

June 27, 2016

Mr. James Fish Alaska Department of Environmental Conservation Division of Spill Prevention and Response Contaminated Sites Program 610 University Avenue Fairbanks, Alaska 99709

RE: Soil Vapor Investigation Report, Charles Slater Subdivision Bentley Mall, Fairbanks, Alaska

Dear Mr. Fish,

KE Bentley One, LLC and KGE Bentley Two, LLC (Client) submit this report pursuant to the November 13, 2015 letter issued by Alaska Department of Environmental Conservation (ADEC) in response to the September 2015 soil vapor investigation. In September 2015, an investigation was completed that consisted of collecting 11 soil vapor samples to assess whether there is a potentially significant risk to human health and analytical results revealed that further investigation was warranted. A Soil Vapor Investigation Work Plan was then subsequently prepared and submitted to ADEC who approved the Work Plan on March 21, 2016.

In March 2016, as described below, Environmental Resource Group (ERG) implemented the Work Plan and conducted investigation activities including drilling and collecting soil vapor samples at residences and near the Monroe Catholic School in the Charles Slater Subdivision.

ERG has prepared this Soil Vapor Investigation Report (Report) for Bentley Mall East Satellite, ADEC File #102.38.122 (Site) (Figure 1). This Report discusses the soil vapor investigation performed to assess the potential risks of vapor intrusion to residences with basements in the Charles Slater subdivision.

FIELD INVESTIGATION OF SOIL VAPOR QUALITY

Selection of Soil Vapor Point Locations

Risks, if any, to indoor air posed by chemicals in soil vapor are based, in part, on the chemical concentration, proximity of the living space to the soil vapor, and migration pathways to the living space. Therefore, buildings with basements are assumed to be the most vulnerable to these potential risks because the basement is likely closer to higher concentrations within soil vapor. Soil vapor samples were collected from the following residences based on their proximity to locations that had elevated concentrations of CVOCs in previously collected samples of soil vapor and ground water (Figure 2), permission to access, and distribution throughout the Charles Slater subdivision. While other residences also meet the criteria, it was assumed that these seven reasonably represent the various conditions in the area. Table 1 describes the construction of each residence as well as the school. Questionnaires for each residence are provided in Appendix A and a further description of each home is provided below.

311 Noyes Street (SVR-1)

This single-story residence is a wood-frame building with three occupied units. Two rental units are located in the finished full basement and the property owner lives on the ground level. A schematic of the

property is provided in Figure 3a. Water and sewer utility lines were located and marked, however due to safety and access issues only one sample could be collected within 10 feet of the water line. An additional sample was collected on the opposite side of the property, approximately 39 feet away from the sewer line. Both samples were collected approximately 10 feet from the foundation.

208 Charles Street (SVR-2)

This residence is a single story home with two residents. The full basement is finished and used for storage. A schematic of the property is provided in Figure 3a. A cold air intake was observed at the residence. The property owner did not allow access to the basement, but stated that the water and sewer lines enter in the front of the residence. Due to access limitations, the soil vapor samples were collected near the southeast corner of the residence. The approximate location of the water line was marked by Golden Heart Utilities (GHU) and the soil vapor samples were collected approximately 13 feet and 18 feet from this location and approximately 5 feet from the foundation.

625 Noyes Street (SVR-3)

This residence is a two-story home that is occupied by six residents, including four children. The full basement is partially finished and used for storage. A schematic of the property is provided in Figure 3a. The property owner marked the approximate location of the sewer line and the water line was marked by GHU. One soil vapor sample was collected on the western side of the property approximately 5.5 feet from the sewer line. Another soil vapor sample was collected on the eastern side of the property approximately 5 feet from the water line. Both samples were collected approximately 5 feet from the foundation.

120 Ina Street (SVR-4)

This is a two-story building that is occupied by a daycare on the first floor and a residence on the second floor occupied by four to five full-time residents. The full basement is partially finished and used for storage. A schematic of the property is provided in Figure 3a. A private locator marked the approximate locations of the water and sewer lines. The two soil vapor samples were collected no more than approximately 12 feet from these lines and the foundation of the residence.

201 Ellingson Street (SVR-5)

This single-story residence is a log home with two occupied residential units. A rental unit is located in the basement and the property owner lives on the ground floor. A schematic of the property is provided in Figure 3b. A private locator marked the approximate locations of the water and sewer lines. Due to access issues, only one soil vapor sample was collected at the property, approximately 25 feet from the water and sewer lines and 10 feet from the foundation.

236 Ina Street (SVR-6)

This single-story residence is a ranch style home with two occupied residential units. A rental unit is located in the basement with three occupants and the property owner lives on the ground floor. A cold air intake for the furnace was observed at the residence. A schematic of the property is provided in Figure 3b. A private locator marked the approximate locations of the water and sewer lines. One vapor sample was collected within approximately 10 feet of the utility lines and 8 feet from the foundation. An additional vapor sample was collected towards the rear of the property approximately 5 feet from the foundation.



106 Charles Street (SVR-7)

This residence is a single story home occupied by two adults and one infant. The full basement is finished and used for storage. A schematic of the property is provided in Figure 3b. A private locator marked the approximate locations of the water and sewer lines. Due to limited access, the soil vapor sample was collected in the public right of way approximately 7 feet from the foundation of the residence and approximately 18 feet from the utilities.

Monroe Catholic School (SV-12 to SV-15)

Monroe Catholic School does not have a basement; however, a section of the boiler room is approximately 10 feet below grade. Four soil vapor samples (SV-12 to SV-15) were collected at locations near the Monroe Catholic High School (Figure 3b).

Soil Vapor Point Installation

Alaska Digline (811), Golden Heart Utilities (GHU), and City of Fairbanks were notified and soil vapor point locations were adjusted and cleared for underground utilities. In addition, Glacier Point Services, a private locator, was subcontracted to locate water and sewer lines in several homes as well as Monroe Catholic School.

The temporary soil vapor points were advanced by direct push by an Alaska licensed drilling at seven residences and around the Monroe Catholic School at locations shown on Figures 3, 3a, and 3b. Temporary vapor points were installed to 8 feet below ground surface (bgs) at the residences and at one location at the school. Three locations at the school were advanced to 5 feet bgs. All temporary points were installed in a 1.25-inch diameter boring using a ¼" vapor sampling implant with an expendable implant anchor in the bottom of the boring. The anchor ensured that the implant was not in direct contact with native soil. The implant was installed with attached tubing within a 12 inch filter pack and beneath 12 inches of dry granular bentonite to prevent moisture from entering the filter pack from above. Hydrated bentonite was used to fill the rest of the boring to ground surface. To allow for the subsurface to equilibrate back to representative conditions, the sampling of soil vapor was conducted at least two hours after installation.

Two soil vapor points were installed at each of the residences with the exception of SVR-5 and SVR-7, where only one soil vapor point was installed due to access limitations.

Soil Vapor Sampling and Analysis

At each of the residences and at one location at the school, samples were collected from approximately 8 feet bgs, coincident with the depth of a typical basement floor. At the school, three samples were collected from 5 feet bgs. A leak test using isopropyl alcohol with a shroud was conducted at every sampling point to evaluate whether ambient air was introduced into the soil vapor sample during the collection process. Field sheets from the investigation are provided in Appendix B.

A photoionization detector (PID) was used to measure concentrations within the initial soil vapor prior to purging or sampling. Once the shut-in test confirmed a tight connection, an appropriate volume was purged into a 6L summa canister. Purge volume was calculated based on the internal volume of the tubing, the void space of the filter pack, and the void space of the dry bentonite. The volume of air purged was calculated based on the change in pressure observed in the summa canister.



During soil vapor sampling, barometric pressure, temperature, and surface inversion occurrence were recorded simultaneously. Barometric pressure ranged from 28.99 inches Hg to 29.19 in Hg and temperatures ranged from 35°F to 49°F. Surface inversion was not occurring during any of the soil vapor sampling.

The soil vapor sample was collected into a 1L summa canister within a sealed shroud with isopropanol on a cotton ball. A PID was used the measure the concentration of the isopropanol in the shroud. Following collection, all samples were appropriately labeled with the sample ID, date and time of collection, and sampler's initials and shipped to the laboratory under standard chain-of-custody procedures.

The soil vapor samples were analyzed for volatile organic compounds (VOCs) by EPA Method TO-15 and for fixed gases by ASTM D1946.

QUALITY ASSURANCE/QUALITY CONTROL

Field QA/QC Standard Measures

In addition to the shut-in test and the leak check with isopropanol, the following was implemented in the field as quality control to improve confidence in the measured concentrations:

- One field duplicate and one split sample was collected.
- A down hole gauge was present on the manifold during sampling to ensure that soil vapor was not collected under high vacuum conditions.
- The sampling and purge rates were maintained between 75mL to 200mL per minute.

Leak Check with Shroud and Isopropanol

Soil vapor samples were collected into 1L summa canisters within a sealed shroud with a cotton ball soaked with isopropanol inside to evaluate sample integrity. The concentration of isopropanol inside of the shroud was measured using a PID and the lowest concentration recorded was approximately 81,000 µg/m3. Significant leakage is considered present when the tracer compound is present in the test sample at more than 10% of the source concentration (ADEC 2012). Two canisters contained concentrations of isopropanol above 10% of the concentration inside the shroud, SVR-6B and the split of SVR-4B. All other concentrations in the canisters were far below 10%. Per ADEC, samples with less than 10% of the leak compound are considered representative and reveals that the sample quality is of a high integrity.

Field Split

A split sample was collected from SVR-4B to evaluate the precision of the overall analysis process; however, this split revealed concentrations of isopropanol above 10% of the source concentration despite there being concentrations of isopropanol at 1% in the other sample. It is possible that this leak is due to loose fittings on the summa canister provided by the laboratory. Due to the isopropanol, this split sample could not be used to assess precision.



Field Duplicate

A duplicate sample from SV-14 was collected in order to evaluate the precision of the overall sample collection methodology and the consistency of environmental conditions through the calculation of the Relative Percent Difference (RPD) for duplicate pairs.

Chlorinated solvents were not detected in SV-14, however calculations of other constituents are used for the purposes of this evaluation. Based on results expressed in micrograms per cubic meter ($\mu g/m^3$), the RPDs for toluene and ethylbenzene were calculated as follows:

Toluene: $(86-79) / \{(86 + 79/2)\} \times 100\% = 8.48\%$

Ethylbenzene: $(12-9.4) / \{(12+9.4/2)\} \times 100\% = 24.29\%$

The RPD was less than 25% for the duplicate pair, which met QA/QC limits for the RPD per ADEC's Laboratory Data Review Checklist. This reveals that samples of acceptable quality were collected in the field and that subsurface conditions are represented in the samples with the exception of SVR-6B and the split from SVR-4B.

Laboratory QA/QC Standard Measures

The laboratory implemented its own internal QA/QC measures including but not limited to method blanks, calibration checks, reporting limit verifications, instrument blanks, and laboratory control samples.

An ADEC Laboratory Data Review Checklist was completed to QA/QC the laboratory analytical results and is provided in Appendix C. No discrepancies or errors that would affect data usability were noted with the exception of SVR-6A. The canister was found to be leaking when tested at the laboratory. The sample analysis was subsequently canceled.

SOIL VAPOR ANALYTICAL RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

The analytical results are provided in Table 2 and are compared with target levels for shallow soil vapor samples in a residential setting established by ADEC's October 2012 Vapor Intrusion Guidance to evaluate potential vapor intrusion risks. The laboratory analytical report is provided in Appendix C.

Concentrations of constituents related to petroleum releases are provided in Table 2. For the purposes of this investigation, only concentrations of constituents that may have originated at the Bentley Mall (chlorinated volatile organic compounds (CVOCs)) are discussed further herein. The source of petroleum contamination should be investigated by the appropriate responsibility party.

Discussions with ADEC indicate that concentrations in soil vapor and risk to indoor air could be highest in September-October due to cooling temperatures and use of heating before the ground freezes. Therefore, it is recommended that sampling of soil vapor and indoor air be done in September-October.

Tetrachloroethene (PCE), trichloroethene (TCE), and trans-1,2 dichloroethene (trans-1,2 DCE) were detected above their respective target levels in one or more soil vapor samples collected at three residences, 208 Charles St, 120 Ina St, and 201 Ellingson St.



311 Noyes Street (SVR-1)

Soil vapor samples collected near this residence did reveal concentrations of PCE and trans-1,2 DCE, however these concentrations are below ADEC's target level for these compounds. These concentrations suggest no significant risk from potential vapor intrusion, however additional soil vapor sampling in September-October is recommended.

208 Charles Street (SVR-2)

A soil vapor sample from SVR-2B revealed a concentration of trans-1,2 DCE above its respective ADEC target level. This location is on the southern side of the residence near Charles Street, which in 2015 had elevated concentrations of trans-1,2 DCE detected in soil vapor samples collected in the public right of way. In contrast, a soil vapor sample from a second location, SVR-2A, on the eastern side of the residence revealed a concentration of trans-1,2 DCE below the target level. Because concentrations in SVR-2B exceed ADEC target levels, samples of indoor air in September-October is recommended at this residence.

625 Noyes Street (SVR-3)

Soil vapor samples collected near this residence revealed concentrations of PCE and TCE below ADEC's target level. However, PCE was detected at a concentration within 5% of the target level at 400 $\mu g/m^3$ in SVR-3B. Due to this potential risk of vapor intrusion to human health, it is recommended that indoor air samples be collected in September-October.

120 Ina Street (SVR-4)

A soil vapor sample from SVR-4A revealed a concentration of trans-1,2 DCE above its respective ADEC target level and a soil vapor sample from SVR-4B revealed concentrations of PCE and TCE above their respective target levels. However, indoor air samples previously collected inside the residence in November 2015 and January 2016 did not reveal concentrations of PCE, TCE, or trans-1,2 DCE above ADEC target levels (Biomax November 2015 and March 2016). It is recommended that indoor air samples be collected in September-October to assess potential risk of vapor intrusion to human health.

201 Ellingson Street (SVR-5)

A soil vapor sample from SVR-5 revealed concentrations of PCE and TCE above their respective target levels. Samples of indoor air collected in September-October is recommended at this residence.

<u>236 Ina Street (SVR-6)</u>

As described above, the soil vapor samples from SVR-6A and SVR-6B were found to be comprised due to leakage. Resampling of the locations is recommended in September-October since the potential risk of vapor intrusion could not be evaluated during this event.

106 Charles Street (SVR-7)

Soil vapor sample collected near this residence did reveal a concentration of trans-1,2 DCE, however the concentration is below ADEC's target level. This concentration suggests no significant risk from potential vapor intrusion, however additional sampling of soil vapor in September-October is recommended.

Monroe Catholic School (SV-12 to SV-15)

Soil vapor samples collected near the school did not reveal concentrations of chlorinated solvents with the exception of one sample, which revealed a concentration of PCE far below the ADEC target level. This



concentration suggests no significant risk from potential vapor intrusion, however additional sampling in the September-October is recommended.

Figures 4, 5, and 6 present the concentrations of PCE, TCE, and trans-1,2 DCE detected in the 2010 passive soil vapor samples and the 2015 and 2016 soil vapor samples. In October 2010, thirty (30) passive soil vapor samples were collected along Noyes Street to the west of the Bentley Mall and PCE detections were mainly clustered between 620 and 640 Noyes Street (ERG, January 2011). In 2015 and 2016, elevated concentrations of chlorinated solvents were detected mainly around SV-6, SVR-4 and SVR-5, along Noyes Street, Ina Street, and along Charles Street.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on the recent soil vapor investigation:

- Barometric pressure ranged from 28.99 inches Hg to 29.19 in Hg and temperatures ranged from 35°F to 49°F. Surface inversion was not occurring during any of the soil vapor sampling.
- PCE, TCE, and trans-1,2 DCE were detected above their respective target levels in one or more soil vapor samples at three separate residences.
- A duplicate sample was collected from SV-14. The RPD was less than 25% for the duplicate pair, which met QA/QC limits and reveals that samples of acceptable quality were collected in the field and that subsurface conditions were represented in the samples.
- Indoor air samples collected at 120 Ina Street did not reveal concentrations of PCE, TCE, or trans-1,2 DCE above ADEC target levels in two sampling events.
- Elevated concentrations were detected mainly around SVR-5, SVR-4B, along Noyes Street, and along Charles Street.
- Samples collected around Monroe Catholic School did not reveal concentrations of PCE, TCE, or trans-1,2 DCE above ADEC target levels.
- In general, the distribution of CVOC concentrations in ground water is similar to the distribution in soil vapor.
- It is recommended that indoor air samples be collected at 208 Charles St, 625 Noyes St, 120 Ina St, and 201 Ellingson St. All homes evaluated in this investigation had similarly constructed basements. It is recommended that 3-5 other homes in the subdivision that have differently constructed basements including crawl space, earthen floor, etc be similarly evaluated. Testing would occur in September-October, when ADEC indicated that the risk to indoor air was likely greatest.



Please call if you have any questions or comments, or if we can be of further assistance.

Sincerely,

Environmental Resource Group, Inc.

Benjamin Wells

President

Steve Michelson

Professional Geologist

Tables Figures

Appendix A: Questionnaires Appendix B: Field Sheets

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Appendix C: Laboratory Analytical Reports

TABLES



Table 1 Constructions of Residences and School Charles Slater Subdivision, Fairbanks, AK

Address	Floor Materials	Wall materials	Basement floor below grade (ft)	Height of ceiling above basement floor (ft)	First floor above grade (ft)	Basement windows	Cold air intake observed	Usage	Soil gas sample depth (ft)	Heating Oil UST(s)
311 Noyes	Concrete slab	Concrete	6	8	2	Yes	No	Tenants	8	Yes
208 Charles St	Unknown	Concrete*	7	8	1	Yes	Yes	Storage	8	Yes
625 Noyes St	Concrete slab*	Concrete	6	8	2	Yes	No	Storage	8	Yes
120 Ina St	Concrete slab	Concrete Blocks	6	8	2	Yes	No	Storage	8	Yes
201 Ellingson St	Concrete slab	Concrete Blocks	7	8	1	Yes	No	Tenants	8	Yes
236 Ina St	Concrete slab*	Concrete Blocks	7	8	1	Yes	Yes	Tenants	8	Yes
106 Charles St	Concrete slab*	Concrete*	8	8	0	No	No	Storage	8	Yes
School - Boiler Room	Concrete slab	Concrete	10	20	0	No	No	Facilities	5	Yes
School - Slab area	Concrete slab	Concrete	NA	NA	0	NA	No	School	5, 8	Yes

Notes:

ft: feet

All measurements are approximate

* Not directly observed, materials are assumed

Wall materials based on observation of exposed exterior construction

Table 2
Soil Vapor Results
Charles Slater Subdivision, Fairbanks, AK

Sample ID	Location	Date Sampled	Sample Depth (ft bgs)	QA/QQ Code	sopropanol*	Tetrachloroethene	Trichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Freon 12	Freon 11	Acetone	Ethanol	Tetrahydrofuran	Chloroform	Hexane	Benzene	Cyclohexane	Heptane	4-Methyl-2-pentanone	Toluene	Ethyl Benzene	m,p-Xylene	o-Xylene	Cumene	Propylbenzene	4-Ethyltoluene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	2-Butanone (Methyl Ethyl Ketone)	Охувеп	Nitrogen	Methane	n Diox	Laboratory Initial Pressure Initital Pressure (Field)	Final Pressure (Laboratory Final Pressure
																	μg/	′m3															%		i	n Hg	
	ADEC Targo	et Levels				420	21	630	52,100	1,000	7,300	322,000			11	7,300	31	62,600		3,130	52,100	97	1,000	1,000	4,200	10,400		73	73	52,100							
SVR1A	311 Noyes St	24-Mar	8	С	46	30	<5.4	17	<5.4	29	<5.6	<24	9.5	<2.9	<4.9	4.6	8.8	<3.4	17	5.0	140	14	42	12	<4.9	<4.9	5.3	<4.9	4.9J	<12	21	78	<0.00021	0.75	30 21	1	0.41
SVR1B	311 Noyes 3t	24-Mar	8		<10	140	<5.4	<4	<5.5	110	25	31	<7.6	<3	<5	<3.6	<3.2	<3.5	<4.3	5.4	31	<4.4	10	<4.4	<5	<5	<5	<5	<5	<12	21	78	<0.0002	0.91	30 29	2	0.2
SVR2A	208 Charles St	24-Mar	8		<49	<34	<27	380	<27	<24	280	<120	<37	<15	<24	30	<16	380	220	<20	560	920	4,000	3,900	780	1,100	5,400	4,100	5,900	<58	19	78	<0.0002	3.2	30 30	2	0.2
SVR2B	200 Charles St	24-Mar	8		<9.8	8.6	<4.9	1,300	<5.5	<4.9	220	<25	<7.8	<3	10	<3.6	<3.2	<3.5	<4.3	<4.1	8.6	<4.9	5.6	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<12	19	78	<0.0002	3.4	30 30	2	0
SVR3A	625 Noyes St	24-Mar	8		10	250	13	<3.7	<5.7	7.1	<5.8	<25	<7.8	7.1	<5.1	<3.7	<3.3	<3.6	<4.3	<4.3	90	20	71	18	<5.1	<5.1	7.9	<5.1	<5.1	<12	20	77	<0.0002	2.7	30 27	2	1
SVR3B	025 Noyes 5t	24-Mar	8		42	400	16	<4.2	<5.8	<5.3	<6	<25	<8	<3.1	<5.1	<3.8	<3.4	<3.7	<4.3	<4.4	10	<4.6	4.8	<4.6	<5.2	<5.2	<5.2	<5.2	<5.2	<12	20	78	<0.0002	2.1	30 29.5	, 2	1.4
SVR4A		25-Mar	8		<67	95	<37	7,600	<37	<34	<38	<160	<52	<20	<33	<24	<22	<24	<28	<28	200	50	180	56	<34	<34	<34	<34	<34	<81		78	<0.0002	2.1	30 30	2	0.8
SVR4B	120 Ina St	25-Mar	8	С	1,100E	1,500	110	38	<5.7	8.4	7.6	<25	<8	<3.1	<5.1	<3.8	6.6	<3.7	6.3	<4.4	270	38	120	33	<5.1	<5.1	13	<5.1	7.3	<12	18	79	<0.0002	3	30 26	1	1
SVR4B-DUP		25-Mar	8	Α	320,000	_	<5700	<4200	<5800	<5200	<5900	12,000	<8000	<3100	<5200	<3700	<3400	<3600	<4300	<4300	<4000	<4600	<4600	<4600	<5200	<5200	<5200	<5200	<5200	<12000		78	<0.0002		30 26	\rightarrow	1.4
SVR5	201 Ellingson St	25-Mar	8	С	20	760	47	<3.9	85	13	670	<25	<8	<3.1	4.8	<3.6	<3.2	<3.5	<4.3	<4.1	9.8	<4.3	<4.3	<4.3	<4.9	<4.9	<4.9	<4.9	<4.9	<12	19	78	<0.0002	2.9		2	0.8
SVR6A	236 Ina St	25-Mar	8	В						1			ı	Canis	ter foui	nd to be	leakin	g upon	arrival	to labo	ratory; s	ample a	analysis	cancel	ed					I					30 20		1.2
SVR6B		25-Mar	8	A,C	33,000	<550	<440	<320	<440	<400	<460	1,100	<610	<240	<400	<280	<260	<280	<330	<330	<300	<350	<350	<350	<400	<400	<400	<400	<400	<960	21		<0.0002		30 23		0.8
SVR-7	106 Charles St	25-Mar	8		70	<6.4	<5.1	22	<5.2	<4.7	21	<22	<7.2	<2.8	<4.6	<3.3	<3	<3.3	4.8	<3.9	44	4.7	13	<4.1	<4.7	<4.7	<4.7	<4.7	<4.7	<11		78	<0.0002	4.3	_		1.6
SV-12		25-Mar	5	С	220	27	<5.2	<3.7	<5.3	17	80	<22	<7.2	<2.8	<5.1	<3.7	<3.3	4.8	6.0	<3.9	160	<4.3	7.9	<4.3	<4.7	<4.7	<4.7	<4.7	<4.7	<11	20		0.00024		30 25	_	1.2
SV-13	Monroe Catholic	25-Mar	5		<10	<5.2	<5.6	<4.2	<5.7	25	67	<25	<7.8	<3.1	75	<3.7	<3.3	<3.3	<3.3	<3.9	12	<5.2	5.6	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<12		78	<0.0002		30 29		1.2
SV-14	School	25-Mar	5		62	<5.2	<5.4	<4.2	<5.8	13	<6	94	<7.8	4.4	<5.1	<3.8	<3.4	<3.7	<4.3	6.6	79	9.4	23	6.0	<5.2	<5.2	<5.2	<5.2	<5.2	23			0.00021		30 30		1.8
SV-14-DUP		25-Mar	5		45	<7.3	<5.8	<4.3	<5.9	13	<6.1	80	<8	3.7	<5.3	<3.8	<3.4	<3.4	<4.4	6.2	86	12	32	8.5	<5.3	<5.3	<5.3	<5.3	<5.3	18	20	79	<0.0002	1.3			2.2
SV-15		25-Mar	8	C	19	<5.2	<5.7	<4.2	<5.8	27	32	<25	<7.8	<2.8	<5.1	<3.8	<3.4	<3.7	<4.3	<5.2	5	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<12	16	77	<0.00021	7	30 26.5	ا 0.5	1.8

Notes:

μg/m³: micrograms per cubic meters

<: not detected above the reporting limit or method detection limit as shown

*: leak check compound

J: estimated value

E: exceeds instrument calibration range

SVR4B-DUP: Split from SVR4B SV-14-DUP: Duplicate from SV-14

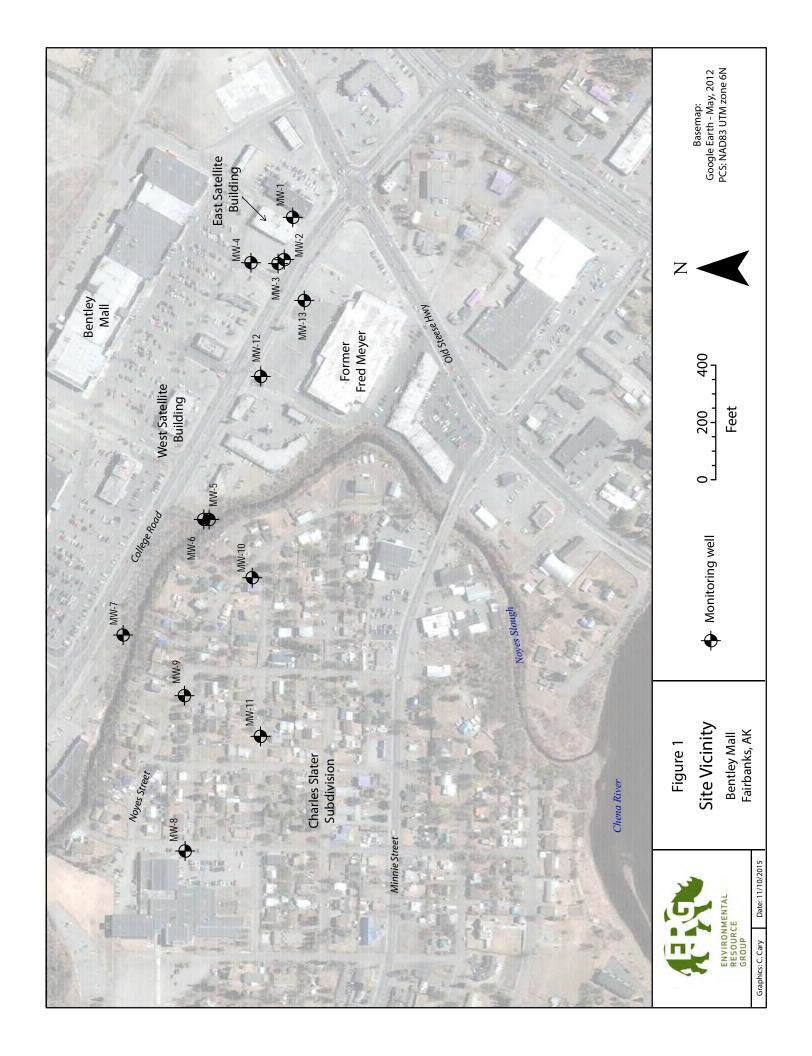
ADEC Target Levels are acquired from the October 2012 Vapor Intrusion Guidance Appendix E for Shallow Soil Gas in a Residential Setting

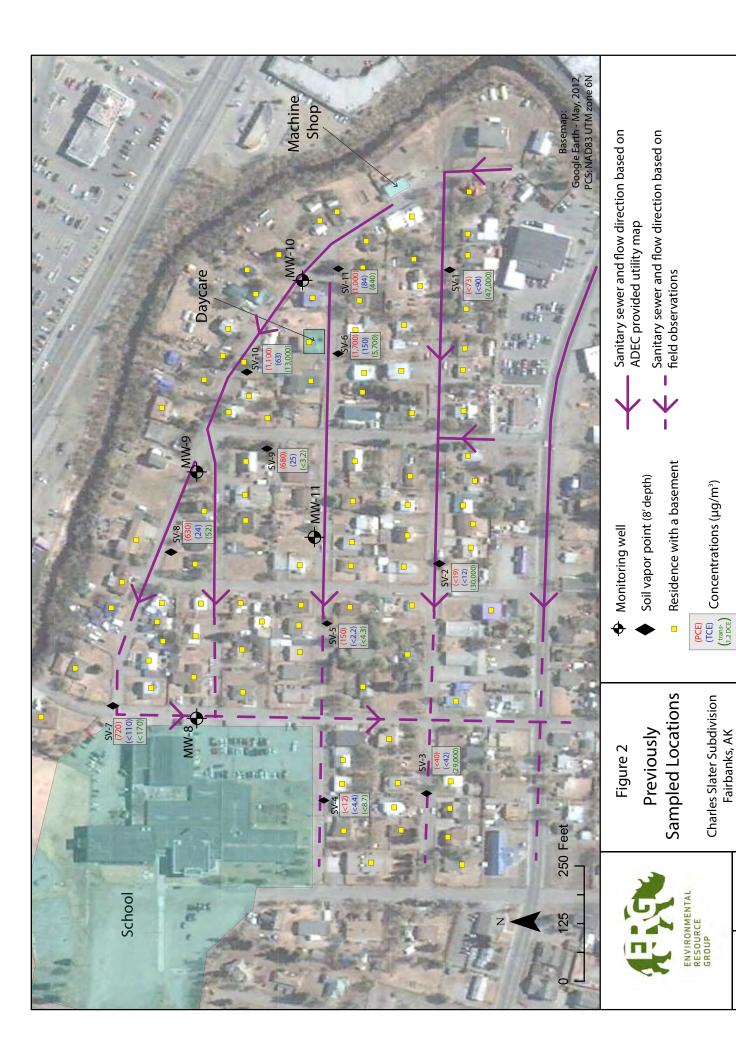
QA/QC Codes

- A: leak check compound exceeds 8000 μg/m3
- (Lowest concentration of isopropanol measured in shroud was 33ppmv or 81,103µg/m3. 10% of source concentrations is 8,110.)
- B: Canister leaking upon arrival at lab
- C: Canister pressure lower than 10% upon receipt in field

FIGURES



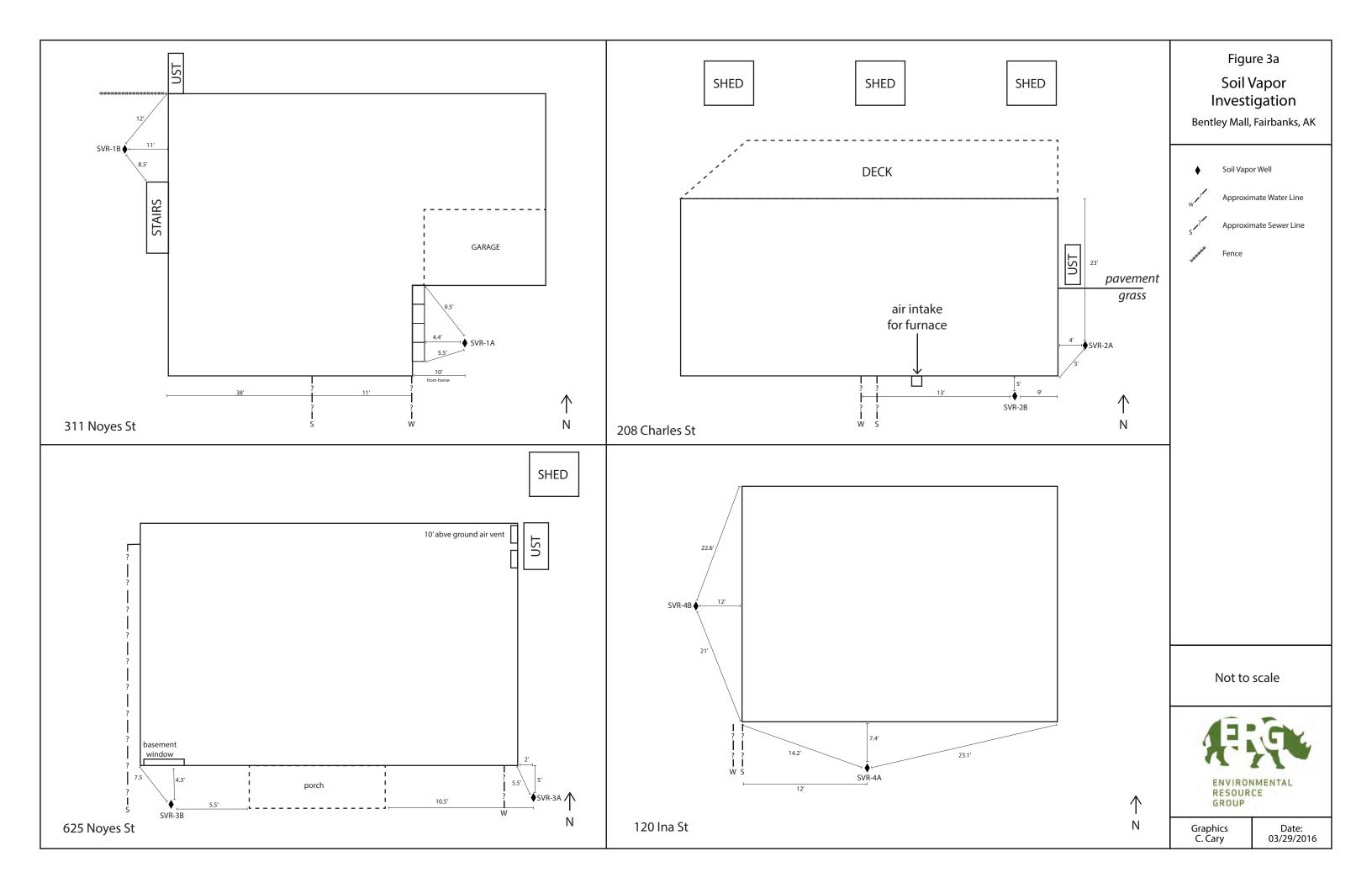


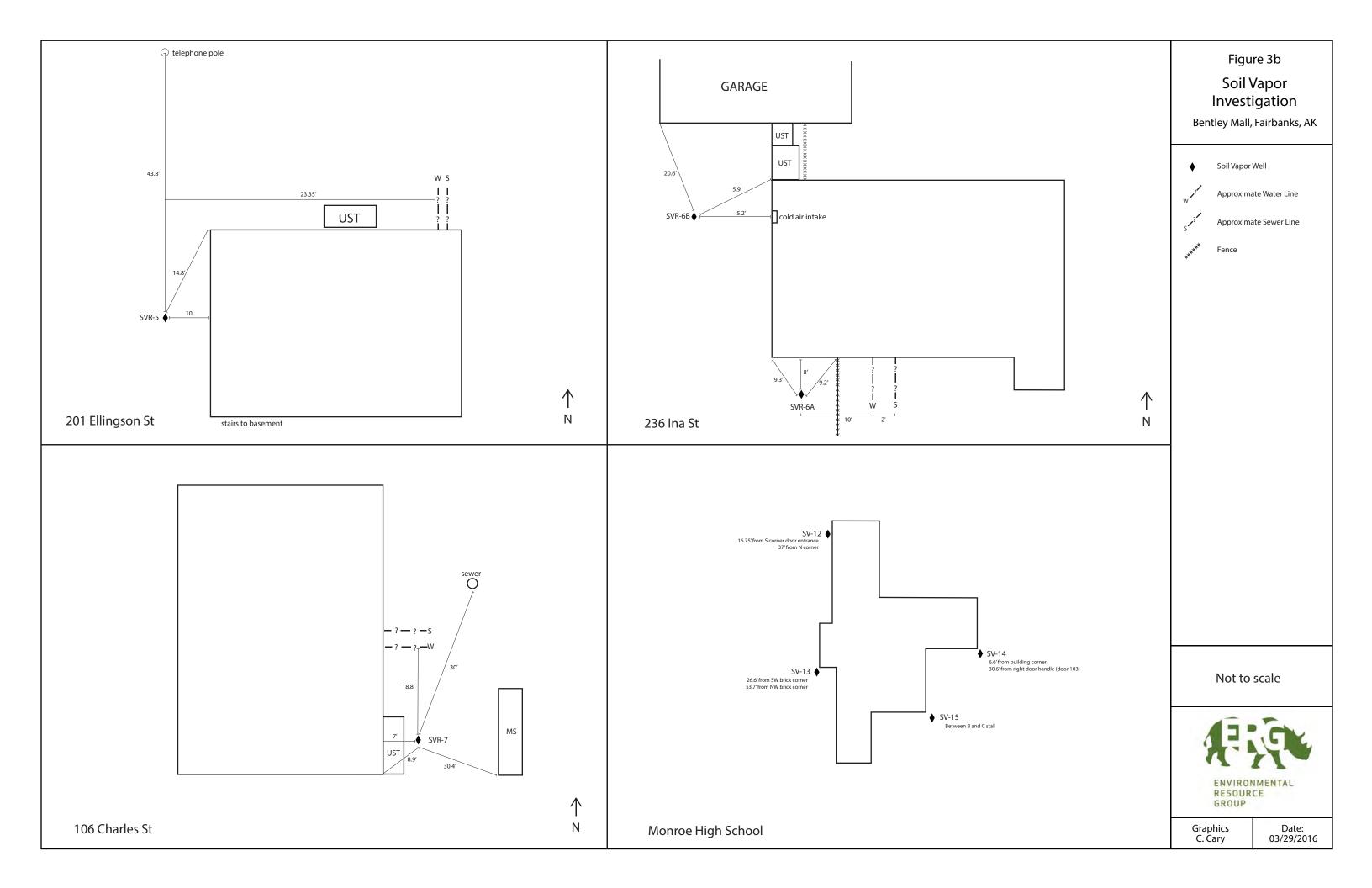


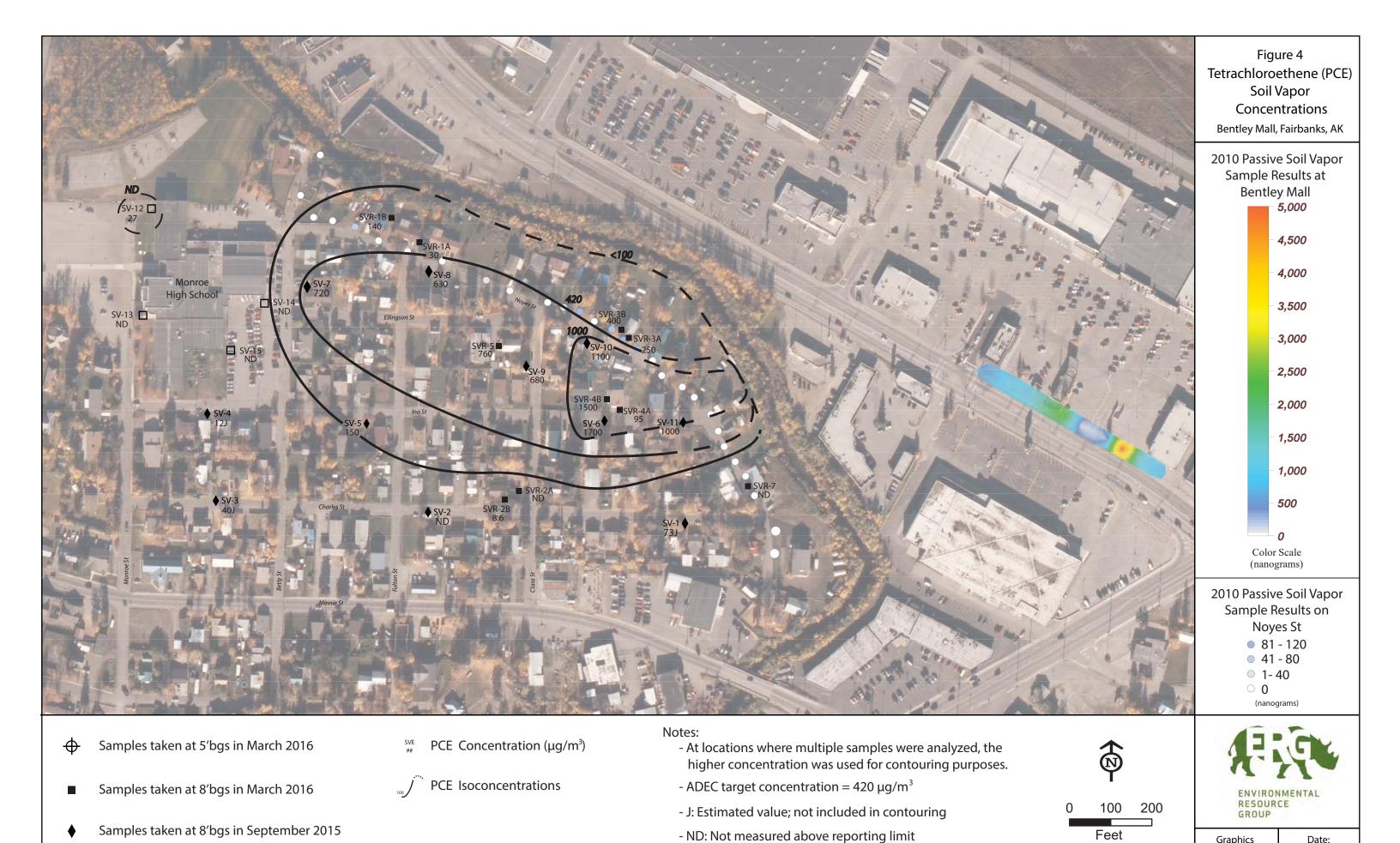
Date: 03/03/2016

Graphics: C. Cary

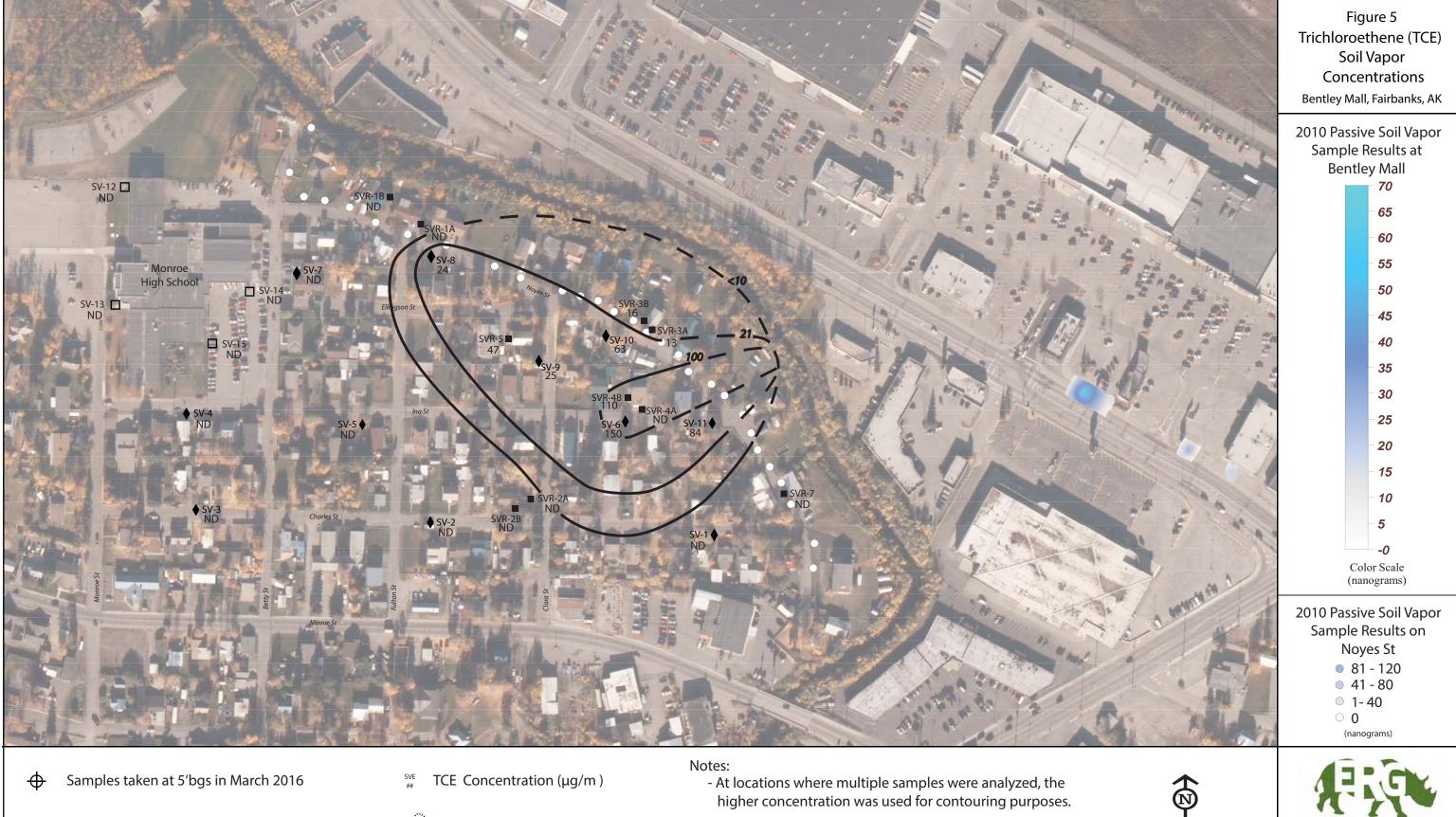








Graphics C. Cary Date: 04/29/2016



TCE Isoconcentrations

Samples taken at 8'bgs in March 2016

Samples taken at 8'bgs in September 2015

- ADEC target concentration = $21\mu g/m^3$
- J: Estimated value; not included in contouring
- ND: Not measured above reporting limit



200 Feet



Graphics C. Cary

Date: 04/29/2016



Notes:

- At locations where multiple samples were analyzed, the higher concentration was used for contouring purposes.
- ADEC target concentration = 630 μg/m³
- J: Estimated value; not included in contouring
- ND: Not measured above reporting limit



100 200 Feet

ENVIRONMENTAL RESOURCE GROUP

Figure 6

(TDCE) Soil Vapor Concentrations

TDCE Isoconcentrations

Graphics C. Cary

Date: 04/29/2016

Samples taken at 8'bgs in March 2016

Samples taken at 8'bgs in September 2015

Samples taken at 5'bgs in March 2016

APPENDIX A: QUESTIONNAIRES



Environmental Resource Group, Inc adapted issue of ALASKA DEPARTMENT OF ENVIRONMENAL CONSERVATION'S BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Prej	parer's Name	DUSTIN	STAHL	Date	e/Time Prepared_	1/15/2016	
			RESOURCES + EN	VIRON MEHTAL	SERVOBS Phone No.	907-590-031	6
	pose of Invest						
SE	CTION I:	BUILDING	INVENTORY				
1.	OCCUPAN	r or buildin	NG PERSONNEL:				
	Interviewed	: Y / N					
	Last Name	Barra	eaan	First Name	Alexa	endra	
	Address	100	thas	+	0		
	City	Flok	5 AK	9970			
	Phone No	907 3	347-7960	>			
	Number of C	Occupants/people	e at this location	Ag	e of Occupants_	19months	16,13
2.	OWNER or	LANDLORD:	(Check if same as occu	pant)		2 2	
	Interviewed	: Y / N			U		
	Last Name_	Barro	NAON	First Name	Aleja	ndra	
	Address	120 -	Inast		0		
	City	FbK	5 ALL	99701			
	Phone No	9073	17-7960				_
3.	BUILDING	CHARACTE	RISTICS				
	Type of Bui	lding: (Circle a	ppropriate response.)				
	Residen		School Church	Commercial/M Other AND	ulti-use DAYCARE		

If the property is residential, what type? (Circle appro	priate response.)
Ranch 2-Family Raised Ranch Split Level Cape Cod Contemporary Duplex Apartment House Modular Log Home	3-Family Colonial Mobile Home Townhouse/Condo Other
If multiple units, how many? 2nd Floor 6wr	er occupied unit, Basement unoccupied
If the property is commercial, what type?	
Business types(s) DAY CARE	
Does it include residences (i.e., multi-use) (N/N)	If yes, how many? 2- 1 2nd FLOOR APART MY
Other characteristics:	That is owner occupied - Dasement Apartment Conused
Number of floors 2 PLUS BASEMEN	Building age
Is the building insulated YN N	How airtight? Tight / Average Vot Tight
Have occupants noticed chemical odors in the buildin	g? Y N
If yes, please describe:	
describe:	S FROM 15T TO 2nd FLOOR INCREASES When 2nd FLOOR 15 ON
Airflow in building near suspected source	
Outdoor air infiltration 50ME VINDOWS ON 15 TIGHTLY, SMALL	T + SECOND FLOOF DONT CLOSE GAPS UNDER MOST DOORS
Infiltration into air duets WA BASE	BOARD HEAT

a. Above-grade construction:	wood frame	log	concrete	brick
a. Above grade construction.				
	constructed on p with enclosed ai		constructed o with open air	
b. Basement type:	full	crawlspace	slab-on-grade	e other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	PAINT
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with _	PAINT
g. The basement is:		damp	dry	
h. The basement is:	finished	un shished +	partially finis	hed TOILET, KITCHEN, ect Needs upgrades trepain
i. Sump present?	DIN 14	Fornac	e Room	Needs oppidaes tregation
j. Water in sump?	Y (N /) not appli	icable		
sement or lowest level depth be	elow grade (o		(feet)	L. C.
Sump, Fundal				tility ports, and drains).
Sump, Foundard	AIR CONDITION	NING (Circle	all that apply.)	
Sump, Foundar	AIR CONDITION	NING (Circle	all that apply.)	ust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation	AIR CONDITION Heat pump	NING (Circle : (Circle all the	all that apply.)	ust primary.)
Sump, Foundard HEATING, VENTING, and Type of heating system(s) use	AIR CONDITION	NING (Circle : (Circle all the	all that apply.) hat apply – not j water baseboan	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove	NING (Circle : (Circle all the	all that apply.) hat apply – not j water baseboard iant floor	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove	NING (Circle : (Circle all the Hot Radio Outc	all that apply.) hat apply – not j water baseboard iant floor	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane	NING (Circle : (Circle all the Hot Radio Outc	all that apply.) hat apply – not j water baseboard iant floor door wood boile osene	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane Coal	NING (Circle : (Circle all the Radi Outco Kerr Sola	all that apply.) hat apply – not j water baseboar iant floor door wood boile osene ur	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane Coal	NING (Circle : (Circle all the Radi Outco Kerr Sola	all that apply.) hat apply – not j water baseboard iant floor door wood boile osene	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric Wood	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane Coal	NING (Circle : (Circle all the Radio Outcome) Kerr Sola	all that apply.) hat apply – not j water baseboar iant floor door wood boile osene ur	fust primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric Wood Domestic hot water tank is for	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane Coal meled by: Basem maces have cold-air	NING (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome)	water baseboardiant floor door wood boile osene ar widoors	d Other
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric Wood Domestic hot water tank is for Boiler/furnace is located in: Do any of the heating appliant	AIR CONDITION ed in this building Heat pump Stream radiation Wood stove d is: Fuel oil Propane Coal meled by: Basem maces have cold-air	NING (Circle all the Hotel Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Circle all the Radio Outcome (Circle all the Radio Outcome) Kerce Sola Circle all the Radio Outcome (Circle all the Radio Outcome) Circ	water baseboardiant floor door wood boile osene ar widoors	fust primary.) Other Main floor Other
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel use Natural gas Electric Wood Domestic hot water tank is for Boiler/furnace is located in: Do any of the heating appliant Type of air conditioning or v	AIR CONDITION The din this building Heat pump Stream radiation Wood stove dis: Fuel oil Propane Coal Basem Inces have cold-air entilation used in	NING (Circle : (Circle all the Radio Outcome) Kerce Sola intakes? On this building	water baseboardiant floor door wood boile osene ar widoors	Main floor Other

7.

8.

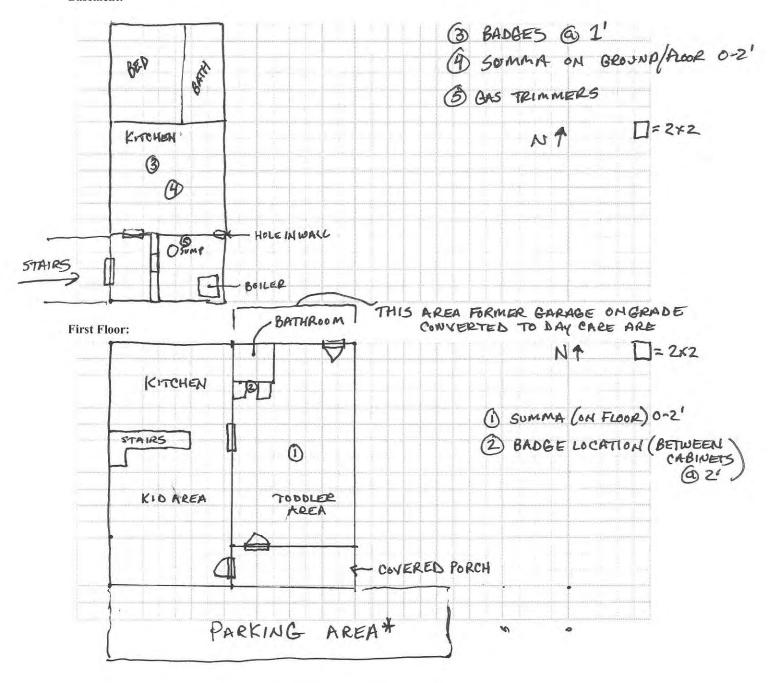
Describe the ventilation system in the building, its condition where visible, and the tightness of duct joints. Indica	te
the location of air supply and exhaust points on the floor plan.	

BATHROOMS EACH HAYE FAN VENTED TO OUT DOORS
HALL WAY BATH HAS DRY VENTED TO OUTDOOPS
Is there a radon mitigation system for the building/structure? Y / Date of Installation
Is the system active or passive? Active/Passive
OCCUPANCY
Is basement/lowest level occupied? Full-time Occasionally Seldom Almost never
Level General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).
Basement Apartment space (unoccupied)-correnty used as storage 1st Floor KITCHEN, 2 DAYCARE ROOMS (1 toddlers, 1 older kids) corrently 5-todders m_F
1st Floor KITCHEN, 2 DAYCARE ROOMS (1 toddlers, 1 older kids) corrently 5-todders
2nd Floor Owner occupted - Madel AS, Whill toddles 1 ADULT (32), 4 k105
3rd Floor N/A 19 months, 11 yrs, 13 yrs, 16 yrs.
WATER AND SEWAGE
Water supply: Public water Drilled well Driven well Dug well Other
Sewage disposal: Public sewer Septic tank Leach field Dry well Other

9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement:

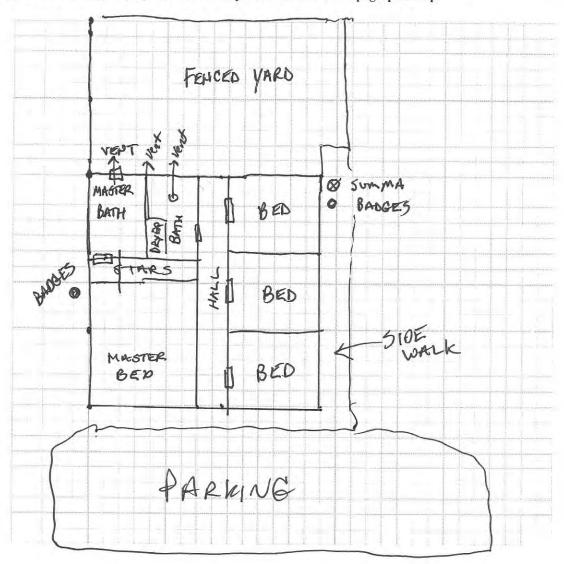


* CARS LEFT IDLING DURING PICK UP + DROP OFF
POSSIBLE EXAUST ENTRY INTO FRONT DOORS

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

a) 1. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

Is there an attached garage?	ON HAS BEEN CONVERTED TO FLANSHED INFAMIT DAY CARE AREA
Does the garage have a separate heating unit?	Y NA
Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)	Y NA
stored in the garage (e.g., lawlinower, ATV, or car)	Please specify
Has the building ever had a fire?	YN When?
Is a kerosene or unvented gas space heater present?	Y/ Where?
Is there a workshop or hobby/craft area?	Y N Where and type
Is there smoking in the building?	Y (N) How frequently?
Has painting/staining been done in the last six months?	()/N Where and when? PAINT MASTER BED
Is there new carpet, drapes or other textiles?	M/N Where and when? FLOOR INC MASTER BED
Is there a kitchen exhaust fan?	(9/N If yes, where is it vented? <u>Recycler w/ filter</u>
Is there a bathroom exhaust fan?	N If yes, where is it vented? OUTSIDE
Is there a clothes dryer?	(Y/N If yes, is it vented outside? (Y)N
Are cleaning products, cosmetic products, or pesticides	used that could interfere with indoor air sampling?/ N
If yes, please describe In the bath	rooms, some in basement
Appartment	
Do any of the building occupants use solvents at work?	YN
(For example, is the building used for chemical manufactur shop, fuel oil delivery area, or do any of the occupants world	ring or a laboratory, auto mechanic or auto body shop, painting k as a poiler mechanic, pesticide applicator, or cosmetologist?)
If yes, what types of solvents are used? Baby wipe	5/cleaners
If yes, are his/her/their clothes washed at work?	YN
Do any of the building occupants regularly use or work	at a dry-cleaning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	(No)
Yes, use dry cleaning infrequently (monthly or less)	Unknown
Yes, work at a dry cleaning services	

I-7

2. PRODUCT INVENTORY FORM (For use during building walk-through.)

Make and model of field instrument used:	

List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo Y/N
BASEMEN	T BLADE "CLEAN LI	NEN A	R FROSH" C	PEN	MA	N
	de oil	202	open		10	V
11 57	P BRAKE FUID	1002	OPEM		11	V
10	NAPA STARTING FUL	4) lloz	OPEN		10	6
()	CITRUS ALL CLEANS	Gallen	OPEN/DRY		41	1/1
BASEMENT	ZEP HARDWOOD CLEANER	11	OPEN		-61	4
	2995 trimmor	5 429016	n/Fore)		NOTICEABLE	4
	,					/
4						

Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**.

This form was modified from:

ITRC (Interstate Technology and Regulatory Council). 2007. *Vapor Intrusion Pathway: A Practical Guideline*. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

For more information, please contact our staff at Environmental Resource Group, Inc. (415) 381-6574 www.EnvironmentalRG.com

Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

ALASKA DEPARTMENT OF ENVIRONMENAL CONSERVATION BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name Yola Bryson	Date/Time Prepared 1023 1315
Preparer's Affiliation ERG	Phone No. 510 671 2088
Purpose of Investigation Soil Vapor Inv	
SECTION I: BUILDING INVENTORY	
1. OCCUPANT OR BUILDING PERSONNEL:	
Interviewed: Y/N	
Last Name	First Name
Address 625 Noyes Street	
city Fairbanks	
Phone No	
Number of Occupants/people at this location 5- (Age of Occupants 2 Adults w/ 4 children ~30's + oddler to teena
	~30's +oddler to been
2. OWNER or LANDLORD: (Check if same as occupant	.)
Interviewed: Y/N	
Last NameEII.S	First Name R.CK
Address 620 Noves Street	
City_ Fairbanks	
Phone No. 907 -378-7748	1
BUILDING CHARACTERISTICS	
Type of Building: (Circle appropriate response.)	
Residential School Co Industrial Church Ott	nmercial/Multi-use er

625 Noyes

If the property is residential, what type? (Circle appropriate response.) 3-Family 2-Family Ranch Split Level Colonial Raised Ranch Contemporary Mobile Home Cape Cod Townhouse/Condo Apartment House Duplex Other Log Home Modular If multiple units, how many?_ If the property is commercial, what type? Business types(s)_ Does it include residences (i.e., multi-use)? Y / N If yes, how many?_____ Other characteristics: Building age Number of floors How airtight? Tight / Average / Not Tight Is the building insulated? Y/N Have occupants noticed chemical odors in the building? Y/N If yes, please describe:_ 4. AIRFLOW Use air current tubes, tracer smoke, or knowledge about the building to evaluate airflow patterns and qualitatively describe: Airflow between floors Airflow in building near suspected source Outdoor air infiltration Infiltration into air ducts

a. Above-grade constru	iction:	wood frame	log	concrete	brick	
		constructed or with enclosed	n pilings air space	constructed or with open air		
b. Basement type:		full	crawlspace	slab-on-grade	other	11 1 1 1 1 1 1 1 1
c. Basement floor:	(concrete?	dirt	stone	other 🚳	D0000000000000000000000000000000000000
d. Basement floor:		unsealed	sealed	sealed with		
e. Foundation walls:		poured	block	stone	other	
f. Foundation walls:		unsealed	sealed	sealed with		
g. The basement is:		wet	damp	dry		
h. The basement is:		finished	unfinished	partially finish	ned	
i. Sump present?		Y/0	,			
j. Water in sump?		Y/N/not app	olicable			
asement or lowest level de	nth bala	ny avodo	~8	(feet).		
	ентур	oints and appi	roximate size	(e.g., cracks, util	lity ports, a	nd drains).
HEATING, VENTING,	and AI	R CONDITIO	NING (Circle	e all that apply.)		nd drains).
	and AI	R CONDITIO	NING (Circle	e all that apply.)		nd drains).
HEATING, VENTING,	and AII s) used i He Sti	R CONDITIO	NING (Circle g: (Circle all t Hot Rad	e all that apply.)		nd drains).
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters	and AII s) used i He Str W	R CONDITIO In this building eat pump ream radiation ood stove	NING (Circle g: (Circle all t Hot Rad	e all that apply.) hat apply – not jus water baseboard iant floor	st primary.)	nd drains).
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters Electric baseboard	and AII s) used i He Str W	R CONDITIOn this building eat pump ream radiation cood stove:	PNING (Circle g: (Circle all t Hot Rad Out	e all that apply.) hat apply – not jus water baseboard iant floor door wood boiler osene	st primary.)	nd drains).
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric	and AII s) used i He Str W I used is Fu Pre Co	R CONDITIOn this building eat pump ream radiation cood stove:	eNING (Circle g: (Circle all t Hot Rad Out	e all that apply.) hat apply – not jus water baseboard iant floor door wood boiler osene	st primary.)	nd drains).
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood	and AII s) used i Str W I used is Fu Pro Co	R CONDITIOn this building eat pump ream radiation cood stove:	PNING (Circle g: (Circle all t Hot Rad Out Kerr Sola	e all that apply.) hat apply – not jus water baseboard iant floor door wood boiler osene	st primary.)	Other
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood Domestic hot water tank	and AII s) used i He Str W I used is Fu Prc Co i is fuele in:	R CONDITIO In this building eat pump ream radiation ood stove : el oil opane al d by: Basem	PNING (Circle all the Hot Rad Out Sola	e all that apply.) hat apply – not jus water baseboard iant floor door wood boiler osene ur utdoors M	st primary.) Other_	
HEATING, VENTING, Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood Domestic hot water tank Boiler/furnace is located Do any of the heating ap	and AII s) used i Str W I used is Fu Pro Co is fuele in: pliances or venti	R CONDITIO In this building eat pump ream radiation ood stove : el oil opane al d by: Basem	PNING (Circle all the Hot Rad Out Kern Sola intakes? Y	e all that apply.) hat apply – not jus water baseboard iant floor door wood boiler osene ur utdoors M	st primary.) Other_	

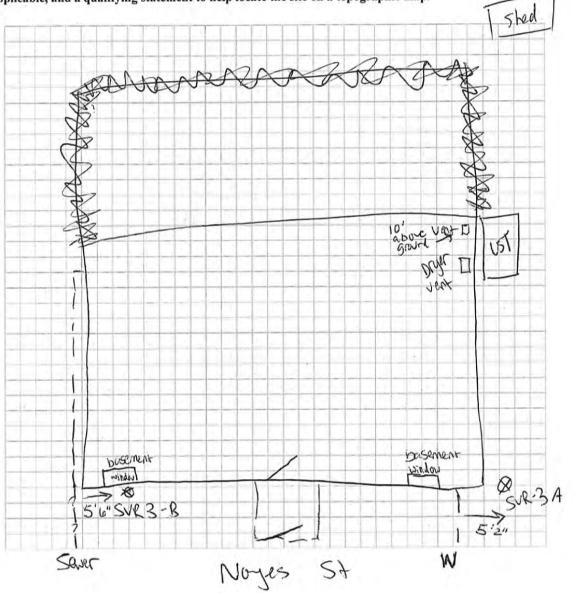
			ust points on the fl			
Is there a	ı radon mit	igation system	for the building/st	tructure? Y / N D	ate of Installatio	n
Is the sys	tem active	or passive?	Active/Passive			
OCCUP	ANCY					
		level occupied?	Full-time	Occasionally	Seldom	Almost never
	ent/lowest		Full-time			
Is basem	Genera	al Use of Each l	Floor (e.g., family	room, bedroom,	laundry, works	
Is basem Level Basemen	Genera	l Use of Each I	Storage	room, bedroom,	laundry, works	hop, or storage).
Is basem Level Basemen 1st Floor	Genera	al Use of Each l	Storage	room, bedroom,	laundry, works	hop, or storage).
Is basem Level Basemen	Genera	landry Ling T	Storage	room, bedroom,	laundry, works	hop, or storage).

625 Noges

10. OUTDOOR PLOT

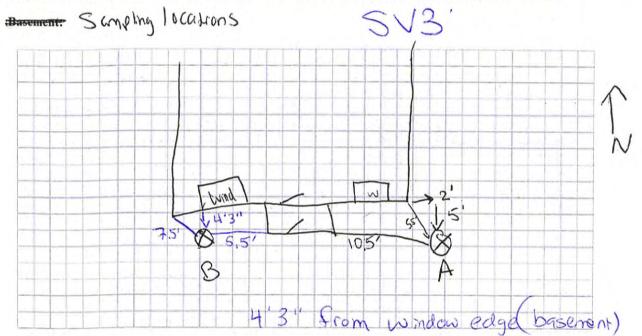
Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

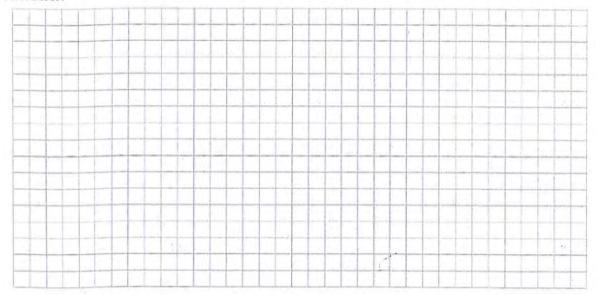


9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.



First Floor:



625 Noses

SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

IR QUAL	LITY		
YN	Y N		
Y/N/NA			
Y/N/NA			
Please	specify		
Y/N	When?		
Y/N	Where?		
Y/N	Where and type		
Y/N	How frequently?		
Y/N	Where and when?		
Y/N	Where and when?		
Y/N	If yes, where is it vented?		
Y/N	If yes, where is it vented?		
W/N	If yes, is it vented outside? () / N		
ised that	could interfere with indoor air sampling? Y/		
	A Company of the Comp		
Y/N			
	Y (N) Y/N Y/N Please Y/N		

(For example, is the building used for chemical manufacturing or a laboratory, auto mechanic or auto body shop, painting shop, fuel oil delivery area, or do any of the occupants work as a boiler mechanic, pesticide applicator, or cosmetologist?)

If yes, what types of solvents are used?_____

If yes, are his/her/their clothes washed at work?

Y/N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry cleaning regularly (weekly)

No

Yes, use dry cleaning infrequently (monthly or less)

Unknown

Yes, work at a dry cleaning services

2.	PRODUCT INVENTORY FORM (For use during building walk-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² Y/N
LOCALION	1100000					
	15					
				1111111111111		
		1	15			
			H-1			
						4
			12			
		-				

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D). 1

This form was modified from:

ITRC (Interstate Technology and Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

The Alaska Department of Environmental Conservation's Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska. For more information, please contact our staff at the Contaminated Sites Program closest to you: Juneau: 907-465-5390 / Anchorage: 907-269-7503 Fairbanks: 907-451-2153 / Kenai: 907-262-5210

Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name	Bayran	Date/Ti	me Prepared	3-24-1	6 1200
Preparer's Affiliation	ERG		Phone No.	1067/2	2088
Purpose of Investigation	Sc1 605	Inu	Mar M.		
SECTION I: BUILDING	G INVENTORY				
1. OCCUPANT OR BUILD	ING PERSONNEL:				
Interviewed Y N					
Last Name	5	First Name	Mikaya	5	
Address 311 City Farithan					
City Folia ban	KS				
Phone No. 90	1-451-645	1			
Number of Occupants/peop	ole at this location	4 Age of	Occupants M	:d 20's	to 605
2. OWNER or LANDLORE	o: (Check if same as occu	ıpant × .)			
Interviewed Y/N					
Last Name		First Name			
Address					
City					
Phone No					
3. BUILDING CHARACTE	CRISTICS				
Type of Building: (Circle	appropriate response.)				
Residential Industrial	School Church	Commercial/Multi-t Other_	use		

amily
lonial
obile Home
wnhouse/Condo
her
If yes, how many?
Building age
How airtight? Tight / Average / Not Tight
Y 🕅
the building to evaluate airflow patterns and qualitatively

4.

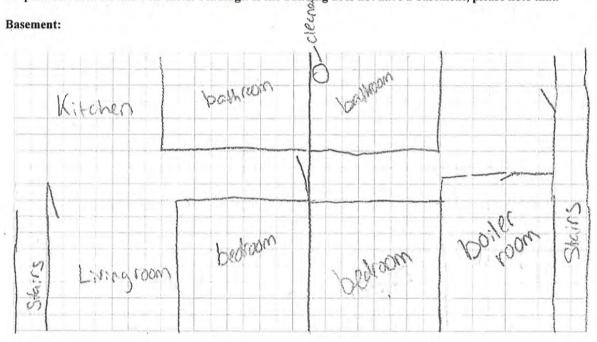
a. Above-grade construction	on: (wood frame	log	concrete	brick
	constructed on with enclosed		constructed or with open air:	pilings space
b. Basement type:	full	crawlspace	slab-on-grade	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	172
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with	
g. The basement is:	wet	damp	dry	
h. The basement is:	finished	unfinished	partially finish	ed
i. Sump present?	Y/N			
j. Water in sump?	Y/N/not app	licable		
asement or lowest level depth	halow guada	X	(feet).	
Water/Sever	SUFIN			lity ports, and drains).
Water/Sever	entry			
HEATING, VENTING, and Type of heating system(s) u Hot air circulation Space heaters	d AIR CONDITIOnsed in this building Heat pump Stream radiation	NING (Circle g: (Circle all the Hot Rad	all that apply.) hat apply – not ju water baseboard iant floor	st primary.)
HEATING, VENTING, and Type of heating system(s) us Hot air circulation Space heaters Electric baseboard	d AIR CONDITIOnsed in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all the Hot Rad	all that apply.) hat apply – not ju- water baseboard	
HEATING, VENTING, and Type of heating system(s) u Hot air circulation Space heaters	d AIR CONDITIOnsed in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all the Hot Radi Outo	all that apply.) hat apply – not just water baseboard iant floor door wood boiler	st primary.)
HEATING, VENTING, and Type of heating system(s) we have air circulation space heaters Electric baseboard The primary type of fuel us Natural gas Electric	d AIR CONDITIOnsed in this building Heat pump Stream radiation Wood stove sed is: Fuel oil Propane Coal	NING (Circle g: (Circle all the Hot Radi Outo	all that apply.) hat apply – not just water baseboard iant floor door wood boiler	st primary.)
HEATING, VENTING, and Type of heating system(s) to Hot air circulation Space heaters Electric baseboard The primary type of fuel us Natural gas Electric Wood	d AIR CONDITIOnsed in this building Heat pump Stream radiation Wood stove sed is: Fuel oil Propane Coal fueled by:	NING (Circle g: (Circle all the Radi Outo Kero Sola	all that apply.) hat apply – not just water baseboard iant floor door wood boiler osene	st primary.)
HEATING, VENTING, and Type of heating system(s) to Hot air circulation Space heaters Electric baseboard The primary type of fuel us Natural gas Electric Wood Domestic hot water tank is	d AIR CONDITIO sed in this building Heat pump Stream radiation Wood stove sed is: Fuel oil Propane Coal fueled by: Basen ances have cold-air	NING (Circle g: (Circle all the Radi Outo Kero Sola	all that apply.) hat apply – not just water baseboard iant floor door wood boiler bsene r	st primary.) Other
HEATING, VENTING, and Type of heating system(s) to Hot air circulation Space heaters Electric baseboard The primary type of fuel us Natural gas Electric Wood Domestic hot water tank is Boiler/furnace is located in Do any of the heating appli	d AIR CONDITIO sed in this building Heat pump Stream radiation Wood stove sed is: Fuel oil Propane Coal fueled by: Basen ances have cold-air	NING (Circle g: (Circle all the Hot Rad Oute Kere Sola intakes? Y this building	all that apply.) hat apply – not just water baseboard iant floor door wood boiler bsene r	st primary.) Other

Is there a	don mitigation system for the building/structure? Y / N Date of Installation
	n active or passive? Active/Passive
	/lowest level occupied? Full-time Occasionally Seldom Almost never
	General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).
Is basem Level Basemen	/lowest level occupied? Full-time Occasionally Seldom Almost never
Is basem	General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage). 2 00.45 W badrooms + bathrooms

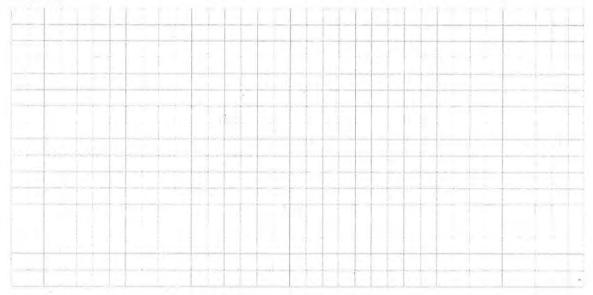
311

9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.



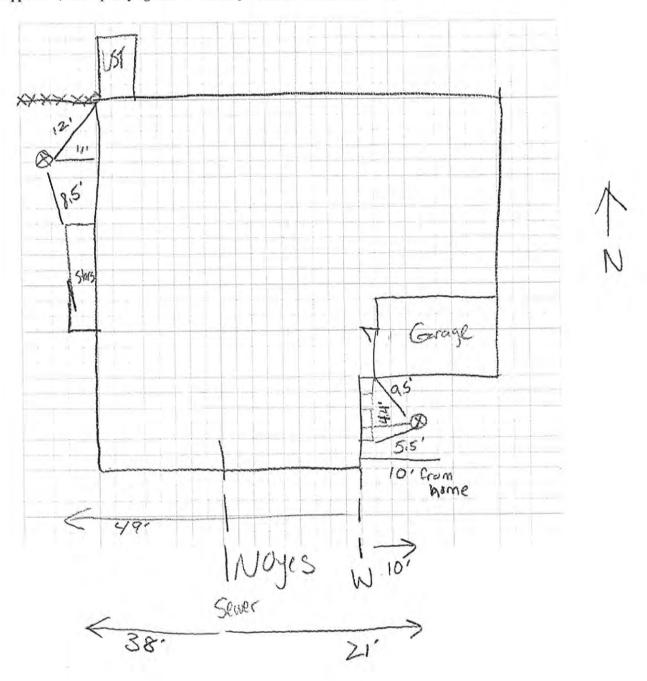
First Floor:



10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

1. FACTORS THAT MAY INFLUENCE INDOOR A	IR QUAL	ITY
Is there an attached garage?	(Y)N	
Does the garage have a separate heating unit?	YIN	NA
Are petroleum-powered machines or vehicles	Y/N/	NA
stored in the garage (e.g., lawnmower, ATV, or car)	Please	specify
Has the building ever had a fire?	Y/N	When?
Is a kerosene or unvented gas space heater present?	Y/N	Where?
Is there a workshop or hobby/craft area?	Y/N	Where and type
Is there smoking in the building?	Y/N	How frequently?
Has painting/staining been done in the last six months?	Y/N	Where and when?
Is there new carpet, drapes or other textiles?	YN	Where and when?
Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
Is there a clothes dryer?	(Y/N	If yes, is it vented outside? ON
Are cleaning products, cosmetic products, or pesticides t	used that o	could interfere with indoor air sampling? Y/N
If yes, please describe		alos an academana de la como de l
Do any of the building occupants use solvents at work?	Y/N	
(For example, is the building used for chemical manufacturi shop, fuel oil delivery area, or do any of the occupants work	ng or a lab as a boile	oratory, auto mechanic or auto body shop, painting r mechanic, pesticide applicator, or cosmetologist?
If yes, what types of solvents are used?		
If yes, are his/her/their clothes washed at work?	/N	
Do any of the building occupants regularly use or work a	at a dry-cl	eaning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	No	
Yes, use dry cleaning infrequently (monthly or less)	Un	known
Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building walk-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² <u>Y / N</u>
			V . St. U			
						-
						1
					-	
-		1				7
			H.			
				1		

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D).

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Pro	eparer's Name YOA	2 ayram	Date/Time Pr	repared 3-2	4-16.1200
	eparer's Affiliation <u></u>	- 1	Phon		71 2088
Pu	rpose of Investigation	Soil Gas J			
SE	ECTION I: BUILDIN	IG INVENTORY			
1.	OCCUPANT OR BUIL	DING PERSONNEL:	**		
	Interviewed: V/N				
	Last Name	elly	First Name	onet	
	the same of the sa	INA ST			
	City Fair				
	Phone No. 70 7	7-374-0789			
	Number of Occupants/pe	ople at this location	Age of Occu	pants_teer	1 +0 >50
2.	OWNER or LANDLOR	RD: (Check if same as occ	upant <u> </u>		
	Interviewed: Y/N		- (C. 14) 22 - 24 (C. 14)		
	Last Name		First Name		
	Address				
	City				
	Phone No				
3.	BUILDING CHARACT	ERISTICS			
	Type of Building: (Circle	e appropriate response.)			
	Residential Industrial	School Church	Commercial/Multi-use		

3-Family Colonial Mobile Home Townhouse/Condo
Other Hultiple Units
If yes, how many?
Building age
How airtight? Tight / Average / Not Tight
building? Y/N
edge about the building to evaluate airflow patterns and qualitatively

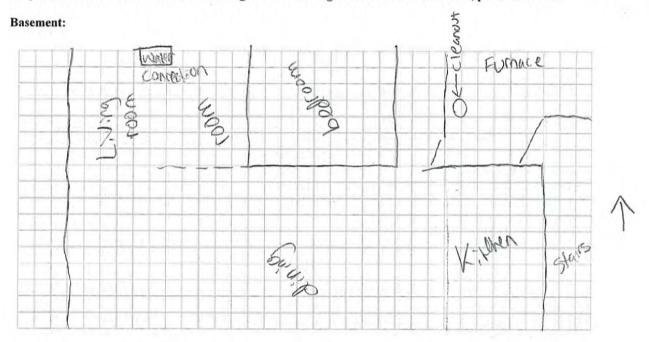
72

a. Above-grade construct	ion: (wood frame)	log	concrete	brick
	constructed on with enclosed	pilings air space	constructed on with open air s	
b. Basement type:	full	crawlspace	slab-on-grade	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with	
g. The basement is:	wet	damp	dry	
h. The basement is:	finished	unfinished	partially finish	ed
i. Sump present?	YIN			
j. Water in sump?	Y/N/not app	licable		
ement or lowest level depti	6 10 20 21 22 22 23	~ <2	(feet).	
Jater/Sewer				ity ports, and drains).
Vater / Sewer	entry and AIR CONDITIO	NING (Circle	all that apply.)	
HEATING, VENTING, an	nd AIR CONDITIO	NING (Circle g: (Circle all th	all that apply.) hat apply – not jus	
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters	nd AIR CONDITIO	NING (Circle g: (Circle all the Hot Rad	all that apply.) hat apply – not jus water baseboard iant floor	et primary.)
HEATING, VENTING, and Type of heating system(s)	nd AIR CONDITIO	NING (Circle g: (Circle all the Hot Rad	all that apply.) hat apply – not jus water baseboard	
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all the Hot Rad	all that apply.) hat apply – not jus water baseboard iant floor	et primary.)
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all the Hot Radi Outo	all that apply.) hat apply – not jus water baseboard iant floor door wood boiler	et primary.)
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric Wood	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal	NING (Circle g: (Circle all the Hot Radi Outo	all that apply.) hat apply – not jus water baseboard iant floor door wood boiler	et primary.)
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric Wood Domestic hot water tank is	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal s fueled by:	NING (Circle g: (Circle all the Hot Radi Outo Kerc Sola	all that apply.) hat apply – not just water baseboard iant floor door wood boiler osene r	et primary.)
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel of Natural gas Electric Wood Domestic hot water tank is Boiler/furnace is located in	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal s fueled by: Basem liances have cold-air	NING (Circle g: (Circle all the Hote Radio Outcome) Kerce Sola ment Or intakes? Y	all that apply.) hat apply – not just water baseboard iant floor door wood boiler bsene r utdoors M	ot primary.) Other
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel under the primary type of f	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal s fueled by: Basem liances have cold-air	NING (Circle g: (Circle all the Hot Radioute Kere Sola nent Or intakes? Yethis building	all that apply.) hat apply – not just water baseboard iant floor door wood boiler bsene r utdoors M	ot primary.) Other
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel of Natural gas Electric Wood Domestic hot water tank is Boiler/furnace is located in Do any of the heating appl Type of air conditioning of	nd AIR CONDITIO used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal s fueled by: I: Basem liances have cold-air r ventilation used in	NING (Circle g: (Circle all the Hot Radi Oute Kere Sola nent Or intakes? V this building	all that apply.) hat apply – not just water baseboard iant floor door wood boiler beene r utdoors M / N :	ot primary.) Other

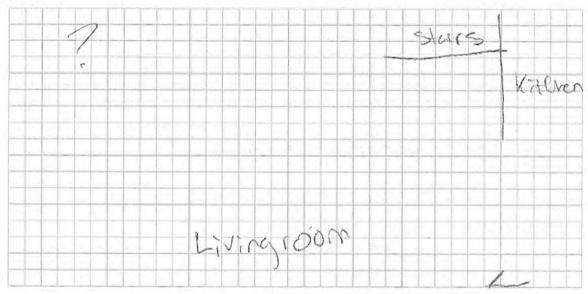
ACCOMM.			
Ic there a r	adon mitigation system for the	building/structure? Y / N Date of Insta	llation
		ve/Passive	
OCCUPA			4.004.7000
	nt/lowest level occupied? Ful	-time Occasionally Seldom	Almost never
	nt/lowest level occupied? Ful	-time Occasionally Seldom	11.
Is basemen	nt/lowest level occupied? Ful	.g., family room, bedroom, laundry, w	orkshop, or storage).
Is basement Level Basement	nt/lowest level occupied? Ful	.g., family room, bedroom, laundry, w	orkshop, or storage).
Is basement Level Basement 1st Floor	nt/lowest level occupied? Ful	g., family room, bedroom, laundry, w	orkshop, or storage).
Level Basement 1st Floor 2nd Floor	nt/lowest level occupied? Ful	.g., family room, bedroom, laundry, w	orkshop, or storage).
Is basement Level Basement 1st Floor	nt/lowest level occupied? Ful	.g., family room, bedroom, laundry, w	orkshop, or storage).
Level Basement 1st Floor 2nd Floor 3rd Floor	nt/lowest level occupied? Ful	.g., family room, bedroom, laundry, w	orkshop, or storage).
Level Basement 1st Floor 2nd Floor 3rd Floor	General Use of Each Floor (e	.g., family room, bedroom, laundry, w	orkshop, or storage).

9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.



First Floor:

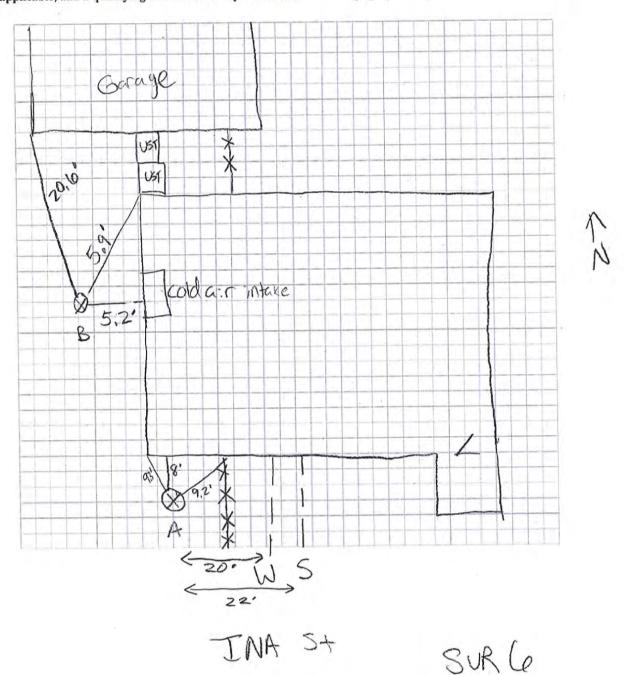


236 INA

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



I-6

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SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

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)	1. FACTORS THAT MAY INFLUENCE INDOOR AI	IR QUAL	ITY
	Is there an attached garage?	YIN	
	Does the garage have a separate heating unit?	YN	NA
	Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)	Y/N/	
		Please	specify CUT
	Has the building ever had a fire?	Y/N	When?
	Is a kerosene or unvented gas space heater present?	YN	Where?
	Is there a workshop or hobby/craft area?	Y/N	Where and type
	Is there smoking in the building?	Y/N	How frequently?
	Has painting/staining been done in the last six months?	Y/N	Where and when?
	Is there new carpet, drapes or other textiles?	Y/N	Where and when?
	Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
	Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
	Is there a clothes dryer?	(Y)N	If yes, is it vented outside? (Y) N
	Are cleaning products, cosmetic products, or pesticides u If yes, please describe		경화 얼마님 아들어서 아이는 얼마를 살으면 그 것이다.
	Do any of the building occupants use solvents at work?	Y/N	
	(For example, is the building used for chemical manufacturing shop, fuel oil delivery area, or do any of the occupants work	ng or a lab as a boile	poratory, auto mechanic or auto body shop, painting r mechanic, pesticide applicator, or cosmetologist?
	If yes, what types of solvents are used?		
	If yes, are his/her/their clothes washed at work?	/N	
	Do any of the building occupants regularly use or work a	at a dry-cl	leaning service? (Circle appropriate response)
	Yes, use dry cleaning regularly (weekly)	No	
	Yes, use dry cleaning infrequently (monthly or less)	Un	known
	Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building walk-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² <u>Y / N</u>
						3/13/20
===1						
						+
						-
						1
_						
						1
						-
						-
		-				
		1				

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D).

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Pr	eparer's Name <u>U</u> ô	la Bayran	Date/Time Prepared	3/23/16	1015
Pr	eparer's Affiliation	ERG'	Phone No	510671	2088
Pu	rpose of Investigation_	Soil gas	invest		
<u>S1</u>	ECTION I: BUILI	DING INVENTORY			
1.	OCCUPANT OR B	UILDING PERSONNEL:			
	Interviewed: Y / 🕅)			
	Last Name 400	ng	First NameSqll o		
	Address 208	Charles Str	e+		
	City Fairb	anks			
	Phone No. 90	7-322-924			
	Number of Occupant	s/people at this location	Age of Occupants_	>50	
2.	OWNER or LANDI	LORD: (Check if same as occ	upant <u>×</u> .)		
	Interviewed: Y (N)				
	Last Name		First Name		
	Address				
	Phone No				
3.	BUILDING CHARA	ACTERISTICS			
	Type of Building: (C	Circle appropriate response.)			
	Residential Industrial	School Church	Commercial/Multi-use Other		

	a D 11.	2 Family
Ranch	2-Family	3-Family Colonial
Raised Ranch	Split Level	Mobile Home
Cape Cod	Contemporary	Townhouse/Condo
Duplex	Apartment House	
Modular	Log Home	Other
multiple units, how m	any?	
the property is comm	ercial, what type?	
Business types(s)		
Does it include resid	lences (i.e., multi-use)? Y / N	If yes, how many?
Other characteristics:		
Number of floors		
Is the building insul	ated? Y / N	How airtight? Tight / Average / Not Tight
	d chemical odors in the building	
f yes, please describe:_		
AIRFLOW		
AIRFLOW		
AIRFLOW		bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the describe:	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the describe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the describe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the describe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
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AIRFLOW Use air current tubes, the describe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the describe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the secribe: Airflow between floors Airflow in building near	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the scribe: Airflow between floors	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
AIRFLOW Use air current tubes, the secribe: Airflow between floors Airflow in building near	tracer smoke, or knowledge al	bout the building to evaluate airflow patterns and qualitative
Jse air current tubes, the scribe: Airflow between floors Airflow in building near	r suspected source	bout the building to evaluate airflow patterns and qualitative

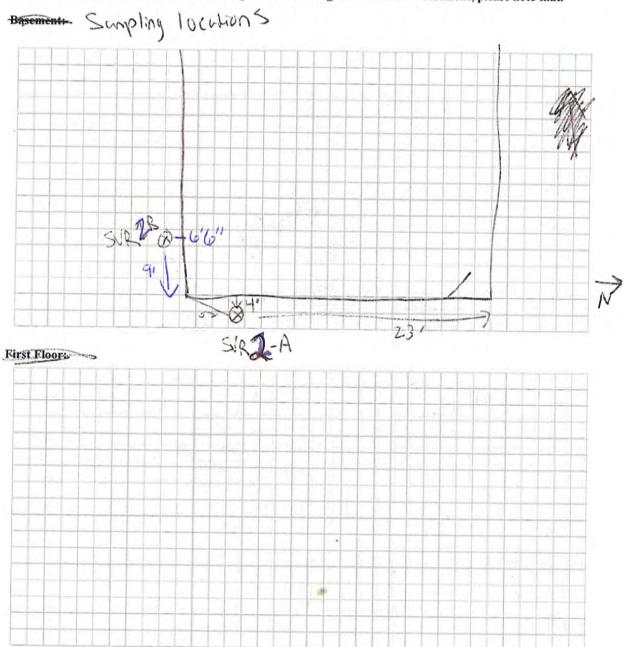
4.

a. Above-grade construction:	(wood frame)	log	concrete	brick
	constructed or with enclosed		constructed on with open air s	
b. Basement type:	full	crawlspace	slab-on-grade	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with	
g. The basement is:	wet	damp	dry	
h. The basement is:	finished	unfinished	partially finishe	ed
i. Sump present?	Y /(N)			
j. Water in sump?	Y/N/not app	olicable		
ement or lowest level depth be		-8	(feet).	
Sewer / Water				
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters	AIR CONDITION d in this building Heat pump Stream radiation	ONING (Circle g: (Circle all the	all that apply.) nat apply – not jus water baseboard ant floor	t primary.)
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard	AIR CONDITION d in this building Heat pump Stream radiation Wood stove	ONING (Circle g: (Circle all the	all that apply.) nat apply – not jus	nent
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood	AIR CONDITION In this building Heat pump Stream radiation Wood stove is: Fuel oil Propane Coal	ONING (Circle g: (Circle all the Radi Outo	all that apply.) nat apply – not jus water baseboard ant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood	AIR CONDITION In this building Heat pump Stream radiation Wood stove is: Fuel oil Propane Coal	ONING (Circle g: (Circle all the Radi Outo	all that apply.) nat apply – not jus water baseboard ant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood Domestic hot water tank is fue	AIR CONDITION In this building Heat pump Stream radiation Wood stove is: Fuel oil Propane Coal	ONING (Circle g: (Circle all the Radii Outo Kero Sola	all that apply.) nat apply – not just water baseboard ant floor door wood boiler ssene	t primary.)
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric	AIR CONDITION In this building Heat pump Stream radiation Wood stove is: Fuel oil Propane Coal Basen ces have cold-air	NING (Circle g: (Circle all the Radii Outo Kero Sola nent Outo	all that apply.) nat apply – not just water baseboard ant floor door wood boiler seene atdoors M	t primary.) Other
HEATING, VENTING, and A Type of heating system(s) used Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood Domestic hot water tank is fuel Boiler/furnace is located in: Do any of the heating appliance Type of air conditioning or ver	AIR CONDITION In this building Heat pump Stream radiation Wood stove is: Fuel oil Propane Coal Basen ces have cold-air	NING (Circle g: (Circle all the Hot Radi Outo Kero Sola nent Outo r intakes?	all that apply.) nat apply – not just water baseboard ant floor door wood boiler seene atdoors M	t primary.) Other

the locat	on of air su	pply and exhau	st points on the	floor plan.		
Is there	a radon mit	igation system f	or the building/	structure? Y / N I	Date of Installation	on
Is the sy	stem active	or passive?	Active/Passive			
OCCUP	ANCY					
OCCUP Is basen		evel occupied?	Full-time	Occasionally	Seldom	Almost never
	nent/lowest l	evel occupied?		Occasionally		
Is basen	nent/lowest l <u>Genera</u>					
Is basen Level Baseme	Genera	l Use of Each F	loor (e.g., family	room, bedroom,	laundry, works	
Level Baseme	Genera		loor (e.g., family	room, bedroom,	laundry, works	
Is basen Level Baseme	Genera	l Use of Each F	loor (e.g., family	room, bedroom,	laundry, works	

9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

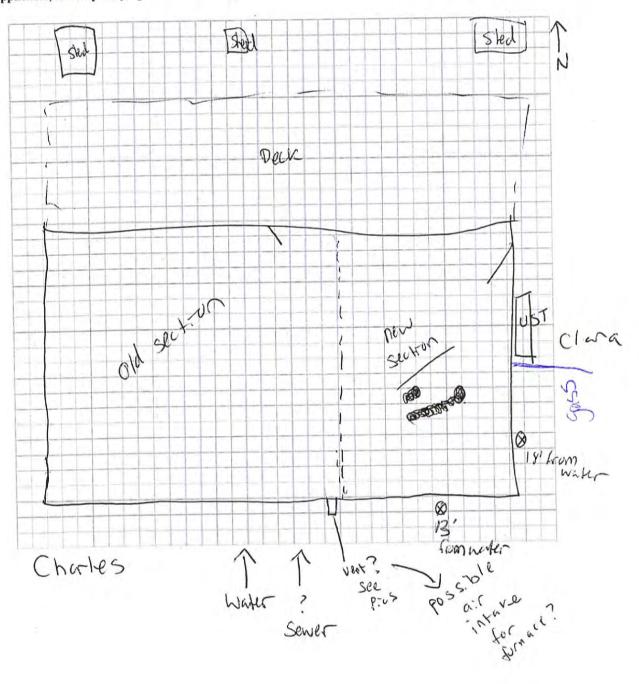


208 Charles

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



208 Churks

SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

1. FACTORS THAT MAY INFLUENCE INDOOR A	AIR QUAL	JTY
Is there an attached garage?	Y/0)	
Does the garage have a separate heating unit?	Y/N/	NA
Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)	Y/N/	NA
and garage (e.g., lawillower, ATV, of car)	Please	specify
Has the building ever had a fire?	Y/N	When?
Is a kerosene or unvented gas space heater present?	Y/N	Where?
Is there a workshop or hobby/craft area?	Y/N	Where and type
Is there smoking in the building?	YIN	How frequently?
Has painting/staining been done in the last six months?	Y/N	Where and when?
Is there new carpet, drapes or other textiles?	Y/N	Where and when?
Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
Is there a clothes dryer?	Ø/N	If yes, is it vented outside? N
Are cleaning products, cosmetic products, or pesticides of the second se		
Do any of the building occupants use solvents at work? (For example, is the building used for chemical manufacturi shop, fuel oil delivery area, or do any of the occupants work	Y/N ing or a labo	oratory, auto mechanic or auto body shop, painting mechanic, pesticide applicator, or cosmetologist?)
If yes, what types of solvents are used?	7.2.2.2.2.7.7.2	- The state of the
If yes, are his/her/their clothes washed at work?	/N	
Do any of the building occupants regularly use or work a	it a dry-cle	aning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	No	two majors on 200 or of the same former.
Yes, use dry cleaning infrequently (monthly or less)	Unk	nown
Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building walk-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² Y/N
Location		1				
		120				-
_						
		-				
	A					-
						1
						1
						1,1
						1 7
		-				+
					-	-
		1				1
	-					

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D). 1

ITRC (Interstate Technology and Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

The Alaska Department of Environmental Conservation's Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska. For more information, please contact our staff at the Contaminated Sites Program closest to you: Juneau: 907-465-5390 / Anchorage: 907-269-7503 Fairbanks: 907-451-2153 / Kenai: 907-262-5210

Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

	ION I: BUILDING INVENTORY
	CUPANT OR BUILDING PERSONNEL:
	erviewed: Y N
La	t Name Mercier First Name Scott
Ad	dress 106 Charles Street
Cit	Fairbonks
Ph	one No.
Nu	mber of Occupants/people at this location 3-4? Age of Occupants 2 adults, teen ager,
ov	NER or LANDLORD: (Check if same as occupant <u></u> .)
Int	erviewed: Y / N
Las	t NameFirst Name
Ad	lress
Cit	
	2.712

Industrial

Church

Ranch Raised Ranch Cape Cod Duplex Modular	2-Family Split Level Contemporary Apartment House Log Home	Town	
f multiple units, how	many?	_	
f the property is com	nercial, what type?		
Business types(s)_			
Does it include resi	dences (i.e., multi-use)? Y / N		If yes, how many?
Other characteristics:			
Number of floors_			Building age
Is the building insu	lated? Y / N		How airtight? Tight / Average / Not Tight
The second second state of	ed chemical odors in the buil	ding?	Y/N
AIRFLOW Use air current tubes,			building to evaluate airflow patterns and qualitatively
AIRFLOW Use air current tubes, describe: Airflow between floors	tracer smoke, or knowledge	about the	
AIRFLOW Use air current tubes, describe: Airflow between floors	tracer smoke, or knowledge	about the	building to evaluate airflow patterns and qualitatively
AIRFLOW Use air current tubes, describe: Airflow between floors	tracer smoke, or knowledge	about the	building to evaluate airflow patterns and qualitatively
AIRFLOW Use air current tubes, describe: Airflow between floors Airflow in building ne	tracer smoke, or knowledge	about the	building to evaluate airflow patterns and qualitatively
AIRFLOW Use air current tubes, describe: Airflow between floors Airflow in building ne	tracer smoke, or knowledge	about the	building to evaluate airflow patterns and qualitatively

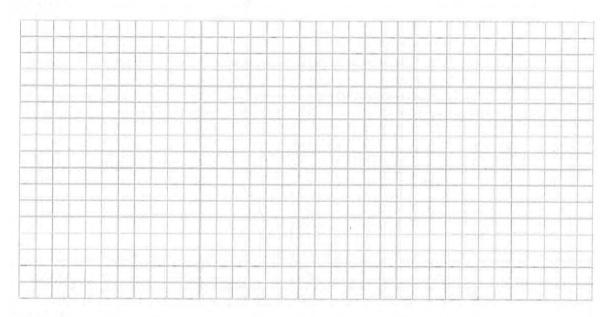
a. Above-grade construct	ion: (wood frame)	log	concrete	brick
	constructed or with enclosed		constructed on with open air s	
b. Basement type:	full	crawlspace	slab-on-grade	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	MV
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with	
g. The basement is:	wet	damp (dry	
h. The basement is:	finished	unfinished	partially finish	ed
i. Sump present?	YN			
j. Water in sump?	Y/N/not app	plicable		
ement or lowest level dept	h balaw awada	8	(feet).	
Sewer and w		roximate size HY		ity ports, and drains).
Sewer and u	søver en	try		
	nd AIR CONDITIO	ONING (Circle	all that apply.)	
Sewer and w	nd AIR CONDITIO	ONING (Circle g: (Circle all the Rad	all that apply.)	
HEATING, VENTING, a Type of heating system(s) Hot air circulation Space heaters	nd AIR CONDITION used in this buildin Heat pump Stream radiation Wood stove	ONING (Circle g: (Circle all the Rad	all that apply.) hat apply – not juster baseboard iant floor	st primary.)
HEATING, VENTING, and Type of heating system(s) Hot air circulation Space heaters Electric baseboard	nd AIR CONDITION used in this buildin Heat pump Stream radiation Wood stove	ONING (Circle g: (Circle all the Rad Outo	e all that apply.) hat apply – not just water baseboard iant floor door wood boiler osene	st primary.)
HEATING, VENTING, a Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric	nd AIR CONDITION used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal	ONING (Circle g: (Circle all the Rad Outo	e all that apply.) hat apply – not just water baseboard iant floor door wood boiler osene	st primary.)
HEATING, VENTING, a Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric Wood Domestic hot water tank in	nd AIR CONDITION used in this building Heat pump Stream radiation Wood stove used is: Ruel oil Propane Coal s fueled by:	ONING (Circle g: (Circle all the Rad Outo Kerr Sola	e all that apply.) that apply – not just water baseboard iant floor door wood boiler osene	st primary.)
HEATING, VENTING, at Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric Wood	nd AIR CONDITION used in this building Heat pump Stream radiation Wood stove used is: Ruel oil Propane Coal s fueled by: m: Basen liances have cold-ai	DNING (Circle g: (Circle all the Radi Outo Kero Sola ment Or	e all that apply.) that apply – not just water baseboard iant floor door wood boiler basene ur / N	ot primary.) Other
HEATING, VENTING, at Type of heating system(s) Hot air circulation Space heaters Electric baseboard The primary type of fuel to Natural gas Electric Wood Domestic hot water tank it Boiler/furnace is located in	nd AIR CONDITION used in this building Heat pump Stream radiation Wood stove used is: Ruel oil Propane Coal s fueled by: m: Basen liances have cold-ai	ONING (Circle g: (Circle all the Rad Outo Kero Sola ment Or r intakes? Y this building	e all that apply.) that apply – not just water baseboard iant floor door wood boiler basene ur / N	ot primary.) Other

5	
1	Is there a radon mitigation system for the building/structure? Y / N Date of Installation
	Is the system active or passive? Active/Passive
	OCCUPANCY
	Is basement/lowest level occupied? Full-time Occasionally Seldom Almost never
	Level General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).
	Basement
	1 st Floor
	2 nd Floor
	3 rd Floor
	WATER AND SEWAGE

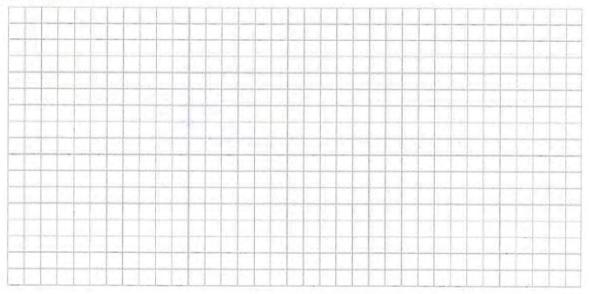
9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement:



First Floor:

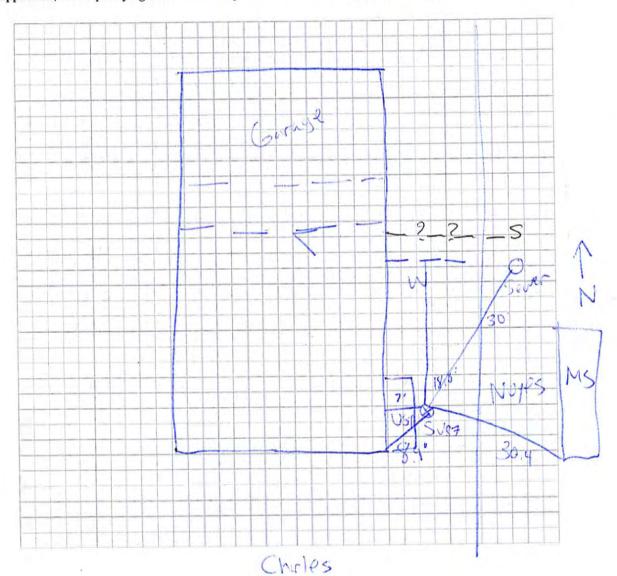


100 Charles

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

1. FACTORS THAT MAY INFLUENCE INDOOR A	IR QUAL	JTY
Is there an attached garage?	A VIV)
Does the garage have a separate heating unit?	Y/N/	NA
Are petroleum-powered machines or vehicles	Y/N/	NA
stored in the garage (e.g., lawnmower, ATV, or car)	Please	specify
Has the building ever had a fire?	Y/N	When?
Is a kerosene or unvented gas space heater present?	Y/N	Where?
Is there a workshop or hobby/craft area?	Y/N	Where and type
Is there smoking in the building?	Y/N	How frequently?
Has painting/staining been done in the last six months?	Y/N	Where and when?
Is there new carpet, drapes or other textiles?	Y/N	Where and when?
Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
Is there a clothes dryer?	(Y)N	If yes, is it vented outside? (Y) N
If yes, please describe		
Do any of the building occupants use solvents at work?	Y/N	
(For example, is the building used for chemical manufacturi shop, fuel oil delivery area, or do any of the occupants work	ng or a lat as a boile	oratory, auto mechanic or auto body shop, painting r mechanic, pesticide applicator, or cosmetologist?
If yes, what types of solvents are used?		
If yes, are his/her/their clothes washed at work?	/N	
Do any of the building occupants regularly use or work a	at a dry-cl	eaning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	No	
Yes, use dry cleaning infrequently (monthly or less)	Un	known
Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building walk-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² Y/N
EUCULION	110ddct 2ccs.,pus.	1				14/4/
			V			
					1	
						-
						-
					-	-
-						-
	1					+
	1	-				
		-				
		-				
_						
			1			

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D).

This form was modified from:

ITRC (Interstate Technology and Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

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Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name YOLA	Bayrown	Date/	Time Prepared_	3/2	4/16	1000
Preparer's Affiliation	RG		_Phone No	510	671	2088
Purpose of Investigation	Soil gas inv	estigation				
SECTION I: BUILDIN	G INVENTORY					
1. OCCUPANT OR BUIL	DING PERSONNEL:					
Interviewed: YN						
Last Name O'Gran	dy	First Name_	Pearl			
city Fairba	Éllingson oks					
Phone No. N						
Number of Occupants/pe	ople at this location	2Age	of Occupants	>7	0	
2. OWNER or LANDLOR	D: (Check if same as occupa	unt <u>X</u> .)				
Interviewed: Y/N						
Last Name		First Name_				
Address						
City						
Phone No						
3. BUILDING CHARACT	ERISTICS					
Type of Building: (Circle	e appropriate response.)					
Residential Industrial	School Church	Commercial/Mult Other	ti-use			

f the property is reside	ential, what type? (Circle app	propriate response.)
Ranch M	2-Family Split Level	3-Family Colonial
The state of the s	Contemporary	Mobile Home
Cape Cod	Apartment House	Townhouse/Condo
Duplex Modular	Log Home	Other
If multiple units, how i	many?	_
If the property is comm	nercial, what type?	
Business types(s)_		
Does it include resi	dences (i.e., multi-use)? Y / N	If yes, how many?
Other characteristics:		
Number of floors_	2	Building age
Is the building insu	lated? Y / N	How airtight? Tight / Average / Not Tight
Have occupants notice	ed chemical odors in the buil	lding? Y/N
If yes, please describe:_		
describe: Airflow between floors		e about the building to evaluate airflow patterns and qualitativ
	X	
Airflow in building nea		
Outdoor air infiltration		
In City and a second of	šta.	
Infiltration into air duc	JIS	

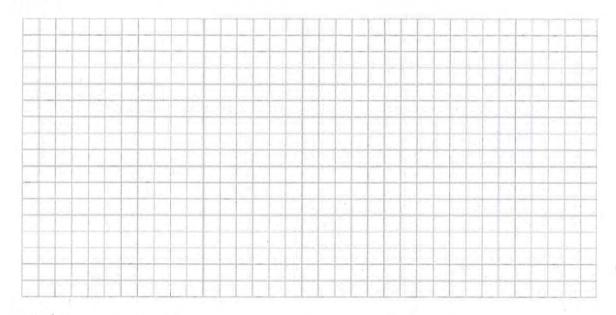
	ction: wood frame	log	concrete	brick	
	constructed o with enclosed		constructed with open a		
b. Basement type:	full	crawlspace	slab-on-grad	de other	
c. Basement floor:	concrete	dirt	stone	other	
d. Basement floor:	unsealed	sealed	sealed with_		
e. Foundation walls:	poured	block	stone	other	
f. Foundation walls:	unsealed	sealed	sealed with		
g. The basement is:	wet	damp	dry	6.	
h. The basement is:	finished	unfinished	partially fini	shed	
i. Sump present?	YN				
j. Water in sump?	Y/N/not ap	plicable			
sement or lowest level dep	oth below grade	8	(feet	·	
	3	1730.00	all that apply)		
HEATING, VENTING,	and AIR CONDITIO	ONING (Circle	all that apply.) at apply – not	just primary.)	
HEATING, VENTING,	and AIR CONDITIO	ONING (Circle g: (Circle all th Hot v Radi	all that apply.)	just primary.) d	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters	and AIR CONDITION (i) used in this building Heat pump Stream radiation Wood stove	ONING (Circle g: (Circle all th Hot v Radi	all that apply.) at apply – not j water baseboar ant floor	just primary.) d	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard	and AIR CONDITION (i) used in this building Heat pump Stream radiation Wood stove	ONING (Circle g: (Circle all th Hot v Radi	all that apply.) at apply – not juster baseboar ant floor loor wood boile	just primary.) d	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood	and AIR CONDITION i) used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal	ONING (Circle g: (Circle all th	all that apply.) at apply – not juster baseboar ant floor loor wood boile	just primary.) d	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric	and AIR CONDITION i) used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal is fueled by:	ONING (Circle eg: (Circle all the Hot v Radi Outd Kero Solar	all that apply.) at apply – not juster baseboar ant floor loor wood boile	just primary.) d	Other
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood Domestic hot water tank	and AIR CONDITION (i) used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal is fueled by: in: Baser	DNING (Circle g: (Circle all the Radi Outd Kero Solar ment Ou	all that apply.) at apply – not government floor ant floor wood boild sene	just primary.) d er Other	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood Domestic hot water tank Boiler/furnace is located Do any of the heating ap	and AIR CONDITION (i) used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal is fueled by: in: Baser	DNING (Circle g: (Circle all the Radi Outd Kero Solar ment Ou r intakes? Y /	all that apply.) at apply – not government floor ant floor wood boild sene	just primary.) d er Other	
HEATING, VENTING, Type of heating system(s Hot air circulation Space heaters Electric baseboard The primary type of fuel Natural gas Electric Wood Domestic hot water tank Boiler/furnace is located Do any of the heating app Type of air conditioning	and AIR CONDITION (i) used in this building Heat pump Stream radiation Wood stove used is: Fuel oil Propane Coal is fueled by: in: Baser pliances have cold-ail or ventilation used in	DNING (Circle g: (Circle all the Hotol Radii Outd Kerol Solar ment Outd r intakes? Y / this building:	all that apply.) at apply – not juster baseboar ant floor oor wood boild sene	just primary.) d er Other	

Is there a radon mitigation system for the building/structure? Y / N Date of Installation
Is the system active or passive? Active/Passive
OCCUPANCY CONTRACTOR OF THE PROPERTY OF THE PR
Is basement/lowest level occupied? Full-time Occasionally Seldom Almost never
Level General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).
Basement
1 st Floor
2 nd Floor

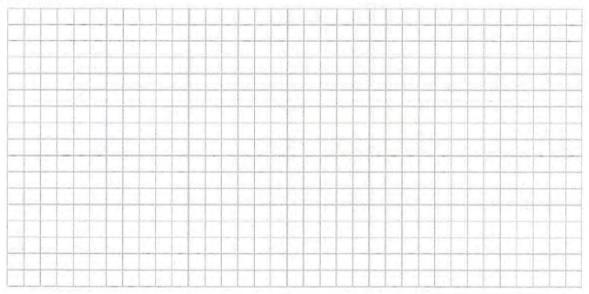
9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement:



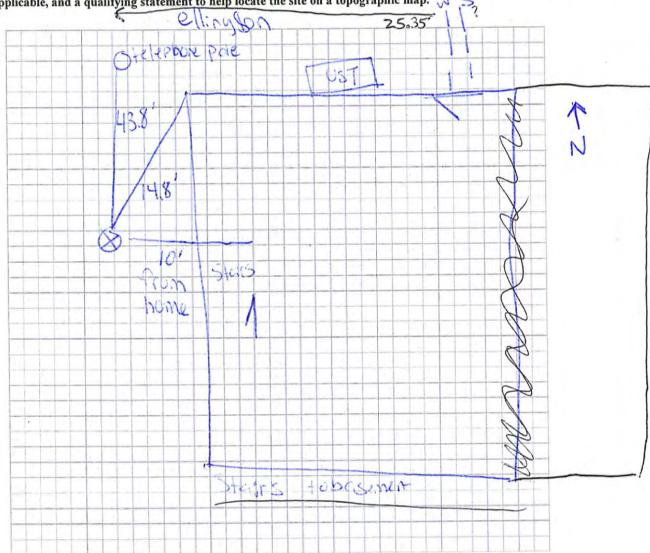
First Floor:



10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



SUR-5

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SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

1. FACTORS THAT MAY INFLUENCE INDOOR A	IR QUAL	JITY
Is there an attached garage?	YIN	
Does the garage have a separate heating unit?	Y/N/	/ NA
Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)	Y/N/	NA
stored in the garage (e.g., lawnmower, A1 v, or car)	Please	specify
Has the building ever had a fire?	Y/N	When?
Is a kerosene or unvented gas space heater present?	Y/N	Where?
Is there a workshop or hobby/craft area?	Y/N	Where and type
Is there smoking in the building?	Y/N	How frequently?
Has painting/staining been done in the last six months?	Y/N	Where and when?
Is there new carpet, drapes or other textiles?	Y/N	Where and when?
Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
Is there a clothes dryer?	(Y)N	If yes, is it vented outside? (Y)/N
Are cleaning products, cosmetic products, or pesticides u If yes, please describe		
Do any of the building occupants use solvents at work? (For example, is the building used for chemical manufacturi		poputoru, auto mochania or auto hody chon pointie.
shop, fuel oil delivery area, or do any of the occupants work		
If yes, what types of solvents are used?		
If yes, are his/her/their clothes washed at work?	/N	
Do any of the building occupants regularly use or work a	at a dry-c	leaning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	No	
Yes, use dry cleaning infrequently (monthly or less)	Ur	nknown
Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building waik-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² <u>Y / N</u>
		A		177	
	-				
	1				
	Product Description		Product Description (units) Condition ¹	Product Description (units) Condition Chemical Ingredients	Product Description Site (units) Condition Chemical Ingredients Reading (units)

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D).

This form was modified from:

ITRC (Interstate Technology and Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

The Alaska Department of Environmental Conservation's Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska. For more information, please contact our staff at the Contaminated Sites Program closest to you:

Juneau: 907-465-5390 / Anchorage: 907-269-7503

Fairbanks: 907-451-2153 / Kenai: 907-262-5210

Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

ALASKA DEPARTMENT OF ENVIRONMENAL CONSERVATION BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name Yola Bayran	Date/Time Prepared 3-24-16 1200
Preparer's Affiliation ERG	Phone No. 510671 2088
Purpose of Investigation SON gas	investigation
SECTION I: BUILDING INVENTOR	$\underline{\mathbf{Y}}$
1. OCCUPANT OR BUILDING PERSONN	EL:
Interviewed: Y / N	
Lasi Name Barragan	First Name Alpjandra
Address 120 Ina St	J
city Fair banks	
Phone No. 907 347 791	00
Number of Occupants/people at this location	
2. OWNER or LANDLORD: (Check if same	
Interviewed: Y/(N)	
Last Name	First Name
Address	
City	
Phone No	
3. BUILDING CHARACTERISTICS	
Type of Building: (Circle appropriate respon	ise.)
Residential School Industrial Church	Commercial/Multi-use

Ranch 2-Family Raised Ranch Split Level Cape Cod Contemporary Duplex Apartment House Modular Log Home	3-Family Colonial Mobile Home Townhouse/Condo Other
f multiple units, how many?	
f the property is commercial, what type?	
Business types(s) Daycare	
Does it include residences (i.e., multi-use) (Y) N	If yes, how many?
Other characteristics:	
Number of floors 2	Building age
Is the building insulated? Y / N	How airtight? Tight / Average / Not Tight
Have occupants noticed chemical odors in the build	ling? Y/N
If yes, please describe:	
AIRFLOW	about the building to evaluate airflow patterns and qualitatively
	about the building to evaluate airflow patterns and qualitatively
Use air current tubes, tracer smoke, or knowledge describe:	about the building to evaluate airflow patterns and qualitativel
Use air current tubes, tracer smoke, or knowledge describe: Airflow between floors	
Use air current tubes, tracer smoke, or knowledge describe: Airflow between floors Airflow in building near suspected source	
Use air current tubes, tracer smoke, or knowledge describe: Airflow between floors Airflow in building near suspected source	

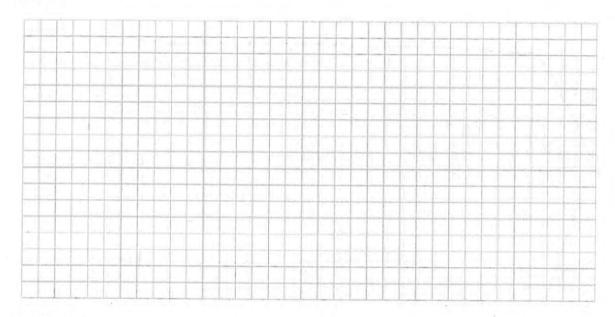
a. Above-grade construction	wood frame	log	concrete	brick
	constructed on with enclosed		constructed on with open air s	
b. Basement type:	full	crawlspace	slab-on-grade	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	unsealed	sealed	sealed with	
e. Foundation walls:	poured	block	stone	other
f. Foundation walls:	unsealed	sealed	sealed with	
g. The basement is:	wet	damp	dry	
h. The basement is:	finished	unfinished	partially finish	ed
i. Sump present?	Y(N)			
j. Water in sump?	Y/N/not app	licable		
ement or lowest level depth be	alow grada	8	(feet).	
드라마 얼마를 받는 것이 되었다.			(e.g., cracks, util	Art Art of the Artificial
Sewer/water con	Mections			Art Art of the Artificial
Sewer Water Cor	Mechions AIR CONDITIO	NING (Circle	e all that apply.)	
Sever/water con	AIR CONDITIO	NING (Circle g: (Circle all t	e all that apply.) hat apply – not jus	
HEATING, VENTING, and I	AIR CONDITIOn the din this building Heat pump Stream radiation	NING (Circle z: (Circle all t Hot Rad	e all that apply.) that apply – not just water baseboard liant floor	t primary.)
Hot air circulation Space heaters Electric baseboard	AIR CONDITIOn the din this building Heat pump Stream radiation Wood stove	NING (Circle z: (Circle all t Hot Rad	e all that apply.) that apply – not jus water baseboard	
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used	AIR CONDITIOn of in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all t Hot Rad Out	e all that apply.) that apply – not just water baseboard liant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard	AIR CONDITIOn of in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all t Hot Rad Out Ker	e all that apply.) that apply – not just water baseboard liant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used	AIR CONDITIOn of in this building Heat pump Stream radiation Wood stove	NING (Circle g: (Circle all t Hot Rad Out	e all that apply.) that apply – not just water baseboard liant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood	AIR CONDITION of in this building Heat pump Stream radiation Wood stove I is: Fuel oil Propane Coal	NING (Circle g: (Circle all t Hot Rad Out Ker	e all that apply.) that apply – not just water baseboard liant floor door wood boiler	t primary.)
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood Domestic hot water tank is fuel	AIR CONDITION of in this building Heat pump Stream radiation Wood stove I is: Fuel oil Propane Coal	NING (Circle g: (Circle all t Hot Rad Out Ker Sola	e all that apply.) that apply – not just water baseboard liant floor door wood boiler cosene	t primary.)
HEATING, VENTING, and Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric	AIR CONDITION of in this building Heat pump Stream radiation Wood stove I is: Fuel oil Propane Coal eled by: Basen ces have cold-air	NING (Circle all t Hot Rad Out Ker Sola	e all that apply.) that apply – not just water baseboard liant floor door wood boiler cosene ar	ot primary.) Other
HEATING, VENTING, and A Type of heating system(s) use Hot air circulation Space heaters Electric baseboard The primary type of fuel used Natural gas Electric Wood Domestic hot water tank is fuel Boiler/furnace is located in:	AIR CONDITION of in this building Heat pump Stream radiation Wood stove I is: Fuel oil Propane Coal eled by: Basen ces have cold-air	NING (Circle g: (Circle all t Hot Rad Out Ker Sola nent O intakes? Y this building	e all that apply.) that apply – not just water baseboard liant floor door wood boiler cosene ar	ot primary.) Other

=			5.174.7			
Is th	here a ra	don mitigation system fo	or the building/st	ructure? Y/ND	ate of Installation	h
Is th	he systen	n active or passive?	Active/Passive			
oc	CUPAN	CY				
		/lowest level occupied?	Full-time	Occasionally	Seldom	Almost never
Lev		General Use of Each Fl	loor (e.g., family 1	room, bedroom,	laundry, worksh	nop, or storage).
	sement	Storage				
Ras		410000000000000000000000000000000000000				
		Daycare				
[st]	Floor	Storage Daycare bedrooms				
1 st 1	Floor	<u>bedrooms</u>				
1 st 1 2 nd 3 rd	Floor Floor Floor	bedrooms				
1 st 1 2 nd 3 rd	Floor Floor Floor	hedrooms ND SEWAGE	Drilled well	Driven well	Dug well	Other

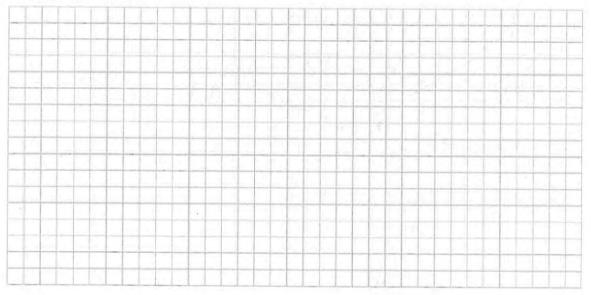
9. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement:



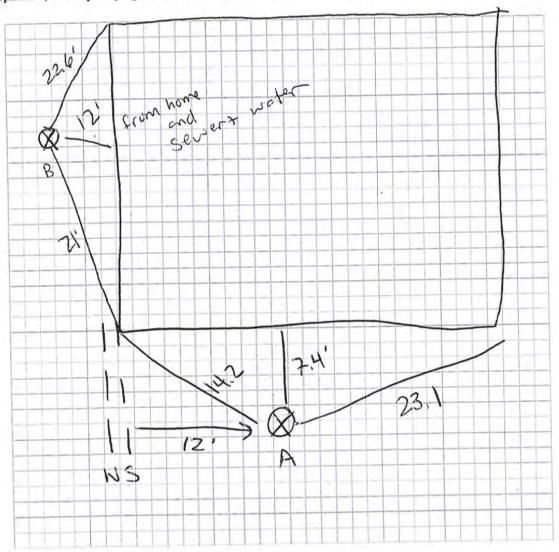
First Floor:



10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



ANI

SVR-4

120:na

SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

1. FACTORS THAT MAY INFLUENCE INDOOR A	IR QUAL	LITY
Is there an attached garage?	Y (N	
Does the garage have a separate heating unit?	Y/N/	'NA
Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)	Y/N/	
	Please	specify
Has the building ever had a fire?	Y/N	When?
Is a kerosene or unvented gas space heater present?	Y/N	Where?
Is there a workshop or hobby/craft area?	Y/N	Where and type
Is there smoking in the building?	Y/N	How frequently?
Has painting/staining been done in the last six months?	Y/N	Where and when?
Is there new carpet, drapes or other textiles?	Y/N	Where and when?
Is there a kitchen exhaust fan?	Y/N	If yes, where is it vented?
Is there a bathroom exhaust fan?	Y/N	If yes, where is it vented?
Is there a clothes dryer?	(Y)N	If yes, is it vented outside? (Y)/ N
Are cleaning products, cosmetic products, or pesticides	used that	could interfere with indoor air sampling? Y/N
If yes, please describe	TA C	
A CONTRACT OF COLUMN		
	*	
Do any of the building occupants use solvents at work?	Y/N	
(For example, is the building used for chemical manufactur shop, fuel oil delivery area, or do any of the occupants work		
If yes, what types of solvents are used?	11:10	
If yes, are his/her/their clothes washed at work?	Y/N	
Do any of the building occupants regularly use or work	at a dry-c	leaning service? (Circle appropriate response)
Yes, use dry cleaning regularly (weekly)	No	
Yes, use dry cleaning infrequently (monthly or less)	Ur	nknown
Yes, work at a dry cleaning services		

2.	PRODUCT INVENTORY FORM (For use during building waik-through.)
	Make and model of field instrument used:
	List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition ¹	Chemical Ingredients	Field Instrument Reading (units)	Photo ² Y/N
		1000	7XCTTY			
						-
						-
					-	-
		-				1
_		-				+
		+	 			

Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D).

This form was modified from:

ITRC (Interstate Technology and Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, D.C.: Interstate Technology and Regulatory Council, Vapor Intrusion Team. Available at: www.itrcweb.org.

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Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX B: FIELD SHEETS



Ė			SOIL GAS FIEL	D WORKSHEET		
P	roject Name	· Bentley Mal			Date: 3/	25/16
L	ocation:	Charles Slat		v.5ion	Client: Krawz	
s	Sampler:		Surface Inversion?		Weather: SUNNY	
ŀ		Sampler Signature:		Sar	nple ID	
* .			SV-15	SV-13241	4 SV-12	100001-
[Sample Canister ID	33723	255	3037	-A9796
-		Train ID#	20428	20308	建筑等	-COO172
		Case Volume (L)	0.18	0.168	0.168	
		Initial PID Reading	0	.6	25	
		Time Start	1520	1554	1629	
	1 Test	Time Finish	1521	1555	1630	
	Shut-in Test	Vacuum Start (in Hg)	26.5	25,5	24	
		Vacuum Finish (in Hg)	26.5	25.5	24	
		Time Start	1525	1600	1654	
	9,0	Time Finish	(528	1002	1657	
	Sample Purge	Vacuum Start	19027	27	24.5	
	Sam	Vacuum Finish (in Hg)	25	75	22.5	
		Purge Rate (ml/min)	~-193	~290	~193	
		Time Start	1529	1603	1712	
		Time Finish	1538	1612	1722	
	_	Vacuum Start (in Hg)	26.5	29	25	
	ollectio	Vacuum Finish (in Hg)	0 .5	2	2	
	Sample Collection	Sample Rate (ml/min)	~100	~100	~80	
1	S	PID Reading in Shroud	64.2	71.3	614	
6		Barometric Pressure (in Hg)	29.01	29.01	29.02	
p.	6	Temperature (F)	5le. Z	56.2	.55.7	
	Tubing	Tube Diameter (inches) Volume (liters per foot)	0.17 0.004	0.25 0.010	0.5	0.75 0.087
		Height of Sand Pack (inches)	0.63	43.73	Height of dry bent Radius of dry bent	12 0.63
	Sand Pack volumes	Porosity of Sand	0.3	Dry Bentonite Volun	Porosity of bentonite Casing Volume of dry	0.3
		Casing Volume of Sandpack (liter per foot)	0.07	No. 1	bentonite (liters per foo	t) 0.07
	Notes:	50-13 Bric	k corner	NW 53	0.6'	< 11-1
		7.1.17 5			19"	holi
		3V-12 Do	or entone :	SOUT COUNT I	7'	. Q <1.
	-	100	corner	3		2) 319

Case Volume (L)			SOIL GAS FIEL	D WORKSHEET		
Sample Canister ID Sourface Inversion? No Weather: Sunny	roject Nam	ne: Benthey Ma	ત	x-2-1	Date: 3-25-16	
Sampler Signature: Sample ID	ocation:	Charles Slaws	Subdivis	ton.	Client: Krwz	
Sample ID Sample ID Sure-to-A SVR-to-B SV-14 SVR-to-B	ampler:	yola/DUSTA	Surface Inversion?	No	Weather: Sunny	
Sample Canister ID Soo 4 [339] 37311 304 304 339] 37311 304 304 339] 37311 304 304 304 305 3		Sampler Signature:		Sa	mple ID	
Train ID# 20995 FC00173 FC00197 FC0019	1		SUR-6A	SVR-6B	SV-14	15×14/1
Case Volume (I)		Sample Canister ID		13391	37311	30411
Initial PID Reading		Train ID#	20995	FC00173	FC00497	FC 00494
Time Start 1250 1346 1430 11		Case Volume (L)	0.18	0.18	0.168	0.168
Time Finish 125 1347 143 11 11 11 11 11 11 1		Initial PID Reading	0	-0	0	0
Vacuum Finish (in Hg) 17 16 11 11 11 11 11 12 13 14 15 14 14 15 14 14 15 15		Time Start	1250	1346	1430	11
Vacuum Finish (in Hg) 17 16 11 11 11 11 11 12 13 14 15 14 14 15 14 14 15 15	n Test	Time Finish	1251	1347	1431	11
Time Start 253 1352 1435 1445 1455 1445 1445 1445 1445 1445 1445 1445 1445 1445	Shut-i	Vacuum Start (in Hg)	17	77	11	()
Time Finish 1257 1352 143 1435 1435 1435 1435 1435 1435 1435		Vacuum Finish (in Hg)	17	16	11	11
Time Finish 1257 1352 1435 1449 1435 1435 1449 1447 150 1447 15		Time Start	1253	1800	H9 1433	1433
Purge Rate (ml/min)	90	Time Finish	1257			1435
Purge Rate (ml/min)	nble Pu	Vacuum Start	16.5	15	1311	il
Time Start 130 7 1356 1436 1449 Time Finish 1314 1406 1447 150 Vacuum Start (in Hg) 20 23 30 -30 Vacuum Finish (in Hg) 2 1 -2 Sample Rate (ml/min) ~87 ~75 ~105 ~80 PID Reading in Shroud 61.2 60.7 62.7 64 Barometric Pressure (in Hg) 29.08 29.07 29.01 28.0 Tubing Tube Diameter (inches) 0.17 0.25 0.5 0.75 Volume (liters per foot) 0.004 0.010 0.039 0.087 Height of Sand Pack (inches) 12 Radius of Sand Pack (inches) 0.63 Porosity of Sand Pack (inches) 0.63 Porosity of Sand Casing Volume of Sandpack (liters on 3) 0.30 Casing Volume of Sandpack (liters on 3) 0.30 Casing Volume of Gandpack (liters on 3) 0.30 Total Pack volume of Sandpack (liters on 3) 0.30 Total Pack volume of Sandpack (liters on 3) 0.30 Dry Bentonite Volume Casing Volume of dry 0.30 Casing Volume of Gandpack (liters on 3) 0.30	San	Vacuum Finish (in Hg)	14,5	13	B 9	9
Time Finish 3 4 1406 1447 150		Purge Rate (ml/min)	~145	~190	2290	~290
Vacuum Start (in Hg) 20 23 36 -30		Time Start	1307	1356	1436	1449
Vacuum Finish (in Hg) Z		Time Finish	1314	1406	1447	1501
PID Reading in Shroud	u o	Vacuum Start (in Hg)	20	23	- 30	-30
PID Reading in Shroud	Collection	Vacuum Finish (in Hg)	2		- 7	2
PID Reading in Shroud	ample (Sample Rate (ml/min)	~87	~75	~105	~80
Temperature (F)	Š	PID Reading in Shroud	(01.2	60.7	COZ.7	64.1
Tubing Tube Diameter (inches) 0.17 0.25 0.5 0.75		Barometric Pressure (in Hg)	29.08	29.07	29.0	28.99
Tubing Volume (liters per foot) 0.004 0.010 0.039 0.087		Temperature (F)	48421	43.4	57.0	57.0
Sand Pack volumes Porosity of Sand pack (linches) 12 Height of dry bent 12 Radius of Sand Pack (inches) 0.63 Dry Bentonite Volume Porosity of bentonite 0.3 Casing Volume of Sandpack (liters Casing Volume of dry Dry Bentonite Volume of dry Dry Bentonite Volume Ocasing Volume	Tubing					
Sand Pack volumes Porosity of Sand Pack (inches) 0.63 Dry Bentonite Volume Porosity of bentonite 0.63 Casing Volume of Sandpack (liters Casing Volume of dry Dry Bentonite Volume Porosity of bentonite 0.63 Casing Volume of dry Dry Bentonite Volume Porosity of bentonite 0.63 Casing Volume of dry Dry Bentonite Volume Porosity of bentonite 0.63 Dry Bentonite Volume Porosity of Bentonite Volume Porosity Olimpia Dry Benton				0.010		
volumes Porosity of Sand 0.3 Dry Bentonite Volume Porosity of bentonite 0.3 Casing Volume of Sandpack (liters Casing Volume of dry Casing Volume of Casing Vol	Sand Pack		0.63	Landing to the	Radius of dry bent	0.63
6 64	CVC SC BUTCH TO	Porosity of Sand		Dry Bentonite Volume	, et early et e attitue	0.3
			0.07			0.07
Notes: GileFit From Building corner	Notes:		•		1	
3016 FT FROM RIGHT DOOR HANDLE (DOOR 103) >5V-1		3016 Ft FROM RI	OHT DOOR HI	ANDLE (DO	OR 103)	5V-14

roject Nam	e: Bertley Ma	U	1	Date: 3-25-16	
ocation:	Charles Skit		iron .	Client: Krwz	
ampler:	2/19-7	Surface Inversion?		Weather: Cloudu	
	Sampler Signature:		San	nple ID	107, 117
		SVR-5	SVR-7-4	PSUR-7-6 SVR41	
	Sample Canister ID	111591	4110	36449	37397
	Train ID#	TC (2558	34369 FC00447	FC00447	FC0080
	Case Volume (L)	0.18	0.18	0.18	0,18
	Initial PID Reading	0	0	0	0
	Time Start	940	1030	(1	1130
∠ Test	Time Finish	941	103	11	1131
Shut-in Test	Vacuum Start (in Hg)	12	10	11	10
124	Vacuum Finish (in Hg)	12	10	11	10
	Time Start	943	1035	-11	1131
98	Time Finish	948	1040		1136
Sample Purge	Vacuum Start		10	-11	8
Sam	Vacuum Finish (in Hg)	q	8	- 11	6
	Purge Rate (ml/min)	~116	~116	- 11	116
	Time Start	959	1047	1059	1138
	Time Finish	1014	1658	1115	1/50
E .	Vacuum Start (in Hg)	23	15	30	30
Collection	Vacuum Finish (in Hg)	2	2	2	2
Sample Collection	Sample Rate (ml/min)	~ 50	~50	~60	~80
SS.	PID Reading in Shroud	94.2	63.2	632	58.3
	Barometric Pressure (in Hg)	29.19	27/15	29,15	29.11
	Temperature (F)	35,2	39,3	39.3	42.7
Tubing	Tube Diameter (inches) Volume (liters per foot)	0.17	0.25 0.010	0.5 0.039	0.75 0.087
	Height of Sand Pack (inches)	12		Height of dry bent	12
Sand Pack volumes	Radius of Sand Pack (inches) Porosity of Sand Casing Volume of Sandpack (liters	0.63	Dry Bentonite Volume	Radius of dry bent Porosity of bentonite Casing Volume of dry	0.63
1	per foot)	0.07	- 1 100 0	bentonite (liters per foot)	0.07
Notes:	SUK- + 0 1		es wie	E-1169	_
	LP : LO	2 PIESSUR		y.	

	7 -471	SOIL GAS FIE	LD WORKSHEET	/	
Project Nan	ne: Bentle: Mal		77774	Date:	3-24-16
Location:	the Charles S	later Carl	3	Client: Mau	7-
Sampler:	. Yola Bayran	Surface Inversion?	No	Weather: Sunn	1
	Sampler Signature:		Sai	mple ID)
16		51/2 A	SV3B	SURAA	SVR1B
1	Sample Canister ID	123(0)	2,79100	36453	34591
	Train ID#	100308	10,0798	FC60338	FC 0052
	Case Volume (L)	0.18	3.13	0.24	02401
	Initial PID Reading Poin	0.1	.0	0	0
	Time Start	1444	1544	1641	1744
Test	Time Finish	1445	1545	1647	1745
Shut-in Test	Vacuum Start (in Hg)	21.5	175	7.1	15
S	Vacuum Finish (in Hg)	21.5	17.5	21	15
_	Time Start	1500	1549	1640	1745
ay .	Time Finish	1504	1551	1643	1248
Sample Purge	Vacuum Start	19,5	17	-15	12
Sam	Vacuum Finish (in Hg)	125	15	13	11
	Purge Rate (ml/min)	~145	~190	~190	~ 190
	Time Start	1505	11552	1648	1750
	Time Finish	1515	1602	1657	1758
5	Vacuum Start (in Hg)	27	29.5.	21	29
ollectio	Vacuum Finish (in Hg)	2	2		2
Sample Collection	Sample Rate (ml/min)	~ 100	~ 100	@@@_30	~120
Sa	PID Reading in Shroud	~ 33.5	51.8	52.8	50.6
	Barometric Pressure (in Hg)	29.18	29.16	29.18	29,19
	Temperature (F)	~35-42°	2430	49.1	47.1
Tubing	Tube Diameter (inches) Volume (liters per foot)	0.17	0.25 0.010	0.5 0.039	0.75 0.087
	Height of Sand Pack (inches)	12	0.010	Height of dry bent	12
Sand Pack	Radius of Sand Pack (inches)	0.63	Day Bonton In 1	Radius of dry bent	0.63
volumes	Porosity of Sand Casing Volume of Sandpack (liters	0.3	Dry Bentonite Volume	Porosity of bentonite Casing Volume of dry	0.3
	per foot)	0.07	Sec. 12.	bentonite (liters per foot)	0.07
Notes:		191			

roject Nam	e: Bentley Ma	il		Date: 3-24-11	p +3/25/
ocation:	Charles S	later Sub	division	Client: Krawz +	60
ampler:	-12/	Surface Inversion?	N	Weather: Sunn	4
	Sampler Signature:		Sai	mple ID	9
		SUR2A	SVR2B		SVR4B-
_	Sample Canister ID	37710	21/517	35594	1L1638
	Train ID#	FC09358	The 6858	-	FC00440
	Case Volume (L)	0,18	0.240,		
_			0.210,		0.18
	Initial PID Reading	6		.0	•—
	Time Start	1830	1859	1155	11
Test	Time Finish	1831	1900	1156	11
Shut-in Test	Vacuum Start (in Hg)	12	10	5	11
5	Vacuum Finish (in Hg)	12	10	5	14
	Time Start	1829	1904	1158	11
9.	Time Finish	1842	1907	1202	11
Sample Purge	Vacuum Start	1.7	PRONO.	3	(1
Samp	Vacuum Finish (in Hg)	10	8	i	11
	Purge Rate (ml/min)	~ 190	~190	~145	11
	Time Start	1846	19141	1205	1205
	Time Finish	1856	1974	12 14	1214
	Vacuum Start (in Hg)	30	20	26	26
ection	Vacuum Finish (in Hg)	30	50	多 1	1
Sample Collection	Sample Rate (ml/min)	04100	2100	2.100	~100
Sam		1100	1100	57.1	t7.1
	PID Reading in Shroud	79,1	47.6	57.1	57.1
	Barometric Pressure (in Hg)	29.17	29,14	29.11	29.11
	Temperature (F)	38	38	39.1	39.1
Tubing	Tube Diameter (inches)	0.17	0.25	0.5	0.75
to to the same	Volume (liters per foot) Height of Sand Pack (inches)	0.004	0.010	0.039 Height of dry bent	0.087
2004 A 2004	Radius of Sand Pack (inches)	0.63		Radius of dry bent	0.63
Sand Pack volumes	Porosity of Sand	0.3	Dry Bentonite Volume	Porosity of bentonite	0.3
volumes	Casing Volume of Sandpack (liters	100		Casing Volume of dry	0.02
Notes:	SURHB-D	UP 8 DU	P-1 +;	me 1307	0.07

APPENDIX C: LABORATORY ANALYTICAL REPORTS



Laboratory Data Review Checklist for Air Samples

Completed by:	Yola Bayram				
Title:	Geologist			Date:	May 20, 2016
CS Report Name:	Soil Vapor Investigation Report			Report Date:	May 20, 2016
Consultant Firm:	Environmental	Resource Group	p		
Laboratory Name:	Eurofins US		Laboratory Report Nu	mber: 1603595	AR1
ADEC File Number:	102.38.122		ADEC Haz ID:		
1. <u>Laboratory</u>					
•	AP certified labo	ratory receive an	nd <u>perform</u> all of the subm	itted sample ana	lyses?
• Yes	○ No	O NA (Plea	-	Comments	
*			network" laboratory or sub nalyses NELAP approved se explain.)		
Samples v	vere not subcon	`	,		
2. Chain of Custody	(COC)				
		, signed, and dat	ed (including released/rec	eived by)?	
• Yes	○ No	○ NA (Plea	se explain.)	Comments	:
b. Correct ana	lyses requested?				
• Yes	○ No	○ NA (Pleas	e explain)	Comments:	
3. <u>Laboratory Sampl</u>	e Receipt Docu	mentation			
a. Sample cond	lition documente	ed -Samples colle	ected in gas tight, opaque/o		
• Yes	○ No	ONA (Pleas	se explain)	Comments:	

	Yes	○ No	○NA (Please explain)	Comments:
Г			not match and was corrected. SVR6A	found to be leaking. Analysis canceled
L				
	Yes	O No	ffected? (Please explain.) ONA (Please explain)	Comments:
Г		nalysis cancele		
L	arrative			
		l understandab	le?	
(Yes	○ No	○ NA (Please explain)	Comments:
b. 1	Discrepan	cies, errors or (QC failures identified by the lab?	
	• Yes	○ No	○ NA (Please explain)	Comments:
	COC inf	o for SV12 did	not match and was corrected.	
c.	Were all o	corrective actio	ns documented?	
	• Yes	\bigcirc No	ONA (Please explain)	Comments:
	SVR6A	analysis cance	led . COC info for SV12 did not match	and was corrected.
d.	What is t	he effect on da	ata quality/usability according to the ca	se narrative?
				Comments:
	No effec	et noted on dat	a quality or usability.	
Sample	s Results			
a.	Correct a	nalyses perforn	ned/reported as requested on COC?	
	• Yes	○ No	ONA (Please explain)	Comments:
b.	Samples	analyzed withi	n 30 days of collection or within the time	e required by the method?
	Yes	○ No	○ NA (Please explain)	Comments:
			~ (
		1507	ass than the Tanget Companing I avail on t	
	. Are the rroject?	reported PQLs	less than the Target Screening Level of the	he minimum required detection level for

u. Data quanty of	usability affec	rted?	Comments:	
SVR2A and S	SVR4A are abo	ove target levels for TCE		
Samples				
a. Method Blank				
i. One metho	od blank reporte	ed per analysis and 20 samples?		
• Yes	○ No	○ NA (Please explain)	Comments:	
ii. All metho	od blank results	less than PQL?		
• Yes	○ No	○NA (Please explain)	Comments:	
iii. If above	PQL, what san	mples are affected?	Comments:	
iv. Do the af	fected sample(s) have data flags and if so, are the data	ta flags clearly defined?	
○ Yes	○ No	ONA (Please explain)	Comments:	
v. Data quali	ity or usability	affected? (Please explain.)	Comments:	
b. Laboratory Con	trol Sample/Du	uplicate (LCS/LCSD)		
i. One LCS/	LCSD or one L	CS and a sample/sample duplicate pa	ir reported per analysis and 20 sampl	
• Yes	○ No	ONA (Please explain)	Comments:	
•	y - All percent QOs, if applica	recoveries (%R) reported and within able.	method or laboratory limits? And pro	
○ Yes	No	ONA (Please explain)	Comments:	
Chlorom	ethane exceed	ed QC Limits by 1%		
		percent differences (RPD) reported ared DQOs, if applicable.	nd less than method or laboratory	

iv. If %R or	RPD is outside	e of acceptable limits, what samples are	c affected:
○ Yes	○ No	NA (Please explain)	Comments:
NA			
v. Do the aff	fected sample(s	s) have data flags? If so, are the data fl	lags clearly defined?
O Yes	○ No	NA (Please explain)	Comments:
NA			
vi. Data qual	lity or usability	affected? (Please explain.)	
			Comments:
Not affec	eted.		
Surrogates			
	gate recoveries	reported for field, QC and laboratory	samples?
• Yes	○ No	ONA (Please explain)	Comments:
-	- All percent ified DQOs, if	recoveries (%R) reported and within rapplicable.	method or laboratory limits? And
-	_		method or laboratory limits? And Comments:
• Yes	ified DQOs, if O No	applicable.	Comments:
• Yes iii. Do the sa defined?	ified DQOs, if No mple results w	applicable. ONA (Please explain) ith failed surrogate recoveries have da	Comments: ata flags? If so, are the data flags clea
• Yes	ified DQOs, if O No	applicable. ONA (Please explain)	Comments:
iii. Do the sa defined?	ified DQOs, if No mple results w	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain)	Comments: ata flags? If so, are the data flags clea
iii. Do the sa defined?	ified DQOs, if No mple results w	applicable. ONA (Please explain) ith failed surrogate recoveries have da	Comments: ata flags? If so, are the data flags clea
iii. Do the sa defined?	ified DQOs, if No mple results was No No	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain)	Comments: ata flags? If so, are the data flags clea Comments:
iii. Do the sa defined? Yes iv. Data qual	ified DQOs, if No mple results was No ity or usability	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain)	Comments: ata flags? If so, are the data flags clea Comments:
iii. Do the sa defined? Yes iv. Data qual Not affect	ified DQOs, if No mple results with the control of the control o	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain) affected? (Please explain.)	Comments: Comments: Comments:
iii. Do the sa defined? O Yes iv. Data qual Not affect Field Duplicate i. One field	ified DQOs, if No mple results was No ity or usability cted duplicate subn	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain) affected? (Please explain.)	Comments: Comments: Comments: Comments:
iii. Do the sa defined? Yes iv. Data qual Not affect	ified DQOs, if No mple results with the control of the control o	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain) affected? (Please explain.)	Comments: Comments: Comments:
iii. Do the sa defined? Yes iv. Data qual Not affect i. One field Yes	ified DQOs, if No mple results was No ity or usability cted duplicate subn	applicable. ONA (Please explain) ith failed surrogate recoveries have da NA (Please explain) affected? (Please explain.)	Comments: Comments: Comments: Comments:

	F	RPD (%) = Absolute Value of: (R_1)	$-R_2$ x 100
		$((R_{1+})^{-1})^{-1}$	$R_2)/2)$
Where	$R_1 = Sample Co$ $R_2 = Field Duple$	oncentration icate Concentration	
⊙ Y	Yes O No	○ NA (Please explain)	Comments:
8.4	8 to 24.29%		
iv. Data	a quality or usabil	ity affected? (Please explain.)	Comments:
SV	R4 duplicate disc	carded due to leak check failure	
e. Field Blank	(If not used expla	nin why).	
○ Yes	⊙ No	ONA (Please explain)	Comments:
Lab did no	ot provide nitroge	n	
i. All 1	results less than Po	QL?	
0.5	Yes O No	○ NA (Please explain)	Comments:
ii. If al	pove PQL, what sa	amples are affected?	Comments:
iii. Data	a quality or usabili	ity affected? (Please explain.)	
			Comments:
7. Other Data Flags	/Oualifiers		
· ·	nd appropriate?		
• Yes	○ No	ONA (Please explain)	Comments:

Reset Form



5/4/2016 Mr. Rod Satre Environmental Resource Group 1038 Redwood Highway Suite 1 Mill Valley CA 94941

Project Name: Bentley Mall

Project #:

Workorder #: 1603595B

Dear Mr. Rod Satre

The following report includes the data for the above referenced project for sample(s) received on 3/30/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1603595B

Work Order Summary

CLIENT: Mr. Rod Satre BILL TO: Mr. Rod Satre

Environmental Resource Group Environmental Resource Group

1038 Redwood Highway 1038 Redwood Highway

Suite 1 Suite 1

Mill Valley, CA 94941 Mill Valley, CA 94941

PHONE: P.O. #

FAX: PROJECT # Bentley Mall

DATE RECEIVED: 03/30/2016 **CONTACT:** Kyle Vagadori **DATE COMPLETED:** 05/04/2016

			RECEIPT	FINAL
FRACTION #	NAME	TEST	VAC./PRES.	PRESSURE
01A	SVR3A	Modified ASTM D-1946	1 "Hg	14.8 psi
02A	SVR3B	Modified ASTM D-1946	1.4 "Hg	15.1 psi
03A	SVR1A	Modified ASTM D-1946	0.2 psi	15.1 psi
04A	SVR1B	Modified ASTM D-1946	0.2 "Hg	14.9 psi
05A	SVR2A	Modified ASTM D-1946	0.1 psi	14.7 psi
06A	SVR2B	Modified ASTM D-1946	0 psi	14.7 psi
07A	SVR4A	Modified ASTM D-1946	0.8 "Hg	14.7 psi
08A	SVR4B	Modified ASTM D-1946	1 "Hg	15 psi
09A	SVR5	Modified ASTM D-1946	0.4 psi	15.2 psi
10A	DUP-1	Modified ASTM D-1946	1.4 "Hg	14.9 psi
11A(cancelled)	SVR6A	Modified ASTM D-1946	0.6 psi	15 psi
12A	SVR6B	Modified ASTM D-1946	0.4 psi	14.8 psi
13A	SVR-7	Modified ASTM D-1946	0.8 psi	14.7 psi
14A(on hold)	SVR-7-LP	Modified ASTM D-1946	0.5 psi	14.8 psi
15A	SV-12	Modified ASTM D-1946	0.6 psi	14.9 psi
16A	SV-13	Modified ASTM D-1946	1.2 "Hg	14.9 psi
17A	SV-14	Modified ASTM D-1946	1.8 "Hg	14.9 psi
18A	SV-15	Modified ASTM D-1946	1.8 "Hg	14.8 psi
19A	DUP2	Modified ASTM D-1946	2.2 "Hg	14.8 psi
20A	Lab Blank	Modified ASTM D-1946	NA	NA
20B	Lab Blank	Modified ASTM D-1946	NA	NA
21A	LCS	Modified ASTM D-1946	NA	NA
21AA	LCSD	Modified ASTM D-1946	NA	NA

Continued on next page



WORK ORDER #: 1603595B

Work Order Summary

CLIENT: Mr. Rod Satre BILL TO: Mr. Rod Satre

Environmental Resource Group Environmental Resource Group

1038 Redwood Highway 1038 Redwood Highway

Suite 1 Suite 1

Mill Valley, CA 94941 Mill Valley, CA 94941

PHONE: P.O. #

FAX: PROJECT # Bentley Mall

DATE RECEIVED: 03/30/2016 **CONTACT:** Kyle Vagadori **DATE COMPLETED:** 05/04/2016

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
21B	LCS	Modified ASTM D-1946	NA	NA
21BB	LCSD	Modified ASTM D-1946	NA	NA

	1	eide flages	
CERTIFIED BY:			DATE: 05/04/16

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016. Eurofins Air Toxics Inc.. 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 Eurofins Air Toxics, Inc.



LABORATORY NARRATIVE Modified ASTM D-1946 Environmental Resource Group Workorder# 1603595B

Nineteen 1 Liter Summa Canister samples were received on March 30, 2016. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

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

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.



Receiving Notes

Sample SVR-7-LP was placed on hold per the client's request.

The Summa canisters for samples SVR6A was leaking upon arrival. The client was notified and the analysis was cancelled.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- 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 detection limit.
- M Reported value may be biased due to apparent matrix interferences.

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



Client Sample ID: SVR3A Lab ID#: 1603595B-01A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.21	20
Nitrogen	0.21	77
Carbon Dioxide	0.021	2.7

Client Sample ID: SVR3B Lab ID#: 1603595B-02A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.21	20
Nitrogen	0.21	78
Carbon Dioxide	0.021	2.1

Client Sample ID: SVR1A

Lab ID#: 1603595B-03A

Rpt. Limit	Amount
(%)	(%)
0.20	21
0.20	78
0.020	0.75
	(%) 0.20 0.20

Client Sample ID: SVR1B

Lab ID#: 1603595B-04A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.20	21
Nitrogen	0.20	78
Carbon Dioxide	0.020	0.91

Client Sample ID: SVR2A

Lab ID#: 1603595B-05A

	Rpt. Limit	Amount
Compound	(%)	(%)



Client Sample ID: SVR2A Lab ID#: 1603595B-05A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.20	19
Nitrogen	0.20	78
Carbon Dioxide	0.020	3.2

Client Sample ID: SVR2B Lab ID#: 1603595B-06A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.20	19
Nitrogen	0.20	78
Carbon Dioxide	0.020	3.4

Client Sample ID: SVR4A

Lab ID#: 1603595B-07A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.21	20
Nitrogen	0.21	78
Carbon Dioxide	0.021	2.1

Client Sample ID: SVR4B

Lab ID#: 1603595B-08A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.21	18
Nitrogen	0.21	79
Carbon Dioxide	0.021	3.0

Client Sample ID: SVR5

Lab ID#: 1603595B-09A

Lab 1511. 1003373B-0711		
	Rpt. Limit	Amount
Compound	(%)	(%)



Client Sample ID: SVR5 Lab ID#: 1603595B-09A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.20	19
Nitrogen	0.20	78
Carbon Dioxide	0.020	2.9

Client Sample ID: DUP-1 Lab ID#: 1603595B-10A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.21	21
Nitrogen	0.21	78
Carbon Dioxide	0.021	0.79

Client Sample ID: SVR6B

Lab ID#: 1603595B-12A

Rpt. Limit	Amount
(%)	(%)
0.20	21
0.20	78
0.020	0.80
	(%) 0.20 0.20

Client Sample ID: SVR-7

Lab ID#: 1603595B-13A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.19	18	
Nitrogen	0.19	78	
Carbon Dioxide	0.019	4.3	

Client Sample ID: SV-12

Lab ID#: 1603595B-15A

	Rpt. Limit	Amount
Compound	(%)	(%)



Client Sample ID: SV-12 Lab ID#: 1603595B-15A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.19	20
Nitrogen	0.19	78
Methane	0.00019	0.00024
Carbon Dioxide	0.019	1.8

Client Sample ID: SV-13

Lab ID#: 1603595B-16A

Compound	Rpt. Limit (%)	Amount (%)
Nitrogen	0.21	78
Carbon Dioxide	0.021	0.82

Client Sample ID: SV-14

Lab ID#: 1603595B-17A

Rpt. Limit	Amount
(%)	(%)
0.21	21
0.21	78
0.00021	0.00021
0.021	1.3
	0.21 0.21 0.00021

Client Sample ID: SV-15

Lab ID#: 1603595B-18A

	Rpt. Limit	Amount (%)
Compound	(%)	
Oxygen	0.21	16
Nitrogen	0.21	77
Carbon Dioxide	0.021	7.0

Client Sample ID: DUP2 Lab ID#: 1603595B-19A



Client Sample ID: DUP2 Lab ID#: 1603595B-19A

Compound	Rpt. Limit (%)	Amount (%)
Nitrogen	0.22	79
Carbon Dioxide	0.022	1.3



Client Sample ID: SVR3A Lab ID#: 1603595B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor: Compound	10040505 2.08		ction: 3/24/16 3:15:00 PM rsis: 4/5/16 09:27 AM
	Rpt. Limit (%)	Amount (%)	
Oxygen		0.21	20
Nitrogen		0.21	77
Methane		0.00021	Not Detected
Carbon Dioxide		0.021	2.7

Container Type: 1 Liter Summa Canister



Client Sample ID: SVR3B Lab ID#: 1603595B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040506 2.13		ction: 3/24/16 4:02:00 PM sis: 4/5/16 09:57 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	20
Nitrogen		0.21	78
Methane		0.00021	Not Detected
Carbon Dioxide		0.021	2.1



Client Sample ID: SVR1A Lab ID#: 1603595B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040507 2.00		ction: 3/24/16 4:57:00 PM sis: 4/5/16 10:19 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	21
Nitrogen		0.20	78
Methane		0.00020	Not Detected
Carbon Dioxide		0.020	0.75



Client Sample ID: SVR1B Lab ID#: 1603595B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040508 2.03		ction: 3/24/16 5:58:00 PM sis: 4/5/16 10:51 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	21
Nitrogen		0.20	78
Methane		0.00020	Not Detected
Carbon Dioxide		0.020	0.91



Client Sample ID: SVR2A Lab ID#: 1603595B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040509 1.99		ection: 3/24/16 6:56:00 PM ysis: 4/5/16 11:18 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	19
Nitrogen		0.20	78
Methane		0.00020	Not Detected
Carbon Dioxide		0.020	3.2



Client Sample ID: SVR2B Lab ID#: 1603595B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040510 2.00		ction: 3/24/16 7:24:00 PM sis: 4/5/16 11:45 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	19
Nitrogen		0.20	78
Methane		0.00020	Not Detected
Carbon Dioxide		0.020	3.4



Client Sample ID: SVR4A Lab ID#: 1603595B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040511 2.06	•	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	20
Nitrogen		0.21	78
Methane		0.00021	Not Detected
Carbon Dioxide		0.021	2.1



Client Sample ID: SVR4B Lab ID#: 1603595B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor: Compound	10040512 2.09		ction: 3/25/16 12:14:00 PM rsis: 4/5/16 12:42 PM
		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	18
Nitrogen		0.21	79
Methane		0.00021	Not Detected

0.021

3.0

Container Type: 1 Liter Summa Canister

Carbon Dioxide



Client Sample ID: SVR5 Lab ID#: 1603595B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10040513	Date of Collection: 3/25/16 10:14:00 AM
Dil. Factor:	1.98	Date of Analysis: 4/5/16 01:25 PM

	Rpt. Limit	Amount (%)	
Compound	(%)		
Oxygen	0.20	19	
Nitrogen	0.20	78	
Methane	0.00020	Not Detected	
Carbon Dioxide	0.020	2.9	



Client Sample ID: DUP-1 Lab ID#: 1603595B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor: Compound	10040514 2.11	1	
		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	21
Nitrogen		0.21	78
Methane		0.00021	Not Detected

0.021

0.79

Container Type: 1 Liter Summa Canister

Carbon Dioxide



Client Sample ID: SVR6B Lab ID#: 1603595B-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040515 1.95		ction: 3/25/16 2:06:00 PM rsis: 4/5/16 02:14 PM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	21
Nitrogen		0.20	78
Methane		0.00020	Not Detected
Carbon Dioxide		0.020	0.80



Client Sample ID: SVR-7 Lab ID#: 1603595B-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040516 1.90		ction: 3/25/16 11:15:00 AM rsis: 4/5/16 02:41 PM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.19	18
Nitrogen		0.19	78
Methane		0.00019	Not Detected

0.019

4.3

Container Type: 1 Liter Summa Canister

Carbon Dioxide



Client Sample ID: SV-12 Lab ID#: 1603595B-15A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040606 1.93		tion: 3/25/16 5:22:00 PM sis: 4/6/16 09:56 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.19	20
Nitrogen		0.19	78
Methane		0.00019	0.00024

0.019

1.8

Container Type: 1 Liter Summa Canister

Carbon Dioxide



Client Sample ID: SV-13 Lab ID#: 1603595B-16A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040607 2.10		ction: 3/25/16 4:12:00 PM sis: 4/6/16 10:24 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	21
Nitrogen		0.21	78
Methane		0.00021	Not Detected
Carbon Dioxide		0.021	0.82



Client Sample ID: SV-14 Lab ID#: 1603595B-17A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040608 2.14		etion: 3/25/16 2:47:00 PM sis: 4/6/16 11:07 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	21
Nitrogen		0.21	78
Methane		0.00021	0.00021

0.021

1.3

Container Type: 1 Liter Summa Canister

Carbon Dioxide



Client Sample ID: SV-15 Lab ID#: 1603595B-18A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040609 2.14		ction: 3/25/16 3:38:00 PM rsis: 4/6/16 11:31 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.21	16
Nitrogen		0.21	77
Methane		0.00021	Not Detected
Carbon Dioxide		0.021	7.0

Container Type: 1 Liter Summa Canister



Client Sample ID: DUP2 Lab ID#: 1603595B-19A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040610 2.17		ction: 3/25/16 4:07:00 PM /sis: 4/6/16 11:55 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	20
Nitrogen		0.22	79
Methane		0.00022	Not Detected
Carbon Dioxide		0.022	1.3



Client Sample ID: Lab Blank Lab ID#: 1603595B-20A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10040504	Date of Colle	
Dil. Factor:	1.00	Date of Anal	ysis: 4/5/16 08:54 AM
		Rpt. Limit	Amount
Compound		(%)	(%)
Oxygen		0.10	Not Detected
Nitrogen		0.10	Not Detected
Methane		0.00010	Not Detected
Carbon Dioxide		0.010	Not Detected



Client Sample ID: Lab Blank Lab ID#: 1603595B-20B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: Dil. Factor:	10040604 1.00	Date of Colle Date of Analy	ction: NA /sis: 4/6/16 09:04 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.10	Not Detected
Nitrogen		0.10	Not Detected
Methane		0.00010	Not Detected
Carbon Dioxide		0.010	Not Detected



Client Sample ID: LCS Lab ID#: 1603595B-21A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 10040502 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/5/16 07:11 AM

		Method
Compound	%Recovery	Limits
Oxygen	99	85-115
Nitrogen	93	85-115
Methane	103	85-115
Carbon Dioxide	100	85-115



Client Sample ID: LCSD Lab ID#: 1603595B-21AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 10040517 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/5/16 03:10 PM

		Method
Compound	%Recovery	Limits
Oxygen	100	85-115
Nitrogen	92	85-115
Methane	102	85-115
Carbon Dioxide	100	85-115



Client Sample ID: LCS Lab ID#: 1603595B-21B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 10040602 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 08:10 AM

		Method
Compound	%Recovery	Limits
Oxygen	99	85-115
Nitrogen	92	85-115
Methane	102	85-115
Carbon Dioxide	99	85-115



Client Sample ID: LCSD Lab ID#: 1603595B-21BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 10040617 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 03:12 PM

		Method
Compound	%Recovery	Limits
Oxygen	100	85-115
Nitrogen	92	85-115
Methane	102	85-115
Carbon Dioxide	100	85-115



5/13/2016 Mr. Rod Satre Environmental Resource Group 1038 Redwood Highway Suite 1 Mill Valley CA 94941

Project Name: Bentley Mall

Project #:

Workorder #: 1603595AR1

Dear Mr. Rod Satre

The following report includes the data for the above referenced project for sample(s) received on 3/30/2016 at Air Toxics Ltd.

The data and associated QC analyzed by 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free 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 #: 1603595AR1

Work Order Summary

CLIENT: Mr. Rod Satre **BILL TO:** Mr. Rod Satre

Environmental Resource Group

1038 Redwood Highway

Suite 1

Mill Valley, CA 94941

Environmental Resource Group

1038 Redwood Highway

Suite 1

Mill Valley, CA 94941

PHONE: P.O. #

FAX: PROJECT # Bentley Mall

DATE RECEIVED: 03/30/2016 **CONTACT:** Kyle Vagadori **DATE COMPLETED:** 04/12/2016

DATE REISSUED: 05/13/2016

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SVR3A	TO-15	1 "Hg	14.8 psi
02A	SVR3B	TO-15	1.4 "Hg	15.1 psi
03A	SVR1A	TO-15	0.2 psi	15.1 psi
04A	SVR1B	TO-15	0.2 "Hg	14.9 psi
05A	SVR2A	TO-15	0.1 psi	14.7 psi
06A	SVR2B	TO-15	0 psi	14.7 psi
07A	SVR4A	TO-15	0.8 "Hg	14.7 psi
08A	SVR4B	TO-15	1 "Hg	15 psi
09A	SVR5	TO-15	0.4 psi	15.2 psi
10A	DUP-1	TO-15	1.4 "Hg	14.9 psi
11A(cancelled)	SVR6A	TO-15	0.6 psi	15 psi
12A	SVR6B	TO-15	0.4 psi	14.8 psi
13A	SVR-7	TO-15	0.8 psi	14.7 psi
15A	SV-12	TO-15	0.6 psi	14.9 psi
16A	SV-13	TO-15	1.2 "Hg	14.9 psi
17A	SV-14	TO-15	1.8 "Hg	14.9 psi
18A	SV-15	TO-15	1.8 "Hg	14.8 psi
19A	DUP2	TO-15	2.2 "Hg	14.8 psi
20A	Lab Blank	TO-15	NA	NA
20B	Lab Blank	TO-15	NA	NA
20C	Lab Blank	TO-15	NA	NA
20D	Lab Blank	TO-15	NA	NA
21A	CCV	TO-15	NA	NA

Continued on next page



WORK ORDER #: 1603595AR1

Work Order Summary

CLIENT: Mr. Rod Satre BILL TO: Mr. Rod Satre

Environmental Resource Group Environmental Resource Group

1038 Redwood Highway 1038 Redwood Highway

Suite 1 Suite 1

Mill Valley, CA 94941 Mill Valley, CA 94941

PHONE: P.O.#

FAX: PROJECT # Bentley Mall

DATE RECEIVED: 03/30/2016 **CONTACT:** Kyle Vagadori

DATE COMPLETED: 04/12/2016 **DATE REISSUED:** 05/13/2016

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	PRESSURE
21B	CCV	TO-15	NA	NA
21C	CCV	TO-15	NA	NA
21D	CCV	TO-15	NA	NA
22A	LCS	TO-15	NA	NA
22AA	LCSD	TO-15	NA	NA
22B	LCS	TO-15	NA	NA
22BB	LCSD	TO-15	NA	NA
22C	LCS	TO-15	NA	NA
22CC	LCSD	TO-15	NA	NA
22D	LCS	TO-15	NA	NA
22DD	LCSD	TO-15	NA	NA

	TI	eide Thayes		
CERTIFIED BY:		0 0	DATE: 05/13/16	

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.
Eurofins Air Toxics Inc.. 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 Environmental Resource Group Workorder# 1603595AR1

Nineteen 1 Liter Summa Canister samples were received on March 30, 2016. The laboratory performed analysis via 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

The Chain of Custody (COC) information for sample SV-12 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

The workorder was reissued on 05/13/16 to cancel sample SVR6A and amend the following narrative:

The Summa canister for sample SVR6A was leaking upon arrival. The client was notified and the analysis cancelled. The narrative referencing this sample in the analytical notes has also been amended.

Analytical Notes

Dilution was performed on samples SVR2A, SVR4A, DUP-1, and SVR6B due to the presence of high level target species.

2-Propanol exceeded the instrument's calibration range for sample SVR4B and was flagged accordingly.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

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

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.
 - 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



Client Sample ID: SVR3A Lab ID#: 1603595AR1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	1.4	5.1	7.1
2-Propanol	4.2	4.2	10	10
Tetrahydrofuran	1.0	2.4	3.1	7.1
Trichloroethene	1.0	2.5	5.6	13
Toluene	1.0	24	3.9	90
Tetrachloroethene	1.0	37	7.0	250
Ethyl Benzene	1.0	4.7	4.5	20
m,p-Xylene	1.0	16	4.5	71
o-Xylene	1.0	4.2	4.5	18
4-Ethyltoluene	1.0	1.6	5.1	7.9

Client Sample ID: SVR3B Lab ID#: 1603595AR1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.3	17	10	42
Trichloroethene	1.1	3.0	5.7	16
Toluene	1.1	2.8	4.0	10
Tetrachloroethene	1.1	59	7.2	400
m,p-Xylene	1.1	1.1	4.6	4.8

Client Sample ID: SVR1A

Lab ID#: 1603595AR1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	5.9	4.9	29
Ethanol	4.0	5.0	7.5	9.5
2-Propanol	4.0	19	9.8	46
trans-1,2-Dichloroethene	1.0	4.2	4.0	17
Hexane	1.0	1.3	3.5	4.6
Benzene	1.0	2.8	3.2	8.8
Heptane	1.0	4.1	4.1	17
4-Methyl-2-pentanone	1.0	1.2	4.1	5.0



Client Sample ID: SVR1A

Lab ID#: 1603595AR1-03A				
Toluene	1.0	36	3.8	140
Tetrachloroethene	1.0	4.4	6.8	30
Ethyl Benzene	1.0	3.1	4.3	14
m,p-Xylene	1.0	9.7	4.3	42
o-Xylene	1.0	2.9	4.3	12
4-Ethyltoluene	1.0	1.1	4.9	5.3
1,2,4-Trimethylbenzene	1.0	0.99 J	4.9	4.9 J

Client Sample ID: SVR1B Lab ID#: 1603595AR1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	22	5.0	110
Freon 11	1.0	4.4	5.7	25
Acetone	10	13	24	31
4-Methyl-2-pentanone	1.0	1.3	4.2	5.4
Toluene	1.0	8.2	3.8	31
Tetrachloroethene	1.0	21	6.9	140
m,p-Xylene	1.0	2.4	4.4	10

Client Sample ID: SVR2A Lab ID#: 1603595AR1-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	5.0	50	28	280
trans-1,2-Dichloroethene	5.0	97	20	380
Hexane	5.0	8.5	17	30
Cyclohexane	5.0	110	17	380
Heptane	5.0	54	20	220
Toluene	5.0	150	19	560
Ethyl Benzene	5.0	210	22	920
m,p-Xylene	5.0	920	22	4000
o-Xylene	5.0	890	22	3900
Cumene	5.0	160	24	780



Client Sample ID: SVR2A

Lab ID#: 1603595AR1-05A				
Propylbenzene	5.0	220	24	1100
4-Ethyltoluene	5.0	1100	24	5400
1,3,5-Trimethylbenzene	5.0	840	24	4100

5.0

1200

24

5900

Client Sample ID: SVR2B Lab ID#: 1603595AR1-06A

1,2,4-Trimethylbenzene

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	39	5.6	220
trans-1,2-Dichloroethene	1.0	330	4.0	1300
Chloroform	1.0	2.1	4.9	10
Toluene	1.0	2.3	3.8	8.6
Tetrachloroethene	1.0	1.3	6.8	8.6
m,p-Xylene	1.0	1.3	4.3	5.6

Client Sample ID: SVR4A Lab ID#: 1603595AR1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
trans-1,2-Dichloroethene	6.8	1900	27	7600
Toluene	6.8	52	26	200
Tetrachloroethene	6.8	14	46	95
Ethyl Benzene	6.8	11	30	50
m,p-Xylene	6.8	42	30	180
o-Xylene	6.8	13	30	56

Client Sample ID: SVR4B Lab ID#: 1603595AR1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	1.7	5.2	8.4
Freon 11	1.0	1.4	5.9	7.6
2-Propanol	4.2	450 E	10	1100 E



Client Sample ID: SVR4B

•				
Lab ID#: 1603595AR1-08A				
trans-1,2-Dichloroethene	1.0	9.6	4.1	38
Benzene	1.0	2.1	3.3	6.6
Heptane	1.0	1.5	4.3	6.3
Trichloroethene	1.0	21	5.6	110
Toluene	1.0	72	3.9	270
Tetrachloroethene	1.0	220	7.1	1500
Ethyl Benzene	1.0	8.6	4.5	38
m,p-Xylene	1.0	29	4.5	120
o-Xylene	1.0	7.6	4.5	33
4-Ethyltoluene	1.0	2.7	5.1	13
1,2,4-Trimethylbenzene	1.0	1.5	5.1	7.3

Client Sample ID: SVR5 Lab ID#: 1603595AR1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.99	2.7	4.9	13
Freon 11	0.99	120	5.6	670
2-Propanol	4.0	8.2	9.7	20
Chloroform	0.99	0.99	4.8	4.8
1,1,1-Trichloroethane	0.99	16	5.4	85
Trichloroethene	0.99	8.7	5.3	47
Toluene	0.99	2.6	3.7	9.8
Tetrachloroethene	0.99	110	6.7	760

Client Sample ID: DUP-1 Lab ID#: 1603595AR1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)	
Acetone	4200	5200	10000	12000	
2-Propanol	4200	130000	10000	320000	

Client Sample ID: SVR6B Lab ID#: 1603595AR1-12A



Client Sample ID: SVR6B Lab ID#: 1603595AR1-12A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Acetone	320	450	770	1100
2-Propanol	320	14000	800	33000

Client Sample ID: SVR-7 Lab ID#: 1603595AR1-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.95	3.7	5.3	21
2-Propanol	3.8	28	9.3	70
trans-1,2-Dichloroethene	0.95	5.5	3.8	22
Heptane	0.95	1.2	3.9	4.8
Toluene	0.95	12	3.6	44
Ethyl Benzene	0.95	1.1	4.1	4.7
m,p-Xylene	0.95	3.1	4.1	13

Client Sample ID: SV-12 Lab ID#: 1603595AR1-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.96	3.4	4.8	17
Freon 11	0.96	14	5.4	80
2-Propanol	3.9	89	9.5	220
Cyclohexane	0.96	1.4	3.3	4.8
Heptane	0.96	1.5	4.0	6.0
Toluene	0.96	42	3.6	160
Tetrachloroethene	0.96	4.0	6.5	27
m,p-Xylene	0.96	1.8	4.2	7.9

Client Sample ID: SV-13 Lab ID#: 1603595AR1-16A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)



Client Sample ID: SV-13 Lab ID#: 1603595AR1-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	5.0	5.2	25
Freon 11	1.0	12	5.9	67
Chloroform	1.0	15	5.1	75
Toluene	1.0	3.0	4.0	12
m,p-Xylene	1.0	1.3	4.6	5.6

Client Sample ID: SV-14 Lab ID#: 1603595AR1-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	2.7	5.3	13
Acetone	11	40	25	94
2-Propanol	4.3	25	10	62
2-Butanone (Methyl Ethyl Ketone)	4.3	7.9	13	23
Tetrahydrofuran	1.1	1.5	3.2	4.4
4-Methyl-2-pentanone	1.1	1.6	4.4	6.6
Toluene	1.1	21	4.0	79
Ethyl Benzene	1.1	2.2	4.6	9.4
m,p-Xylene	1.1	5.2	4.6	23
o-Xylene	1.1	1.4	4.6	6.0

Client Sample ID: SV-15

Lab ID#: 1603595AR1-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	5.5	5.3	27
Freon 11	1.1	5.7	6.0	32
2-Propanol	4.3	7.8	10	19
Toluene	1.1	1.3	4.0	5.0

Client Sample ID: DUP2 Lab ID#: 1603595AR1-19A



Client Sample ID: DUP2 Lab ID#: 1603595AR1-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	2.6	5.3	13
Acetone	11	33	26	80
2-Propanol	4.3	18	11	45
2-Butanone (Methyl Ethyl Ketone)	4.3	6.1	13	18
Tetrahydrofuran	1.1	1.3	3.2	3.7
4-Methyl-2-pentanone	1.1	1.5	4.4	6.2
Toluene	1.1	23	4.1	86
Ethyl Benzene	1.1	2.7	4.7	12
m,p-Xylene	1.1	7.3	4.7	32
o-Xylene	1.1	2.0	4.7	8.5



trans-1,3-Dichloropropene

1,1,2-Trichloroethane

Tetrachloroethene 2-Hexanone

Client Sample ID: SVR3A Lab ID#: 1603595AR1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	17040409 2.08		of Collection: 3/ of Analysis: 4/4/	24/16 3:15:00 PM 16 10:50 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	1.4	5.1	7.1
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected UJ	21	Not Detected U
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	40	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	Not Detected	5.8	Not Detected
Ethanol	4.2	Not Detected	7.8	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Acetone	10	Not Detected	25	Not Detected
2-Propanol	4.2	4.2	10	10
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.7	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected Not Detected	4.1	Not Detected
Tetrahydrofuran	1.0	2.4	3.1	7.1
Chloroform	1.0	Not Detected	5.1	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
	1.0	Not Detected	3.6	Not Detected
Cyclohexane Carbon Tetrachloride	1.0	Not Detected Not Detected	3.6 6.5	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	6.5 4.8	Not Detected
Benzene	1.0	Not Detected	4.0 3.3	Not Detected
1,2-Dichloroethane	1.0	Not Detected	3.3 4.2	Not Detected
	1.0	Not Detected	4.2	Not Detected
Heptane Triphlareathana	1.0		4.3 5.6	13
Trichloroethene	1.0	2.5 Not Detected	5.6 4.8	Not Detected
1,2-Dichloropropane	1.0 4.2	Not Detected	4.8 15	Not Detected
1,4-Dioxane Bromodichloromethane	4.2 1.0	Not Detected	7.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	1.0	24	3.9	90

Not Detected

Not Detected

37

Not Detected

4.7

5.7

7.0

17

Not Detected

Not Detected

250

Not Detected

1.0

1.0

1.0

4.2



Client Sample ID: SVR3A Lab ID#: 1603595AR1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040409	Date of Collection: 3/24/16 3:15:00 PM
Dil. Factor:	2.08	Date of Analysis: 4/4/16 10:50 PM

Dil. I actor.	2.00	Date of Analysis. 4/4/10 10.30 Fivi		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.8	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.0	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	4.7	4.5	20
m,p-Xylene	1.0	16	4.5	71
o-Xylene	1.0	4.2	4.5	18
Styrene	1.0	Not Detected	4.4	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.1	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.1	Not Detected
Propylbenzene	1.0	Not Detected	5.1	Not Detected
4-Ethyltoluene	1.0	1.6	5.1	7.9
1,3,5-Trimethylbenzene	1.0	Not Detected	5.1	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.1	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.2	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	44	Not Detected

UJ = Analyte associated with low bias in the CCV.

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	103	70-130	
1,2-Dichloroethane-d4	89	70-130	
4-Bromofluorobenzene	108	70-130	



Client Sample ID: SVR3B Lab ID#: 1603595AR1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040410 Date of Collection: 3/24/16 4:02:00 PM
Dil. Factor: 2.13 Date of Analysis: 4/4/16 11:16 PM

Dil. Factor:	2.13	Date	of Analysis: 4/4/	16 11:16 PM
	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	7.4	Not Detected
Chloromethane	11	Not Detected UJ	22	Not Detected UJ
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	41	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	4.3	Not Detected	8.0	Not Detected
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	Not Detected	25	Not Detected
2-Propanol	4.3	17	10	42
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	3.0	5.7	16
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	1.1	2.8	4.0	10
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	59	7.2	400
2-Hexanone	4.3	Not Detected	17	Not Detected



Client Sample ID: SVR3B Lab ID#: 1603595AR1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040410 Date of Collection: 3/24/16 4:02:00 PM
Dil. Factor: 2.13 Date of Analysis: 4/4/16 11:16 PM

2.13	Date	OI Allalysis. 4/4/ i	O I I. IO PIVI
Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1.1	Not Detected	9.1	Not Detected
1.1	Not Detected	8.2	Not Detected
1.1	Not Detected	4.9	Not Detected
1.1	Not Detected	4.6	Not Detected
1.1	1.1	4.6	4.8
1.1	Not Detected	4.6	Not Detected
1.1	Not Detected	4.5	Not Detected
1.1	Not Detected	11	Not Detected
1.1	Not Detected	5.2	Not Detected
1.1	Not Detected	7.3	Not Detected
1.1	Not Detected	5.2	Not Detected
1.1	Not Detected	5.2	Not Detected
1.1	Not Detected	5.2	Not Detected
1.1	Not Detected	5.2	Not Detected
1.1	Not Detected	6.4	Not Detected
1.1	Not Detected	6.4	Not Detected
1.1	Not Detected	5.5	Not Detected
1.1	Not Detected	6.4	Not Detected
4.3	Not Detected	32	Not Detected
4.3	Not Detected	45	Not Detected
	Rpt. Limit (ppbv) 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1	Rpt. Limit (ppbv) Amount (ppbv) 1.1 Not Detected 1.1 Not Detected 1.1 Not Detected 1.1 Not Detected 1.1 1.1 1.1 Not Detected 1.2 Not Detected 1.3 Not Detected	Rpt. Limit (ppbv) Amount (ppbv) Rpt. Limit (ug/m3) 1.1 Not Detected 9.1 1.1 Not Detected 8.2 1.1 Not Detected 4.9 1.1 Not Detected 4.6 1.1 1.1 4.6 1.1 Not Detected 4.5 1.1 Not Detected 11 1.1 Not Detected 5.2 1.1 Not Detected 6.4 1.1 Not Detected 6.4 1.1 Not Detected 5.5 1.1 Not Detected 6.4 1

UJ = Analyte associated with low bias in the CCV.

_		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: SVR1A Lab ID#: 1603595AR1-03A

File Name: Dil. Factor:	17040616 2.00		of Collection: 3/2 of Analysis: 4/6/1	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	5.9	4.9	29
Freon 114	1.0	Not Detected	7.0	Not Detected
Chloromethane	10	Not Detected	21	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.2	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	4.0	Not Detected	10	Not Detected
Freon 11	1.0	Not Detected	5.6	Not Detected
Ethanol	4.0	5.0	7.5	9.5
Freon 113	1.0	Not Detected	7.7	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	Not Detected	24	Not Detected
2-Propanol	4.0	19	9.8	46
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	12	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.6	Not Detected
trans-1,2-Dichloroethene	1.0	4.2	4.0	17
Hexane	1.0	1.3	3.5	4.6
1,1-Dichloroethane	1.0	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrahydrofuran	1.0	Not Detected	2.9	Not Detected
Chloroform	1.0	Not Detected	4.9	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.4	Not Detected
Cyclohexane	1.0	Not Detected	3.4	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	1.0	2.8	3.2	8.8
1,2-Dichloroethane	1.0	Not Detected	4.0	Not Detected
Heptane	1.0	4.1	4.1	17
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.6	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	1.0	Not Detected	6.7	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.5	Not Detected
4-Methyl-2-pentanone	1.0	1.2	4.1	5.0
Toluene	1.0	36	3.8	140
trans-1,3-Dichloropropene	1.0	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.4	Not Detected
Tetrachloroethene	1.0	4.4	6.8	30
2-Hexanone	4.0	Not Detected	16	Not Detected



Client Sample ID: SVR1A Lab ID#: 1603595AR1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040616	Date of Collection: 3/24/16 4:57:00 PM
Dil. Factor:	2.00	Date of Analysis: 4/6/16 05:23 PM

Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1.0	Not Detected	8.5	Not Detected
1.0	Not Detected	7.7	Not Detected
1.0	Not Detected	4.6	Not Detected
1.0	3.1	4.3	14
1.0	9.7	4.3	42
1.0	2.9	4.3	12
1.0	Not Detected	4.2	Not Detected
1.0	Not Detected	10	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	6.9	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	1.1	4.9	5.3
1.0	Not Detected	4.9	Not Detected
1.0	0.99 J	4.9	4.9 J
1.0	Not Detected	6.0	Not Detected
1.0	Not Detected	6.0	Not Detected
1.0	Not Detected	5.2	Not Detected
1.0	Not Detected	6.0	Not Detected
4.0	Not Detected	30	Not Detected
4.0	Not Detected	43	Not Detected
	(ppbv) 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	(ppbv) (ppbv) 1.0 Not Detected 1.0 Not Detected 1.0 Not Detected 1.0 3.1 1.0 9.7 1.0 Not Detected 1.0 Not Detected	(ppbv) (ppbv) (ug/m3) 1.0 Not Detected 8.5 1.0 Not Detected 7.7 1.0 Not Detected 4.6 1.0 3.1 4.3 1.0 9.7 4.3 1.0 Not Detected 4.2 1.0 Not Detected 10 1.0 Not Detected 4.9 1.0 Not Detected 4.9 1.0 Not Detected 4.9 1.0 Not Detected 4.9 1.0 Not Detected 6.0 1.0 Not Detected 6.0 1.0 Not Detected 5.2 1.0 Not Detected 6.0 1.0 Not Detected

J = Estimated value.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	101	70-130	
1,2-Dichloroethane-d4	84	70-130	
4-Bromofluorobenzene	111	70-130	



Client Sample ID: SVR1B Lab ID#: 1603595AR1-04A

File Name:	17040411	Date of Collection: 3/24/16 5:58:00 PM
Dil. Factor:	2.03	Date of Analysis: 4/4/16 11:43 PM

Dil. Factor:	2.03	Date	of Analysis: 4/4/	16 11:43 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.0	22	5.0	110
Freon 114	1.0	Not Detected	7.1	Not Detected
Chloromethane	10	Not Detected UJ	21	Not Detected UJ
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.2	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	4.1	Not Detected	11	Not Detected
Freon 11	1.0	4.4	5.7	25
Ethanol	4.1	Not Detected	7.6	Not Detected
Freon 113	1.0	Not Detected	7.8	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	13	24	31
2-Propanol	4.1	Not Detected	10	Not Detected
Carbon Disulfide	4.1	Not Detected	13	Not Detected
3-Chloropropene	4.1	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.6	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	1.0	Not Detected	5.0	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Cyclohexane	1.0	Not Detected	3.5	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	1.0	Not Detected	3.2	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Heptane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.7	Not Detected
1,4-Dioxane	4.1	Not Detected	15	Not Detected
Bromodichloromethane	1.0	Not Detected	6.8	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
4-Methyl-2-pentanone	1.0	1.3	4.2	5.4
Toluene	1.0	8.2	3.8	31
trans-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Tetrachloroethene	1.0	21	6.9	140
2-Hexanone	4.1	Not Detected	17	Not Detected



Client Sample ID: SVR1B Lab ID#: 1603595AR1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040411 Date of Collection: 3/24/16 5:58:00 PM
Dil. Factor: 2.03 Date of Analysis: 4/4/16 11:43 PM

Dil. I actor.	2.03	Date	OI Allalysis. 4/4/ i	0 11.43 F W
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.6	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	7.8	Not Detected
Chlorobenzene	1.0	Not Detected	4.7	Not Detected
Ethyl Benzene	1.0	Not Detected	4.4	Not Detected
m,p-Xylene	1.0	2.4	4.4	10
o-Xylene	1.0	Not Detected	4.4	Not Detected
Styrene	1.0	Not Detected	4.3	Not Detected
Bromoform	1.0	Not Detected	10	Not Detected
Cumene	1.0	Not Detected	5.0	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.0	Not Detected
Propylbenzene	1.0	Not Detected	5.0	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.0	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.0	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.0	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.2	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
1,2,4-Trichlorobenzene	4.1	Not Detected	30	Not Detected
Hexachlorobutadiene	4.1	Not Detected	43	Not Detected

UJ = Analyte associated with low bias in the CCV.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	101	70-130	
1,2-Dichloroethane-d4	89	70-130	
4-Bromofluorobenzene	109	70-130	



Client Sample ID: SVR2A Lab ID#: 1603595AR1-05A

File Name:	17040414	Date of Collection: 3/24/16 6:56:00 PM
Dil. Factor:	9.93	Date of Analysis: 4/5/16 12:57 AM

Compound Rpt. Limit (ppbv) Amount (ppbv) Rpt. Limit (ug/m3) Amount (ug/m3) Freon 12 5.0 Not Detected 24 Not Detected Freon 114 5.0 Not Detected 35 Not Detected Chloromethane 5.0 Not Detected 11 Not Detected 1/mill 5.0 Not Detected 11 Not Detected 1.3-Butadiene 5.0 Not Detected 11 Not Detected Brommethane 5.0 Not Detected 190 Not Detected Chloroethane 2.0 Not Detected 52 Not Detected Chloroethane 2.0 Not Detected 52 Not Detected Chloroethane 5.0 Not Detected 37 Not Detected Freon 11 5.0 Not Detected 38 Not Detected Freon 113 5.0 Not Detected 38 Not Detected Freon 113 5.0 Not Detected 20 Not Detected 1,1-Dichloroethane 5.0 Not Dete	Dil. Factor:	9.93	Date	of Analysis: 4/5/	16 12:57 AM
Freon 12 5.0 Not Detected 24 Not Detected Freon 114 5.0 Not Detected 35 Not Detected Chloromethane 50 Not Detected 13 Not Detected 1,3-Butadiene 5.0 Not Detected 11 Not Detected 1,3-Butadiene 5.0 Not Detected 11 Not Detected Chloroethane 20 Not Detected 190 Not Detected Chloroethane 20 Not Detected 52 Not Detected Chloroethane 20 Not Detected 32 Not Detected Chloroethane 20 Not Detected 32 Not Detected Chloroethane 20 Not Detected 38 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected 2,2-Propanol 20 Not Detected 120 Not Detected 2,2-Propanol 20 Not Detected <td< th=""><th></th><th>Rpt. Limit</th><th>Amount</th><th>Rpt. Limit</th><th>Amount</th></td<>		Rpt. Limit	Amount	Rpt. Limit	Amount
Freon 114 5.0 Not Detected UJ 100 Not Detected U Union Not Detected UJ 100 Not Detected U Union Not Detected UJ 100 Not Detected Union Not Detected Union Not Detected Union 130 Not Detected	Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Chloromethane 50 Not Detected UJ 100 Not Detected UJ Vinyl Chloride 5.0 Not Detected 13 Not Detected 1,3-Butadiene 5.0 Not Detected 11 Not Detected Bromomethane 50 Not Detected 52 Not Detected Chloroethane 20 Not Detected 52 Not Detected Freon 11 5.0 50 28 280 Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 4-cetone 50 Not Detected 20 Not Detected 4-cetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected 2-Propanol 20 Not Detected 49 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not	Freon 12	5.0	Not Detected	24	Not Detected
Vinyl Chloride 5.0 Not Detected 13 Not Detected 1,3-Butadiene 5.0 Not Detected 11 Not Detected Bromomethane 50 Not Detected 190 Not Detected Chloroethane 20 Not Detected 52 Not Detected Freon 11 5.0 50 28 280 Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methyl tert-butyl ether 5.0 Not Detected 170 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected	Freon 114	5.0	Not Detected	35	Not Detected
1,3-Butadiene 5.0 Not Detected 11 Not Detected Bromomethane 50 Not Detected 190 Not Detected Chloroethane 20 Not Detected 52 Not Detected Freon 11 5.0 50 28 280 Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected Acethore 50 Not Detected 62 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected Methyler Echloride 50 Not Detected 170	Chloromethane	50	Not Detected UJ	100	Not Detected UJ
Bromomethane	Vinyl Chloride	5.0	Not Detected	13	Not Detected
Chloroethane 20 Not Detected 52 Not Detected Freon 11 5.0 50 28 280 Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methylene Chloride 5.0 Not Detected 170 Not Detected Methylene Chloride 5.0 Not Detected 170 Not Detected Methylene Chloride 5.0 Not Detected 18 Not Detected Methylene Chloride 5.0 Not Detected	1,3-Butadiene	5.0	Not Detected	11	Not Detected
Freon 11 5.0 50 28 280 Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected 2-Propanol 20 Not Detected 62 Not Detected 3-Chioropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methylene Chloride 50 Not Detected 18 Not Detected Methylene Chloride 50 Not Detected 18 Not Detected trans-1,2-Dichloroethene 5.0 Not Detected 17 Not Detected 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not	Bromomethane	50	Not Detected	190	Not Detected
Ethanol 20 Not Detected 37 Not Detected Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 62 Not Detected Methyl terr-butyl ether 5.0 Not Detected 18 Not Detected Methyl terr-butyl ether 5.0 Not Detected 18 Not Detected Methyl terr-butyl ether 5.0 Not Detected 18 Not Detected Methyl terr-butyl ether 5.0 Not Detected 18 Not Detected Methyl terr-butyl ether 5.0 Not Detected 18 Not Detected Methyl terr-butyl ether 5.0 Not Detected 20 Not Detected 1,2-Dichlor	Chloroethane	20	Not Detected	52	Not Detected
Freon 113 5.0 Not Detected 38 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methylene Chloride 50 Not Detected 18 Not Detected Methylene Chloride 50 Not Detected 18 Not Detected Methyl tert-butyl either 5.0 Not Detected 18 Not Detected trans-1,2-Dichloroethene 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected C-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected Cis-1,2-Dichloroethene	Freon 11	5.0	50	28	280
1,1-Dichloroethene 5.0 Not Detected 20 Not Detected Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 20 Not Detected Methyl tert-butyl ether 5.0 Not Detected 20 Not Detected 1,1-Dichloroethene 5.0 Not Detected 20 Not Detected	Ethanol	20	Not Detected	37	Not Detected
Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methyl tert-butyl ether 50 Not Detected 18 Not Detected trans-1,2-Dichloroethene 50 97 20 380 Hexane 50 Not Detected 20 Not Detected 18 Not Detected 18-Chloroethene 50 8.5 17 30 1,1-Dichloroethane 50 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Entrahydrofuran 50 Not Detected 24 Not Detected 25-Not Detected 26-Chloroform 50 Not Detected 24 Not Detected 26-Chloroform 50 Not Detected 27 Not Detected 28-Carbon Tetrachloride 50 Not Detected 31 Not Detected 28-Carbon Tetrachloride 50 Not Detected 31 Not Detected 32 Not Detected 32 Not Detected 32 Not Detected 33 Not Detected 34 Not Detected 34 Not Detected 35 Not Det	Freon 113	5.0	Not Detected	38	Not Detected
Acetone 50 Not Detected 120 Not Detected 2-Propanol 20 Not Detected 49 Not Detected Carbon Disulfide 20 Not Detected 62 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected Methyl tert-butyl ether 5.0 Not Detected 20 Not Detected Hexane 5.0 Not Detected 20 Not Detected 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected	1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
2-Propanol20Not Detected49Not DetectedCarbon Disulfide20Not Detected62Not Detected3-Chloropropene20Not Detected62Not DetectedMethylene Chloride50Not Detected170Not DetectedMethylene Chloride50Not Detected18Not DetectedMethyl tert-butyl ether5.0Not Detected18Not DetectedInternational Character5.09720380Hexane5.08.517301,1-Dichloroethane5.0Not Detected20Not Detected2-Butanone (Methyl Ethyl Ketone)20Not Detected58Not Detected2-Butanone (Methyl Ethyl Ketone)20Not Detected20Not Detected2-Butanone (Methyl Ethyl Ketone)5.0Not Detected24Not Detected2-Butanone (Methyl Ethyl Ketone)5.0Not Detected24Not Detected2-Butanone (Methyl Ethyl Ketone)5.0Not Detected27Not Detected2-Butanone (Methyl Ethyl Ketone)5.0Not Detected27Not Detected2-Dichloroformen5.0Not Detected23Not Detected2-Lary Introduction5.0Not De		50	Not Detected	120	Not Detected
Carbon Disulfide 20 Not Detected 62 Not Detected 3-Chloropropene 20 Not Detected 62 Not Detected Methylene Chloride 50 Not Detected 170 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected trans-1,2-Dichloroethene 5.0 97 20 380 Hexane 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected		20	Not Detected	49	Not Detected
Methylene Chloride 50 Not Detected 170 Not Detected Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected trans-1,2-Dichloroethene 5.0 97 20 380 Hexane 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Chloroform 5.0 Not Detected 15 Not Detected 1,1,1-Tirchloroethane 5.0 Not Detected 24 Not Detected 1,1,1-Tirchloroethane 5.0 Not Detected 27 Not Detected 1,1,1-Tirchloroethane 5.0 Not Detected 27 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected 2,2-Unic	Carbon Disulfide	20	Not Detected	62	Not Detected
Methyl tert-butyl ether 5.0 Not Detected 18 Not Detected trans-1,2-Dichloroethene frans-1,2-Dichloroethene 5.0 97 20 380 Hexane 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Tetrahydrofuran 5.0 Not Detected 15 Not Detected Chloroform 5.0 Not Detected 24 Not Detected Chloroform 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane <	3-Chloropropene	20	Not Detected	62	Not Detected
trans-1,2-Dichloroethene 5.0 97 20 380 Hexane 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Lockloroethane 5.0 Not Detected 20 Not Detected Cerbon Tetrachloride 5.0 Not Detected 27 Not Detected 2-2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected 2-2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected 1,2-Dichloroethane 5.0 Not Detected 23 Not Detected 1,2-Dichloroethane 5.0 Not Detected 27 Not Detected	Methylene Chloride	50	Not Detected	170	Not Detected
trans-1,2-Dichloroethene 5.0 97 20 380 Hexane 5.0 8.5 17 30 1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 20 Not Detected 2-Lockloroethane 5.0 Not Detected 20 Not Detected Cerbon Tetrachloride 5.0 Not Detected 27 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected 1,2-Dichloroethane 5.0 Not Detected 23 Not Detected 1,2-Dichloropropane 5.0 Not Detected 27 Not Detected	Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane 5.0 Not Detected 20 Not Detected 2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Tetrahydrofuran 5.0 Not Detected 15 Not Detected Chloroform 5.0 Not Detected 24 Not Detected 1,1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 Not Detected 31 Not Detected Cyclohexane 5.0 Not Detected 31 Not Detected Cyclohexane 5.0 Not Detected 31 Not Detected Cyclohexane 5.0 Not Detected 23 Not Detected Ley-Trimethylpentane 5.0 Not Detected 23 Not Detected 1,2-Dichloroethane 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 27 Not Detected 1,2-Dichloro	· · · · · · · · · · · · · · · · · · ·	5.0	97	20	380
2-Butanone (Methyl Ethyl Ketone) 20 Not Detected 58 Not Detected cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Tetrahydrofuran 5.0 Not Detected 15 Not Detected Chloroform 5.0 Not Detected 24 Not Detected 1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 23 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected 1,2-Dichloropropane 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected 1,3-Dichloropropene	Hexane	5.0	8.5	17	30
cis-1,2-Dichloroethene 5.0 Not Detected 20 Not Detected Tetrahydrofuran 5.0 Not Detected 15 Not Detected Chloroform 5.0 Not Detected 24 Not Detected 1,1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected Heptane 5.0 54 20 220 Trichloroethene 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected Bromodichloromethane 5.0 Not Detect	1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
Tetrahydrofuran 5.0 Not Detected 15 Not Detected Chloroform 5.0 Not Detected 24 Not Detected 1,1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected Heptane 5.0 54 20 220 Trichloroethene 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected Bromodichloromethane 5.0 Not Detected 33 Not Detected cis-1,3-Dichloropropene 5.0 Not Detec	2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	58	Not Detected
Chloroform 5.0 Not Detected 24 Not Detected 1,1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected Heptane 5.0 54 20 220 Trichloroethene 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 72 Not Detected Bromodichloromethane 5.0 Not Detected 22 Not Detected cis-1,3-Dichloropropene 5.0 Not Detected </td <td>cis-1,2-Dichloroethene</td> <td>5.0</td> <td>Not Detected</td> <td>20</td> <td>Not Detected</td>	cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
1,1,1-Trichloroethane 5.0 Not Detected 27 Not Detected Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected Heptane 5.0 54 20 220 Trichloroethene 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 72 Not Detected Bromodichloromethane 5.0 Not Detected 33 Not Detected cis-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected Toluene 5.0 Not Detected	Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Cyclohexane 5.0 110 17 380 Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected Heptane 5.0 54 20 220 Trichloroethene 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 72 Not Detected Bromodichloromethane 5.0 Not Detected 33 Not Detected cis-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected Toluene 5.0 Not Detected 22 Not Detected Toluene 5.0 Not Detected 2	Chloroform	5.0	Not Detected	24	Not Detected
Carbon Tetrachloride 5.0 Not Detected 31 Not Detected 2,2,4-Trimethylpentane 5.0 Not Detected 23 Not Detected Benzene 5.0 Not Detected 16 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected 1,2-Dichloroethane 5.0 Not Detected 20 Not Detected 1,2-Dichloropropane 5.0 Not Detected 27 Not Detected 1,2-Dichloropropane 5.0 Not Detected 23 Not Detected 1,4-Dioxane 20 Not Detected 23 Not Detected 1,4-Dioxane 5.0 Not Detected 33 Not Detected 5:0-1,3-Dichloropropene 5.0 Not Detected 33 Not Detected 5:3-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected 4-Methyl-2-pentanone 5.0 Not Detected 20 Not Detected 5:0-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected 5:0-1,3-Dichloropropene 5:0-1,3-Dichloroprope	1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
2,2,4-Trimethylpentane5.0Not Detected23Not DetectedBenzene5.0Not Detected16Not Detected1,2-Dichloroethane5.0Not Detected20Not DetectedHeptane5.05420220Trichloroethene5.0Not Detected27Not Detected1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.0Not Detected20Not DetectedToluene5.0Not Detected22Not DetectedToluene5.0Not Detected22Not DetectedToluene5.0Not Detected22Not DetectedTerrachloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Cyclohexane	5.0	110	17	380
Benzene5.0Not Detected16Not Detected1,2-Dichloroethane5.0Not Detected20Not DetectedHeptane5.05420220Trichloroethene5.0Not Detected27Not Detected1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
1,2-Dichloroethane5.0Not Detected20Not DetectedHeptane5.05420220Trichloroethene5.0Not Detected27Not Detected1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.0Not Detected20Not Detectedtrans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Heptane5.05420220Trichloroethene5.0Not Detected27Not Detected1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Benzene	5.0	Not Detected	16	Not Detected
Trichloroethene5.0Not Detected27Not Detected1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.0Not Detected20Not Detectedtrans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
1,2-Dichloropropane5.0Not Detected23Not Detected1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Heptane	5.0	54	20	220
1,4-Dioxane20Not Detected72Not DetectedBromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Trichloroethene	5.0	Not Detected	27	Not Detected
Bromodichloromethane5.0Not Detected33Not Detectedcis-1,3-Dichloropropene5.0Not Detected22Not Detected4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	1,2-Dichloropropane	5.0	Not Detected		Not Detected
cis-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected 4-Methyl-2-pentanone 5.0 Not Detected 20 Not Detected Toluene 5.0 150 19 560 trans-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected 1,1,2-Trichloroethane 5.0 Not Detected 27 Not Detected Tetrachloroethene 5.0 Not Detected 34 Not Detected	1,4-Dioxane		Not Detected		Not Detected
4-Methyl-2-pentanone5.0Not Detected20Not DetectedToluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	Bromodichloromethane	5.0	Not Detected	33	Not Detected
Toluene5.015019560trans-1,3-Dichloropropene5.0Not Detected22Not Detected1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	cis-1,3-Dichloropropene	5.0	Not Detected	22	Not Detected
trans-1,3-Dichloropropene 5.0 Not Detected 22 Not Detected 1,1,2-Trichloroethane 5.0 Not Detected 27 Not Detected Tetrachloroethene 5.0 Not Detected 34 Not Detected	4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
1,1,2-Trichloroethane5.0Not Detected27Not DetectedTetrachloroethene5.0Not Detected34Not Detected	•	5.0	150	19	560
Tetrachloroethene 5.0 Not Detected 34 Not Detected	trans-1,3-Dichloropropene	5.0	Not Detected	22	Not Detected
	1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
2-Hexanone 20 Not Detected 81 Not Detected	Tetrachloroethene	5.0	Not Detected	34	Not Detected
	2-Hexanone	20	Not Detected	81	Not Detected



Client Sample ID: SVR2A Lab ID#: 1603595AR1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040414 Date of Collection: 3/24/16 6:56:00 PM Dil. Factor: 9.93 Date of Analysis: 4/5/16 12:57 AM

Dii. i actor.	9.93	Date of Affaiysis. 4/3/10 12.37 AW		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	210	22	920
m,p-Xylene	5.0	920	22	4000
o-Xylene	5.0	890	22	3900
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	51	Not Detected
Cumene	5.0	160	24	780
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	220	24	1100
4-Ethyltoluene	5.0	1100	24	5400
1,3,5-Trimethylbenzene	5.0	840	24	4100
1,2,4-Trimethylbenzene	5.0	1200	24	5900
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected

UJ = Analyte associated with low bias in the CCV.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	116	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: SVR2B Lab ID#: 1603595AR1-06A

File Name:	17040412	Date of Collection: 3/24/16 7:24:00 PM
Dil. Factor:	2.00	Date of Analysis: 4/5/16 12:09 AM

Dil. Factor:	2.00	Date of Analysis: 4/5/16 12:09 AM		
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.0	Not Detected	4.9	Not Detected
Freon 114	1.0	Not Detected	7.0	Not Detected
Chloromethane	10	Not Detected UJ	21	Not Detected UJ
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.2	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	4.0	Not Detected	10	Not Detected
Freon 11	1.0	39	5.6	220
Ethanol	4.0	Not Detected	7.5	Not Detected
Freon 113	1.0	Not Detected	7.7	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	Not Detected	24	Not Detected
2-Propanol	4.0	Not Detected	9.8	Not Detected
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	12	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.6	Not Detected
trans-1,2-Dichloroethene	1.0	330	4.0	1300
Hexane	1.0	Not Detected	3.5	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrahydrofuran	1.0	Not Detected	2.9	Not Detected
Chloroform	1.0	2.1	4.9	10
1,1,1-Trichloroethane	1.0	Not Detected	5.4	Not Detected
Cyclohexane	1.0	Not Detected	3.4	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	1.0	Not Detected	3.2	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.0	Not Detected
Heptane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.6	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	1.0	Not Detected	6.7	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.5	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.1	Not Detected
Toluene	1.0	2.3	3.8	8.6
trans-1,3-Dichloropropene	1.0	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.4	Not Detected
Tetrachloroethene	1.0	1.3	6.8	8.6
2-Hexanone	4.0	Not Detected	16	Not Detected



Client Sample ID: SVR2B Lab ID#: 1603595AR1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040412 Date of Collection: 3/24/16 7:24:00 PM
Dil. Factor: 2.00 Date of Analysis: 4/5/16 12:09 AM

2.00	Date of Analysis: 4/5/16 12:09 AM		
Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1.0	Not Detected	8.5	Not Detected
1.0	Not Detected	7.7	Not Detected
1.0	Not Detected	4.6	Not Detected
1.0	Not Detected	4.3	Not Detected
1.0	1.3	4.3	5.6
1.0	Not Detected	4.3	Not Detected
1.0	Not Detected	4.2	Not Detected
1.0	Not Detected	10	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	6.9	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	4.9	Not Detected
1.0	Not Detected	6.0	Not Detected
1.0	Not Detected	6.0	Not Detected
1.0	Not Detected	5.2	Not Detected
1.0	Not Detected	6.0	Not Detected
4.0	Not Detected	30	Not Detected
4.0	Not Detected	43	Not Detected
	Rpt. Limit (ppbv) 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	Rpt. Limit (ppbv) Amount (ppbv) 1.0 Not Detected 1.0 Not Detected	Rpt. Limit (ppbv) Amount (ppbv) Rpt. Limit (ug/m3) 1.0 Not Detected 8.5 1.0 Not Detected 7.7 1.0 Not Detected 4.6 1.0 Not Detected 4.3 1.0 Not Detected 4.3 1.0 Not Detected 4.2 1.0 Not Detected 10 1.0 Not Detected 4.9 1.0 Not Detected 6.0 1.0 Not Detected 6.0 1.0 Not Detected 5.2 1.0 Not Detected 6.0 1.0 Not Detected 6.0 1.0 Not Detected 6.0 1.0 Not Detected 6.0 1.0 Not Detected 6.0

UJ = Analyte associated with low bias in the CCV.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	106	70-130



Client Sample ID: SVR4A Lab ID#: 1603595AR1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040413 Date of Collection: 3/25/16 11:50:00 AM
Dil. Factor: 13.7 Date of Analysis: 4/5/16 12:33 AM

Dil. Factor:	13.7	Date of Analysis: 4/5/16 12:33 AM		
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	6.8	Not Detected	34	Not Detected
Freon 114	6.8	Not Detected	48	Not Detected
Chloromethane	68	Not Detected UJ	140	Not Detected UJ
Vinyl Chloride	6.8	Not Detected	18	Not Detected
1,3-Butadiene	6.8	Not Detected	15	Not Detected
Bromomethane	68	Not Detected	270	Not Detected
Chloroethane	27	Not Detected	72	Not Detected
Freon 11	6.8	Not Detected	38	Not Detected
Ethanol	27	Not Detected	52	Not Detected
Freon 113	6.8	Not Detected	52	Not Detected
1,1-Dichloroethene	6.8	Not Detected	27	Not Detected
Acetone	68	Not Detected	160	Not Detected
2-Propanol	27	Not Detected	67	Not Detected
Carbon Disulfide	27	Not Detected	85	Not Detected
3-Chloropropene	27	Not Detected	86	Not Detected
Methylene Chloride	68	Not Detected	240	Not Detected
Methyl tert-butyl ether	6.8	Not Detected	25	Not Detected
trans-1,2-Dichloroethene	6.8	1900	27	7600
Hexane	6.8	Not Detected	24	Not Detected
1,1-Dichloroethane	6.8	Not Detected	28	Not Detected
2-Butanone (Methyl Ethyl Ketone)	27	Not Detected	81	Not Detected
cis-1,2-Dichloroethene	6.8	Not Detected	27	Not Detected
Tetrahydrofuran	6.8	Not Detected	20	Not Detected
Chloroform	6.8	Not Detected	33	Not Detected
1,1,1-Trichloroethane	6.8	Not Detected	37	Not Detected
Cyclohexane	6.8	Not Detected	24	Not Detected
Carbon Tetrachloride	6.8	Not Detected	43	Not Detected
2,2,4-Trimethylpentane	6.8	Not Detected	32	Not Detected
Benzene	6.8	Not Detected	22	Not Detected
1,2-Dichloroethane	6.8	Not Detected	28	Not Detected
Heptane	6.8	Not Detected	28	Not Detected
Trichloroethene	6.8	Not Detected	37	Not Detected
1,2-Dichloropropane	6.8	Not Detected	32	Not Detected
1,4-Dioxane	27	Not Detected	99	Not Detected
Bromodichloromethane	6.8	Not Detected	46	Not Detected
cis-1,3-Dichloropropene	6.8	Not Detected	31	Not Detected
4-Methyl-2-pentanone	6.8	Not Detected	28	Not Detected
Toluene	6.8	52	26	200
trans-1,3-Dichloropropene	6.8	Not Detected	31	Not Detected
1,1,2-Trichloroethane	6.8	Not Detected	37	Not Detected
Tetrachloroethene	6.8	14	46	95
2-Hexanone	27	Not Detected	110	Not Detected



Client Sample ID: SVR4A Lab ID#: 1603595AR1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040413 Date of Collection: 3/25/16 11:50:00 AM Dil. Factor: 13.7 Date of Analysis: 4/5/16 12:33 AM

Dii. i actor.	13.7	Date of Allarysis. 4/3/10 12:33 AW		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	6.8	Not Detected	58	Not Detected
1,2-Dibromoethane (EDB)	6.8	Not Detected	53	Not Detected
Chlorobenzene	6.8	Not Detected	32	Not Detected
Ethyl Benzene	6.8	11	30	50
m,p-Xylene	6.8	42	30	180
o-Xylene	6.8	13	30	56
Styrene	6.8	Not Detected	29	Not Detected
Bromoform	6.8	Not Detected	71	Not Detected
Cumene	6.8	Not Detected	34	Not Detected
1,1,2,2-Tetrachloroethane	6.8	Not Detected	47	Not Detected
Propylbenzene	6.8	Not Detected	34	Not Detected
4-Ethyltoluene	6.8	Not Detected	34	Not Detected
1,3,5-Trimethylbenzene	6.8	Not Detected	34	Not Detected
1,2,4-Trimethylbenzene	6.8	Not Detected	34	Not Detected
1,3-Dichlorobenzene	6.8	Not Detected	41	Not Detected
1,4-Dichlorobenzene	6.8	Not Detected	41	Not Detected
alpha-Chlorotoluene	6.8	Not Detected	35	Not Detected
1,2-Dichlorobenzene	6.8	Not Detected	41	Not Detected
1,2,4-Trichlorobenzene	27	Not Detected	200	Not Detected
Hexachlorobutadiene	27	Not Detected	290	Not Detected

UJ = Analyte associated with low bias in the CCV.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	106	70-130



Client Sample ID: SVR4B Lab ID#: 1603595AR1-08A

File Name:	17040615	Date of Collection: 3/25/16 12:14:00 PM
Dil. Factor:	2.09	Date of Analysis: 4/6/16 04:56 PM

Dil. Factor:	2.09	Date	of Analysis: 4/6/1	16 04:56 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.0	1.7	5.2	8.4
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	40	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	1.4	5.9	7.6
Ethanol	4.2	Not Detected	7.9	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Acetone	10	Not Detected	25	Not Detected
2-Propanol	4.2	450 E	10	1100 E
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.0	9.6	4.1	38
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	Not Detected	5.1	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	2.1	3.3	6.6
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Heptane	1.0	1.5	4.3	6.3
Trichloroethene	1.0	21	5.6	110
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	Not Detected	7.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	1.0	72	3.9	270
trans-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	220	7.1	1500
2-Hexanone	4.2	Not Detected	17	Not Detected



Client Sample ID: SVR4B Lab ID#: 1603595AR1-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040615 Date of Collection: 3/25/16 12:14:00 PM
Dil. Factor: 2.09 Date of Analysis: 4/6/16 04:56 PM

Dili i dotoi:	2.03	Date	oi Alialysis. 7/0/1	0 04.50 T W
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.9	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.0	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	8.6	4.5	38
m,p-Xylene	1.0	29	4.5	120
o-Xylene	1.0	7.6	4.5	33
Styrene	1.0	Not Detected	4.4	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.1	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.1	Not Detected
4-Ethyltoluene	1.0	2.7	5.1	13
1,3,5-Trimethylbenzene	1.0	Not Detected	5.1	Not Detected
1,2,4-Trimethylbenzene	1.0	1.5	5.1	7.3
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	44	Not Detected

E = Exceeds instrument calibration range.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	83	70-130	
4-Bromofluorobenzene	111	70-130	



Client Sample ID: SVR5 Lab ID#: 1603595AR1-09A

File Name:	17040614	Date of Collection: 3/25/16 10:14:00 AM
Dil. Factor:	1.98	Date of Analysis: 4/6/16 04:30 PM

Dil. Factor:	1.98	Date of Analysis: 4/6/16 0		16 04:30 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.99	2.7	4.9	13
Freon 114	0.99	Not Detected	6.9	Not Detected
Chloromethane	9.9	Not Detected	20	Not Detected
Vinyl Chloride	0.99	Not Detected	2.5	Not Detected
1,3-Butadiene	0.99	Not Detected	2.2	Not Detected
Bromomethane	9.9	Not Detected	38	Not Detected
Chloroethane	4.0	Not Detected	10	Not Detected
Freon 11	0.99	120	5.6	670
Ethanol	4.0	Not Detected	7.5	Not Detected
Freon 113	0.99	Not Detected	7.6	Not Detected
1,1-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Acetone	9.9	Not Detected	24	Not Detected
2-Propanol	4.0	8.2	9.7	20
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	12	Not Detected
Methylene Chloride	9.9	Not Detected	34	Not Detected
Methyl tert-butyl ether	0.99	Not Detected	3.6	Not Detected
trans-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Hexane	0.99	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.99	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Tetrahydrofuran	0.99	Not Detected	2.9	Not Detected
Chloroform	0.99	0.99	4.8	4.8
1,1,1-Trichloroethane	0.99	16	5.4	85
Cyclohexane	0.99	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.99	Not Detected	6.2	Not Detected
2,2,4-Trimethylpentane	0.99	Not Detected	4.6	Not Detected
Benzene	0.99	Not Detected	3.2	Not Detected
1,2-Dichloroethane	0.99	Not Detected	4.0	Not Detected
Heptane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.99	8.7	5.3	47
1,2-Dichloropropane	0.99	Not Detected	4.6	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	0.99	Not Detected	6.6	Not Detected
cis-1,3-Dichloropropene	0.99	Not Detected	4.5	Not Detected
4-Methyl-2-pentanone	0.99	Not Detected	4.0	Not Detected
Toluene	0.99	2.6	3.7	9.8
trans-1,3-Dichloropropene	0.99	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	0.99	Not Detected	5.4	Not Detected
Tetrachloroethene	0.99	110	6.7	760
2-Hexanone	4.0	Not Detected	16	Not Detected



Client Sample ID: SVR5 Lab ID#: 1603595AR1-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040614 Date of Collection: 3/25/16 10:14:00 AM Date of Analysis: 4/6/16 04:30 PM

J 1 4.01011	1.00	Dute	or milaryolo: 470/	0 0 - 1.00 1 111
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.99	Not Detected	8.4	Not Detected
1,2-Dibromoethane (EDB)	0.99	Not Detected	7.6	Not Detected
Chlorobenzene	0.99	Not Detected	4.6	Not Detected
Ethyl Benzene	0.99	Not Detected	4.3	Not Detected
m,p-Xylene	0.99	Not Detected	4.3	Not Detected
o-Xylene	0.99	Not Detected	4.3	Not Detected
Styrene	0.99	Not Detected	4.2	Not Detected
Bromoform	0.99	Not Detected	10	Not Detected
Cumene	0.99	Not Detected	4.9	Not Detected
1,1,2,2-Tetrachloroethane	0.99	Not Detected	6.8	Not Detected
Propylbenzene	0.99	Not Detected	4.9	Not Detected
4-Ethyltoluene	0.99	Not Detected	4.9	Not Detected
1,3,5-Trimethylbenzene	0.99	Not Detected	4.9	Not Detected
1,2,4-Trimethylbenzene	0.99	Not Detected	4.9	Not Detected
1,3-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
1,4-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
alpha-Chlorotoluene	0.99	Not Detected	5.1	Not Detected
1,2-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
1,2,4-Trichlorobenzene	4.0	Not Detected	29	Not Detected
Hexachlorobutadiene	4.0	Not Detected	42	Not Detected

-		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	87	70-130	
4-Bromofluorobenzene	108	70-130	



Client Sample ID: DUP-1 Lab ID#: 1603595AR1-10A EPA METHOD TO-15 GC/MS

File Name: 14040807 Date of Collection: 3/25/16 1:07:00 PM
Dil. Factor: 211 Date of Analysis: 4/8/16 10:46 AM

Dil. Factor:	211 Date of Analysis: 4/8/16 10:46 A			16 10:46 AM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1000	Not Detected	5200	Not Detected
Freon 114	1000	Not Detected	7400	Not Detected
Chloromethane	4200	Not Detected	8700	Not Detected
Vinyl Chloride	1000	Not Detected	2700	Not Detected
1,3-Butadiene	1000	Not Detected	2300	Not Detected
Bromomethane	1000	Not Detected	4100	Not Detected
Chloroethane	4200	Not Detected	11000	Not Detected
Freon 11	1000	Not Detected	5900	Not Detected
Ethanol	4200	Not Detected	8000	Not Detected
Freon 113	1000	Not Detected	8100	Not Detected
1,1-Dichloroethene	1000	Not Detected	4200	Not Detected
Acetone	4200	5200	10000	12000
2-Propanol	4200	130000	10000	320000
Carbon Disulfide	1000	Not Detected	3300	Not Detected
3-Chloropropene	4200	Not Detected	13000	Not Detected
Methylene Chloride	1000	Not Detected	3700	Not Detected
Methyl tert-butyl ether	1000	Not Detected	3800	Not Detected
trans-1,2-Dichloroethene	1000	Not Detected	4200	Not Detected
Hexane	1000	Not Detected	3700	Not Detected
1,1-Dichloroethane	1000	Not Detected	4300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4200	Not Detected	12000	Not Detected
cis-1,2-Dichloroethene	1000	Not Detected	4200	Not Detected
Tetrahydrofuran	1000	Not Detected	3100	Not Detected
Chloroform	1000	Not Detected	5200	Not Detected
1,1,1-Trichloroethane	1000	Not Detected	5800	Not Detected
Cyclohexane	1000	Not Detected	3600	Not Detected
Carbon Tetrachloride	1000	Not Detected	6600	Not Detected
2,2,4-Trimethylpentane	1000	Not Detected	4900	Not Detected
Benzene	1000	Not Detected	3400	Not Detected
1,2-Dichloroethane	1000	Not Detected	4300	Not Detected
Heptane	1000	Not Detected	4300	Not Detected
Trichloroethene	1000	Not Detected	5700	Not Detected
1,2-Dichloropropane	1000	Not Detected	4900	Not Detected
1,4-Dioxane	4200	Not Detected	15000	Not Detected
Bromodichloromethane	1000	Not Detected	7100	Not Detected
cis-1,3-Dichloropropene	1000	Not Detected	4800	Not Detected
4-Methyl-2-pentanone	1000	Not Detected	4300	Not Detected
Toluene	1000	Not Detected	4000	Not Detected
trans-1,3-Dichloropropene	1000	Not Detected	4800	Not Detected
1,1,2-Trichloroethane	1000	Not Detected	5800	Not Detected
Tetrachloroethene	1000	Not Detected	7200	Not Detected
2-Hexanone	4200	Not Detected	17000	Not Detected



Client Sample ID: DUP-1 Lab ID#: 1603595AR1-10A EPA METHOD TO-15 GC/MS

File Name: 14040807 Date of Collection: 3/25/16 1:07:00 PM
Dil. Factor: 211 Date of Analysis: 4/8/16 10:46 AM

Dili. I dotor.	<u> </u>	Date of Allarysis. 4/0/10 10:40 Alli		4/0/10 10.40 AW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1000	Not Detected	9000	Not Detected
1,2-Dibromoethane (EDB)	1000	Not Detected	8100	Not Detected
Chlorobenzene	1000	Not Detected	4800	Not Detected
Ethyl Benzene	1000	Not Detected	4600	Not Detected
m,p-Xylene	1000	Not Detected	4600	Not Detected
o-Xylene	1000	Not Detected	4600	Not Detected
Styrene	1000	Not Detected	4500	Not Detected
Bromoform	1000	Not Detected	11000	Not Detected
Cumene	1000	Not Detected	5200	Not Detected
1,1,2,2-Tetrachloroethane	1000	Not Detected	7200	Not Detected
Propylbenzene	1000	Not Detected	5200	Not Detected
4-Ethyltoluene	1000	Not Detected	5200	Not Detected
1,3,5-Trimethylbenzene	1000	Not Detected	5200	Not Detected
1,2,4-Trimethylbenzene	1000	Not Detected	5200	Not Detected
1,3-Dichlorobenzene	1000	Not Detected	6300	Not Detected
1,4-Dichlorobenzene	1000	Not Detected	6300	Not Detected
alpha-Chlorotoluene	1000	Not Detected	5500	Not Detected
1,2-Dichlorobenzene	1000	Not Detected	6300	Not Detected
1,2,4-Trichlorobenzene	4200	Not Detected	31000	Not Detected
Hexachlorobutadiene	4200	Not Detected	45000	Not Detected

••		Method Limits	
Surrogates	%Recovery		
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	102	70-130	



Client Sample ID: SVR6B Lab ID#: 1603595AR1-12A EPA METHOD TO-15 GC/MS

File Name: 14040806 Date of Collection: 3/25/16 2:06:00 PM
Dil. Factor: 16.2 Date of Analysis: 4/8/16 10:14 AM

Dil. Factor:	16.2	Date	Date of Analysis: 4/8/16 10:14 AM		
	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)	
Freon 12	81	Not Detected	400	Not Detected	
Freon 114	81	Not Detected	570	Not Detected	
Chloromethane	320	Not Detected	670	Not Detected	
Vinyl Chloride	81	Not Detected	210	Not Detected	
1,3-Butadiene	81	Not Detected	180	Not Detected	
Bromomethane	81	Not Detected	310	Not Detected	
Chloroethane	320	Not Detected	850	Not Detected	
Freon 11	81	Not Detected	460	Not Detected	
Ethanol	320	Not Detected	610	Not Detected	
Freon 113	81	Not Detected	620	Not Detected	
1,1-Dichloroethene	81	Not Detected	320	Not Detected	
Acetone	320	450	770	1100	
2-Propanol	320	14000	800	33000	
Carbon Disulfide	81	Not Detected	250	Not Detected	
3-Chloropropene	320	Not Detected	1000	Not Detected	
Methylene Chloride	81	Not Detected	280	Not Detected	
Methyl tert-butyl ether	81	Not Detected	290	Not Detected	
trans-1,2-Dichloroethene	81	Not Detected	320	Not Detected	
Hexane	81	Not Detected	280	Not Detected	
1,1-Dichloroethane	81	Not Detected	330	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	320	Not Detected	960	Not Detected	
cis-1,2-Dichloroethene	81	Not Detected	320	Not Detected	
Tetrahydrofuran	81	Not Detected	240	Not Detected	
Chloroform	81	Not Detected	400	Not Detected	
1,1,1-Trichloroethane	81	Not Detected	440	Not Detected	
Cyclohexane	81	Not Detected	280	Not Detected	
Carbon Tetrachloride	81	Not Detected	510	Not Detected	
2,2,4-Trimethylpentane	81	Not Detected	380	Not Detected	
Benzene	81	Not Detected	260	Not Detected	
1,2-Dichloroethane	81	Not Detected	330	Not Detected	
Heptane	81	Not Detected	330	Not Detected	
Trichloroethene	81	Not Detected	440	Not Detected	
1,2-Dichloropropane	81	Not Detected	370	Not Detected	
1,4-Dioxane	320	Not Detected	1200	Not Detected	
Bromodichloromethane	81	Not Detected	540	Not Detected	
cis-1,3-Dichloropropene	81	Not Detected	370	Not Detected	
4-Methyl-2-pentanone	81	Not Detected	330	Not Detected	
Toluene	81	Not Detected	300	Not Detected	
trans-1,3-Dichloropropene	81	Not Detected	370	Not Detected	
1,1,2-Trichloroethane	81	Not Detected	440	Not Detected	
Tetrachloroethene	81	Not Detected	550	Not Detected	
2-Hexanone	320	Not Detected	1300	Not Detected	
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Client Sample ID: SVR6B Lab ID#: 1603595AR1-12A EPA METHOD TO-15 GC/MS

File Name: 14040806 Date of Collection: 3/25/16 2:06:00 PM
Dil. Factor: 16.2 Date of Analysis: 4/8/16 10:14 AM

2	10.2	Bute of Amaryolo: 4010 10:1474M		0 10.14 / 1111
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	81	Not Detected	690	Not Detected
1,2-Dibromoethane (EDB)	81	Not Detected	620	Not Detected
Chlorobenzene	81	Not Detected	370	Not Detected
Ethyl Benzene	81	Not Detected	350	Not Detected
m,p-Xylene	81	Not Detected	350	Not Detected
o-Xylene	81	Not Detected	350	Not Detected
Styrene	81	Not Detected	340	Not Detected
Bromoform	81	Not Detected	840	Not Detected
Cumene	81	Not Detected	400	Not Detected
1,1,2,2-Tetrachloroethane	81	Not Detected	560	Not Detected
Propylbenzene	81	Not Detected	400	Not Detected
4-Ethyltoluene	81	Not Detected	400	Not Detected
1,3,5-Trimethylbenzene	81	Not Detected	400	Not Detected
1,2,4-Trimethylbenzene	81	Not Detected	400	Not Detected
1,3-Dichlorobenzene	81	Not Detected	490	Not Detected
1,4-Dichlorobenzene	81	Not Detected	490	Not Detected
alpha-Chlorotoluene	81	Not Detected	420	Not Detected
1,2-Dichlorobenzene	81	Not Detected	490	Not Detected
1,2,4-Trichlorobenzene	320	Not Detected	2400	Not Detected
Hexachlorobutadiene	320	Not Detected	3400	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	103	70-130	



Client Sample ID: SVR-7 Lab ID#: 1603595AR1-13A

File Name:	17040617	Date of Collection: 3/25/16 11:15:00 AM
Dil. Factor:	1.90	Date of Analysis: 4/6/16 05:49 PM

Compound Rpt. Limit (ppbv) Amount (ppbv) Rpt. Limit (ug/m3) Amount (ug/m3) Freon 12 0.95 Not Detected 4.7 Not Detected Freon 114 0.95 Not Detected 6.6 Not Detected Chloromethane 9.5 Not Detected 2.0 Not Detected Uniyl Chloride 0.95 Not Detected 2.4 Not Detected 1,3-Butadiene 9.95 Not Detected 2.1 Not Detected Chloromethane 3.8 Not Detected 3.7 Not Detected Chloromethane 3.8 Not Detected 1.0 Not Detected Chloromethane 3.8 Not Detected 1.0 Not Detected Freon 11 0.95 3.7 5.3 2.1 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 3.8 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected 2-Propanol 3.8	Dil. Factor:	1.90	Date	of Analysis: 4/6/1	16 05:49 PM
Freon 12 0.95 Not Detected 4.7 Not Detected Freon 114 0.95 Not Detected 6.6 Not Detected Chloromethane 9.5 Not Detected 2.0 Not Detected Vinyl Chloride 0.95 Not Detected 2.4 Not Detected 1,3-Butadiene 0.95 Not Detected 2.1 Not Detected Chloroethane 3.8 Not Detected 3.7 Not Detected Chloroethane 3.8 Not Detected 7.2 Not Detected Chloroethane 3.8 Not Detected 7.2 Not Detected Chloroethane 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.3 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected 1,1-Dichloroethane 9.5 Not Detected 2.8 9.3 7.0 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene		Rpt. Limit	Amount	Rpt. Limit	Amount
Freon 114 0.95 Not Detected 6.6 Not Detected Chloromethane 9.5 Not Detected 20 Not Detected Ling (Chloride) 0.95 Not Detected 2.1 Not Detected 1,3-Butadiene 0.95 Not Detected 2.1 Not Detected Brommethane 9.5 Not Detected 37 Not Detected Chloroethane 3.8 Not Detected 10 Not Detected Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.3 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected 4,estone 9.5 Not Detected 3.8 Not Detected 2,Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 2,Propanol 3.8 Not Detected 12 Not D	Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Chloromethane 9.5 Not Detected 20 Not Detected Vinyl Chloride 0.95 Not Detected 2.4 Not Detected 1.3-Butadiene 0.95 Not Detected 2.1 Not Detected Bromomethane 9.5 Not Detected 37 Not Detected Chloroethane 3.8 Not Detected 10 Not Detected Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 3.8 Not Detected 1,-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 2.2 Not Detected Acetone 9.5 Not Detected 12 Not Detected Acetone 9.5 Not Detected 12 Not Detected 3-Chiorpopane 3.8 Not Detected 12 Not Detected 4-Chiorpopane 3.8 Not Detected 3.2	Freon 12	0.95	Not Detected	4.7	Not Detected
Vinyl Chloride 0.95 Not Detected 2.4 Not Detected 1,3-Butadiene 0.95 Not Detected 2.1 Not Detected Bromomethane 9.5 Not Detected 37 Not Detected Chloroethane 3.8 Not Detected 10 Not Detected Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.2 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 2.2 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloroppropene 3.8 Not Detected 12 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.3 Not Detected Methyl tert-butyl ether 0.95 Not Detected	Freon 114	0.95	Not Detected	6.6	Not Detected
1,3-Butadiene 0.95 Not Detected 2.1 Not Detected Brommethane 9.5 Not Detected 37 Not Detected Chloroethane 3.8 Not Detected 10 Not Detected Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 22 Not Detected Acetone 9.5 Not Detected 12 Not Detected Acetone 3.8 Not Detected 12 Not Detected Acetone 3.8 Not Detected 12 Not Detected Acetone 3.8 Not Detected 12 Not Detected 3-Chioropropene 3.8 Not Detected 12 Not Detected Methyler Echloride 9.5 Not Detected 3.4 Not De	Chloromethane	9.5	Not Detected	20	Not Detected
Bromomethane	Vinyl Chloride	0.95	Not Detected	2.4	Not Detected
Chloroethane 3.8 Not Detected 10 Not Detected Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.3 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 22 Not Detected Acetone 9.5 Not Detected 22 Not Detected Acetone 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chioropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 3.2 Not Detected Methylene Chloride 9.5 Not Detected 3.4 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.8 Not Detected Hexane 0.95 Not Detected 3.8	1,3-Butadiene	0.95	Not Detected	2.1	Not Detected
Freon 11 0.95 3.7 5.3 21 Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.3 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 22 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methylene Chloride 9.5 Not Detected 3.4 Not Detected Methylene Chloride 9.5 Not Detected 3.4 Not Detected Methylene Chloride 9.5 Not Detected 3.8 Not Detected Methylene Chloride 9.5 Not Detected 3.8 Not Detected 1,1-Dichloroethane 0.95 Not Detected	Bromomethane	9.5	Not Detected	37	Not Detected
Ethanol 3.8 Not Detected 7.2 Not Detected Freon 113 0.95 Not Detected 7.3 Not Detected 7.1 Dichloroethene 0.95 Not Detected 3.8 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3.6 Not Detected 3.8 Not Detected 12 Not Detected 3.6 Not Detected 3.8 Not Dete	Chloroethane	3.8	Not Detected	10	Not Detected
Freon 113 0.95 Not Detected 7.3 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 22 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 3.4 Not Detected Methyle ter-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 Not Detected 3.3 Not Detected trans-1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected cis-1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected Chloroform 0.95 Not Detected 3.8 Not Detected Chlo	Freon 11	0.95	3.7	5.3	21
1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Acetone 9.5 Not Detected 22 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.8 22 Hexane 0.95 Not Detected 3.8 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected 1,1-Dichloroethene 0.95 Not Detected 3.8 Not Detected Chloroform 0.95 Not Detected 2.8 Not Detected Chloroform 0.95	Ethanol	3.8	Not Detected	7.2	Not Detected
Acetone 9.5 Not Detected 22 Not Detected 2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected	Freon 113	0.95	Not Detected	7.3	Not Detected
2-Propanol 3.8 28 9.3 70 Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 11 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 1,1-Trichloroethane 0.95 Not Detected 3.8 Not Detected Chloroform 0.95 Not Detected 4.6 Not Detected <td>1,1-Dichloroethene</td> <td>0.95</td> <td>Not Detected</td> <td>3.8</td> <td>Not Detected</td>	1,1-Dichloroethene	0.95	Not Detected	3.8	Not Detected
Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected Choron Termander (Methyl Ethyl Ketone) 3.8 Not Detected <td></td> <td>9.5</td> <td>Not Detected</td> <td>22</td> <td>Not Detected</td>		9.5	Not Detected	22	Not Detected
Carbon Disulfide 3.8 Not Detected 12 Not Detected 3-Chloropropene 3.8 Not Detected 12 Not Detected Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected	2-Propanol	3.8	28	9.3	70
Methylene Chloride 9.5 Not Detected 33 Not Detected Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 11 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 11 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 4.8 Not Detected Cerbon Terachloride 0.95 Not Detected 2.8 Not Detected Cyclohexane 0.95 Not Detected	Carbon Disulfide	3.8	Not Detected	12	Not Detected
Methyl tert-butyl ether 0.95 Not Detected 3.4 Not Detected trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 3.8 Not Detected Celothor (Methyl Ethyl Ketone) 0.95 Not Detected 4.6 Not Detected Chloroform 0.95 Not Detected 3.8 Not Detected Chloroford 0.95 Not Detected 4.4	3-Chloropropene	3.8	Not Detected	12	Not Detected
trans-1,2-Dichloroethene 0.95 5.5 3.8 22 Hexane 0.95 Not Detected 3.3 Not Detected 1,1-Dichloroethane 0.95 Not Detected 3.8 Not Detected 2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected 11 Not Detected 2-Butanone (Inchemene 0.95 Not Detected 3.8 Not Detected Cis-1,2-Dichloroethene 0.95 Not Detected 3.8 Not Detected Cetrahydrofuran 0.95 Not Detected 2.8 Not Detected Chloroform 0.95 Not Detected 4.6 Not Detected 1,1,1-Trichloroethane 0.95 Not Detected 5.2 Not Detected 1,1,1-Trichloroethane 0.95 Not Detected 3.3 Not Detected Carbon Tetrachloride 0.95 Not Detected 6.0 Not Detected Carbon Tetrachloride 0.95 Not Detected 4.4 Not Detected Benzene 0.95 Not Detected 3.0 Not Detected	Methylene Chloride	9.5	Not Detected	33	Not Detected
Hexane0.95Not Detected3.3Not Detected1,1-Dichloroethane0.95Not Detected3.8Not Detected2-Butanone (Methyl Ethyl Ketone)3.8Not Detected11Not Detectedcis-1,2-Dichloroethene0.95Not Detected3.8Not DetectedTetrahydrofuran0.95Not Detected2.8Not DetectedChloroform0.95Not Detected4.6Not Detected1,1,1-Trichloroethane0.95Not Detected5.2Not DetectedCyclohexane0.95Not Detected3.3Not DetectedCarbon Tetrachloride0.95Not Detected6.0Not Detected2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not Detected1,2-Dichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected4.4Not DetectedBromodichloromethane0.95Not Detected4.3Not Detected1,4-Dioxane3.8Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected4.3Not Detected1-Quene0.95Not Detected4.3Not Detected1-Quene0.95Not Detected4.3Not Detected1-Tichloroethane <td>Methyl tert-butyl ether</td> <td>0.95</td> <td>Not Detected</td> <td>3.4</td> <td>Not Detected</td>	Methyl tert-butyl ether	0.95	Not Detected	3.4	Not Detected
1,1-Dichloroethane0.95Not Detected3.8Not Detected2-Butanone (Methyl Ethyl Ketone)3.8Not Detected11Not Detectedcis-1,2-Dichloroethene0.95Not Detected3.8Not DetectedTetrahydrofuran0.95Not Detected2.8Not DetectedChloroform0.95Not Detected4.6Not Detected1,1,1-Trichloroethane0.95Not Detected5.2Not DetectedCyclohexane0.95Not Detected3.3Not DetectedCarbon Tetrachloride0.95Not Detected6.0Not Detected2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected4.4Not DetectedBromodichloromethane0.95Not Detected4.3Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected4.3Not DetectedTollene0.95Not Detected4.3Not Detected10luene0.95Not Detected5.2Not Detected1,1,	trans-1,2-Dichloroethene	0.95	5.5	3.8	22
2-Butanone (Methyl Ethyl Ketone) 3.8 Not Detected cis-1,2-Dichloroethene 0.95 Not Detected 3.8 Not Detected Tetrahydrofuran 0.95 Not Detected 2.8 Not Detected Chloroform 0.95 Not Detected 4.6 Not Detected 1,1,1-Trichloroethane 0.95 Not Detected 5.2 Not Detected Cyclohexane 0.95 Not Detected 3.3 Not Detected Carbon Tetrachloride 0.95 Not Detected 6.0 Not Detected Carbon Tetrachloride 0.95 Not Detected 6.0 Not Detected Benzene 0.95 Not Detected 3.0 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloropropane 0.95 Not Detected 1,2-Dichloropropane 0.95 Not Detected 1,2-Dichloropropane 0.95 Not Detected 1,3-Dichloropropane 0.95 Not Detected	Hexane	0.95	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene0.95Not Detected3.8Not DetectedTetrahydrofuran0.95Not Detected2.8Not DetectedChloroform0.95Not Detected4.6Not Detected1,1,1-Trichloroethane0.95Not Detected5.2Not DetectedCyclohexane0.95Not Detected3.3Not DetectedCarbon Tetrachloride0.95Not Detected6.0Not Detected2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.95Not Detected3.8Not Detected1,2-Dichloropropane0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected4.4Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not DetectedToluene0.95Not Detected4.3Not DetectedToluene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not Detected	1,1-Dichloroethane	0.95	Not Detected	3.8	Not Detected
Tetrahydrofuran 0.95 Not Detected 2.8 Not Detected Chloroform 0.95 Not Detected 4.6 Not Detected 1,1,1-Trichloroethane 0.95 Not Detected 5.2 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected 8enzene 0.95 Not Detected 3.0 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloropropane 0.95 Not Detected 5.1 Not Detected 1,2-Dichloropropane 0.95 Not Detected 5.1 Not Detected 1,4-Dioxane 3.8 Not Detected 4.4 Not Detected 1,4-Dioxane 3.8 Not Detected 4.4 Not Detected 8romodichloromethane 0.95 Not Detected 4.4 Not Detected 6.4 Not Detected	2-Butanone (Methyl Ethyl Ketone)	3.8	Not Detected	11	Not Detected
Chloroform 0.95 Not Detected 4.6 Not Detected 1,1,1-Trichloroethane 0.95 Not Detected 5.2 Not Detected Cyclohexane 0.95 Not Detected 3.3 Not Detected Carbon Tetrachloride 0.95 Not Detected 6.0 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected Benzene 0.95 Not Detected 3.0 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloroethane 0.95 Not Detected 3.8 Not Detected 1,2-Dichloropropane 0.95 Not Detected 5.1 Not Detected 1,2-Dichloropropane 0.95 Not Detected 5.1 Not Detected 1,4-Dioxane 3.8 Not Detected 4.4 Not Detected 1,4-Dioxane 3.8 Not Detected 14 Not Detected 14 Not Detected 1,3-Dichloropropane 0.95 Not Detected 14 Not Detected 15.3-Dichloropropane 0.95 Not Detected 14 Not Detected 15.3-Dichloropropane 0.95 Not Detected 3.9 Not Detected 15.1 Not Detected 15.1 Not Detected 15.3-Dichloropropane 0.95 Not Detected 4.3 Not Detected 15.1	cis-1,2-Dichloroethene	0.95	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane0.95Not Detected5.2Not DetectedCyclohexane0.95Not Detected3.3Not DetectedCarbon Tetrachloride0.95Not Detected6.0Not Detected2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.951.23.94.8Trichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected4.4Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95Not Detected4.3Not DetectedToluene0.95Not Detected4.3Not DetectedTetrachloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected5.2Not Detected	Tetrahydrofuran	0.95	Not Detected	2.8	Not Detected
Cyclohexane 0.95 Not Detected 3.3 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected 2,2,4-Trimethylpentane 0.95 Not Detected 4.4 Not Detected 4.2 Not Detected 4.3 Not Detected 4.4 Not Detected 6.4 Not Detec	Chloroform	0.95	Not Detected	4.6	Not Detected
Carbon Tetrachloride0.95Not Detected6.0Not Detected2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.95Not Detected5.1Not DetectedTrichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95Not Detected4.3Not DetectedToluene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected5.2Not Detected	1,1,1-Trichloroethane	0.95	Not Detected	5.2	Not Detected
2,2,4-Trimethylpentane0.95Not Detected4.4Not DetectedBenzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.951.23.94.8Trichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95Not Detected4.3Not DetectedToluene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Cyclohexane	0.95	Not Detected	3.3	Not Detected
Benzene0.95Not Detected3.0Not Detected1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.951.23.94.8Trichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95Not Detected3.9Not Detectedtrans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Carbon Tetrachloride	0.95	Not Detected	6.0	Not Detected
1,2-Dichloroethane0.95Not Detected3.8Not DetectedHeptane0.951.23.94.8Trichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	2,2,4-Trimethylpentane	0.95	Not Detected	4.4	Not Detected
Heptane0.951.23.94.8Trichloroethene0.95Not Detected5.1Not Detected1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Benzene	0.95	Not Detected	3.0	
Trichloroethene 0.95 Not Detected 5.1 Not Detected 1,2-Dichloropropane 0.95 Not Detected 4.4 Not Detected 1,4-Dioxane 3.8 Not Detected 14 Not Detected Bromodichloromethane 0.95 Not Detected 6.4 Not Detected cis-1,3-Dichloropropene 0.95 Not Detected 4.3 Not Detected 4-Methyl-2-pentanone 0.95 Not Detected 3.9 Not Detected Toluene 0.95 Not Detected 4.3 Not Detected 1,1,2-Trichloroethane 0.95 Not Detected 5.2 Not Detected 1,1,2-Trichloroethane 0.95 Not Detected 6.4 Not Detected 5.2 Not Detected 5.2 Not Detected 6.4	1,2-Dichloroethane	0.95	Not Detected	3.8	Not Detected
1,2-Dichloropropane0.95Not Detected4.4Not Detected1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Heptane	0.95	1.2	3.9	4.8
1,4-Dioxane3.8Not Detected14Not DetectedBromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Trichloroethene	0.95	Not Detected	5.1	Not Detected
Bromodichloromethane0.95Not Detected6.4Not Detectedcis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	1,2-Dichloropropane				
cis-1,3-Dichloropropene0.95Not Detected4.3Not Detected4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	1,4-Dioxane		Not Detected		Not Detected
4-Methyl-2-pentanone0.95Not Detected3.9Not DetectedToluene0.95123.644trans-1,3-Dichloropropene0.95Not Detected4.3Not Detected1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Bromodichloromethane	0.95	Not Detected	6.4	Not Detected
Toluene 0.95 12 3.6 44 trans-1,3-Dichloropropene 0.95 Not Detected 4.3 Not Detected 1,1,2-Trichloroethane 0.95 Not Detected 5.2 Not Detected Tetrachloroethene 0.95 Not Detected 6.4 Not Detected	cis-1,3-Dichloropropene	0.95	Not Detected	4.3	Not Detected
trans-1,3-Dichloropropene 0.95 Not Detected 4.3 Not Detected 1,1,2-Trichloroethane 0.95 Not Detected 5.2 Not Detected Tetrachloroethene 0.95 Not Detected 6.4 Not Detected	4-Methyl-2-pentanone	0.95	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane0.95Not Detected5.2Not DetectedTetrachloroethene0.95Not Detected6.4Not Detected	Toluene	0.95	12	3.6	44
Tetrachloroethene 0.95 Not Detected 6.4 Not Detected	trans-1,3-Dichloropropene	0.95	Not Detected	4.3	Not Detected
	1,1,2-Trichloroethane	0.95	Not Detected	5.2	Not Detected
2-Hexanone 3.8 Not Detected 16 Not Detected	Tetrachloroethene	0.95	Not Detected	6.4	Not Detected
	2-Hexanone	3.8	Not Detected	16	Not Detected



Client Sample ID: SVR-7 Lab ID#: 1603595AR1-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040617	Date of Collection: 3/25/16 11:15:00 AM
Dil. Factor:	1.90	Date of Analysis: 4/6/16 05:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.95	Not Detected	8.1	Not Detected
1,2-Dibromoethane (EDB)	0.95	Not Detected	7.3	Not Detected
Chlorobenzene	0.95	Not Detected	4.4	Not Detected
Ethyl Benzene	0.95	1.1	4.1	4.7
m,p-Xylene	0.95	3.1	4.1	13
o-Xylene	0.95	Not Detected	4.1	Not Detected
Styrene	0.95	Not Detected	4.0	Not Detected
Bromoform	0.95	Not Detected	9.8	Not Detected
Cumene	0.95	Not Detected	4.7	Not Detected
1,1,2,2-Tetrachloroethane	0.95	Not Detected	6.5	Not Detected
Propylbenzene	0.95	Not Detected	4.7	Not Detected
4-Ethyltoluene	0.95	Not Detected	4.7	Not Detected
1,3,5-Trimethylbenzene	0.95	Not Detected	4.7	Not Detected
1,2,4-Trimethylbenzene	0.95	Not Detected	4.7	Not Detected
1,3-Dichlorobenzene	0.95	Not Detected	5.7	Not Detected
1,4-Dichlorobenzene	0.95	Not Detected	5.7	Not Detected
alpha-Chlorotoluene	0.95	Not Detected	4.9	Not Detected
1,2-Dichlorobenzene	0.95	Not Detected	5.7	Not Detected
1,2,4-Trichlorobenzene	3.8	Not Detected	28	Not Detected
Hexachlorobutadiene	3.8	Not Detected	40	Not Detected

Surrogates	%Recovery	Metnoa Limits
Surrogates	/onecovery	Lillits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: SV-12 Lab ID#: 1603595AR1-15A

File Name:	17040624	Date of Collection: 3/25/16 5:22:00 PM
Dil. Factor:	1.93	Date of Analysis: 4/6/16 11:18 PM

Dil. Factor:	1.93	Date	of Analysis: 4/6/1	6 11:18 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.96	3.4	4.8	17
Freon 114	0.96	Not Detected	6.7	Not Detected
Chloromethane	9.6	Not Detected	20	Not Detected
Vinyl Chloride	0.96	Not Detected	2.5	Not Detected
1,3-Butadiene	0.96	Not Detected	2.1	Not Detected
Bromomethane	9.6	Not Detected	37	Not Detected
Chloroethane	3.9	Not Detected	10	Not Detected
Freon 11	0.96	14	5.4	80
Ethanol	3.9	Not Detected	7.3	Not Detected
Freon 113	0.96	Not Detected	7.4	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Acetone	9.6	Not Detected	23	Not Detected
2-Propanol	3.9	89	9.5	220
Carbon Disulfide	3.9	Not Detected	12	Not Detected
3-Chloropropene	3.9	Not Detected	12	Not Detected
Methylene Chloride	9.6	Not Detected	34	Not Detected
Methyl tert-butyl ether	0.96	Not Detected	3.5	Not Detected
trans-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Hexane	0.96	Not Detected	3.4	Not Detected
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	Not Detected	11	Not Detected
cis-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Tetrahydrofuran	0.96	Not Detected	2.8	Not Detected
Chloroform	0.96	Not Detected	4.7	Not Detected
1,1,1-Trichloroethane	0.96	Not Detected	5.3	Not Detected
Cyclohexane	0.96	1.4	3.3	4.8
Carbon Tetrachloride	0.96	Not Detected	6.1	Not Detected
2,2,4-Trimethylpentane	0.96	Not Detected	4.5	Not Detected
Benzene	0.96	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.96	Not Detected	3.9	Not Detected
Heptane	0.96	1.5	4.0	6.0
Trichloroethene	0.96	Not Detected	5.2	Not Detected
1,2-Dichloropropane	0.96	Not Detected	4.4	Not Detected
1,4-Dioxane	3.9	Not Detected	14	Not Detected
Bromodichloromethane	0.96	Not Detected	6.5	Not Detected
cis-1,3-Dichloropropene	0.96	Not Detected	4.4	Not Detected
4-Methyl-2-pentanone	0.96	Not Detected	4.0	Not Detected
Toluene	0.96	42	3.6	160
trans-1,3-Dichloropropene	0.96	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	0.96	Not Detected	5.3	Not Detected
Tetrachloroethene	0.96	4.0	6.5	27
	3.00	1.0	5.0	- '



Client Sample ID: SV-12 Lab ID#: 1603595AR1-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040624	Date of Collection: 3/25/16 5:22:00 PM
Dil. Factor:	1.93	Date of Analysis: 4/6/16 11:18 PM

DII. Factor.	1.93	Date	OI Analysis: 4/6/1	O I I : 10 PW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.96	Not Detected	8.2	Not Detected
1,2-Dibromoethane (EDB)	0.96	Not Detected	7.4	Not Detected
Chlorobenzene	0.96	Not Detected	4.4	Not Detected
Ethyl Benzene	0.96	Not Detected	4.2	Not Detected
m,p-Xylene	0.96	1.8	4.2	7.9
o-Xylene	0.96	Not Detected	4.2	Not Detected
Styrene	0.96	Not Detected	4.1	Not Detected
Bromoform	0.96	Not Detected	10	Not Detected
Cumene	0.96	Not Detected	4.7	Not Detected
1,1,2,2-Tetrachloroethane	0.96	Not Detected	6.6	Not Detected
Propylbenzene	0.96	Not Detected	4.7	Not Detected
4-Ethyltoluene	0.96	Not Detected	4.7	Not Detected
1,3,5-Trimethylbenzene	0.96	Not Detected	4.7	Not Detected
1,2,4-Trimethylbenzene	0.96	Not Detected	4.7	Not Detected
1,3-Dichlorobenzene	0.96	Not Detected	5.8	Not Detected
1,4-Dichlorobenzene	0.96	Not Detected	5.8	Not Detected
alpha-Chlorotoluene	0.96	Not Detected	5.0	Not Detected
1,2-Dichlorobenzene	0.96	Not Detected	5.8	Not Detected
1,2,4-Trichlorobenzene	3.9	Not Detected	29	Not Detected
Hexachlorobutadiene	3.9	Not Detected	41	Not Detected

		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: SV-13 Lab ID#: 1603595AR1-16A

File Name:	17040625	Date of Collection: 3/25/16 4:12:00 PM
Dil. Factor:	2.10	Date of Analysis: 4/6/16 11:44 PM

Dil. Factor:	2.10	Date	of Analysis: 4/6/1	6 11:44 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.0	5.0	5.2	25
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	41	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	12	5.9	67
Ethanol	4.2	Not Detected	7.9	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Acetone	10	Not Detected	25	Not Detected
2-Propanol	4.2	Not Detected	10	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	15	5.1	75
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	Not Detected	7.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	1.0	3.0	4.0	12
trans-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	Not Detected	7.1	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected



Client Sample ID: SV-13 Lab ID#: 1603595AR1-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040625	Date of Collection: 3/25/16 4:12:00 PM
Dil. Factor:	2.10	Date of Analysis: 4/6/16 11:44 PM

DII. Factor.	2.10	Date	oi Analysis: 4/6/1	6 11:44 PW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.9	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.1	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	Not Detected	4.6	Not Detected
m,p-Xylene	1.0	1.3	4.6	5.6
o-Xylene	1.0	Not Detected	4.6	Not Detected
Styrene	1.0	Not Detected	4.5	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	45	Not Detected

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	82	70-130	
4-Bromofluorobenzene	110	70-130	



Client Sample ID: SV-14 Lab ID#: 1603595AR1-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	17040626 2.14	Date of Collection: 3/25/16 2: Date of Analysis: 4/7/16 12:10		
	Rpt. Limit	Amount Rpt. Limit Amount		
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	1.1	2.7	5.3	13
Freon 114	1.1	Not Detected	7.5	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	4.3	Not Detected	8.1	Not Detected
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	40	25	94
2-Propanol	4.3	25	10	62
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	7.9	13	23
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	1.5	3.2	4.4
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.8	Not Detected
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	1.6	4.4	6.6
Toluene	1.1	21	4.0	79
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	Not Detected	7.2	Not Detected
		1131 2 3100100		

Not Detected

18

Not Detected

4.3

2-Hexanone



Client Sample ID: SV-14 Lab ID#: 1603595AR1-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040626	Date of Collection: 3/25/16 2:47:00 PM
Dil. Factor:	2.14	Date of Analysis: 4/7/16 12:10 AM

DII. Factor.	2.14	Date	oi Analysis: 4///	6 12:10 AW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	2.2	4.6	9.4
m,p-Xylene	1.1	5.2	4.6	23
o-Xylene	1.1	1.4	4.6	6.0
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	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	5.2	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	82	70-130	
4-Bromofluorobenzene	109	70-130	



Client Sample ID: SV-15 Lab ID#: 1603595AR1-18A

File Name: Dil. Factor:	17040627 2.13	Date of Collection: 3/25/16 3:38:00 PM Date of Analysis: 4/7/16 12:37 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	5.5	5.3	27
Freon 114	1.1	Not Detected	7.4	Not Detected



Client Sample ID: SV-15 Lab ID#: 1603595AR1-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040627	Date of Collection: 3/25/16 3:38:00 PM
Dil. Factor:	2.13	Date of Analysis: 4/7/16 12:37 AM

DII. Factor.	2.13	Date	or Analysis: 4///	6 12:37 AW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	Not Detected	4.6	Not Detected
m,p-Xylene	1.1	Not Detected	4.6	Not Detected
o-Xylene	1.1	Not Detected	4.6	Not Detected
Styrene	1.1	Not Detected	4.5	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	Not Detected
Propylbenzene	1.1	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	45	Not Detected

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	82	70-130	
4-Bromofluorobenzene	109	70-130	



Toluene

trans-1,3-Dichloropropene

1,1,2-Trichloroethane

Tetrachloroethene

2-Hexanone

Client Sample ID: DUP2 Lab ID#: 1603595AR1-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:				Collection: 3/25/16 4:07:00 PM Analysis: 4/7/16 01:03 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)	
Freon 12	1.1	2.6	5.3	13	
Freon 114	1.1	Not Detected	7.6	Not Detected	
Chloromethane	11	Not Detected	22	Not Detected	
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected	
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected	
Bromomethane	11	Not Detected	42	Not Detected	
Chloroethane	4.3	Not Detected	11	Not Detected	
Freon 11	1.1	Not Detected	6.1	Not Detected	
Ethanol	4.3	Not Detected	8.1	Not Detected	
Freon 113	1.1	Not Detected	8.3	Not Detected	
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected	
Acetone	11	33	26	80	
2-Propanol	4.3	18	11	45	
Carbon Disulfide	4.3	Not Detected	13	Not Detected	
3-Chloropropene	4.3	Not Detected	14	Not Detected	
Methylene Chloride	11	Not Detected	38	Not Detected	
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	Not Detected	3.8	Not Detected	
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	4.3	6.1	13	18	
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected	
Tetrahydrofuran	1.1	1.3	3.2	3.7	
Chloroform	1.1	Not Detected	5.3	Not Detected	
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected	
Cyclohexane	1.1	Not Detected	3.7	Not Detected	
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	Not Detected	3.4	Not Detected	
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected	
Heptane	1.1	Not Detected	4.4	Not Detected	
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	1.5	4.4	6.2	
_	4.4	00	4.4	00	

1.1

1.1

1.1

1.1

4.3

23

Not Detected

Not Detected

Not Detected

Not Detected

4.1

4.9

5.9

7.3

18

86

Not Detected

Not Detected

Not Detected

Not Detected



Client Sample ID: DUP2 Lab ID#: 1603595AR1-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040628	Date of Collection: 3/25/16 4:07:00 PM
Dil. Factor:	2.16	Date of Analysis: 4/7/16 01:03 AM

Z.II. 1 4401011	2.10	2.10 Date 01 / that yello: 4/1/10 01:00 /		0 0 1.00 / till
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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	2.7	4.7	12
m,p-Xylene	1.1	7.3	4.7	32
o-Xylene	1.1	2.0	4.7	8.5
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

Surrogates	%Recovery	Metnoa Limits
Ourrogates	/orcecovery	Lillits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20A

(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Rpt. Limit	Amount	Rpt. Limit	Amount
1.00	Date of Analysis: 4/4/16 05:26 PM		6 05:26 PM
17040406	Date	Date of Collection: NA	
	1.00 Rpt. Limit	1.00 Date Rpt. Limit Amount	1.00 Date of Analysis: 4/4/1 Rpt. Limit Amount Rpt. Limit



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040406	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/4/16 05:26 PM

DII. Factor.	1.00	Date of Affaiysis: 4/4/16 05:26 Pivi		6 U3:26 PIVI
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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

UJ = Analyte associated with low bias in the CCV.

Container Type: NA - Not Applicable

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	88	70-130	
4-Bromofluorobenzene	107	70-130	



File Name:

Heptane Trichloroethene

Toluene

1,4-Dioxane

1,2-Dichloropropane

Bromodichloromethane

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

4-Methyl-2-pentanone

1,1,2-Trichloroethane

Tetrachloroethene

2-Hexanone

Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20B

EPA METHOD TO-15 GC/MS FULL SCAN

Date of Collection: NA

17040606

Dil. Factor:	1.00 Date of Analysis: 4/6/16 12		16 12:42 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	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	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	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)	2.0	Not Detected	5.9	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

Not Detected

2.0

2.7

2.3

7.2

3.4 2.3

2.0

1.9

2.3

2.7

3.4

8.2

Not Detected

0.50

0.50

0.50

2.0

0.50

0.50

0.50

0.50

0.50

0.50

0.50

2.0



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040606	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/6/16 12:42 PM

Dili i dotoi:	1.00	Date of Affaiysis. 4/0/10 12:42 i W		0 12.72 1 W
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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	101	70-130	
1,2-Dichloroethane-d4	87	70-130	
4-Bromofluorobenzene	107	70-130	



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	17040706 1.00		of Collection: NA of Analysis: 4/7/1	l6 12:29 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	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	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	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	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)	2.0	Not Detected	5.9	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
1, 1,4-111011010ettialle	0.50	Not Detected	2.1	THOI DOLOGIC

Not Detected

Not Detected

3.4

8.2

Not Detected

Not Detected

0.50

2.0

Tetrachloroethene

2-Hexanone



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	17040706	Dat	e of Collection: NA	
Dil. Factor:	1.00	Dat	e of Analysis: 4/7/16	12:29 PM
•	Pnt Limit	Amount	Pnt Limit	Amount

Dii. i actor.	1.00	Date	OI Allalysis. 4/1/	0 12.29 FW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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
Surrogates	%Recovery	Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20D EPA METHOD TO-15 GC/MS

File Name: 14040805 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/8/16 09:49 AM

Dil. Factor:	1.00	Date	of Analysis: 4/8/	16 09:49 AM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	20	Not Detected	38	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected



Client Sample ID: Lab Blank Lab ID#: 1603595AR1-20D EPA METHOD TO-15 GC/MS

File Name:	14040805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/8/16 09:49 AM

Dili. I dotor.	1.00	Date	Ol Allalysis. 4/0/	0 03.73 AN
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	101	70-130	



Client Sample ID: CCV Lab ID#: 1603595AR1-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 03:12 PM

Freon 12 92 Freon 114 104 Chloromethane 62 Q Vinyl Chloride 92 1,3-Butadiene 81 Bromomethane 1111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyle End Luyle ether 90 trans-1,2-Dichloroethene 92 Hexane 84 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 4Ertanydrofuran 84 Chloroform 92 1,1.1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane<	Compound	%Recovery
Freon 114 104 Chloromethane 62 Q Vinyl Chloride 92 1,3-Butadiene 81 Bromomethane 111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloroptopene 91 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane <td>Freon 12</td> <td>92</td>	Freon 12	92
Vinyl Chloride 92 1,3-Butadiene 81 Bromomethane 111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butly ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 sis-1,2-Dichloroethane 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloro		
1,3-Butadiene 81 Bromomethane 111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methylene Chloride 88 Methylene Chloride 84 1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene<		
1,3-Butadiene 81 Bromomethane 111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methylene Chloride 88 Methylene Chloride 88 Methyle tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethene 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 92	Vinyl Chloride	92
Bromomethane 111 Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1.1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloropthane 94 Heptane 90 Trichloroethene 95 1,2-Dichloroptropane 92 1,4-Dioxane 92 Bromodichl	· ·	81
Chloroethane 93 Freon 11 96 Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylen-Chloride 88 Methyl eth-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 Hexane 84 1,1-Dichloroethane 99 2-Butanone (Methyl Ethyl Ketone) 91 vis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 1,2-Dichlor		111
Ethanol 88 Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethane 95 1,2-Dichloropropane 92 1,4-Dioxane 92 Bromodichloromethane 97 cis-1,3-Dichloropropene 97		
Freon 113 101 1,1-Dichloroethene 89 Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methyl en Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 Bromodichloromethane 97 4-Methyl-2-pentanone 81 Toluene 97 4-Methyl-2-pentanone 81 </td <td>Freon 11</td> <td>96</td>	Freon 11	96
1,1-Dichloroethene	Ethanol	88
Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 1,2-Dichloropropane 92 1,4-Dioxane 92 Bromodichloromethane 97 cis-1,3-Dichloropropene 97 4-Methyl-2-pentanone 81 Toluene 97 trans-1,3-Dichloroptopene 94 </td <td>Freon 113</td> <td>101</td>	Freon 113	101
Acetone 106 2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 1,2-Dichloropropane 92 1,4-Dioxane 92 Bromodichloromethane 97 cis-1,3-Dichloropropene 97 4-Methyl-2-pentanone 81 Toluene 97 trans-1,3-Dichloroptopene 94 </td <td>1.1-Dichloroethene</td> <td>89</td>	1.1-Dichloroethene	89
2-Propanol 81 Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 1,4-Dioxane 92 Bromodichloromethane 97 cis-1,3-Dichloropropene 97 4-Methyl-2-pentanone 81 Toluene 97 trans-1,3-Dichloropropene 94 1,1,2-Trichloroethane 96 Tetrachloroethene 106 <		
Carbon Disulfide 94 3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 Bromodichloromethane 97 cis-1,3-Dichloropropene 97 4-Methyl-2-pentanone 81 Toluene 97 trans-1,3-Dichloropropene 96 Tetrachloroethene 96 Tetrachloroethene 106		
3-Chloropropene 91 Methylene Chloride 88 Methyl tert-butyl ether 90 trans-1,2-Dichloroethene 92 Hexane 84 1,1-Dichloroethane 89 2-Butanone (Methyl Ethyl Ketone) 91 cis-1,2-Dichloroethene 94 Tetrahydrofuran 84 Chloroform 92 1,1,1-Trichloroethane 92 Cyclohexane 89 Carbon Tetrachloride 98 2,2,4-Trimethylpentane 85 Benzene 95 1,2-Dichloroethane 94 Heptane 90 Trichloroethene 95 1,2-Dichloropropane 92 1,4-Dioxane 92 Bromodichloromethane 92 cis-1,3-Dichloropropene 97 4-Methyl-2-pentanone 81 Toluene 97 trans-1,3-Dichloropropene 94 1,1,2-Trichloroethane 96 1,1,2-Trichloroethane 96	· · · · · · · · · · · · · · · · · · ·	
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1,1,2-Trichloroethane96Tetrachloroethene106		
Tetrachloroethene 106		
	2-Hexanone	74



Client Sample ID: CCV Lab ID#: 1603595AR1-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 03:12 PM

Compound	%Recovery	
Dibromochloromethane	100	
1,2-Dibromoethane (EDB)	98	
Chlorobenzene	101	
Ethyl Benzene	98	
m,p-Xylene	98	
o-Xylene	97	
Styrene	85	
Bromoform	109	
Cumene	98	
1,1,2,2-Tetrachloroethane	94	
Propylbenzene	96	
4-Ethyltoluene	97	
1,3,5-Trimethylbenzene	98	
1,2,4-Trimethylbenzene	92	
1,3-Dichlorobenzene	104	
1,4-Dichlorobenzene	104	
alpha-Chlorotoluene	90	
1,2-Dichlorobenzene	105	
1,2,4-Trichlorobenzene	96	
Hexachlorobutadiene	112	

Q = Exceeds Quality Control limits.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	103	70-130	
1,2-Dichloroethane-d4	84	70-130	
4-Bromofluorobenzene	108	70-130	



Client Sample ID: CCV Lab ID#: 1603595AR1-21B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040602 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 10:27 AM

Compound	%Recovery	
Freon 12	87	
Freon 114	99	
Chloromethane	80	
Vinyl Chloride	87	
1,3-Butadiene	76	
Bromomethane	108	
Chloroethane	87	
Freon 11	91	
Ethanol	78	
Freon 113	99	
1,1-Dichloroethene	84	
Acetone	82	
2-Propanol	78	
Carbon Disulfide	87	
3-Chloropropene	85	
Methylene Chloride	79	
Methyl tert-butyl ether	85	
trans-1,2-Dichloroethene	88	
Hexane	82	
1,1-Dichloroethane	82	
2-Butanone (Methyl Ethyl Ketone)	86	
cis-1,2-Dichloroethene	87	
Tetrahydrofuran	81	
Chloroform	86	
1,1,1-Trichloroethane	88	
Cyclohexane	86	
Carbon Tetrachloride	95	
2,2,4-Trimethylpentane	84	
Benzene	92	
1,2-Dichloroethane	88	
Heptane	89	
Trichloroethene	91	
1,2-Dichloropropane	87	
1,4-Dioxane	94	
Bromodichloromethane	90	
cis-1,3-Dichloropropene	92	
4-Methyl-2-pentanone	87	
Toluene	95	
trans-1,3-Dichloropropene	91	
1,1,2-Trichloroethane	93	
Tetrachloroethene	106	
2-Hexanone	86	



Client Sample ID: CCV Lab ID#: 1603595AR1-21B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040602 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 10:27 AM

Compound	%Recovery	
Dibromochloromethane	96	
1,2-Dibromoethane (EDB)	96	
Chlorobenzene	100	
Ethyl Benzene	98	
m,p-Xylene	99	
o-Xylene	97	
Styrene	97	
Bromoform	109	
Cumene	98	
1,1,2,2-Tetrachloroethane	93	
Propylbenzene	97	
4-Ethyltoluene	101	
1,3,5-Trimethylbenzene	103	
1,2,4-Trimethylbenzene	98	
1,3-Dichlorobenzene	104	
1,4-Dichlorobenzene	102	
alpha-Chlorotoluene	95	
1,2-Dichlorobenzene	103	
1,2,4-Trichlorobenzene	83	
Hexachlorobutadiene	92	

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	111	70-130



Client Sample ID: CCV Lab ID#: 1603595AR1-21C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040702 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 10:08 AM

Compound	%Recovery	
Freon 12	83	
Freon 114	97	
Chloromethane	78	
Vinyl Chloride	83	
1,3-Butadiene	73	
Bromomethane	104	
Chloroethane	82	
Freon 11	85	
Ethanol	73	
Freon 113	93	
1,1-Dichloroethene	81	
Acetone	77	
2-Propanol	72	
Carbon Disulfide	84	
3-Chloropropene	81	
Methylene Chloride	74	
Methyl tert-butyl ether	81	
trans-1,2-Dichloroethene	86	
Hexane	78	
1,1-Dichloroethane	79	
2-Butanone (Methyl Ethyl Ketone)	85	
cis-1,2-Dichloroethene	87	
Tetrahydrofuran	76	
Chloroform	84	
1,1,1-Trichloroethane	84	
Cyclohexane	84	
Carbon Tetrachloride	92	
2,2,4-Trimethylpentane	81	
Benzene	93	
1,2-Dichloroethane	83	
Heptane	90	
Trichloroethene	93	
1,2-Dichloropropane	89	
1,4-Dioxane	97	
Bromodichloromethane	91	
cis-1,3-Dichloropropene	94	
4-Methyl-2-pentanone	89	
Toluene	99	
trans-1,3-Dichloropropene	86	
1,1,2-Trichloroethane	91	
Tetrachloroethene	107	
2-Hexanone	83	



Client Sample ID: CCV Lab ID#: 1603595AR1-21C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040702 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 10:08 AM

Compound	%Recovery	
Dibromochloromethane	95	
1,2-Dibromoethane (EDB)	95	
Chlorobenzene	99	
Ethyl Benzene	98	
m,p-Xylene	98	
o-Xylene	98	
Styrene	96	
Bromoform	108	
Cumene	98	
1,1,2,2-Tetrachloroethane	90	
Propylbenzene	94	
4-Ethyltoluene	99	
1,3,5-Trimethylbenzene	103	
1,2,4-Trimethylbenzene	96	
1,3-Dichlorobenzene	104	
1,4-Dichlorobenzene	103	
alpha-Chlorotoluene	94	
1,2-Dichlorobenzene	104	
1,2,4-Trichlorobenzene	86	
Hexachlorobutadiene	99	

_		Method
Surrogates	%Recovery	Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: CCV Lab ID#: 1603595AR1-21D EPA METHOD TO-15 GC/MS

File Name: 14040802 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/8/16 08:32 AM

Compound	%Recovery
Freon 12	112
Freon 114	117
Chloromethane	105
Vinyl Chloride	102
1,3-Butadiene	101
Bromomethane	92
Chloroethane	115
Freon 11	120
Ethanol	120
Freon 113	113
1,1-Dichloroethene	107
Acetone	118
2-Propanol	110
Carbon Disulfide	105
3-Chloropropene	98
Methylene Chloride	104
Methyl tert-butyl ether	120
trans-1,2-Dichloroethene	110
Hexane	111
1,1-Dichloroethane	114
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	108
Tetrahydrofuran	109
Chloroform	113
1,1,1-Trichloroethane	120
Cyclohexane	104
Carbon Tetrachloride	126
2,2,4-Trimethylpentane	110
Benzene	111
1,2-Dichloroethane	115
Heptane	110
Trichloroethene	98
1,2-Dichloropropane	112
1,4-Dioxane	108
Bromodichloromethane	115
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	118
Toluene	105
trans-1,3-Dichloropropene	127
1,1,2-Trichloroethane	107
Tetrachloroethene	114
2-Hexanone	111



Client Sample ID: CCV Lab ID#: 1603595AR1-21D EPA METHOD TO-15 GC/MS

File Name: 14040802 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/8/16 08:32 AM

Compound	%Recovery	
Dibromochloromethane	116	
1,2-Dibromoethane (EDB)	116	
Chlorobenzene	108	
Ethyl Benzene	114	
m,p-Xylene	114	
o-Xylene	112	
Styrene	116	
Bromoform	125	
Cumene	119	
1,1,2,2-Tetrachloroethane	120	
Propylbenzene	113	
4-Ethyltoluene	115	
1,3,5-Trimethylbenzene	120	
1,2,4-Trimethylbenzene	116	
1,3-Dichlorobenzene	113	
1,4-Dichlorobenzene	112	
alpha-Chlorotoluene	129	
1,2-Dichlorobenzene	108	
1,2,4-Trichlorobenzene	90	
Hexachlorobutadiene	113	

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	97	70-130	
4-Bromofluorobenzene	107	70-130	



Client Sample ID: LCS Lab ID#: 1603595AR1-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040403 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 03:39 PM

		Method
Compound	%Recovery	Limits
Freon 12	94	70-130
Freon 114	110	70-130
Chloromethane	69 Q	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	79	70-130
Bromomethane	111	70-130
Chloroethane	93	70-130
Freon 11	98	70-130
Ethanol	87	70-130
Freon 113	97	70-130
1,1-Dichloroethene	90	70-130
Acetone	88	70-130
2-Propanol	85	70-130
Carbon Disulfide	80	70-130
3-Chloropropene	84	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	83	70-130
1,1-Dichloroethane	86	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
cis-1,2-Dichloroethene	89	70-130
Tetrahydrofuran	82	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	90	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	93	70-130
1,2-Dichloroethane	91	70-130
Heptane	89	70-130
Trichloroethene	105	70-130
1,2-Dichloropropane	92	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	89	70-130
4-Methyl-2-pentanone	87	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	105	70-130
2-Hexanone	86	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040403 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 03:39 PM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	99	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	98	70-130
o-Xylene	99	70-130
Styrene	92	70-130
Bromoform	111	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	80	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	102	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	101	70-130
Hexachlorobutadiene	110	70-130

Q = Exceeds Quality Control limits.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	83	70-130
4-Bromofluorobenzene	108	70-130



Client Sample ID: LCSD Lab ID#: 1603595AR1-22AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040404 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 04:05 PM

		Method
Compound	%Recovery	Limits
Freon 12	94	70-130
Freon 114	111	70-130
Chloromethane	69 Q	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	80	70-130
Bromomethane	112	70-130
Chloroethane	97	70-130
Freon 11	98	70-130
Ethanol	87	70-130
Freon 113	100	70-130
1,1-Dichloroethene	90	70-130
Acetone	90	70-130
2-Propanol	84	70-130
Carbon Disulfide	81	70-130
3-Chloropropene	83	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	84	70-130
1,1-Dichloroethane	86	70-130
2-Butanone (Methyl Ethyl Ketone)	90	70-130
cis-1,2-Dichloroethene	90	70-130
Tetrahydrofuran	82	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	91	70-130
Cyclohexane	90	70-130
Carbon Tetrachloride	95	70-130
2,2,4-Trimethylpentane	85	70-130
Benzene	94	70-130
1,2-Dichloroethane	92	70-130
Heptane	91	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	90	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	96	70-130
cis-1,3-Dichloropropene	90	70-130
4-Methyl-2-pentanone	89	70-130
Toluene	97	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	108	70-130
2-Hexanone	88	70-130



Client Sample ID: LCSD Lab ID#: 1603595AR1-22AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040404 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/4/16 04:05 PM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	99	70-130
o-Xylene	100	70-130
Styrene	94	70-130
Bromoform	112	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	81	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	104	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	105	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	113	70-130
Hexachlorobutadiene	120	70-130

Q = Exceeds Quality Control limits.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040603 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 10:53 AM

Compound %Recovery Limits Freon 12 91 70-130 Freon 114 108 70-130 Chloromethane 63 Q 70-130 Vinyl Chloride 92 70-130 1,3-Butadiene 76 70-130 Brommethane 102 70-130 Chloroethane 92 70-130 Freon 11 98 70-130 Freon 113 98 70-130 Freon 113 98 70-130 Freon 113 98 70-130 1,1-Dichloroethene 89 70-130 Acetone 84 70-130 2-Propanol 80 70-130 Carbon Disulfide 79 70-130 3-Chloropropene 83 70-130 Methylene Chloride 81 70-130 Methylene Chloride 81 70-130 Methylene Chloride 81 70-130 Hexane 80 70-130 1-L-Dichloroethene 80 70-130			Method
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trans-1,3-Dichloropropene 90 70-130 1,1,2-Trichloroethane 93 70-130 Tetrachloroethene 106 70-130			
1,1,2-Trichloroethane 93 70-130 Tetrachloroethene 106 70-130			
Tetrachloroethene 106 70-130	· ·		
	2-Hexanone	85	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040603 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 10:53 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	98	70-130
o-Xylene	98	70-130
Styrene	92	70-130
Bromoform	112	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	79	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	101	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	96	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	99	70-130
Hexachlorobutadiene	111	70-130

Q = Exceeds Quality Control limits.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	81	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: LCSD Lab ID#: 1603595AR1-22BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040604 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 11:20 AM

		Method
Compound	%Recovery	Limits
Freon 12	92	70-130
Freon 114	109	70-130
Chloromethane	62 Q	70-130
Vinyl Chloride	91	70-130
1,3-Butadiene	77	70-130
Bromomethane	104	70-130
Chloroethane	91	70-130
Freon 11	96	70-130
Ethanol	86	70-130
Freon 113	98	70-130
1,1-Dichloroethene	88	70-130
Acetone	85	70-130
2-Propanol	80	70-130
Carbon Disulfide	78	70-130
3-Chloropropene	81	70-130
Methylene Chloride	80	70-130
Methyl tert-butyl ether	86	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	81	70-130
1,1-Dichloroethane	84	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
cis-1,2-Dichloroethene	90	70-130
Tetrahydrofuran	78	70-130
Chloroform	89	70-130
1,1,1-Trichloroethane	90	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	94	70-130
2,2,4-Trimethylpentane	82	70-130
Benzene	94	70-130
1,2-Dichloroethane	89	70-130
Heptane	89	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	92	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	88	70-130
4-Methyl-2-pentanone	87	70-130
Toluene	95	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	107	70-130
2-Hexanone	86	70-130



Client Sample ID: LCSD Lab ID#: 1603595AR1-22BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040604 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/6/16 11:20 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	99	70-130
o-Xylene	100	70-130
Styrene	93	70-130
Bromoform	112	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	80	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	106	70-130
1,3,5-Trimethylbenzene	106	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	105	70-130
alpha-Chlorotoluene	97	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	116	70-130
Hexachlorobutadiene	122	70-130

Q = Exceeds Quality Control limits.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	101	70-130	
1,2-Dichloroethane-d4	85	70-130	
4-Bromofluorobenzene	109	70-130	



Client Sample ID: LCS Lab ID#: 1603595AR1-22C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040703 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 10:35 AM

		Method
Compound	%Recovery	Limits
Freon 12	89	70-130
Freon 114	112	70-130
Chloromethane	66 Q	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	76	70-130
Bromomethane	101	70-130
Chloroethane	90	70-130
Freon 11	93	70-130
Ethanol	80	70-130
Freon 113	99	70-130
1,1-Dichloroethene	88	70-130
Acetone	82	70-130
2-Propanol	75	70-130
Carbon Disulfide	79	70-130
3-Chloropropene	81	70-130
Methylene Chloride	78	70-130
Methyl tert-butyl ether	84	70-130
trans-1,2-Dichloroethene	93	70-130
Hexane	80	70-130
1,1-Dichloroethane	84	70-130
2-Butanone (Methyl Ethyl Ketone)	90	70-130
cis-1,2-Dichloroethene	91	70-130
Tetrahydrofuran	78	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	89	70-130
Cyclohexane	90	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	93	70-130
1,2-Dichloroethane	86	70-130
Heptane	89	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	89	70-130
4-Methyl-2-pentanone	87	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	89	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	109	70-130
2-Hexanone	84	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040703 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 10:35 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	100	70-130
Styrene	94	70-130
Bromoform	114	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	79	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	105	70-130
1,3,5-Trimethylbenzene	107	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	107	70-130
1,4-Dichlorobenzene	107	70-130
alpha-Chlorotoluene	97	70-130
1,2-Dichlorobenzene	107	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	116	70-130

Q = Exceeds Quality Control limits.

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	103	70-130	
1,2-Dichloroethane-d4	82	70-130	
4-Bromofluorobenzene	110	70-130	



Client Sample ID: LCSD Lab ID#: 1603595AR1-22CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040704 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 11:01 AM

		Method
Compound	%Recovery	Limits
Freon 12	88	70-130
Freon 114	109	70-130
Chloromethane	63 Q	70-130
Vinyl Chloride	90	70-130
1,3-Butadiene	75	70-130
Bromomethane	100	70-130
Chloroethane	90	70-130
Freon 11	92	70-130
Ethanol	80	70-130
Freon 113	99	70-130
1,1-Dichloroethene	88	70-130
Acetone	80	70-130
2-Propanol	73	70-130
Carbon Disulfide	78	70-130
3-Chloropropene	80	70-130
Methylene Chloride	78	70-130
Methyl tert-butyl ether	84	70-130
trans-1,2-Dichloroethene	92	70-130
Hexane	79	70-130
1,1-Dichloroethane	82	70-130
2-Butanone (Methyl Ethyl Ketone)	89	70-130
cis-1,2-Dichloroethene	89	70-130
Tetrahydrofuran	78	70-130
Chloroform	88	70-130
1,1,1-Trichloroethane	89	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	83	70-130
Benzene	93	70-130
1,2-Dichloroethane	85	70-130
Heptane	88	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	94	70-130
cis-1,3-Dichloropropene	89	70-130
4-Methyl-2-pentanone	88	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	89	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	110	70-130
2-Hexanone	84	70-130



Client Sample ID: LCSD Lab ID#: 1603595AR1-22CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 17040704 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/7/16 11:01 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	101	70-130
Styrene	94	70-130
Bromoform	114	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	80	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	108	70-130
1,3,5-Trimethylbenzene	109	70-130
1,2,4-Trimethylbenzene	108	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	108	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	110	70-130
1,2,4-Trichlorobenzene	119	70-130
Hexachlorobutadiene	129	70-130

Q = Exceeds Quality Control limits.

		Method Limits
Surrogates	%Recovery	
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	77	70-130
4-Bromofluorobenzene	113	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22D EPA METHOD TO-15 GC/MS

File Name: 14040803 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 4/8/16 08:54 AM

Compound	9/ Doggyowy	Method Limits
Compound	%Recovery	
Freon 12	94	70-130
Freon 114	97	70-130
Chloromethane	78	70-130
Vinyl Chloride	79	70-130
1,3-Butadiene	77	70-130
Bromomethane	79	70-130
Chloroethane	92	70-130
Freon 11	102	70-130
Ethanol	60 Q	70-130
Freon 113	94	70-130
1,1-Dichloroethene	87	70-130
Acetone	90	70-130
2-Propanol	86	70-130
Carbon Disulfide	75	70-130
3-Chloropropene	86	70-130
Methylene Chloride	83	70-130
Methyl tert-butyl ether	80	70-130
trans-1,2-Dichloroethene	91	70-130
Hexane	88	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
cis-1,2-Dichloroethene	84	70-130
Tetrahydrofuran	84	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	90	70-130
Carbon Tetrachloride	102	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	89	70-130
1,2-Dichloroethane	96	70-130
Heptane	82	70-130
Trichloroethene	84	70-130
1,2-Dichloropropane	87	70-130
1,4-Dioxane	85	70-130
Bromodichloromethane	97	70-130
cis-1,3-Dichloropropene	90	70-130
4-Methyl-2-pentanone	92	70-130
Toluene	87	70-130
trans-1,3-Dichloropropene	107	70-130
1,1,2-Trichloroethane	91	70-130
Tetrachloroethene	94	70-130
2-Hexanone	84	70-130



Client Sample ID: LCS Lab ID#: 1603595AR1-22D EPA METHOD TO-15 GC/MS

File Name: 14040803 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/8/16 08:54 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	96	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	90	70-130
Ethyl Benzene	89	70-130
m,p-Xylene	91	70-130
o-Xylene	91	70-130
Styrene	96	70-130
Bromoform	102	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	96	70-130
Propylbenzene	92	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	92	70-130
1,3-Dichlorobenzene	93	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	117	70-130
1,2-Dichlorobenzene	90	70-130
1,2,4-Trichlorobenzene	98	70-130
Hexachlorobutadiene	112	70-130

Q = Exceeds Quality Control limits.

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



Client Sample ID: LCSD Lab ID#: 1603595AR1-22DD EPA METHOD TO-15 GC/MS

File Name: 14040804 Date of Collection: NA

Dil. Factor: 1.00 Date of Analysis: 4/8/16 09:18 AM

%Recovery	Limits
00	
99	70-130
100	70-130
80	70-130
86	70-130
81	70-130
82	70-130
99	70-130
107	70-130
63 Q	70-130
97	70-130
87	70-130
99	70-130
91	70-130
79	70-130
87	70-130
88	70-130
82	70-130
96	70-130
92	70-130
94	70-130
91	70-130
90	70-130
82	70-130
95	70-130
104	70-130
92	70-130
109	70-130
93	70-130
93	70-130
100	70-130
87	70-130
89	70-130
92	70-130
89	70-130
100	70-130
90	70-130
99	70-130
91	70-130
105	70-130
92	70-130
100	70-130
87	70-130
	80 86 81 82 99 107 63 Q 97 87 99 91 79 87 88 82 96 92 94 91 90 82 95 104 92 109 93 93 93 100 87 89 92 109



Client Sample ID: LCSD Lab ID#: 1603595AR1-22DD EPA METHOD TO-15 GC/MS

File Name: 14040804 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 4/8/16 09:18 AM

		Method
Compound	%Recovery	Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	93	70-130
Ethyl Benzene	88	70-130
m,p-Xylene	88	70-130
o-Xylene	96	70-130
Styrene	98	70-130
Bromoform	105	70-130
Cumene	97	70-130
1,1,2,2-Tetrachloroethane	99	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	100	70-130
1,2,4-Trimethylbenzene	97	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	92	70-130
alpha-Chlorotoluene	123	70-130
1,2-Dichlorobenzene	92	70-130
1,2,4-Trichlorobenzene	101	70-130
Hexachlorobutadiene	117	70-130

Q = Exceeds Quality Control limits.

		Method Limits
Surrogates	%Recovery	
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130