

October 12, 2010

Project 0147400000

Mr. Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502-6577 **RECEIVED**

11:12 am, Oct 13, 2010

Alameda County
Environmental Health

Subject:

Soil Vapor Investigation Report

Pacific Shops, Inc. 1829 Clement Avenue Alameda, California

SLIC Case No. RO0002624 and GeoTracker Global ID SLT2O00414

Dear Mr. Wickham:

Enclosed please find the *Soil Vapor Investigation Report* for SLIC Case No. RO0002624. This report was prepared by AMEC Geomatrix, Inc. (AMEC) on behalf of Pacific Shops. Considering the data presented in this report and data previously collected at the site and submitted to Alameda County Environmental Health, we request closure of SLIC Case No. RO0002624 without a deed restriction.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely yours,

y

Enclosure: Soil Vapor Investigation Report



October 12, 2010

Project 0147400000

Mr. Sean Svendsen Pacific Shops, Inc. 1829 Clement Avenue Alameda, California 94501

Subject: Soil Vapor Investigation Report

Pacific Shops, Inc. 1829 Clement Avenue Alameda, California

SLIC Case No. RO0002624 and GeoTracker Global ID SLT2O00414

Dear Mr. Svendsen:

AMEC Geomatrix, Inc. (AMEC), has prepared this *Soil Vapor Investigation Report* (report) on behalf of Pacific Shops, Inc. (Pacific Shops), for the property located at 1829 Clement Avenue in Alameda, California (the site; Figure 1). The soil vapor investigation was performed in accordance with the *Soil Vapor Investigation Work Plan* (work plan) dated September 2, 2010,¹ which was conditionally approved by the Alameda County Environmental Health Services Department (ACEH) in a letter to Pacific Shops dated September 7, 2010.²

Based on the results of this investigation presented herein and on the data previously collected at the site and submitted to ACEH, on behalf of Pacific Shops we request closure of SLIC Case No. RO0002624 without a deed restriction.

SCOPE OF WORK

Four soil vapor samples were collected at the locations shown on Figure 2.

Pre-Field Activities

Prior to commencing fieldwork, AMEC performed the following activities:

- Notified ACEH of the work schedule;
- Notified Underground Service Alert (USA) at least 48 hours in advance of beginning field work; and
- Contracted with a private utility locator to survey proposed boring locations for underground utilities.

AMEC Geomatrix, Inc., 2010, Soil Vapor Investigation Work Plan, Pacific Shops, Inc., 1829 Clement Avenue, Alameda, California, SLIC Case No. RO0002624 and GeoTracker Global ID SLT2O00414, September 2.

Alameda County Environmental Health, 2010, SLIC Case No. RO0002624 and Geotracker Global ID SLT2O00414
 Pacific Shops, 1829 Clement Avenue, Alameda, CA 94501 – Email Submittal dated September 7, 2010.



Mr. Sean Svendsen Pacific Shops, Inc. October 12, 2010 Page 2 of 5

Field Methods

AMEC installed and sampled four temporary soil vapor probes on September 10 and 22, 2010, in accordance with the following methodology. The sample locations are shown on Figure 2.

Temporary Vapor Probe Installation

Each probe was installed by Penecore Drilling, of Woodland, California, a California C57-licensed contractor. The soil boring for each probe was advanced using a jackhammer to drive 2.25-inch-outside-diameter stainless steel rods, fitted with a disposable tip, to the desired total depth. Each soil boring was advanced from the floor of the building, through the sub-floor space (approximately 2 to 3 feet), and into the ground below.

Once the total desired depth was reached at each probe location, the drive rods were retracted several inches, leaving the disposable tip in the ground, and new, disposable, \$^1/_4\$-inch-outside-diameter Teflon® tubing, fitted with a filter at the bottom to prevent particulate infiltration, was placed in the boring at approximately 0.5 feet above the bottom of the boring. Approximately 12 inches of filter sand was placed in the bottom of the boring, so that the bottom of the Teflon® tubing was approximately in the middle of the filter sand interval.

Following installation of the filter sand, approximately 1 foot of dry granular bentonite was placed in the boring. The boring was then sealed to the ground surface in approximately 3- to 4-inch lifts with hydrated bentonite. A valve was fitted to the above-ground end of the tubing and remained closed prior to purging and sampling. The rods were slowly retracted as all probe materials were installed in the boring.

Each soil vapor probe was allowed to equilibrate for a minimum of 30 minutes prior to purging and sampling.

The anticipated total depth for each boring was 5 feet below ground surface (bgs), with the probes installed between 4 and 5 feet bgs. However, fine-grained and/or saturated soils were encountered below approximately 4 feet bgs (including water encountered in the tubing at the initial depth [4 to 5 feet bgs] and location of SV-2). AMEC advanced borings SV-1, SV-2 and SV-3 to 5 feet bgs on September 10, 2010, installed soil vapor probes from 4 to 5 feet bgs, and attempted to sample the probes. Due to low-flow conditions and saturated soils, it was not possible to obtain samples. As a result of the subsurface conditions encountered in borings SV-1, SV-2, and SV-3, boring SV-4 was advanced to a total depth of 4 feet bgs, and the probe was installed from 3 to 4 feet bgs. A soil vapor sample was successfully collected from that depth in SV-4 on September 10, 2010.

On September 22, 2010, AMEC returned to the site to advance borings SV-1, SV-2 and SV-3 to shallower depths at locations close to, but at least 5 feet away from, the initial locations. Soil vapor probe SV-1 was installed from 2.5 to 3.5 feet bgs (after a probe installed on September 22, 2010 from 3 to 4 feet bgs failed due to low-flow conditions). Soil vapor probes SV-2 and SV-3 were installed from 3 to 4 feet bgs.



Mr. Sean Svendsen Pacific Shops, Inc. October 12, 2010 Page 3 of 5

Temporary Vapor Probe Purging

Following equilibration, AMEC assembled a soil vapor sampling manifold that allowed each probe to be purged and a soil gas sample to be collected into a 1-liter Summa[™] canister. The manifold included a Summa[™] canister and flow controller, and a three-way valve so that the purge port was not in line with the Summa[™] canister. Canisters and flow controllers were provided by Air Toxics, Ltd. (Air Toxics), of Folsom, California, a California Department of Public Health–accredited laboratory.³

Immediately prior to sampling, the tubing and manifold were purged to clear the tubing and sample train of stagnant or ambient air. Three purge volumes were removed before sampling at each location. One purge volume was calculated in the field based on the volume of the void space in the tubing plus an estimate of the void space in the filter sand interval. The estimated purge volume calculation is presented below.

Estimated purge volume: one purge volume ≈ (internal volume of tubing) + (annular pore space around probe tip)

Approximately 1020 milliliters (mL) of air was purged from each probe prior to sampling. The vapor flow rate during purging was limited to approximately 167 mL per minute (mL/min) using a universal pump calibrated with a volumetric air flow meter.

Temporary Vapor Probe Sampling

Immediately following purging, each soil gas sample was collected into a 1-liter Summa[™] canister, which was equipped with a flow controller that limits the flow rate into the canister to less than 200 mL/minute. The Summa[™] canister was allowed to fill almost completely. Following sampling, the Summa[™] canister was capped with a fitting to prevent ambient air intrusion during shipping, labeled, and stored in a cardboard box prior to being shipped to Air Toxics under AMEC chain-of-custody procedures.

Following sampling, the probe tubing was pulled from each boring, and Penecore Drilling advanced the same-diameter stainless steel rods as used to advance the borings into each boring to displace the bentonite and filter sand. The boring was then backfilled to the ground surface with neat cement grout.

Quality Control Measures

Quality control (QC) measures that were implemented during the soil vapor investigation included leak testing and collection of a duplicate sample.

Leak testing was conducted prior to sampling using a shut-in test at each sampling location. During the shut-in test, a vacuum was created in the sample train, extending to the valve closest to the ground surface, and the vacuum was monitored over a period of several minutes to confirm that it remained stable. All equipment used in collection of the soil vapor samples passed the shut-in test. A tracer compound leak test was not performed during sampling,

³ California laboratory accreditation is not yet available for U.S. EPA Method TO-15; however, samples were shipped to a laboratory that is accredited by the California Environmental Laboratory Accreditation Program (ELAP) for other methods.



Mr. Sean Svendsen Pacific Shops, Inc. October 12, 2010 Page 4 of 5

because it would have been necessary to fill a shroud at the ground surface with a tracer compound, and access to the ground surface via the sub-floor space was not available.

A blind field duplicate sample was collected from soil vapor probe SV-2. The duplicate sample was collected simultaneously with the primary sample, using a laboratory-provided T-joint between the flow controller and two Summa™ canisters. The duplicate sample was labeled with a false identifier (i.e., SV-20) and time, and was stored in the same manner as the primary sample and submitted to the analytical laboratory for the analysis of the same constituents as the primary sample.

Laboratory Analytical Methods

The SUMMA™ canisters were shipped to Air Toxics and were analyzed for VOCs using U.S. Environmental Protection Agency (U.S. EPA) Method TO-15. The laboratory analytical reports and chain-of-custody documents are provided in Attachment A.

RESULTS

Following receipt of the laboratory analytical data, AMEC evaluated the data using guidelines set forth in the *U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.*⁴ Overall, the results of the data quality assessment indicate that the analytical results are valid and useable.

The laboratory analytical results are presented in Table 1. Results were compared to published California Regional Water Quality Control Board, San Francisco Bay Region, environmental screening levels (ESLs) for evaluation of potential vapor intrusion concerns. Where ESLs are available, none of the results exceeded the published ESLs for the residential or commercial/industrial land use scenarios.

The published ESLs for evaluation of potential vapor intrusion concerns are a conservative measure to assess whether constituents detected in soil vapor could potentially pose a risk via the vapor intrusion pathway. Since none of the results exceeded the ESLs for the residential or commercial/industrial land use scenarios, it is unlikely that constituents detected in soil vapor pose a risk via the vapor intrusion pathway.

Considering the data presented herein and data previously collected at the site and submitted to ACEH, on behalf of Pacific Shops we request closure of SLIC Case No. RO0002624 without a deed restriction. In addition, we request approval to destroy the three monitoring wells that are present at the site.

⁴ U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (U.S. EPA 2008)

⁵ California Regional Water Quality Control Board, San Francisco Bay Region, 2008, Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater, Interim Final, Table E-4, Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns using DTSC Attenuation Factors (Residential Exposure and Commercial/Industrial Land Use).



DARREN CROTEAU

No. 7495

Mr. Sean Svendsen Pacific Shops, Inc. October 12, 2010 Page 5 of 5

The published ESLs for evaluation of potential vapor intrusion concerns are a conservative measure to assess whether constituents detected in soil vapor could potentially pose a risk via the vapor intrusion pathway. Since none of the results exceeded the ESLs for the residential or commercial/industrial land use scenarios, it is unlikely that constituents detected in soil vapor pose a risk via the vapor intrusion pathway.

Considering the data presented herein and data previously collected at the site and submitted to ACEH, on behalf of Pacific Shops we request closure of SLIC Case No. RO0002624 without a deed restriction. In addition, we request approval to destroy the three monitoring wells that are present at the site.

Please contact any of the undersigned if you have any questions or require additional information.

Sincerely yours,

AMEC Geomatrix, Inc.

Edward P. Conti, CEG, CHG

Principal Geologist

Robert A. Chur

Robert Cheung

Senior Toxicologist/Risk Assessor

EPC/DC/jd/bfw

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Enclosures:

Table 1

Analytical Results of Detected Volatile Organic Compounds in

Darren Croteau, PG

Senior Geologist

Soil Vapor

Figure 1

Site Location Map

Figure 2

Site Plan and Soil Vapor Sample Locations

Attachment A Laboratory Analytical Reports and Sample Chain-of-Custody

Records



TABLE



TABLE 1

ANALYTICAL RESULTS OF DETECTED VOLATILE ORGANIC COMPOUNDS IN SOIL VAPOR 1

Pacific Shops 1829 Clement Avenue Alameda, California

All concentrations reported in units of micrograms per cubic meter (µg/m³)

Sample ID	Date	Depth (feet bgs)	Analytical Method		Benzene	Bromo- methane	1,3- Butadiene	Carbon Disulfide			Ethanol	Ethyl- benzene	4-Ethyl- toluene			Methylene chloride	,	4-Methyl-2- pentanone	-	Tetra- chloro- ethene	Tetra-hydro- furan	1,2,4- Trimethyl- benzene	Toluene	o- Xylene	m,p- Xylene
SV-1	9/22/2010	3.0	TO-15	100	16	<4.3	11	7.6	<5.4	6.8	9.1	<4.8	<5.4	<4.5	5.6	<3.8	21	56	<11	10	<3.2	<5.4	8.8	<4.8	<4.8
SV-20	9/22/2010	3.5	TO-15	230	9.8	9.0	14	31	54	4.1	21	<4.7	<5.3	8.7	12	4.7	54	42	13	<7.3	<3.2	<5.3	7.5	<4.7	<4.7
SV-2	9/22/2010	3.5	TO-15	230	12	8.2	12	30	52	7.4	20	<4.7	<5.3	8.6	11	5.0	54	38	<11	<7.3	3.5	<5.3	12	<4.7	5.2
SV-3	9/22/2010	3.5	TO-15	75	10	<4.2	8.1	10	17	<3.7	47	<4.8	<5.4	<4.5	4.6	<3.8	14	29	<11	<7.5	<3.2	<5.4	7.8	<4.8	6.3
SV-4	9/10/2010	3.5	TO-15	110	11	8.7	22	19	290	8.4	15	5.9	9.2	12	17	5.1	23	70	<11	<7.6	3.6	11	25	7.1	19
R	esidential Exp	osure ESL (D	TSC AF) ²	3.30E+04	4.20E+01	5.20E+02						4.90E+02				2.60E+03	5.20E+05			2.10E+02			3.10E+04	1.00E+04	1.00E+04
Co	mmercial/Indu	ustrial ESL (D	TSC AF) ³	9.20E+05	1.40E+02	1.50E+03						1.60E+03				8.70E+03	1.50E+06			6.90E+02			8.80E+04	2.90E+04	2.90E+04

Notes

- 1. Each soil vapor sample was collected into SummaTM canisters by AMEC Geomatrix, Inc., and analyzed using U.S. EPA Method TO-15 by Air Toxics.
- 2. Residential Exposure Environmental Screening Level (ESL), Update to Environmental Screening Levels for Sites with Impacted Soil and Groundwater, Water Board, May 2008, Table E-4 Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns using DTSC Attenuation Factors.
- 3. Commercial/Industrial Environmental Screening Level (ESL), Update to Environmental Screening Levels for Sites with Impacted Soil and Groundwater, Water Board, May 2008, Table E-4 Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns using DTSC Attenuation Factors.

Abbreviations

- -- = No ESL available
- < = Not detected at or above the laboratory reporting limit shown

AF = Attenuation Factor

Air Toxics = Air Toxics, Limited, of Folsom, California

bgs = below ground surface

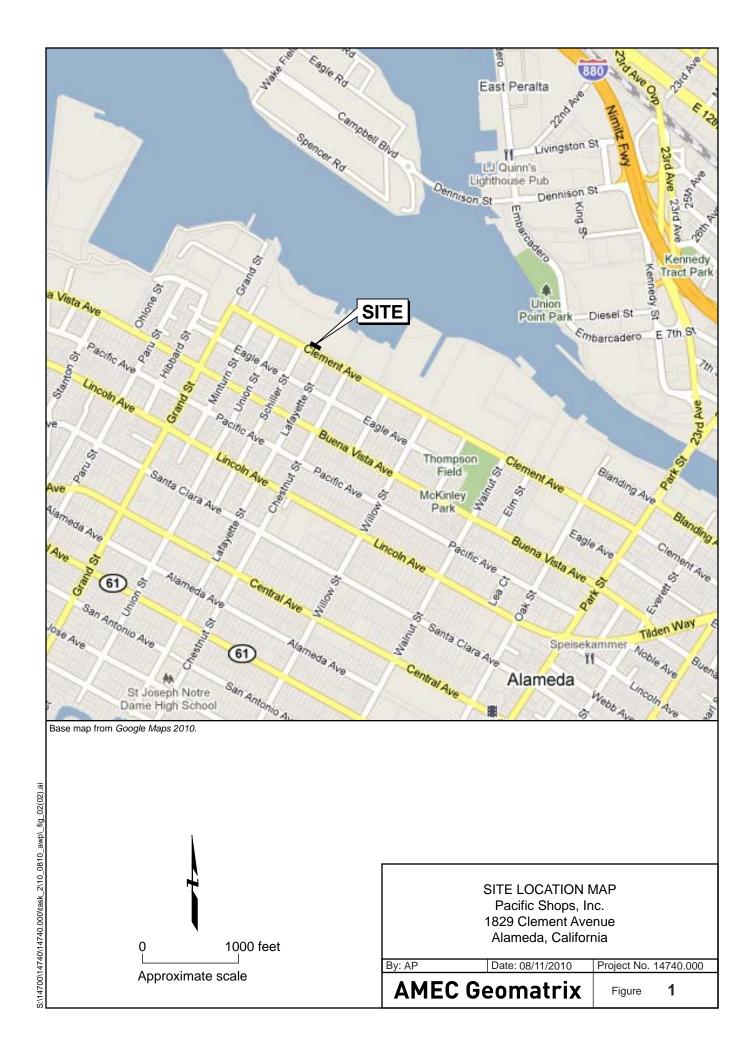
DTSC = Department of Toxic Substances Control

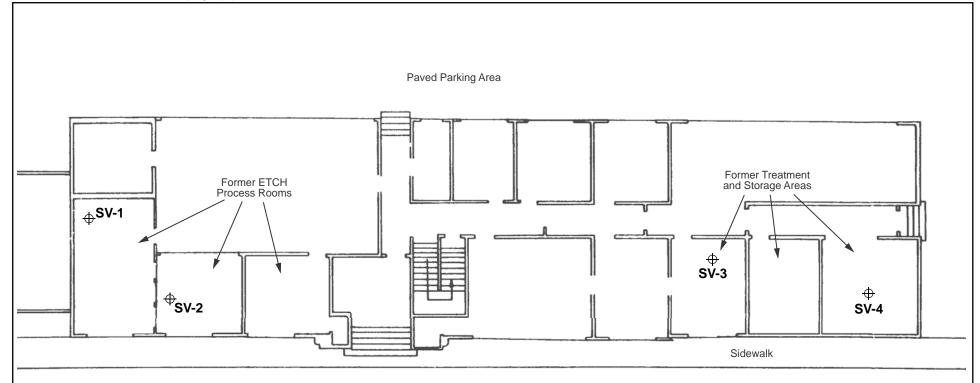
U.S. EPA = U.S. Environmental Protection Agency

Water Board = California Regional Water Quality Control Board, San Francisco Bay Region



FIGURES





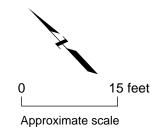
Clement Avenue

LEGEND

Approximate location of soil vapor sample

Note:

Base map from Kaldveer Associates, Soil Cleanup Report, dated July 18, 1990.



SITE PLAN AND SOIL VAPOR SAMPLE LOCATIONS Pacific Shops, Inc. 1829 Clement Avenue Alameda, California

By: AP Date: 08/30/2010 Project No. 14740.000

AMEC Geomatrix

Figure

2



ATTACHMENT A

Laboratory Analytical Reports and Sample Chain-of-Custody Records



10/8/2010
Ms. Avery Patton
AMEC Geomatrix Consultants
2101 Webster Street, 12th Floor

Oakland CA 94612

Project Name: Pacific Shops Project #: 01474700000 Workorder #: 1009510R1

Dear Ms. Avery Patton

The following report includes the data for the above referenced project for sample(s) received on 9/23/2010 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: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

Kya Vych



WORK ORDER #: 1009510R1

Work Order Summary

CLIENT: Ms. Avery Patton BILL TO: Accounts Payable - Bothell

> **AMEC Geomatrix Consultants AMEC Geomatrix Consultants** 2101 Webster Street, 12th Floor 11810 North Creek Parkway North

Oakland, CA 94612 Bothell, WA 98011

PHONE: **P.O.** # 510-663-4100

09/30/2010

FAX: 510-663-4141 PROJECT # 01474700000 Pacific Shops

DATE RECEIVED: 09/23/2010 Kyle Vagadori **CONTACT:** DATE COMPLETED:

DATE REISSUED: 10/08/2010

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SV-1	Modified TO-15	2.4 "Hg	15 psi
02A	SV-20	Modified TO-15	2.0 "Hg	15 psi
03A	SV-2	Modified TO-15	2.0 "Hg	15 psi
04A	SV-3	Modified TO-15	2.4 "Hg	15 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:

Sinda d. Fruman

10/08/10 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, 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: 06/30/11

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

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.



LABORATORY NARRATIVE EPA Method TO-15 AMEC Geomatrix Consultants Workorder# 1009510R1

Four 1 Liter Summa Canister samples were received on September 22, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

THE WORK ORDER WAS REISSUED ON OCTOBER 08, 2010 TO CORRECT IDENTIFICATION OF THE FOLLOWING SAMPLE SV-2.

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



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

Client Sample ID: SV-1 Lab ID#: 1009510R1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	5.1	2.4	11
Ethanol	4.4	4.8	8.3	9.1
Acetone	4.4	44	10	100
Carbon Disulfide	1.1	2.4	3.4	7.6
Hexane	1.1	1.6	3.9	5.6
2-Butanone (Methyl Ethyl Ketone)	1.1	7.1	3.2	21
Cyclohexane	1.1	2.0	3.8	6.8
Benzene	1.1	4.8	3.5	16
4-Methyl-2-pentanone	1.1	14	4.5	56
Toluene	1.1	2.3	4.1	8.8
Tetrachloroethene	1.1	1.5	7.5	10

Client Sample ID: SV-20 Lab ID#: 1009510R1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	6.2	2.4	14
Bromomethane	1.1	2.3	4.2	9.0
Ethanol	4.3	11	8.1	21
Acetone	4.3	98	10	230
2-Propanol	4.3	5.4	11	13
Carbon Disulfide	1.1	10	3.4	31
Methylene Chloride	1.1	1.4	3.8	4.7
Hexane	1.1	3.5	3.8	12
2-Butanone (Methyl Ethyl Ketone)	1.1	18	3.2	54
Chloroform	1.1	11	5.3	54
Cyclohexane	1.1	1.2	3.7	4.1
Benzene	1.1	3.0	3.4	9.8
Heptane	1.1	2.1	4.4	8.7
4-Methyl-2-pentanone	1.1	10	4.4	42
Toluene	1.1	2.0	4.1	7.5



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

Client Sample ID: SV-2 Lab ID#: 1009510R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	5.4	2.4	12
Bromomethane	1.1	2.1	4.2	8.2
Ethanol	4.3	11	8.1	20
Acetone	4.3	96	10	230
Carbon Disulfide	1.1	9.5	3.4	30
Methylene Chloride	1.1	1.4	3.8	5.0
Hexane	1.1	3.2	3.8	11
2-Butanone (Methyl Ethyl Ketone)	1.1	18	3.2	54
Tetrahydrofuran	1.1	1.2	3.2	3.5
Chloroform	1.1	11	5.3	52
Cyclohexane	1.1	2.1	3.7	7.4
Benzene	1.1	3.7	3.4	12
Heptane	1.1	2.1	4.4	8.6
4-Methyl-2-pentanone	1.1	9.2	4.4	38
Toluene	1.1	2.1	4.1	7.8
m,p-Xylene	1.1	1.2	4.7	5.2

Client Sample ID: SV-3 Lab ID#: 1009510R1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	3.7	2.4	8.1
Ethanol	4.4	25	8.3	47
Acetone	4.4	32	10	75
Carbon Disulfide	1.1	3.2	3.4	10
Hexane	1.1	1.3	3.9	4.6
2-Butanone (Methyl Ethyl Ketone)	1.1	4.8	3.2	14
Chloroform	1.1	3.5	5.4	17
Benzene	1.1	3.2	3.5	10
4-Methyl-2-pentanone	1.1	7.1	4.5	29
Toluene	1.1	3.2	4.1	12



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

Client Sample ID: SV-3 Lab ID#: 1009510R1-04A

m,p-Xylene 1.1 1.4 4.8 6.3



Client Sample ID: SV-1 Lab ID#: 1009510R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092827
 Date of Collection:
 9/22/10 1:20:00 PM

 Dil. Factor:
 2.20
 Date of Analysis:
 9/29/10 08:07 AM

DII. Factor:	2.20	Date	Date of Analysis: 9/29/10 08:07 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)	
Freon 12	1.1	Not Detected	5.4	Not Detected	
Freon 114	1.1	Not Detected	7.7	Not Detected	
Chloromethane	4.4	Not Detected	9.1	Not Detected	
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected	
1,3-Butadiene	1.1	5.1	2.4	11	
Bromomethane	1.1	Not Detected	4.3	Not Detected	
Chloroethane	1.1	Not Detected	2.9	Not Detected	
Freon 11	1.1	Not Detected	6.2	Not Detected	
Ethanol	4.4	4.8	8.3	9.1	
Freon 113	1.1	Not Detected	8.4	Not Detected	
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected	
Acetone	4.4	44	10	100	
2-Propanol	4.4	Not Detected	11	Not Detected	
Carbon Disulfide	1.1	2.4	3.4	7.6	
3-Chloropropene	4.4	Not Detected	14	Not Detected	
Methylene Chloride	1.1	Not Detected	3.8	Not Detected	
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected	
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected	
Hexane	1.1	1.6	3.9	5.6	
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	1.1	7.1	3.2	21	
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected	
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected	
Chloroform	1.1	Not Detected	5.4	Not Detected	
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected	
Cyclohexane	1.1	2.0	3.8	6.8	
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected	
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected	
Benzene	1.1	4.8	3.5	16	
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
Heptane	1.1	Not Detected	4.5	Not Detected	
Trichloroethene	1.1	Not Detected	5.9	Not Detected	
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected	
1,4-Dioxane	4.4	Not Detected	16	Not Detected	
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected	
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected	
4-Methyl-2-pentanone	1.1	14	4.5	56	
Toluene	1.1	2.3	4.1	8.8	
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected	
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected	
Tetrachloroethene	1.1	1.5	7.5	10	
i etiacilioroetilene	1.1	1.0	i.5	10	



Client Sample ID: SV-1 Lab ID#: 1009510R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092827
 Date of Collection:
 9/22/10 1:20:00 PM

 Dil. Factor:
 2.20
 Date of Analysis:
 9/29/10 08:07 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)		
2-Hexanone	4.4	Not Detected	18	Not Detected		
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected		
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected		
Chlorobenzene	1.1	Not Detected	5.1	Not Detected		
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected		
m,p-Xylene	1.1	Not Detected	4.8	Not Detected		
o-Xylene	1.1	Not Detected	4.8	Not Detected		
Styrene	1.1	Not Detected	4.7	Not Detected		
Bromoform	1.1	Not Detected	11	Not Detected		
Cumene	1.1	Not Detected	5.4	Not Detected		
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected		
Propylbenzene	1.1	Not Detected	5.4	Not Detected		
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected		
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected		
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected		
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected		
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected		
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected		
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected		
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected		
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected		

Container Type: 1 Liter Summa Canister

		Method		
Surrogates	%Recovery	Limits		
Toluene-d8	98	70-130		
1,2-Dichloroethane-d4	102	70-130		
4-Bromofluorobenzene	99	70-130		



Client Sample ID: SV-20 Lab ID#: 1009510R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092828
 Date of Collection: 9/22/10 11:15:00 AM

 Dil. Factor:
 2.16
 Date of Analysis: 9/29/10 08:40 AM

DII. Factor:	2.16	Date	Date of Analysis: 9/29/10 08:40 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)	
Freon 12	1.1	Not Detected	5.3	Not Detected	
Freon 114	1.1	Not Detected	7.6	Not Detected	
Chloromethane	4.3	Not Detected	8.9	Not Detected	
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected	
1,3-Butadiene	1.1	6.2	2.4	14	
Bromomethane	1.1	2.3	4.2	9.0	
Chloroethane	1.1	Not Detected	2.8	Not Detected	
Freon 11	1.1	Not Detected	6.1	Not Detected	
Ethanol	4.3	11	8.1	21	
Freon 113	1.1	Not Detected	8.3	Not Detected	
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected	
Acetone	4.3	98	10	230	
2-Propanol	4.3	5.4	11	13	
Carbon Disulfide	1.1	10	3.4	31	
3-Chloropropene	4.3	Not Detected	14	Not Detected	
Methylene Chloride	1.1	1.4	3.8	4.7	
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected	
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected	
Hexane	1.1	3.5	3.8	12	
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	1.1	18	3.2	54	
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected	
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected	
Chloroform	1.1	11	5.3	54	
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected	
Cyclohexane	1.1	1.2	3.7	4.1	
Carbon Tetrachloride	1.1	Not Detected	6.8	Not Detected	
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected	
Benzene	1.1	3.0	3.4	9.8	
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
Heptane	1.1	2.1	4.4	8.7	
Trichloroethene	1.1	Not Detected	5.8	Not Detected	
1,2-Dichloropropane	1.1	Not Detected	5.0	Not Detected	
1,4-Dioxane	4.3	Not Detected	16	Not Detected	
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected	
cis-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected	
4-Methyl-2-pentanone	1.1	10	4.4	42	
Toluene	1.1	2.0	4.1	7.5	
trans-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected	
1,1,2-Trichloroethane	1.1	Not Detected	5.9	Not Detected	
Tetrachloroethene	1.1	Not Detected	7.3	Not Detected	



Client Sample ID: SV-20 Lab ID#: 1009510R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092828
 Date of Collection:
 9/22/10 11:15:00 AM

 Dil. Factor:
 2.16
 Date of Analysis:
 9/29/10 08:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	4.3	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.2	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.3	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	1.1	Not Detected	4.7	Not Detected
o-Xylene	1.1	Not Detected	4.7	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.3	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.4	Not Detected
Propylbenzene	1.1	Not Detected	5.3	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.3	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.6	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

Container Type: 1 Liter Summa Canister

		Method
Surrogates	%Recovery	Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: SV-2 Lab ID#: 1009510R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092829
 Date of Collection: 9/22/10 12:30:00 PM

 Dil. Factor:
 2.16
 Date of Analysis: 9/29/10 09:04 AM

DII. Factor:	2.16	Date of Analysis: 9/29/10 09:04 AM		
0	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.6	Not Detected
Chloromethane	4.3	Not Detected	8.9	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	5.4	2.4	12
Bromomethane	1.1	2.1	4.2	8.2
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	1.1	Not Detected	6.1	Not Detected
Ethanol	4.3	11	8.1	20
Freon 113	1.1	Not Detected	8.3	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Acetone	4.3	96	10	230
2-Propanol	4.3	Not Detected	11	Not Detected
Carbon Disulfide	1.1	9.5	3.4	30
3-Chloropropene	4.3	Not Detected	14	Not Detected
Methylene Chloride	1.1	1.4	3.8	5.0
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Hexane	1.1	3.2	3.8	11
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	18	3.2	54
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrahydrofuran	1.1	1.2	3.2	3.5
Chloroform	1.1	11	5.3	52
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Cyclohexane	1.1	2.1	3.7	7.4
Carbon Tetrachloride	1.1	Not Detected	6.8	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	3.7	3.4	12
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	2.1	4.4	8.6
Trichloroethene	1.1	Not Detected	5.8	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.0	Not Detected
1,4-Dioxane	4.3	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
4-Methyl-2-pentanone	1.1	9.2	4.4	38
Toluene	1.1	2.1	4.1	7.8
trans-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Tetrachloroethene	1.1	Not Detected	7.3	Not Detected
I GUACHIOLOGUICHE	1.1	INOL DELECTED	1.5	INOL DELECTE



Client Sample ID: SV-2 Lab ID#: 1009510R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092829
 Date of Collection:
 9/22/10 12:30:00 PM

 Dil. Factor:
 2.16
 Date of Analysis:
 9/29/10 09:04 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	4.3	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.2	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.3	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	1.1	1.2	4.7	5.2
o-Xylene	1.1	Not Detected	4.7	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.3	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.4	Not Detected
Propylbenzene	1.1	Not Detected	5.3	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.3	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.6	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

Container Type: 1 Liter Summa Canister

••		Method
Surrogates	%Recovery	Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: SV-3 Lab ID#: 1009510R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092830
 Date of Collection:
 9/22/10 4:01:00 PM

 Dil. Factor:
 2.20
 Date of Analysis:
 9/29/10 09:30 AM

DII. Factor:	2.20	Date of Analysis: 9/29/10 09:30 AM		
0	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	4.4	Not Detected	9.1	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	3.7	2.4	8.1
Bromomethane	1.1	Not Detected	4.3	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	4.4	25	8.3	47
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.4	32	10	75
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	1.1	3.2	3.4	10
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	1.3	3.9	4.6
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	4.8	3.2	14
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	3.5	5.4	17
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	3.2	3.5	10
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	7.1	4.5	29
Toluene	1.1	3.2	4.1	12
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected



Client Sample ID: SV-3 Lab ID#: 1009510R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 3092830
 Date of Collection:
 9/22/10 4:01:00 PM

 Dil. Factor:
 2.20
 Date of Analysis:
 9/29/10 09:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	4.4	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	1.1	1.4	4.8	6.3
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected

Container Type: 1 Liter Summa Canister

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



Client Sample ID: Lab Blank Lab ID#: 1009510R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092807 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/28/10 05:43 PM

Dil. Factor:	1.00	Date of Analysis: 9/28/10 05:43 PM		
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected



Client Sample ID: Lab Blank Lab ID#: 1009510R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092807 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/28/10 05:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	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
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: CCV Lab ID#: 1009510R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092802 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/28/10 03:03 PM

Freon 114 103 Chloromethane 114 Winyl Chloride 114 1,3-Butadiene 99 Bromomethane 107 Chloroethane 107 Freon 11 102 Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethene 99 1-Sebutanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 1-Eertanydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethene 192	Compound	%Recovery
Chloromethane 114 Vinyl Chloride 114 Vinyl Chloride 199 Bromomethane 112 Chloroethane 107 Freon 11 102 Elthanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethene 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 95 Cyclohexane 95 Cyclohexane 92 2,2-4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Helptane 98 Trichloroethene 99 1,2-Dichloroprop	Freon 12	113
Vinyl Chloride 114 1,3-Butadiene 99 Bromomethane 112 Chloroethane 107 Freon 11 102 Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methylene Chloride 110 Methylene Chloride 110 Methylene Chloride 19 1-2-Dichloroethene 99 2-Butanone (Methyl Ethyl Ketone) 98 2-3-1-2-Dichloroethene 99 2-Butanone (Methyl Ethyl Ketone) 98 2-3-1-7-Irichloroethane 95 Cyclohoxane 95 Cyclohoxane 95 Cyclohoxane 99 2-2,2-4-Trimethylpentane 98 Benzene 102 1,2-Dichloroethane 103 1,2-Dichloropropane 104	Freon 114	103
1,3-Butadiene 99 Brommethane 112 Chloroethane 107 Freon 11 102 Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyle Intributyle ther 94 Itans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 sis-1,2-Dichloroethene 99 Etratahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Czyclohexane 92 Carbon Tetrachloride 95 Sc2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 96 Tirchloroethane 103 Erichloroethane 103 Bromodichloromethane	Chloromethane	114
Trick Tric	Vinyl Chloride	114
Chloroethane 107 Freon 11 102 Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Fetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 92-Bezene 102 1,2-Dichloroethane 104 Heptane 99 Trichloroethene 99 1,2-Dichloropropene 100 4-Methyl-2-pentanone 99 Ermans-1,3-D	1,3-Butadiene	99
Freon 11 102 Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 vis-1,2-Dichloroethene 99 2-Butanone (Methyl Ethyl Ketone) 98 vis-1,2-Dichloroethene 99 Cyclohexane 95 Cyclohexane 95 Cyclohexane 95 Cyclohexane 99 Benzene 102 4,2-Dichloroethane 104 Heptane 98 1,2-Dichloropropane 10 4,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 <td>Bromomethane</td> <td>112</td>	Bromomethane	112
Ethanol 117 Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 110 3-Chloropropene 106 Methylere Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Czarbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 99 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 98 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone	Chloroethane	107
Freon 113 100 1,1-Dichloroethene 105 Acetone 102 2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 100 4-Methyl-2-pentanone 96 browsen 100 4-Methyl-2-pentanone 93 Toluene 99 </td <td>Freon 11</td> <td>102</td>	Freon 11	102
1,1-Dichloroethene 105 Acetone 102 2-Exton Disulfide 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 100 1,4-Dioxane 100 Bromodichloromethane 100 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 99 Totuene 99 Trichloroethane 103 <	Ethanol	117
Acetone 102 2-Propanol 105 Carbon Disulfide 105 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 100 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 99 Toluene 99 Transans-1,3-Dichloroptopene	Freon 113	100
2-Propanol 105 Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 99 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	1,1-Dichloroethene	105
Carbon Disulfide 111 3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 19 1,2-Dichloropropane 96 1,4-Dioxane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 98 Toluene 99 trans-1,3-Dichloroptopene 99	Acetone	102
3-Chloropropene 106 Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bronodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 99 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103 1,1,2-Trichloroethane 103	2-Propanol	105
Methylene Chloride 110 Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,1-Dichloropropene 103 trans-1,1-Dichloropropene 103 trans-1,1-Dichloropropene 103 trans-1,1-Dichloropropene 103 trans-1,1-Dichloropropene 104	Carbon Disulfide	111
Methyl tert-butyl ether 94 trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 103 4-Methyl-2-pentanone 99 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103 1,1,2-Trichloroethane 101	3-Chloropropene	106
trans-1,2-Dichloroethene 102 Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Methylene Chloride	110
Hexane 96 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 99 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 101	Methyl tert-butyl ether	94
1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 taras-1,3-Dichloropropene 103 taras-1,3-Dichloropropene 104 taras-1,3-Dichloropropene 105	trans-1,2-Dichloroethene	102
2-Butanone (Methyl Ethyl Ketone) 98 cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	Hexane	96
cis-1,2-Dichloroethene 99 Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103 1,1,2-Trichloroethane 103	1,1-Dichloroethane	99
Tetrahydrofuran 97 Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103 1,1,2-Trichloroethane 101	2-Butanone (Methyl Ethyl Ketone)	98
Chloroform 101 1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	cis-1,2-Dichloroethene	99
1,1,1-Trichloroethane 95 Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	Tetrahydrofuran	97
Cyclohexane 92 Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	Chloroform	101
Carbon Tetrachloride 95 2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 103	1,1,1-Trichloroethane	95
2,2,4-Trimethylpentane 99 Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Cyclohexane	92
Benzene 102 1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Carbon Tetrachloride	95
1,2-Dichloroethane 104 Heptane 98 Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	2,2,4-Trimethylpentane	99
Heptane 98	Benzene	102
Trichloroethene 99 1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	1,2-Dichloroethane	104
1,2-Dichloropropane 96 1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Heptane	98
1,4-Dioxane 100 Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Trichloroethene	99
Bromodichloromethane 103 cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	1,2-Dichloropropane	96
cis-1,3-Dichloropropene 100 4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	1,4-Dioxane	100
4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	Bromodichloromethane	103
4-Methyl-2-pentanone 93 Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	cis-1,3-Dichloropropene	100
Toluene 99 trans-1,3-Dichloropropene 103 1,1,2-Trichloroethane 101	4-Methyl-2-pentanone	
1,1,2-Trichloroethane 101	Toluene	99
1,1,2-Trichloroethane 101	trans-1,3-Dichloropropene	103
	Tetrachloroethene	100



Client Sample ID: CCV Lab ID#: 1009510R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092802 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/28/10 03:03 PM

Compound	%Recovery
2-Hexanone	100
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	101
Chlorobenzene	100
Ethyl Benzene	97
m,p-Xylene	98
o-Xylene	98
Styrene	101
Bromoform	103
Cumene	101
1,1,2,2-Tetrachloroethane	100
Propylbenzene	100
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	97
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: LCS Lab ID#: 1009510R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092803 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/28/10 03:37 PM

Compound	%Recovery
Freon 12	110
Freon 114	102
Chloromethane	108
Vinyl Chloride	109
1,3-Butadiene	100
Bromomethane	118
Chloroethane	112
Freon 11	102
Ethanol	103
Freon 113	93
1,1-Dichloroethene	91
Acetone	94
2-Propanol	98
Carbon Disulfide	105
3-Chloropropene	102
Methylene Chloride	97
Methyl tert-butyl ether	97
trans-1,2-Dichloroethene	99
Hexane	97
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	99
Tetrahydrofuran	99
Chloroform	100
1,1,1-Trichloroethane	98
Cyclohexane	96
Carbon Tetrachloride	99
2,2,4-Trimethylpentane	100
Benzene	103
1,2-Dichloroethane	102
Heptane	100
Trichloroethene	101
1,2-Dichloropropane	98
1,4-Dioxane	102
Bromodichloromethane	104
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	96
Toluene	97
trans-1,3-Dichloropropene	107
1,1,2-Trichloroethane	105
Tetrachloroethene	103



Client Sample ID: LCS Lab ID#: 1009510R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092803 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/28/10 03:37 PM

Compound	%Recovery
2-Hexanone	105
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	103
m,p-Xylene	104
o-Xylene	103
Styrene	107
Bromoform	110
Cumene	103
1,1,2,2-Tetrachloroethane	106
Propylbenzene	103
4-Ethyltoluene	102
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	107

Container Type: NA - Not Applicable

		Method Limits		
Surrogates	%Recovery			
Toluene-d8	97	70-130		
1,2-Dichloroethane-d4	100	70-130		
4-Bromofluorobenzene	99	70-130		



Client Sample ID: LCSD Lab ID#: 1009510R1-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092804 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/28/10 04:01 PM

Freen 114 104 Chloromethane 106 Winyl Chloride 101 1,3-Butadiene 103 Bromomethane 103 Chloroethane 95 Freon 11 107 Ethanol 97 Freon 113 98 1,1-Dichloroethene 91 Acetone 92 2-Propanol 99 Carbon Disulfide 103 3-C-Chloropropene 103 Methyl tert-butyl ether 104 trans-1,2-Dichloroethene 93 Methyl tert-butyl ether 104 trans-1,2-Dichloroethene 99 Hexane 103 1,1-Dichloroethane 99 2-Buanone (Methyl Ethyl Ketone) 102 cis-1,2-Dichloroethane 104 Cyclohexane 104 Cyclohexane 102 Carbon Tetrachloride 105 Benzene 104 1,2-Dichloroethane 106 Benzene 104 <t< th=""><th>Compound</th><th>%Recovery</th></t<>	Compound	%Recovery
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Heptane	Benzene	104
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4-Methyl-2-pentanone 98 Toluene 100 trans-1,3-Dichloropropene 105 1,1,2-Trichloroethane 105	cis-1,3-Dichloropropene	104
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1,1,2-Trichloroethane	trans-1,3-Dichloropropene	105
		105
	Tetrachloroethene	103



Client Sample ID: LCSD Lab ID#: 1009510R1-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 3092804 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/28/10 04:01 PM

Compound	%Recovery
2-Hexanone	104
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	103
m,p-Xylene	104
o-Xylene	104
Styrene	106
Bromoform	108
Cumene	104
1,1,2,2-Tetrachloroethane	107
Propylbenzene	105
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	104
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	107
alpha-Chlorotoluene	105
1,2-Dichlorobenzene	105
1,2,4-Trichlorobenzene	106
Hexachlorobutadiene	110

Container Type: NA - Not Applicable

		Method Limits		
Surrogates	%Recovery			
Toluene-d8	99	70-130		
1,2-Dichloroethane-d4	101	70-130		
4-Bromofluorobenzene	98	70-130		



CHAIN-OF-CUSTODY RECORD

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

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

Page ____ of __/_

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Collected b	py: (Print and Sign) Avery Patton U			P.O. #		·	☐ Norma			9/23	
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Phone <u>57</u>	0-663-4100 Fax 570-663	3-4141	_	Project	Name <u>fact</u>	tic snops	specify	/	((N_2) H	
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10/12/2010
Ms. Avery Patton
AMEC Geomatrix Consultants
2101 Webster Street, 12th Floor

Oakland CA 94612

Project Name: Pacific Shops

Project #: 0147400000 Workorder #: 1009238R1

Dear Ms. Avery Patton

The following report includes the data for the above referenced project for sample(s) received on 9/13/2010 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: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

Kya Vych



WORK ORDER #: 1009238R1

Work Order Summary

CLIENT: Ms. Avery Patton BILL TO: Accounts Payable - Bothell

AMEC Geomatrix Consultants
2101 Webster Street, 12th Floor

AMEC Geomatrix Consultants
11810 North Creek Parkway North

Oakland, CA 94612 Bothell, WA 98011

PHONE: 510-663-4100 **P.O.** #

FAX: 510-663-4141 **PROJECT** # 0147400000 Pacific Shops

DATE RECEIVED: 09/13/2010 **CONTACT:** Kyle Vagadori

DATE COMPLETED: 09/15/2010 **DATE REISSUED:** 10/12/2010

			KECEH I	LIMAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	PRESSURE
01A(on hold)	SV-1	Modified TO-15	16.0 "Hg	15 psi
02A(on hold)	SV-2	Modified TO-15	16.0 "Hg	15 psi
03A	SV-4	Modified TO-15	3.0 "Hg	15 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: $\frac{10/12/10}{10}$

DECEIDT

ETNIAT

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP - AI 30763, 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: 06/30/11

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 EPA Method TO-15 AMEC Geomatrix Consultants Workorder# 1009238R1

Three 1 Liter Summa Canister samples were received on September 13, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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.

Receiving Notes

Samples SV-1 and SV-2 were placed on hold per the client's request.

Analytical Notes

There were no analytical discrepancies.

THE WORK ORDER WAS RE-ISSUED ON 10/12/2010 TO REMOVE AN INCORRECT RECEIVING NARRATIVE.

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



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

Client Sample ID: SV-4 Lab ID#: 1009238R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	9.9	2.5	22
Bromomethane	1.1	2.2	4.3	8.7
Ethanol	4.5	8.1	8.4	15
Acetone	4.5	46	11	110
Carbon Disulfide	1.1	6.2	3.5	19
Methylene Chloride	1.1	1.5	3.9	5.1
Hexane	1.1	4.8	3.9	17
2-Butanone (Methyl Ethyl Ketone)	1.1	8.0	3.3	23
Tetrahydrofuran	1.1	1.2	3.3	3.6
Chloroform	1.1	59	5.5	290
Cyclohexane	1.1	2.4	3.8	8.4
Benzene	1.1	3.5	3.6	11
Heptane	1.1	2.9	4.6	12
4-Methyl-2-pentanone	1.1	17	4.6	70
Toluene	1.1	6.6	4.2	25
Ethyl Benzene	1.1	1.4	4.9	5.9
m,p-Xylene	1.1	4.5	4.9	19
o-Xylene	1.1	1.6	4.9	7.1
4-Ethyltoluene	1.1	1.9	5.5	9.2
1,2,4-Trimethylbenzene	1.1	2.2	5.5	11



Client Sample ID: SV-4 Lab ID#: 1009238R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 p091409
 Date of Collection:
 9/10/10 2:49:00 PM

 Dil. Factor:
 2.24
 Date of Analysis:
 9/14/10 03:04 PM

DII. Factor:	2.24	Date	of Analysis: 9/14	/10 03:04 PM
Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	4.5	Not Detected	9.2	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	9.9	2.5	22
Bromomethane	1.1	2.2	4.3	8.7
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	8.1	8.4	15
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.5	46	11	110
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	1.1	6.2	3.5	19
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	1.1	1.5	3.9	5.1
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	4.8	3.9	17
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	8.0	3.3	23
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	1.2	3.3	3.6
Chloroform	1.1	59	5.5	290
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	2.4	3.8	8.4
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	3.5	3.6	11
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	2.9	4.6	12
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	17	4.6	70
Toluene	1.1	6.6	4.2	25
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
1 Oli GOLIIO I OCCI I OLI O	1.1	THE DELECTION	7.0	1401 DOTOGOGO



Client Sample ID: SV-4 Lab ID#: 1009238R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

 File Name:
 p091409
 Date of Collection:
 9/10/10 2:49:00 PM

 Dil. Factor:
 2.24
 Date of Analysis:
 9/14/10 03:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	4.5	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	1.4	4.9	5.9
m,p-Xylene	1.1	4.5	4.9	19
o-Xylene	1.1	1.6	4.9	7.1
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	1.9	5.5	9.2
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	2.2	5.5	11
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

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



Client Sample ID: Lab Blank Lab ID#: 1009238R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091406 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/14/10 12:03 PM

Dil. Factor:	1.00	1.00 Date of Analysis: 9/14/10 12:03 PM			
	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)	
Freon 12	0.50	Not Detected	2.5	Not Detected	
Freon 114	0.50	Not Detected	3.5	Not Detected	
Chloromethane	2.0	Not Detected	4.1	Not Detected	
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected	
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected	
Bromomethane	0.50	Not Detected	1.9	Not Detected	
Chloroethane	0.50	Not Detected	1.3	Not Detected	
Freon 11	0.50	Not Detected	2.8	Not Detected	
Ethanol	2.0	Not Detected	3.8	Not Detected	
Freon 113	0.50	Not Detected	3.8	Not Detected	
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Acetone	2.0	Not Detected	4.8	Not Detected	
2-Propanol	2.0	Not Detected	4.9	Not Detected	
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected	
3-Chloropropene	2.0	Not Detected	6.3	Not Detected	
Methylene Chloride	0.50	Not Detected	1.7	Not Detected	
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected	
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Hexane	0.50	Not Detected	1.8	Not Detected	
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected	
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected	
Chloroform	0.50	Not Detected	2.4	Not Detected	
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected	
Cyclohexane	0.50	Not Detected	1.7	Not Detected	
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected	
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected	
Benzene	0.50	Not Detected	1.6	Not Detected	
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected	
Heptane	0.50	Not Detected	2.0	Not Detected	
Trichloroethene	0.50	Not Detected	2.7	Not Detected	
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected	
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected	
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected	
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected	
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected	
Toluene	0.50	Not Detected	1.9	Not Detected	
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected	
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected	
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected	



Client Sample ID: Lab Blank Lab ID#: 1009238R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091406 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/14/10 12:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	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
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	98	70-130	
1,2-Dichloroethane-d4	100	70-130	
4-Bromofluorobenzene	99	70-130	



Client Sample ID: CCV Lab ID#: 1009238R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/14/10 09:34 AM

Compound	%Recovery
Freon 12	101
Freon 114	100
Chloromethane	98
Vinyl Chloride	100
1,3-Butadiene	100
Bromomethane	113
Chloroethane	100
Freon 11	99
Ethanol	120
Freon 113	99
1,1-Dichloroethene	101
Acetone	88
2-Propanol	99
Carbon Disulfide	90
3-Chloropropene	102
Methylene Chloride	99
Methyl tert-butyl ether	106
rans-1,2-Dichloroethene	101
Hexane	103
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	101
Tetrahydrofuran	104
Chloroform	101
1,1,1-Trichloroethane	102
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	100
Benzene	101
1,2-Dichloroethane	103
Heptane	104
Trichloroethene	101
1,2-Dichloropropane	102
1,4-Dioxane	103
Bromodichloromethane	103
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	109
Toluene	101
trans-1,3-Dichloropropene	108
1,1,2-Trichloroethane	102
Tetrachloroethene	102



Client Sample ID: CCV Lab ID#: 1009238R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091402 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/14/10 09:34 AM

Compound	%Recovery
2-Hexanone	109
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	102
Chlorobenzene	100
Ethyl Benzene	103
m,p-Xylene	103
o-Xylene	102
Styrene	103
Bromoform	103
Cumene	103
1,1,2,2-Tetrachloroethane	99
Propylbenzene	102
4-Ethyltoluene	102
1,3,5-Trimethylbenzene	93
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	97

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	97	70-130	
4-Bromofluorobenzene	100	70-130	



Client Sample ID: LCS Lab ID#: 1009238R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091403 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/14/10 10:18 AM

Freon 114 102 Chloromethane 98 Winyl Chloride 102 1,3-Butadiene 102 Bromomethane 117 Chloromethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hekzane 103 1,1-Dichloroethene 98 1-Beanone (Methyl Ethyl Ketone) 100 15-1,2-Dichloroethene 100 16-tertahydrofuran 103 16-tertahydrofuran 103 16-tertahydrofuran 103 16-tertahydrofuran 102 17-Dichloroethane 102 2,2-4-Trimethylpentane 101 Benzene 19 1,2-Dichloroethene 101	Compound	%Recovery
Chloromethane 98 Vinyl Chloride 102 Bromomethane 101 Chloroethane 117 Chloroethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 transn-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethene 100 cis-1,2-Dichloroethene 100 Cis-1,2-Dichloroethene 100 Cis-1,2-Dichloroethene 102 Cyclohexane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2-4-Trimethylpentane 101 Benzene 99 1-2-Dichloroethane 101 1-2-Dichloroethane 101	Freon 12	102
Vinyl Chloride 102 1,3-Butadiene 102 Bromomethane 1117 Chloroethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Lestane 103 1,1-Dichloroethene 101 Evanne 102 Evanne 103 Chloride 98 2-2,2-1 Trinchloroethane 102 Carbon Tetrachloride 102 Carbon Tetrachloride 102 Carbon Tetrachloro	Freon 114	102
1,3-Butadiene 102 Brommethane 117 Chloroethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Itanse-1,2-Dichloroethene 101 Itexane 103 1,1-Dichloroethene 100 Cist-1,2-Dichloroethene 102 Cyclohexane 102 Carbon Tetrachloride 102 Cyclohexane 102 Carbon Tetrachloride 102 Tirchloroethene 101 Heptane 10	Chloromethane	98
1,3-Butacliene 102 Brommethame 117 Chloroethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Etrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 Cyclohoroethane 101 Benzene 19 1,2-Dichloropropane 101 1,2-Dichloropropane 102 1,4-Dioxane 101 Bromodichloromethane <td>Vinyl Chloride</td> <td>102</td>	Vinyl Chloride	102
Chloroethane 101 Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Fetrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 102 Trichloroethene 101 1,2-Dichloroptopene 102 1,4-Dioxane 101 Bromodichloromethane 101 1cis-1,3-Dichloroptopene 106	1,3-Butadiene	102
Freon 11 100 Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Cis-1,2-Dichloroethene 100 Cis-1,2-Dichloroethene 100 Cis-1,2-Tichloroethane 102 Cyclohexane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloropropane 101 1,4-Dioxane 101 Bromodichloromethane 101 cis-1,3-Dichloropropene 106 foluene <	Bromomethane	117
Ethanol 108 Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylere Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 tlexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 102 Trichloroethene 101 1,2-Dichloropropane 102 1,4-Dioxane 101 Beromodichloromethane 101 Eis-1,3-Dichloropropene 107 4-Methyl-2-pentanone	Chloroethane	101
Freon 113 90 1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 103 Chloroform 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 102 Trichloroethene 101 1,2-Dichloropropane 102 Trichloroethene 101 tis-1,3-Dichloropropene 107 4-Methyl-2-pentanone 106 Toluene 96 transas-1,3-Dichloropropene	Freon 11	100
1,1-Dichloroethene 92 Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 Cist-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 98 Heptane 101 Trichloroethene 101 1,2-Dichloropropane 102 Trichloroethene 101 1,4-Dioxane 101 Bromodichloromethane 101 cis-1,3-Dichloropropene 106 Toluene 96 transan-1,3-Dichloropropene 108	Ethanol	108
Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 193 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 101 Heptane 102 Trichloroethene 101 1,2-Dichloropropane 102 1,4-Dioxane 101 Bromodichloromethane 101 cis-1,3-Dichloropropene 106 4-Methyl-2-pentanone 96 Totansa-1,3-Dichloropropene 96 transa-1	Freon 113	90
Acetone 85 2-Propanol 95 Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 2,2,4-Trimethylpentane 101 Benzene 99 1,2-Dichloroethane 102 Trichloroethene 101 1,2-Dichloropropane 102 1,4-Dioxane 101 Bromodichloromethane 101 cis-1,3-Dichloropropene 107 4-Methyl-2-pentanone 106 Toluene 96 trans-1,3-Dichloropropene 108 1,1,2-Trichloroethane 108	1,1-Dichloroethene	92
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Carbon Disulfide 90 3-Chloropropene 102 Methylene Chloride 92 Methyl tert-butyl ether 105 trans-1,2-Dichloroethene 101 Hexane 103 1,1-Dichloroethane 98 2-Butanone (Methyl Ethyl Ketone) 100 cis-1,2-Dichloroethene 100 Tetrahydrofuran 103 Chloroform 99 1,1,1-Trichloroethane 102 Cyclohexane 104 Carbon Tetrachloride 102 Cyclohexane 101 Benzene 99 1,2-Dichloroethane 99 1,2-Dichloroethane 101 Benzene 99 1,2-Dichloropropane 102 Trichloroethene 101 1,2-Dichloropropane 101 4,4-Dioxane 101 Bromodichloromethane 101 cis-1,3-Dichloropropene 106 4-Methyl-2-pentanone 106 Toluene 96 trans-1,3-Dichloropropene 108 trans-1,3-Dichloroptopene <td< td=""><td>2-Propanol</td><td>95</td></td<>	2-Propanol	95
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Heptane	Benzene	99
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4-Methyl-2-pentanone 106 Toluene 96 trans-1,3-Dichloropropene 108 1,1,2-Trichloroethane 101	cis-1,3-Dichloropropene	107
Toluene 96 trans-1,3-Dichloropropene 108 1,1,2-Trichloroethane 101	4-Methyl-2-pentanone	
1,1,2-Trichloroethane 101	Toluene	
1,1,2-Trichloroethane 101		
	1,1,2-Trichloroethane	
	Tetrachloroethene	99



Client Sample ID: LCS Lab ID#: 1009238R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091403 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 9/14/10 10:18 AM

Compound	%Recovery
2-Hexanone	105
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	105
Chlorobenzene	101
Ethyl Benzene	104
m,p-Xylene	103
o-Xylene	102
Styrene	103
Bromoform	104
Cumene	100
1,1,2,2-Tetrachloroethane	101
Propylbenzene	100
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	100

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



Client Sample ID: LCSD Lab ID#: 1009238R1-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091404 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/14/10 10:35 AM

Compound	%Recovery
Freon 12	104
Freon 114	104
Chloromethane	102
Vinyl Chloride	104
1,3-Butadiene	104
Bromomethane	122
Chloroethane	105
Freon 11	102
Ethanol	92
Freon 113	92
1,1-Dichloroethene	93
Acetone	86
2-Propanol	96
Carbon Disulfide	92
3-Chloropropene	102
Methylene Chloride	94
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	103
Hexane	105
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	101
Tetrahydrofuran	105
Chloroform	100
1,1,1-Trichloroethane	104
Cyclohexane	105
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	108
Benzene	102
1,2-Dichloroethane	100
Heptane	106
Trichloroethene	102
1,2-Dichloropropane	104
1,4-Dioxane	103
Bromodichloromethane	103
cis-1,3-Dichloropropene	108
4-Methyl-2-pentanone	104
Toluene	97
trans-1,3-Dichloropropene	111
1,1,2-Trichloroethane	106
Tetrachloroethene	104



Client Sample ID: LCSD Lab ID#: 1009238R1-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: p091404 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 9/14/10 10:35 AM

Compound	%Recovery
2-Hexanone	107
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	107
m,p-Xylene	107
o-Xylene	106
Styrene	106
Bromoform	106
Cumene	104
1,1,2,2-Tetrachloroethane	104
Propylbenzene	104
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	103
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	103
Hexachlorobutadiene	108

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



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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FOLSOM, CA 95630-4719 (916) 985-1000 FAX (916) 985-1020

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