Wickham, Jerry, Env. Health

From: PDKing0000@aol.com

Sent: Thursday, August 14, 2008 6:24 PM

To: Wickham, Jerry, Env. Health

Subject: RO357 Snow Cleaners Soil Gas Sample SG6 Through SG11 Results

Attachments: 0808019_d.pdf; 0298.R6 fig 3 w_PCE in soil gas.pdf

Hi Jerry,

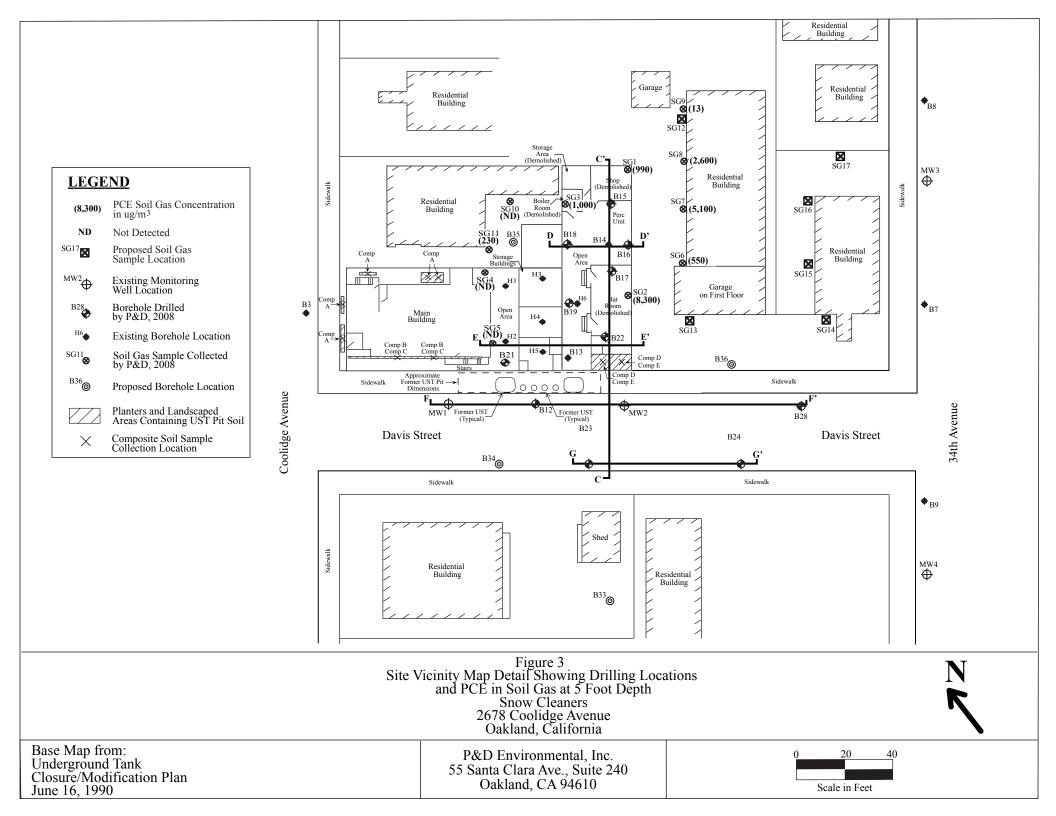
You will find attached the most recent soil gas sample results for Snow Cleaners for samples SG6 through SG11 (document 0808019_d.pdf). You will also find attached a figure (document 0298.R6 fig 3 w PCE in soil gas.pdf) showing the soil gas sample collection locations with PCE results and 6 additional proposed soil gas sample collection locations SG12 through SG17. The only compound detected at concentrations exceeding ESL Table E Residential land use values was PCE at locations SG6, SG7 and SG8. No vinyl chloride was detected. Because large amounts of tracer gas were detected in SG9, soil gas location SG12 is proposed at the SG9 location. To further investigate elevated DCE concentrations historically encountered in well MW2 (3,300 ug/L) and elevated PCE concentrations at location SG2, soil gas samples at SG13 and SG14 are proposed. To further investigate the downgradient extent of PCE in soil gas for downgradient sensitive receptors that was detected in SG6, SG7 and SG8, soil gas samples at locations SG15, SG16 and SG17 are proposed. Soil gas samples will be collected at a depth of 5 feet and analyzed for HVOCs by EPA Method TO-15 (one duplicate sample will be collected and analyzed) in accordance with methods and procedures identified in P&D's most recent subsurface investigation and associated addenda for the subject site.

Although we have continued to request the status of the encroachment permit for the groundwater monitoring wells, we have not yet received word from the City of Oakland on the status of the encroachment permit approval. I anticipate that we will not be able to submit a complete report by the proposed revised report submittal date. I will continue to contact the City of Oakland, and will let you know as soon as I know when we can get the encroachment permit. Once we know when we can get the encroachment permit I will provide a new revised proposed report submittal date.

Please let me know if you have any questions or need any additional information.

Best Regards, Paul King P&D Environmental, Inc. 510-658-6916

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

This electronic report includes the following:

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

WORK ORDER #: 0808019

Work Order Summary

CLIENT: Mr. Paul King BILL TO: Mr. Paul King

P & D Environmental
P & D Environmental
S Santa Clara
Suite 240
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S Santa Clara
Suite 240

Oakland, CA 94610 Oakland, CA 94610

PHONE: 510-658-6916 P.O. #

FAX: 510-834-0772 **PROJECT** # 0298 Snow Cleaners

DATE RECEIVED: 08/01/2008 **CONTACT:** Kyle Vagadori **DATE COMPLETED:** 08/14/2008

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SG6	Modified TO-15	3.0 "Hg	15 psi
02A	SG6-DUP	Modified TO-15	4.5 "Hg	15 psi
03A	SG7	Modified TO-15	4.0 "Hg	15 psi
04A	SG8	Modified TO-15	3.5 "Hg	15 psi
05A	SG9	Modified TO-15	4.0 "Hg	15 psi
06A	SG10	Modified TO-15	4.0 "Hg	15 psi
07A	SG11	Modified TO-15	5.0 "Hg	15 psi
08A	Lab Blank	Modified TO-15	NA	NA
09A	CCV	Modified TO-15	NA	NA
10A	LCS	Modified TO-15	NA	NA

CERTIFIED BY:

Linda d. Fruman

DATE: 08/14/08

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: 07/01/07, Expiration date: 06/30/08

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

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LABORATORY NARRATIVE Modified TO-15 P & D Environmental Workorder# 0808019

Seven 1 Liter Summa Canister samples were received on August 01, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

Requirement	TO-15	ATL Modifications
Daily CCV	= 30% Difference</td <td><!--= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.</td--></td>	= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.</td
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
 - U Compound analyzed for but not detected above the reporting limit.



- UJ- Non-detected compound associated with low bias in the CCV
- N The identification is based on presumptive evidence.

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

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



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

Client Sample	ID:	SG6
---------------	-----	-----

Lab ID#: 0808019-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methylene Chloride	1.1	2.9	3.9	10
Trichloroethene	1.1	6.3	6.0	34
Tetrachloroethene	1.1	81	7.6	550
Toluene	1.1	1.3	4.2	4.9

Client Sample ID: SG6-DUP

Lab ID#: 0808019-02A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Trichloroethene	1.2	3.3	6.4	18
Tetrachloroethene	1.2	31	8.1	210

Client Sample ID: SG7

Lab ID#: 0808019-03A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Trichloroethene	3.1	170	17	920
Tetrachloroethene	3.1	750	21	5100
Benzene	3.1	6.0	9.9	19

Client Sample ID: SG8

Lab ID#: 0808019-04A

	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	
Trichloroethene	2.3	5.6	12	30	
Tetrachloroethene	2.3	390	16	2600	
Benzene	2.3	12	7.3	38	
Toluene	2.3	4.6	8.6	17	
2-Propanol	9.2	280	22	680	

Client Sample ID: SG9

Lab ID#: 0808019-05A

Lau 1D#. 0000017-03A					
	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	



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

Client Sample ID: SG9

Lab ID#: 0808019-05A

	Rpt. Limit	Amount	Rpt. Limit	Amount		
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	_	
Tetrachloroethene	1.9	2.0	13	13		
2-Propanol	7.5	1400 E	18	3400 E		

Client Sample ID: SG10

Lab ID#: 0808019-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	3.5	4.6	14
Benzene	1.2	2.3	3.7	7.4
Toluene	1.2	3.2	4.4	12
Ethyl Benzene	1.2	1.3	5.0	5.5
m,p-Xylene	1.2	6.9	5.0	30
o-Xylene	1.2	3.0	5.0	13

Client Sample ID: SG11

Lab ID#: 0808019-07A

Compound	Rpt. Limit (ppbv)	(ppbv)	(uG/m3)	(uG/m3)
cis-1,2-Dichloroethene	1.2	1.7	4.8	6.8
Trichloroethene	1.2	1.6	6.5	8.8
Tetrachloroethene	1.2	34	8.2	230
Benzene	1.2	3.8	3.9	12
Toluene	1.2	3.9	4.6	15
m,p-Xylene	1.2	3.9	5.2	17
o-Xylene	1.2	1.6	5.2	6.7
2-Propanol	4.8	4.8	12	12



Client Sample ID: SG6 Lab ID#: 0808019-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081307		Date of Collection: 7	7/30/08
Dil. Factor:	2.24		Date of Analysis: 8/1	13/08 02:42 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Methylene Chloride	1.1	2.9	3.9	10
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	6.3	6.0	34
Tetrachloroethene	1.1	81	7.6	550
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
Toluene	1.1	1.3	4.2	4.9
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	82	70-130	
Toluene-d8	86	70-130	
4-Bromofluorobenzene	101	70-130	



Client Sample ID: SG6-DUP Lab ID#: 0808019-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name: Dil. Factor:	8081308 2.38		Date of Collection: 7 Date of Analysis: 8/	
Compound	Rpt. Limit	Amount (ydag)	Rpt. Limit (uG/m3)	Amount (uG/m3)

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Methylene Chloride	1.2	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	3.3	6.4	18
Tetrachloroethene	1.2	31	8.1	210
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected

•		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	83	70-130	
Toluene-d8	87	70-130	
4-Bromofluorobenzene	102	70-130	



Client Sample ID: SG7 Lab ID#: 0808019-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081315	Date of Collection: 7/30/08
Dil. Factor:	6.21	Date of Analysis: 8/13/08 08:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	3.1	Not Detected	7.9	Not Detected
Methylene Chloride	3.1	Not Detected	11	Not Detected
cis-1,2-Dichloroethene	3.1	Not Detected	12	Not Detected
Trichloroethene	3.1	170	17	920
Tetrachloroethene	3.1	750	21	5100
trans-1,2-Dichloroethene	3.1	Not Detected	12	Not Detected
Benzene	3.1	6.0	9.9	19
Toluene	3.1	Not Detected	12	Not Detected
Ethyl Benzene	3.1	Not Detected	13	Not Detected
m,p-Xylene	3.1	Not Detected	13	Not Detected
o-Xylene	3.1	Not Detected	13	Not Detected
2-Propanol	12	Not Detected	30	Not Detected

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Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	83	70-130	
Toluene-d8	88	70-130	
4-Bromofluorobenzene	100	70-130	



Client Sample ID: SG8 Lab ID#: 0808019-04A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081311	Date of Collection: 7/30/08
Dil. Factor:	4.58	Date of Analysis: 8/13/08 05:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	2.3	Not Detected	5.8	Not Detected
Methylene Chloride	2.3	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	2.3	Not Detected	9.1	Not Detected
Trichloroethene	2.3	5.6	12	30
Tetrachloroethene	2.3	390	16	2600
trans-1,2-Dichloroethene	2.3	Not Detected	9.1	Not Detected
Benzene	2.3	12	7.3	38
Toluene	2.3	4.6	8.6	17
Ethyl Benzene	2.3	Not Detected	9.9	Not Detected
m,p-Xylene	2.3	Not Detected	9.9	Not Detected
o-Xylene	2.3	Not Detected	9.9	Not Detected
2-Propanol	9.2	280	22	680

,,,		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	87	70-130	
Toluene-d8	88	70-130	
4-Bromofluorobenzene	102	70-130	



Client Sample ID: SG9 Lab ID#: 0808019-05A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081316	Date of Collection: 7/30/08
Dil. Factor:	3.73	Date of Analysis: 8/13/08 08:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.9	Not Detected	4.8	Not Detected
Methylene Chloride	1.9	Not Detected	6.5	Not Detected
cis-1,2-Dichloroethene	1.9	Not Detected	7.4	Not Detected
Trichloroethene	1.9	Not Detected	10	Not Detected
Tetrachloroethene	1.9	2.0	13	13
trans-1,2-Dichloroethene	1.9	Not Detected	7.4	Not Detected
Benzene	1.9	Not Detected	6.0	Not Detected
Toluene	1.9	Not Detected	7.0	Not Detected
Ethyl Benzene	1.9	Not Detected	8.1	Not Detected
m,p-Xylene	1.9	Not Detected	8.1	Not Detected
o-Xylene	1.9	Not Detected	8.1	Not Detected
2-Propanol	7.5	1400 E	18	3400 E

E = Exceeds instrument calibration range.

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	83	70-130	
Toluene-d8	85	70-130	
4-Bromofluorobenzene	101	70-130	



Client Sample ID: SG10 Lab ID#: 0808019-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081309	Date of Collection: 7/30/08
Dil. Factor:	2.33	Date of Analysis: 8/13/08 04:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Methylene Chloride	1.2	Not Detected	4.0	Not Detected
cis-1,2-Dichloroethene	1.2	3.5	4.6	14
Trichloroethene	1.2	Not Detected	6.3	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Benzene	1.2	2.3	3.7	7.4
Toluene	1.2	3.2	4.4	12
Ethyl Benzene	1.2	1.3	5.0	5.5
m,p-Xylene	1.2	6.9	5.0	30
o-Xylene	1.2	3.0	5.0	13
2-Propanol	4.7	Not Detected	11	Not Detected

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Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	85	70-130	
Toluene-d8	87	70-130	
4-Bromofluorobenzene	99	70-130	



Client Sample ID: SG11 Lab ID#: 0808019-07A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081310	Date of Collection: 7/30/08
Dil. Factor:	2.42	Date of Analysis: 8/13/08 04:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
cis-1,2-Dichloroethene	1.2	1.7	4.8	6.8
Trichloroethene	1.2	1.6	6.5	8.8
Tetrachloroethene	1.2	34	8.2	230
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Benzene	1.2	3.8	3.9	12
Toluene	1.2	3.9	4.6	15
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	3.9	5.2	17
o-Xylene	1.2	1.6	5.2	6.7
2-Propanol	4.8	4.8	12	12

,,,		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	87	70-130	
Toluene-d8	88	70-130	
4-Bromofluorobenzene	103	70-130	



Client Sample ID: Lab Blank Lab ID#: 0808019-08A

MODIFIED EPA METHOD TO-15 GC/MS

File Name: Dil. Factor:	8081304 1.00		Date of Collection: I Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected

Container Type: NA - Not Applicable

2 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	84	70-130	
Toluene-d8	86	70-130	
4-Bromofluorobenzene	96	70-130	



Client Sample ID: CCV Lab ID#: 0808019-09A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/13/08 09:32 AM

Compound	%Recovery
Vinyl Chloride	91
Methylene Chloride	88
cis-1,2-Dichloroethene	89
Trichloroethene	93
Tetrachloroethene	98
trans-1,2-Dichloroethene	93
Benzene	93
Toluene	82
Ethyl Benzene	88
m,p-Xylene	89
o-Xylene	91
2-Propanol	85

Container Type: NA - Not Applicable

21 bb		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	84	70-130	
Toluene-d8	90	70-130	
4-Bromofluorobenzene	103	70-130	



Client Sample ID: LCS Lab ID#: 0808019-10A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	8081303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/13/08 10:00 AM

Compound	%Recovery
Vinyl Chloride	80
Methylene Chloride	81
cis-1,2-Dichloroethene	78
Trichloroethene	82
Tetrachloroethene	85
trans-1,2-Dichloroethene	81
Benzene	80
Toluene	74
Ethyl Benzene	78
m,p-Xylene	78
o-Xylene	81
2-Propanol	75

Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	84	70-130	
Toluene-d8	90	70-130	
4-Bromofluorobenzene	106	70-130	