

# Data Validation Services

120 Cobble Creek Road P.O. Box 208  
North Creek, NY 12853  
**Phone 518-251-4429**  
**Facsimile 518-251-4428**

March 3, 2010

Jeremy Wyckoff  
Malcolm Pirnie, Inc.  
855 Rt 146 Suite 204  
Clifton Park, NY 12065

RE: Validation of Gladding Cordage site data package –air samples  
AirToxics SDG No. 0912306

Dear Mr. Wyckoff:

Review has been completed for the data package generated by Contest that pertains to analysis of 6-L summa canister air samples collected at the Gladding Cordage site. Nine air samples and a duplicate collected 12/10/09 were analyzed for volatile analytes by a modified USEPA GC/MS method TO-15.

The data packages submitted by the laboratory contain full deliverables for validation, but this usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. Full validation has not been performed. However, the reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, with guidance from the 2006 USEPA Region II validation SOP HW-31, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

- \* Data Completeness
- \* Case Narrative
- \* Custody Documentation
- \* Holding Times
- \* Surrogate and Internal Standard Recoveries
- \* Method and Canister Blanks
- \* Field Duplicate Correlations
- \* Laboratory Control Samples (LCSs)
- \* Instrumental Tunes
- \* Initial and Continuing Calibration Standards
- \* Method Compliance
- \* Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

**In summary**, sample processing was conducted in compliance with the analytical method. All sample reported results are usable as reported, or usable with minor qualification. No data are rejected.

Copies of the client sample identifications and the laboratory case narrative are attached to this text, and should be reviewed in conjunction with this report. The laboratory case narrative did not contain the required “verbatim” statement.

Also attached are sample report forms, with recommended qualifiers applied in red ink. Results are validated in ppbv, as processed by the laboratory. Conversion factors to ug/m<sup>3</sup> were checked on random detected values, and no errors were found.

### **Volatile Analyses by EPA TO-15**

Laboratory modifications to the method are outlined in the case narrative, and include analysis by Selective Ion Monitoring (SIM) for increased sensitivity and lower reporting limits. The modifications in laboratory processing do not negatively impact the reported results of the samples.

The detections of benzene in the samples have been qualified as tentative in identification and estimated in value due to spectral interferences.

Results for analytes reported with the “E” flag are qualified as estimated, as they reflect responses above the instrument calibration range.

Detected values of ethanol in the samples have been qualified as estimated due to elevated recovery (155%) in the Laboratory Control Sample.

Initial and continuing calibration standard (ICV and CCV) responses are within protocol and validation guidelines, with the exception of that for chloromethane (39%RSD). Detected values of that compound in the field samples have been qualified as estimated, with a likely high bias.

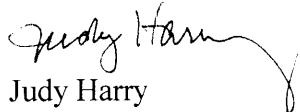
Holding times were met. Internal standard responses are within the required limits, and surrogate recoveries fall within the acceptance range.

The laboratory duplicate of 9009-130-BA shows acceptable correlations.

The method and clean canister certification blanks show no contamination.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

  
Judy Harry

## **VALIDATION DATA QUALIFIER DEFINITIONS**

- U** The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J** The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- UJ** The analyte was not detected. The associated reported quantitation limit is an estimate and may be inaccurate or imprecise.
- NJ** The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R** The data are unusable. The analyte may or may not be present.
- EMPC** The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

**CLIENT and LABORATORY SAMPLE IDs  
and CASE NARRATIVE**

**WORK ORDER #: 0912306**

Work Order Summary

<b>CLIENT:</b>	Mr. Bruce Nelson Malcolm Purnie 855 Route 146 Suite 210 Clifton Park, NY 12065	<b>BILL TO:</b>	Ms. Accounts Payable Malcolm Purnie P.O. Box 1240 White Plains, NY 10602-1240
<b>PHONE:</b>	518-782-2100	<b>P.O. #</b>	0266365
<b>FAX:</b>	(518) 250-7300	<b>PROJECT #</b>	0266365 Gladding Cordage
<b>DATE RECEIVED:</b>	12/11/2009	<b>CONTACT:</b>	Bryanna Langley
<b>DATE COMPLETED:</b>	12/28/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES</u>	<u>FINAL PRESSURE</u>
01A	9009-125-AA	Modified TO-15	2.5 "Hg	5 psi
01B	9009-125-AA	Modified TO-15	2.5 "Hg	5 psi
02A	9009-125-BA2	Modified TO-15	3 "Hg	5 psi
02B	9009-125-BA2	Modified TO-15	3 "Hg	5 psi
03A	9009-125-BA	Modified TO-15	6 "Hg	5 psi
03B	9009-125-BA	Modified TO-15	6 "Hg	5 psi
04A	9009-125-IA	Modified TO-15	8.5 "Hg	5 psi
04B	9009-125-IA	Modified TO-15	8.5 "Hg	5 psi
05A	9009-130-FH-IA	Modified TO-15	8 "Hg	5 psi
05B	9009-130-FH-IA	Modified TO-15	8 "Hg	5 psi
06A	9009-130-SS-IA	Modified TO-15	8 "Hg	5 psi
06B	9009-130-SS-IA	Modified TO-15	4.5 "Hg	5 psi
07A	9009-130-SAN-IA	Modified TO-15	4.5 "Hg	5 psi
07B	9009-130-SAN-IA	Modified TO-15	8 "Hg	5 psi
08A	9009-135-IAX	Modified TO-15	8 "Hg	5 psi
08B	9009-135-IAX	Modified TO-15	8 "Hg	5 psi
09A	9009-130-BA	Modified TO-15	7.5 "Hg	5 psi

Continued on next page



## WORK ORDER #: 0912306

### Work Order Summary

CLIENT:	Mr. Bruce Nelson Malcolm Pirnie 855 Route 146 Suite 210 Clifton Park, NY 12065	BILL TO:	Ms. Accounts Payable Malcolm Pirnie P.O. Box 1240 White Plains, NY 10602-1240
PHONE:	518-782-2100	P.O. #	0266365
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DATE COMPLETED:	12/28/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
09B	9009-130-BA	Modified TO-15	7.5 "Hg	5 psi
10A	Lab Blank	Modified TO-15	NA	NA
10B	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA
11B	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12B	LCS	Modified TO-15	NA	NA

CERTIFIED BY: Bryanna Langley

DATE: 12/28/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

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

Accreditation number: E87680. Effective date: 07/01/09, Expiration date: 06/30/10

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

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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**

Malcolm Pirnie  
Workorder# 0912306

Seven 6 Liter Summa Canister and two 6 Liter Summa Canister (100% Certified) samples were received on December 11, 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.

<b>Requirement</b>	<b>TO-15</b>	<b>ATL Modifications</b>
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD  For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+/- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers  For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

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

The Laboratory Control Spike (LCS) did not meet acceptance criteria for Ethanol. Recovery for this compound was (155%). Results are reported as estimated."

**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

## **QUALIFIED SAMPLE RESULTS FORMS**



Client Sample ID: 9009-125-AA

Lab ID#: 0912306-01A

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

File Name:	e122307	Date of Collection: 12/10/09 9:07:00 AM		
Dil. Factor:	1.46	Date of Analysis: 12/23/09 09:07 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.41	0.72	2.0
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.15	0.42	0.30	0.87
Vinyl Chloride	0.15	Not Detected	0.37	Not Detected
Bromomethane	0.15	Not Detected	0.57	Not Detected
Chloroethane	0.15	Not Detected	0.38	Not Detected
Freon 11	0.15	0.20	0.82	1.1
Ethanol	0.73	2.9 J	1.4	5.5 J
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Methylene Chloride	0.29	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Hexane	0.15	Not Detected	0.51	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.59	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.15	0.83	0.43	2.4
cis-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Chloroform	0.15	Not Detected	0.71	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Cyclohexane	0.15	Not Detected	0.50	Not Detected
Benzene	0.15	0.27	0.47	0.87
1,2-Dichloroethane	0.15	Not Detected	0.59	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.67	Not Detected
1,4-Dioxane	0.15	Not Detected	0.53	Not Detected
Bromodichloromethane	0.15	Not Detected	0.98	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.60	Not Detected
Toluene	0.15	0.21	0.55	0.79
trans-1,3-Dichloropropene	0.15	Not Detected	0.66	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.80	Not Detected
Tetrachloroethene	0.15	Not Detected	0.99	Not Detected
Dibromochloromethane	0.15	Not Detected	1.2	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.67	Not Detected
Ethyl Benzene	0.15	Not Detected	0.63	Not Detected
m,p-Xylene	0.15	Not Detected	0.63	Not Detected
o-Xylene	0.15	Not Detected	0.63	Not Detected
Styrene	0.15	Not Detected	0.62	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected



Client Sample ID: 9009-125-AA

Lab ID#: 0912306-01A

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

File Name:	e122307	Date of Collection: 12/10/09 9:07:00 AM		
Dil. Factor:	1.46	Date of Analysis: 12/23/09 09:07 PM		
Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.72	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.76	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.88	Not Detected
1,2,4-Trichlorobenzene	0.73	Not Detected	5.4	Not Detected
Hexachlorobutadiene	0.73	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	0.73	Not Detected	3.4	Not Detected
tert-Butyl alcohol	0.73	Not Detected	2.2	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

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



Client Sample ID: 9009-125-AA

Lab ID#: 0912306-01B

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

File Name:	e122307sim	Date of Collection:	12/10/09 9:07:00 AM	
Dil. Factor:	1.46	Date of Analysis:	12/23/09 09:07 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.029	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.029	0.069	0.18	0.43
Container Type: 6 Liter Summa Canister				
Surrogates	%Recovery	Method Limits		
1,2-Dichloroethane-d4	97	70-130		
Toluene-d8	95	70-130		
4-Bromofluorobenzene	103	70-130		



Client Sample ID: 9009-125-BA2

Lab ID#: 0912306-02A

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

File Name:	e122309	Date of Collection: 12/10/09 9:02:00 AM		
Dil. Factor:	1.49	Date of Analysis: 12/24/09 08:30 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.15	0.34	0.74	1.7
Freon 114	0.15	Not Detected	1.0	Not Detected
Chloromethane	0.15	0.18	0.31	0.37
Vinyl Chloride	0.15	Not Detected	0.38	Not Detected
Bromomethane	0.15	Not Detected	0.58	Not Detected
Chloroethane	0.15	Not Detected	0.39	Not Detected
Freon 11	0.15	0.16	0.84	0.90
Ethanol	0.74	1.4 J	1.4	2.7 J
Freon 113	0.15	Not Detected	1.1	Not Detected
1,1-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methylene Chloride	0.30	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.54	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Hexane	0.15	Not Detected	0.52	Not Detected
1,1-Dichloroethane	0.15	Not Detected	0.60	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.15	0.32	0.44	0.93
cis-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Chloroform	0.15	Not Detected	0.73	Not Detected
1,1,1-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Cyclohexane	0.15	Not Detected	0.51	Not Detected
Benzene	0.15	1.5	0.48	4.8
1,2-Dichloroethane	0.15	Not Detected	0.60	Not Detected
1,2-Dichloropropane	0.15	Not Detected	0.69	Not Detected
1,4-Dioxane	0.15	Not Detected	0.54	Not Detected
Bromodichloromethane	0.15	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
4-Methyl-2-pentanone	0.15	Not Detected	0.61	Not Detected
Toluene	0.15	Not Detected	0.56	Not Detected
trans-1,3-Dichloropropene	0.15	Not Detected	0.68	Not Detected
1,1,2-Trichloroethane	0.15	Not Detected	0.81	Not Detected
Tetrachloroethene	0.15	Not Detected	1.0	Not Detected
Dibromochloromethane	0.15	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Chlorobenzene	0.15	Not Detected	0.68	Not Detected
Ethyl Benzene	0.15	Not Detected	0.65	Not Detected
m,p-Xylene	0.15	Not Detected	0.65	Not Detected
o-Xylene	0.15	Not Detected	0.65	Not Detected
Styrene	0.15	Not Detected	0.63	Not Detected
Bromoform	0.15	Not Detected	1.5	Not Detected



Client Sample ID: 9009-125-BA2

Lab ID#: 0912306-02A

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

File Name:	e122309	Date of Collection:	12/10/09 9:02:00 AM	
Dil. Factor:	1.49	Date of Analysis:	12/24/09 08:30 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.15	Not Detected	1.0	Not Detected
1,3,5-Trimethylbenzene	0.15	Not Detected	0.73	Not Detected
1,2,4-Trimethylbenzene	0.15	Not Detected	0.73	Not Detected
1,3-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,4-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
alpha-Chlorotoluene	0.15	Not Detected	0.77	Not Detected
1,2-Dichlorobenzene	0.15	Not Detected	0.90	Not Detected
1,2,4-Trichlorobenzene	0.74	Not Detected	5.5	Not Detected
Hexachlorobutadiene	0.74	Not Detected	7.9	Not Detected
2,2,4-Trimethylpentane	0.74	Not Detected	3.5	Not Detected
tert-Butyl alcohol	0.74	Not Detected	2.2	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130



Laboratory Services Since 1989

Client Sample ID: 9009-125-BA2

Lab ID#: 0912306-02B

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

File Name:	e122309sim	Date of Collection:	12/10/09 9:02:00 AM	
Dil. Factor:	1.49	Date of Analysis:	12/24/09 08:30 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.030	0.034	0.16	0.18
Carbon Tetrachloride	0.030	0.062	0.19	0.39
Container Type: 6 Liter Summa Canister				
Surrogates	%Recovery	Method Limits		
1,2-Dichloroethane-d4	100	70-130		
Toluene-d8	94	70-130		
4-Bromofluorobenzene	102	70-130		



Client Sample ID: 9009-125-BA

Lab ID#: 0912306-03A

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

File Name:	e122310	Date of Collection: 12/10/09 9:02:00 AM		
Dil. Factor:	1.68	Date of Analysis: 12/24/09 09:25 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.35	0.83	1.7
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.17	0.19	0.35	0.39
Vinyl Chloride	0.17	Not Detected	0.43	Not Detected
Bromomethane	0.17	Not Detected	0.65	Not Detected
Chloroethane	0.17	Not Detected	0.44	Not Detected
Freon 11	0.17	0.17	0.94	0.98
Ethanol	0.84	Not Detected	1.6	Not Detected
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Methylene Chloride	0.34	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Hexane	0.17	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.68	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.17	0.19	0.50	0.56
cis-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloroform	0.17	Not Detected	0.82	Not Detected
1,1,1-Trichloroethane	0.17	0.38	0.92	2.1
Cyclohexane	0.17	Not Detected	0.58	Not Detected
Benzene	0.17	3.0	0.54	9.7
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.78	Not Detected
1,4-Dioxane	0.17	Not Detected	0.60	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	Not Detected	0.63	Not Detected
trans-1,3-Dichloropropene	0.17	Not Detected	0.76	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.92	Not Detected
Tetrachloroethene	0.17	0.72	1.1	4.9
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	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
Styrene	0.17	Not Detected	0.72	Not Detected
Bromoform	0.17	Not Detected	1.7	Not Detected



Client Sample ID: 9009-125-BA

Lab ID#: 0912306-03A

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

File Name:	e122310	Date of Collection:	12/10/09 9:02:00 AM	
Dil. Factor:	1.68	Date of Analysis:	12/24/09 09:25 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.82	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.87	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
Hexachlorobutadiene	0.84	Not Detected	9.0	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
tert-Butyl alcohol	0.84	Not Detected	2.5	Not Detected

Container Type: 6 Liter Summa Canister

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



Client Sample ID: 9009-125-BA

Lab ID#: 0912306-03B

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

File Name:	e122310sim	Date of Collection:	12/10/09 9:02:00 AM	
Dil. Factor:	1.68	Date of Analysis:	12/24/09 09:25 AM	
Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.034	0.26	0.18	1.4
Carbon Tetrachloride	0.034	0.067	0.21	0.42
Container Type: 6 Liter Summa Canister				Method Limits
Surrogates	%Recovery			
1,2-Dichloroethane-d4	101			70-130
Toluene-d8	94			70-130
4-Bromofluorobenzene	105			70-130



Client Sample ID: 9009-125-IA

Lab ID#: 0912306-04A

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

File Name:	e122311	Date of Collection:	12/10/09 9:00:00 AM	
Dil. Factor:	1.87	Date of Analysis:	12/24/09 10:17 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.19	0.46	0.92	2.3
Freon 114	0.19	Not Detected	1.3	Not Detected
Chloromethane	0.19	Not Detected	0.39	Not Detected
Vinyl Chloride	0.19	Not Detected	0.48	Not Detected
Bromomethane	0.19	Not Detected	0.73	Not Detected
Chloroethane	0.19	Not Detected	0.49	Not Detected
Freon 11	0.19	0.20	1.0	1.1
Ethanol	0.94	810 E	1.8	1500 E J
Freon 113	0.19	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.67	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Hexane	0.19	Not Detected	0.66	Not Detected
1,1-Dichloroethane	0.19	Not Detected	0.76	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.19	0.64	0.55	1.9
cis-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Chloroform	0.19	Not Detected	0.91	Not Detected
1,1,1-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Cyclohexane	0.19	Not Detected	0.64	Not Detected
Benzene	0.19	0.42	0.60	1.4 N J
1,2-Dichloroethane	0.19	Not Detected	0.76	Not Detected
1,2-Dichloropropane	0.19	Not Detected	0.86	Not Detected
1,4-Dioxane	0.19	Not Detected	0.67	Not Detected
Bromodichloromethane	0.19	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
4-Methyl-2-pentanone	0.19	Not Detected	0.77	Not Detected
Toluene	0.19	0.83	0.70	3.1
trans-1,3-Dichloropropene	0.19	Not Detected	0.85	Not Detected
1,1,2-Trichloroethane	0.19	Not Detected	1.0	Not Detected
Tetrachloroethene	0.19	Not Detected	1.3	Not Detected
Dibromochloromethane	0.19	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.19	Not Detected	1.4	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	Not Detected	0.81	Not Detected
o-Xylene	0.19	Not Detected	0.81	Not Detected
Styrene	0.19	Not Detected	0.80	Not Detected
Bromoform	0.19	Not Detected	1.9	Not Detected



Client Sample ID: 9009-125-IA

Lab ID#: 0912306-04A

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

File Name:	e122311	Date of Collection:	12/10/09 9:00:00 AM	
Dil. Factor:	1.87	Date of Analysis:	12/24/09 10:17 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.19	Not Detected	1.3	Not Detected
1,3,5-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,2,4-Trimethylbenzene	0.19	Not Detected	0.92	Not Detected
1,3-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.19	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.19	Not Detected	0.97	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
Hexachlorobutadiene	0.94	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	0.94	Not Detected	4.4	Not Detected
tert-Butyl alcohol	0.94	Not Detected	2.8	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

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



Client Sample ID: 9009-125-IA

Lab ID#: 0912306-04B

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

File Name:	e122311sim	Date of Collection:	12/10/09 9:00:00 AM
Dil. Factor:	1.87	Date of Analysis:	12/24/09 10:17 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Carbon Tetrachloride	0.037	0.078	0.24	0.49

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	106	70-130



Client Sample ID: 9009-130-FH-IA

Lab ID#: 0912306-05A

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

File Name:	e122312	Date of Collection: 12/10/09 9:58:00 AM		
Dil. Factor:	1.83	Date of Analysis: 12/24/09 11:06 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.45	0.90	2.2
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.18	0.48	0.38	1.0
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
Bromomethane	0.18	Not Detected	0.71	Not Detected
Chloroethane	0.18	Not Detected	0.48	Not Detected
Freon 11	0.18	0.23	1.0	1.3
Ethanol	0.92	34 J	1.7	65 J
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.18	0.91	0.54	2.7
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Benzene	0.18	0.23	0.58	0.74
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.69	0.69	2.6
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected



Client Sample ID: 9009-130-FH-IA

Lab ID#: 0912306-05A

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

File Name:	e122312	Date of Collection:	12/10/09 9:58:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 11:06 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.95	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
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
tert-Butyl alcohol	0.92	Not Detected	2.8	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

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



Client Sample ID: 9009-130-FH-IA

Lab ID#: 0912306-05B

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

File Name:	e122312sim	Date of Collection:	12/10/09 9:58:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 11:06 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Carbon Tetrachloride	0.037	0.081	0.23	0.51
Container Type:	6 Liter Summa Canister			
Surrogates	%Recovery	Method Limits		
1,2-Dichloroethane-d4	101	70-130		
Toluene-d8	95	70-130		
4-Bromofluorobenzene	107	70-130		



Client Sample ID: 9009-130-SS-IA

Lab ID#: 0912306-06A

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

File Name:	e122313	Date of Collection: 12/10/09 10:00:00 AM		
Dil. Factor:	1.83	Date of Analysis: 12/24/09 12:23 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.44	0.90	2.2
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.18	0.37	0.38	0.76
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
Bromomethane	0.18	Not Detected	0.71	Not Detected
Chloroethane	0.18	Not Detected	0.48	Not Detected
Freon 11	0.18	0.20	1.0	1.1
Ethanol	0.92	18 J	1.7	34 J
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.18	Not Detected	0.54	Not Detected
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Benzene	0.18	0.21	0.58	0.67
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.37	0.69	1.4
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected



Client Sample ID: 9009-130-SS-IA

Lab ID#: 0912306-06A

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

File Name:	e1222313	Date of Collection:	12/10/09 10:00:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 12:23 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.95	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
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
tert-Butyl alcohol	0.92	Not Detected	2.8	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130



Client Sample ID: 9009-130-SS-IA

Lab ID#: 0912306-06B

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

File Name:	e122313sim	Date of Collection:	12/10/09 10:00:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 12:23 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Carbon Tetrachloride	0.037	0.065	0.23	0.41
Container Type: 6 Liter Summa Canister				Method Limits
Surrogates	%Recovery			
1,2-Dichloroethane-d4	101			70-130
Toluene-d8	95			70-130
4-Bromofluorobenzene	107			70-130



Client Sample ID: 9009-130-SAN-IA

Lab ID#: 0912306-07A

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

File Name:	e122314	Date of Collection: 12/10/09 10:01:00 AM		
Dil. Factor:	1.58	Date of Analysis: 12/24/09 01:14 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.78	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.16	0.34	0.33	0.70
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
Bromomethane	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.16	Not Detected	0.42	Not Detected
Freon 11	0.16	0.17	0.89	0.97
Ethanol	0.79	6.8 J	1.5	13 J
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Hexane	0.16	Not Detected	0.56	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.64	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.16	0.18	0.46	0.53
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloroform	0.16	Not Detected	0.77	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Cyclohexane	0.16	Not Detected	0.54	Not Detected
Benzene	0.16	0.28	0.50	0.91
1,2-Dichloroethane	0.16	Not Detected	0.64	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.73	Not Detected
1,4-Dioxane	0.16	Not Detected	0.57	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	0.50	0.60	1.9
trans-1,3-Dichloropropene	0.16	Not Detected	0.72	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.86	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	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
Styrene	0.16	Not Detected	0.67	Not Detected
Bromoform	0.16	Not Detected	1.6	Not Detected



Client Sample ID: 9009-130-SAN-IA

Lab ID#: 0912306-07A

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

File Name:	e122314	Date of Collection: 12/10/09 10:01:00 AM		
Dil. Factor:	1.58	Date of Analysis: 12/24/09 01:14 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.78	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.95	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.82	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
Hexachlorobutadiene	0.79	Not Detected	8.4	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
tert-Butyl alcohol	0.79	Not Detected	2.4	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: 9009-130-SAN-IA

Lab ID#: 0912306-07B

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

File Name:	e122314sim	Date of Collection:	12/10/09 10:01:00 AM	
Dil. Factor:	1.58	Date of Analysis:	12/24/09 01:14 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.032	0.056	0.20	0.35
Container Type: 6 Liter Summa Canister				
Surrogates	%Recovery	Method Limits		
1,2-Dichloroethane-d4	102	70-130		
Toluene-d8	95	70-130		
4-Bromofluorobenzene	108	70-130		



Client Sample ID: 9009-135-IAX

Lab ID#: 0912306-08A

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

File Name:	e122315	Date of Collection: 12/10/09 10:05:00 AM		
Dil. Factor:	1.83	Date of Analysis: 12/24/09 02:07 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.48	0.90	2.4
Freon 114	0.18	Not Detected	1.3	Not Detected
Chloromethane	0.18	0.34	0.38	0.71
Vinyl Chloride	0.18	Not Detected	0.47	Not Detected
Bromomethane	0.18	Not Detected	0.71	Not Detected
Chloroethane	0.18	Not Detected	0.48	Not Detected
Freon 11	0.18	0.22	1.0	1.2
Ethanol	0.92	1.5 J	1.7	2.8 J
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methylene Chloride	0.37	Not Detected	1.3	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Hexane	0.18	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.74	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.18	0.71	0.54	2.1
cis-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Chloroform	0.18	Not Detected	0.89	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Cyclohexane	0.18	Not Detected	0.63	Not Detected
Benzene	0.18	Not Detected	0.58	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.84	Not Detected
1,4-Dioxane	0.18	Not Detected	0.66	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.75	Not Detected
Toluene	0.18	0.27	0.69	1.0
trans-1,3-Dichloropropene	0.18	Not Detected	0.83	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	1.0	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Dibromochloromethane	0.18	Not Detected	1.6	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Chlorobenzene	0.18	Not Detected	0.84	Not Detected
Ethyl Benzene	0.18	Not Detected	0.79	Not Detected
m,p-Xylene	0.18	Not Detected	0.79	Not Detected
o-Xylene	0.18	Not Detected	0.79	Not Detected
Styrene	0.18	Not Detected	0.78	Not Detected
Bromoform	0.18	Not Detected	1.9	Not Detected



Client Sample ID: 9009-135-IAX

Lab ID#: 0912306-08A

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

File Name:	e122315	Date of Collection:	12/10/09 10:05:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 02:07 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.90	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.95	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
Hexachlorobutadiene	0.92	Not Detected	9.8	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
tert-Butyl alcohol	0.92	Not Detected	2.8	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	108	70-130



Client Sample ID: 9009-135-IAX

Lab ID#: 0912306-08B

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

File Name:	e122315sim	Date of Collection:	12/10/09 10:05:00 AM	
Dil. Factor:	1.83	Date of Analysis:	12/24/09 02:07 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Carbon Tetrachloride	0.037	0.083	0.23	0.52
Container Type: 6 Liter Summa Canister (100% Certified)				
Surrogates	%Recovery	Method Limits		
1,2-Dichloroethane-d4	102	70-130		
Toluene-d8	95	70-130		
4-Bromofluorobenzene	107	70-130		



Client Sample ID: 9009-130-BA

Lab ID#: 0912306-09A

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

File Name:	e122316	Date of Collection: 12/10/09 10:03:00 AM		
Dil. Factor:	1.79	Date of Analysis: 12/24/09 03:01 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.18	0.45	0.88	2.2
Freon 114	0.18	Not Detected	1.2	Not Detected
Chloromethane	0.18	0.35	0.37	0.73
Vinyl Chloride	0.18	Not Detected	0.46	Not Detected
Bromomethane	0.18	Not Detected	0.70	Not Detected
Chloroethane	0.18	Not Detected	0.47	Not Detected
Freon 11	0.18	0.21	1.0	1.2
Ethanol	0.90	2.0 J	1.7	3.9 J
Freon 113	0.18	Not Detected	1.4	Not Detected
1,1-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methylene Chloride	0.36	Not Detected	1.2	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Hexane	0.18	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.18	Not Detected	0.72	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.18	0.64	0.53	1.9
cis-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Chloroform	0.18	Not Detected	0.87	Not Detected
1,1,1-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Cyclohexane	0.18	Not Detected	0.62	Not Detected
Benzene	0.18	Not Detected	0.57	Not Detected
1,2-Dichloroethane	0.18	Not Detected	0.72	Not Detected
1,2-Dichloropropane	0.18	Not Detected	0.83	Not Detected
1,4-Dioxane	0.18	Not Detected	0.64	Not Detected
Bromodichloromethane	0.18	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
4-Methyl-2-pentanone	0.18	Not Detected	0.73	Not Detected
Toluene	0.18	0.25	0.67	0.94
trans-1,3-Dichloropropene	0.18	Not Detected	0.81	Not Detected
1,1,2-Trichloroethane	0.18	Not Detected	0.98	Not Detected
Tetrachloroethene	0.18	Not Detected	1.2	Not Detected
Dibromochloromethane	0.18	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	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
Styrene	0.18	Not Detected	0.76	Not Detected
Bromoform	0.18	Not Detected	1.8	Not Detected



Client Sample ID: 9009-130-BA

Lab ID#: 0912306-09A

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

File Name:	e122316	Date of Collection: 12/10/09 10:03:00 AM		
Dil. Factor:	1.79	Date of Analysis: 12/24/09 03:01 PM		
Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.18	Not Detected	1.2	Not Detected
1,3,5-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,2,4-Trimethylbenzene	0.18	Not Detected	0.88	Not Detected
1,3-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
1,4-Dichlorobenzene	0.18	Not Detected	1.1	Not Detected
alpha-Chlorotoluene	0.18	Not Detected	0.93	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
Hexachlorobutadiene	0.90	Not Detected	9.5	Not Detected
2,2,4-Trimethylpentane	0.90	Not Detected	4.2	Not Detected
tert-Butyl alcohol	0.90	Not Detected	2.7	Not Detected

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	107	70-130



Client Sample ID: 9009-130-BA

Lab ID#: 0912306-09B

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

File Name:	e122316sim	Date of Collection:	12/10/09 10:03:00 AM	
Dil. Factor:	1.79	Date of Analysis:	12/24/09 03:01 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Carbon Tetrachloride	0.036	0.082	0.22	0.52
Container Type: 6 Liter Summa Canister (100% Certified)				Method Limits
Surrogates	%Recovery			
1,2-Dichloroethane-d4	102			70-130
Toluene-d8	95			70-130
4-Bromofluorobenzene	106			70-130