# **CONVERSE CONSULTANTS**



DRAFT Vapor Intrusion Assessment Report

> Westgate West Shopping Center Former Midas Muffler 5287 Prospect Road San Jose, California 95129

Converse Project No. 16-42-194-15 June 30, 2022

**Prepared For:** 

DS Westgate West, L.P. 200 East Baker Street Suite 100 Costa Mesa, California 92626

**Prepared By:** 

Converse Consultants 3176 Pullman Street Suite 108 Costa Mesa, California 92626



June 30, 2022

Mr. Henry Avila DS Westgate West, L.P. 200 East Baker Street Suite 100 Costa Mesa, California 92626

Subject: DRAFT - Vapor Intrusion Assessment Report Westgate West Shopping Center Former Midas Mufflers 5287 Prospect Road San Jose, California 95129 Converse Project No. 16-42-194-15

Mr. Avila:

Converse Consultants (Converse) is pleased to submit the attached report that summarizes the activities and the results of a *Vapor Intrusion Assessment* that was conducted at the referenced property (Site).

We appreciate the opportunity to be of service. Should you have any questions or comments regarding this report, please contact Michael Van Fleet at (909) 796-0544 or Norman Eke at (626) 930-1260.

#### **CONVERSE CONSULTANTS**

Michael Van Fleet, PG Senior Geologist Norman Eke Managing Officer

Dist.: 1/Addressee via Electronic Mail

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# **1.0 Introduction**

This *Vapor Intrusion Assessment* report has been prepared by Converse Consultants (Converse), on behalf of DS Westgate West, L.P. (DSWW), for the former Midas Mufflers automotive repair facility (Midas) at the Westgate West Shopping Center located at 5287 Prospect Road, in San Jose, California (Site). The location of the Site is shown on Figure 1, Site Location Plan.

# 1.1 Background

Midas Mufflers formerly operated at the Site within the Westgate West shopping center. Assessment activities previously completed by Converse in 2016 related to the Midas Site included the completion of 14 borings, generally to depths of 20 feet below ground surface (bgs), from which soil and or/soil vapor samples were collected. Soil samples were analyzed for metals, volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), and/or polychlorinated biphenyls (PCBs), and soil vapor samples were analyzed for VOCs. No VOCs or PCBs were detected in any of the soil samples, all TPH and metals concentrations in soil samples were below residential screening levels. Ten (10) VOCs were reported in soil vapor samples, with the maximum concentration of all compounds being less than the screening levels at the time for residential land use. Therefore no further action was recommended at that time with regard to the minor impacts identified in the vicinity of Midas.

Regulatory screening levels for soil vapor concentrations changed significantly in 2019, resulting in some of the previously reported VOC concentrations to now exceed residential screening levels.

In preparation for potential redevelopment activities at the Site, supplemental testing was conducted by Kleinfelder in 2021. Findings of the Kleinfelder assessment were presented in a Limited Phase II Environmental Site Assessment (ESA) Report, dated December 2, 2021. The scope of that assessment included 14 boreholes completed to depths of approximately 15 feet bgs with soil samples collected from depths of 2, 5, 10, and 15 feet bgs, and soil vapor samples collected from probes set at depths of 5 and 15 feet bgs. Select soil samples were analyzed for VOCs, Total Petroleum Hydrocarbons (TPH), and Metals in accordance with EPA Methods 8260B, 8015, and 6010/7471A, respectively. All soil vapor samples were evaluated for low fraction TPH, VOCs, and MTBE in accordance with EPA Method TO-15.

To evaluate the concentrations of each analyte reported, Kleinfelder initially compared the results to screening levels Tier 1 Environmental Screening Levels (ESLs) established



by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) for both residential and commercial/industrial land uses. The following is a summary of their findings:

- All reported concentrations of VOCs and TPH in the gasoline, diesel, and oil ranges in soil samples were below their respective Tier I ESL levels for residential, and commercial land uses.
- Except for arsenic, all reported metals concentrations in the soil samples are below their respective ESLs for both residential and commercial land uses. However, all arsenic concentrations are less than the generally accepted naturally occurring background level for the region.
- All reported concentrations of low fraction TPH in soil vapor samples were below their respective Tier I ESL levels for residential, and commercial land uses.
- A total of 38 VOCs were reported in the soil vapor samples, but only four (4) were reported with maximum concentrations greater than either the residential or commercial ESL values (benzene, chloroform, tetrachloroethylene (PCE), and trichloroethylene (TCE).
  - Although not discussed in the Kleinfelder report, Converse notes that benzene was detected in four (4) of their soil vapor samples at concentrations in excess of the Tier1 ESL for residential land use of 3.2 micrograms per cubic meter (ug/m<sup>3</sup>). However, the maximum reported benzene concentration of 8.66 ug/m<sup>3</sup> is less than the ESL for commercial land use of 14 ug/m<sup>3</sup>.
  - Although not discussed in the Kleinfelder report, Converse notes that chloroform was detected in one (1) of their soil vapor samples at a concentration in excess of the Tier1 ESL for residential land use of 4.1 ug/m<sup>3</sup>. However, the maximum reported chloroform concentration of 5.45 ug/m<sup>3</sup> is less than the ESL for commercial land use of 18 ug/m<sup>3</sup>.
    - PCE was reported at a maximum concentration of 923 ug/m<sup>3</sup>. A total of 11 of the 19 reported PCE concentrations are greater than the Tier I ESLs for commercial and/or residential land uses of 15 and 67 ug/m<sup>3</sup>, respectively.
  - TCE was reported at a maximum concentration of 234 ug/m<sup>3</sup>. Only two (2) of the 11 reported TCE concentrations greater than the Tier I ESLs for commercial and/or residential land uses of 16 and 100 ug/m<sup>3</sup>, respectively.
- Although Kleinfelder discusses carbon tetrachloride as having been detected in soil vapor samples at maximum concentrations in excess of commercial and residential ESLs, Converse notes that they appear to have been comparing their results to the ESL values published in January 2019 (2.2 and 9.7 ug/m<sup>3</sup>, respectively). In the most current publication of ESLs from August 2019 the ESLs for carbon tetrachloride were revised to 16 and 68 ug/m<sup>3</sup>, respectively. The maximum reported carbon tetrachloride concentration of 12.7 ug/m<sup>3</sup>, is less than current Tier 1 ESL values.

The presence of benzene, chloroform, PCE and TCE in soil vapor samples at concentrations greater than Tier 1 ESLs are considered to poses a potential risk to the



health of future Site occupants. The maximum concentrations of these compounds were generally reported in samples collected from the northern and central portions of the former Midas facility (locations KVP-1 through KVP-6, KVP-9, and KVP-12). The findings of the Kleinfelder assessment were generally consistent with those of the 2016 Converse assessment. Converse recommended further assessment to evaluate the actual levels of VOCs present in the indoor air that may be attributable to vapor intrusion.

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# 2.0 Scope of Services

# 2.1 Objective

The objective of this investigation was to evaluate the actual concentrations of VOCs in the indoor air to evaluate the health risk to Site occupants from vapor intrusion.

# 2.2 Site Description

The Site (former Midas Muffler building) is located in the northwest portion of the Westgate West shopping center, as indicated on Figure 1. The adjacent building to the north was formerly occupied by a yoga studio, but both the Midas and yoga studio buildings are currently vacant. The adjacent building to the east is currently occupied by a furniture showroom store (Ethan Allen).

The temporary soil vapor probes installed by Kleinfelder at the nine (9) bore locations inside of the Midas building (KVP-1 through KVP-9) were found to still be present. At each of these locations a 4-diameter hole had been cored through the concrete slab. Kleinfelder reported that the upper portion of each of these boreholes had been filled with cement grout. However, the upper portion (approximately 1 foot) of ¼-inch diameter Teflon tubing for each of the probes had been coiled up and tucked into the corehole to protect them from damage and the remainder of the core was then filled with sand to prevent a potential trip hazard. It is unknown if the cement grout was brought up into the corehole of the concrete, or if it finished at some depth below the bottom of the slab. At any location where the void in the concrete slab may be filled entirely with sand and not grout, these locations would provide a significant pathway for subsurface vapors to potentially intrude into the indoor air.

# 2.3 Field Activities

Ambient air samples were collected using 6-liter summa canisters over a 24-hour period beginning on May 26, 2022. Indoor air samples were collected from four (4) locations; two (2) from the former Midas suite (IA-1 and IA-2), one (1) from the former yoga studio (IA-3), and one (1) from the Ethan Allen store (IA-4). In addition, outdoor air samples were collected from two (2) locations (OA-1 and OA-2) to assess background concentrations. The approximate sample locations are indicated on Figure 2. The intake of the indoor air sample containers were set within the breathing zone, while the outdoor sample containers were set on the ground.



During the sample collection period both of the vacant units were closed up with no active HVAC systems. Sample IA-4 was collected from the furniture store under normal operating conditions (occupied for approximately 8 hours with HVAC operational, and the closed for the remainder of the period). The sampling event was conducted in general accordance with the DTSC Vapor Intrusion Guidance (October 2011).

# 2.3 Analytical

All indoor and outdoor air samples were collected in canisters supplied by Eurofins Air Toxics located in Fulsome, California. Eurofins is certified by the State of California as an environmental testing laboratory. All samples were analyzed for VOCs in accordance with EPA Test Method TO-15.

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# 3.0 Summary of Findings

A summary of the analytical results are provided below, and in Table 1. The analytical report and chain of custody documentation are provided in Appendix B. Analytical results were initially compared to ESLs values. For compounds without established ESLs, the Regional Screening Levels (RSLs) established by the US EPA were used.

A total of 11 VOCs were detected in one or more of the four (4) indoor air samples and/or two (2) outdoor (ambient) samples. All except two (2) of the VOCs detected in indoor air samples were also reported in soil vapor samples collected during the recent Kleinfelder assessment, and are considered to be chemicals of concern (COCs) due to the potential that they may be present as a result of vapor intrusion. The other two (2) compounds that were not detected in soil vapor samples (1,4-Dichlorobenzene, and 1,2-Dichloroethane) are not considered to be COCs as their presence in indoor air is unlikely to be related to intrusion of contamination from the subsurface.

Of the nine (9) detected COCs, only two (2) were reported in one (1) or more indoor air samples at concentrations exceeding either the residential or commercial screening levels; benzene and chloroform. In order to evaluate the fraction of the reported COC concentrations in indoor air that may be related to vapor encroachment, the average outdoor (background) concentration of each COC was subtracted from the maximum reported indoor air concentrations of each COC. The results are as follows:

- Benzene was reported in all four (4) indoor air samples at concentrations ranging from 0.26 to 0.28 μg/m<sup>3</sup>. All reported concentrations are greater than the residential ESL of 0.097 μg/m<sup>3</sup>, but less than the commercial ESL of 0.42 μg/m<sup>3</sup>. Benzene was also reported in one (1) of the two (2) outdoor air samples at a concentration of 0.26 μg/m<sup>3</sup>. When accounting for the average outdoor air concentrations (assuming ½ the reporting limit for the non-detect value in sample OA-2), the maximum indoor air concentration adjusts to 0.09 μg/m<sup>3</sup>, which is less than the residential ESL.
- Chloroform was reported in two (2) of the samples (IA-3 and IA-4) at concentrations of 0.18 and 0.16  $\mu$ g/m<sup>3</sup>, respectively. Both reported concentrations are greater than the residential ESL of 0.12  $\mu$ g/m<sup>3</sup>, but less than the commercial ESL of 0.53  $\mu$ g/m<sup>3</sup>. Chloroform was also reported in one (1) of the two (2) outdoor air samples at a concentration of 0.18  $\mu$ g/m<sup>3</sup>. When accounting for the average outdoor air concentrations (assuming ½ the reporting limit for the non-detect value in sample OA-1), the maximum indoor air concentration adjusts to 0.06  $\mu$ g/m<sup>3</sup>, which is less than the residential ESL.

Of the two (2) non-COC compounds detected, only one (1) was reported at concentrations in excess of screening levels; 1,2-Dichloroethane.



• 1,2-Dichloroethane was detected in one (1) indoor sample (IA-4), and not in either of the outdoor air samples. The reported concentration of 0.21  $\mu$ g/m<sup>3</sup> is greater than the residential ESL of 0.11  $\mu$ g/m<sup>3</sup>, but less than the commercial ESL of 0.47  $\mu$ g/m<sup>3</sup>.

Neither PCE or TCE were reported in any of the indoor or outdoor air samples.



# 4.1 Findings

Recent soil vapor samples collected by Kleinfelder identified four (4) VOCs at concentrations in excess of current ESL screening levels for commercial and/or residential land use; benzene, chloroform, PCE, and TCE. These compounds of concern (COCs) were therefore considered to pose a potential risk to the Site as concentrations could migrate through vapor intrusion to the indoor air. This indoor air screening assessment was completed to evaluate if these COCs are present in indoor air at concentrations that may pose a significant risk to the health of Site occupants.

PCE and TCE, which were both recently reported in soil vapor samples at concentrations in excess of commercial screening levels, were not reported at detectable concentrations in any of the indoor or outdoor air samples.

Two (2) COCs were reported in indoor air samples at concentrations in excess of their respective residential ESL values.

- Benzene was reported in all four (4) indoor air samples at concentrations ranging from 0.26 to 0.28  $\mu$ g/m<sup>3</sup>. All reported concentrations are greater than the residential ESL of 0.097  $\mu$ g/m<sup>3</sup>, but less than the commercial ESL of 0.42  $\mu$ g/m<sup>3</sup>. Benzene was also reported in one (1) of the two (2) outdoor air samples at a concentration of 0.26  $\mu$ g/m<sup>3</sup>. When accounting for the average outdoor air concentrations (assuming ½ the reporting limit for the non-detect value in sample OA-2), the maximum indoor air concentration adjusts to 0.09  $\mu$ g/m<sup>3</sup>, which is less than the residential ESL.
- Chloroform was reported in two (2) of the samples (IA-3 and IA-4) at concentrations of 0.18 and 0.16  $\mu$ g/m<sup>3</sup>, respectively. Both reported concentrations are greater than the residential ESL of 0.12  $\mu$ g/m<sup>3</sup>, but less than the commercial ESL of 0.53  $\mu$ g/m<sup>3</sup>. Chloroform was also reported in one (1) of the two (2) outdoor air samples at a concentration of 0.18  $\mu$ g/m<sup>3</sup>. When accounting for the average outdoor air concentrations (assuming  $\frac{1}{2}$  the reporting limit for the non-detect value in sample OA-1), the maximum indoor air concentration adjusts to 0.06  $\mu$ g/m<sup>3</sup>, which is less than the residential ESL.

One (1) non-COC was reported at concentrations in excess of screening levels.

• 1,2-Dichloroethane was detected in one (1) indoor sample (IA-4), and not in either of the outdoor air samples. The reported concentration of 0.21  $\mu$ g/m<sup>3</sup> is greater than the residential ESL of 0.11  $\mu$ g/m<sup>3</sup>, but less than the commercial ESL of 0.47  $\mu$ g/m<sup>3</sup>.



All reported concentrations of the eight (8) other VOCs detected were less than their respective residential screening levels.

# 4.2 Conclusions

The chemicals of primary concern, based on the findings of the recent Kleinfelder soil vapor assessment, were PCE and TCE. However, neither PCE nor TCE were detected in any of the indoor air samples.

The other COCs based on the soil vapor data were benzene and chloroform. Both benzene and chloroform were detected in indoor air samples at concentrations greater than their residential ESL values. However, after accounting for concentrations also present in the ambient air, the levels of these compounds that may be resulting from vapor intrusion are less than their residential ESL values.

All reported VOC concentrations in the indoor air samples, whether from ambient air pollution or vapor intrusion, are less than their respective screening levels for commercial land uses.

The findings of this assessment are considered to be representative of a worstcase scenario for potential vapor intrusion due to the minimal ventilation of the buildings, core holes in slab of the Midas building that might be presenting major pathways, and the extended duration of the test period.

Based on the findings presented above, the VOCs previously reported in the soil vapor beneath the Site do not appear to be impacting the indoor air, and therefore do not pose a significant risk to the health of future Site occupants.

# 5.0 Reliance

This report is for the sole benefit and exclusive use of DS Westgate West, L.P. in accordance with the terms and conditions of the mutually agreed upon contract. Its preparation has been in accordance with generally accepted environmental practices. No other warranty, either expressed or implied is made. The Scope of Services associated with the report was designed solely fin accordance with the objectives, schedule, budget, and risk- management preferences of DS Westgate West, L.P.

This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope if this assessment, is present at the Site. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided of r complied by others. It is possible to absolutely confirm that no hazardous materials and/or substances exist at the Site. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the site visit, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented.

Any reliance on this report by Third Parties shall be at the third Party's sole risk. Should Donahue Schriber Realty Group, L.P. wish to identify any additional relying parties not previously identified, a completed *Application of Authorization to Use* (see Appendix B of this report) must be submitted to Converse Consultants.

- California Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Levels, August 2019.
- Department of Toxic Substances Control, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance), October 2011.
- Kleinfelder, Limited Phase II Environmental Site Assessment Report, Former Firestone / Midas Mufflers, 5287 Prospect Road, San Jose, Santa Clarita County, California, December 2, 2021.
- United States Environmental Protection Agency, Regional Screening Levels, November 2021.



Figures





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# SITE LOCATION PLAN



**Converse Consultants** 

Project No:

16-42-194-15

FIGURE 1



# **AMBIENT AIR SAMPLE LOCATIONS**

DS Westgate West, L.P. – Former Midas 5287 Prospect Road San Jose California

Project No:

16-42-194-15

**Converse Consultants** 

FIGURE 2

Tables

Tables



# Table 1 - Ambient Air Analytical ResultsDS Westgate West, L.P. - Former Midas5287 Prospect RaodSan Jose, California

			Compounds Detected in Soil Vapor Samples												
Sample Location	Sample Date	Benzene	Carbon Tetrachloride	Chloroform	1,4-Dichlorobenzene	1,2-Dichloroethane	Dichlorodifluoromethane (Freon 12)	Ethylbenzene	Tetrachloroethylene (PCE)	Trichloroethene (TCE)	Toluene	1,1,1-Trichloroethane	m,p-Xylenes	o-Xylenes	All Other VOCs
IA-1	5/26/2022	0.26	0.44	ND	ND	ND	3.0	ND	ND	ND	0.60	ND	0.31	ND	ND
IA-2	5/26/2022	0.28	0.42	ND	ND	ND	1.8	ND	ND	ND	0.57	ND	0.31	ND	ND
IA-3	5/26/2022	0.28	0.45	0.18	ND	ND	3.0	ND	ND	ND	0.99	0.39	0.35	0.14	ND
IA-4	5/26/2022	0.26	0.46	0.16	0.21	0.21	3.0	0.41	ND	ND	1.5	ND	0.84	0.34	ND
OA-1	5/26/2022	0.26	0.41	ND	ND	ND	1.8	ND	ND	ND	0.48	ND	0.26	ND	ND
OA-2	5/26/2022	ND	0.43	0.18	ND	ND	1.8	ND	ND	ND	0.42	ND	ND	ND	ND
Maximum ( (u	Concentration g/m <sup>3</sup> )	0.28	0.46	0.18	0.21	0.21	3.0	0.41	ND	ND	1.5	0.39	0.84	0.34	-
Maximum Indoor Minus Average Outdoor Concentration (ug/m <sup>3</sup> )		0.09	0.04	0.06	0.21	0.21	1.20	0.41	0.00	0.00	1.05	0.39	0.65	0.34	-
Indoor Air Screening	Residential	0.097	0.47	0.12	0.26	0.11	100	1.1	0.46	0.48	310	35,000	100	100	
Levels (SLs)	Commercial / Industrial	0.42	2.0	0.53	1.1	0.47	440	4.9	2.0	3.0	1,300	150,000	440	440	
Maximum Qar															
Waximum Con Vapo	r (ug/m <sup>3</sup> )	8.66	12.7	5.45	ND	ND	22.4	12.0	923	234	97.9	2,580	42.1	17.7	

Screening Levels based on Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs)

ug/m<sup>3</sup> - micrograms per cubic meter

Exceeds residential SL

Exceeds commercial SL

Converse Consultants Project # 16-42-194-15

Laboratory Analytical Report

Appendix A





6/10/2022 Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave

Monrovia CA 91016

Project Name: WW - Midas Project #: 16-42-196-15 Workorder #: 2205752

Dear Mr. Michael Van Fleet

The following report includes the data for the above referenced project for sample(s) received on 5/27/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 SIM 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 LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kathleen Kancko

Kathleen Kaneko Project Manager

180 Blue Ravine Road, Suite B Folsom, CA 95630



#### WORK ORDER #: 2205752

#### Work Order Summary

CLIENT:	Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016	BILL TO:	Accounts Payable Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016
PHONE:	626-930-1267	<b>P.O.</b> #	16-42-196-15
FAX:	626-930-1212	<b>PROJECT</b> #	16-42-196-15 WW - Midas
DATE RECEIVED:	05/27/2022	CONTACT	Kathleen Kaneko
DATE COMPLETED:	06/10/2022	contact.	Kauncen Kancko

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	<b>PRESSURE</b>
01A	IA-1	Modified TO-15 SIM	8.0 "Hg	2 psi
02A	IA-2	Modified TO-15 SIM	7.0 "Hg	2 psi
03A	IA-3	Modified TO-15 SIM	5.0 "Hg	2 psi
04A	IA-4	Modified TO-15 SIM	7.0 "Hg	2 psi
05A	OA-1	Modified TO-15 SIM	6.0 "Hg	2 psi
06A	OA-2	Modified TO-15 SIM	8.5 "Hg	2 psi
07A	Lab Blank	Modified TO-15 SIM	NA	NA
07B	Lab Blank	Modified TO-15 SIM	NA	NA
08A	CCV	Modified TO-15 SIM	NA	NA
08B	CCV	Modified TO-15 SIM	NA	NA
09A	LCS	Modified TO-15 SIM	NA	NA
09AA	LCSD	Modified TO-15 SIM	NA	NA
09B	LCS	Modified TO-15 SIM	NA	NA
09BB	LCSD	Modified TO-15 SIM	NA	NA

layes end

06/10/22 DATE:

Technical Director

CERTIFIED BY:

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022. Eurofins Air Toxics, LLC 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, LLC. 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000. (800) 985-5955. FAX (916) 351-8279

#### LABORATORY NARRATIVE Modified TO-15 SIM Converse Consultants Workorder# 2205752

Six 6 Liter Summa Canister (100% SIM Ambient) samples were received on May 27, 2022. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

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

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

#### **Receiving Notes**

🛟 eurofins

There were no receiving discrepancies.

#### **Analytical Notes**

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. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on sample IA-4 due to the presence of high level non-target species.

#### **Definition of Data Qualifying Flags**

The following qualifiers may have been used on the data analysis sheets and indicate 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.

CN- See Case Narrative.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



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

#### **Client Sample ID: IA-1**

#### Lab ID#: 2205752-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.078	0.60 J0	0.38	3.0 J0
Carbon Tetrachloride	0.031	0.070	0.20	0.44
Benzene	0.078	0.083	0.25	0.26
Toluene	0.078	0.16	0.29	0.60
m,p-Xylene	0.062	0.072	0.27	0.31

#### **Client Sample ID: IA-2**

#### Lab ID#: 2205752-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.074	0.36	0.36	1.8
Carbon Tetrachloride	0.030	0.066	0.19	0.42
Benzene	0.074	0.088	0.24	0.28
Toluene	0.074	0.15	0.28	0.57
m,p-Xylene	0.059	0.072	0.26	0.31

#### **Client Sample ID: IA-3**

#### Lab ID#: 2205752-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.068	0.60 J0	0.34	3.0 J0
Chloroform	0.027	0.038	0.13	0.18
1,1,1-Trichloroethane	0.027	0.072	0.15	0.39
Carbon Tetrachloride	0.027	0.072	0.17	0.45
Benzene	0.068	0.086	0.22	0.28
Toluene	0.068	0.26	0.26	0.99
m,p-Xylene	0.054	0.081	0.24	0.35
o-Xylene	0.027	0.031	0.12	0.14

#### **Client Sample ID: IA-4**

Lab ID#: 2205752-04A



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

#### **Client Sample ID: IA-4**

#### Lab ID#: 2205752-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.082	0.60 J0	0.40	3.0 J0
Chloroform	0.033	0.034	0.16	0.16
Carbon Tetrachloride	0.033	0.073	0.21	0.46
Benzene	0.082	0.082	0.26	0.26
1,2-Dichloroethane	0.033	0.052	0.13	0.21
Toluene	0.082	0.40	0.31	1.5
Ethyl Benzene	0.033	0.095	0.14	0.41
m,p-Xylene	0.066	0.19	0.28	0.84
o-Xylene	0.033	0.079	0.14	0.34
1,4-Dichlorobenzene	0.033	0.035	0.20	0.21

#### **Client Sample ID: OA-1**

#### Lab ID#: 2205752-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.071	0.36	0.35	1.8
Carbon Tetrachloride	0.028	0.066	0.18	0.41
Benzene	0.071	0.080	0.23	0.26
Toluene	0.071	0.13	0.27	0.48
m,p-Xylene	0.057	0.061	0.25	0.26

#### **Client Sample ID: OA-2**

#### Lab ID#: 2205752-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.080	0.36	0.39	1.8
Chloroform	0.032	0.038	0.16	0.18
Carbon Tetrachloride	0.032	0.068	0.20	0.43
Toluene	0.080	0.11	0.30	0.42



#### Client Sample ID: IA-1 Lab ID#: 2205752-01A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name:	22060920sim	Date of Collection: 5/26/22 10:17:00		6/22 10:17:00
DII. Factor:	1.55	Date	ot Analysis: 6/9/2	2 10:26 PM
- ·	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.078	0.60 J0	0.38	3.0 J0
Freon 114	0.031	Not Detected	0.22	Not Detected
Chloromethane	0.78	Not Detected	1.6	Not Detected
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
Chloroform	0.031	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.031	0.070	0.20	0.44
Benzene	0.078	0.083	0.25	0.26
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Toluene	0.078	0.16	0.29	0.60
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
1,2-Dibromoethane (EDB)	0.031	Not Detected	0.24	Not Detected
Ethyl Benzene	0.031	Not Detected	0.13	Not Detected
m,p-Xylene	0.062	0.072	0.27	0.31
o-Xylene	0.031	Not Detected	0.13	Not Detected
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
1,4-Dichlorobenzene	0.031	Not Detected	0.19	Not Detected
Naphthalene	0.078	Not Detected	0.41	Not Detected

J0 = Estimated value due to bias in the CCV.

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	84	70-130	



#### Client Sample ID: IA-2 Lab ID#: 2205752-02A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22061008sim 1.48	2061008sim Date of Collection: 5/26/22 10:18:00		6/22 10:18:00 22 02:53 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.074	0.36	0.36	1.8
Freon 114	0.030	Not Detected	0.21	Not Detected
Chloromethane	0.74	Not Detected	1.5	Not Detected
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
Chloroethane	0.074	Not Detected	0.20	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
Chloroform	0.030	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Carbon Tetrachloride	0.030	0.066	0.19	0.42
Benzene	0.074	0.088	0.24	0.28
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Toluene	0.074	0.15	0.28	0.57
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
1,2-Dibromoethane (EDB)	0.030	Not Detected	0.23	Not Detected
Ethyl Benzene	0.030	Not Detected	0.13	Not Detected
m,p-Xylene	0.059	0.072	0.26	0.31
o-Xylene	0.030	Not Detected	0.13	Not Detected
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
1,4-Dichlorobenzene	0.030	Not Detected	0.18	Not Detected
Naphthalene	0.074	Not Detected	0.39	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	109	70-130	
4-Bromofluorobenzene	87	70-130	



#### Client Sample ID: IA-3 Lab ID#: 2205752-03A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22060923sim 1.36	Date of Collection: 5/26/22 10:12:00 Date of Analysis: 6/10/22 06:49 AM		6/22 10:12:00 22 06:49 AM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.068	0.60 J0	0.34	3.0 J0
Freon 114	0.027	Not Detected	0.19	Not Detected
Chloromethane	0.68	Not Detected	1.4	Not Detected
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
Chloroethane	0.068	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.054	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.49	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Chloroform	0.027	0.038	0.13	0.18
1,1,1-Trichloroethane	0.027	0.072	0.15	0.39
Carbon Tetrachloride	0.027	0.072	0.17	0.45
Benzene	0.068	0.086	0.22	0.28
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.15	Not Detected
Toluene	0.068	0.26	0.26	0.99
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	Not Detected	0.18	Not Detected
1,2-Dibromoethane (EDB)	0.027	Not Detected	0.21	Not Detected
Ethyl Benzene	0.027	Not Detected	0.12	Not Detected
m,p-Xylene	0.054	0.081	0.24	0.35
o-Xylene	0.027	0.031	0.12	0.14
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.027	Not Detected	0.16	Not Detected
Naphthalene	0.068	Not Detected	0.36	Not Detected

J0 = Estimated value due to bias in the CCV.

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	78	70-130	



#### Client Sample ID: IA-4 Lab ID#: 2205752-04A MODIFIED EPA METHOD TO-15 GC/MS SIM

Т

File Name:	22060921sim	im Date of Collection: 5/26/22 10:03:00		
Dil. Factor:	1.64	Date	of Analysis: 6/9/2	2 11:07 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.082	0.60 J0	0.40	3.0 J0
Freon 114	0.033	Not Detected	0.23	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
Chloroform	0.033	0.034	0.16	0.16
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Carbon Tetrachloride	0.033	0.073	0.21	0.46
Benzene	0.082	0.082	0.26	0.26
1,2-Dichloroethane	0.033	0.052	0.13	0.21
Trichloroethene	0.033	Not Detected	0.18	Not Detected
Toluene	0.082	0.40	0.31	1.5
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
1,2-Dibromoethane (EDB)	0.033	Not Detected	0.25	Not Detected
Ethyl Benzene	0.033	0.095	0.14	0.41
m,p-Xylene	0.066	0.19	0.28	0.84
o-Xylene	0.033	0.079	0.14	0.34
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
1,4-Dichlorobenzene	0.033	0.035	0.20	0.21
Naphthalene	0.082	Not Detected	0.43	Not Detected

J0 = Estimated value due to bias in the CCV.

	,	Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	106	70-130	
4-Bromofluorobenzene	86	70-130	



#### Client Sample ID: OA-1 Lab ID#: 2205752-05A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name:	22061010sim	Date of Collection: 5/26/22 10:40:00		6/22 10:40:00
Dil. Factor:	1.42	Date	of Analysis: 6/10/	22 04:18 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(ug/m3)	(ug/m3)
Freon 12	0.071	0.36	0.35	1.8
Freon 114	0.028	Not Detected	0.20	Not Detected
Chloromethane	0.71	Not Detected	1.5	Not Detected
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
Chloroethane	0.071	Not Detected	0.19	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.056	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.51	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Chloroform	0.028	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.028	0.066	0.18	0.41
Benzene	0.071	0.080	0.23	0.26
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
Toluene	0.071	0.13	0.27	0.48
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,2-Dibromoethane (EDB)	0.028	Not Detected	0.22	Not Detected
Ethyl Benzene	0.028	Not Detected	0.12	Not Detected
m,p-Xylene	0.057	0.061	0.25	0.26
o-Xylene	0.028	Not Detected	0.12	Not Detected
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.028	Not Detected	0.17	Not Detected
Naphthalene	0.071	Not Detected	0.37	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	89	70-130	



#### Client Sample ID: OA-2 Lab ID#: 2205752-06A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22061009sim 1.59	Date of Collection: 5/26/22 10:05:00 Date of Analysis: 6/10/22 03:32 PM		6/22 10:05:00 22 03:32 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.080	0.36	0.39	1.8
Freon 114	0.032	Not Detected	0.22	Not Detected
Chloromethane	0.80	Not Detected	1.6	Not Detected
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
Chloroform	0.032	0.038	0.16	0.18
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Carbon Tetrachloride	0.032	0.068	0.20	0.43
Benzene	0.080	Not Detected	0.25	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Toluene	0.080	0.11	0.30	0.42
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected
1,2-Dibromoethane (EDB)	0.032	Not Detected	0.24	Not Detected
Ethyl Benzene	0.032	Not Detected	0.14	Not Detected
m,p-Xylene	0.064	Not Detected	0.28	Not Detected
o-Xylene	0.032	Not Detected	0.14	Not Detected
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
1,4-Dichlorobenzene	0.032	Not Detected	0.19	Not Detected
Naphthalene	0.080	Not Detected	0.42	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	108	70-130	
4-Bromofluorobenzene	88	70-130	



#### Client Sample ID: Lab Blank Lab ID#: 2205752-07A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22060908sim 1 00	Date	of Collection: NA	2 01·11 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.050	Not Detected	0.25	Not Detected
Freon 114	0.020	Not Detected	0.14	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Chloroform	0.020	Not Detected	0.098	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.050	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,2-Dibromoethane (EDB)	0.020	Not Detected	0.15	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
1,4-Dichlorobenzene	0.020	Not Detected	0.12	Not Detected
Naphthalene	0.050	Not Detected	0.26	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	104	70-130	
4-Bromofluorobenzene	84	70-130	



#### Client Sample ID: Lab Blank Lab ID#: 2205752-07B MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22061007sim 1.00	Date Date	of Collection: NA of Analysis: 6/10/	22 01:47 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.050	Not Detected	0.25	Not Detected
Freon 114	0.020	Not Detected	0.14	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Chloroform	0.020	Not Detected	0.098	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.050	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,2-Dibromoethane (EDB)	0.020	Not Detected	0.15	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
1,4-Dichlorobenzene	0.020	Not Detected	0.12	Not Detected
Naphthalene	0.050	Not Detected	0.26	Not Detected

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	84	70-130	



#### Client Sample ID: CCV Lab ID#: 2205752-08A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	22060902sim	Date of Colle	ection: NA
DII. Factor:	1.00	Date of Anal	ysis: 6/9/22 07:15 AM
Compound		%Recovery	
Freon 12		135 Q	
Freon 114		129	
Chloromethane		110	
Vinyl Chloride		128	
Chloroethane		133 Q	
1,1-Dichloroethene		117	
trans-1,2-Dichloroethene		123	
Methyl tert-butyl ether		120	
1,1-Dichloroethane		115	
cis-1,2-Dichloroethene		98	
Chloroform		104	
1,1,1-Trichloroethane		102	
Carbon Tetrachloride		117	
Benzene		104	
1,2-Dichloroethane		114	
Trichloroethene		104	
Toluene		104	
1,1,2-Trichloroethane		102	
Tetrachloroethene		96	
1,2-Dibromoethane (EDB)		99	
Ethyl Benzene		104	
m,p-Xylene		98	
o-Xylene		95	
1,1,2,2-Tetrachloroethane		101	
1,4-Dichlorobenzene		98	
Naphthalene		93	

#### Q = Exceeds Quality Control limits.

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	112	70-130	
4-Bromofluorobenzene	94	70-130	



#### Client Sample ID: CCV Lab ID#: 2205752-08B MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	22061002sim 1.00	D	ate of Collection: NA ate of Analysis:  6/10/22 09:52 AM
Compound		%Recovery	
Freon 12		86	
Freon 114		81	
Chloromethane		77	
Vinyl Chloride		88	
Chloroethane		91	
1,1-Dichloroethene		77	
trans-1,2-Dichloroethene		82	
Methyl tert-butyl ether		84	
1,1-Dichloroethane		93	
cis-1,2-Dichloroethene		99	
Chloroform		104	
1,1,1-Trichloroethane		100	
Carbon Tetrachloride		112	
Benzene		104	
1,2-Dichloroethane		106	
Trichloroethene		99	
Toluene		101	
1,1,2-Trichloroethane		102	
Tetrachloroethene		92	
1,2-Dibromoethane (EDB)		98	
Ethyl Benzene		104	
m,p-Xylene		101	
o-Xylene		98	
1,1,2,2-Tetrachloroethane		104	
1,4-Dichlorobenzene		99	
Naphthalene		97	

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	113	70-130	
4-Bromofluorobenzene	93	70-130	



#### Client Sample ID: LCS Lab ID#: 2205752-09A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	22060903sim	Date of Co	ollection: NA
Dil. Factor:	1.00	Date of Ar	nalysis: 6/9/22 08:39 AM
			Method
Compound		%Recovery	Limits
Freon 12		134 Q	70-130
Freon 114		128	70-130
Chloromethane		109	70-130
Vinyl Chloride		127	70-130
Chloroethane		132 Q	70-130
1,1-Dichloroethene		114	70-130
trans-1,2-Dichloroethene		122	70-130
Methyl tert-butyl ether		120	70-130
1,1-Dichloroethane		112	70-130
cis-1,2-Dichloroethene		95	70-130
Chloroform		100	70-130
1,1,1-Trichloroethane		101	70-130
Carbon Tetrachloride		115	60-140
Benzene		102	70-130
1,2-Dichloroethane		111	70-130
Trichloroethene		102	70-130
Toluene		100	70-130
1,1,2-Trichloroethane		103	70-130
Tetrachloroethene		92	70-130
1,2-Dibromoethane (EDB)		95	70-130
Ethyl Benzene		102	70-130
m,p-Xylene		96	70-130
o-Xylene		91	70-130
1,1,2,2-Tetrachloroethane		99	70-130
1,4-Dichlorobenzene		92	70-130
Naphthalene		96	60-140

#### Q = Exceeds Quality Control limits.

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	93	70-130



#### Client Sample ID: LCSD Lab ID#: 2205752-09AA MODIFIED EPA METHOD TO-15 GC/MS SIM

Т

File Name:	22060906sim	Date of	Collection: NA
DII. Factor:	1.00	Date of	Analysis: 6/9/22 11:36 AM
Company		0/ <b>D</b> = = = = = = = =	Method
Compound		%Recovery	Limits
Freon 12		135 Q	70-130
Freon 114		130	70-130
Chloromethane		112	70-130
Vinyl Chloride		129	70-130
Chloroethane		132 Q	70-130
1,1-Dichloroethene		117	70-130
trans-1,2-Dichloroethene		125	70-130
Methyl tert-butyl ether		122	70-130
1,1-Dichloroethane		116	70-130
cis-1,2-Dichloroethene		98	70-130
Chloroform		103	70-130
1,1,1-Trichloroethane		103	70-130
Carbon Tetrachloride		117	60-140
Benzene		102	70-130
1,2-Dichloroethane		112	70-130
Trichloroethene		102	70-130
Toluene		100	70-130
1,1,2-Trichloroethane		105	70-130
Tetrachloroethene		96	70-130
1,2-Dibromoethane (EDB)		100	70-130
Ethyl Benzene		105	70-130
m,p-Xylene		99	70-130
o-Xylene		95	70-130
1,1,2,2-Tetrachloroethane		103	70-130
1,4-Dichlorobenzene		95	70-130
Naphthalene		99	60-140

#### Q = Exceeds Quality Control limits.

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	110	70-130	
Toluene-d8	111	70-130	
4-Bromofluorobenzene	91	70-130	



#### Client Sample ID: LCS Lab ID#: 2205752-09B MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	22061003sim 1.00	Date of C Date of A	ollection: NA nalysis: 6/10/22 10:50 AM
Compound		%Recovery	Method Limits
Freon 12		84	70-130
Freon 114		80	70-130
Chloromethane		75	70-130
Vinyl Chloride		86	70-130
Chloroethane		90	70-130
1,1-Dichloroethene		74	70-130
trans-1,2-Dichloroethene		80	70-130
Methyl tert-butyl ether		82	70-130
1,1-Dichloroethane		90	70-130
cis-1,2-Dichloroethene		96	70-130
Chloroform		100	70-130
1,1,1-Trichloroethane		98	70-130
Carbon Tetrachloride		110	60-140
Benzene		104	70-130
1,2-Dichloroethane		106	70-130
Trichloroethene		99	70-130
Toluene		100	70-130
1,1,2-Trichloroethane		102	70-130
Tetrachloroethene		91	70-130
1,2-Dibromoethane (EDB)		94	70-130
Ethyl Benzene		103	70-130
m,p-Xylene		98	70-130
o-Xylene		94	70-130
1,1,2,2-Tetrachloroethane		102	70-130
1,4-Dichlorobenzene		94	70-130
Naphthalene		106	60-140

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	114	70-130	
4-Bromofluorobenzene	91	70-130	



#### Client Sample ID: LCSD Lab ID#: 2205752-09BB MODIFIED EPA METHOD TO-15 GC/MS SIM

Т

File Name: Dil. Factor:	22061004sim 1.00	Date o Date o	of Collection: NA of Analysis: 6/10/22 11:30 AM
Compound		%Recovery	Method Limits
Freon 12		82	70-130
Freon 114		78	70-130
Chloromethane		75	70-130
Vinyl Chloride		84	70-130
Chloroethane		86	70-130
1,1-Dichloroethene		72	70-130
trans-1,2-Dichloroethene		78	70-130
Methyl tert-butyl ether		80	70-130
1,1-Dichloroethane		87	70-130
cis-1,2-Dichloroethene		94	70-130
Chloroform		97	70-130
1,1,1-Trichloroethane		96	70-130
Carbon Tetrachloride		107	60-140
Benzene		102	70-130
1,2-Dichloroethane		103	70-130
Trichloroethene		96	70-130
Toluene		98	70-130
1,1,2-Trichloroethane		102	70-130
Tetrachloroethene		90	70-130
1,2-Dibromoethane (EDB)		93	70-130
Ethyl Benzene		102	70-130
m,p-Xylene		97	70-130
o-Xylene		94	70-130
1,1,2,2-Tetrachloroethane		101	70-130
1,4-Dichlorobenzene		93	70-130
Naphthalene		107	60-140

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	113	70-130	
4-Bromofluorobenzene	90	70-130	

Application for Authorization to Use

# Appendix B



Converse Project No. 16-42-194-15 Copyright 2022 Converse Consultants



# **Application for Authorization to Use**

TO: **Converse Consultants** 717 S. Myrtle Avenue Monrovia, California 91016

	Project Title & Date: Project Address:
FROM: reference	(Please identify name & address of person/entity applying for permission to use the ed report.)
Applica	ant hereby applies for permission to use the referenced report in order to:
Applicant	t wishes or needs to use the referenced report because:
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Applicant Signature:	
Applicant Name (print):	
Title:	
Date:	



