intact and the canister vacuums (initial field, field final, and lab receipt) were considered acceptable for all samples except FB20090708. The final field and lab receipt vacuums for FB20090708 were significantly different from each other (i.e., > ± 5″ Hg), which may be an indication of canister leakage or collection problems. All results for FB20090708 were considered estimated (UJ) with indeterminate bias as a result of the uncertainty in the canister vacuum.
- The canister pre-certification forms were present in the data packages as an indication that the canisters were clean prior to shipment to the field. However, there was no certification for 1,1-dichloroethene (the other 21 target compounds were reported as "ND" by SIM analysis). Since the canisters were clean for all other compounds, no action was taken based on this reporting omission.

Calibration Criteria

- The initial calibration associated with analysis of all samples was outside criteria for 1,2,4-trichlorobenzene; therefore all 1,2,4-trichlorobenzene data were estimated (UJ) with indeterminate bias due to exceedance of criteria.

Method and Field Blank Results

- The method and field blanks were all non-detect for the target VOCs; therefore, no action was required.

Laboratory Control Sample (LCS) Recoveries

- 1,2,4-trichlorobenzene was recovered low, but above 10%, in the two LCS' associated with the analysis of all samples. All 1,2,4-trichlorobenzene results were estimated (UJ), with overall indeterminate bias, due to other QC issues affecting these data.

Surrogate Recoveries

- There were no issues with surrogate recovery.

Internal Standard Recoveries

- There were no issues with internal standard recovery.

Matrix Quality Control (Laboratory Duplicate and Field Duplicate Samples)

- There were two laboratory duplicates (LD) performed: on samples IA0204 and IA0205. Laboratory duplicate precision was acceptable for all detected VOCs; therefore, no action was required.
- The field duplicate pair IA0600 and 23888 results were evaluated during this review and all met criteria for all compounds except Freon 12. Freon 12 did not meet field precision criteria (RPD > 20% for values > 5 times the Reporting Limit); therefore, the results for this one compound in IA0600 and 23888 were estimated (J) with indeterminate bias. The sample/LD and FD results are an indication of generally

acceptable precision and representativeness of the samples to the locations collected for VOC analysis in air.

Sample result reporting (including reporting limits and units)

- Sensitivity requirements compared to the Reporting Limits (RLs) defined in Table B.1 of the Workplan were met for all samples except IA0205. This sample was analyzed at a dilution due to the presence of non-target compounds. The data user will need to evaluate the elevated non-detects in sample IA0205 for project objectives.
- Acetone in sample AA0206 was reported at a level above the instrument calibration range and flagged "E" by the laboratory. Re-analysis of this sample at a secondary dilution was not performed. The acetone result in AA0206 was estimated (J) with indeterminate bias due to the uncertainty in quantitation at a level above the instrument calibration range.
- A check on the calculations made by ATL to report calibration statistics, sample-specific RLs, and results indicated that the laboratory reported the data properly. See the Data Usability Review Checklist (attached) for details.

Review of TO-15 Hi/Lo Analyses

Lab: Air Toxics Limited (ATL)

Project ID: 0907203AR1 + 0907203BR1

The Data Validation Criteria used within this checklist are based upon the following:

Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment IBM East Fishkill Facility, Hopewell Junction, New York, prepared by Sanborn, Head & Associates, June 2009;

NYSDEC Analytical Services Protocol, June 2005 with NYSDEC Modifications to the EPA Region 9 TO-15 QA/QC Criteria, February 2008;

USEPA Region II SOP HW-31, *Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canisters by Method TO-15*, Rev. 4, October 2006;

Method TO-15, *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*, Publication EPA/625/R-96/010b, January 1999,; and

USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review; Publication USEPA540/R-07/003, July 2007.

Date Reviewed: 8/6/09

Data Reviewer: N C. R/N

Nancy C. Rothman, Ph.D
New Environmental Horizons, Inc.

II. Data Package Completeness

The data package is reviewed for completeness as follows:

Were all required reporting forms and associated raw data included in the data package (equivalent to a NYSDEC Category B deliverable)? (Yes) / No

Was the data accompanied by a Project Narrative explaining any non-compliance issues with the analyses? (Yes) / No.

Were all sample analyses requested on the Chain-of-Custody performed by the laboratory? (Yes) / No.

Were there any Chain-of-custody deviations noted? (e.g., labeling discrepancy between SUMMA canisters, obvious problems with canisters, etc.) (Yes) / No Was a "Sample Discrepancy Report" Issued? Yes / (No) - see reasons for "R1"

ACTION: If the initial Pressure (vacuum) in the field of a canister is < 25" Hg, or pressure of a canister upon receipt at the lab is > 15" Hg, or the receipt pressure measured at ATL is > ± 5" Hg from the final pressure recorded for the canister in the field (as it appears on the COC), estimate all results (J and UJ).

Comments: 15 Sample Canister + 1 Field Blk Canister were received on 7/10/09. The lab noted that the Chain-of-Custody (COC) IDs didn't match the sample ID's which were on the canister tags and SHA was contacted. On 7/24/09, SHA sent ATL a revised COC (see page TO-15-2A) so that the canister tags + COC were consistent. Lab reissued the reports with "R1" suffix reports the new narrative (eliminated paragraph related to COC / Sample Canister Tags not matching) + revised COC. After receipt, Sample ID IA0600D changed to 23888 - See page TO15-2A

The field initial, field final + lab receipt vacuums were all acceptable => No Action required for Samples - FB field final = 8.5" Hg but Receipt = 15 psi

* Action: All Results for FB20090708 estimated (UJ) with indeterminate bias.

Data for Sample / QC each have an "A" + "B" fraction - "A" are Full Scan (i.e., Hi) Analysis + "B" is SIM (i.e., "Lo") - Single run with 2 detectors - SIM / Scan analysis.

Air Toxics LTD.

0907203

SHA IMPROVING EARTH

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

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 P.O# Project # 2939.00.010 Project Name: EFC Analyses: 1 = TO-15 H/L	Normal X Rush	[signature] 7/8/09 1500	Monica Angzen AAL 7/10/09 835
	Comments: Please provide an ECVP for this data. ** ONLY CARBON TET, TCE AND VC BY SIM**	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	B386IA0300	14010	07/08/2009	1553	28	5	1		
02AB	B386IA0301	24479	07/08/2009	1600	>30	6.01	1		
03AB	B386IA0302	35972	07/08/2009	1525	>30	7	1		
04AB	B386IA0303	34218	07/08/2009	1557	>30	6.5	1		
05AB	B386AA0304	33912	07/08/2009	1554	>30	5	1		
06AB	B316IA0600	14000	07/08/2009	1534	>30	6.55	1		
07AB	B316IAC600D	23888	07/08/2009	1534	>30	5.82	1		
08AB	B316AA0601	34746	07/08/2009	1541	>30	8	1		
09AB	B309IA0200	11865	07/08/2009	2031	30	9.5	1		
10AB	B309IA0201	35251	07/08/2009	1651	29	6	1		
11A	B309IA0202	3734	07/08/2009	1700	>30	5.5	1		
12A	B309IA0203	20935	07/08/2009	1702	29	7	1		
13A	B309IA0204	12335	07/08/2009	1648	30	7	1		
14A	B309IA0205	33673	07/08/2009	1636	>30	5	1		
15A	B309AA0206	1578	07/08/2009	1615	>30	8.5	1		
16A	FB20090708	34485	07/08/2009	1737	28	3.5	1		

MC 7/10/09

TO-15-2A

CUSTODY SEAL INTACT? Y N NONE TEMP NA
Fed Ex

Box 1 of 5

Case Narrative Review

Review the Case Narrative provided with the data package. Were there any issues addressed in the case narrative that were not addressed in this In Depth Data Usability Review (DUR). Was the narrative complete? **Yes** (**No**) If modifications to the TO-15 method were made, did ATL clearly identify them in the project? (**Yes**)/ **No**

Comments:

Project narrative did not mention 2 issues which should have been addressed

1) 1,2,4-Trichlorobenzene Initial Calibration was outside criteria which probably also caused LCS recovery for this compound.

2) Acetone reported at a level exceeding the calibration range in sample AA0206

III. Review of Volatile Air Data

1. Canister Condition

The quality control related to preparation of the canisters prior to sampling are reviewed to ensure the accuracy of the reported results.

Does the laboratory indicate that the canisters were cleaned prior to being shipped to the field for analysis? (**Yes**) / **No** Was the cleanliness of the canisters verified by analysis? (**Yes**) / **No** Were the canisters leak checked by the laboratory prior to shipment to the field? **Yes / No** Was data presented in the data package to verify these results or did the laboratory indicate these canister conditions in their narrative? (**Data present**) / **Narrative certification** Unknown.

Were there any anomalies noted in the field sampling records about the SUMMA canister conditions? **Yes** / (**No**) If yes, list issues below.

Action: If there is no indication about how the canisters were prepared, contact the laboratory for documentation. If there were issues noted in the field sampling logs or on the COC about the canister conditions, action may be required to qualify sample data as estimated (J or UJ) or, if issues are deemed severe enough, data may require rejection (R). If contaminants of concern were reported in the "cleaned" canisters prior to sample collection, action to negate (U) data flowing Blank Action process may be warranted. Professional judgment is required in data qualification.

Comments:
Certification Forms present - Analysis by SIM - all Target Compds (see pg TO-15-20) reported as "ND" - No result for 1,1-Dichloroethene - Since the other 21 Targets were ND by SIM - OK to assume 1,1-Dichloroethene ND in Canisters prior to use in field - No Action

Leak check results not presented per se in package; however, COC indicates all canisters had > 28" Hg vacuum upon receipt in field so no action required - Canisters did not appear to leak en route to field.

2. Holding Times

Holding times are reviewed to ensure the accuracy of the reported results. The table on the following page (Table 2a) was completed to document the holding times and QC association for the samples.

Were the samples analyzed within 30 days of sample receipt? (Yes) / **No**. If no, list below the affected samples and the number of days outside of holding time.

Action: If HT > 30 days, estimate (J) detects and reject (R) non-detects, or use professional judgment.

Comments:

All Canisters were analyzed within 14 days of Collection - Separate Table 2a's presented for 09070203AR1 (page TO-15-6) and 0907203BR1 (page TO-15-6A).

Table 2a. Holding Time and Associated QC Table

0907203AR1

Sample Matrix: AIR

Sample ID	Date Sampled	Field Blanks	Method Blank	LCS	Date Analyzed	DF
IA0300 -01A+B	7/8/09	FB2W910708	5072009	5072006	7/20/09	1.61
IA0301 -02A+B	↓	↓	↓	↓	7/20/01	1.68
IA0302 -03A+B			5072105	5072106	7/21/09	1.75
IA0303 -04A+B			5072009	5072006	7/20/09	1.58
AA0304 -05A+B			↓	↓	7/20/09	1.79
IA0600 -06A+B			↓	↓	7/20/09	1.75
23888 -07A+B			5072108	5072106	7/21/09	1.68
AA0601 -08A+B			↓	↓	7/21/09	1.83
IA0200 -09A+B			↓	↓	7/21/09	1.87
IA0201 -10A+B	↓	↓	↓	↓	7/21/09	1.68

Table 2a. Holding Time and Associated QC Table

Sample Matrix: Air

0907203BR1

Sample ID	Date Sampled	Field Blanks	Method Blank	LCS	Date Analyzed	DF
IA0202 -11A+B	7/8/09	FB20090708	5072108+	5072106	7/21/09	1.61
IA0203 -12A+B	↓	↓	5072108sm	+ 5072106sm	7/21/09	1.71
IA0204 -13A+B	↓	↓	↓	↓	7/21/09	1.64
IA0205 -14A+B	↓	↓	↓	↓	7/21/09	3.10
AA0206 -15A+B	↓	↓	↓	↓	7/21/09	1.87
FB20090708 -16A+B	↓	NA	↓	↓	7/21/09	1.00

3. GC/MS Instrument Performance Check

The BFB instrument performance checks (tunes) are reviewed to assess the accuracy and sensitivity of the results relative to instrument performance.

Review the tune summaries for BFB

Were all SW-846 8260B defined mass calibration and ion abundance criteria met for the BFB analyses (per ATL modification of TO-15 method)? (Yes) / No. If no, list below the tune and affected samples.

BFB MASS INTENSITY CRITERIA PER SW-846 METHOD 8260B

m/z	Required Intensity (relative abundance)
50	15 to 40% of m/z 95
75	30 to 60% of m/z 95
95	Base peak, 100% relative abundance
96	5 to 9% of m/z 95
173	Less than 2% of m/z 174
174	Greater than 50% of m/z 95
175	5 to 9% of m/z 174
176	Greater than 95% but less than 101% of m/z 174
177	5 to 9% of m/z 176

Review the raw data for one tune. Did the laboratory obtain the BFB mass spectrum in a straight-forward manner (e.g., average of three scans centered across the BFB peak with background subtraction from a scan within 20 scans prior to the BFB scan)? (Yes) / No. If no, list below the method used to obtain the mass spectrum and the affected samples.

Were all samples (including QC) analyzed within 12 hours of an acceptable tune (NYSDEC Modifications to the EPA Region 9 TO-15 QA/QC Criteria, February 2008)? Yes / (No.) If no, were the samples analyzed within 24-hour tune time (TO-15, HW-31, and ATL SOP) ? (Yes) / No

Action: If the mass assignment criteria were not met reject (R) all associated data. Use professional judgment to qualify data acquired outside of tune time.

Comments:
Tune - S071610 (ICAL), S072004 + S072104

Lab used 24-hour tune criteria for analysis - No Action except to note deviation for NYSDEC Modifications to the EPA Region 9 TO-15 QA/QC Criteria, February 2008 - 24-hr. Tune clock acceptable by TO-15 & Lab SOP, & SOP HW-31 for EPA Region II).

4. Initial Calibration

The initial calibration (ICAL) data are reviewed to determine if the standards were compliant with the method protocols.

Review the Initial Calibration Data Summary. Check and recalculate the RRFs, avg. RRF and %RSD for at least one volatile analyte across the ICAL for Full Scan and SIM. Does the avg. RRF and %RSD check back to the raw data? **(Yes)/ No.** Were the RRFs for all analytes in the standard all greater than or equal to 0.05 (HW-31 criteria)? **(Yes)/ No.**

Were at least five concentration levels of each compound analyzed during the initial calibration (see page TO-15 - 20 of this DUR for the project-specific compound list)? **(Yes)/ No** Were all calibration standards analyzed within tune time (see criteria on page TO-15 -7)? **(Yes)/ No**

Were retention times for each target analyte stable across the calibration (i.e., within ± 0.06 RRT units of the mean RT for each compound)? **(Yes)/ No**

Did the initial calibration meet %RSD criteria of ≤ 30% for all project target analytes and surrogates? **Yes /(No)** Was the average %RSD across all analytes ≤ 30%? **(Yes)/ No**

Action: If RRF < 0.05, estimate (J) positive detects and reject (R) non-detects. If the %RSD >30%, qualify positive and non-detected results as estimated (J and UJ). Sound technical judgment should be used in qualification of the data. The results for each sample associated with ICAL should be evaluated to determine if a result reported would be impacted by the mis-calibration.

Full Scan ICAL Check: Compound Checked Tetrachloroethene ; IS: Chlorobenzene-d5

Level 7		Level 1	Level 2	Level 3	Level 4	Level 5	Avg. RRF	%RSD	Level 6
20	Concentration (ppbV)	0.05	0.1	0.5	2	5			10
2585779	Response Cpd	5076	12699	59419	~~212962~~ 199020 NM	669557			1338787
10	Conc, IS	10	10	10	10	10			10
1830800	Response IS	1731697	1770596	1858848	1524639	1789152			1880581
0.7062	RRF	0.5862	0.7172	0.6393	~~0.6984~~ 0.6527 NM	0.7485	0.698	10.4% ✓	0.7119

0907203AR1 + BR1 had same ICAL.
Level 8 ICAL; Conc. 40 ppbV ; Resp. Cpd = 6054664
Conc. IS = 10 ppbV Resp. IS = 1840658 RRF = 0.8224

4. Initial Calibration (continued)

SIM ICAL Check: Compound Checked Trichloroethene IS: 1,4-Difluorobenzene

	Level 1	Level 2	Level 3	Level 4	Level 5	Avg. RRF	%RSD
Concentration	0.003	0.01	0.02	0.05	0.10D		
Response Cpd	344	935	1667	3800	8407		
Conc, IS	10	10	10	10	10		
Response IS	1459691	1522866	1406228	1325454	1275679		
RRF	0.7856	0.6140	0.5927	0.5734	0.6590	0.6309	9.8% ✓

Level 6: Conc = 0.5 ; Resp Cpd = 39100 ; Conc IS = 10; Resp = 1331232
RRF = 0.5874

Level 7: Conc = 2.0 ; Resp Cpd = 128713 ; Conc. IS = 10 ; Resp = 1109622
RRF = 0.5799

Level 8: Conc = 5.0 ; Resp Cd = 455912 ; Conc. IS = 10 ; Resp = 1405203
RRF = 0.6489

Level 9: Conc = 10 ; Resp = 940630 ; Conc IS = 10 ; Resp = 14626916
RRF = 0.6431

Level 10: Conc = 20 ; Resp = 1818108 ; Conc. IS = 10 ; Resp = 1454441
RRF = 0.6250

ICALs contained many compounds in addition to 22 Target Compounds for Project (see page TO-15-20). All % RSDs < 30% except:
1,2,4-Trichlorobenzene 32.5% + 2 non-Target Compounds

* Action: 1,2,4-Trichlorobenzene estimated (UJ) with Indeterminate bias due to ICAL being outside criteria.

5. Continuing Calibration Check

The continuing calibration (CCAL or CCV) data are reviewed to determine if the standards were contractually compliant.

Review the Continuing Calibrations and Summaries. Check and recalculate the RRF and %D (or %Rec or %R) for at least one of the target volatile compounds in one of the CCALs for Full Scam and SIM. Do the RRFs and %Ds check back to the raw data? (**Yes**) / **No**. Were the RRFs for all analytes in the standard all greater than or equal to 0.05 (HW-31 criteria)? (**Yes**) / **No.**

Was a continuing calibration check performed every **12** / (**24**) hours following tuning verification of the instrument? (**Yes**) / **No**. If no, list below all the affected samples.

Were the target analytes recovered within the expected retention time window based upon the initial calibration (i.e., drift of instrument was acceptable)? (**Yes**) / **No.**

Did the continuing calibrations meet criteria for verification of %D ≤ ± 30% for all compounds? (**Yes**) / **No.**

Were the average RRFs from ~~the~~ ICAL used to calculate sample results (SW-846, TO-15A, and ATL Modification requirements)? (**Yes**) / **No**

Action: If %D > ± 30% (or %R outside of 70-130%), compound should be checked in each sample.
Non-detects: If the CCAL indicates the system had enhanced detection of the compound on the day of CCAL as compared in the ICAL, and the compound is non-detect in the associated samples, no action is required. If the CCAL indicates a loss in instrument sensitivity on day of analysis for detection of a compound, estimate (UJ) the result with possible low bias.
Positive detects if the ICAL RRFs are used for sample quantitation: If CCAL %D shows loss in instrument sensitivity, estimated (J) result with possible low bias. If CCAL %D shows increase in instrument sensitivity, estimated (J) result with possible high bias.

Full Scan CCAL Check: Standard ID 5072005 Compound Checked Acetone

	Responses	RRF	avg. RRF ICAL	% Rec
Cpd:	1995826 5	1.2865	1.05533	1229o ✓
IS:	310277@ 10			

9.0 = 21.9%

5. Continuing Calibration Check - *continued*

SIM CCAL Check: Standard ID 5072105sim Compound Checked Vinyl chloride

Responses	RRF	avg. RRF ICAL	% R
Cpd: 891177@5	3.3022	3.13149	105% ✓
IS: 236921@10			

%D = 5.5%

All %D / %R criteria for 2 CCVs (5072009 / 5072108 Full Scan + sim) were acceptable => No Action Required.

6. Laboratory Method and Field Equipment Blank Results

Laboratory method and field blank (equipment blanks) results are reviewed to assess the presence of contaminants, which affect the accuracy and sensitivity of the results. See Table 2a. where the Holding Time and Associated QC Table was completed for the samples within this SDG.

Were equipment blanks (EB) associated with the samples received at the lab? (**Yes**) / **No**.

Was each sample analysis associated with an appropriate method blank? (**Yes**) / **No**. Was there a method blank for each tune? (**Yes**) / **No** If no, list below affected samples.

Review the reporting forms for each method and equipment blank. Were any target compounds in the blanks detected? **Yes** / (**No**)

NOTE: Equipment Blanks are generated in the field using canisters received from ATL for sampling. These canisters are hooked up through a pressure regulator to a laboratory grade Nitrogen tank and filled using the same procedures used for sampling ambient and indoor air samples from the site. These EBs evaluate the equipment in a general way and are not specifically related to the samples collected at a particular location.

Action: - Blanks should not contain contaminants above the RL. The Blank Action Level is defined as five times the level seen in the blank on a sample-specific basis (i.e., all dilutions for a sample analysis taken into consideration). The following actions should be taken if conditions warrant :

Method Blank Evaluation

1. If the reported result in a sample is below the reporting limit (sample < RL) and if the method blank contains a result above the sample-equivalent level reported, the result in the sample should be negated (U) and raised to the sample-specific RL for that sample
2. If the sample result is between the reporting limit and the blank Action Level for the method blank (RL < sample < Action Level), the result for the sample is negated (U) at the level found in the sample.
3. If the sample result is greater than the RL and the blank Action Level, no action is taken.

Equipment Blank Evaluation

1. If the reported result in a sample is below the blank Action Level, the result should be qualified (EB) to indicate that the results may be biased high (false positive).

Comments:
Blanks evaluated:

Nam 8/4/09 Nam 8/4/09

MBs: S072009 / S072009Sim
S072108 / S072108Sim

FB: FB20090708

All 22 Target VOCs were ND in all Blanks.

6. Laboratory and Field Blank Results - continued

Blank ID	Contaminant / Level	Action Level	Sample/Reported Result	Corrected Result
			No Blank Action Required Nan 8/5/09	

7. Internal Standards

Internal Standard Responses

Review the Internal Standard (IS) Summary information.

Was the Retention Time for the IS' within ± 0.33 min of the corresponding IS in the associated CCAL? **(Yes) / No**. Were the Area Counts for each IS within 60% to 140% of the Areas from the associated CCAL? **(Yes) / No**

Action: Action is taken on only those compounds associated with a specific IS. If 25% < IS Response < 60% compared to IS in CCAL, estimate all associated compound results (J and UJ) with possible low bias. If the IS response is > 140%, estimate (J) positive results with possible high bias, no action required for non-detects. If the IS response is < 25% relative to CCAL, estimate detects (J) and reject (R) non-detect.

Comment:

Full Scan + SIM IS' for each Sample were all in criteria => No Actions.

8. Surrogate Results

Review the Surrogate Recovery Summary information.

Were the Surrogate recoveries within 70-130%? (**Yes**) / **No**. If no, was reanalysis performed? **Yes** . **No** (NA)

Action: . If the Surrogate recoveries are above criteria, estimate (J) positive results in sample due to potential high bias, no qualification of non-detected results is necessary. If the Surrogate recoveries are between 50% and 69%, estimate (J and UJ) positive and non-detect results in sample due to potential low bias in the results. If the recovery in the Surrogate is less than 50%, estimate (J) positive results due to low bias and use professional judgment to estimate (UJ) or reject (R) non-detect results due to potential false negatives.

Comments:

All 3 Surrogates were recovered within criteria for all samples + QC in both Work Orders => No Action.

9. Laboratory Control Sample Analysis

The Laboratory Control Samples (LCS) are reviewed to assess the accuracy of the results relative to the analytical procedure.

Review the raw data and recovery information for the LCS.

Did the laboratory perform a LCS daily prior to sample analysis (at least once per every 12- or (24)-hour tune)? (**Yes**) / **No**. If no, list below the affected samples.

Were the LCS recoveries within 70-130% for the 22 project-specific compounds (see page TO-15 - 20)? **Yes** / (**No**) Were reanalyses of the samples performed if the LCS or LCSD was outside of ATL acceptance criteria? **Yes** / (**No**)

Was an LCSD performed? **Yes** / (**No**) If yes, was the RPD between the LCS/LCSD ≤ 20%. **Yes** / **No** (NA)

Action: . If the LCS recoveries are above criteria, estimate (J) positive results due to potential high bias, no qualification of non-detected results is necessary. If the LCS recoveries are between 50% and 69%, estimate (J and UJ) positive and non-detect results for the samples associated with the analytical batch due to potential low bias in the results. If the recovery in the LCS is less than 50%, estimate (J) positive results due to low bias and use professional judgment to estimate (UJ) or reject (R) non-detect results due to potential false negatives. If the LCS/LCSD RPD > 20%, estimate results (J and UJ) for those compounds affected in the analytical batch.

Comments:
LCS = 5072006 / 5072006sim + 5072106 / 5072106sim

%Rec for all 22 Targets were within criteria except:

1,2,4-Trichlorobenzene %Rec = 68% in 5072006 +
%Rec = 60% in 5072106

* Action: All 1,2,4-Trichlorobenzene data estimated (UJ) due to low LCS recovery - Overall bias indeterminate due to other QC issues.

10. Laboratory Duplicate Analysis

Laboratory duplicate samples are reviewed to assess precision of the results relative to laboratory analysis techniques.

Action: If RPD > 20% and both results are > 5xRL, then estimate both results (J) with indeterminate bias. If RPD > 20% and one result > 5xRL and the other < RL, estimate both results (J). If one result is non-detect, and the other is < RL or < 5xRL, do not take action. If one result is non-detect and the other is > 5xRL, estimate (J and UJ) both results.

Comments:

0907203AR1 did not contain Lab duplicate.
0907203BR1 LD done on Sample IA0204 + IA0205. For both sets of LDs, RPD < 20% for results > 3 x RL.
Acetone in IA0204 reported RPD = 45% but value < 5xRL so no action req'd.

LD precision by Full Scan + SIM acceptable => No Action required.

See 0907203BR1 page 184 + 185 for tabular presentation of Sample/LD results.

11. Field Duplicate Precision

Field duplicate samples are reviewed to assess representativeness of the sample aliquot to the area sampled and the precision of the results relative to field sampling techniques.

Action: If RPD > 20% and both results are > 5xRL, then estimate both results (J) with indeterminate bias. If RPD > 20% and one result > 5xRL and the other < RL, estimate both results (J). If one result is non-detect, and the other is < RL or < 5xRL, do not take action. If one result is non-detect and the other is > 5xRL, estimate (J and UJ) both results.

Comments:

Field Duplicate Samples: IA0600 23888

Page TO-15-18A shows tabular comparison of results for the FD pair.

FD precision was acceptable for all Target Compounds except Freon 12 which reported RPD = 21.9% which results were > 5xRL for both Samples.

*Action: From 12 estimated (J) in IA0600 + 23888 due to FD imprecision - Indeterminate bias.

IBM - East Fishkill Facility, Hopewell Junction, New York
Field Duplicate Evaluation

Lab: Air Toxics Ltd.
Date Sampled: 07/08/09
Method of Analysis: TO-15 Hi/Lo

Work Order #: 0907203AR1
No. Samples 7 IA + 1FD + 2 AA

Field Duplicate Evaluation_ Sample IDs: Sample = IA0600 FD = 23888

Analyte Name	CAS No.	DF= 1.75* RL (µg/m³)	Sample µg/m³	Q	Sample Result Level	FD µg/m³	Q	FD Result Level	RPD	Action
Freon 12	75-71-8	0.86	4.7		> 5 x RL	5.8		> 5 x RL	21.0	J Both
Freon 11	75-69-4	0.98	2		>RL but < 5xRL	2.4		>RL but < 5xRL	18.2	None
Freon 113	76-13-1	1.3	1.3	U	RL	1.3	U	RL	NA	None
1,1-Dichloroethene	75-35-4	0.69	0.69	U	RL	0.67	U	RL	NA	None
Acetone	67-64-1	2.1	4.4		>RL but < 5xRL	5.4		>RL but < 5xRL	20.4	None
Methylene Chloride	75-09-2	1.2	1.2	U	RL	1.2	U	RL	NA	None
cis-1,2-Dichloroethene	156-59-2	0.69	0.72		>RL but < 5xRL	0.72		>RL but < 5xRL	0.0	None
1,1,1-Trichloroethane	71-55-6	0.95	0.95	U	RL	0.92	U	RL	NA	None
Benzene	71-43-2	0.56	0.56	U	RL	0.54	U	RL	NA	None
Toluene	108-88-3	0.66	1.4		>RL but < 5xRL	1.3		>RL but < 5xRL	7.4	None
Tetrachloroethene	127-18-4	1.2	12		> 5 x RL	12		> 5 x RL	0.0	None
Chlorobenzene	108-90-7	0.8	0.8	U	RL	0.77	U	RL	NA	None
Ethyl Benzene	100-41-4	0.76	0.76	U	RL	0.73	U	RL	NA	None
m,p-Xylene	108-38-3/106-42-3	0.76	0.76	U	RL	0.73	U	RL	NA	None
o-Xylene	95-47-6	0.76	0.76	U	RL	0.73	U	RL	NA	None
1,3-Dichlorobenzene	541-73-1	1	1	U	RL	1	U	RL	NA	None
1,4-Dichlorobenzene	106-46-7	1	1	U	RL	1	U	RL	NA	None
1,2-Dichlorobenzene	95-50-1	1	1	U	RL	1	U	RL	NA	None
1,2,4-Trichlorobenzene	120-82-1	6.5	6.5	UJ	RL	6.2	UJ	RL	NA	None
Vinyl Chloride	75-01-4	0.045	0.056		>RL but < 5xRL	0.07		>RL but < 5xRL	22.2	None
Carbon Tetrachloride	56-23-5	0.22	0.5		>RL but < 5xRL	0.48		>RL but < 5xRL	4.1	None
Trichloroethene	79-01-6	0.19	1.5		> 5 x RL	1.7		> 5 x RL	12.5	None

*This is the sample DF and RLs, the FD DF was 1.68 and RLs are RLs shown x (1.68/1.75)
Q = Data Qualifier as reported by ATL and/or NEH; U = non-detect, J = estimated result; UJ = non-detect is estimated
NA = Not Applicable. RPD not calculated since one or both results were non-detect.

Date 8/6/09

Data Reviewer MJC. RR

pg TO-15-18A

12. Sample Quantitation/Reporting Limits

Review raw data and reporting forms. What was the lowest concentration (ppbv) standard analyzed with the samples? 0.05 ppbV Full 0.003 ppbV SIM Were the sample-specific RLs based on this standard? **Yes** (**No**)

$\mu g/m^3 = (ppbv \times Mwt \times DF) / 24.45$

where: Mwt = Molecular weight for the compound, g/mole
DF = Dilution Factor for analysis, unitless
24.45 = ATL conversion factor = RT/P from ideal gas law with R at 0.08206 L-atm/mole-K; P = 1 atm (Standard pressure), and T = 25°C=298.16K (Room Temperature)

Reporting Limit checked (pick a non-detect in one sample and using the sample-specific DF, verify the RL (compound checked Vinyl chloride ; Mwt 62.5)

RL calculated 0.026 µg/m3 ; RL reported 0.026 µg/m3
0.01 ppbV

Were all the compounds in the calibration standards reported for the samples? **Yes** / (**No**) Were Tentatively Identified Compounds (TICs) reported for the samples? **Yes** (**No**)

Did the sample-specific RLs for non-detected data meet the levels from Table B.1 of the Work Plan (see Table on next page: TO-15 – 20)? **Yes** / (**No**) If No, the data may not be usable for project objectives.

Comments:

- Full Scan RLs = 0.1 ppbV for all 19 cpds by Full (see TO-15-20) except 0.2 ppbV for MeCl + 0.5 ppbV for Acetone + 1,2,4-Trichlorobenzene
- SIM lowest RL = 0.01 ppbV for Vinyl chloride + 0.02 ppbV Carbon Tetrachloride + Trichloroethene

All non-detects were reported at levels < RL given in Table ~~15-20~~ No. on next page except all non-detects for cpds IA0205 due to dilution made for cpds analysis (DF = 3.10). RLs given in Table on next page assume DF ≤ 2. All other cpds met sensitivity requirements except as indicated on next page.

Target Analyte List	Full Scan (Full) or SIM	USEPA Method TO-15, Hi/Lo
		RL ($\mu g/m^3$)
Tetrachloroethene (PCE)	Full	1.4
Trichloroethene (TCE)	SIM	0.22
cis-1,2-Dichloroethene (cDCE)	Full	0.80
1,1-Dichloroethene (DCE)	Full	0.80
Vinyl chloride (VC)	SIM	0.06
1,1,1-Trichloroethane (TCA)	Full	1.1
Carbon Tetrachloride	SIM	0.2
Methylene chloride (MeCL)	Full	1.4
Chlorobenzene	Full	0.92
1,2,4-Trichlorobenzene	Full	7.4
1,2-Dichlorobenzene	Full	1.2
1,3-Dichlorobenzene	Full	1.2
1,4-Dichlorobenzene	Full	1.2
Acetone	Full	2.4
Benzene	Full	0.64
Ethylbenzene	Full	0.86
m-Xylene	Full	0.86
p-Xylene		
o-Xylene	Full	0.86
Toluene	Full	0.77
Trichlorofluoromethane (Freon 11)	Full	1.1
Dichlorodifluoromethane (Freon 12)	Full	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Full	1.5

Comments:

Acetone in sample AA0206 was reported with an "E" qualifier (Lab ID 0907203BR1-15A) since result was reported at a level exceeding the instrument calibration range - Lab should have reanalyzed sample with a dilution.

* Acetone in AA0206 reported (J) due to uncertainty in quantitation.

There were no "J" data reported by the lab

13. Sample Qualitative and Quantitative Determination

Were the canisters pressurized with zero grade nitrogen or humid air prior to analysis? (Yes) / No If yes, was a dilution factor applied to the sample data? (Yes) / No

Check the Mass Spectra of all positive detects. Did the Mass Spectra meet criteria (e.g., all ions > 10% matched those in reference spectra, etc – SOP/method criteria) (Yes) / No

Was the retention time (RT) for the detected result within ± 0.06 relative RT minutes of the standard component RT? (Yes) / No Did the primary/quantitation ion and secondary ion maximize a the same relative RT? (Yes) / No

Were all components reported in the samples quantitated within the calibration region of the instrument for the detected analytes? Yes (No) Were results reported below the sample-specific RL reported as estimated due to uncertainty in quantitation? Yes / No (J/R) Were there any other data qualifiers on the results which may affect usability of the data? (Yes) / No. Explain all qualifiers below

Comments:

As indicated on pg TO-15-20, Acetone in AA0206 qualified "E" by Lab. During this review, this "E" was changed to a "J" + comment added about result being uncertain due to reporting at a level above the calibration range.

All Canisters were over-pressurized to 5 psi upon receipt - Dilution Factors properly reflected this.

14. Additional QA/QC Issues

Were there any additional QA/QC issues noted in the project narrative or found during this review that were not previously addressed? **Yes / (No)**

List any additional issues which may affect the quality of the results. List the affected samples, QA/QC issue, and necessary actions taken in the comments section below.

No Additional Issus to Consider.

IV. Example Sample Calculations

Review of one sample per data package is performed to determine if sample results were correctly calculated and reported.

Sample ID: IA0203 was selected for review in this data package.

09072038R1 - 12A + - 12B

A. Data Sheet Review

Were the data sheets completed according to the method requirements? (Yes) / No. If no, list below the affected fields.

B. Quantitation Review

Reproduce a calculation for one volatile analyte in one of the samples that contained a positive result and compare the calculated result to the result reported by the laboratory.

Analyte Checked: Trichloroethene

Laboratory Result: 6.7 mg/m³ Calculated Result: 6.7 µg/m3 ✓

Example Calculation:

DF = 1.71

Trichloroethene Resp = 32016 } Sim Run

IS Resp. = 695674 @ 10 ppbV

$\overline{RRF}$ Conc = 0.63091

$$Cnc = \frac{32016 \times 10}{695674 \times 0.63091} \times 1.71 = 1.25 \text{ ppbV}$$

mwt Trichloroethen = 131.4

$$\therefore \text{Cnc in } \mu g/m^3 = \frac{1.25 \times 131.4}{24.45} = 6.7 \mu g/m^3$$

Draft NOTICE

Post Date:
Removal Date:

Below is a summary of area air sampling results or volatile organic compounds detected for Building 309 in July 2009.

Chemical Name	Sample Results		Occupational Limits	
	Outdoor Air (ug/m3)	Indoor Air (ug/m3)	OSHA PEL (ug/m3)	ACGIH TLV (ug/m3)
Tetrachloroethene (PCE or "Perc")	ND	ND to 3.4	678,000	170,000
Trichloroethene (TCE)	ND	ND to 6.7	537,000	54,000
1,1-Dichloroethene (DCE)	ND	ND to 0.71	None Established	None Established
1,1,1-Trichloroethane (TCA)	ND	ND to 5.2	1,900,000	1,910,000
Carbon tetrachloride	0.52	0.47 to 0.61	62,900	31,000
Acetone	390	4.2 to 53	2,400,000	1,188,000
Benzene	0.66	ND	3,000	1,600
Ethylbenzene	ND	ND to 2.2	435,000	434,000
m,p-Xylene	1.9	ND to 2.6	435,000 (mixture)	434,000 (mixture)
o-Xylene	1.1	ND to 1.2		
Toluene	2.1	ND to 2.0	753,000	75,000
Trichlorofluoromethane (Freon 11)	1.3	ND to 1.8	5,600,000	None Established
Dichlorodifluoromethane (Freon 12)	2.1	1.7 to 2.5	4,950,000	4,950,000

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) and the American Conference of Governmental Industrial Hygienists (ACGIH)Threshold Limit Value (TLV) are provided as references. PELs and TLVs are employee exposure concentrations that must not be exceeded during any 8-hour shift of a 40-hour work week. The results from all of these samples showed levels which were well below the above noted occupational exposure limits.

If you have any health-related questions regarding the sampling, please contact Glenn Morrison (533-4354) or Michael Dempsey (533-4074) of the IBM Integrated Health Services organization.

Note: "ug/m3": micrograms of chemical per cubic meter of air.
"ND": compound was not detected above the applicable detection limits.
"Outdoor air": air sampled outside of Building 309 concurrent with sampling of indoor areas.

Draft NOTICE

Post Date:
Removal Date:

Below is a summary of area air sampling results or volatile organic compounds detected for Building 316 in July 2009.

Chemical Name	Sample Results		Occupational Limits	
	Outdoor Air (ug/m3)	Indoor Air (ug/m3)	OSHA PEL (ug/m3)	ACGIH TLV (ug/m3)
Tetrachloroethene (PCE or "Perc")	5.0	12	678,000	170,000
Trichloroethene (TCE)	1.6	1.5 to 1.7	537,000	54,000
cis-1,2-Dichloroethene (cDCE)	ND	0.72	790,000	793,000
Vinyl chloride (VC)	ND	0.056 to 0.070	2,600	2,600
Carbon tetrachloride	0.48	0.48 to 0.50	62,900	31,000
Acetone	7.9	4.4 to 5.4	2,400,000	1,188,000
Benzene	0.74	ND	3,000	1,600
Toluene	1.2	1.3 to 1.4	753,000	75,000
Trichlorofluoromethane (Freon 11)	1.6	2.0 to 2.4	5,600,000	None Established
Dichlorodifluoromethane (Freon 12)	2.4	4.7 to 5.8	4,950,000	4,950,000

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) and the American Conference of Governmental Industrial Hygienists (ACGIH)Threshold Limit Value (TLV) are provided as references. PELs and TLVs are employee exposure concentrations that must not be exceeded during any 8-hour shift of a 40-hour work week. The results from all of these samples showed levels which were well below the above noted occupational exposure limits.

If you have any health-related questions regarding the sampling, please contact Glenn Morrison (533-4354) or Michael Dempsey (533-4074) of the IBM Integrated Health Services organization.

Note: "ug/m3": micrograms of chemical per cubic meter of air.
"ND": compound was not detected above applicable detection limits.
"Outdoor air": air sampled outside of Building 316 concurrent with sampling of indoor areas.

Draft NOTICE

Post Date:
Removal Date:

Below is a summary of area air sampling results or volatile organic compounds detected for Building 386 in July 2009.

Chemical Name	Sample Results		Occupational Limits	
	Outdoor Air (ug/m3)	Indoor Air (ug/m3)	OSHA PEL (ug/m3)	ACGIH TLV (ug/m3)
Carbon tetrachloride	0.36	0.44 to 0.47	62,900	31,000
Acetone	16	4.9 to 20	2,400,000	1,188,000
Benzene	0.82	ND to 0.71	3,000	1,600
Toluene	1.4	ND to 1.8	753,000	75,000
Trichlorofluoromethane (Freon 11)	1.6	4.0 to 7.0	5,600,000	None Established
Dichlorodifluoromethane (Freon 12)	2.0	1.8 to 2.4	4,950,000	4,950,000

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) and the American Conference of Governmental Industrial Hygienists (ACGIH)Threshold Limit Value (TLV) are provided as references. PELs and TLVs are employee exposure concentrations that must not be exceeded during any 8-hour shift of a 40-hour work week. The results from all of these samples showed levels which were well below the above noted occupational exposure limits.

If you have any health-related questions regarding the sampling, please contact Glenn Morrison (533-4354) or Michael Dempsey (533-4074) of the IBM Integrated Health Services organization.

Note: "ug/m3": micrograms of chemical per cubic meter of air.
"ND": compound was not detected above applicable detection limits.
"Outdoor air": air sampled outside of Building 386 concurrent with sampling of indoor areas.