TETRA TECH

Memo

To:	Ryan Weyker – ACS
Cc:	Chris Bonniwell – Tetra Tech
From:	Connor Lauzon – Tetra Tech
Date:	June 11, 2025
Subject:	Marriott TownePlace Suites – May 2025 Indoor Air – BRRTS #02-67-554753

This Technical Memorandum (memo) was prepared by Tetra Tech, Inc. to summarize the May 2025 indoor air sampling and compile data from the commissioning sampling conducted at the Marriott TownePlace Suites building (Site). The Site is identified in the Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment Tracking System (BRRTS) as site #02-67-554753.

At the request of the WDNR and as part of the commissioning demonstration of the effectiveness of the installed vapor mitigation system (VMS), Tetra Tech recently performed indoor air sampling at the Site during May 2025. The May 2025 sampling round represents the second of three rounds of indoor air sampling required by the WDNR for system commissioning.

In May 2025, indoor air sampling was performed in a manner consistent with previous sampling events that utilized Radiello RAD130 passive sampling media. The devices were deployed at each sampling location from 5/6/25 to 5/15/25. Following the deployment period, Tetra Tech retrieved the sampling media and shipped to Eurofins Air Toxics laboratory for analysis of Tetrachloroethylene (PCE), Trichloroethylene (TCE), cis-1,2 dichloroethylene, and trans-1,2 dichloroethylene. Sampling locations are depicted on **Figure 1.**

The laboratory analytical results showed that none of the contaminants of concern were detected at any of the locations sampled during the May 2025 sampling round. Cumulative indoor air analytical results for the Site, including results from the initial September 2023 event, are shown in **Table 1**.

Coinciding with the indoor air sampling, a round of pressure field measurements was collected from the seven vapor pins located throughout the slab of the building. Of the seven measured locations, all showed pressure differentials of greater than -0.004, indicating that the installed VMS is effectively depressurizing the sub-slab. PFE readings from the last four rounds of measurement are shown in **Table 2**.

In accordance with WDNR guidance, the third and final round of indoor air sampling and PFE measurements is scheduled to take place in June 2025, during a period of historically high water table.

Tetra Tech, Inc
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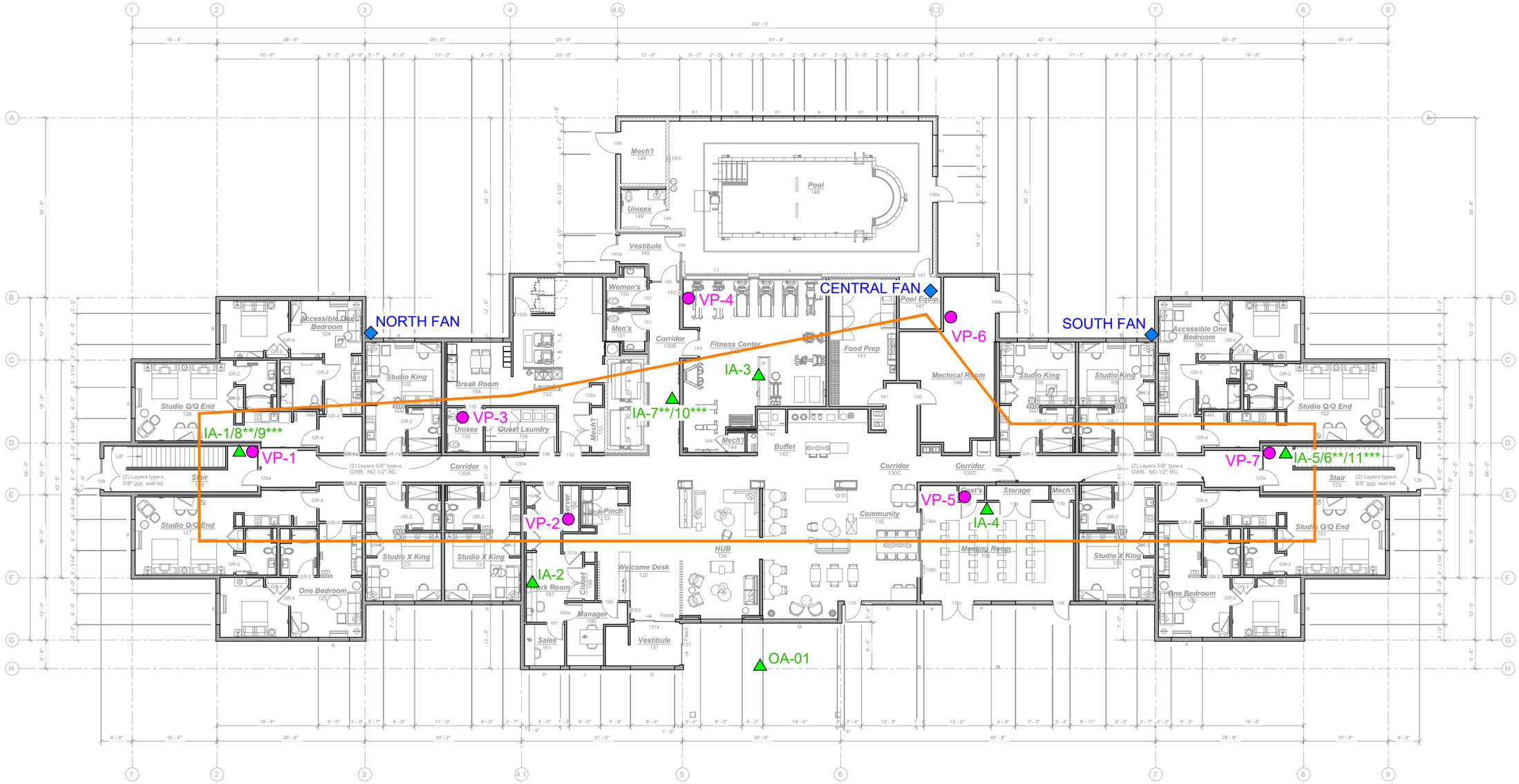
CERTIFICATION

Hydrogeologist:

I, Connor Lauzon, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Connor Lauzon, P.G. #2002-13
Project Manager

FIGURES



LEGEND

VP-2 ●	VAPOR PIN LOCATION
◆	SUB SLAB SOIL VAPOR EXTRACTION FAN
IA-2 ▲	INDOOR AIR SAMPLE LOCATION
━	PERFORATED PIPE LINE
**	SECOND FLOOR SAMPLE
***	THIRD FLOOR SAMPLE

SCALE

0 40

Feet

TITLE: SYSTEM LAYOUT AND SAMPLING LOCATIONS

LOCATION: TIF DISTRICT #12, WEST BEND, WISCONSIN

TETRA TECH

CHECKED	CL
DRAFTED	CP
PROJECT	117-328416-24012
DATE	04/22/25

FIGURE: 1

S:\CITY OF WEST BEND\APRIL 2025\HOTEL A-101 VAPOR PIN LOCATIONS 04-11-25.DWG

TABLES

Table 1 - Cumulative Indoor Air Sampling Results
Marriott TownePlace Suites
West Bend, Wisconsin

Sample	Location	Floor	Date	TCE (µg/m^3)	PCE (µg/m^3)	Cis (µg/m^3)	trans (µg/m^3)
Small Commercial VAL (µg/m^3)				**8.8**	**180**	**180**	**180**
IA-1 (Former ID: MIA-4)	North Stairwell	1	9/18/23	**1.2**	**0.26**	**0.47**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-2 (Former ID: MIA-1)	Reception	1	9/18/23	**1.7**	**0.38**	**0.59**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-3 (Former ID: MIA-2)	Fitness Center	1	9/18/23	**1.3**	**0.30**	**0.63**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-4	Conference Room	1	3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-5 (Former ID: MIA-3)	South Stairwell	1	9/18/23	**3.2**	**0.32**	**1.3**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-6 (Former ID: MIA-7)	South Stairwell	2	9/18/23	**1.4**	**0.19**	**0.44**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-7 (Former ID: MIA-6)	Elevator Landing	2	9/18/23	**1.1**	**0.22**	**0.37**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-8 (Former ID: MIA-5)	North Stairwell	2	9/18/23	**0.76**	**0.20**	**0.25**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-9 (Former ID: MIA-10)	North Stairwell	3	9/18/23	**0.72**	**0.18**	**0.27**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-10 (Former ID: MIA-9)	Elevator Landing	3	9/18/23	**1.0**	**0.25**	**0.34**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
IA-11 (Former ID: MIA-8)	South Stairwell	3	9/18/23	**1.0**	**0.18**	**0.35**	<0.20
			3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26
OA-01	Outdoor Patio Area	1	3/24/25	<0.10	<0.12	<0.11	<0.23
			5/15/25	<0.11	<0.13	<0.13	<0.26

Dashed line differentiates pre and post VMS upgrade timeframes
Radiello passive indoor air samples collected from 9/7/23 - 9/18/23
Radiello passive indoor air samples collected from 3/14/25 - 3/24/25
Radiello passive indoor air samples collected from 5/6/25 - 5/15/25
TCE - Trichloroethylene
PCE - Tetrachloroethylene
Cis - cis-1,2-Dichloroethene
trans - trans-1,2-Dichloroethene
Bold values denote detections greater than the reporting limit
Denotes exceedance of Small Commercial VAL
Denotes exceedance of 3X Small Commercial VAL

Table 2 - Pressure Field Measurements

Marriott TownePlace Suites

West Bend, WI

Location	3/29/24 in WC	9/25/24 in WC	3/14/25 in WC	5/6/25 in WC	Notes
North Fan	nm	-1.0	-2.0	-1.6	Supplemental
Central Fan	-2.0	nm	-2.2	-2.1	Original
South Fan	nm	-1.2	-1.0	-0.8	Supplemental
VP-1	0.030	-0.042	-0.026	-0.039	
VP-2	0.034	-0.020	-0.009	-0.025	
VP-3	0.020	-0.048	-0.042	-0.052	
VP-4	0.038	-0.052	-0.042	-0.044	
VP-5	0.043	-0.029	-0.021	-0.041	
VP-6	0.025	-0.095	-0.088	-0.109	
VP-7	0.042	-0.022	-0.014	-0.032	

nm - Not measured

Supplemental fans installed 9/4/24

Dashed line differentiates pre and post VMS upgrade timeframes

ATTACHMENTS

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Analytical Report

6/9/2025

Connor Lauzon
Tetra Tech
13555 Bishops Ct
Ste 201
Brookfield WI 53005

Project Name: ACS-Marriott
Project #:
Workorder #: 2505433

Dear Connor Lauzon

The following report includes the data for the above referenced project for sample(s) received on 5/16/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. RAD130/SKC 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: Alexander Mojica at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Alexander Mojica

Project Manager

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WORK ORDER #: 2505433

Work Order Summary

CLIENT:	Connor Lauzon Tetra Tech 13555 Bishops Ct Ste 201 Brookfield, WI 53005	**BILL TO:**	Connor Lauzon Tetra Tech 13555 Bishops Ct Ste 201 Brookfield, WI 53005
PHONE:		**P.O. #**	117-328416-24012
FAX:		**PROJECT #**	ACS-Marriott
DATE RECEIVED:	05/16/2025	**CONTACT:**	Alexander Mojica
DATE COMPLETED:	05/29/2025		

FRACTION #	NAME	TEST
01A	IA-1	Passive S.E. RAD130/SKC
02A	IA-2	Passive S.E. RAD130/SKC
03A	IA-3	Passive S.E. RAD130/SKC
04A	IA-4	Passive S.E. RAD130/SKC
05A	IA-5	Passive S.E. RAD130/SKC
06A	IA-6	Passive S.E. RAD130/SKC
07A	IA-7	Passive S.E. RAD130/SKC
08A	IA-8	Passive S.E. RAD130/SKC
09A	IA-9	Passive S.E. RAD130/SKC
10A	IA-10	Passive S.E. RAD130/SKC
11A	IA-11	Passive S.E. RAD130/SKC
12A	OA-01	Passive S.E. RAD130/SKC
13A	Lab Blank	Passive S.E. RAD130/SKC
14A	CCV	Passive S.E. RAD130/SKC
14B	CCV	Passive S.E. RAD130/SKC
15A	LCS	Passive S.E. RAD130/SKC
15AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes DATE: 05/29/25

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2836569, NH NELAP–209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
Tetra Tech
Workorder# 2505433

Twelve Radiello 130 (Solvent) samples were received on May 16, 2025. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

The samples arrived at the laboratory without a Chain of Custody (COC). The client subsequently provided the COC by e-mail on 5/16/25.

The Chain of Custody (COC) was not relinquished properly. A time was not provided by the field sampler.

Analytical Notes

The cartridge casing for sample IA-8 was received broken with the sample sorbent still contained in the outer glass storage vial. The sample preparation and analysis proceeded.

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 12907 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten 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.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

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

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: IA-1

Lab ID#: 2505433-01A

No Detections Were Found.

Client Sample ID: IA-2

Lab ID#: 2505433-02A

No Detections Were Found.

Client Sample ID: IA-3

Lab ID#: 2505433-03A

No Detections Were Found.

Client Sample ID: IA-4

Lab ID#: 2505433-04A

No Detections Were Found.

Client Sample ID: IA-5

Lab ID#: 2505433-05A

No Detections Were Found.

Client Sample ID: IA-6

Lab ID#: 2505433-06A

No Detections Were Found.

Client Sample ID: IA-7

Lab ID#: 2505433-07A

No Detections Were Found.

Client Sample ID: IA-8

Lab ID#: 2505433-08A

No Detections Were Found.

Client Sample ID: IA-9

Lab ID#: 2505433-09A

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: IA-9

Lab ID#: 2505433-09A

No Detections Were Found.

Client Sample ID: IA-10

Lab ID#: 2505433-10A

No Detections Were Found.

Client Sample ID: IA-11

Lab ID#: 2505433-11A

No Detections Were Found.

Client Sample ID: OA-01

Lab ID#: 2505433-12A

No Detections Were Found.

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Client Sample ID: IA-1

Lab ID#: 2505433-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051911sim**	**Date of Collection: 5/15/25 8:55:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 01:04 PM**
		Date of Extraction: 5/19/25

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12905 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-2

Lab ID#: 2505433-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051912sim**	**Date of Collection: 5/15/25 8:59:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 01:31 PM**
		Date of Extraction: 5/19/25

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12907 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-3

Lab ID#: 2505433-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051913sim**	**Date of Collection: 5/15/25 9:02:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 01:58 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12907 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

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Client Sample ID: IA-4

Lab ID#: 2505433-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051914sim**	**Date of Collection: 5/15/25 9:04:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 02:25 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12904 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-5

Lab ID#: 2505433-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c052004sim**	**Date of Collection: 5/15/25 9:06:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/25 10:51 AM**
		Date of Extraction: 5/19/25

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12904 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-6

Lab ID#: 2505433-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051916sim**	**Date of Collection: 5/15/25 9:08:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 03:19 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12903 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-7

Lab ID#: 2505433-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051917sim**	**Date of Collection: 5/15/25 9:11:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 03:46 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12902 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

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Client Sample ID: IA-8

Lab ID#: 2505433-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051918sim**	**Date of Collection: 5/15/25 9:13:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 04:13 PM**
		Date of Extraction: 5/19/25

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12901 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: IA-9

Lab ID#: 2505433-09A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c052005sim**	**Date of Collection: 5/15/25 9:15:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/25 11:18 AM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12901 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: IA-10

Lab ID#: 2505433-10A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051920sim**	**Date of Collection: 5/15/25 9:17:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 05:07 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12899 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

eurofins | Air Toxics

Client Sample ID: IA-11

Lab ID#: 2505433-11A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051921sim**	**Date of Collection: 5/15/25 9:20:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 05:34 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12899 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: OA-01

Lab ID#: 2505433-12A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051922sim**	**Date of Collection: 5/15/25 9:24:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 06:01 PM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12894 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2505433-13A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051905sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 10:11 AM**	
		Date of Extraction: 5/19/25	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.11	Not Detected	Not Detected
Tetrachloroethene	0.10	0.13	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.26	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 12907 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 2505433-14A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051902sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 08:46 AM**
		Date of Extraction: NA

Compound	%Recovery
Trichloroethene	117
Tetrachloroethene	116
cis-1,2-Dichloroethene	118
trans-1,2-Dichloroethene	121

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 2505433-14B

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c052002sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/25 09:51 AM**
		Date of Extraction: NA

Compound	%Recovery
Trichloroethene	110
Tetrachloroethene	119
cis-1,2-Dichloroethene	95
trans-1,2-Dichloroethene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 2505433-15A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051903sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 09:18 AM**	
		Date of Extraction: 5/19/25	

Compound	%Recovery	Method Limits
Trichloroethene	114	70-130
Tetrachloroethene	117	70-130
cis-1,2-Dichloroethene	105	70-130
trans-1,2-Dichloroethene	109	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 2505433-15AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c051904sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/19/25 09:44 AM**	
		Date of Extraction: 5/19/25	

Compound	%Recovery	Method Limits
Trichloroethene	109	70-130
Tetrachloroethene	118	70-130
cis-1,2-Dichloroethene	89	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Method : Passive SE GC/MS (Sh)-c/t-1,2-DCE, PCE & TCE

CAS Number	Compound	Rpt. Limit (ug)
79-01-6	**Trichloroethene**	**0.10**
127-18-4	Tetrachloroethene	0.10
156-59-2	**cis-1,2-Dichloroethene**	**0.10**
156-60-5	**trans-1,2-Dichloroethene**	**0.20**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130