

Air Quality Report

This report has been compiled utilizing data provided by San Diego County HAZMAT/ San Diego City Fire Rescue HAZMAT and Haley & Aldrich, Inc.

The information obtained from these sources has been carefully analyzed and incorporated to ensure the accuracy and reliability of the findings.

SDG&E Battery Fire
571 Enterprise Street
Start 9/5/2024 12:09
Repopulate 9/7/2024 12:00

Air quality monitored by San Diego County HAZMAT

- Three types of monitoring units
- First reading taken at 14:30 on 9/5/2024
- Final reading taken at 18:32 on 9/6/2024

Air monitoring equipment (SD HAZMAT)

1. EAGLE 2 CGI

Last calibrated on 8/30/2024 and was “zeroed” prior to use on incident.

Standard 4 gas monitor which measures:

Lower Explosive Limit -**LEL**

Oxygen -**O₂**

Hydrogen Sulfide-**H₂S**

Carbon Monoxide-**CO**

2. RedWave XplorIR

Self-Calibrates at device startup.

Identifies over 5,500 gases at low part per million (ppm) concentrations

3. MultiRAE Pro

Last calibrated on 8/30/2024 and “zeroed” prior to use on the incident.

Monitors both chemical threats and gamma radiation and is the only multi-threat monitor with parts per billion

Gases monitored

1. **PH₃ (Phosphine)**
2. **Cl₂ (Chlorine)**
3. **H₂S (Hydrogen Sulfide)**
4. **CO₂ (Carbon Dioxide)**
5. **HCN (Hydrogen Cyanide)**
6. **CO (Carbon Monoxide)**
7. **HF (Hydrofluoric Acid)**

Hazmat Exposure Terms

1. TWA (Time-Weighted Average)

- **Definition:** TWA refers to the average exposure to a hazardous substance (usually airborne) over a standard workday, typically 8 hours, and a 40-hour workweek.
- **Purpose:** It is used to assess the cumulative exposure a person may experience and is compared against permissible limits to ensure safety over long-term exposure.

2. STEL (Short-Term Exposure Limit)

- **Definition:** STEL is the maximum concentration to which a person can be exposed to a chemical substance for a short period, typically **15 minutes**, without suffering adverse effects like irritation, chronic or irreversible tissue damage, or narcosis.
- **Purpose:** It helps control exposure to hazardous substances during short bursts of high exposure within a workday.

3. PEL (Permissible Exposure Limit)

- **Definition:** PEL is the maximum amount or concentration of a substance that a person can be exposed to under OSHA (Occupational Safety and Health Administration) regulations over an 8-hour work shift (TWA) or a 40-hour workweek.
- **Purpose:** These are legally enforceable limits to protect workers from the harmful effects of hazardous chemicals and substances in the workplace.

4. REL (Recommended Exposure Limit)

- **Definition:** REL is a recommended exposure limit set by NIOSH (National Institute for Occupational Safety and Health) that suggests maximum allowable concentrations for exposure to substances over a workday or workweek.
- **Purpose:** These limits are non-enforceable but serve as guidelines for employers and regulators to ensure worker safety. They are typically more stringent than PELs.

5. IDLH (Immediately Dangerous to Life or Health)

- **Definition:** the maximum concentration of a chemical in the air to which a person can be exposed for **30 minutes** without suffering life-threatening health effects or death.
- **Purpose:** Determines when workers need to wear protective equipment, such as respirators, and **when emergency evacuation is necessary**. It is critical for ensuring worker safety in hazardous environments.

Summary:

- TWA refers to the average exposure over time.
- STEL refers to the limit for short-term exposures.
- PEL is a legally enforceable limit by OSHA.
- REL is a recommended limit by NIOSH (often more conservative than PEL).
- IDLH refers to the maximum level of a toxic substance in the air that a person can be exposed to for 30 minutes without experiencing life-threatening effects or being unable to escape.

OSHA and NIOSH exposure limits

1. Phosphine (PH3):

- OSHA PEL: 0.3 ppm (TWA)
- NIOSH REL: 0.3 ppm (TWA) / 1 ppm (STEL)
- IDLH 50 ppm

2. Chlorine (Cl2):

- OSHA PEL: 1 ppm (TWA) 3 ppm (STEL)
- NIOSH REL: 0.5 ppm (TWA) / 1 ppm (STEL)
- IDLH 10 ppm

3. Hydrogen Sulfide (H2S):

- OSHA PEL: 20 ppm (TWA) / 50 ppm (STEL)
- NIOSH REL: 10 ppm (TWA) / 15 ppm (STEL)
- IDLH 100 PPM

4. Carbon Dioxide (CO2):

- OSHA PEL: 5,000 ppm
- NIOSH REL: 5,000 ppm (TWA) / 30,000 ppm (STEL)
- IDLH 40,000 ppm

5. Hydrogen Cyanide (HCN):

- OSHA PEL: 10 ppm (TWA)
- NIOSH REL: 4.7 ppm (not to be exceeded)
- IDLH 50 ppm

6. Carbon Monoxide (CO):

- OSHA PEL: 50 ppm (TWA)
- NIOSH REL: 35 ppm (TWA) / 200 ppm (STEL)
- IDLH 1,200 ppm

7. Hydrofluoric Acid (HF):

- OSHA PEL: 3 ppm (TWA) 6 ppm (STEL)
- NIOSH REL: 3 ppm (TWA) 6 ppm (STEL)
- IDLH 30 ppm

SD County Hazmat Readings in Parts Per Million (PPM)

Location	Distance from Incident (ft)	Time	PH3	CL2	H2S	CO2	HCN	CO
Main Gate	315	14:30	0	0	0	0	0	0
Venture and Simpson	784	14:35	0	0	0	0	0	0
State St (All Enterprise and Auto Park)	1447	14:36	0	0	0	0	0	0
Enterprise Gate	776	18:15	0	0	0	0	0.5	0
Venture and Simpson	262	18:16	0	0	0	18	2	0
Venture and State	784	18:21	0	0	0	0	0.5	0
Market and Auto Park	1108	18:22	0	0	0	0	0.5	0
Vinewood and Industrial	2227	18:25	0	0	0	0	0	0
Andreasen and Simpson	2280	18:27	0	0	0	0	0.5	0
1287 Simpson	2522	18:29	0	0	0	0	0.5	0
	3943	18:32	0	0	0	0	0.5	0

*****Above readings are the peak (highest detected) readings during the entire incident*****

***** CO2 sensors are calibrated to account for typical atmospheric CO2 levels, which generally range between 400-420ppm. This ensures that variations above normal levels are easily detectable*****

*****Negative reading on Fluoride paper at all locations. Non detect for Hydrofluoric Acid (HF) at all sites*****

***** All readings taken were well below acceptable exposure limits and considered expected readings during a routine structure fire*****

Air quality monitored by SDG&E

- Via 3rd party contractor; Haley & Aldrich, INC.
- Two types of monitoring units
- First reading taken at 20:30 on 9/5/2024
- Final reading taken at 21:36 on 9/6/2024

Air monitoring equipment

1. RAE Systems MultiRAE with P2P
Calibrated on 9/5/2024.
Multi-threat chemical detector and gas monitor
2. TSI 7575-x Indoor air quality monitor utilizing the TSI 982 Sensor probe
Monitor calibrated on 8/29/2024.
Probe calibrated on 3/11/2024.
Used to monitor indoor air quality

Gases Monitored

- LEL (Lower Explosive Limit)
- HCN (Hydrogen Cyanide)
- CO (Carbon Monoxide)
- H₂S (Hydrogen Sulfide)
- O₂ (Oxygen)

***** Only Carbon Monoxide (CO) levels were detected and had readings above 0 but remained well below acceptable exposure limits. Elevated CO readings are expected result during a structure fire*****

*****Carbon monoxide (CO) levels may be detected in the environment due to various sources of incomplete combustion, including vehicle emissions*****

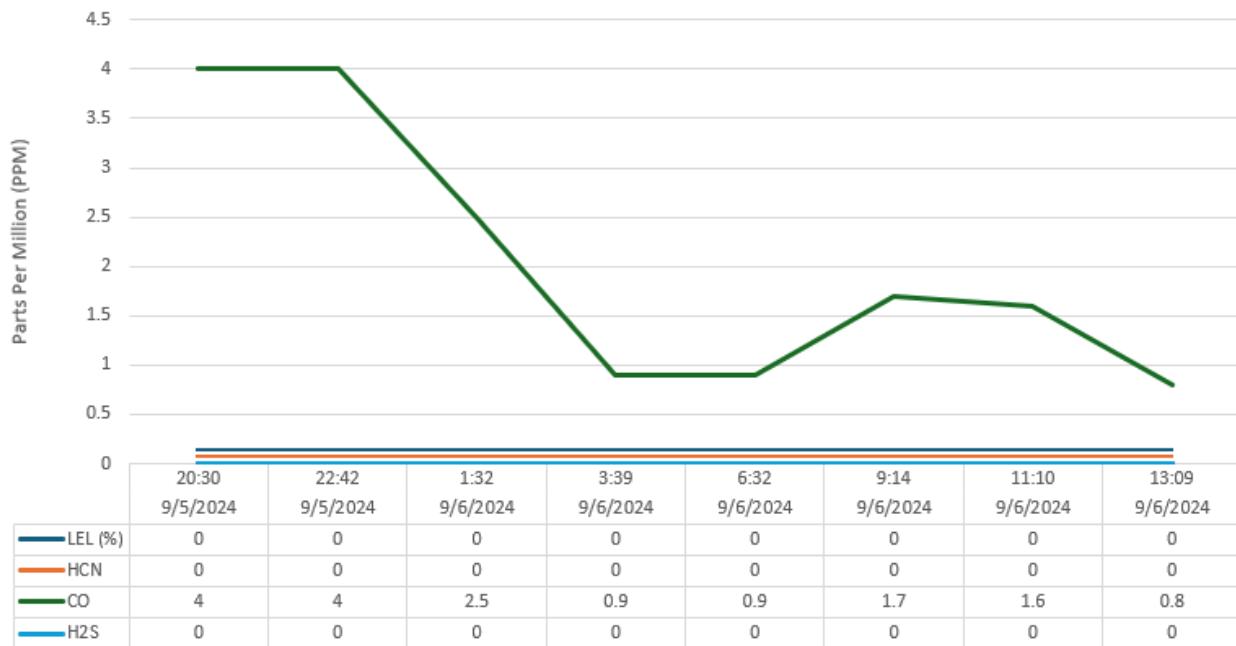
Haley & Aldrich, INC (SDG&E) Monitoring locations denoted in blue



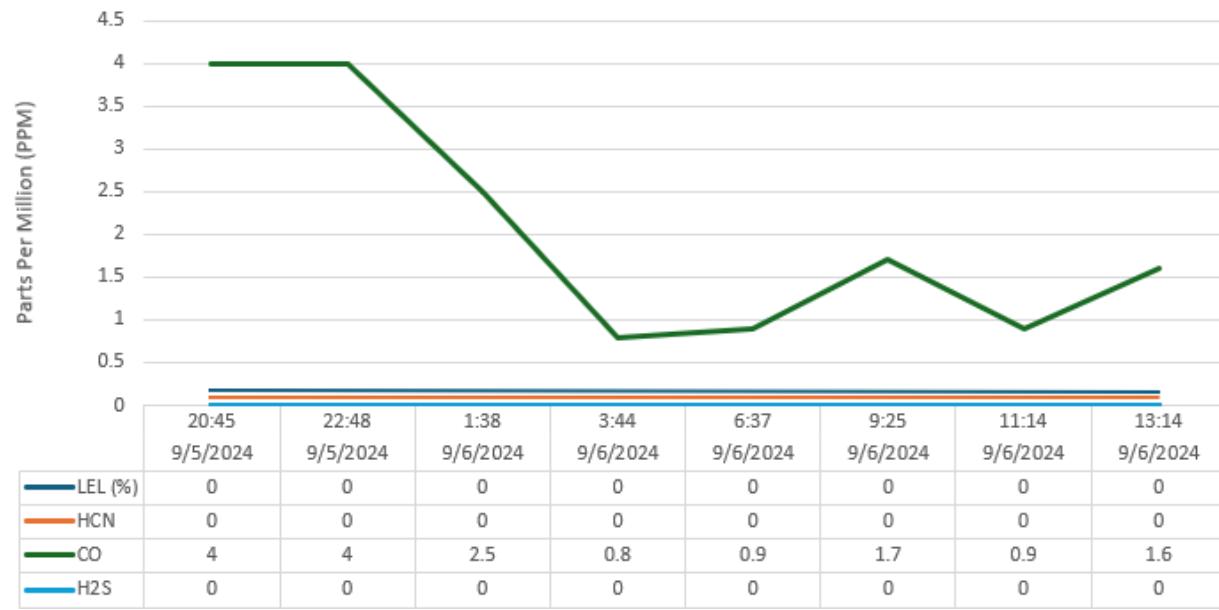
Monitoring Locations

1. **Incident location:** 571 Enterprise St South side of property
2. 571 Enterprise St: Stop sign in equipment yard
3. 571 Enterprise St: Breakroom
4. 571 Enterprise St: Substation
5. 1564 Mission Rd
6. 1856 Commercial St
7. 440 Venture
8. 446 Enterprise St
9. 555 Enterprise St
10. 630 Alpine Wy
11. Alpine Wy and Don Lee
12. Auto Park and Mission Rd
13. Auto Park and Alpine Wy
14. Auto Park and Enterprise
15. Auto Park and Citracado
16. Auto Park and Country Club Dr
17. Enterprise St and Mission Rd
18. Simpson Wy and Venture St

1. Air monitoring at SDG&E site location

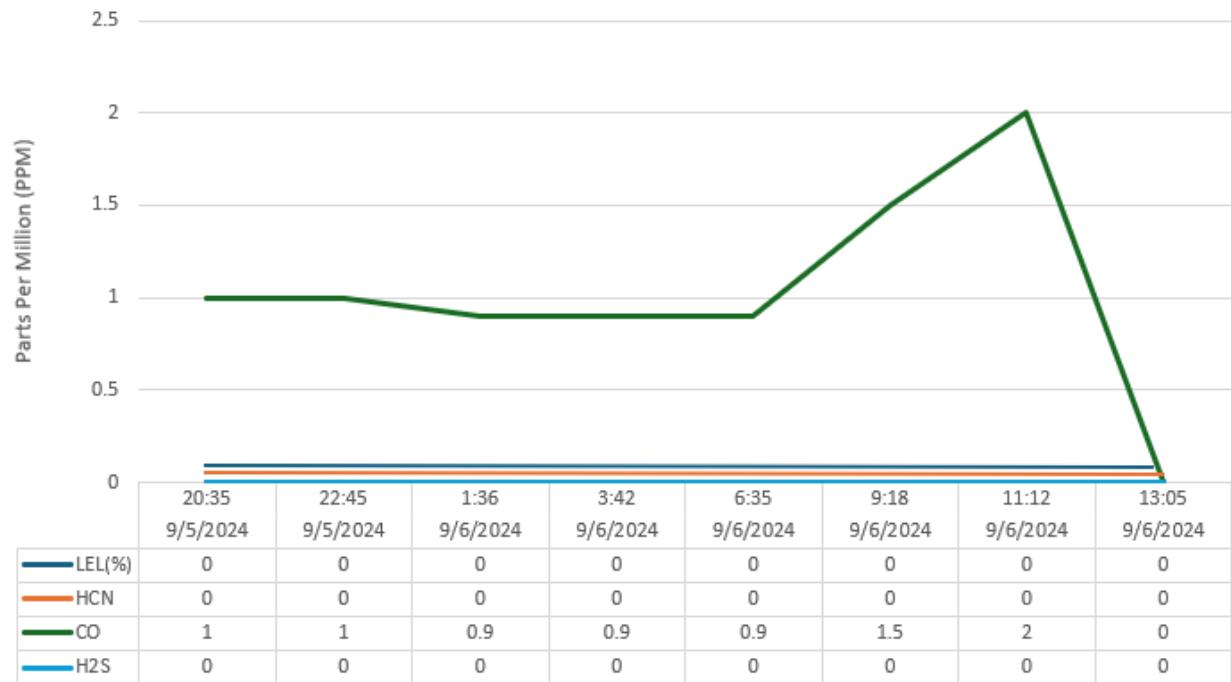


2. Air monitoring at Stop Sign NE corner of Equipment Storage yard

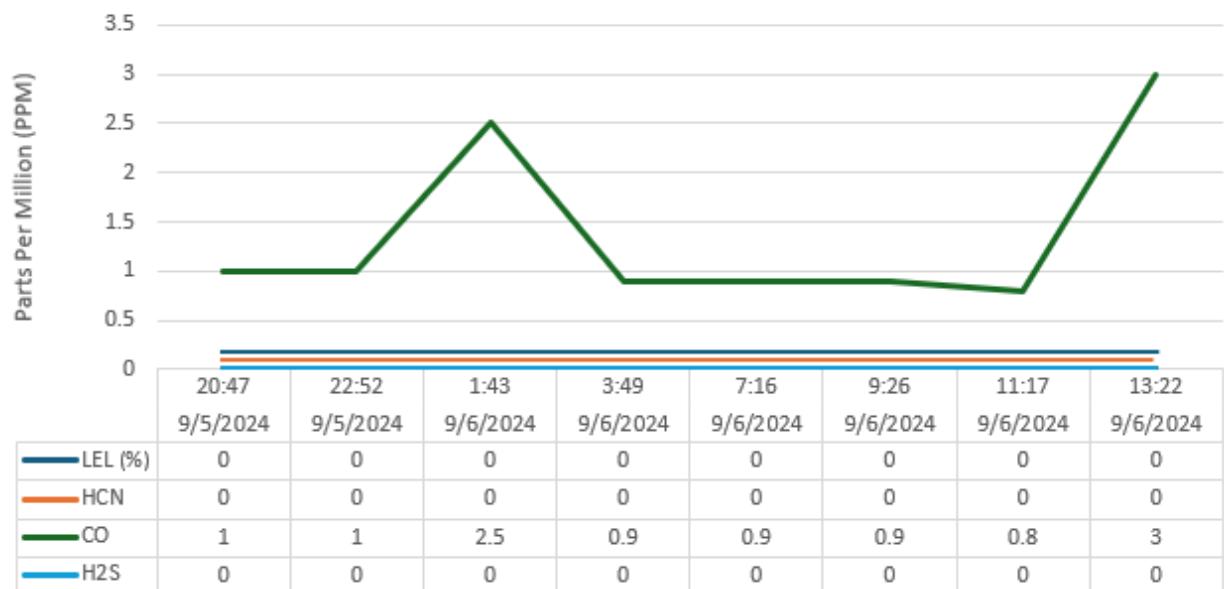


**Urban CO levels are typically higher than in rural areas due to vehicle emissions and industrial processes. Although average concentrations are low (0.5 to 5 ppm), they can increase near heavy traffic or industrial sites, especially during rush hours. The concentrations shown on the graphs remained significantly below harmful thresholds and do not pose any significant health risks **

3. Air monitoring at SDG&E Breakroom

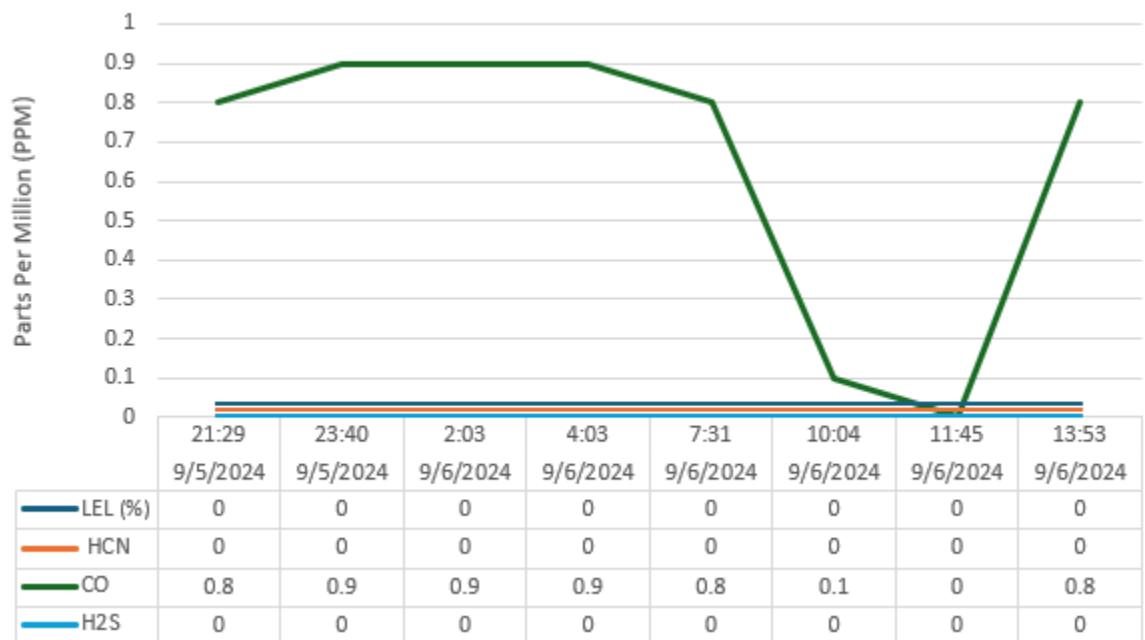


4. Air Monitoring at North SDG&E substation

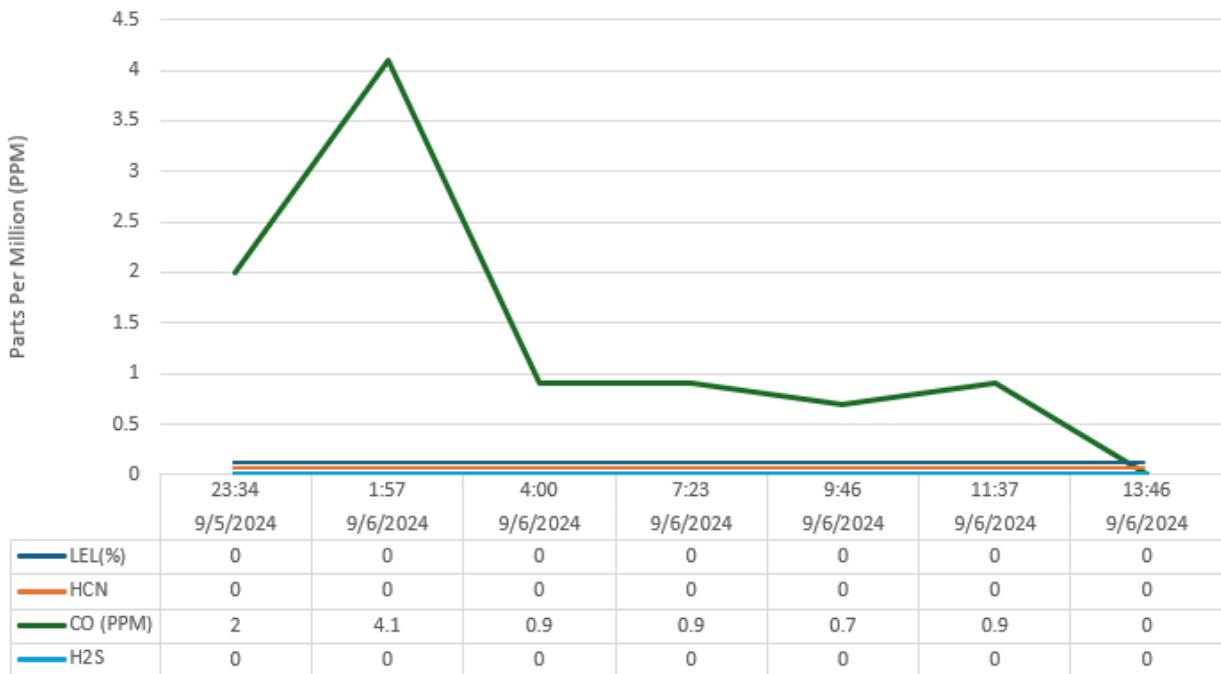


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5. Air monitoring at 1564 Mission Rd

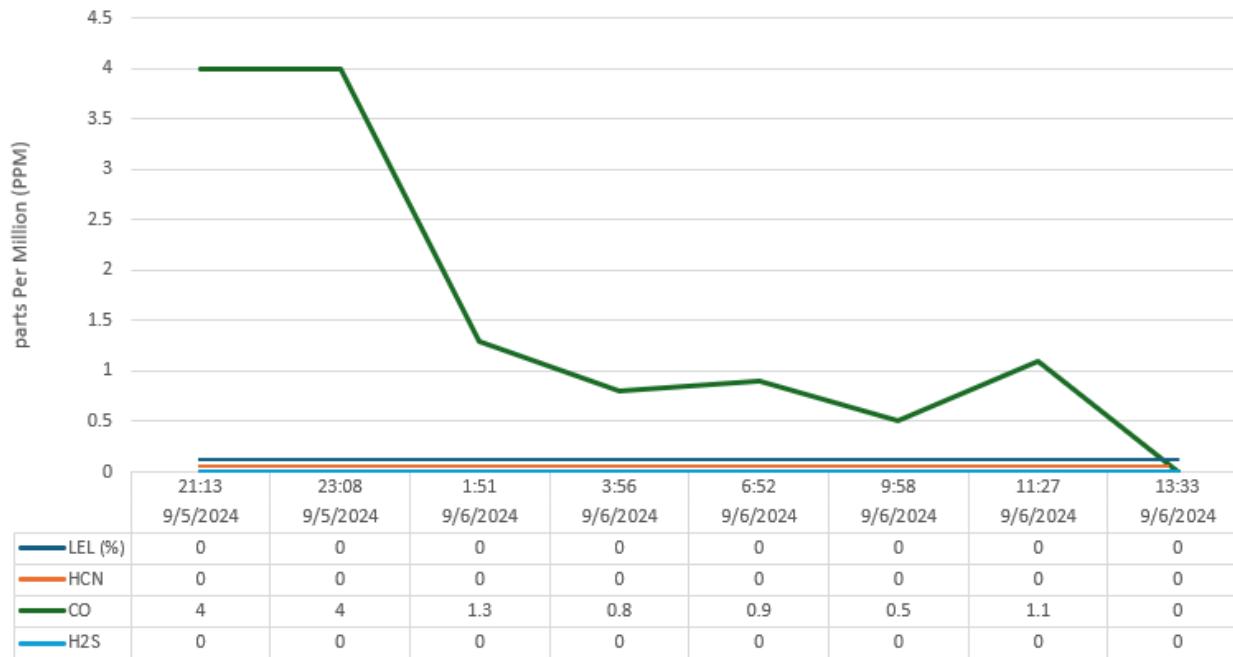


6. Air monitoring at 1856 Commercial St

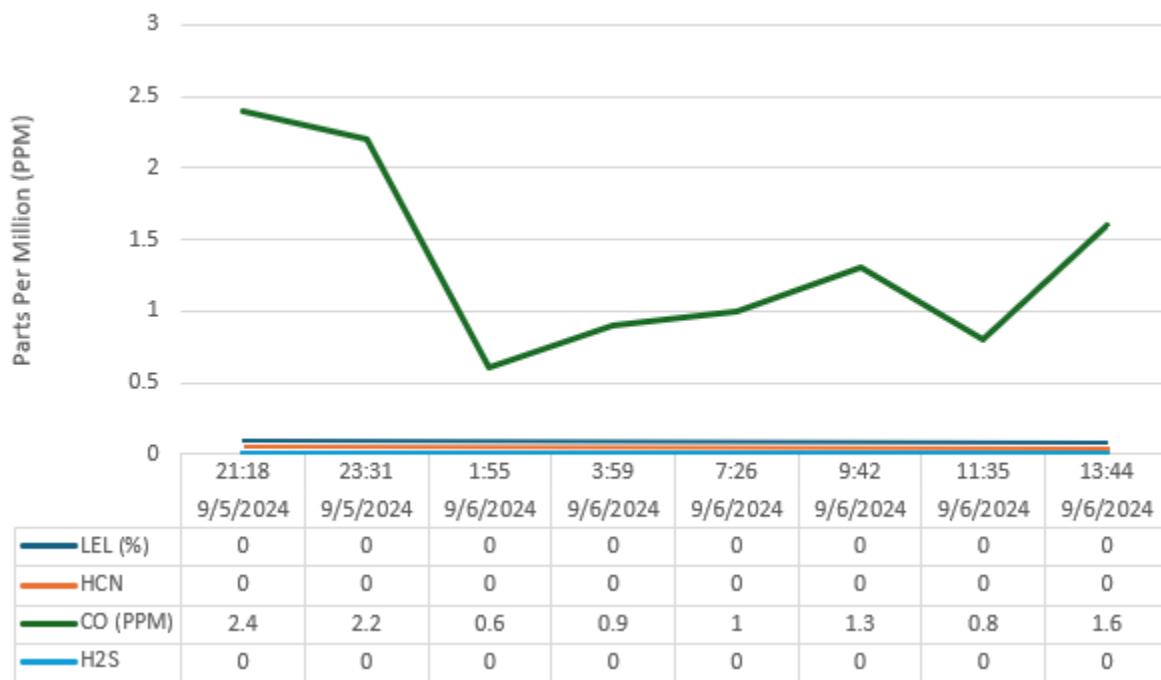


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7. Air monitoring at 440 Venture Rd

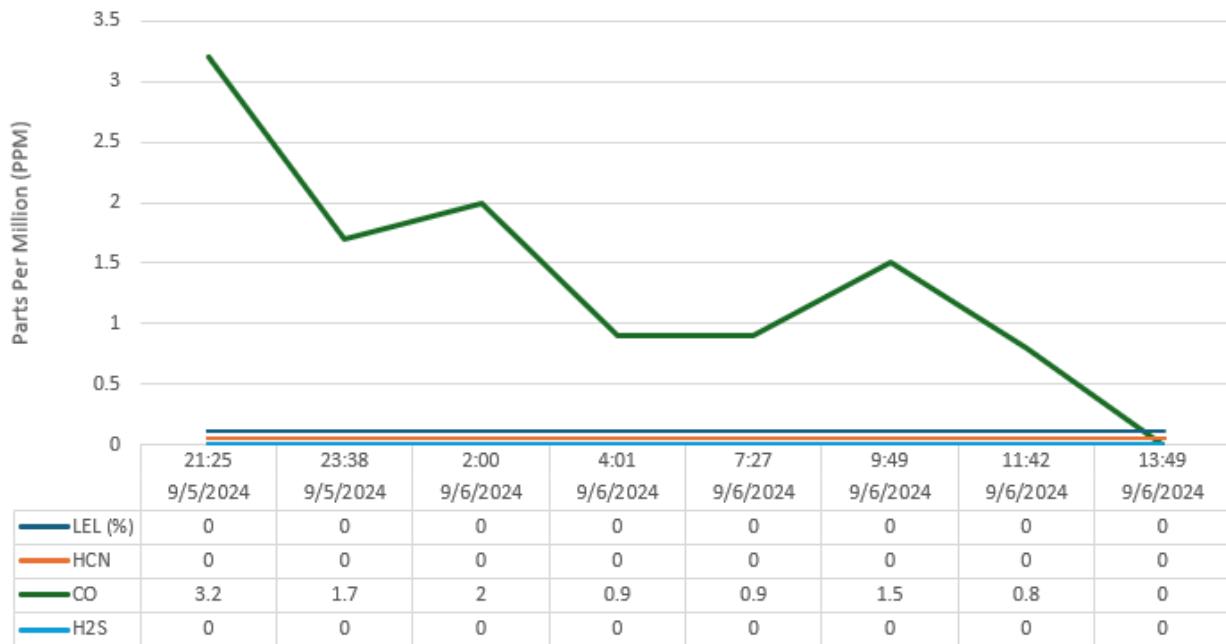


8. Air monitoring at 446 Enterprise

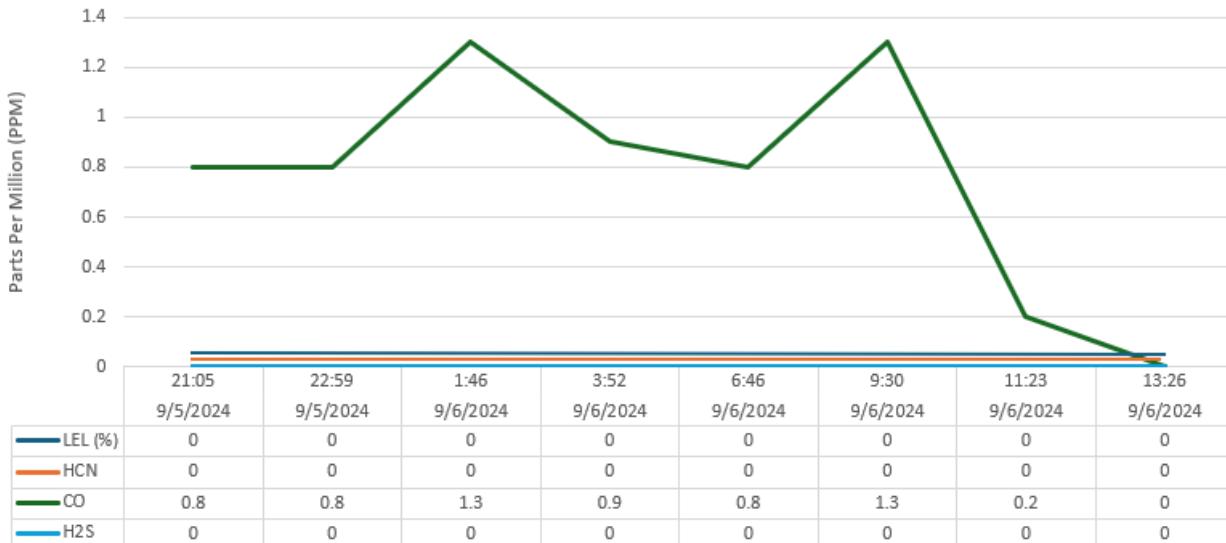


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9. Air monitoring at 555 Enterprise St

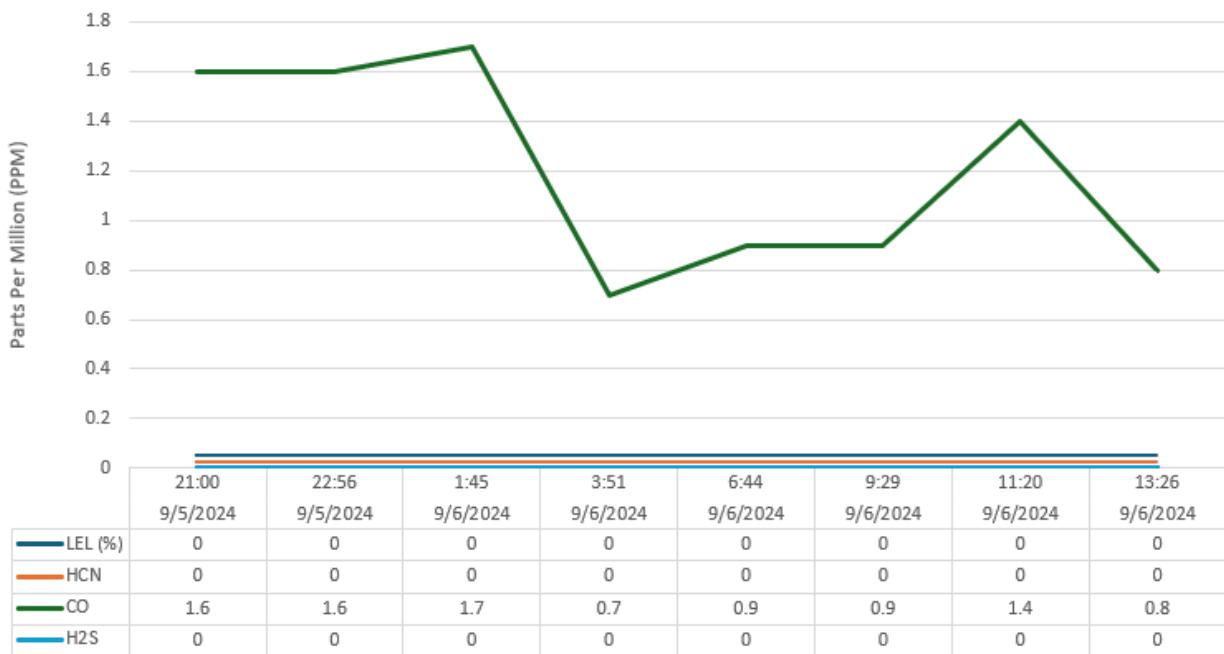


10. Air monitoring at 630 Alpine Wy

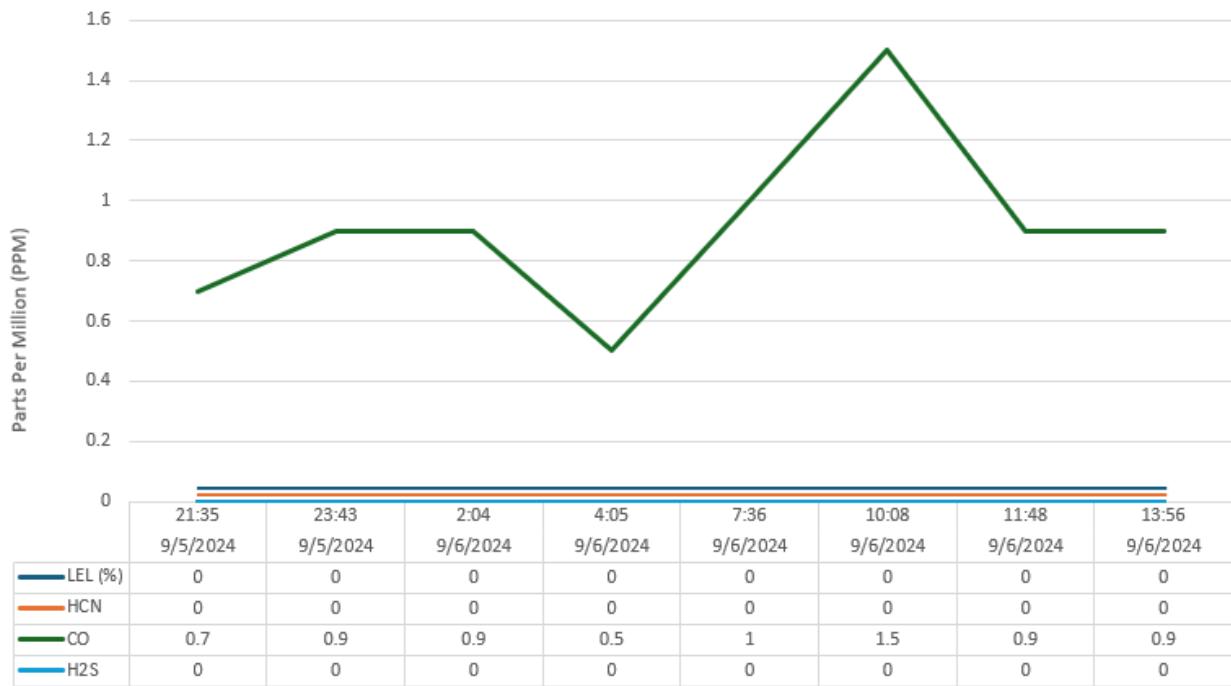


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11. Air monitoring at Alpine Wy and Don Lee

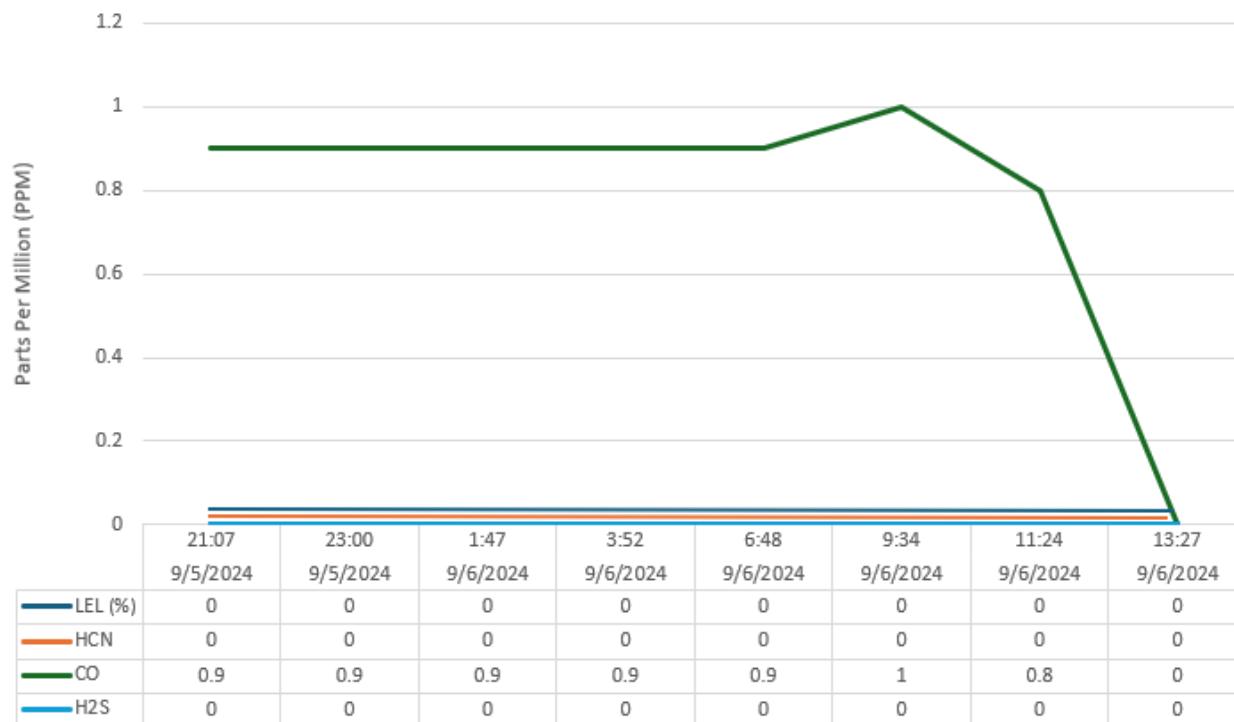


12. Air monitoring at Auto Park Way and Mission Rd

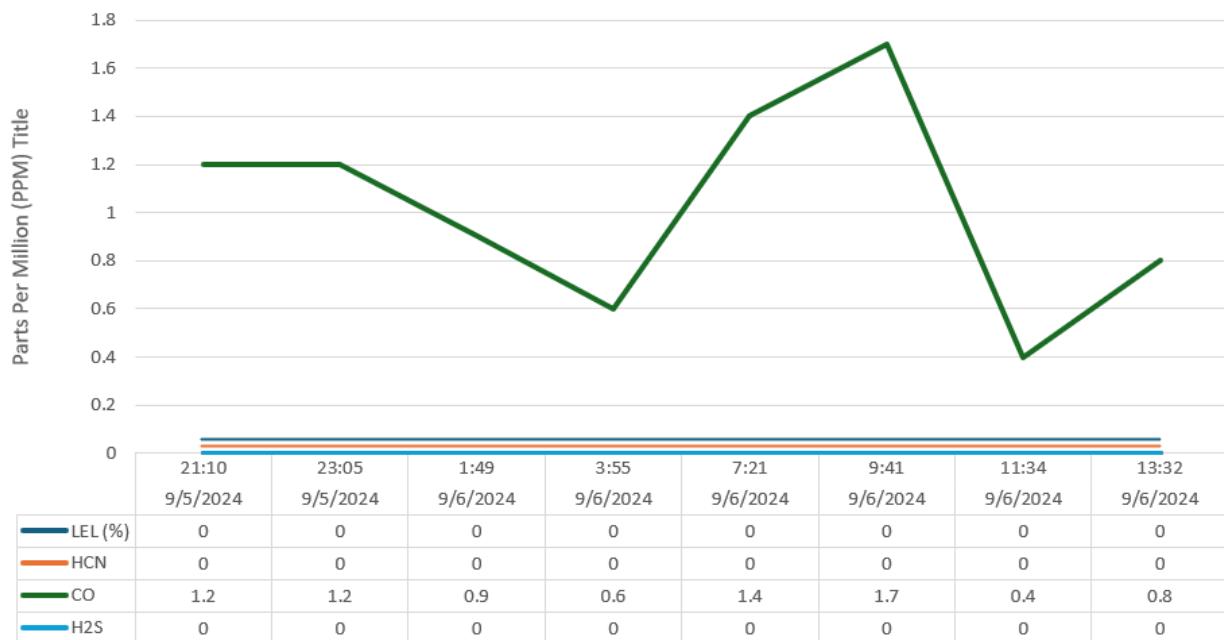


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13. Air monitoring at Auto Park and Alpine Wy

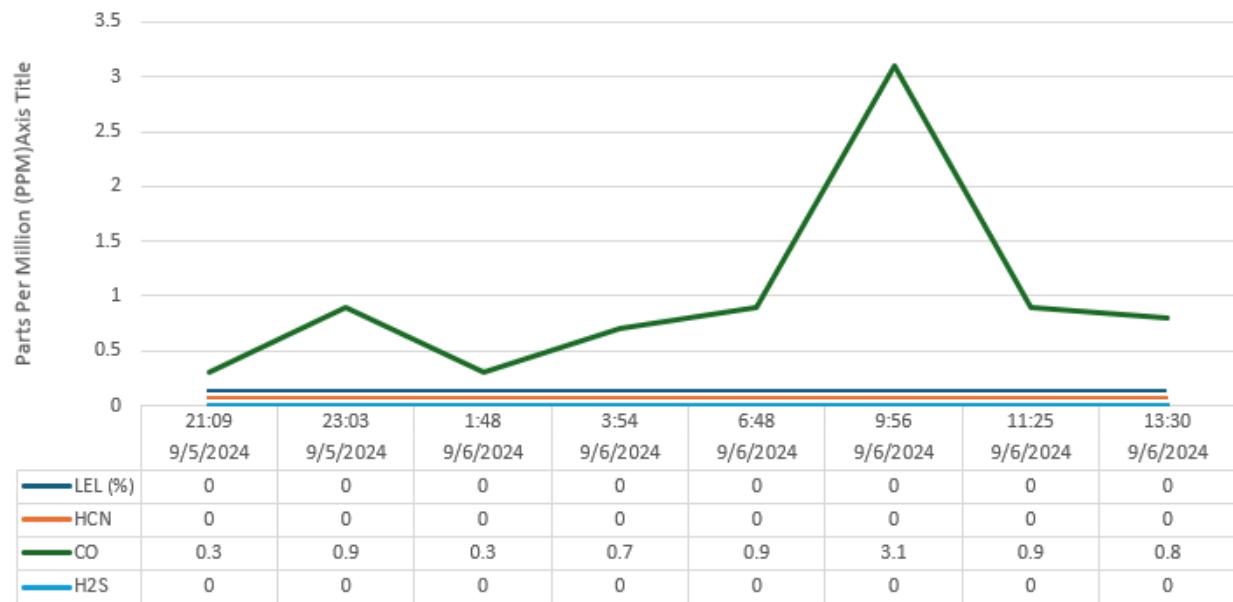


14. Air monitoring at Auto Park and Enterprise St

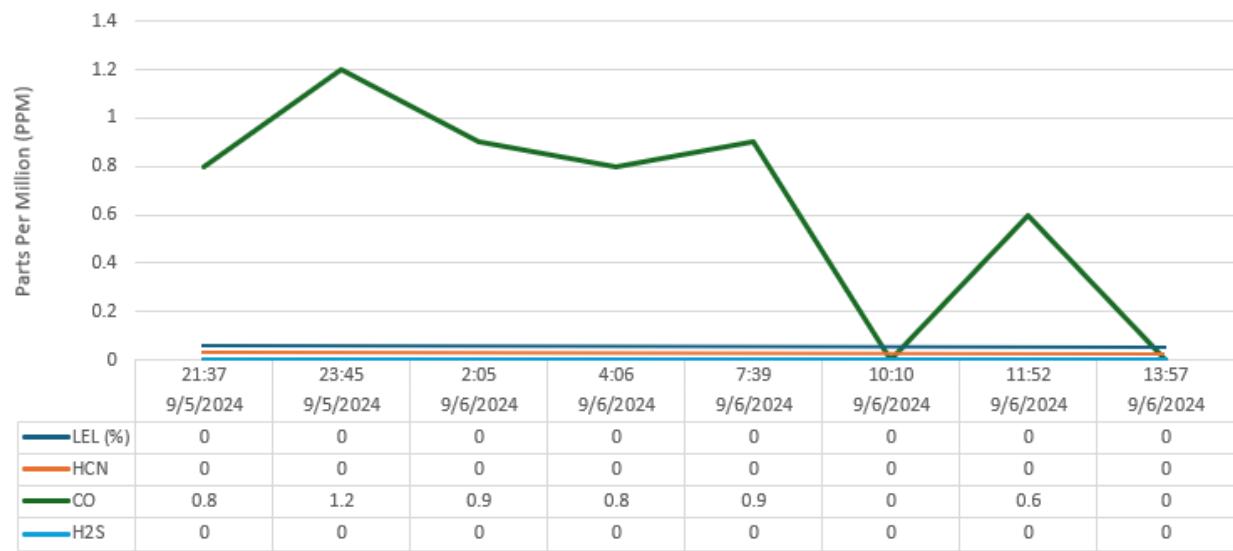


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15. Air monitoring at Auto Park and Citracado

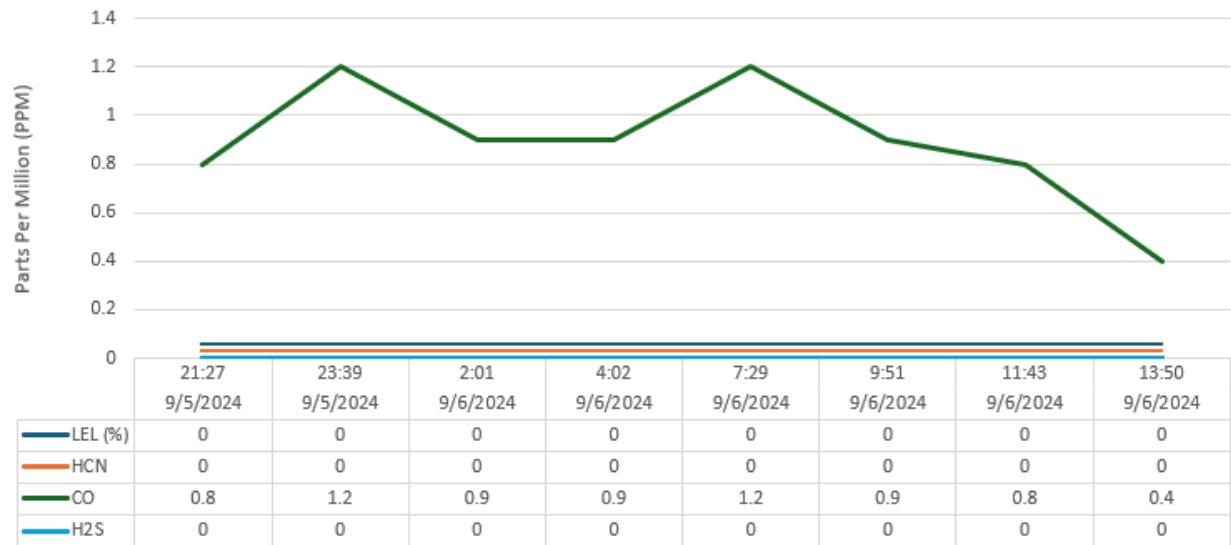


16. Air monitoring at Auto Park Way/Country Club Dr

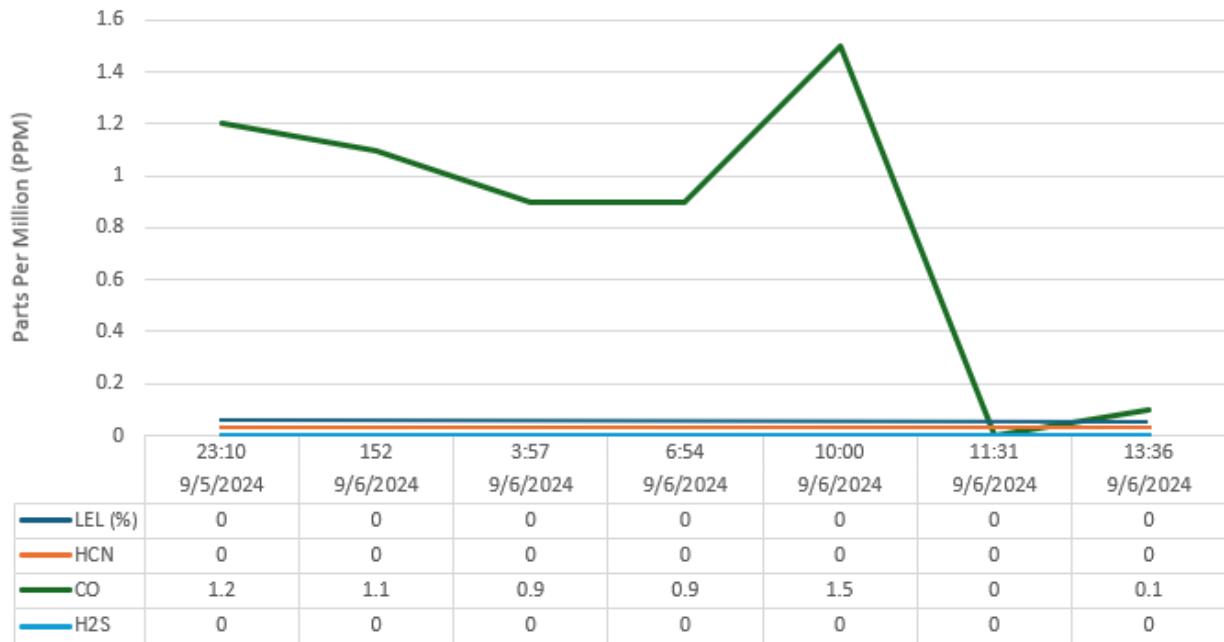


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17. Air monitoring at Enterprise and Mission



18. Air monitoring at Simpson and Venture



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Findings:

On September 5 at 12:09, units from the Escondido Fire Department responded to a fire at the SDG&E battery storage facility at 571 Enterprise Street. Upon arrival, crews found an active fire in a Lithium-Ion battery bank. Due to the specific hazards of such fires, a defensive strategy was employed, focusing on protecting adjacent structures containing additional batteries by applying water to those adjacent structures. Evacuations of the surrounding area began at approximately 13:00 on September 5 and remained in effect until September 7. San Diego County Hazmat arrived to conduct air monitoring from 14:30 to 18:30 at which time only normal products combustion of a structure fire were detected and at levels considered by NIOSH and OSHA to be well below exposure thresholds. Haley & Aldrich Inc., SDG&E's third-party contractor, began air quality monitoring later that evening and concluded on September 7. The fire was fully extinguished at 01:10 on September 6, with precautionary air monitoring continuing for an additional 12 hours into the afternoon of September 7. At no time during the incident did the levels of Oxygen deviate from 20.9 percent which is considered normal atmospheric level. Any decrease in the percentage of Oxygen would indicate that there was some unknown gas in the atmosphere that was not able to be detected by monitoring equipment. Fortunately, no such deviation was detected. The use of Fluoride reactive test strips was negative at all locations. Additionally, Hydrofluoric acid was not detected at any of the sampling locations.

Information Requests:

San Diego County HAZMAT/ San Diego City Fire Department HAZMAT
(619) 595-4633

San Diego Gas & Electric/ Haley & Aldrich INC
(877) 866-20266



IDAHO POWER
AIR MONITORING AND SAMPLING
SUMMARY

Melba, Idaho Fire Incident
October 2 – October 6, 2023
Project #031332

1.0 INTRODUCTION

Idaho Power requested that CTEH®, LLC (CTEH) provide air monitoring and sampling support in response to a lithium iron phosphate battery fire occurring at an electrical substation near Melba, Idaho. The fire started at approximately 05:00 Mountain Daylight Time (MDT) on October 2, 2023 and appeared to be fully extinguished on October 5, 2023. Prior to CTEH's arrival on site, Industrial Hygiene Services conducted air sampling on site around the impacted substation. CTEH personnel mobilized to the incident site and began real-time air monitoring in the surrounding community at approximately 19:17 MDT on October 3, 2023. This report summarizes analytical air sampling data collected by Industrial Hygiene Services on October 2, 2023, real-time air monitoring data collected by CTEH from 19:17 on October 3 to 04:24 on October 6, 2023, and analytical air sampling data collected by CTEH from October 3, 2023 through October 5, 2023.

Summary of Conclusions

- There were no detections observed during real-time air monitoring that exceeded health-based action levels for chemicals potentially associated with the fire.
- There were no constituent detections observed during analytical air sampling by either monitoring group that would represent a public health concern.

2.0 AIR MONITORING AND SAMPLING METHODS

CTEH personnel developed and implemented an air Sampling and Analysis Plan (SAP) (**Attachment A**). Real-time air monitoring was conducted in accordance with the Community Monitoring plan outlined in the SAP. Community Monitoring was conducted at breathing zone level in publicly accessible residential areas near the substation.

During this reporting period, CTEH personnel conducted handheld real-time air monitoring for atmospheric flammability measured as a percentage of the lower explosive limit (%LEL), carbon monoxide (CO), carbon dioxide (CO₂), hydrogen fluoride (HF), hydrogen chloride (HCl), acid gases, particulate matter with a mean diameter of 2.5 micrometers (PM_{2.5}), and volatile organic compounds (VOCs). Handheld air monitoring was conducted using RAE Systems by Honeywell MultiRAE Pro instruments, TSI SidePak AM520 instruments, ChemLogic CLPx Portable Gas Detectors, and Gastec piston pumps with chemical-specific colorimetric detector tubes. All instrumentation was calibrated once per day or per manufacturer recommendation.

CTEH personnel also deployed stationary radio-telemetering real-time air monitoring instruments (RAE Systems by Honeywell AreaRAE instruments) at multiple locations surrounding the substation. AreaRAE

instruments were used to monitor VOCs, HF, HCl, CO, %LEL, and oxygen (O₂) every 15 seconds. VOC instrumentation drift was confirmed with a secondary instrument on multiple occasions, indicating that at least some detections of VOCs were due to instrument error and not the presence of VOCs in the air. Drift events were documented at station AS03 on October 3 at 23:50, October 4 at 1:19, and October 5 at 7:19.

CTEH was provided laboratory reports from analytical air sampling performed by Industrial Hygiene Services and a map of sampling locations utilized. CTEH was not present at the time of work performed by Industrial Hygiene Services. Industrial Hygiene Services conducted sampling for total dust, total metals particulates, metals particulates with an average particulate size of 4µm, and total volatile organic compounds (TVOCs). Sampling for these constituents was conducted during the afternoon of October 2, 2023 at four locations in a general downwind direction from the substation. Samples for total dust and metals particulates were analyzed by the Wisconsin Occupational Health Laboratory using NIOSH Method 0500 NIOSH Method 7303, respectively. Samples for TVOCs were analyzed by Enthalpy Analytical by a laboratory in-house IAQ Commercial Survey method. Within the laboratory reports for TVOC analysis, Enthalpy Analytical provides a list of "Significant VOCs" contributing to the TVOC analysis. This "Significant VOCs" list for each sample was used as the list of individual VOC detections discussed in this report.

CTEH personnel deployed analytical air sampling at five discrete locations around the substation which were co-located with stationary radio-telemetering real-time air monitoring instruments. Analytical air sampling was conducted for VOCs, metals particulates¹, and polycyclic aromatic hydrocarbons (PAHs). Air samples for VOCs were collected with 1.4-liter evacuated Minican canisters equipped with 24-hour flow controllers. Samples for metals particulates and PAHs were collected using analytical sampling pumps with mixed cellulose ester membrane filters or 37mm PTFE membrane filters, respectively. The sampling strategy for metals particulates and PAHs involved deploying samples for approximately 12 hours, with new sample deployment at the time of previous sample pick-up to provide continuous analytical sampling coverage. Samples for VOCs were analyzed by Pace Analytical, an American Industrial Hygiene Association (AIHA)-accredited laboratory, by United States Environmental Protection Agency (USEPA) Method TO-15 with Tentatively Identified Compounds (TICs). Samples for metals particulates and PAHs were analyzed by SGS Galson by NIOSH Method 7303 and NIOSH Method 5506, respectively.

To assess analytical sampling results, two types of reference values were utilized. The first type of reference values are health-based screening values (HBSVs). HBSVs are highly conservative reference concentrations, below which health effects are highly unlikely to be observed even in sensitive subpopulations. HBSVs were selected from two primary sources. Priority was given to the acute Minimal Risk Levels (MRLs) derived by the Agency for Toxic Substances and Disease Registry (ATSDR). If ATSDR

¹ Ni, Co, Li, Cu, P, Pb, Fe, Al, Fe Oxide

MRLs were not available for a constituent, HBSVs were selected from the short-term Air Monitoring Comparison Values (AMCVs) derived by the Texas Commission on Environmental Quality (TCEQ).

If a constituent detection was observed above the concentration of a HBSV or an HBSV was not available from ATSDR or TCEQ, the second reference value type was selected. These reference values are emergency guideline values (EGVs). EGVs are created for emergency scenarios and are tiered based upon the potential health effects associated with exposure. For the current report, the EGVs referenced are the most conservative and represent concentrations at which odors or irritation may be noticeable, but effects are expected to be transient and reversible upon cessation of exposure. Priority was given to the Acute Exposure Guideline Level-1 values (AEGL-1) derived by the United States Environmental Protection Agency (USEPA). If USEPA AEGL-1 values were not available, the Protective Action Criteria-1 value (PAC-1) from the PAC database maintained by the Office of Environment, Health, Safety, and Security was utilized. The PAC database provides EGVs from multiple sources, including the USEPA AEGL values, the Temporary Emergency Exposure Limits (TEELs) derived by the Department of Energy (DOE), and the Emergency Response Planning Guidelines (ERPGs) derived by the American Industrial Hygiene Association (AIHA).

3.0 AIR MONITORING RESULTS

A summary of handheld real-time readings by location is provided in **Table 1**. Maps of the incident location and handheld air monitoring locations are provided in **Attachment B**. A summary of stationary radio-telemetering real-time air monitoring data is provided in **Table 2**. A map of locations and graphical representations of radio-telemetering real-time air monitoring data are provided in **Attachment C**.

Table 1: Handheld Real-Time Community Monitoring Results

Analyte	Instrument	Count of Readings	Count of Detects	Concentration Range*	Action Level Exceedance?	Represents Health Concern?
Acid Gases (ppm)	Gastec #80	141	0	< 0.5 ppm	No	No
CO (ppm)	MultiRAE	120	0	< 1 ppm	No	No
CO ₂ (ppm)	MultiRAE	61	61	300 - 600 ppm	No	No
HCl (ppm)	CLPx	11	0	< 0.1 ppm	No	No
HF (ppm)	CLPx	8	0	< 0.2 ppm	No	No
%LEL (%)	MultiRAE	105	0	< 1 %	No	No
PM _{2.5} (mg/m ³)	AM520	101	101	0.002 - 0.126 mg/m ³	No	No
VOCs (ppm)	MultiRAE	165	0	< 0.1 ppm	No	No

* If no detectable concentration was observed, the instrument detection limit preceded by a "<" is listed.

ppm = parts per million; mg/m³ = milligrams per cubic meter

During Community Monitoring, no detections of VOCs, %LEL, HF, HCl, CO, or acid gases were observed. No concentrations of PM_{2.5} exceeding the health-based action level of 0.138 mg/m³ were observed. All detections of CO₂ were within normal atmospheric levels.

Table 2. Radio-Telemetered Real-Time Air Monitoring Results

Station ID	Location	Analyte	Count of Readings	Count of Detections	Range of Detections*	Action Level Exceedance?	Represents Health Concern?
AS01	North of fire	%LEL	7,308	0	< 1 %	No	No
		CO (ppm)	7,311	0	< 1 ppm	No	No
		HCl (ppm)	7,311	0	< 1 ppm	No	No
		HF	7,311	0	< 0.1 ppm	No	No
		O ₂ (%)	7,311	7,311	20.9 - 21.3 %	-	No
AS02	East of fire	VOCs (ppm)	7,311	0	< 0.1 ppm	No	No
		%LEL	7,609	0	< 1 %	No	No
		CO (ppm)	7,609	12	2 - 4 ppm	No	No
		HCl (ppm)	7,609	0	< 1 ppm	No	No
		HF	7,609	0	< 0.1 ppm	No	No
AS03	South of fire	O ₂ (%)	7,609	7,609	20.9 - 21.3 %	-	No
		VOCs (ppm)	7,609	3	0.1 - 0.2 ppm	No	No
		%LEL	7,611	0	< 1 %	No	No
		CO (ppm)	7,611	0	< 1 ppm	No	No
		HCl (ppm)	7,611	0	< 1 ppm	No	No
AS04	West of fire	O ₂ (%)	7,611	7,611	20.9 - 21.4 %	-	No
		VOCs (ppm)	7,611	1,167	0.1 - 0.3 ppm	No	No
		%LEL	6,500	0	< 1 %	No	No
		CO (ppm)	6,500	0	< 1 ppm	No	No
		HCl (ppm)	5,379	0	< 1 ppm	No	No
AS05	Southeast of fire	O ₂ (%)	6,500	6,500	20.3 - 21.7 %	-	No
		VOCs (ppm)	6,500	1	0.1 ppm	No	No
		%LEL	1,545	0	< 1 %	No	No
		HCl (ppm)	1,545	0	< 1 ppm	No	No
		O ₂ (%)	1,545	1,545	20.9 %	-	No
		VOCs (ppm)	1,545	0	< 0.1 ppm	No	No

*If no detection was observed, the instrument detection limit preceded by a “<” symbol is listed; ppm = parts per million

During this reporting period, there were twelve detections of CO. All twelve CO detections were detected at a single station, AS02, which was in a general downwind direction of the substation during the fire. No detections of CO exceeding the on-site action level of 25 ppm were observed. Detections of VOCs were observed at three locations: three detections at AS02, 1,167 detections at AS03, and one detection at AS04. No VOC detections above the on-site action level of 0.5 ppm were observed.

There were no detections of %LEL, HF, or HCl during this reporting period and all detections of O₂ were within normal atmospheric levels.

4.0 AIR SAMPLING RESULTS AND DISCUSSION

4.1 Air Sampling by Industrial Hygiene Resources

Prior to CTEH's arrival on site, Industrial Hygiene Resources conducted air sampling on the afternoon of October 2, 2023 in four general downwind locations from the substation. Industrial Hygiene Resources conducted air sampling for particulates and VOCs. A map of Industrial Hygiene Resources air sampling locations and analytical laboratory results are included in **Attachment D**. A summary of detections from analytical sampling results collected by Industrial Hygiene Resources are included in **Tables 3 and 4**. If the detected concentration of a constituent exceeded the HBSV concentration or no HBSV was available for a given constituent, EGV values were included for comparison.

Table 3: Summary of Industrial Hygiene Resources Analytical Sampling Detections – Particulates

Sampling Station ID	Location	Analyte	Sample Type	Detected Concentration (µg/m ³)	HBSV (µg/m ³)	Exceeded HBSV Concentration?	EGV (µg/m ³)	Exceeded EGV Concentration?
1	South side of Hill Rd downwind of substation	Total Dust	Particles < 4µm	400	-	-	-	-
			Total particles	410	-	-	-	-
		Copper ²	Particles < 4µm	4.5	10	No	-	-
			Total particles	4.7	10	No	-	-
	On southeast corner of substation property line	Zinc Oxide ²	Particles < 4µm	18	20	No	-	-
			Total particles	20	20	No	-	-
		Antimony ^{1,3}	Particles < 4µm	1,400	-	-	-	-
			Total particles	1,400	-	-	-	-
2	On southeast corner of substation property line	Copper ^{2,3}	Particles < 4µm	6.3	1	Yes	1,500	No
			Total particles	6.5	1	Yes	1,500	No
		Lithium ³	Particles < 4µm	14	10	Yes	3,000	No
			Total particles	15	10	Yes	3,000	No
	Zinc Oxide ^{2,3}	Particles < 4µm	0.86	NA	-	-	3,300	No
			Total particles	0.98	NA	-	3,300	No
		Zinc Oxide ^{2,3}	Particles < 4µm	71	20	Yes	10,000	No
			Total particles	73	20	Yes	10,000	No

NA – Not Available

¹Health-Based Screening Value – ATSDR Acute MRL

²Health-Based Screening Value – TCEQ Short-Term AMCV

³Emergency Guideline Value – DOE TEEL-1

Table 4: Summary of Industrial Hygiene Resources Analytical Sampling Detections – TVOCs

Sampling Station ID	Location	Analyte	Detected Concentration (ppb)	HBSV (ppb)	Exceeded HBSV Concentration?	EGV (ppb)	Exceeded EGV Concentration?
1	South side of Hill Rd downwind of substation	Benzene ¹	21	9	Yes	9,000	No
		Styrene ¹	6	5,000	No	-	-
		Toluene ¹	4	2,000	No	-	-
		Naphthalene ²	3	95	No	-	-
2	On southeast corner of substation property line	Benzene ¹	72	9	Yes	9,000	No
		Styrene ¹	20	5,000	No	-	-
		Toluene ¹	12	2,000	No	-	-
		Naphthalene ²	8	95	No	-	-
		Ethylbenzene ¹	5	5,000	No	-	-
		Acetonitrile	6	NA	-	13,000	No

NA – Not Available

¹Health-Based Screening Value – ATSDR Acute MRL²Health-Based Screening Value – TCEQ Short-Term AMCV³Emergency Guideline Value – USEPA 8hr A EGL-1

The four sampling stations deployed by Industrial Hygiene Resources were placed in general downwind directions from the impacted substation. The sampling station located closest to the impacted substation was sampling station 2. This sampling station was located within the substation fenceline on the southeast corner of the substation property. While this station provides useful information regarding constituents potentially within the fire smoke, this sampling location is not representative of potential exposures to community members. Detections of antimony, copper, zinc, and benzene were observed above HBSV concentrations at sampling station 2 but were below EGVs. Additionally, while HBSVs were not identified for lithium or acetonitrile, detections of both constituents were below their respective EGVs.

There were six constituent detections at sampling station 1, which was placed on the south side of Hill Road downwind of the impacted substation. These detections were of copper, zinc oxide, benzene, styrene, toluene, and naphthalene. Detections of all constituents but one, benzene, were below their respective HBSVs. The detection of benzene at sampling station 1 was over 400 times lower than the EGV of 9,000 ppb.

Sampling station 3 was located between the impacted substation and the closest home to the east. Sampling station 4 was in a downwind location on the southeast corner of the agricultural field across Hill Road from the impacted substation. No detections of any constituent measured by Industrial Hygiene Resources were observed at sampling stations 3 or 4.

Based on these results, data collected by Industrial Hygiene Services on October 2, 2023 indicate that the constituents measured did not represent a public health concern for nearby community members during the fire.

4.2 CTEH

Following arrival on site, CTEH initially conducted air sampling on the evening of October 3, 2023 in four locations (AS01 – AS04) in the cardinal directions around the substation for VOCs, metals particulates, and PAHs. On the evening of October 4, 2023, a fifth sampling location was added on the southeast corner of the agricultural field across Hill Road from the impacted substation (AS05). Summaries of detections from CTEH analytical sampling for metals particulates and PAHs are included in **Tables 5 and 6**, respectively. A summary of detections from CTEH analytical sampling for VOCs is included in **Attachment E**. If the detected concentration of a constituent exceeded the HBSV concentration or no HBSV was available for a given constituent, EGV values were included for comparison. Sample deployment dates for detections of VOCs are indicated within the table in **Attachment E**. A map of CTEH air sampling locations and analytical laboratory results are included in **Attachment F**.

Table 5: Summary of CTEH Analytical Sampling Detections – Particulates

Sampling Station ID	Location	Analyte	Detected Concentration ($\mu\text{g}/\text{m}^3$)	HBSV ($\mu\text{g}/\text{m}^3$)	Exceeded HBSV Concentration?	EGV ($\mu\text{g}/\text{m}^3$)	Exceeded EGV Concentration?
AS02	East of substation	Copper ¹	1.1	10	No	-	-
		Lithium ²	0.077	NA	-	3,300	No
		Phosphorus Particulate ³	8.6	20	No	-	-

NA – Not Available

¹ Health-Based Screening Value – TCEQ Short-Term AMCV

²Emergency Guideline Value – USEPA 8hr A EGL-1

³ Health-Based Screening Value – ATSDR Acute MRL

Table 6: Summary of CTEH Analytical Sampling Detections – PAHs

Sampling Station ID	Location	Analyte	Detected Concentration (ppb)	HBSV (ppb)	Exceeded HBSV Concentration?	EGV ($\mu\text{g}/\text{m}^3$)	Exceeded EGV Concentration?
AS01	North of substation	Naphthalene ¹	0.076	95	No	-	-
AS02	East of substation	Naphthalene ¹	0.31	95	No	-	-

NA – Not Available

¹ Health-Based Screening Value – TCEQ Short-Term AMCV

Detections of metals particulates and PAHs were only observed in the first samples deployed by CTEH on the evening of October 3, 2023, which represent the data included in **Tables 5 and 6**. No detections were observed in any other metals particulates or PAH samples collected by CTEH. Additionally, there were no detections of metals particulates observed at sampling stations AS01 and AS03 or detections of PAHs at AS03 on the evening of October 3, 2023².

² During this sampling period, a sample was deployed at AS04. However, an analyzable sample was not collected due to a pump failure in the analytical sampling equipment.

There were three metals particulates detections at sampling station AS02, located on the north side of Hill Road in front of the closest residence east of the substation. These detections were of copper, lithium, and phosphorus (**Table 5**). Detections of copper and phosphorus were below their respective HBSVs. While an HBSV was not available for lithium, the detected concentration of lithium was well below its respective EGV. There was a single PAH detected at sampling stations AS01 and AS02 on the evening of October 3, 2023, which was naphthalene (**Table 6**). Both detections were below the HBSV for naphthalene. Overall, these results indicate that concentrations of metals particulates and PAHs around the impacted substation did not present a public health concern.

A summary table of VOC detections observed during air sampling by CTEH is included in **Attachment E**. There were no VOC detections above their respective HBSV or EGV values in any of the samples collected by CTEH, indicating that concentrations of VOCs around the impacted substation did not present a public health concern.

5.0 CONCLUSIONS

Results of both real-time air monitoring and analytical air sampling conducted between October 2 and October 6, 2023 from both monitoring groups indicate that all chemical constituents measured around the impacted substation were not at levels that would represent a public health concern.

6.0 METEOROLOGICAL CONDITIONS

Attachment G contains a wind rose depicting wind speed and direction from the evening of October 3 to the afternoon of October 5, 2023. Wind data is obtained from publicly available information collected at the Nampa Municipal Weather Station located in Nampa, Idaho.

Attachment A

CTEH Sampling and Analysis Plan (SAP)



Lithium Iron Phosphate Battery Fire

Air Sampling and Analysis Plan (SAP)

Version 1.2

Prepared on Behalf of:

Idaho Power

Prepared By:

CTEH, LLC

5120 Northshore Drive

Little Rock, AR 72118

501-801-8500

October 6, 2023

	Name/Organization	Signature	Date Signed
Prepared by:	Scott Malm, PhD, CIH		10/5/2023
Reviewed by:			
Approved by:			
Approved by:			
Approved by:			

Air Monitoring and Sampling Strategy

CTEH[®], LLC is focusing on the mixtures, chemicals, and indicators of flammability chosen below because they are among the most important and readily monitored hazards of burning lithium iron phosphate batteries. Monitoring and sampling for some chemicals or indicators of the presence of lithium iron phosphate battery components may be conducted less frequently or even discontinued as product-specific information becomes available or as initial monitoring and sampling results indicate that these chemicals and indicators do not pose a health concern.

The strategy is to utilize two broadly-defined monitoring plans: 1) Community Monitoring; and 2) Site Assessment. Community Monitoring may take place in those residential and commercial locations immediately surrounding the incident site, not necessarily currently occupied by members of the community. Unlike Community Monitoring, Site Assessment does not necessarily represent ambient air monitoring near breathing zone level. Site Assessment may involve a variety of different monitoring tasks intended to provide information that may help to delineate the nature and extent of the release (e.g. fence line monitoring, worst case determination, container head space, ground level, etc.).

Free-roaming handheld real-time air monitoring may be conducted in a variety of areas based on levels of activity, proximity to the release, and site conditions. Fixed-location handheld real-time locations may be established in the community in order to provide concentration averages that may be observed and analyzed over time in distinct geographic locations in the community.

Radio-telemetering RAE Systems[®] AreaRAE/AreaRAE Plus units may be deployed in all monitoring plans to allow for continuous air monitoring in multiple areas. AreaRAE/AreaRAE Plus readings may be received and monitored in a centralized location by CTEH[®] personnel to allow for recognition, communication, and response to changing conditions.

Discrete air samples may be collected in all monitoring areas and sent to an off-site laboratory for chemical analysis. These analytical air sampling techniques may be used to provide air quality data beyond the scope of real-time instruments. When necessary, discrete air samples may be collected on individual workers (personal sampling) to provide exposure data over the course of a work shift for more direct comparison to occupational exposure values.

CTEH Site-Specific Action Levels

CTEH site-specific action levels may be employed in all air monitoring plans to provide information for corrective action to limit potential exposures. These values do not replace occupational or community exposure standards or guidelines but are intended to represent a concentration limit that triggers a course of action to better address worker and public safety. Action level exceedances will be communicated to Site Management and the CTEH Project Technical Director by the CTEH Project Manager (PM). Work practice may be assessed and then altered if necessary. Site-Specific Action Levels are not utilized for Site Assessment monitoring.

Plan 1: Community Monitoring

Objective: Report air levels before they reach those causing nuisance or health issues

Analyte	Action Level	Action to be Taken	Basis	Instrument	Detection Limit	Notes	Correction Factor
Total VOCs	0.5 ppm 5 minutes	Report reading to PM and PTD	Approximate background level - Reading sustained for 5 minutes	MultiRAE PID AreaRAE PID	0.1 ppm	Measuring range: 0 – 5,000	NA
Hydrogen Chloride	3 ppm	Egress, Report reading to PM and PTD	ERPG-1 value	CLPx	0.1 ppm	Measuring range: 0 – 15 ppm	NA
				AreaRAE Sensor	1 ppm	Measuring range: 0 – 30 ppm	NA
				Gastec #80	2 ppm	Measuring range: 4 – 320 ppm	Var.
Hydrogen Fluoride	1 ppm 5 minutes	Egress, Report reading to PM and PTD	Acute Exposure Guideline Level (AEGL-1)	CLPx AreaRAE Sensor	0.2 ppm 0.5 ppm	Measuring range: 0 – 10 ppm	NA

Combustion Products*

Analyte	Action Level	Action to be Taken	Basis	Instrument	Detection Limit	Notes	Correction Factor
Particulate Matter (PM _{2.5} or PM ₁₀)†	138 µg/m ³ 5 min.	Report reading to PM	Wildfire Smoke Guidelines for 1 hr. avg. upper-bound breakpoint for unhealthy for sensitive groups AQI	SidePak AM520	0.001 mg/m ³	PM _{2.5} impactor – 50% cut-off at 2.5 micron PM ₁₀ impactor – 50% cut-off at 10 micron	NA
PM _{2.5} or PM ₁₀	79 µg/m ³ 8 hr.	Report reading to PM	See above - 8 hr. guideline	SidePak AM520	0.001 mg/m ³	See above	NA
Carbon monoxide	25 ppm 5 min.	Egress, Report reading to PM	Inform PM/PTD of potential off-site issues	MultiRAE Sensor AreaRAE Sensor	1 ppm	Range: 0 – 500 ppm	NA
Carbon Dioxide	5,000 ppm 5 min.	Egress, Report reading to PM	Inform PM/PTD of potential off-site issues	MultiRAE Sensor	250 ppm	Range: 250 – 25,000 ppm	NA
Nitrogen dioxide	Detection	Report reading to PM	Inform PM/PTD of potential off-site issues	Gastec #80	0.05 ppm	Range: 0.1 – 8 ppm	Var.
Sulfur dioxide	Detection	Report reading to PM	Inform PM/PTD of potential off-site issues	Gastec #80	0.375 ppm	Range: 0.75 – 60 ppm	Var.

*Monitoring for combustion products may be discontinued when the fire is extinguished.

†PM_{2.5} is especially prone to interference from high humidity, in cases of high humidity, PM₁₀ impactors may be used which are not as sensitive to humidity. In general, correction factors may be used to adjust PM readings for humidity.

Flammability*

Analyte	Action Level	Corrected Value	Action to be Taken	Basis	Instrument	Detection Limit	Notes	Correction Factor
LEL	1%	1.3%	Notify PM	1% LEL	MultiRAE Sensor AreaRAE Sensor	1%	Action Level Based on Largest Correction Factor	1.3
LEL	7%	10%	Exit area and Notify PM	10% LEL	MultiRAE Sensor AreaRAE Sensor	1%	Range: 1 ppb – 10,000 ppm	1.3

**LEL sensor can measure for presence of methane, ethane, and hydrogen. Correction factors are 1.0, 1.3, and 1.0, respectively.

Plan 3: Site Assessment

Objective: Characterize nature and extent of release

Analyte	Action Level	Action to be Taken	Basis	Instrument	Detection Limit	Notes	Correction Factor
Total VOCs	NA.	Report reading to PM	NA	See above	See above	See above	NA
Hydrogen Fluoride	NA	Report reading to PM	NA	See above	See above	See above	NA
Hydrogen Chloride	NA	Report reading to PM	NA	See above	See above	See above	NA
Carbon monoxide	NA	Report reading to PM	NA	See above	See above	See above	NA
Carbon dioxide	NA	Report reading to PM	NA	See above	See above	See above	NA
Acid Gases	NA	Report reading to PM	NA	See above	See above	See above	NA
LEL	NA	Report reading to PM	NA	See above	See above	See above	NA

Analytical Methods

Analyte	Media/Can	Method	Notes
VOCs	MiniCans (1L)	EPA TO-15 with TICs	
PAHs (18 PNAH Profile - Galson)	37PTFE 2.0/Treated Amberlite XAD-2	Method 5506	
Metals (Ni, Co, Li, Cu, P, Pb, Fe, Al, Fe Oxide)	MCE filter (35-5,000L; 1-4 lpm)	Mod NIOSH 7303 (ICP/MS)	Will have to specify Li in the panel as it is not typically included in the 21 panel by Galson

Li: lithium; Co: cobalt; Ni: nickel; Cu: copper, P: Phosphorus, Pb: Lead, Fe: Iron, Al: Aluminum

General Information on Procedures (Assessment Techniques) Used

Procedure	Description
Guardian Network	A Guardian network may be established with AreaRAEs equipped with electrochemical sensors at locations around the work zone perimeter. The AreaRAEs will be telemetering instantaneous data at 15-second intervals to a computer console. MultiRAE Pros may also be used in the network. The data will be visible in real-time at the computer console and will be monitored 24 hours per day by CTEH personnel.
Real-Time Handheld Survey	CTEH staff members may utilize handheld instruments (e.g. MultiRAE Plus; ppbRAE, Gastec colorimetric detector tubes, etc.) to measure airborne chemical concentrations. CTEH will use these handheld instruments primarily to monitor the ambient air quality at breathing zone level. Additionally, measurements may be made at grade level, as well as in elevated workspaces, as indicated by chemical properties or site conditions. CTEH may also use these techniques to verify detections observed by the AreaRAE network.
Fixed Real-Time Monitoring locations	Multiple community locations may be identified and monitored at the same location approximately once per hour using handheld instruments. This allows the use of statistical analysis more effectively than with a random approach.
Analytical sampling	Analytical sampling may be used to validate the fixed and handheld real-time monitoring data, or to provide data beyond the scope of the real-time instruments. Analytical samples may be collected as whole air samples in evacuated canisters or on specific collection media and sent to an off-site laboratory for further chemical analysis.
Particulate Monitoring Network	A network of data-logging particulate monitors may be set up and positioned around the community.

Quality Assurance/Quality Control Procedures

Method	Procedure
Real-Time	<p>Real-time instruments may be calibrated in excess of the manufacturer's recommendations.</p> <p>At a minimum whenever indicated by site conditions or instrument readings.</p> <p>Co-located sampling for analytical analysis may be conducted, if necessary, to assess accuracy and precision in the field.</p> <p>Lot numbers and expiration dates may be recorded with use of Gastec colorimetric tubes.</p>
Analytical	<p>Chain of custody documents may be completed for each sample.</p> <p>Level IV data validation may be performed on the first sample group analyzed.</p> <p>Level II data validation may be performed on 20% of all samples.</p> <p>Level IV data validation may be performed on 10% of all samples.</p>
Reporting	<p>Daily data summaries may be provided for informational purposes using data that have not undergone complete QA/QC.</p> <p>Comprehensive reports of real-time and/or analytical data may be generated following QA/QC and may be delivered 60 days following receipt of validated results, if applicable.</p>

Glossary

Term	Definition
Sustained	Instrument reading above the action level continuously for the listed time period.
Excursion Limit	Whenever a reading exceeds an ACGIH TLV by 5 times (if the chemical does not have a STEL- or Ceiling-based action level), exit the area and notify the PM
Breathing zone	The area within an approximate 10-inch radius of an individual's nose and mouth.
Ambient Air	That portion of the atmosphere (indoor or outdoor) to which workers and the general public have access.

Change from version 1.0 to 1.1

In the section titled: Included Gastec 80 in analytes and monitoring equipment, corrected metals sampling analyte error by updating potassium to phosphorus, added lead as an analyte in metals sampling

Name/Organization	Signature	Date Signed
Prepared by: Scott Malm, PhD, CIH		10/5/2023
Review by:		
Approved by:		
Approved by:		
Approved by:		
Approved by:		

Change from version 1.1 to 1.2

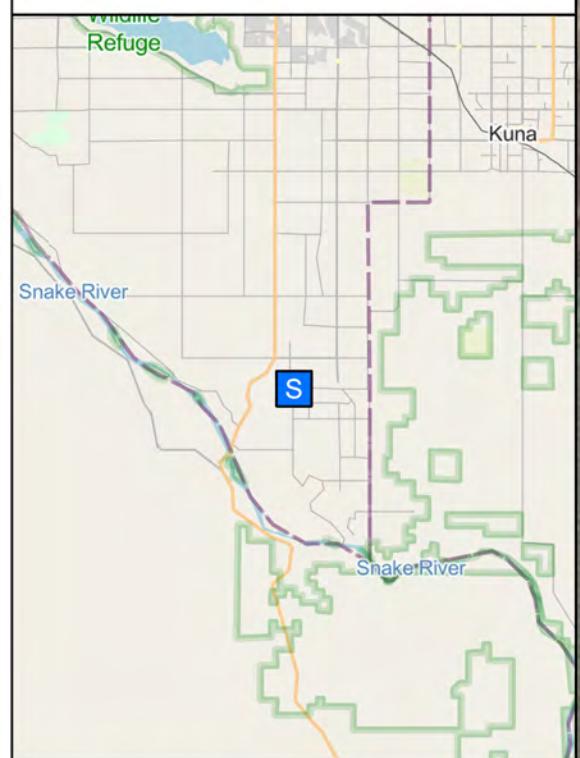
In the section titled: Corrected error in Community Monitoring action level for VOCs. Field team had been operating off a VOC action level of 0.5 ppm VOCs, however the SAP listed 30 ppm.

Name/Organization	Signature	Date Signed
Prepared by: Scott Malm, PhD, CIH		10/6/2023
Review by:		
Approved by:		
Approved by:		
Approved by:		
Approved by:		

Attachment B

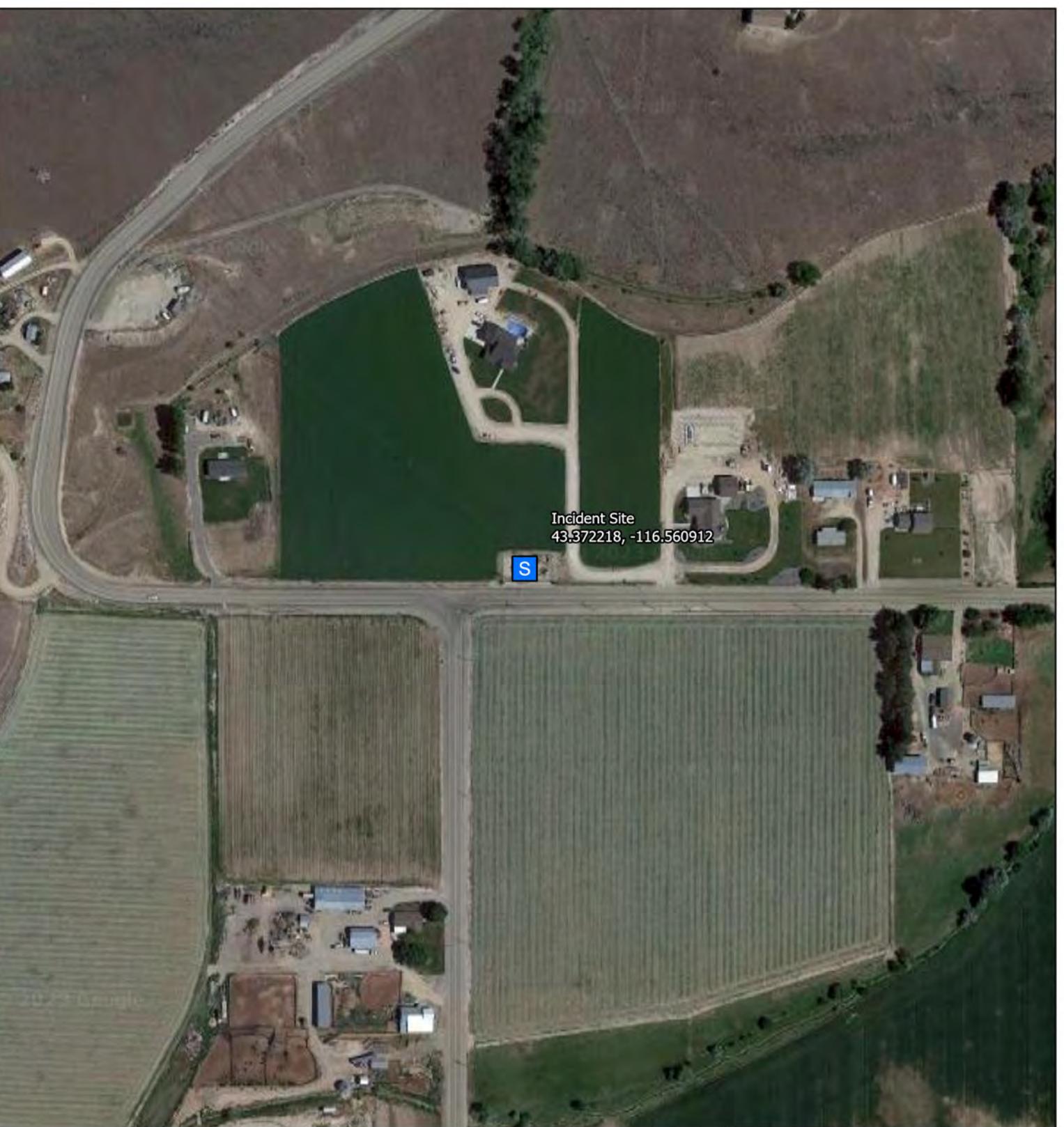
CTEH Handheld Real-time Air Monitoring Locations

Site Location

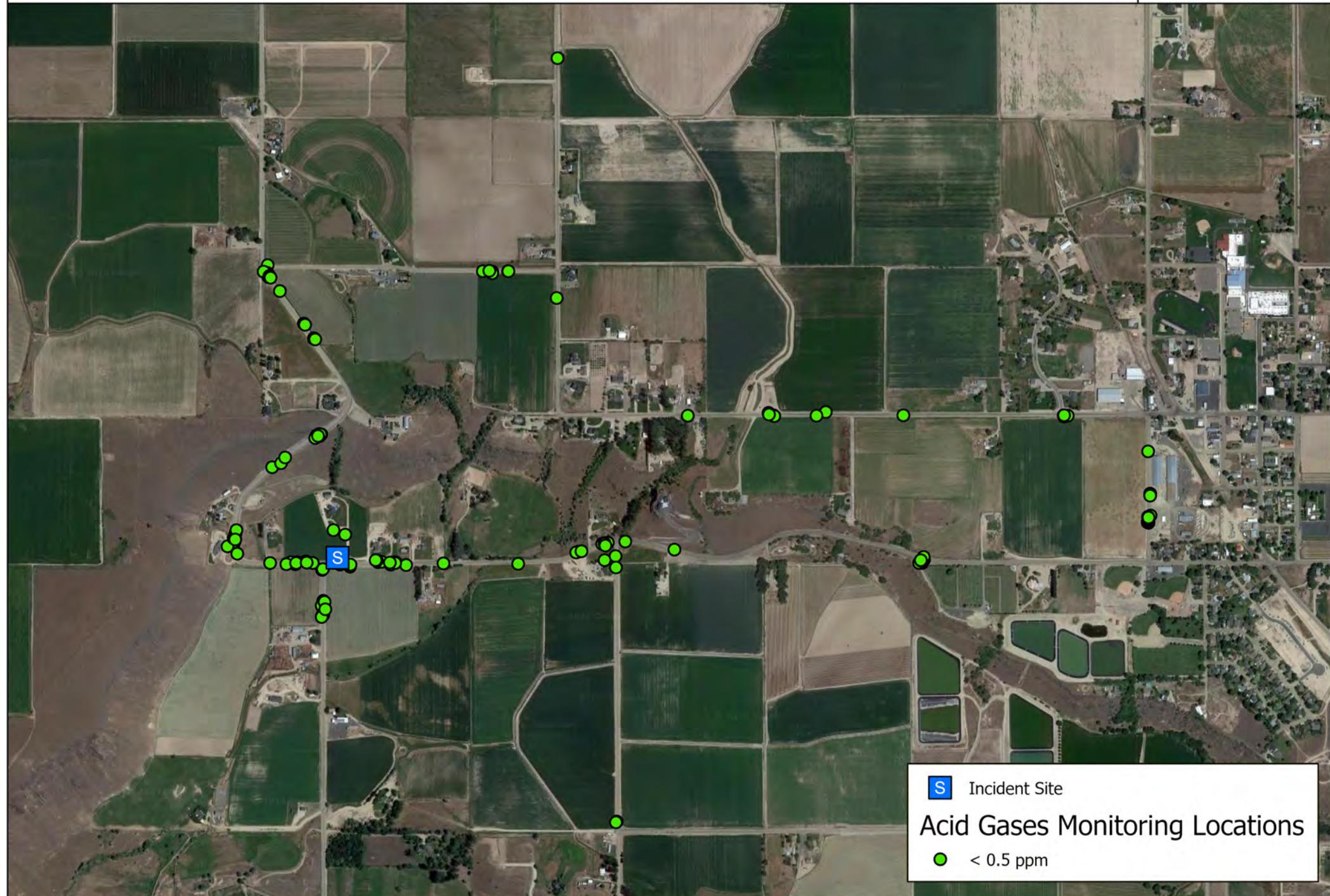


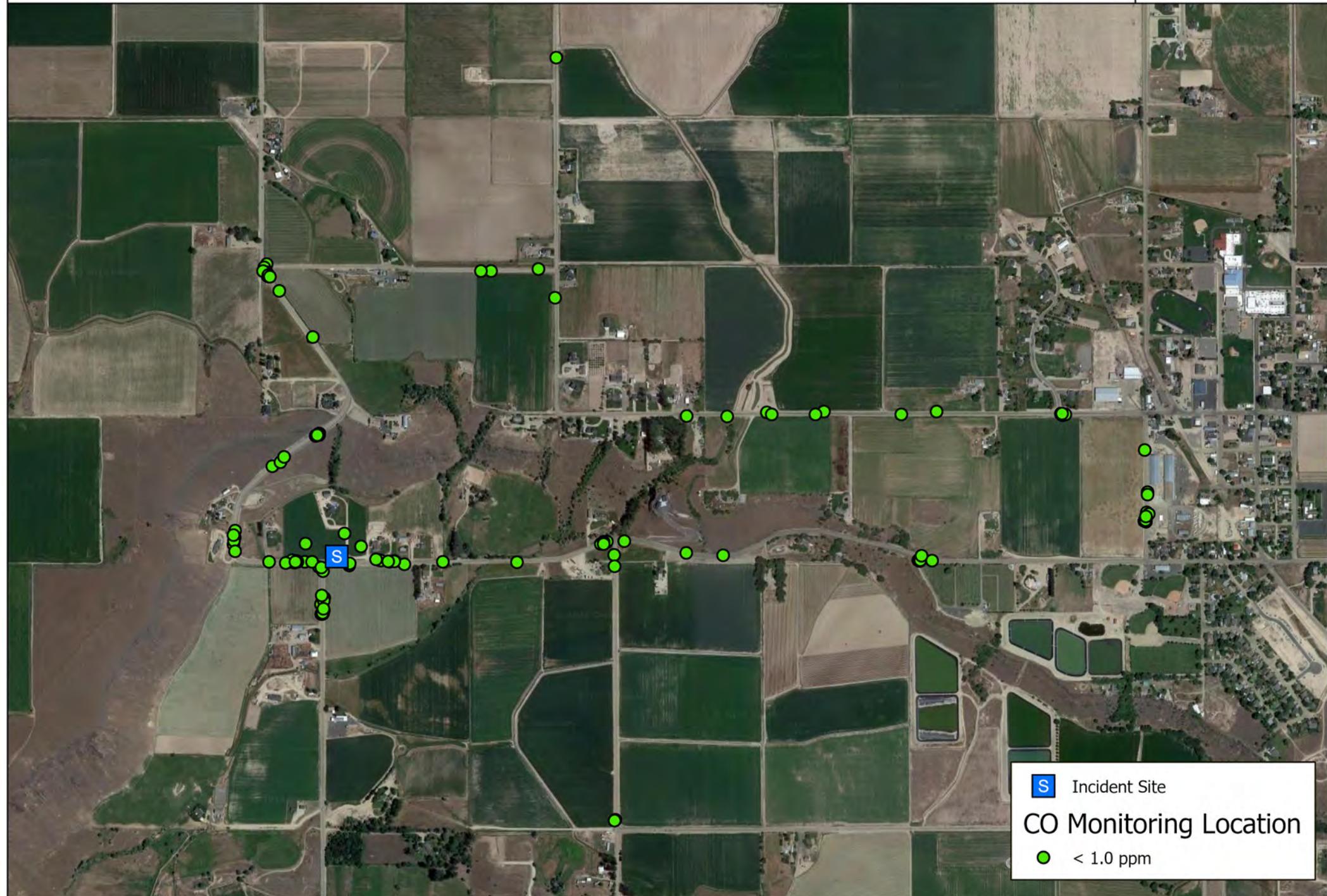
Updated At: 10/16/2023 4:04 PM

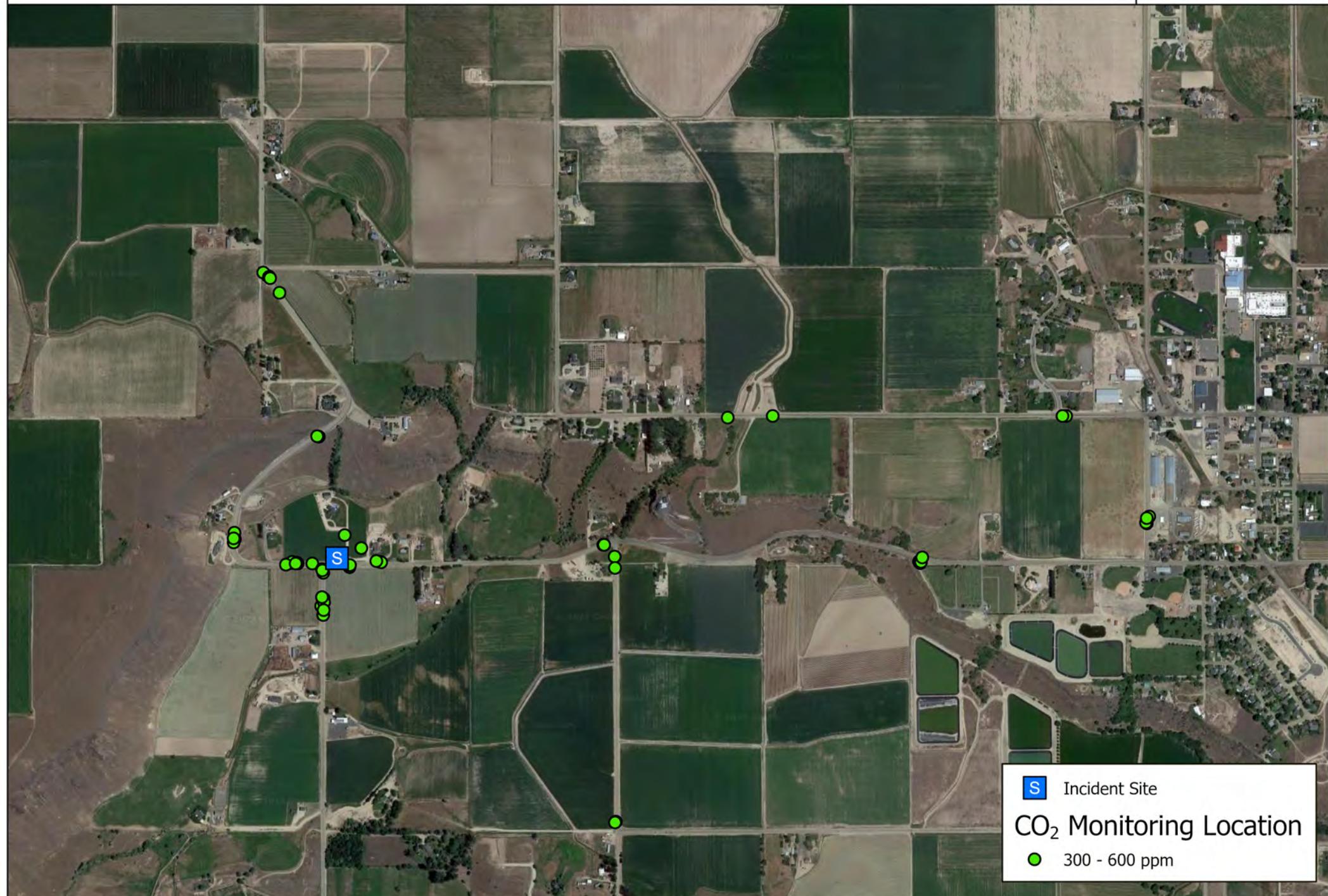
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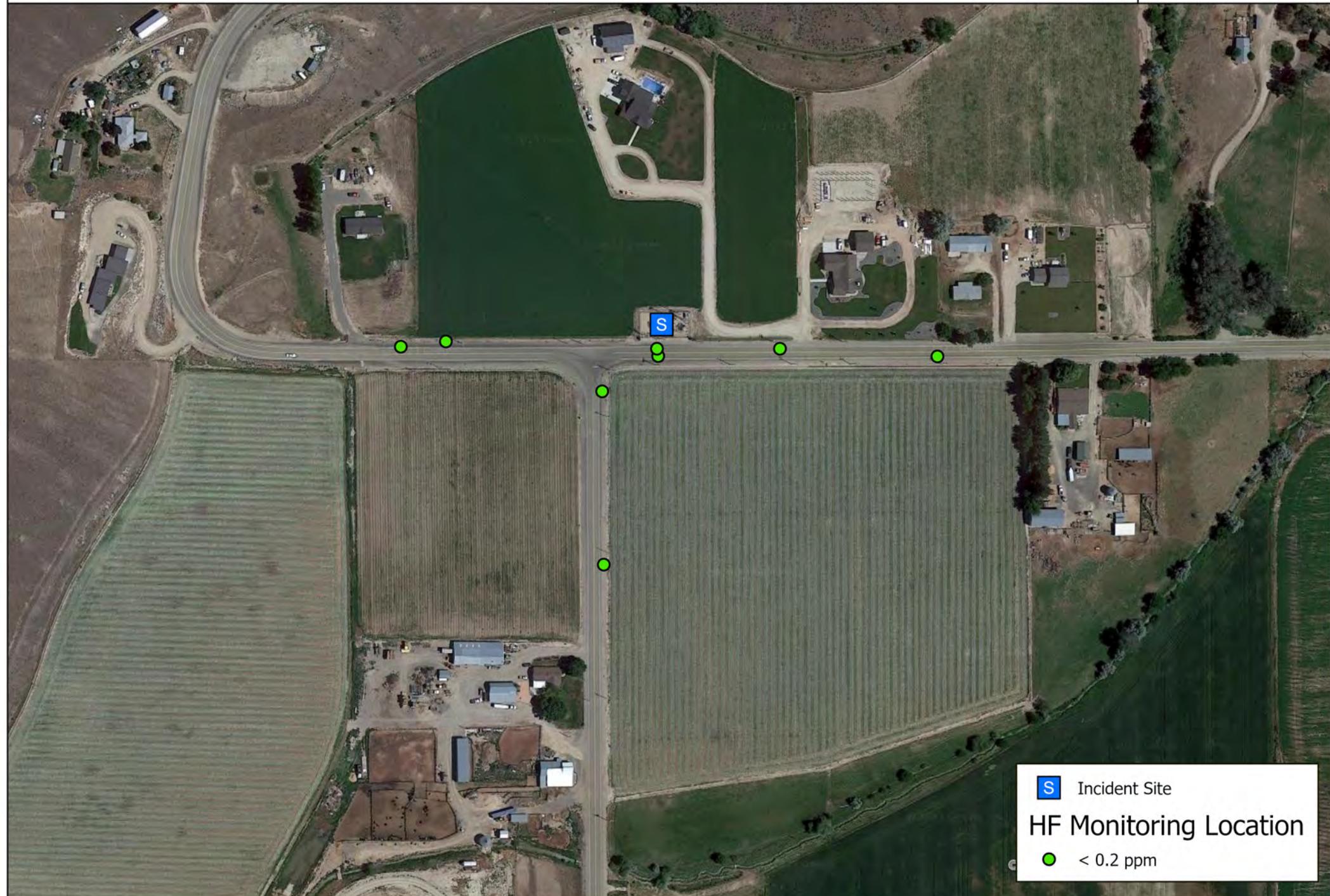
Incident Site
43.372218, -116.560912





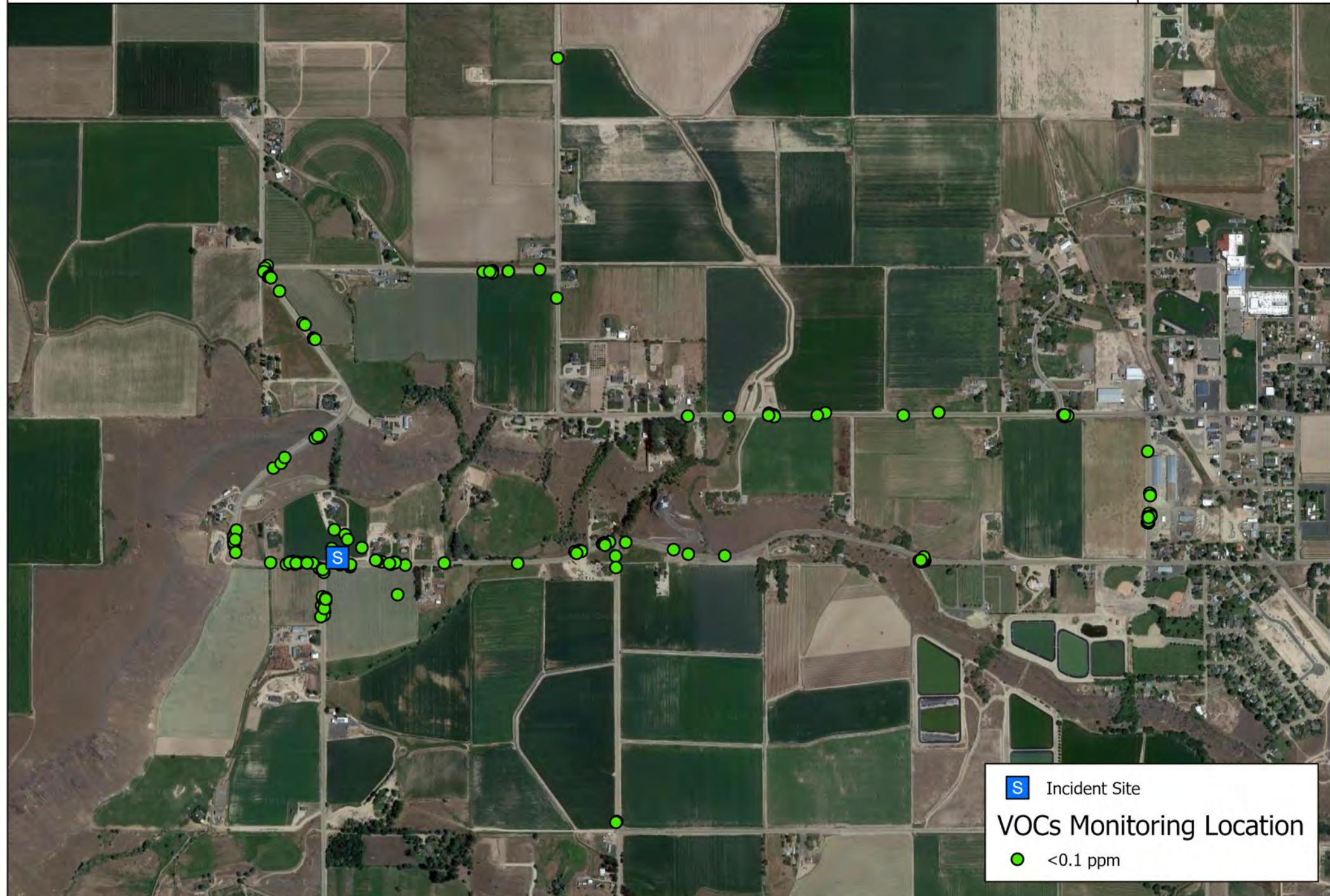












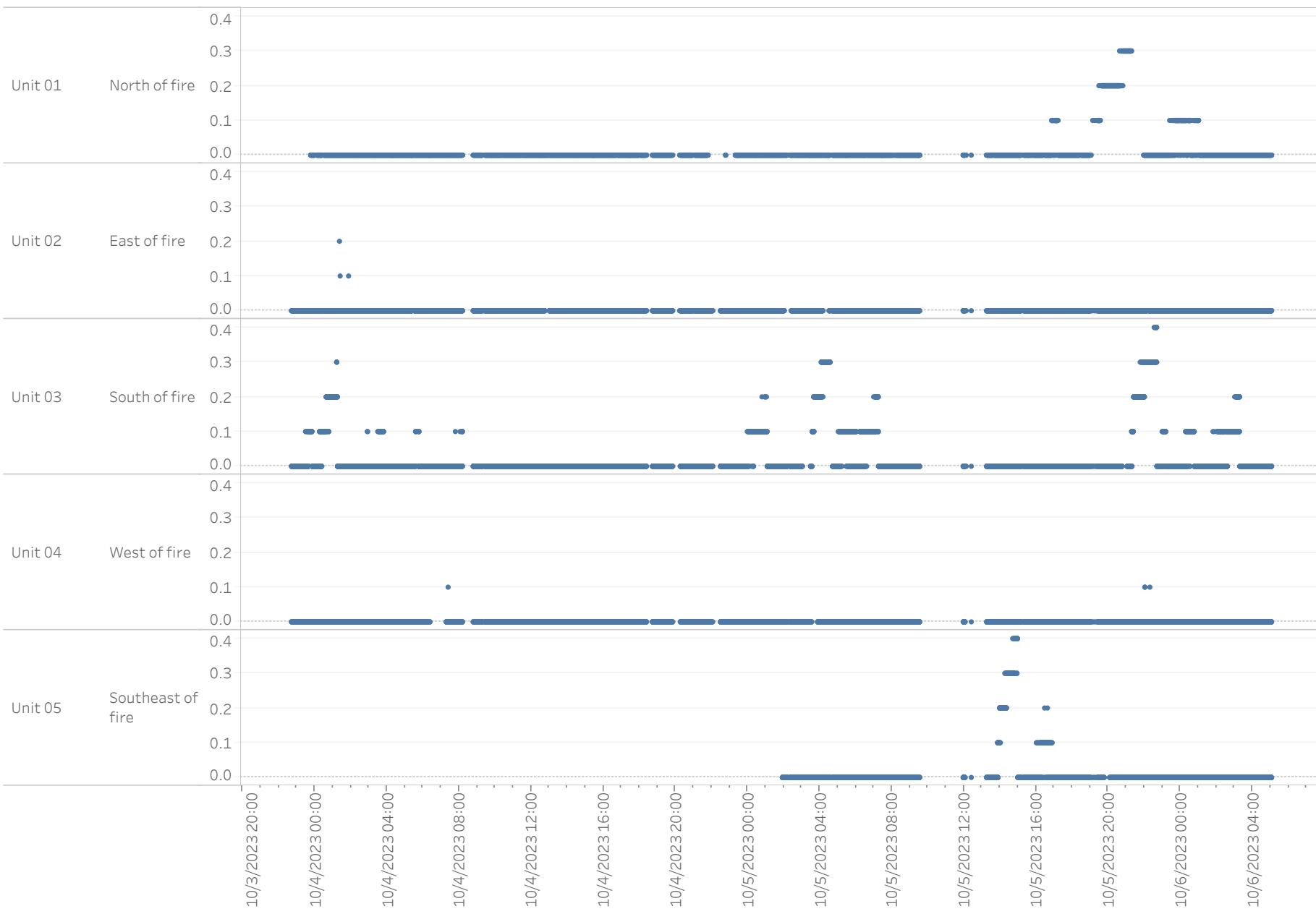
Attachment C

CTEH Radio-Telemetering Air Monitoring Locations and Results

Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-031332 | Melba, ID

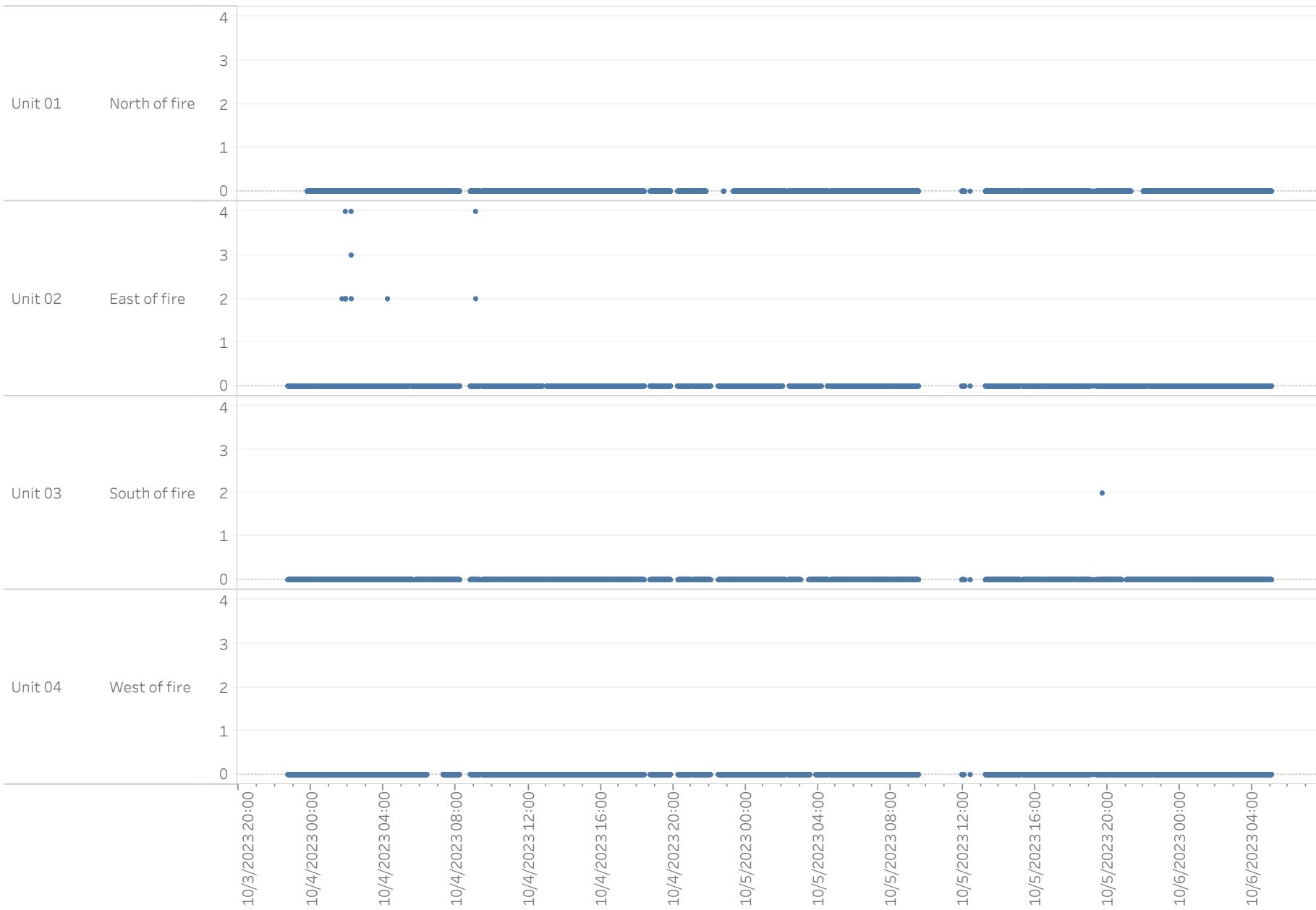
10/3/2023 22:40 to 10/6/2023 05:02 | Analyte: VOCs (ppm)



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-031332 | Melba, ID

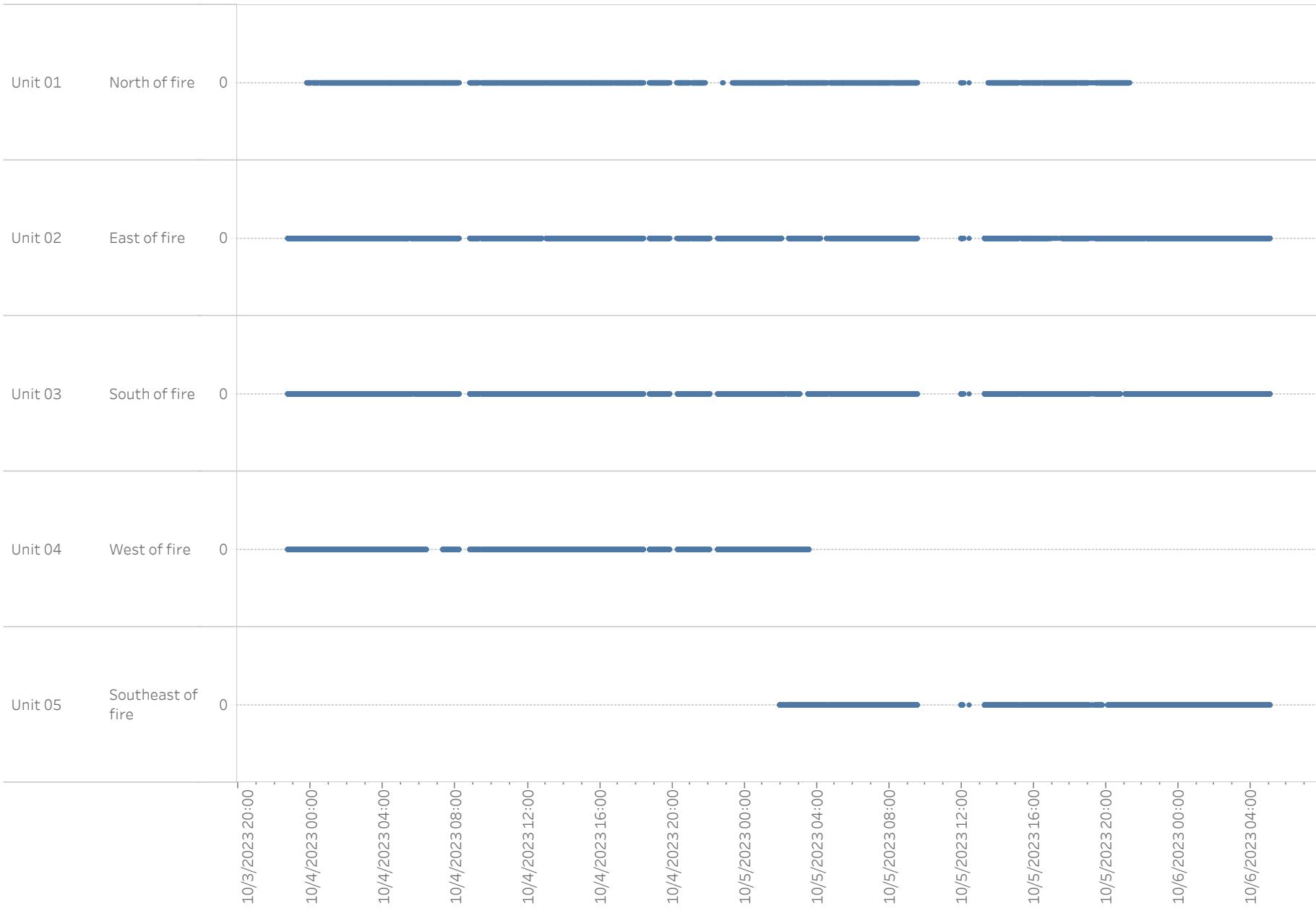
10/3/2023 22:40 to 10/6/2023 05:02 | Analyte: CO (ppm)



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-031332 | Melba, ID

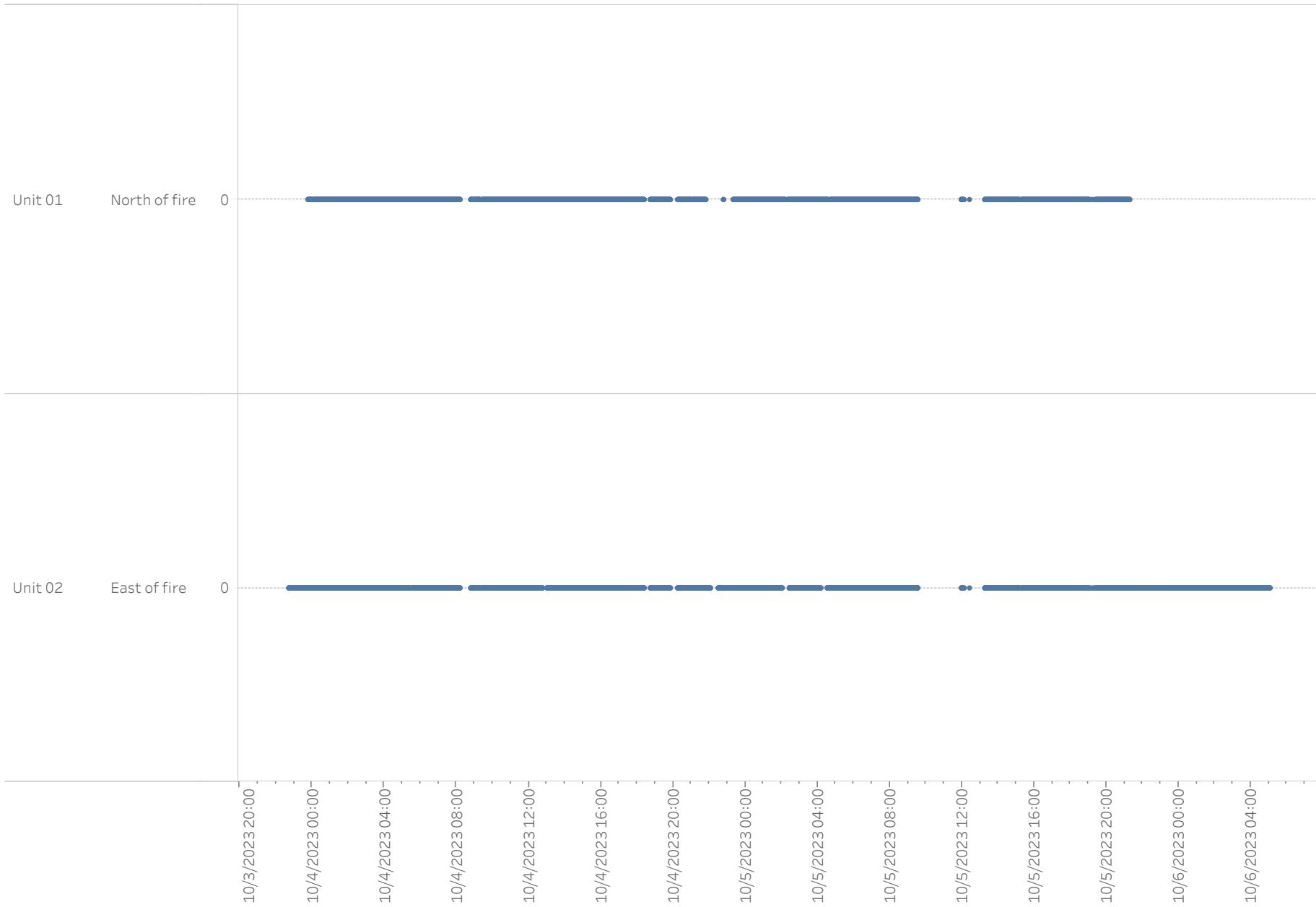
10/3/2023 22:40 to 10/6/2023 05:02 | Analyte: HCL (ppm)



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-031332 | Melba, ID

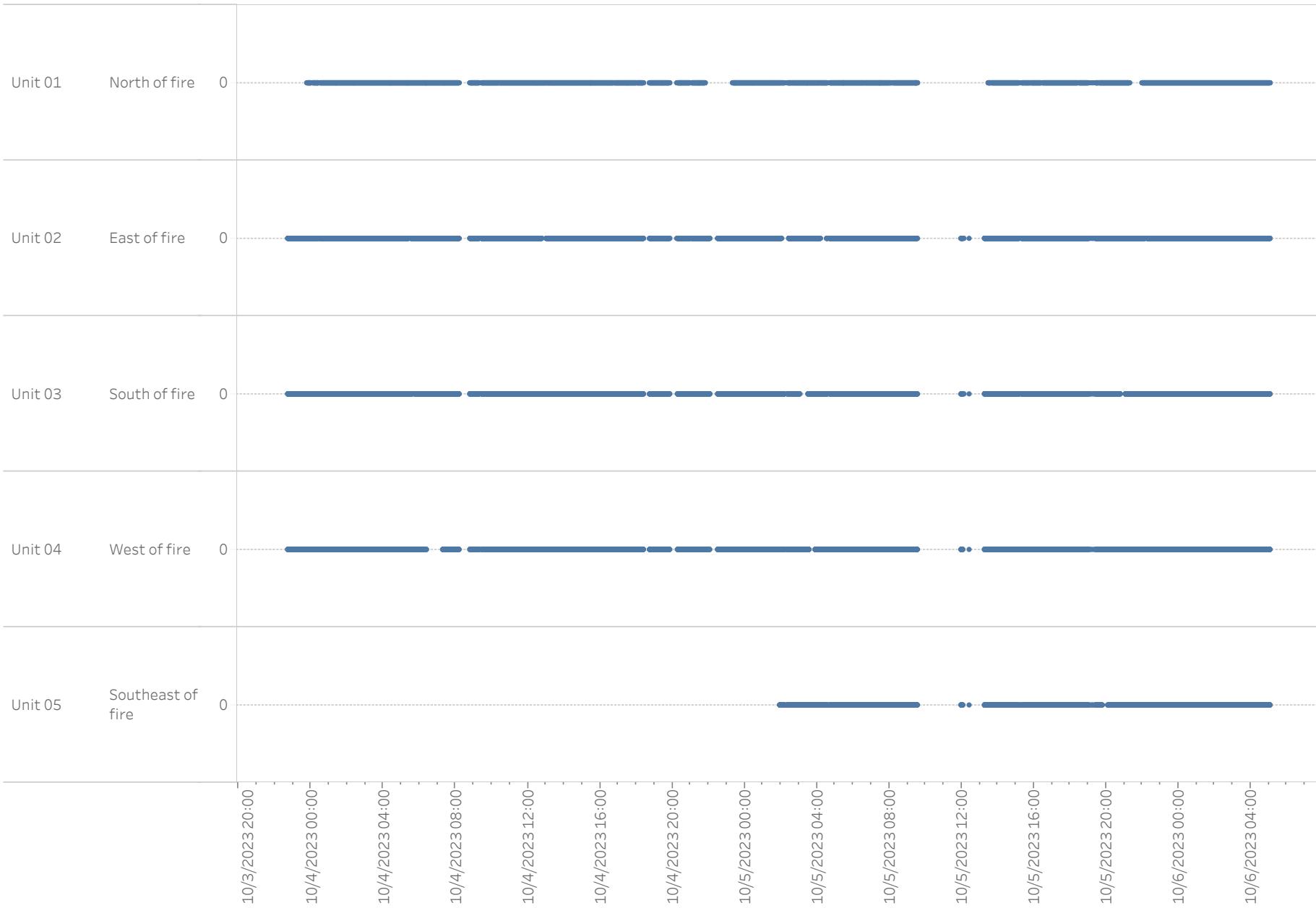
10/3/2023 22:40 to 10/6/2023 05:02 | Analyte: HF



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-031332 | Melba, ID

10/3/2023 22:40 to 10/6/2023 05:02 | Analyte: %LEL



Attachment D

Analytical Sampling Locations and Laboratory Reports – Industrial Hygiene Resources



MATTHEW CALL
INDUSTRIAL HYGIENE RESOURCES
8312 W. NORTHVIEW ST. #100
BOISE, ID 83704

Lab Workorder ID 704238
Visit/Project ID IPC-BATTERY FIRE, MELBA
PO 7144
Received October 4, 2023
Reported October 5, 2023
Report ID 11270205

Previous Report IDs

Dear MATTHEW CALL:

Enclosed are the analytical results for sample(s) received by the laboratory on October 4, 2023. All samples/specimens received by the laboratory were acceptable for testing. Sample results were not blank corrected, and all quality control met laboratory standards unless otherwise noted in the report narrative. All results apply to the samples as received and reported concentrations were calculated with information supplied by the sample submitter.

Please contact the lab if you have any questions concerning this report.

Sincerely,

Steve Strelbel, Laboratory Director

Analyst - RJ MESSLING

Final Report

Lab ID: 704238001		Sample ID: RD-1		Media: PVC filter (Weighed or unweighed)					
Sampling Date:		Matrix: Air		Sampled Time:					
Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS			Air Concentration	TWA
					Front	Rear	Total		
Total Dust	NIOSH 0500	10/4/2023	706 L	53 ug			280 ug	0.40 mg/m3	
Aluminum	NIOSH 7303	10/5/2023	706 L	10 ug			<10 ug	<0.014 mg/m3	
Antimony		10/5/2023	706 L	1.5 ug			<1.5 ug	<0.0021 mg/m3	
Arsenic		10/5/2023	706 L	0.75 ug			<0.75 ug	<0.0011 mg/m3	
Barium		10/5/2023	706 L	0.15 ug			<0.15 ug	<0.00021 mg/m3	
Beryllium		10/5/2023	706 L	0.013 ug			<0.013 ug	<0.000018 mg/m3	
Bismuth		10/5/2023	706 L	2.3 ug			<2.3 ug	<0.0033 mg/m3	
Boron		10/5/2023	706 L	1.5 ug			<1.5 ug	<0.0021 mg/m3	
Cadmium fume		10/5/2023	706 L	0.25 ug			<0.25 ug	<0.00035 mg/m3	
Calcium oxide		10/5/2023	706 L	28 ug			<28 ug	<0.040 mg/m3	
Chromium		10/5/2023	706 L	4.0 ug			<4.0 ug	<0.0057 mg/m3	
Cobalt		10/5/2023	706 L	0.25 ug			<0.25 ug	<0.00035 mg/m3	
Copper fume		10/5/2023	706 L	1.5 ug			3.2 ug	0.0045 mg/m3	
Iron oxide		10/5/2023	706 L	7.2 ug			<7.2 ug	<0.010 mg/m3	
Lead		10/5/2023	706 L	1.8 ug			<1.8 ug	<0.0025 mg/m3	
Lithium		10/5/2023	706 L	0.50 ug			<0.50 ug	<0.00071 mg/m3	
Magnesium oxide		10/5/2023	706 L	8.3 ug			<8.3 ug	<0.012 mg/m3	
Manganese fume		10/5/2023	706 L	0.25 ug			<0.25 ug	<0.00035 mg/m3	
Molybdenum		10/5/2023	706 L	0.50 ug			<0.50 ug	<0.00071 mg/m3	
Nickel		10/5/2023	706 L	1.0 ug			<1.0 ug	<0.0014 mg/m3	
Selenium		10/5/2023	706 L	5.0 ug			<5.0 ug	<0.0071 mg/m3	
Strontium		10/5/2023	706 L	0.15 ug			<0.15 ug	<0.00021 mg/m3	
Thallium		10/5/2023	706 L	2.5 ug			<2.5 ug	<0.0035 mg/m3	
Tin		10/5/2023	706 L	5.0 ug			<5.0 ug	<0.0071 mg/m3	
Titanium		10/5/2023	706 L	0.50 ug			<0.50 ug	<0.00071 mg/m3	
Vanadium		10/5/2023	706 L	0.25 ug			<0.25 ug	<0.00035 mg/m3	

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Zinc oxide 10/5/2023 706 L 2.2 ug 13 ug 0.018 mg/m³

Lab ID: 704238002		Sample ID: RD-2		Media: PVC filter (Weighed or unweighed)					
Sampling Date:		Matrix: Air		Sampled Time:					
Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS				
					Front	Rear	Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	688 L	53 ug			990 ug	1.4 mg/m ³	
Aluminum	NIOSH 7303	10/5/2023	688 L	10 ug			<10 ug	<0.015 mg/m ³	
Antimony		10/5/2023	688 L	1.5 ug			4.3 ug	0.0063 mg/m ³	
Arsenic		10/5/2023	688 L	0.75 ug			<0.75 ug	<0.0011 mg/m ³	
Barium		10/5/2023	688 L	0.15 ug			<0.15 ug	<0.00022 mg/m ³	
Beryllium		10/5/2023	688 L	0.013 ug			<0.013 ug	<0.000019 mg/m ³	
Bismuth		10/5/2023	688 L	2.3 ug			<2.3 ug	<0.0033 mg/m ³	
Boron		10/5/2023	688 L	1.5 ug			<1.5 ug	<0.0022 mg/m ³	
Cadmium fume		10/5/2023	688 L	0.25 ug			<0.25 ug	<0.00036 mg/m ³	
Calcium oxide		10/5/2023	688 L	28 ug			<28 ug	<0.041 mg/m ³	
Chromium		10/5/2023	688 L	4.0 ug			<4.0 ug	<0.0058 mg/m ³	
Cobalt		10/5/2023	688 L	0.25 ug			<0.25 ug	<0.00036 mg/m ³	
Copper fume		10/5/2023	688 L	1.5 ug			9.6 ug	0.014 mg/m ³	
Iron oxide		10/5/2023	688 L	7.2 ug			<7.2 ug	<0.010 mg/m ³	
Lead		10/5/2023	688 L	1.8 ug			<1.8 ug	<0.0026 mg/m ³	
Lithium		10/5/2023	688 L	0.50 ug			0.59 ug	0.00086 mg/m ³	
Magnesium oxide		10/5/2023	688 L	8.3 ug			<8.3 ug	<0.012 mg/m ³	
Manganese fume		10/5/2023	688 L	0.25 ug			<0.25 ug	<0.00036 mg/m ³	
Molybdenum		10/5/2023	688 L	0.50 ug			<0.50 ug	<0.00073 mg/m ³	
Nickel		10/5/2023	688 L	1.0 ug			<1.0 ug	<0.0015 mg/m ³	
Selenium		10/5/2023	688 L	5.0 ug			<5.0 ug	<0.0073 mg/m ³	
Strontium		10/5/2023	688 L	0.15 ug			<0.15 ug	<0.00022 mg/m ³	
Thallium		10/5/2023	688 L	2.5 ug			<2.5 ug	<0.0036 mg/m ³	
Tin		10/5/2023	688 L	5.0 ug			<5.0 ug	<0.0073 mg/m ³	
Titanium		10/5/2023	688 L	0.50 ug			<0.50 ug	<0.00073 mg/m ³	

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Vanadium	10/5/2023	688 L	0.25 ug	<0.25 ug	<0.00036 mg/m3
Zinc oxide	10/5/2023	688 L	2.2 ug	49 ug	0.071 mg/m3

Lab ID: 704238003	Sample ID: RD-3	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	Front	Rear	RESULTS		
							Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	655 L	53 ug			<53 ug	<0.081 mg/m3	
Aluminum	NIOSH 7303	10/5/2023	655 L	10 ug			<10 ug	<0.015 mg/m3	
Antimony		10/5/2023	655 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Arsenic		10/5/2023	655 L	0.75 ug			<0.75 ug	<0.0011 mg/m3	
Barium		10/5/2023	655 L	0.15 ug			<0.15 ug	<0.00023 mg/m3	
Beryllium		10/5/2023	655 L	0.013 ug			<0.013 ug	<0.000020 mg/m3	
Bismuth		10/5/2023	655 L	2.3 ug			<2.3 ug	<0.0035 mg/m3	
Boron		10/5/2023	655 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Cadmium fume		10/5/2023	655 L	0.25 ug			<0.25 ug	<0.00038 mg/m3	
Calcium oxide		10/5/2023	655 L	28 ug			<28 ug	<0.043 mg/m3	
Chromium		10/5/2023	655 L	4.0 ug			<4.0 ug	<0.0061 mg/m3	
Cobalt		10/5/2023	655 L	0.25 ug			<0.25 ug	<0.00038 mg/m3	
Copper fume		10/5/2023	655 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Iron oxide		10/5/2023	655 L	7.2 ug			<7.2 ug	<0.011 mg/m3	
Lead		10/5/2023	655 L	1.8 ug			<1.8 ug	<0.0027 mg/m3	
Lithium		10/5/2023	655 L	0.50 ug			<0.50 ug	<0.00076 mg/m3	
Magnesium oxide		10/5/2023	655 L	8.3 ug			<8.3 ug	<0.013 mg/m3	
Manganese fume		10/5/2023	655 L	0.25 ug			<0.25 ug	<0.00038 mg/m3	
Molybdenum		10/5/2023	655 L	0.50 ug			<0.50 ug	<0.00076 mg/m3	
Nickel		10/5/2023	655 L	1.0 ug			<1.0 ug	<0.0015 mg/m3	
Selenium		10/5/2023	655 L	5.0 ug			<5.0 ug	<0.0076 mg/m3	
Strontium		10/5/2023	655 L	0.15 ug			<0.15 ug	<0.00023 mg/m3	
Thallium		10/5/2023	655 L	2.5 ug			<2.5 ug	<0.0038 mg/m3	
Tin		10/5/2023	655 L	5.0 ug			<5.0 ug	<0.0076 mg/m3	

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Titanium	10/5/2023	655 L	0.50 ug	<0.50 ug	<0.00076 mg/m3
Vanadium	10/5/2023	655 L	0.25 ug	<0.25 ug	<0.00038 mg/m3
Zinc oxide	10/5/2023	655 L	2.2 ug	<2.2 ug	<0.0034 mg/m3

Lab ID: 704238004	Sample ID: RD-4	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	Front	Rear	RESULTS		
							Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	188 L	53 ug			<53 ug	<0.28 mg/m3	
Aluminum	NIOSH 7303	10/5/2023	188 L	10 ug			<10 ug	<0.053 mg/m3	
Antimony		10/5/2023	188 L	1.5 ug			<1.5 ug	<0.0080 mg/m3	
Arsenic		10/5/2023	188 L	0.75 ug			<0.75 ug	<0.0040 mg/m3	
Barium		10/5/2023	188 L	0.15 ug			<0.15 ug	<0.00080 mg/m3	
Beryllium		10/5/2023	188 L	0.013 ug			<0.013 ug	<0.000069 mg/m3	
Bismuth		10/5/2023	188 L	2.3 ug			<2.3 ug	<0.012 mg/m3	
Boron		10/5/2023	188 L	1.5 ug			<1.5 ug	<0.0080 mg/m3	
Cadmium fume		10/5/2023	188 L	0.25 ug			<0.25 ug	<0.0013 mg/m3	
Calcium oxide		10/5/2023	188 L	28 ug			<28 ug	<0.15 mg/m3	
Chromium		10/5/2023	188 L	4.0 ug			<4.0 ug	<0.021 mg/m3	
Cobalt		10/5/2023	188 L	0.25 ug			<0.25 ug	<0.0013 mg/m3	
Copper fume		10/5/2023	188 L	1.5 ug			<1.5 ug	<0.0080 mg/m3	
Iron oxide		10/5/2023	188 L	7.2 ug			<7.2 ug	<0.038 mg/m3	
Lead		10/5/2023	188 L	1.8 ug			<1.8 ug	<0.0096 mg/m3	
Lithium		10/5/2023	188 L	0.50 ug			<0.50 ug	<0.0027 mg/m3	
Magnesium oxide		10/5/2023	188 L	8.3 ug			<8.3 ug	<0.044 mg/m3	
Manganese fume		10/5/2023	188 L	0.25 ug			<0.25 ug	<0.0013 mg/m3	
Molybdenum		10/5/2023	188 L	0.50 ug			<0.50 ug	<0.0027 mg/m3	
Nickel		10/5/2023	188 L	1.0 ug			<1.0 ug	<0.0053 mg/m3	
Selenium		10/5/2023	188 L	5.0 ug			<5.0 ug	<0.027 mg/m3	
Strontium		10/5/2023	188 L	0.15 ug			<0.15 ug	<0.00080 mg/m3	
Thallium		10/5/2023	188 L	2.5 ug			<2.5 ug	<0.013 mg/m3	

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Tin	10/5/2023	188 L	5.0 ug	<5.0 ug	<0.027 mg/m ³
Titanium	10/5/2023	188 L	0.50 ug	<0.50 ug	<0.0027 mg/m ³
Vanadium	10/5/2023	188 L	0.25 ug	<0.25 ug	<0.0013 mg/m ³
Zinc oxide	10/5/2023	188 L	2.2 ug	<2.2 ug	<0.012 mg/m ³

Lab ID: 704238005	Sample ID: RD-5	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS				
					Front	Rear	Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023		53 ug			<53 ug	n/a	
Aluminum	NIOSH 7303	10/5/2023		10 ug			<10 ug	n/a	
Antimony		10/5/2023		1.5 ug			<1.5 ug	n/a	
Arsenic		10/5/2023		0.75 ug			<0.75 ug	n/a	
Barium		10/5/2023		0.15 ug			<0.15 ug	n/a	
Beryllium		10/5/2023		0.013 ug			<0.013 ug	n/a	
Bismuth		10/5/2023		2.3 ug			<2.3 ug	n/a	
Boron		10/5/2023		1.5 ug			<1.5 ug	n/a	
Cadmium fume		10/5/2023		0.25 ug			<0.25 ug	n/a	
Calcium oxide		10/5/2023		28 ug			<28 ug	n/a	
Chromium		10/5/2023		4.0 ug			<4.0 ug	n/a	
Cobalt		10/5/2023		0.25 ug			<0.25 ug	n/a	
Copper fume		10/5/2023		1.5 ug			<1.5 ug	n/a	
Iron oxide		10/5/2023		7.2 ug			<7.2 ug	n/a	
Lead		10/5/2023		1.8 ug			<1.8 ug	n/a	
Lithium		10/5/2023		0.50 ug			<0.50 ug	n/a	
Magnesium oxide		10/5/2023		8.3 ug			<8.3 ug	n/a	
Manganese fume		10/5/2023		0.25 ug			<0.25 ug	n/a	
Molybdenum		10/5/2023		0.50 ug			<0.50 ug	n/a	
Nickel		10/5/2023		1.0 ug			<1.0 ug	n/a	
Selenium		10/5/2023		5.0 ug			<5.0 ug	n/a	
Strontium		10/5/2023		0.15 ug			<0.15 ug	n/a	

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Thallium	10/5/2023	2.5 ug	<2.5 ug	n/a
Tin	10/5/2023	5.0 ug	<5.0 ug	n/a
Titanium	10/5/2023	0.50 ug	<0.50 ug	n/a
Vanadium	10/5/2023	0.25 ug	<0.25 ug	n/a
Zinc oxide	10/5/2023	2.2 ug	<2.2 ug	n/a

Lab ID: 704238006	Sample ID: M-1	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS		Air Concentration	TWA
					Front	Rear		
Total Dust	NIOSH 0500	10/4/2023	654 L	53 ug			270 ug	0.41 mg/m ³
Aluminum	NIOSH 7303	10/5/2023	654 L	10 ug			<10 ug	<0.015 mg/m ³
Antimony		10/5/2023	654 L	1.5 ug			<1.5 ug	<0.0023 mg/m ³
Arsenic		10/5/2023	654 L	0.75 ug			<0.75 ug	<0.0011 mg/m ³
Barium		10/5/2023	654 L	0.15 ug			<0.15 ug	<0.00023 mg/m ³
Beryllium		10/5/2023	654 L	0.013 ug			<0.013 ug	<0.000020 mg/m ³
Bismuth		10/5/2023	654 L	2.3 ug			<2.3 ug	<0.0035 mg/m ³
Boron		10/5/2023	654 L	1.5 ug			<1.5 ug	<0.0023 mg/m ³
Cadmium fume		10/5/2023	654 L	0.25 ug			<0.25 ug	<0.00038 mg/m ³
Calcium oxide		10/5/2023	654 L	28 ug			<28 ug	<0.043 mg/m ³
Chromium		10/5/2023	654 L	4.0 ug			<4.0 ug	<0.0061 mg/m ³
Cobalt		10/5/2023	654 L	0.25 ug			<0.25 ug	<0.00038 mg/m ³
Copper fume		10/5/2023	654 L	1.5 ug			3.1 ug	0.0047 mg/m ³
Iron oxide		10/5/2023	654 L	7.2 ug			<7.2 ug	<0.011 mg/m ³
Lead		10/5/2023	654 L	1.8 ug			<1.8 ug	<0.0028 mg/m ³
Lithium		10/5/2023	654 L	0.50 ug			<0.50 ug	<0.00076 mg/m ³
Magnesium oxide		10/5/2023	654 L	8.3 ug			<8.3 ug	<0.013 mg/m ³
Manganese fume		10/5/2023	654 L	0.25 ug			<0.25 ug	<0.00038 mg/m ³
Molybdenum		10/5/2023	654 L	0.50 ug			<0.50 ug	<0.00076 mg/m ³
Nickel		10/5/2023	654 L	1.0 ug			<1.0 ug	<0.0015 mg/m ³
Selenium		10/5/2023	654 L	5.0 ug			<5.0 ug	<0.0076 mg/m ³

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Strontium	10/5/2023	654 L	0.15 ug	<0.15 ug	<0.00023 mg/m ³
Thallium	10/5/2023	654 L	2.5 ug	<2.5 ug	<0.0038 mg/m ³
Tin	10/5/2023	654 L	5.0 ug	<5.0 ug	<0.0076 mg/m ³
Titanium	10/5/2023	654 L	0.50 ug	<0.50 ug	<0.00076 mg/m ³
Vanadium	10/5/2023	654 L	0.25 ug	<0.25 ug	<0.00038 mg/m ³
Zinc oxide	10/5/2023	654 L	2.2 ug	13 ug	0.020 mg/m ³

Lab ID: 704238007	Sample ID: M-2	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS				
					Front	Rear	Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	644 L	53 ug			930 ug	1.4 mg/m ³	
Aluminum	NIOSH 7303	10/5/2023	644 L	10 ug			<10 ug	<0.016 mg/m ³	
Antimony		10/5/2023	644 L	1.5 ug			4.2 ug	0.0065 mg/m ³	
Arsenic		10/5/2023	644 L	0.75 ug			<0.75 ug	<0.0012 mg/m ³	
Barium		10/5/2023	644 L	0.15 ug			<0.15 ug	<0.00023 mg/m ³	
Beryllium		10/5/2023	644 L	0.013 ug			<0.013 ug	<0.000020 mg/m ³	
Bismuth		10/5/2023	644 L	2.3 ug			<2.3 ug	<0.0036 mg/m ³	
Boron		10/5/2023	644 L	1.5 ug			<1.5 ug	<0.0023 mg/m ³	
Cadmium fume		10/5/2023	644 L	0.25 ug			<0.25 ug	<0.00039 mg/m ³	
Calcium oxide		10/5/2023	644 L	28 ug			<28 ug	<0.043 mg/m ³	
Chromium		10/5/2023	644 L	4.0 ug			<4.0 ug	<0.0062 mg/m ³	
Cobalt		10/5/2023	644 L	0.25 ug			<0.25 ug	<0.00039 mg/m ³	
Copper fume		10/5/2023	644 L	1.5 ug			9.4 ug	0.015 mg/m ³	
Iron oxide		10/5/2023	644 L	7.2 ug			<7.2 ug	<0.011 mg/m ³	
Lead		10/5/2023	644 L	1.8 ug			<1.8 ug	<0.0028 mg/m ³	
Lithium		10/5/2023	644 L	0.50 ug			0.63 ug	0.00098 mg/m ³	
Magnesium oxide		10/5/2023	644 L	8.3 ug			<8.3 ug	<0.013 mg/m ³	
Manganese fume		10/5/2023	644 L	0.25 ug			<0.25 ug	<0.00039 mg/m ³	
Molybdenum		10/5/2023	644 L	0.50 ug			<0.50 ug	<0.00078 mg/m ³	
Nickel		10/5/2023	644 L	1.0 ug			<1.0 ug	<0.0016 mg/m ³	

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Selenium	10/5/2023	644 L	5.0 ug	<5.0 ug	<0.0078 mg/m3
Strontium	10/5/2023	644 L	0.15 ug	<0.15 ug	<0.00023 mg/m3
Thallium	10/5/2023	644 L	2.5 ug	<2.5 ug	<0.0039 mg/m3
Tin	10/5/2023	644 L	5.0 ug	<5.0 ug	<0.0078 mg/m3
Titanium	10/5/2023	644 L	0.50 ug	<0.50 ug	<0.00078 mg/m3
Vanadium	10/5/2023	644 L	0.25 ug	<0.25 ug	<0.00039 mg/m3
Zinc oxide	10/5/2023	644 L	2.2 ug	47 ug	0.073 mg/m3

Lab ID: 704238008	Sample ID: M-3	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	Front	Rear	RESULTS		
							Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	645 L	53 ug			<53 ug	<0.082 mg/m3	
Aluminum	NIOSH 7303	10/5/2023	645 L	10 ug			<10 ug	<0.016 mg/m3	
Antimony		10/5/2023	645 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Arsenic		10/5/2023	645 L	0.75 ug			<0.75 ug	<0.0012 mg/m3	
Barium		10/5/2023	645 L	0.15 ug			<0.15 ug	<0.00023 mg/m3	
Beryllium		10/5/2023	645 L	0.013 ug			<0.013 ug	<0.000020 mg/m3	
Bismuth		10/5/2023	645 L	2.3 ug			<2.3 ug	<0.0036 mg/m3	
Boron		10/5/2023	645 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Cadmium fume		10/5/2023	645 L	0.25 ug			<0.25 ug	<0.00039 mg/m3	
Calcium oxide		10/5/2023	645 L	28 ug			<28 ug	<0.043 mg/m3	
Chromium		10/5/2023	645 L	4.0 ug			<4.0 ug	<0.0062 mg/m3	
Cobalt		10/5/2023	645 L	0.25 ug			<0.25 ug	<0.00039 mg/m3	
Copper fume		10/5/2023	645 L	1.5 ug			<1.5 ug	<0.0023 mg/m3	
Iron oxide		10/5/2023	645 L	7.2 ug			<7.2 ug	<0.011 mg/m3	
Lead		10/5/2023	645 L	1.8 ug			<1.8 ug	<0.0028 mg/m3	
Lithium		10/5/2023	645 L	0.50 ug			<0.50 ug	<0.00078 mg/m3	
Magnesium oxide		10/5/2023	645 L	8.3 ug			<8.3 ug	<0.013 mg/m3	
Manganese fume		10/5/2023	645 L	0.25 ug			<0.25 ug	<0.00039 mg/m3	
Molybdenum		10/5/2023	645 L	0.50 ug			<0.50 ug	<0.00078 mg/m3	

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Nickel	10/5/2023	645 L	1.0 ug	<1.0 ug	<0.0016 mg/m3
Selenium	10/5/2023	645 L	5.0 ug	<5.0 ug	<0.0078 mg/m3
Strontium	10/5/2023	645 L	0.15 ug	<0.15 ug	<0.00023 mg/m3
Thallium	10/5/2023	645 L	2.5 ug	<2.5 ug	<0.0039 mg/m3
Tin	10/5/2023	645 L	5.0 ug	<5.0 ug	<0.0078 mg/m3
Titanium	10/5/2023	645 L	0.50 ug	<0.50 ug	<0.00078 mg/m3
Vanadium	10/5/2023	645 L	0.25 ug	<0.25 ug	<0.00039 mg/m3
Zinc oxide	10/5/2023	645 L	2.2 ug	<2.2 ug	<0.0034 mg/m3

Lab ID: 704238009	Sample ID: M-4	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS				
					Front	Rear	Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023	206 L	53 ug			<53 ug	<0.26 mg/m3	
Aluminum	NIOSH 7303	10/5/2023	206 L	10 ug			<10 ug	<0.049 mg/m3	
Antimony		10/5/2023	206 L	1.5 ug			<1.5 ug	<0.0073 mg/m3	
Arsenic		10/5/2023	206 L	0.75 ug			<0.75 ug	<0.0036 mg/m3	
Barium		10/5/2023	206 L	0.15 ug			<0.15 ug	<0.00073 mg/m3	
Beryllium		10/5/2023	206 L	0.013 ug			<0.013 ug	<0.000063 mg/m3	
Bismuth		10/5/2023	206 L	2.3 ug			<2.3 ug	<0.011 mg/m3	
Boron		10/5/2023	206 L	1.5 ug			<1.5 ug	<0.0073 mg/m3	
Cadmium fume		10/5/2023	206 L	0.25 ug			<0.25 ug	<0.0012 mg/m3	
Calcium oxide		10/5/2023	206 L	28 ug			<28 ug	<0.14 mg/m3	
Chromium		10/5/2023	206 L	4.0 ug			<4.0 ug	<0.019 mg/m3	
Cobalt		10/5/2023	206 L	0.25 ug			<0.25 ug	<0.0012 mg/m3	
Copper fume		10/5/2023	206 L	1.5 ug			<1.5 ug	<0.0073 mg/m3	
Iron oxide		10/5/2023	206 L	7.2 ug			<7.2 ug	<0.035 mg/m3	
Lead		10/5/2023	206 L	1.8 ug			<1.8 ug	<0.0087 mg/m3	
Lithium		10/5/2023	206 L	0.50 ug			<0.50 ug	<0.0024 mg/m3	
Magnesium oxide		10/5/2023	206 L	8.3 ug			<8.3 ug	<0.040 mg/m3	
Manganese fume		10/5/2023	206 L	0.25 ug			<0.25 ug	<0.0012 mg/m3	

Final Report

Molybdenum	10/5/2023	206 L	0.50 ug	<0.50 ug	<0.0024 mg/m ³
Nickel	10/5/2023	206 L	1.0 ug	<1.0 ug	<0.0049 mg/m ³
Selenium	10/5/2023	206 L	5.0 ug	<5.0 ug	<0.024 mg/m ³
Strontium	10/5/2023	206 L	0.15 ug	<0.15 ug	<0.00073 mg/m ³
Thallium	10/5/2023	206 L	2.5 ug	<2.5 ug	<0.012 mg/m ³
Tin	10/5/2023	206 L	5.0 ug	<5.0 ug	<0.024 mg/m ³
Titanium	10/5/2023	206 L	0.50 ug	<0.50 ug	<0.0024 mg/m ³
Vanadium	10/5/2023	206 L	0.25 ug	<0.25 ug	<0.0012 mg/m ³
Zinc oxide	10/5/2023	206 L	2.2 ug	<2.2 ug	<0.011 mg/m ³

Lab ID: 704238010	Sample ID: M-5	Media: PVC filter (Weighed or unweighed)
Sampling Date:	Matrix: Air	Sampled Time:

Analyte	Method	Analysis Date	Air Volume	Reporting Limit	RESULTS				
					Front	Rear	Total	Air Concentration	TWA
Total Dust	NIOSH 0500	10/4/2023		53 ug			<53 ug	n/a	
Aluminum	NIOSH 7303	10/5/2023		10 ug			<10 ug	n/a	
Antimony		10/5/2023		1.5 ug			<1.5 ug	n/a	
Arsenic		10/5/2023		0.75 ug			<0.75 ug	n/a	
Barium		10/5/2023		0.15 ug			<0.15 ug	n/a	
Beryllium		10/5/2023		0.013 ug			<0.013 ug	n/a	
Bismuth		10/5/2023		2.3 ug			<2.3 ug	n/a	
Boron		10/5/2023		1.5 ug			<1.5 ug	n/a	
Cadmium fume		10/5/2023		0.25 ug			<0.25 ug	n/a	
Calcium oxide		10/5/2023		28 ug			<28 ug	n/a	
Chromium		10/5/2023		4.0 ug			<4.0 ug	n/a	
Cobalt		10/5/2023		0.25 ug			<0.25 ug	n/a	
Copper fume		10/5/2023		1.5 ug			<1.5 ug	n/a	
Iron oxide		10/5/2023		7.2 ug			<7.2 ug	n/a	
Lead		10/5/2023		1.8 ug			<1.8 ug	n/a	
Lithium		10/5/2023		0.50 ug			<0.50 ug	n/a	
Magnesium oxide		10/5/2023		8.3 ug			<8.3 ug	n/a	



Final Report

Manganese fume	10/5/2023	0.25 ug	<0.25 ug	n/a
Molybdenum	10/5/2023	0.50 ug	<0.50 ug	n/a
Nickel	10/5/2023	1.0 ug	<1.0 ug	n/a
Selenium	10/5/2023	5.0 ug	<5.0 ug	n/a
Strontium	10/5/2023	0.15 ug	<0.15 ug	n/a
Thallium	10/5/2023	2.5 ug	<2.5 ug	n/a
Tin	10/5/2023	5.0 ug	<5.0 ug	n/a
Titanium	10/5/2023	0.50 ug	<0.50 ug	n/a
Vanadium	10/5/2023	0.25 ug	<0.25 ug	n/a
Zinc oxide	10/5/2023	2.2 ug	<2.2 ug	n/a

Abbreviations:

mg = milligrams

ppm or ppmv = parts per million

/m³ = per cubic meter

ug = micrograms

ppb or ppbv = parts per billion

ng = nanograms

< Less Than. The analyte, if present, is at a level too low to be accurately quantitated by the method used

Displayed values on report have been rounded to 2 significant figures. Please contact the laboratory if you have any questions regarding our result calculation or rounding. All samples were received by the laboratory in acceptable condition unless otherwise noted.

The results in this report apply only to the samples, specifically listed above, and tested at the Wisconsin Occupational Health Laboratory.

This report is not to be reproduced except in its entirety

End of Analytical Report

Client: INDUSTRIAL HYGIENE RESOURCES
8312 W NORTHVIEW ST STE 100
BOISE, ID 83704-7188
US

Sampled By: Rachel Albertson & Matthew Call
Project: IPC - Battery Fire 7144
Location: Melba, ID
-

Report Number: 109694

Thank you for using IAQ Commercial Survey!

If you have questions about your report,
please contact your service provider who
performed this test.

Client Sample ID: Baseline Rd Downwind, S.E
Sample Volume (L): 12.3
Date Sampled: 10/02/2023
Sample Type: TDT A1720
Sample Condition: Acceptable

Receive Date: 10/04/2023
Approve Date: 10/04/2023
Scan Date: 10/04/2023
Report Date: 10/06/2023

IAQ Commercial Survey™ is one of the most advanced, trusted air testing products on the market today for identifying chemical sources and active mold growth. Many indoor air quality (IAQ) issues identified by IAQ Commercial Survey can be easily remediated or eliminated. This test is an invaluable tool for improving air quality because it provides important information on potential contamination issues that cannot be detected by a visual inspection alone. Acting upon the information in this report will enable you to dramatically improve the air quality, creating a healthier environment.

Your Indoor Air Quality Report Summary

Your Indoor Air Quality Report has several sections describing different aspects of your air quality. A summary of this data is provided below, additional information and descriptions are included in the full report.

Total Volatile Organic Compounds (TVOC) Level

TVOC is a general indicator of the IAQ (see page 2).

 **Total VOCs** **1100 ng/L**

Contamination Index (CI) Level

The CI shows the types of air-contaminating products and materials that are present in the sampled area (see pages 4 and 5). These levels are estimates based on common home products and activities.

Building Sources

See page 4 for more detail.

M	Coatings (Paints, Varnishes, etc.)
N	PVC Cement
N	Building Materials-Toluene Based
N	Gasoline
N	Fuel Oil, Diesel Fuel, Kerosene
N	Light Hydrocarbons
N	Light Solvents

Occupant Sources

See page 5 for more detail.

N	HFCs and CFCs (Freons™)
N	Personal Care and Cleaning Products
N	Odorants and Fragrances
N	Dry Cleaning Solvents

Note: Severity levels begin at Normal or Minimal and progress through Moderate, Elevated, High and/or Severe. The color progression from green to red indicates results that are increasingly atypical and suggest potentially higher risk.

All Severity classifications are based on empirical data and should not be taken as a pass/fail or conformance to a published specified limit.



Enthalpy Analytical, LLC (MTP), the creator of IAQ Home Survey, has been performing air quality assessments to industry and environmental consultants since 1995. Enthalpy Analytical, LLC (MTP) (ID 166272) is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene accreditation program for GC-MS Field of Testing as documented by the Scope of Accreditation [Certificate](#) and associated Scope. This analysis references methods EPA TO-17 and ISO 16000-6, which fall within the Scope of Accreditation.

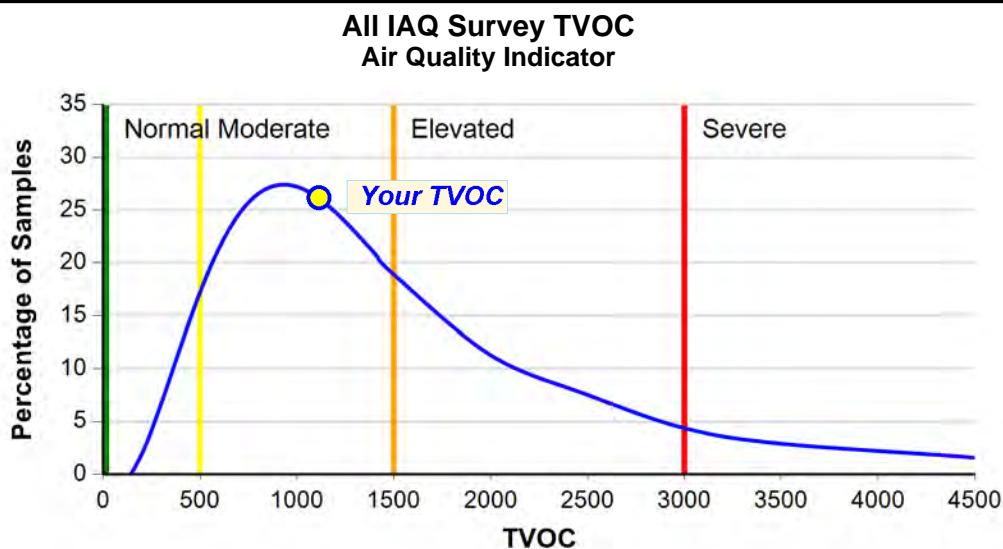
Total Volatile Organic Compound (TVOC) Summary

Your TVOC Level is: 1100 ng/L

IAQ is borderline acceptable; some effect on occupants is possible; reduce potential sources and consider increasing ventilation.

Your Indoor Air Quality Level (Highlighted)

Normal < 500 ng/L	Moderate 500 - 1500 ng/L	Elevated 1500 - 3000 ng/L	Severe > 3000 ng/L
----------------------	-----------------------------	------------------------------	-----------------------



The chart above shows the TVOC levels for all locations tested using IAQ Survey. Results for this air sample are displayed on the chart as a yellow circle. The blue curved line represents the relationship between the percentage of locations (indicated on the vertical y-axis) and the TVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Normal, Moderate, Elevated, and Severe TVOC levels. As the TVOC value increases, individuals may experience aggravated health problems, and therefore, the need to address VOC issues becomes more critical. However, reductions in VOCs can be made at any level.

No government or organization has specified a TVOC limit for indoor air. However, the U.S. Green Building Council (USGBC) has set 500 ng/L as the recommended TVOC limit.

In general:

- < 500 ng/L IAQ is acceptable for most individuals; however, chemically sensitive persons may require lower levels.
- 500 - 1,500 ng/L some effects on the occupants is possible.
- > 1,500 ng/L IAQ should be improved.

Note: These levels are based on observed health effects and have been determined from a combination of published data and the statistical distribution of TVOC concentrations from the IAQ Home Survey methodology.

The presence of chemicals in your home can cause a wide range of problems, from an unpleasant odor to physical symptoms (burning and irritation in the eyes, nose, and throat; headaches; nausea; nervous system effects; severe illness; etc.). Anyone with respiratory issues like asthma or allergies, as well as children, the elderly, and pregnant women are more susceptible to poor indoor air quality than healthy individuals.

Click [here](#) for more information about VOCs.

The Contamination Index (CI) in the next pages of this report will help guide you through determining what types of products or materials in the home could be problematic for your IAQ, and will provide some recommendations to help reduce or eliminate them.

Contamination Index™

The Contamination Index™ (CI) shows the types of air-contaminating products and materials that are present in the sampled area. Each CI category shows the approximate contribution of that category to the TVOC level, indicates how your location compares to thousands of other locations, and provides some suggestions about which products and materials might be the source for the VOCs. The CI is divided into two main source groups: Building Sources and Occupant Sources.

1. Building Sources are those that are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation often increases the CI categories in this group to the Elevated, High, or Severe levels. VOCs from these activities often decrease substantially in the month following use or application of these products, especially if the area is flushed with air to dissipate the VOCs off gassed from the new products or materials.

2. Occupant Sources are those that the occupants of the building bring into the building and can usually be more readily identified and remediated. Recent construction or renovation can often contribute to other source categories in addition to Building Sources.

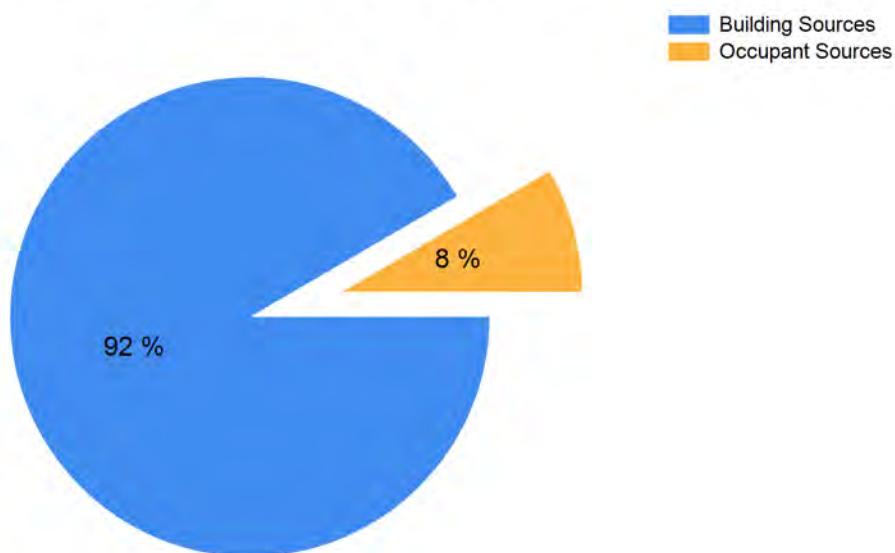
It is possible for a category listed in one source group to belong to another source group. For example, the 'Coatings' category is in the Building Sources group because the largest contribution is typically the paint on the walls, but cans of paint stored in a basement or storage area could be considered part of the Occupant Sources group. Always consider all possible sources for a particular CI category.

The CI categories comprise the most common sources but other products or activities may be present that are not included in the CI. The values assigned to each category are approximations based on typical office and commercial spaces. Locations with additional or atypical sources may require additional investigation to determine the source of certain chemicals that are not accurately represented by the CI.

Since there are potentially many sources of VOCs, buildings can often be re-contaminated even after sources have been removed because new products are constantly being brought into the building. Occupants should take note of this fact, and view IAQ as a continuous improvement process.

The chart below depicts the distribution of the Contamination Index source groups. These source groups are estimates and may not indicate all of the VOCs in your air sample.

Contamination Index Source Groups



Contamination Index™ Building Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation will often cause these categories to be elevated. Increased ventilation will help to reduce VOCs from construction or renovation sources. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Building Sources	Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
	Coatings (Paints, Varnishes, etc.)	380	Moderate	Includes interior and exterior paints (including low- or no-VOC paints), varnishes, lacquers, some sealants, and other products that can be classified as a coating over a surface. Typically, VOCs from these products are in the 10 to 14 carbon size range and can linger for several months, sometimes longer. Ventilate as much as possible during and after application of these products. Dispose of opened but unused products and related supplies if possible or store in areas that will minimize off gassing. Additional sources include fuel oil or diesel fuel.
	PVC Cement	1	Normal	PVC cement is used to join pieces of PVC pipe together, usually for plumbing.
	Building Materials-Toluene Based	0	Normal	Adhesives and glues used in construction and maintenance, arts and crafts; adhesive removers; contact cement; sealants; coatings (paint, polyurethane, lacquer, thinner); automotive products, including parts cleaners. Additional sources include gasoline and other fuels.
	Gasoline	130	Normal	VOCs from gasoline are typically a result of off-gassing from gas containers, small spills, and gas-powered equipment used in facilities maintenance in nearby garage or storage areas. Most vehicles in good operating condition do not emit gasoline vapors due to the tightly sealed gas tank. This category does not include exhaust emissions. Gasoline VOCs can linger on clothing after refueling at a gas station. Gasoline includes chemical compounds that are also included in the Light Solvents category.
	Fuel Oil, Diesel Fuel, Kerosene	130	Normal	Typically found in garages and facilities maintenance areas. These fuels are not very volatile so they will not readily get into the air, but they can linger for a long time and produce a strong, unpleasant odor. This category does not include exhaust emissions. Additional sources include coatings such as paints, varnishes, sealants, waxes, etc.
	Light Hydrocarbons	3	Normal	Building materials; aerosol cans; liquefied petroleum gas (LPG); refrigerant; natural gas; propellant; blowing agent. Includes chemical compounds such as propane, butane, and isobutane.
	Light Solvents	43	Normal	Stoddard solvent; mineral spirits; some coatings (paints, varnish, enamels, etc.); wax remover; adhesives; automotive products; light oils. Typically, VOCs from these products are in the 6 to 9 carbon size range.

Contamination IndexTM Occupant Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically brought into the building by the occupants and can often be readily identified and removed or contained. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Occupant Sources

Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
HFCs and CFCs (Freons TM)	5	Normal	Most often used as refrigerants for air conditioners and refrigerator/freezers and propellants for blown-in insulation, cushions, aerosol cans, etc. Many of these chemical compounds are being phased out because of the Montreal Protocol.
Personal Care and Cleaning Products	35	Normal	Personal care products such as soap, deodorant, lotions, perfumes, hair coloring supplies, nail care supplies, oral hygiene products, etc. Cleaning agents such as surface, window, and flooring products, also restroom and antibacterial products. These products contain many VOCs that will dissipate if use is discontinued or reduced.
Odorants and Fragrances	20	Normal	Air fresheners, scented cleaning products, and scented personal care products.
Dry Cleaning Solvents	4	Normal	Typical dry-cleaning methods employ the use of carcinogenic chemicals. Dry-cleaning should be allowed to vent outside, without plastics bags, before being placed inside.

Significant VOCs

Based upon your specific air analysis, the chemical compounds listed below are significant contributors to the TVOC level reported on page 2 of your IAQ Commercial Survey Report or are indicative of specific types of products or problems. Compounds from a variety of chemical classes are represented here, although only the most common or most notable are specifically listed. These chemical compounds may come from a variety of sources as shown in the Contamination Index section of this report.

Locating and removing the source of the chemical compound is the most effective way to reduce the concentration of that chemical compound. If removing the source is not possible, try to contain it in some way (e.g., placing the source in an air-tight container when not in use). In addition, the ventilation system in some locations may not be optimized so evaluate the ventilation system and make adjustments to increase the amount of fresh air. Filter or purify re-circulated inside air to help reduce the TVOC. Since VOCs may continue to off-gas even when the sources are stored, ventilation and air-purification methods will need to be employed continuously in order to keep the VOC levels low.

The Chemical Abstracts Service (CAS) registry number after the chemical compound name in the table below is a unique identifier for that chemical compound and is often the best means to search for additional information. The two VOC levels in the table below (ng/L and ppb) are different ways of describing the same concentration, in some cases exposure limits or other information may be described using one or both of these concentration units.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	Description
Benzene	71-43-2	70	21	Gasoline. Less common sources include some discontinued solvents; printing and lithography; paints and coatings; rubber; dry cleaning; adhesives; detergents
Styrene	100-42-5	26	6	Polystyrene foam; synthetic rubber; flavoring agent
Toluene	108-88-3	15	4	Gasoline; adhesives (building and arts/crafts); contact cement; solvent; heavy duty cleaner
Naphthalene	91-20-3	14	3	Gasoline; diesel; Moth balls/crystals; insecticide

Supplemental Information: Odorants

Many chemical compounds have odors associated with them, some pleasant and some unpleasant. These odors can combine to create different odors, making odor identification more difficult. The odor descriptions for the compounds reported in this air sample are listed below as well as some of the more common sources.

Compound	CAS	Conc. (ppb)	Odor Range (ppb)	Odor Description
Benzene	71-43-2	21	470 - 313,000	aromatic, sweet, solvent, empyreumatic
Naphthalene	91-20-3	3	2 - 1,012	tar, creosote, mothballs, empyreumatic
Styrene	100-42-5	6	3 - 61,000	sharp, sweet
Toluene	108-88-3	4	21 - 157,000	sour, burnt

Supplemental Information: EPA Hazardous Air Pollutants (HAPs)

Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Listed below are those HAPs that were detected with the IAQ Commercial Survey VOC test. This list does not include all HAPs. The '<' (less than) symbol in the 'Estimated VOC Level' columns indicates the compound is below the reporting limit for this air sample and therefore can be considered absent from the air sample. For more information about HAPs visit the EPA [Air Toxics website](#). The exposure limits listed below can also be found in the [NIOSH Guide to Chemical Hazards](#). The HAPs in the table below may also be listed as Significant VOCs if the concentration of that chemical compound is greater than the threshold level for a Significant VOC.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	NIOSH Exposure Limit	Description
Hexane (C 6)	110-54-3	4	1	180,000 ng/L (50,000 ppb)	Solvent; adhesive; grease; lubricant; paints and coatings; petroleum fuel component
Benzene	71-43-2	70	21	320 ng/L (100 ppb)	Gasoline. Less common sources include some discontinued solvents; printing and lithography; paints and coatings; rubber; dry cleaning; adhesives; detergents
Toluene	108-88-3	15	4	375,000 ng/L (100,000 ppb)	Gasoline; adhesives (building and arts/crafts); contact cement; solvent; heavy duty cleaner
Tetrachloroethene	127-18-4	4	0.5	Carcinogen	Dry cleaning; adhesives, automotive cleaners, polishes
Ethylbenzene	100-41-4	6	1	435,000 ng/L (100,000 ppb)	Gasoline; paints and coatings; solvent; pesticide
m,p-Xylene	108-38-3; 106-42-3	2	0.4	435,000 ng/L (100,000 ppb)	Gasoline; paints and coatings; adhesives and cements; solvent; print cartridges
Styrene	100-42-5	26	6	215,000 ng/L (50,000 ppb)	Polystyrene foam; synthetic rubber; flavoring agent
Naphthalene	91-20-3	14	3	50,000 ng/L (10,000 ppb)	Gasoline; diesel; Moth balls/crystals; insecticide

*These results pertain only to this sample as it was collected and to the items reported.
 These results have been reviewed and approved by the Laboratory Director or approved representative.*

This analysis was performed by Enthalpy Analytical, LLC (MTP). The results contained in this report are dependent upon a number of factors over which Enthalpy Analytical, LLC (MTP) has no control, which may include, but are not limited to, the sampling technique utilized, the size or source of sample, the ability of the sampler to collect a proper or suitable sample, the compounds which make up the TVOC, and/or the type of mold(s) present. Therefore, the opinions contained in this report may be invalid and cannot be considered or construed as definitive and neither Enthalpy Analytical, LLC (MTP), nor its agents, officers, directors, employees, or successors shall be liable for any claims, actions, causes of action, costs, loss of service, medical or other expenses or any compensation whatsoever which may now or hereafter occur or accrue based upon the information or opinions contained herein.

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Client: INDUSTRIAL HYGIENE RESOURCES
8312 W NORTHVIEW ST STE 100
BOISE, ID 83704-7188
US

Sampled By: Rachel Albertson & Matthew Call
Project: IPC - Battery Fire 7144
Location: Melba, ID
-

Report Number: 109694

Thank you for using IAQ Commercial Survey!

If you have questions about your report,
please contact your service provider who
performed this test.

Client Sample ID: Fence Line, E.
Sample Volume (L): 10.9
Date Sampled: 10/02/2023
Sample Type: TDT A0473
Sample Condition: Acceptable

Receive Date: 10/04/2023
Approve Date: 10/04/2023
Scan Date: 10/04/2023
Report Date: 10/06/2023

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Your Indoor Air Quality Report Summary

Your Indoor Air Quality Report has several sections describing different aspects of your air quality. A summary of this data is provided below, additional information and descriptions are included in the full report.

Total Volatile Organic Compounds (TVOC) Level

TVOC is a general indicator of the IAQ (see page 2).

 **Total VOCs** **2700 ng/L**

Contamination Index (CI) Level

The CI shows the types of air-contaminating products and materials that are present in the sampled area (see pages 4 and 5). These levels are estimates based on common home products and activities.

Building Sources

See page 4 for more detail.

M	Coatings (Paints, Varnishes, etc.)
N	PVC Cement
N	Building Materials-Toluene Based
N	Gasoline
N	Fuel Oil, Diesel Fuel, Kerosene
N	Light Hydrocarbons
N	Light Solvents

Occupant Sources

See page 5 for more detail.

N	HFCs and CFCs (Freons™)
N	Personal Care and Cleaning Products
N	Odorants and Fragrances
N	Dry Cleaning Solvents

Note: Severity levels begin at Normal or Minimal and progress through Moderate, Elevated, High and/or Severe. The color progression from green to red indicates results that are increasingly atypical and suggest potentially higher risk.

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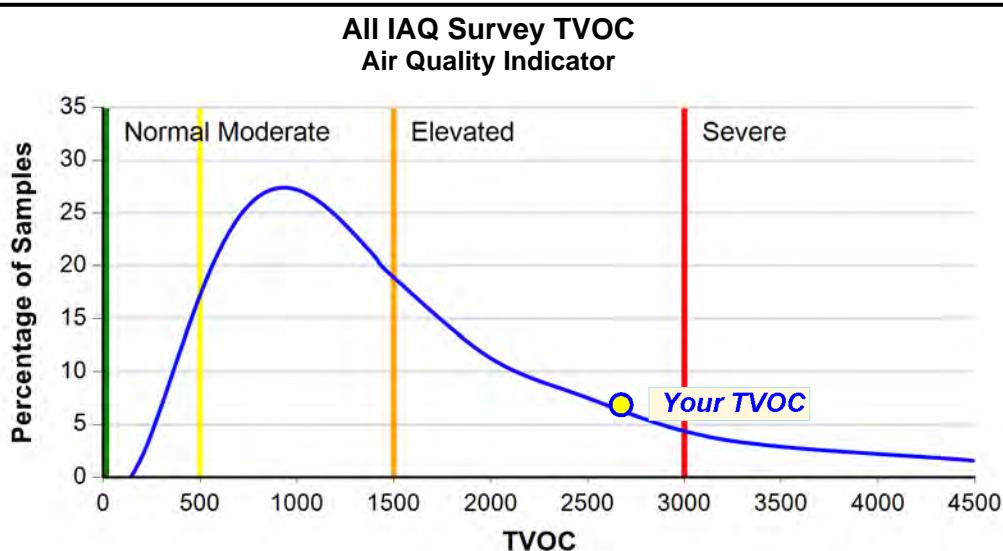
Total Volatile Organic Compound (TVOC) Summary

Your TVOC Level is: 2700 ng/L

IAQ needs improvement; effect on occupants is possible; reduce potential sources and increase ventilation.

Your Indoor Air Quality Level (Highlighted)

Normal < 500 ng/L	Moderate 500 - 1500 ng/L	Elevated 1500 - 3000 ng/L	Severe > 3000 ng/L
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The chart above shows the TVOC levels for all locations tested using IAQ Survey. Results for this air sample are displayed on the chart as a yellow circle. The blue curved line represents the relationship between the percentage of locations (indicated on the vertical y-axis) and the TVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Normal, Moderate, Elevated, and Severe TVOC levels. As the TVOC value increases, individuals may experience aggravated health problems, and therefore, the need to address VOC issues becomes more critical. However, reductions in VOCs can be made at any level.

No government or organization has specified a TVOC limit for indoor air. However, the U.S. Green Building Council (USGBC) has set 500 ng/L as the recommended TVOC limit.

In general:

- < 500 ng/L IAQ is acceptable for most individuals; however, chemically sensitive persons may require lower levels.
- 500 - 1,500 ng/L some effects on the occupants is possible.
- > 1,500 ng/L IAQ should be improved.

Note: These levels are based on observed health effects and have been determined from a combination of published data and the statistical distribution of TVOC concentrations from the IAQ Home Survey methodology.

The presence of chemicals in your home can cause a wide range of problems, from an unpleasant odor to physical symptoms (burning and irritation in the eyes, nose, and throat; headaches; nausea; nervous system effects; severe illness; etc.). Anyone with respiratory issues like asthma or allergies, as well as children, the elderly, and pregnant women are more susceptible to poor indoor air quality than healthy individuals.

Click [here](#) for more information about VOCs.

The Contamination Index (CI) in the next pages of this report will help guide you through determining what types of products or materials in the home could be problematic for your IAQ, and will provide some recommendations to help reduce or eliminate them.

Contamination Index™

The Contamination Index™ (CI) shows the types of air-contaminating products and materials that are present in the sampled area. Each CI category shows the approximate contribution of that category to the TVOC level, indicates how your location compares to thousands of other locations, and provides some suggestions about which products and materials might be the source for the VOCs. The CI is divided into two main source groups: Building Sources and Occupant Sources.

1. Building Sources are those that are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation often increases the CI categories in this group to the Elevated, High, or Severe levels. VOCs from these activities often decrease substantially in the month following use or application of these products, especially if the area is flushed with air to dissipate the VOCs off gassed from the new products or materials.

2. Occupant Sources are those that the occupants of the building bring into the building and can usually be more readily identified and remediated. Recent construction or renovation can often contribute to other source categories in addition to Building Sources.

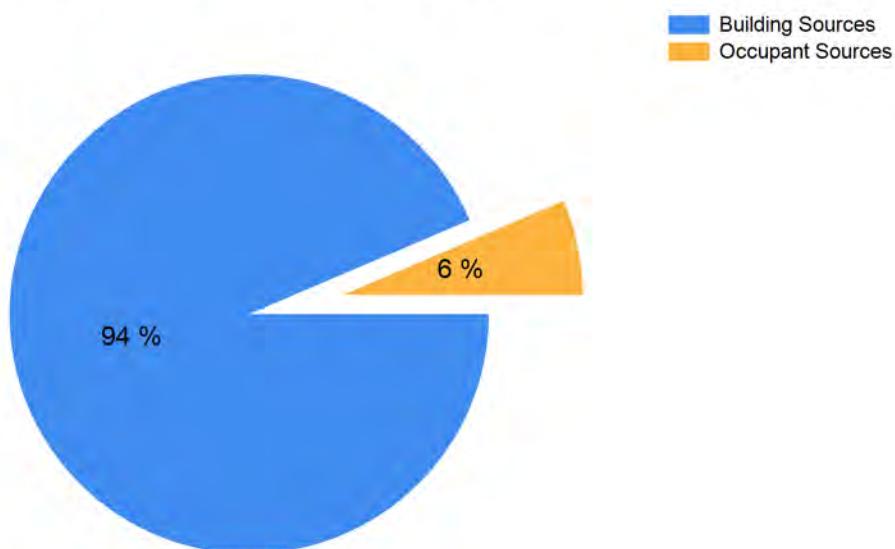
It is possible for a category listed in one source group to belong to another source group. For example, the 'Coatings' category is in the Building Sources group because the largest contribution is typically the paint on the walls, but cans of paint stored in a basement or storage area could be considered part of the Occupant Sources group. Always consider all possible sources for a particular CI category.

The CI categories comprise the most common sources but other products or activities may be present that are not included in the CI. The values assigned to each category are approximations based on typical office and commercial spaces. Locations with additional or atypical sources may require additional investigation to determine the source of certain chemicals that are not accurately represented by the CI.

Since there are potentially many sources of VOCs, buildings can often be re-contaminated even after sources have been removed because new products are constantly being brought into the building. Occupants should take note of this fact, and view IAQ as a continuous improvement process.

The chart below depicts the distribution of the Contamination Index source groups. These source groups are estimates and may not indicate all of the VOCs in your air sample.

Contamination Index Source Groups



Contamination Index™ Building Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation will often cause these categories to be elevated. Increased ventilation will help to reduce VOCs from construction or renovation sources. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
Coatings (Paints, Varnishes, etc.)	760	Moderate	Includes interior and exterior paints (including low- or no-VOC paints), varnishes, lacquers, some sealants, and other products that can be classified as a coating over a surface. Typically, VOCs from these products are in the 10 to 14 carbon size range and can linger for several months, sometimes longer. Ventilate as much as possible during and after application of these products. Dispose of opened but unused products and related supplies if possible or store in areas that will minimize off gassing. Additional sources include fuel oil or diesel fuel.
PVC Cement	3	Normal	PVC cement is used to join pieces of PVC pipe together, usually for plumbing.
Building Materials-Toluene Based	0	Normal	Adhesives and glues used in construction and maintenance, arts and crafts; adhesive removers; contact cement; sealants; coatings (paint, polyurethane, lacquer, thinner); automotive products, including parts cleaners. Additional sources include gasoline and other fuels.
Gasoline	140	Normal	VOCs from gasoline are typically a result of off-gassing from gas containers, small spills, and gas-powered equipment used in facilities maintenance in nearby garage or storage areas. Most vehicles in good operating condition do not emit gasoline vapors due to the tightly sealed gas tank. This category does not include exhaust emissions. Gasoline VOCs can linger on clothing after refueling at a gas station. Gasoline includes chemical compounds that are also included in the Light Solvents category.
Fuel Oil, Diesel Fuel, Kerosene	110	Normal	Typically found in garages and facilities maintenance areas. These fuels are not very volatile so they will not readily get into the air, but they can linger for a long time and produce a strong, unpleasant odor. This category does not include exhaust emissions. Additional sources include coatings such as paints, varnishes, sealants, waxes, etc.
Light Hydrocarbons	18	Normal	Building materials; aerosol cans; liquefied petroleum gas (LPG); refrigerant; natural gas; propellant; blowing agent. Includes chemical compounds such as propane, butane, and isobutane.
Light Solvents	76	Normal	Stoddard solvent; mineral spirits; some coatings (paints, varnish, enamels, etc.); wax remover; adhesives; automotive products; light oils. Typically, VOCs from these products are in the 6 to 9 carbon size range.

Contamination Index™ Occupant Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically brought into the building by the occupants and can often be readily identified and removed or contained. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Occupant Sources

Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
HFCs and CFCs (Freons™)	7	Normal	Most often used as refrigerants for air conditioners and refrigerator/freezers and propellants for blown-in insulation, cushions, aerosol cans, etc. Many of these chemical compounds are being phased out because of the Montreal Protocol.
Personal Care and Cleaning Products	32	Normal	Personal care products such as soap, deodorant, lotions, perfumes, hair coloring supplies, nail care supplies, oral hygiene products, etc. Cleaning agents such as surface, window, and flooring products, also restroom and antibacterial products. These products contain many VOCs that will dissipate if use is discontinued or reduced.
Odorants and Fragrances	34	Normal	Air fresheners, scented cleaning products, and scented personal care products.
Dry Cleaning Solvents	4	Normal	Typical dry-cleaning methods employ the use of carcinogenic chemicals. Dry-cleaning should be allowed to vent outside, without plastics bags, before being placed inside.

Significant VOCs

Based upon your specific air analysis, the chemical compounds listed below are significant contributors to the TVOC level reported on page 2 of your IAQ Commercial Survey Report or are indicative of specific types of products or problems. Compounds from a variety of chemical classes are represented here, although only the most common or most notable are specifically listed. These chemical compounds may come from a variety of sources as shown in the Contamination Index section of this report.

Locating and removing the source of the chemical compound is the most effective way to reduce the concentration of that chemical compound. If removing the source is not possible, try to contain it in some way (e.g., placing the source in an air-tight container when not in use). In addition, the ventilation system in some locations may not be optimized so evaluate the ventilation system and make adjustments to increase the amount of fresh air. Filter or purify re-circulated inside air to help reduce the TVOC. Since VOCs may continue to off-gas even when the sources are stored, ventilation and air-purification methods will need to be employed continuously in order to keep the VOC levels low.

The Chemical Abstracts Service (CAS) registry number after the chemical compound name in the table below is a unique identifier for that chemical compound and is often the best means to search for additional information. The two VOC levels in the table below (ng/L and ppb) are different ways of describing the same concentration, in some cases exposure limits or other information may be described using one or both of these concentration units.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	Description
Benzene	71-43-2	230	72	Gasoline. Less common sources include some discontinued solvents; printing and lithography; paints and coatings; rubber; dry cleaning; adhesives; detergents
Styrene	100-42-5	87	20	Polystyrene foam; synthetic rubber; flavoring agent
Toluene	108-88-3	46	12	Gasoline; adhesives (building and arts/crafts); contact cement; solvent; heavy duty cleaner
Naphthalene	91-20-3	44	8	Gasoline; diesel; Moth balls/crystals; insecticide
Ethylbenzene	100-41-4	21	5	Gasoline; paints and coatings; solvent; pesticide
Acetonitrile	75-05-8	11	6	Solvent

Supplemental Information: Odorants

Many chemical compounds have odors associated with them, some pleasant and some unpleasant. These odors can combine to create different odors, making odor identification more difficult. The odor descriptions for the compounds reported in this air sample are listed below as well as some of the more common sources.

Compound	CAS	Conc. (ppb)	Odor Range (ppb)	Odor Description
Acetonitrile	75-05-8	6	13,000 - 1,161,000	etherish
Benzene	71-43-2	72	470 - 313,000	aromatic, sweet, solvent, empyreumatic
Ethylbenzene	100-41-4	5	2 - 18,000	oily, solvent
Naphthalene	91-20-3	8	2 - 1,012	tar, creosote, mothballs, empyreumatic
Styrene	100-42-5	20	3 - 61,000	sharp, sweet
Toluene	108-88-3	12	21 - 157,000	sour, burnt

Supplemental Information: EPA Hazardous Air Pollutants (HAPs)

Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Listed below are those HAPs that were detected with the IAQ Commercial Survey VOC test. This list does not include all HAPs. The '<' (less than) symbol in the 'Estimated VOC Level' columns indicates the compound is below the reporting limit for this air sample and therefore can be considered absent from the air sample. For more information about HAPs visit the EPA [Air Toxics website](#). The exposure limits listed below can also be found in the [NIOSH Guide to Chemical Hazards](#). The HAPs in the table below may also be listed as Significant VOCs if the concentration of that chemical compound is greater than the threshold level for a Significant VOC.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	NIOSH Exposure Limit	Description
Hexane (C 6)	110-54-3	3	0.9	180,000 ng/L (50,000 ppb)	Solvent; adhesive; grease; lubricant; paints and coatings; petroleum fuel component
Benzene	71-43-2	230	72	320 ng/L (100 ppb)	Gasoline. Less common sources include some discontinued solvents; printing and lithography; paints and coatings; rubber; dry cleaning; adhesives; detergents
Toluene	108-88-3	46	12	375,000 ng/L (100,000 ppb)	Gasoline; adhesives (building and arts/crafts); contact cement; solvent; heavy duty cleaner
Tetrachloroethene	127-18-4	4	0.5	Carcinogen	Dry cleaning; adhesives, automotive cleaners, polishes
Ethylbenzene	100-41-4	21	5	435,000 ng/L (100,000 ppb)	Gasoline; paints and coatings; solvent; pesticide
m,p-Xylene	108-38-3; 106-42-3	4	0.8	435,000 ng/L (100,000 ppb)	Gasoline; paints and coatings; adhesives and cements; solvent; print cartridges
o-Xylene	95-47-6	2	0.4	435,000 ng/L (100,000 ppb)	Gasoline; paints and coatings; adhesives and cements; solvent; print cartridges
Styrene	100-42-5	87	20	215,000 ng/L (50,000 ppb)	Polystyrene foam; synthetic rubber; flavoring agent
Naphthalene	91-20-3	44	8	50,000 ng/L (10,000 ppb)	Gasoline; diesel; Moth balls/crystals; insecticide

These results pertain only to this sample as it was collected and to the items reported.
These results have been reviewed and approved by the Laboratory Director or approved representative.

This analysis was performed by Enthalpy Analytical, LLC (MTP). The results contained in this report are dependent upon a number of factors over which Enthalpy Analytical, LLC (MTP) has no control, which may include, but are not limited to, the sampling technique utilized, the size or source of sample, the ability of the sampler to collect a proper or suitable sample, the compounds which make up the TVOC, and/or the type of mold(s) present. Therefore, the opinions contained in this report may be invalid and cannot be considered or construed as definitive and neither Enthalpy Analytical, LLC (MTP), nor its agents, officers, directors, employees, or successors shall be liable for any claims, actions, causes of action, costs, loss of service, medical or other expenses or any compensation whatsoever which may now or hereafter occur or accrue based upon the information or opinions contained herein.

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Client Sample ID: Private Residence, N.E.
Laboratory ID: 109694-3

Less Than Recommended Volume
Client: INDUSTRIAL HYGIENE RESOURCES
8312 W NORTHVIEW ST STE 100
BOISE, ID 83704-7188
US

Sampled By: Rachel Albertson & Matthew Call
Project: IPC - Battery Fire 7144
Location: Melba, ID
-

Client Sample ID: Private Residence, N.E.
Sample Volume (L): 9.5
Date Sampled: 10/02/2023
Sample Type: TDT A1596
Sample Condition: Acceptable

Report Number: 109694

Thank you for using IAQ Commercial Survey!

If you have questions about your report,
please contact your service provider who
performed this test.

Receive Date: 10/04/2023
Approve Date: 10/04/2023
Scan Date: 10/04/2023
Report Date: 10/06/2023

IAQ Commercial Survey™ is one of the most advanced, trusted air testing products on the market today for identifying chemical sources and active mold growth. Many indoor air quality (IAQ) issues identified by IAQ Commercial Survey can be easily remediated or eliminated. This test is an invaluable tool for improving air quality because it provides important information on potential contamination issues that cannot be detected by a visual inspection alone. Acting upon the information in this report will enable you to dramatically improve the air quality, creating a healthier environment.

Your Indoor Air Quality Report Summary

Your Indoor Air Quality Report has several sections describing different aspects of your air quality. A summary of this data is provided below, additional information and descriptions are included in the full report.

Total Volatile Organic Compounds (TVOC) Level

TVOC is a general indicator of the IAQ (see page 2).

 **Total VOCs** **570 ng/L**

Contamination Index (CI) Level

The CI shows the types of air-contaminating products and materials that are present in the sampled area (see pages 4 and 5). These levels are estimates based on common home products and activities.

Building Sources

See page 4 for more detail.

N	Coatings (Paints, Varnishes, etc.)
N	PVC Cement
N	Building Materials-Toluene Based
N	Gasoline
N	Fuel Oil, Diesel Fuel, Kerosene
N	Light Hydrocarbons
N	Light Solvents

Occupant Sources

See page 5 for more detail.

N	HFCs and CFCs (Freons™)
N	Personal Care and Cleaning Products
N	Odorants and Fragrances
N	Dry Cleaning Solvents

Note: Severity levels begin at Normal or Minimal and progress through Moderate, Elevated, High and/or Severe. The color progression from green to red indicates results that are increasingly atypical and suggest potentially higher risk.

All Severity classifications are based on empirical data and should not be taken as a pass/fail or conformance to a published specified limit.



Enthalpy Analytical, LLC (MTP), the creator of IAQ Home Survey, has been performing air quality assessments to industry and environmental consultants since 1995. Enthalpy Analytical, LLC (MTP) (ID 166272) is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene accreditation program for GC-MS Field of Testing as documented by the Scope of Accreditation [Certificate](#) and associated Scope. This analysis references methods EPA TO-17 and ISO 16000-6, which fall within the Scope of Accreditation.

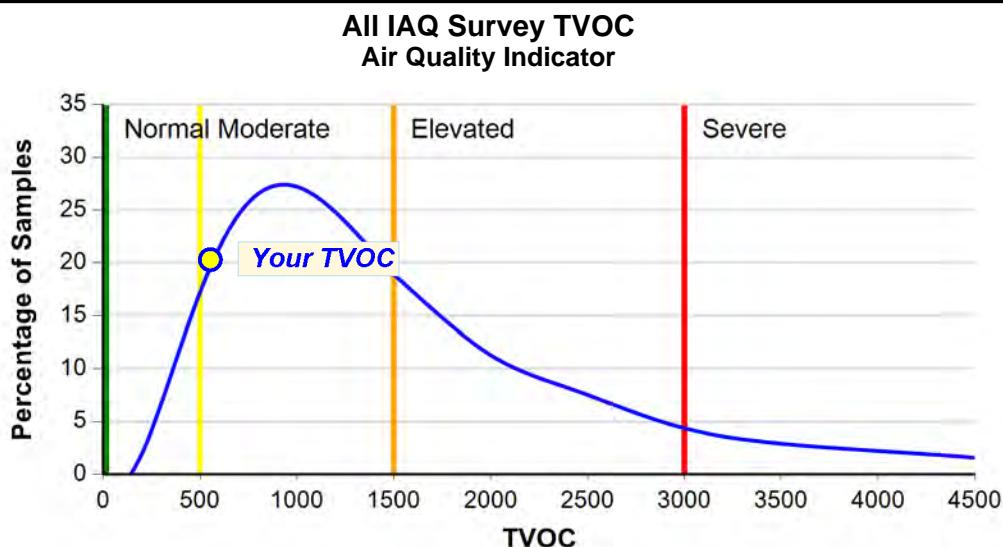
Total Volatile Organic Compound (TVOC) Summary

Your TVOC Level is: 570 ng/L

IAQ is borderline acceptable; some effect on occupants is possible; reduce potential sources and consider increasing ventilation.

Your Indoor Air Quality Level (Highlighted)

Normal < 500 ng/L	Moderate 500 - 1500 ng/L	Elevated 1500 - 3000 ng/L	Severe > 3000 ng/L
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The chart above shows the TVOC levels for all locations tested using IAQ Survey. Results for this air sample are displayed on the chart as a yellow circle. The blue curved line represents the relationship between the percentage of locations (indicated on the vertical y-axis) and the TVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Normal, Moderate, Elevated, and Severe TVOC levels. As the TVOC value increases, individuals may experience aggravated health problems, and therefore, the need to address VOC issues becomes more critical. However, reductions in VOCs can be made at any level.

No government or organization has specified a TVOC limit for indoor air. However, the U.S. Green Building Council (USGBC) has set 500 ng/L as the recommended TVOC limit.

In general:

- < 500 ng/L IAQ is acceptable for most individuals; however, chemically sensitive persons may require lower levels.
- 500 - 1,500 ng/L some effects on the occupants is possible.
- > 1,500 ng/L IAQ should be improved.

Note: These levels are based on observed health effects and have been determined from a combination of published data and the statistical distribution of TVOC concentrations from the IAQ Home Survey methodology.

The presence of chemicals in your home can cause a wide range of problems, from an unpleasant odor to physical symptoms (burning and irritation in the eyes, nose, and throat; headaches; nausea; nervous system effects; severe illness; etc.). Anyone with respiratory issues like asthma or allergies, as well as children, the elderly, and pregnant women are more susceptible to poor indoor air quality than healthy individuals.

Click [here](#) for more information about VOCs.

The Contamination Index (CI) in the next pages of this report will help guide you through determining what types of products or materials in the home could be problematic for your IAQ, and will provide some recommendations to help reduce or eliminate them.

Contamination Index™

The Contamination Index™ (CI) shows the types of air-contaminating products and materials that are present in the sampled area. Each CI category shows the approximate contribution of that category to the TVOC level, indicates how your location compares to thousands of other locations, and provides some suggestions about which products and materials might be the source for the VOCs. The CI is divided into two main source groups: Building Sources and Occupant Sources.

1. Building Sources are those that are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation often increases the CI categories in this group to the Elevated, High, or Severe levels. VOCs from these activities often decrease substantially in the month following use or application of these products, especially if the area is flushed with air to dissipate the VOCs off gassed from the new products or materials.

2. Occupant Sources are those that the occupants of the building bring into the building and can usually be more readily identified and remediated. Recent construction or renovation can often contribute to other source categories in addition to Building Sources.

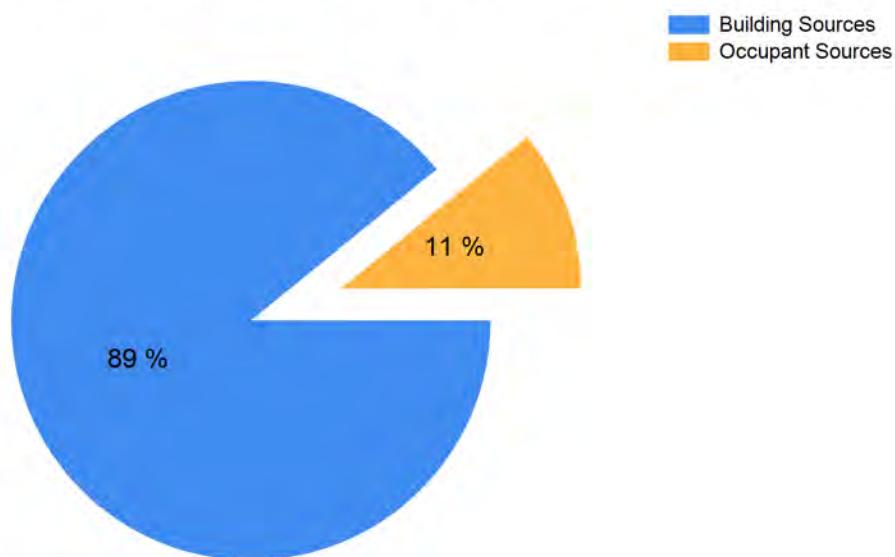
It is possible for a category listed in one source group to belong to another source group. For example, the 'Coatings' category is in the Building Sources group because the largest contribution is typically the paint on the walls, but cans of paint stored in a basement or storage area could be considered part of the Occupant Sources group. Always consider all possible sources for a particular CI category.

The CI categories comprise the most common sources but other products or activities may be present that are not included in the CI. The values assigned to each category are approximations based on typical office and commercial spaces. Locations with additional or atypical sources may require additional investigation to determine the source of certain chemicals that are not accurately represented by the CI.

Since there are potentially many sources of VOCs, buildings can often be re-contaminated even after sources have been removed because new products are constantly being brought into the building. Occupants should take note of this fact, and view IAQ as a continuous improvement process.

The chart below depicts the distribution of the Contamination Index source groups. These source groups are estimates and may not indicate all of the VOCs in your air sample.

Contamination Index Source Groups



Contamination Index™ Building Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation will often cause these categories to be elevated. Increased ventilation will help to reduce VOCs from construction or renovation sources. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Building Sources	Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
	Coatings (Paints, Varnishes, etc.)	220	Normal	Includes interior and exterior paints (including low- or no-VOC paints), varnishes, lacquers, some sealants, and other products that can be classified as a coating over a surface. Typically, VOCs from these products are in the 10 to 14 carbon size range and can linger for several months after application, sometimes longer. Ventilate as much as possible during and after application of any of these products. Dispose of opened but unused products and related supplies if possible or store in areas that will minimize off gassing. Additional sources include fuel oil or diesel fuel.
	PVC Cement	0	Normal	PVC cement is used to join pieces of PVC pipe together, usually for plumbing.
	Building Materials-Toluene Based	0	Normal	Adhesives and glues used in construction and maintenance, arts and crafts; adhesive removers; contact cement; sealants; coatings (paint, polyurethane, lacquer, thinner); automotive products, including parts cleaners. Additional sources include gasoline and other fuels.
	Gasoline	18	Normal	VOCs from gasoline are typically a result of off-gassing from gas containers, small spills, and gas-powered equipment used in facilities maintenance in nearby garage or storage areas. Most vehicles in good operating condition do not emit gasoline vapors due to the tightly sealed gas tank. This category does not include exhaust emissions. Gasoline VOCs can linger on clothing after refueling at a gas station. Gasoline includes chemical compounds that are also included in the Light Solvents category.
	Fuel Oil, Diesel Fuel, Kerosene	0	Normal	Typically found in garages and facilities maintenance areas. These fuels are not very volatile so they will not readily get into the air, but they can linger for a long time and produce a strong, unpleasant odor. This category does not include exhaust emissions. Additional sources include coatings such as paints, varnishes, sealants, waxes, etc.
	Light Hydrocarbons	1	Normal	Building materials; aerosol cans; liquefied petroleum gas (LPG); refrigerant; natural gas; propellant; blowing agent. Includes chemical compounds such as propane, butane, and isobutane.
	Light Solvents	21	Normal	Stoddard solvent; mineral spirits; some coatings (paints, varnish, enamels, etc.); wax remover; adhesives; automotive products; light oils. Typically, VOCs from these products are in the 6 to 9 carbon size range.

Contamination Index™ Occupant Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically brought into the building by the occupants and can often be readily identified and removed or contained. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Occupant Sources

Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
HFCs and CFCs (Freons™)	6	Normal	Most often used as refrigerants for air conditioners and refrigerators/freezers and propellants for blown-in insulation, cushions, aerosol cans, etc. Many of these chemical compounds are being phased out because of the Montreal Protocol.
Personal Care and Cleaning Products	15	Normal	Personal care products such as soap, deodorant, lotions, perfumes, hair coloring supplies, nail care supplies, oral hygiene products, etc. Cleaning agents such as surface, window, and flooring products, also restroom and antibacterial products. These products contain many VOCs that will dissipate if use is discontinued or reduced.
Odorants and Fragrances	10	Normal	Air fresheners, scented cleaning products, and scented personal care products.
Dry Cleaning Solvents	2	Normal	Typical dry-cleaning methods employ the use of carcinogenic chemicals. Dry-cleaning should be allowed to vent outside, without plastic bags, before being placed inside.

Significant VOCs

Based upon your specific air analysis, the chemical compounds listed below are significant contributors to the TVOC level reported on page 2 of your IAQ Commercial Survey Report or are indicative of specific types of products or problems. Compounds from a variety of chemical classes are represented here, although only the most common or most notable are specifically listed. These chemical compounds may come from a variety of sources as shown in the Contamination Index section of this report.

Locating and removing the source of the chemical compound is the most effective way to reduce the concentration of that chemical compound. If removing the source is not possible, try to contain it in some way (e.g., placing the source in an air-tight container when not in use). In addition, the ventilation system in some locations may not be optimized so evaluate the ventilation system and make adjustments to increase the amount of fresh air. Filter or purify re-circulated inside air to help reduce the TVOC. Since VOCs may continue to off-gas even when the sources are stored, ventilation and air-purification methods will need to be employed continuously in order to keep the VOC levels low.

The Chemical Abstracts Service (CAS) registry number after the chemical compound name in the table below is a unique identifier for that chemical compound and is often the best means to search for additional information. The two VOC levels in the table below (ng/L and ppb) are different ways of describing the same concentration, in some cases exposure limits or other information may be described using one or both of these concentration units.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	Description
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The notes below indicate any additional significant compounds present in this air sample or other noteworthy information.

No significant VOCs were detected in this air sample.

Client Sample ID: Private Residence, N.E.
Laboratory ID: 109694-3

Less Than Recommended Volume

Supplemental Information: Odorants

Many chemical compounds have odors associated with them, some pleasant and some unpleasant. These odors can combine to create different odors, making odor identification more difficult. The odor descriptions for the compounds reported in this air sample are listed below as well as some of the more common sources.

Supplemental Information: EPA Hazardous Air Pollutants (HAPs)

Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Listed below are those HAPs that were detected with the IAQ Commercial Survey VOC test. This list does not include all HAPs. The '<' (less than) symbol in the 'Estimated VOC Level' columns indicates the compound is below the reporting limit for this air sample and therefore can be considered absent from the air sample. For more information about HAPs visit the EPA [Air Toxics website](#). The exposure limits listed below can also be found in the [NIOSH Guide to Chemical Hazards](#). The HAPs in the table below may also be listed as Significant VOCs if the concentration of that chemical compound is greater than the threshold level for a Significant VOC.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	NIOSH Exposure Limit	Description
Hexane (C 6)	110-54-3	2	0.5	180,000 ng/L (50,000 ppb)	Solvent; adhesive; grease; lubricant; paints and coatings; petroleum fuel component
Tetrachloroethene	127-18-4	2	0.2	Carcinogen	Dry cleaning; adhesives, automotive cleaners, polishes

*These results pertain only to this sample as it was collected and to the items reported.
These results have been reviewed and approved by the Laboratory Director or approved representative.*

This analysis was performed by Enthalpy Analytical, LLC (MTP). The results contained in this report are dependent upon a number of factors over which Enthalpy Analytical, LLC (MTP) has no control, which may include, but are not limited to, the sampling technique utilized, the size or source of sample, the ability of the sampler to collect a proper or suitable sample, the compounds which make up the TVOC, and/or the type of mold(s) present. Therefore, the opinions contained in this report may be invalid and cannot be considered or construed as definitive and neither Enthalpy Analytical, LLC (MTP), nor its agents, officers, directors, employees, or successors shall be liable for any claims, actions, causes of action, costs, loss of service, medical or other expenses or any compensation whatsoever which may now or hereafter occur or accrue based upon the information or opinions contained herein.

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Client: INDUSTRIAL HYGIENE RESOURCES
8312 W NORTHVIEW ST STE 100
BOISE, ID 83704-7188
US

Sampled By: Rachel Albertson & Matthew Call
Project: IPC - Battery Fire 7144
Location: Melba, ID

Report Number: 109694

Thank you for using IAQ Commercial Survey!

If you have questions about your report,
please contact your service provider who
performed this test.

Client Sample ID: Corner of Field, S.
Sample Volume (L): 14.9
Date Sampled: 10/02/2023
Sample Type: TDT A1130
Sample Condition: Acceptable

Receive Date: 10/04/2023
Approve Date: 10/04/2023
Scan Date: 10/04/2023
Report Date: 10/06/2023

IAQ Commercial Survey™ is one of the most advanced, trusted air testing products on the market today for identifying chemical sources and active mold growth. Many indoor air quality (IAQ) issues identified by IAQ Commercial Survey can be easily remediated or eliminated. This test is an invaluable tool for improving air quality because it provides important information on potential contamination issues that cannot be detected by a visual inspection alone. Acting upon the information in this report will enable you to dramatically improve the air quality, creating a healthier environment.

Your Indoor Air Quality Report Summary

Your Indoor Air Quality Report has several sections describing different aspects of your air quality. A summary of this data is provided below, additional information and descriptions are included in the full report.

Total Volatile Organic Compounds (TVOC) Level

TVOC is a general indicator of the IAQ (see page 2).

 **Total VOCs** **380 ng/L**

Contamination Index (CI) Level

The CI shows the types of air-contaminating products and materials that are present in the sampled area (see pages 4 and 5). These levels are estimates based on common home products and activities.

Building Sources

See page 4 for more detail.

N	Coatings (Paints, Varnishes, etc.)
N	PVC Cement
N	Building Materials-Toluene Based
N	Gasoline
N	Fuel Oil, Diesel Fuel, Kerosene
N	Light Hydrocarbons
N	Light Solvents

Occupant Sources

See page 5 for more detail.

N	HFCs and CFCs (Freons™)
N	Personal Care and Cleaning Products
N	Odorants and Fragrances
N	Dry Cleaning Solvents

Note: Severity levels begin at Normal or Minimal and progress through Moderate, Elevated, High and/or Severe. The color progression from green to red indicates results that are increasingly atypical and suggest potentially higher risk.

All Severity classifications are based on empirical data and should not be taken as a pass/fail or conformance to a published specified limit.

 **Normal** **Moderate** **Elevated** **High** **Severe**

Enthalpy Analytical, LLC (MTP), the creator of IAQ Home Survey, has been performing air quality assessments to industry and environmental consultants since 1995. Enthalpy Analytical, LLC (MTP) (ID 166272) is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene accreditation program for GC-MS Field of Testing as documented by the Scope of Accreditation [Certificate](#) and associated Scope. This analysis references methods EPA TO-17 and ISO 16000-6, which fall within the Scope of Accreditation.

Total Volatile Organic Compound (TVOC) Summary

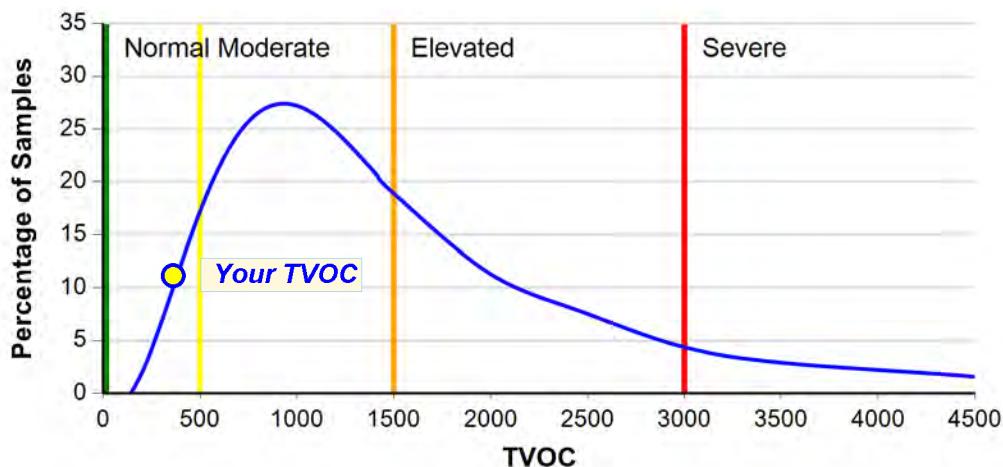
Your TVOC Level is: 380 ng/L

IAQ is acceptable for most individuals; chemically sensitive persons may require lower levels.

Your Indoor Air Quality Level (Highlighted)

Normal	Moderate	Elevated	Severe
< 500 ng/L	500 - 1500 ng/L	1500 - 3000 ng/L	> 3000 ng/L

All IAQ Survey TVOC Air Quality Indicator



The average TVOC is 1900 ng/L

This chart represents the TVOC distribution of over 45,000 samples. Over 80% of these samples indicate improvements in IAQ are necessary to achieve the goal of TVOC less than 500 ng/L.

The chart above shows the TVOC levels for all locations tested using IAQ Survey. Results for this air sample are displayed on the chart as a yellow circle. The blue curved line represents the relationship between the percentage of locations (indicated on the vertical y-axis) and the TVOC level (indicated on the horizontal x-axis). The green, yellow, orange, and red vertical bars represent divisions between Normal, Moderate, Elevated, and Severe TVOC levels. As the TVOC value increases, individuals may experience aggravated health problems, and therefore, the need to address VOC issues becomes more critical. However, reductions in VOCs can be made at any level.

No government or organization has specified a TVOC limit for indoor air. However, the U.S. Green Building Council (USGBC) has set 500 ng/L as the recommended TVOC limit.

In general:

- < 500 ng/L IAQ is acceptable for most individuals; however, chemically sensitive persons may require lower levels.
- 500 - 1,500 ng/L some effects on the occupants is possible.
- > 1,500 ng/L IAQ should be improved.

Note: These levels are based on observed health effects and have been determined from a combination of published data and the statistical distribution of TVOC concentrations from the IAQ Home Survey methodology.

The presence of chemicals in your home can cause a wide range of problems, from an unpleasant odor to physical symptoms (burning and irritation in the eyes, nose, and throat; headaches; nausea; nervous system effects; severe illness; etc.). Anyone with respiratory issues like asthma or allergies, as well as children, the elderly, and pregnant women are more susceptible to poor indoor air quality than healthy individuals.

Click [here](#) for more information about VOCs.

The Contamination Index (CI) in the next pages of this report will help guide you through determining what types of products or materials in the home could be problematic for your IAQ, and will provide some recommendations to help reduce or eliminate them.

Contamination Index™

The Contamination Index™ (CI) shows the types of air-contaminating products and materials that are present in the sampled area. Each CI category shows the approximate contribution of that category to the TVOC level, indicates how your location compares to thousands of other locations, and provides some suggestions about which products and materials might be the source for the VOCs. The CI is divided into two main source groups: Building Sources and Occupant Sources.

1. Building Sources are those that are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation often increases the CI categories in this group to the Elevated, High, or Severe levels. VOCs from these activities often decrease substantially in the month following use or application of these products, especially if the area is flushed with air to dissipate the VOCs off gassed from the new products or materials.

2. Occupant Sources are those that the occupants of the building bring into the building and can usually be more readily identified and remediated. Recent construction or renovation can often contribute to other source categories in addition to Building Sources.

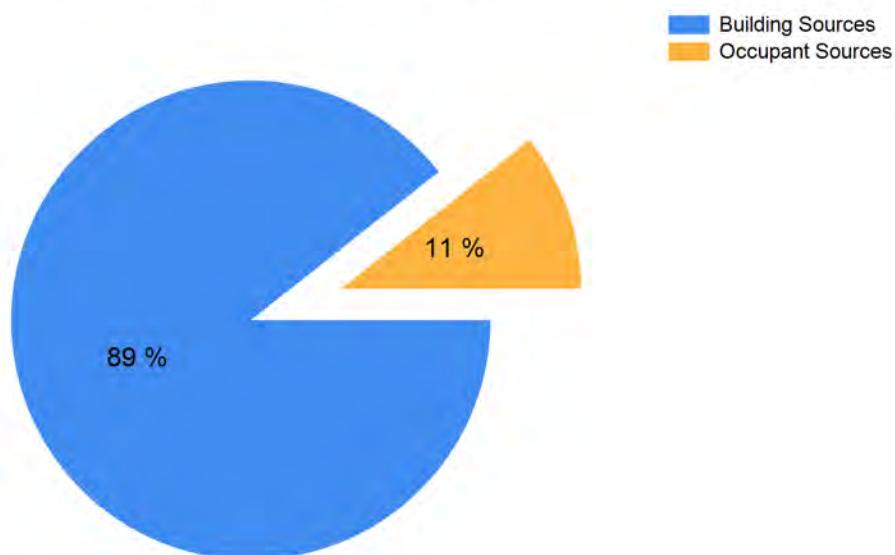
It is possible for a category listed in one source group to belong to another source group. For example, the 'Coatings' category is in the Building Sources group because the largest contribution is typically the paint on the walls, but cans of paint stored in a basement or storage area could be considered part of the Occupant Sources group. Always consider all possible sources for a particular CI category.

The CI categories comprise the most common sources but other products or activities may be present that are not included in the CI. The values assigned to each category are approximations based on typical office and commercial spaces. Locations with additional or atypical sources may require additional investigation to determine the source of certain chemicals that are not accurately represented by the CI.

Since there are potentially many sources of VOCs, buildings can often be re-contaminated even after sources have been removed because new products are constantly being brought into the building. Occupants should take note of this fact, and view IAQ as a continuous improvement process.

The chart below depicts the distribution of the Contamination Index source groups. These source groups are estimates and may not indicate all of the VOCs in your air sample.

Contamination Index Source Groups



Contamination Index™ Building Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically part of the structure of the building and may be more difficult to reduce in the short term. Recent construction or renovation will often cause these categories to be elevated. Increased ventilation will help to reduce VOCs from construction or renovation sources. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Building Sources	Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
	Coatings (Paints, Varnishes, etc.)	160	Normal	Includes interior and exterior paints (including low- or no-VOC paints), varnishes, lacquers, some sealants, and other products that can be classified as a coating over a surface. Typically, VOCs from these products are in the 10 to 14 carbon size range and can linger for several months after application, sometimes longer. Ventilate as much as possible during and after application of any of these products. Dispose of opened but unused products and related supplies if possible or store in areas that will minimize off gassing. Additional sources include fuel oil or diesel fuel.
	PVC Cement	0	Normal	PVC cement is used to join pieces of PVC pipe together, usually for plumbing.
	Building Materials-Toluene Based	0	Normal	Adhesives and glues used in construction and maintenance, arts and crafts; adhesive removers; contact cement; sealants; coatings (paint, polyurethane, lacquer, thinner); automotive products, including parts cleaners. Additional sources include gasoline and other fuels.
	Gasoline	60	Normal	VOCs from gasoline are typically a result of off-gassing from gas containers, small spills, and gas-powered equipment used in facilities maintenance in nearby garage or storage areas. Most vehicles in good operating condition do not emit gasoline vapors due to the tightly sealed gas tank. This category does not include exhaust emissions. Gasoline VOCs can linger on clothing after refueling at a gas station. Gasoline includes chemical compounds that are also included in the Light Solvents category.
	Fuel Oil, Diesel Fuel, Kerosene	0	Normal	Typically found in garages and facilities maintenance areas. These fuels are not very volatile so they will not readily get into the air, but they can linger for a long time and produce a strong, unpleasant odor. This category does not include exhaust emissions. Additional sources include coatings such as paints, varnishes, sealants, waxes, etc.
	Light Hydrocarbons	0	Normal	Building materials; aerosol cans; liquefied petroleum gas (LPG); refrigerant; natural gas; propellant; blowing agent. Includes chemical compounds such as propane, butane, and isobutane.
	Light Solvents	19	Normal	Stoddard solvent; mineral spirits; some coatings (paints, varnish, enamels, etc.); wax remover; adhesives; automotive products; light oils. Typically, VOCs from these products are in the 6 to 9 carbon size range.

Contamination Index™ Occupant Sources

Use the Contamination Index (CI) below to help you find products and materials in the sampled area that may be affecting your indoor air quality. Removing or reducing these products will improve your air quality. The concentrations reported here are approximate and may not add up to the TVOC value on page 2 of this report. These categories are typically brought into the building by the occupants and can often be readily identified and removed or contained. Levels indicated as Elevated, High, or Severe should be addressed immediately, and those listed as Moderate are areas that can be improved over time.

Occupant Sources

Contamination Index Category	Estimated VOC Level (ng/L)	Severity	Source Prediction & Suggestions for VOC Reduction
HFCs and CFCs (Freons™)	4	Normal	Most often used as refrigerants for air conditioners and refrigerator/freezers and propellants for blown-in insulation, cushions, aerosol cans, etc. Many of these chemical compounds are being phased out because of the Montreal Protocol.
Personal Care and Cleaning Products	15	Normal	Personal care products such as soap, deodorant, lotions, perfumes, hair coloring supplies, nail care supplies, oral hygiene products, etc. Cleaning agents such as surface, window, and flooring products, also restroom and antibacterial products. These products contain many VOCs that will dissipate if use is discontinued or reduced.
Odorants and Fragrances	8	Normal	Air fresheners, scented cleaning products, and scented personal care products.
Dry Cleaning Solvents	1	Normal	Typical dry-cleaning methods employ the use of carcinogenic chemicals. Dry-cleaning should be allowed to vent outside, without plastics bags, before being placed inside.

Significant VOCs

Based upon your specific air analysis, the chemical compounds listed below are significant contributors to the TVOC level reported on page 2 of your IAQ Commercial Survey Report or are indicative of specific types of products or problems. Compounds from a variety of chemical classes are represented here, although only the most common or most notable are specifically listed. These chemical compounds may come from a variety of sources as shown in the Contamination Index section of this report.

Locating and removing the source of the chemical compound is the most effective way to reduce the concentration of that chemical compound. If removing the source is not possible, try to contain it in some way (e.g., placing the source in an air-tight container when not in use). In addition, the ventilation system in some locations may not be optimized so evaluate the ventilation system and make adjustments to increase the amount of fresh air. Filter or purify re-circulated inside air to help reduce the TVOC. Since VOCs may continue to off-gas even when the sources are stored, ventilation and air-purification methods will need to be employed continuously in order to keep the VOC levels low.

The Chemical Abstracts Service (CAS) registry number after the chemical compound name in the table below is a unique identifier for that chemical compound and is often the best means to search for additional information. The two VOC levels in the table below (ng/L and ppb) are different ways of describing the same concentration, in some cases exposure limits or other information may be described using one or both of these concentration units.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	Description
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The notes below indicate any additional significant compounds present in this air sample or other noteworthy information.

No significant VOCs were detected in this air sample.

Supplemental Information: Odorants

Many chemical compounds have odors associated with them, some pleasant and some unpleasant. These odors can combine to create different odors, making odor identification more difficult. The odor descriptions for the compounds reported in this air sample are listed below as well as some of the more common sources.

Supplemental Information: EPA Hazardous Air Pollutants (HAPs)

Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Listed below are those HAPs that were detected with the IAQ Commercial Survey VOC test. This list does not include all HAPs. The '<' (less than) symbol in the 'Estimated VOC Level' columns indicates the compound is below the reporting limit for this air sample and therefore can be considered absent from the air sample. For more information about HAPs visit the EPA [Air Toxics website](#). The exposure limits listed below can also be found in the [NIOSH Guide to Chemical Hazards](#). The HAPs in the table below may also be listed as Significant VOCs if the concentration of that chemical compound is greater than the threshold level for a Significant VOC.

Compound	CAS	Estimated VOC Level (ng/L)	Estimated VOC Level (ppb)	NIOSH Exposure Limit	Description
Benzene	71-43-2	3	0.9	320 ng/L (100 ppb)	Gasoline. Less common sources include some discontinued solvents; printing and lithography; paints and coatings; rubber; dry cleaning; adhesives; detergents
Tetrachloroethene	127-18-4	1	0.2	Carcinogen	Dry cleaning; adhesives, automotive cleaners, polishes

*These results pertain only to this sample as it was collected and to the items reported.
These results have been reviewed and approved by the Laboratory Director or approved representative.*

This analysis was performed by Enthalpy Analytical, LLC (MTP). The results contained in this report are dependent upon a number of factors over which Enthalpy Analytical, LLC (MTP) has no control, which may include, but are not limited to, the sampling technique utilized, the size or source of sample, the ability of the sampler to collect a proper or suitable sample, the compounds which make up the TVOC, and/or the type of mold(s) present. Therefore, the opinions contained in this report may be invalid and cannot be considered or construed as definitive and neither Enthalpy Analytical, LLC (MTP), nor its agents, officers, directors, employees, or successors shall be liable for any claims, actions, causes of action, costs, loss of service, medical or other expenses or any compensation whatsoever which may now or hereafter occur or accrue based upon the information or opinions contained herein.

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Attachment E

Summary Table of VOC Air Sampling Detections – CTEH

PROJ-031332 | Summary of CTEH Analytical Sampling Detections - VOCs

Sampling Station ID	Location	Day of Date Time	Analyte	Detected Concentration	HBSV (ppb)	HBSV Source	Exceeded HBSV Concentration?	EGV (ppb)	EGV Source	Exceeded EGV Concentration?
AS01	North of Fire	October 5, 2023	2-Butanone (MEK)	0.996 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	1.32 ppbv	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	22.1 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.56 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Bromoethane	0.24 ppbv (J)	-	NA	-	15,000	DOE TEEL-1	No
			Butane	0.32 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.381 ppbv	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.919 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.86 ppbv	500	ATSDR Acute MRL	No	-	-	-
			cis-1,3-Dichloropropene	0.236 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Dichlorodifluoromethane	0.444 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	67.3 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Heptane	0.203 ppbv	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Isopropylbenzene	0.134 ppbv (J)	510	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.151 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.251 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.151 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Toluene	2.44 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			trans-1,3-Dichloropropene	0.394 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Trichlorofluoromethane	0.197 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
		October 10, 2023	2-Butanone (MEK)	0.634 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	1.04 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	12 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.447 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Bromoethane	0.218 ppbv (J)	-	NA	-	15,000	DOE TEEL-1	No
			Carbon disulfide	0.226 ppbv	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.623 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.861 ppbv	500	ATSDR Acute MRL	No	-	-	-
			Dichlorodifluoromethane	0.454 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	61.9 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Heptane	0.17 ppbv (J)	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.21 ppbv	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.258 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.0844 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Toluene	1.79 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			trans-1,3-Dichloropropene	0.0809 ppbv (J)	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Trichlorofluoromethane	0.187 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
AS02	East of Fire	October 5, 2023	2-Butanone (MEK)	0.183 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	11.9 ppbv	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	7.1 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.168 ppbv (J)	9	ATSDR Acute MRL	No	-	-	-
			Butane	1.17 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.157 ppbv (J)	-	NA	-	13,000	USEPA A EGL-1	No
			Chloromethane	0.45 ppbv	500	ATSDR Acute MRL	No	-	-	-
			Dichlorodifluoromethane	0.413 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	180 ppbv (E)	-	NA	-	1,800,000	AIHA ERPG-1	No
			Methylene Chloride	5.59 ppbv	600	ATSDR Acute MRL	No	-	-	-
			Pentane	10.3 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.0932 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Toluene	0.673 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			Trichlorofluoromethane	0.224 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
		October 10, 2023	2-Butanone (MEK)	1.11 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	0.639 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	14 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	2.8 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Bromomethane	0.122 ppbv (J)	30	TCEQ Short-Term AMCV	No	-	-	-
			Butane	0.253 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.175 ppbv (J)	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.3 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	1.01 ppbv	500	ATSDR Acute MRL	No	-	-	-
			Dichlorodifluoromethane	0.429 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	25.3 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Isopropylbenzene	1.23 ppbv	510	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.17 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.804 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.366 ppbv	5,000	ATSDR Acute MRL	No	-	-	-
			Toluene	1.85 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			Trichlorofluoromethane	0.182 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
AS03	South of Fire	October 4, 2023	2-Butanone (MEK)	0.801 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	0.922 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

PROJ-031332 | Summary of CTEH Analytical Sampling Detections - VOCs

Sampling Station ID	Location	Day of Date Time	Analyte	Detected Concentration	HBSV (ppb)	HBSV Source	Exceeded HBSV Concentration?	EGV (ppb)	EGV Source	Exceeded EGV Concentration?
AS03	South of Fire	October 4, 2023	Acetone	9.63 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.459 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Butane	0.278 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.226 ppbv	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.658 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.752 ppbv	500	ATSDR Acute MRL	No	-	-	-
			Dichlorodifluoromethane	0.447 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	65 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Heptane	0.152 ppbv (J)	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.125 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
		October 5, 2023	Pentane	0.195 ppbv (J)	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.176 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Toluene	1.71 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			Trichlorodifluoromethane	0.193 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
			2-Butanone (MEK)	0.542 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	0.78 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	6.59 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.202 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Butane	0.27 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.129 ppbv (J)	-	NA	-	13,000	USEPA A EGL-1	No
AS04	West of Fire	October 4, 2023	Chloroethane	0.215 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.581 ppbv	500	ATSDR Acute MRL	No	-	-	-
			cis-1,3-Dichloropropene	0.294 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Dichlorodifluoromethane	0.421 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	25.5 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Pentane	0.449 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Toluene	1.14 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			trans-1,3-Dichloropropene	0.488 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Trichlorodifluoromethane	0.196 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
			2-Butanone (MEK)	0.688 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
		October 5, 2023	2-Propanol	0.511 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	22.8 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Acrylonitrile	8.87 ppbv	900	ATSDR Intermediate MRL	No	-	-	-
			Benzene	0.523 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Butane	0.274 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.145 ppbv (J)	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.178 ppbv (J)	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.517 ppbv	500	ATSDR Acute MRL	No	-	-	-
			Dichlorodifluoromethane	0.421 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	37.6 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
AS05	Southeast of fire	October 6, 2023	Heptane	0.114 ppbv (J)	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.167 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.306 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Toluene	2.04 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			Trichlorodifluoromethane	0.183 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
		October 5, 2023	2-Butanone (MEK)	0.679 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	0.853 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	11.4 ppbv	8,000	ATSDR Acute MRL	No	-	-	-
			Benzene	0.321 ppbv	9	ATSDR Acute MRL	No	-	-	-
			Butane	0.283 ppbv	92,000	TCEQ Short-Term AMCV	No	-	-	-
			Carbon disulfide	0.196 ppbv (J)	-	NA	-	13,000	USEPA A EGL-1	No
			Chloroethane	0.52 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	0.73 ppbv	500	ATSDR Acute MRL	No	-	-	-
			cis-1,3-Dichloropropene	0.421 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Dichlorodifluoromethane	0.402 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
AS06	Southeast of fire	October 6, 2023	Ethanol	43.1 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Heptane	0.157 ppbv (J)	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.163 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.22 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.0945 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Tetrachloroethylene	0.254 ppbv	6	ATSDR Acute MRL	No	-	-	-
AS07	Southeast of fire	October 6, 2023	Toluene	1.69 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			trans-1,3-Dichloropropene	0.744 ppbv	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Trichlorodifluoromethane	0.183 ppbv (J)	10,000	TCEQ Short-Term AMCV	No	-	-	-
			2-Butanone (MEK)	1.24 ppbv (J)	1,000	ATSDR Acute MRL	No	-	-	-
			2-Propanol	0.959 ppbv (J)	-	NA	-	400,000	DOE TEEL-1	No
			Acetone	16.1 ppbv	8,000	ATSDR Acute MRL	No	-	-	-

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

PROJ-031332 | Summary of CTEH Analytical Sampling Detections - VOCs

Sampling Station ID	Location	Day of Date Time	Analyte	Detected Concentration	HBSV (ppb)	HBSV Source	Exceeded HBSV Concentration?	EGV (ppb)	EGV Source	Exceeded EGV Concentration?
AS05	Southeast of fire	October 6, 2023	Chloroethane	0.614 ppbv	15,000	ATSDR Acute MRL	No	-	-	-
			Chloromethane	1.13 ppbv	500	ATSDR Acute MRL	No	-	-	-
			cis-1,3-Dichloropropene	0.116 ppbv (J)	9.9	TCEQ Short-Term AMCV	No	-	-	-
			Dichlorodifluoromethane	0.452 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-
			Ethanol	51 ppbv	-	NA	-	1,800,000	AIHA ERPG-1	No
			Heptane	0.174 ppbv (J)	8,300	TCEQ Short-Term AMCV	No	-	-	-
			Methylene Chloride	0.167 ppbv (J)	600	ATSDR Acute MRL	No	-	-	-
			Pentane	0.252 ppbv	68,000	TCEQ Short-Term AMCV	No	-	-	-
			Styrene	0.0975 ppbv (J)	5,000	ATSDR Acute MRL	No	-	-	-
			Tetrachloroethylene	0.224 ppbv	6	ATSDR Acute MRL	No	-	-	-
			Toluene	1.73 ppbv	2,000	ATSDR Acute MRL	No	-	-	-
			Trichlorofluoromethane	0.205 ppbv	10,000	TCEQ Short-Term AMCV	No	-	-	-

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Attachment F

Analytical Sampling Locations and Laboratory Reports – CTEH

CTEH® Fixed Air Monitoring and Sampling Locations

0 200 400 Feet



Project: PROJ-031332
Client: Idaho Power
City: Melba, ID
County: Canyon



JT Wilson
Center for Toxicology & Env. Health LLC
5120 North Shore Drive
North Little Rock, AR 72118

October 09, 2023

Account# 13913

Login# L606869

Dear JT Wilson:

Enclosed are the analytical results for the samples received by our laboratory on October 05, 2023. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson



Lisa Swab
Laboratory Director

Enclosure(s)

Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
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Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com.
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

Accreditations SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgsgalson.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials

Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms



GALSON

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East Syracuse, NY 13057
(315) 432-5227
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LABORATORY ANALYSIS REPORT

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384175

Client ID : MEID1003MET01

Lab ID : L606869-8

Air Volume : 2736.5 L

Date Sampled :

Date Analyzed : 10/05/23

Parameter	LOQ uq	Total uq	Conc	Units
Aluminum	7.5	<7.5	<0.0027	mg/m ³
Cobalt	0.45	<0.45	<0.00016	mg/m ³
Copper	0.30	<0.30	<0.00011	mg/m ³
Iron	7.5	<7.5	<0.0027	mg/m ³
Iron Oxide	11.	<11	<0.0039	mg/m ³
Lead	0.38	<0.38	<0.00014	mg/m ³
Lithium	0.15	<0.15	<0.000055	mg/m ³
Nickel	0.30	<0.30	<0.00011	mg/m ³
Phosphorus Particulate	15.	<15	<0.0055	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 05-OCT-23

Submitted by: CAW/EJB/MWS
Supervisor : JJL

Approved by: JJL



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384175

Client ID : MEID1003MET02 **Lab ID : L606869-9** **Air Volume : 1969.7 L**
Date Sampled : **Date Analyzed : 10/05/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0038	mg/m ³
Cobalt	0.45	<0.45	<0.00023	mg/m ³
Copper	0.30	2.1	0.0011	mg/m ³
Iron	7.5	<7.5	<0.0038	mg/m ³
Iron Oxide	11.	<11	<0.0054	mg/m ³
Lead	0.38	<0.38	<0.00019	mg/m ³
Lithium	0.15	0.15	0.000077	mg/m ³
Nickel	0.30	<0.30	<0.00015	mg/m ³
Phosphorus Particulate	15.	17	0.0086	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 05-OCT-23

Submitted by: CAW/EJB/MWS
Supervisor : JJL

Approved by: JJL



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384175

Client ID : MEID1003MET03 **Lab ID : L606869-10** **Air Volume : 2277.7 L**
Date Sampled : **Date Analyzed : 10/05/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0033	mg/m ³
Cobalt	0.45	<0.45	<0.00020	mg/m ³
Copper	0.30	<0.30	<0.00013	mg/m ³
Iron	7.5	<7.5	<0.0033	mg/m ³
Iron Oxide	11.	<11	<0.0047	mg/m ³
Lead	0.38	<0.38	<0.00016	mg/m ³
Lithium	0.15	<0.15	<0.000066	mg/m ³
Nickel	0.30	<0.30	<0.00013	mg/m ³
Phosphorus Particulate	15.	<15	<0.0066	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 05-OCT-23

Submitted by: CAW/EJB/MWS
Supervisor : JJL

Approved by: JJL



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384175

Client ID : MEID1003MET05**Lab ID : L606869-11****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	NA	mg/m ³
Cobalt	0.45	<0.45	NA	mg/m ³
Copper	0.30	<0.30	NA	mg/m ³
Iron	7.5	<7.5	NA	mg/m ³
Iron Oxide	11.	<11	NA	mg/m ³
Lead	0.38	<0.38	NA	mg/m ³
Lithium	0.15	<0.15	NA	mg/m ³
Nickel	0.30	<0.30	NA	mg/m ³
Phosphorus Particulate	15.	<15	NA	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 05-OCT-23

Submitted by: CAW/EJB/MWS
Supervisor : JJL

Approved by: JJL



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Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384175

Client ID : MEID1003MET06**Lab ID : L606869-12****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	NA	mg/m ³
Cobalt	0.45	<0.45	NA	mg/m ³
Copper	0.30	<0.30	NA	mg/m ³
Iron	7.5	<7.5	NA	mg/m ³
Iron Oxide	11.	<11	NA	mg/m ³
Lead	0.38	<0.38	NA	mg/m ³
Lithium	0.15	<0.15	NA	mg/m ³
Nickel	0.30	<0.30	NA	mg/m ³
Phosphorus Particulate	15.	<15	NA	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 05-OCT-23

Submitted by: CAW/EJB/MWS
Supervisor : JJL

Approved by: JJL



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH01 **Lab ID : L606869-1** **Air Volume : 899.2 L**
Date Sampled : **Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00035	<0.000060
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00037	<0.000063
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00037	<0.000059
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00035	<0.000056
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00039	<0.000054
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00043	<0.000046
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00051	<0.000049
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00046	<0.000045
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00057	<0.000050
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00046	<0.000045
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00043	<0.000046
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00046	<0.000041
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00040	<0.000049
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00037	<0.000055
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00052	<0.000046

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Date : 09-OCT-23

Submitted by: JLL

Supervisor : SMM

Approved by: KLS



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH01 **Lab ID : L606869-1** **Air Volume : 899.2 L**
Date Sampled : **Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	0.33	<0.30	0.36	0.00040	0.000076
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00039	<0.000053
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00041	<0.000049

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH02**Lab ID : L606869-2****Air Volume : 704.6 L****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00045	<0.000077
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00047	<0.000080
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00047	<0.000075
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00044	<0.000071
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00050	<0.000069
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00055	<0.000058
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00065	<0.000063
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00059	<0.000057
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00072	<0.000064
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00059	<0.000057
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00055	<0.000059
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00059	<0.000052
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00051	<0.000062
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00047	<0.000070
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00067	<0.000059

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Date : 09-OCT-23

Submitted by: JLL

Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH02 **Lab ID : L606869-2** **Air Volume : 704.6 L**
Date Sampled : **Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	1.0	<0.30	1.1	0.0016	0.00031
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00050	<0.000068
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00052	<0.000063

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH03**Lab ID : L606869-3****Air Volume : 960.8 L****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00033	<0.000057
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000059
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000055
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00033	<0.000052
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000050
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00040	<0.000043
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00047	<0.000046
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000042
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00053	<0.000047
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000042
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00041	<0.000043
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000038
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00038	<0.000045
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000051
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00049	<0.000043

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Date : 09-OCT-23

Submitted by: JLL

Supervisor : SMM

Approved by: KLS



LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH03**Lab ID : L606869-3****Air Volume : 960.8 L****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000065
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00036	<0.000050
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00038	<0.000046

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH04**Lab ID : L606869-4****Air Volume : 852.5 L****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00037	<0.000064
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00039	<0.000066
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00039	<0.000062
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00037	<0.000059
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00041	<0.000057
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00045	<0.000048
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00053	<0.000052
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00049	<0.000047
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00060	<0.000053
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00049	<0.000047
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00046	<0.000049
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00049	<0.000043
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00042	<0.000051
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00039	<0.000058
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00055	<0.000049

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Submitted by: JLL

Approved by: KLS

Date : 09-OCT-23

Supervisor : SMM



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH04 **Lab ID : L606869-4** **Air Volume : 852.5 L**
Date Sampled : **Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00038	<0.000073
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00041	<0.000056
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00043	<0.000052

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH05**Lab ID : L606869-5****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Submitted by: JLL

Approved by: KLS

Date : 09-OCT-23

Supervisor : SMM



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH05

Lab ID : L606869-5

Air Volume : NA

Date Sampled :

Date Analyzed : 10/05/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH06**Lab ID : L606869-6****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Submitted by: JLL

Approved by: KLS

Date : 09-OCT-23

Supervisor : SMM



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Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH06

Lab ID : L606869-6

Air Volume : NA

Date Sampled :

Date Analyzed : 10/05/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
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Submitted by: JLL
Supervisor : SMM

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Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L606869
Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH07**Lab ID : L606869-7****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Submitted by: JLL

Approved by: KLS

Date : 09-OCT-23

Supervisor : SMM



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Project No. : 031332
Date Sampled : NS Date Analyzed : 05-OCT-23
Date Received : 05-OCT-23 Report ID : 1384337

Client ID : MEID1003PAH07**Lab ID : L606869-7****Air Volume : NA****Date Sampled :****Date Analyzed : 10/05/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 09-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
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(315) 432-5227
FAX: (315) 437-0571
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Client Name : Center for Toxicology & Env. Health LLC
Site :
Project No. : 031332

Date Sampled : Account No.: 13913
Date Received: 05-OCT-23 Login No. : L606869
Date Analyzed: 05-OCT-23

L606869 (Report ID: 1384175):

For applicable NYS sampling events, laboratory accreditation through NYSDOH applies only to Lead results.

Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.

SOPs: MT-SOP-27(20), MT-SOP-28(15), MT-SOP-29(12)

Reported Iron Oxide(Fe2O3) results assume that all detected Iron is present as Iron Oxide. ICP analysis does not differentiate allotropes of phosphorus.

L606869 (Report ID: 1384175):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Aluminum	+/-9.5%	99.6%
Cobalt	+/-8.8%	105%
Copper	+/-9.3%	105%
Iron	+/-9.3%	108%
Iron Oxide	+/-9.3%	108%
Lead	+/-9.6%	102%
Lithium	+/-11.9%	102%
Nickel	+/-10.3%	104%
Phosphorus Particulate	+/-9.6%	106%

Parameter	Method
Aluminum	mod. NIOSH 7303; ICP
Cobalt	mod. NIOSH 7303; ICP
Copper	mod. NIOSH 7303; ICP
Iron	mod. NIOSH 7303; ICP
Iron Oxide	mod. NIOSH 7303; ICP
Lead	mod. NIOSH 7303; ICP
Lithium	mod. NIOSH 7303; ICP/MS
Nickel	mod. NIOSH 7303; ICP
Phosphorus Particulate	mod. NIOSH 7303; ICP

L606869 (Report ID: 1384337):

SOPs: 11-n5506(17)

Results have been corrected for matrix and compound-specific desorption efficiencies, which



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Site :
Project No. : 031332

Date Sampled : Account No.: 13913
Date Received: 05-OCT-23 Login No. : L606869
Date Analyzed: 05-OCT-23

L606869 (Report ID: 1384337):
are attached.

L606869 (Report ID: 1384337):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
1-Methylnaphthalene	+/-12.7%	102%
2-Methylnaphthalene	+/-11.5%	101%
Acenaphthene	+/-11.7%	103%
Acenaphthylene	+/-13.6%	96.5%
Anthracene	+/-9.9%	107%
Benzo(a)anthracene	+/-13.7%	102%
Benzo(a)pyrene	+/-19.1%	113%
Benzo(b)fluoranthene	+/-13.2%	106%
Benzo(g,h,i)perylene	+/-17.9%	102%
Benzo(k)fluoranthene	+/-14.8%	104%
Chrysene	+/-15.6%	103%
Dibenz(a,h)anthracene	+/-18%	98.8%
Fluoranthene	+/-11.7%	104%
Fluorene	+/-10.1%	103%
Indeno(1,2,3-cd)pyrene	+/-17.1%	98%
Naphthalene	+/-10.2%	106%
Phenanthrene	+/-11.3%	104%
Pyrene	+/-14%	98.3%

Parameter	Method
1-Methylnaphthalene	mod. NIOSH 5506; HPLC/UV
2-Methylnaphthalene	mod. NIOSH 5506; HPLC/UV
Acenaphthene	mod. NIOSH 5506; HPLC/UV
Acenaphthylene	mod. NIOSH 5506; HPLC/UV
Anthracene	mod. NIOSH 5506; HPLC/UV
Benzo(a)anthracene	mod. NIOSH 5506; HPLC/UV
Benzo(a)pyrene	mod. NIOSH 5506; HPLC/UV
Benzo(b)fluoranthene	mod. NIOSH 5506; HPLC/UV
Benzo(g,h,i)perylene	mod. NIOSH 5506; HPLC/UV
Benzo(k)fluoranthene	mod. NIOSH 5506; HPLC/UV
Chrysene	mod. NIOSH 5506; HPLC/UV
Dibenz(a,h)anthracene	mod. NIOSH 5506; HPLC/UV



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Client Name : Center for Toxicology & Env. Health LLC
Site :
Project No. : 031332

Date Sampled : Account No.: 13913
Date Received: 05-OCT-23 Login No. : L606869
Date Analyzed: 05-OCT-23

L606869 (Report ID: 1384337):

Parameter	Method
Fluoranthene	mod. NIOSH 5506; HPLC/UV
Fluorene	mod. NIOSH 5506; HPLC/UV
Indeno(1,2,3-cd)pyrene	mod. NIOSH 5506; HPLC/UV
Naphthalene	mod. NIOSH 5506; HPLC/UV
Phenanthrene	mod. NIOSH 5506; HPLC/UV
Pyrene	mod. NIOSH 5506; HPLC/UV

Analyte	PTFE DE	XAD DE
BENZO(B)FLUORANTHENE	97	72
BENZO(K)FLUORANTHENE	97	72
BENZO(A)PYRENE	98	66
DIBENZO(A,H)ANTHRACENE	99	72
BENZO(G,H,I)PERYLENE	96	59
INDENO-1,2,3-CD-PYRENE	98	64
NAPHTHALENE	99	92
ACENAPHTHYLENE	102	96
ACENAPHTHENE	102	90
FLUORENE	97	90
PHENANTHRENE	98	86
ANTHRACENE	98	85
FLUORANTHENE	98	83
PYRENE	99	82
BENZO(A)ANTHRACENE	98	78
CHRYSENE	98	77
1-METHYLNAPHTHALENE	98	95
2-METHYLNAPHTHALENE	99	91

Sample: WG571683-1

QC Type: DLS

Spikelot: IH730610-2

Raw File: WG571683-
1A.UV_VIS_1.0002_1127086_LC6_20231

Analysis date: 10/05/23 12:05:46

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	.0985015	.1008	97.7	70.0 to 130.				
PYRENE	.0911830	.1004	90.8	70.0 to 130.				
BENZO(A)ANTHRACENE	.0922151	.1006	91.7	70.0 to 130.				
CHRYSENE	.0901487	.1002	90	70.0 to 130.				
BENZO(B)FLUORANTHENE	.0992770	.1002	99.1	70.0 to 130.				
BENZO(K)FLUORANTHENE	.0906690	.1006	90.1	70.0 to 130.				
BENZO(A)PYRENE	.1045876	.1002	104	70.0 to 130.				
DIBENZ(A,H)ANTHRACENE	.0886600	.1004	88.3	70.0 to 130.				
BENZO(G,H,I)PERYLENE	.0949356	.1002	94.7	70.0 to 130.				
INDENO-1,2,3-CD-PYRENE	.0823986	.1006	81.9	70.0 to 130.				
ACENAPHTHYLENE	.0867073	.1005	86.3	70.0 to 130.				
1-METHYLNAPHTHALENE	.0960661	.1004	95.7	70.0 to 130.				
2-METHYLNAPHTHALENE	.0952657	.1004	94.9	70.0 to 130.				
ACENAPHTHENE	.0986892	.1008	97.9	70.0 to 130.				
FLUORENE	.0945021	.1008	93.8	70.0 to 130.				
PHENANTHRENE	.0894580	.1004	89.1	70.0 to 130.				
ANTHRACENE	.0916779	.1004	91.3	70.0 to 130.				
FLUORANTHENE	.0849477	.1004	84.6	70.0 to 130.				

Sample: WG571683-2

QC Type: CCV

Spikelot: IH730610-1

Raw File: WG571683-
2A.UV_VIS_1.0003_1127086_LC6_20231

Analysis date: 10/05/23 12:18:06

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.150501	5.04	102	80.0 to 120.				
PYRENE	4.923276	5.02	98.1	80.0 to 120.				
BENZO(A)ANTHRACENE	5.045195	5.03	100	80.0 to 120.				
CHRYSENE	4.921294	5.01	98.2	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.174862	5.01	103	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.067124	5.03	101	80.0 to 120.				
BENZO(A)PYRENE	5.285004	5.01	105	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	4.886187	5.02	97.3	80.0 to 120.				
ACENAPHTHYLENE	4.886140	5.026	97.2	80.0 to 120.				
BENZO(G,H,I)PERYLENE	4.893110	5.01	97.7	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.693576	5.03	93.3	80.0 to 120.				

Sample: WG571683-2

QC Type: CCV

Spikelot: IH730610-1

Raw File: WG571683-
2A.UV_VIS_1.0003_1127086_LC6_20231

Analysis date: 10/05/23 12:18:06

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE	5.063196	5.02	101	80.0 to 120.				
2-METHYLNAPHTHALENE	4.956403	5.02	98.7	80.0 to 120.				
ACENAPHTHENE	5.105508	5.04	101	80.0 to 120.				
FLUORENE	4.958904	5.04	98.4	80.0 to 120.				
PHENANTHRENE	4.968385	5.02	99	80.0 to 120.				
ANTHRACENE	5.034381	5.02	100	80.0 to 120.				
FLUORANTHENE	5.007722	5.02	99.8	80.0 to 120.				

Sample: WG571681-2

QC Type: MBLANK

Spikelot: NA

Raw File: WG571681-
2A.UV_VIS_1.0006_1127089_LC6_20231

Analysis date: 10/05/23 12:55:09

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE (FRONT)	0	<0.30						
1-METHYLNAPHTHALENE (BACK)	0	<0.30						
2-METHYLNAPHTHALENE (FRONT)	0	<0.30						
2-METHYLNAPHTHALENE (BACK)	0	<0.30						
ACENAPHTHENE (FRONT)	0	<.30						
ACENAPHTHENE (BACK)	0	<.30						
ACENAPHTHYLENE (FRONT)	0	<.30						
ACENAPHTHYLENE (BACK)	0	<.30						
ANTHRACENE (FRONT)	0	<.30						
ANTHRACENE (BACK)	0	<.30						
BENZO (A) ANTHRACENE (FRONT)	0	<.30						
BENZO (A) ANTHRACENE (BACK)	0	<.30						
BENZO (A) PYRENE (FRONT)	0	<.30						
BENZO (A) PYRENE (BACK)	0	<.30						
BENZO (B) FLUORANTHENE (FRONT)	0	<.30						
BENZO (B) FLUORANTHENE (BACK)	0	<.30						
BENZO (G, H, I) PERYLENE (FRONT)	0	<.30						
BENZO (G, H, I) PERYLENE (BACK)	.2072955	<.30						
BENZO (K) FLUORANTHENE (FRONT)	0	<.30						
BENZO (K) FLUORANTHENE (BACK)	0	<.30						
CHRYSENE (FRONT)	0	<.30						
CHRYSENE (BACK)	0	<.30						

Sample: WG571681-2

QC Type: MBLANK

Spikelot: NA

Raw File: WG571681-
2A.UV_VIS_1.0006_1127089_LC6_20231

Analysis date: 10/05/23 12:55:09

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE Rec.	Limits	RPD	Limits
DIBENZ (A, H) ANTHRACENE (FRONT)	0	< .30						
DIBENZ (A, H) ANTHRACENE (BACK)	0	< .30						
FLUORANTHENE (FRONT)	0	< .30						
FLUORANTHENE (BACK)	0	< .30						
FLUORENE (FRONT)	0	< .30						
FLUORENE (BACK)	0	< .30						
INDENO-1, 2, 3-CD-PYRENE (FRONT)	0	< .30						
INDENO-1, 2, 3-CD-PYRENE (BACK)	0	< .30						
NAPHTHALENE (FRONT)	0	< .30						
NAPHTHALENE (BACK)	0	< .30						
PHENANTHRENE (FRONT)	0	< .30						
PHENANTHRENE (BACK)	0	< .30						
PYRENE (FRONT)	0	< .30						
PYRENE (BACK)	0	< .30						

Sample: WG571681-3

QC Type: BS

Spikelot: IH730610

Raw File: WG571681-
3F.UV_VIS_1.0008_1127089_LC6_20231

Analysis date: 10/05/23 13:19:51

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec.	Limits	RPD	Limits
NAPHTHALENE	5.319670	5.04	106		107		90.2 to 123.		
PYRENE	5.078584	5.02	101		102		75.0 to 125.		
BENZO(A) ANTHRACENE	5.141721	5.03	102		104		75.0 to 125.		
CHRYSENE	5.013992	5.01	100		102		75.0 to 125.		
BENZO(B) FLUORANTHENE	5.282565	5.01	105		109		85.1 to 127.		
BENZO(K) FLUORANTHENE	5.142098	5.03	102		105		75.0 to 125.		
BENZO(A) PYRENE	5.386745	5.01	108		110		75.0 to 125.		
DIBENZ (A, H) ANTHRACENE	4.997583	5.02	99.6		101		72.1 to 125.		
BENZO(G, H, I) PERYLENE	4.985463	5.01	99.5		104		75.0 to 125.		
ACENAPHTHYLENE	5.006060	5.026	99.6		97.7		76.8 to 116.		
INDENO-1, 2, 3-CD-PYRENE	4.628352	5.03	92		92.9		72.8 to 123.		
1-METHYLNAPHTHALENE	5.237565	5.02	104		106		82.7 to 122.		
2-METHYLNAPHTHALENE	5.124770	5.02	102		103		83.7 to 119.		
ACENAPHTHENE	5.254973	5.04	104		102		75.0 to 125.		
FLUORENE	5.067964	5.04	101		104		75.0 to 125.		

Sample: WG571681-3

QC Type: BS

Spikelot: IH730610

Raw File: WG571681-
3F.UV_VIS_1.0008_1127089_LC6_20231

Analysis date: 10/05/23 13:19:51

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
PHENANTHRENE	5.101746	5.02	102		104	75.0 to 125.		
ANTHRACENE	5.224936	5.02	104		106	75.0 to 125.		
FLUORANTHENE	5.037566	5.02	100		102	75.0 to 125.		

Sample: WG571681-4

QC Type: BSD

Spikelot: IH730610

Raw File: WG571681-
4F.UV_VIS_1.0009_1127089_LC6_20231

Analysis date: 10/05/23 13:32:12

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.401545	5.04	107		108	90.2 to 123.	.93	-20 to 20.0
PYRENE	5.152293	5.02	103		104	75.0 to 125.	1.94	-20 to 20.0
BENZO(A)ANTHRACENE	5.211710	5.03	104		106	75.0 to 125.	1.9	-20 to 20.0
CHRYSENE	5.095881	5.01	102		104	75.0 to 125.	1.94	-20 to 20.0
BENZO(B)FLUORANTHENE	5.347964	5.01	107		110	85.1 to 127.	.913	0 to 13.8
BENZO(K)FLUORANTHENE	5.220283	5.03	104		107	75.0 to 125.	1.89	-20 to 20.0
BENZO(A)PYRENE	5.469490	5.01	109		111	75.0 to 125.	.905	-20 to 20.0
DIBENZ(A,H)ANTHRACENE	5.134831	5.02	102		103	72.1 to 125.	1.96	-20 to 20.0
ACENAPHTHYLENE	5.061373	5.026	101		98.7	76.8 to 116.	1.02	-20 to 20.0
BENZO(G,H,I)PERYLENE	5.155531	5.01	103		107	75.0 to 125.	2.84	-20 to 20.0
INDENO-1,2,3-CD-PYRENE	4.809629	5.03	95.6		96.6	72.8 to 123.	3.91	-20 to 20.0
1-METHYLNAPHTHALENE	5.298264	5.02	106		108	82.7 to 122.	1.87	0 to 13.4
2-METHYLNAPHTHALENE	5.172345	5.02	103		104	83.7 to 119.	.966	0 to 13.2
ACENAPHTHENE	5.322001	5.04	106		104	75.0 to 125.	1.94	-20 to 20.0
FLUORENE	5.148497	5.04	102		105	75.0 to 125.	.957	-20 to 20.0
PHENANTHRENE	5.150157	5.02	103		105	75.0 to 125.	.957	-20 to 20.0
ANTHRACENE	5.279556	5.02	105		107	75.0 to 125.	.939	-20 to 20.0
FLUORANTHENE	5.112559	5.02	102		104	75.0 to 125.	1.94	-20 to 20.0

Sample: WG571681-5

QC Type: BS

Spikelot: IH730610

Raw File: WG571681-
5A.UV_VIS_1.0010_1127089_LC6_20231

Analysis date: 10/05/23 13:44:36

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.083775	5.04	101		110	90.2 to 123.		
FLUORANTHENE	4.506039	5.02	89.8		108	75.0 to 125.		

Sample: WG571681-5

QC Type: BS

Spikelot: IH730610

Raw File: WG571681-
5A.UV_VIS_1.0010_1127089_LC6_20231

Analysis date: 10/05/23 13:44:36

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
PYRENE	4.482812	5.02	89.3		109	75.0 to 125.		
BENZO(A)ANTHRACENE	4.404234	5.03	87.6		112	75.0 to 125.		
CHRYSENE	4.279597	5.01	85.4		111	75.0 to 125.		
BENZO(B)FLUORANTHENE	4.280479	5.01	85.4		119	85.1 to 127.		
BENZO(K)FLUORANTHENE	4.171278	5.03	82.9		115	75.0 to 125.		
BENZO(A)PYRENE	4.138461	5.01	82.6		125	75.0 to 125.		
ACENAPHTHYLENE	4.597451	5.026	91.5		95.3	76.8 to 116.		
DIBENZ(A,H)ANTHRACENE	3.864700	5.02	77		107	72.1 to 125.		
BENZO(G,H,I)PERYLENE	3.571644	5.01	71.3		121	75.0 to 125.		
INDENO-1,2,3-CD-PYRENE	3.582715	5.03	71.2		111	72.8 to 123.		
1-METHYLNAPHTHALENE	4.912507	5.02	97.9		103	82.7 to 122.		
2-METHYLNAPHTHALENE	4.799572	5.02	95.6		105	83.7 to 119.		
ACENAPHTHENE	5.132123	5.04	102		113	75.0 to 125.		
FLUORENE	4.735346	5.04	94		104	75.0 to 125.		
PHENANTHRENE	4.671897	5.02	93.1		108	75.0 to 125.		
ANTHRACENE	4.737698	5.02	94.4		111	75.0 to 125.		

Sample: WG571681-6

QC Type: BSD

Spikelot: IH730610

Raw File: WG571681-
6A.UV_VIS_1.0011_1127089_LC6_20231

Analysis date: 10/05/23 13:56:59

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.341265	5.04	106		115	90.2 to 123.	4.44	-20 to 20.0
PYRENE	4.599354	5.02	91.6		112	75.0 to 125.	2.71	-20 to 20.0
BENZO(A)ANTHRACENE	4.470809	5.03	88.9		114	75.0 to 125.	1.77	-20 to 20.0
CHRYSENE	4.347554	5.01	86.8		113	75.0 to 125.	1.79	-20 to 20.0
BENZO(B)FLUORANTHENE	4.321302	5.01	86.3		120	85.1 to 127.	.837	0 to 13.8
BENZO(K)FLUORANTHENE	4.195131	5.03	83.4		116	75.0 to 125.	.866	-20 to 20.0
BENZO(A)PYRENE	4.093951	5.01	81.7		124	75.0 to 125.	.803	-20 to 20.0
DIBENZ(A,H)ANTHRACENE	3.890266	5.02	77.5		108	72.1 to 125.	.93	-20 to 20.0
ACENAPHTHYLENE	4.976524	5.026	99		103	76.8 to 116.	7.77	-20 to 20.0
BENZO(G,H,I)PERYLENE	3.452863	5.01	68.9		117	75.0 to 125.	3.36	-20 to 20.0
INDENO-1,2,3-CD-PYRENE	3.359361	5.03	66.8		104	72.8 to 123.	6.51	-20 to 20.0
1-METHYLNAPHTHALENE	5.243253	5.02	104		110	82.7 to 122.	6.57	0 to 13.4
2-METHYLNAPHTHALENE	5.097817	5.02	102		112	83.7 to 119.	6.45	0 to 13.2

Sample: WG571681-6

QC Type: BSD

Spikelot: IH730610

Raw File: WG571681-
6A.UV_VIS_1.0011_1127089_LC6_20231

Analysis date: 10/05/23 13:56:59

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
ACENAPHTHENE	5.146279	5.04	102		113	75.0 to 125.	0	-20 to 20.0
FLUORENE	4.999383	5.04	99.2		110	75.0 to 125.	5.61	-20 to 20.0
PHENANTHRENE	4.881607	5.02	97.2		113	75.0 to 125.	4.52	-20 to 20.0
ANTHRACENE	4.977748	5.02	99.2		117	75.0 to 125.	5.26	-20 to 20.0
FLUORANTHENE	4.656431	5.02	92.8		112	75.0 to 125.	3.64	-20 to 20.0

Sample: WG571683-3

QC Type: CCV

Spikelot: IH730610-1

Raw File: WG571683-
3A.UV_VIS_1.0021_1127183_LC6_20231

Analysis date: 10/05/23 16:00:29

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.222278	5.04	104	80.0 to 120.				
PYRENE	4.984928	5.02	99.3	80.0 to 120.				
BENZO(A)ANTHRACENE	5.081565	5.03	101	80.0 to 120.				
CHRYSENE	4.959813	5.01	99	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.240074	5.01	105	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.165543	5.03	103	80.0 to 120.				
BENZO(A)PYRENE	5.460497	5.01	109	80.0 to 120.				
ACENAPHTHYLENE	4.923350	5.026	98	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	4.880654	5.02	97.2	80.0 to 120.				
BENZO(G,H,I)PERYLENE	4.955763	5.01	98.9	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.728500	5.03	94	80.0 to 120.				
1-METHYLNAPHTHALENE	5.118017	5.02	102	80.0 to 120.				
2-METHYLNAPHTHALENE	5.011621	5.02	99.8	80.0 to 120.				
ACENAPHTHENE	5.156935	5.04	102	80.0 to 120.				
FLUORENE	5.017189	5.04	99.5	80.0 to 120.				
PHENANTHRENE	5.020994	5.02	100	80.0 to 120.				
ANTHRACENE	5.098624	5.02	102	80.0 to 120.				
FLUORANTHENE	5.043162	5.02	100	80.0 to 120.				

Sample: WG571683-4

QC Type: CCV

Spikelot: IH730610-1

Raw File: WG571683-
4A.UV_VIS_1.0034_1127183_LC6_20231

Analysis date: 10/05/23 18:41:04

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits

Sample: WG571683-4

QC Type: CCV

Spikelet: IH730610-1

Raw File: WG571683-
4A.UV_VIS_1.0034_1127183_LC6_20231

Analysis date: 10/05/23 18:41:04

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE Rec.	Limits	RPD	Limits
NAPHTHALENE	5.234297	5.04	104	80.0 to 120.				
PYRENE	4.983040	5.02	99.3	80.0 to 120.				
BENZO(A)ANTHRACENE	5.102914	5.03	101	80.0 to 120.				
CHRYSENE	4.979346	5.01	99.4	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.233689	5.01	104	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.106779	5.03	102	80.0 to 120.				
BENZO(A)PYRENE	5.447804	5.01	109	80.0 to 120.				
ACENAPHTHYLENE	4.948648	5.026	98.5	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	4.916050	5.02	97.9	80.0 to 120.				
BENZO(G,H,I)PERYLENE	4.965692	5.01	99.1	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.745203	5.03	94.3	80.0 to 120.				
1-METHYLNAPHTHALENE	5.143996	5.02	102	80.0 to 120.				
2-METHYLNAPHTHALENE	5.030713	5.02	100	80.0 to 120.				
ACENAPHTHENE	5.181497	5.04	103	80.0 to 120.				
FLUORENE	5.037725	5.04	100	80.0 to 120.				
PHENANTHRENE	5.044167	5.02	100	80.0 to 120.				
ANTHRACENE	5.109986	5.02	102	80.0 to 120.				
FLUORANTHENE	5.064762	5.02	101	80.0 to 120.				

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
 Account No: 13913
 Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG571648-6 CCVD IH728953 ICPMS2 Oct 05, 2023 12:26			WG571648-13 CCVD IH728953 ICPMS2 Oct 05, 2023 13:53			WG571648-17 CCVD IH728953 ICPMS2 Oct 05, 2023 15:09		
Limits (%)		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Lithium	80.0 to 120.	1250	1290	103.	1250	1250	100.	1250	1260	101.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571648-32 CCVD IH728953 ICPMS2 Oct 05, 2023 16:20			True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
		True Value (ppb)	Found (ppb)	Recovery (%)						
Lithium	80.0 to 120.	1250	1300	104.						

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L606869

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG571648-4 CCB ICPMS2 10/05/23 12:15	WG571648-8 CCB ICPMS2 10/05/23 12:37	WG571648-15 CCB ICPMS2 10/05/23 14:04	WG571648-19 CCB ICPMS2 10/05/23 15:20	WG571648-34 CCB ICPMS2 10/05/23 16:31			
	LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)		
Aluminum	0.2	0.2	0.2	0.2	0.2	0.2		
Cobalt	0.03	0.03	0.03	0.03	0.03	0.03		
Copper	0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Iron	0.5	0.5	0.5	0.5	0.5	0.5		
Iron Oxide	0.5	0.5	0.5	0.5	0.5	0.5		
Lead	0.025	0.025	0.025	0.025	0.025	0.025		
Lithium	0.1	<0.1	<0.05	<0.1	<0.1	<0.1		
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02		

DETECTION LIMIT STANDARD RECOVERY REPORT

Client : Center for Toxicology & Env. Health LLC
 Account No: 13913
 Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571648-9								
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Aluminum	80.0 to 120.	500.	470.	94.0						
Cobalt	80.0 to 120.	2.00	2.17	106						
Copper	80.0 to 120.	20.0	21.4	107						
Iron	80.0 to 120.	500.	490.	98.7						
Lead	80.0 to 120.	5.00	5.15	103						
Lithium	80.0 to 120.	10.0	10.2	102.						
Nickel	80.0 to 120.	10.0	10.6	106						
JJL 10/5/2023										

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571672-2			WG571672-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Copper	87.0 to 110.	15.0	14.0	97.4	15.0	14.0	96.6	1.90	10.0
Lead	87.0 to 115.	15.0	15.1	101	15.0	15.1	101	0.222	20.0
Lithium	83.6 to 120.	15.0	15.1	101.	15.0	15.4	103.	1.90	12.3
JJL 10/5/2023									

METHOD BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L606869

Lab Sample ID		WG571672-1						
Type		MBLANK						
Instrument		ICPMS2						
Analysis Date		10/05/23						
Analysis Time		14:09						
	LOQ (ug)	Found (ug)						
Lead	0.075	<0.075						
Lithium	0.15	<0.15						
JJL 10/5/2023								

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID		WG571643-1			WG571643-3			WG571643-2		
Type		ICVA		ICVB		ICVF				
Spike Lot #		IH729829		IH726965		IH728310				
Instrument		ICP4		ICP4		ICP4				
Analysis Date		Oct 05, 2023 09:03			Oct 05, 2023 09:10			Oct 05, 2023 09:06		
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	90.0 to 110.	80.0 to 120.			250.	249.	99.6			
Cobalt	for all	80.0 to 120.	12.5	12.6	101.					
Copper		80.0 to 120.	12.5	12.6	101.					
Iron		80.0 to 120.			250.	252.	101.			
Lead		90.0 to 110.	12.5	12.6	101.					
Nickel		80.0 to 120.	10.0	10.3	103.					
Phosphorus		80.0 to 120.						2.5	2.52	101.

Printed: 10/05/23 15:35 icvdlsrpt.idxl

Report Reference # 1384175

Page 40 of 51 Report Reference:1 Generated:09-OCT-23 10:43

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG571643-5 CCVA IH730505 ICP4 Oct 05, 2023 09:17	WG571643-6 CCVB IH730506 ICP4 Oct 05, 2023 09:21	WG571643-11 CCVA IH730505 ICP4 Oct 05, 2023 09:43						
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	255.	102.			
Cobalt	80.0 to 120.	12.5	12.7	101.				12.5	12.7	101.
Copper	80.0 to 120.	12.5	12.7	101.				12.5	12.7	102.
Iron	80.0 to 120.				250.	263.	105.			
Lead	90.0 to 110.	12.5	12.7	101.				12.5	12.7	102.
Nickel	80.0 to 120.	10.0	10.2	102.				10.0	10.2	102.
Phosphorus	80.0 to 120.	2.50	2.55	102.				2.50	2.56	103.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571643-12			WG571643-18			WG571643-19		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	250.	100.				250.	248.	99.2
Cobalt	80.0 to 120.				12.5	12.6	100.			
Copper	80.0 to 120.				12.5	12.6	100.			
Iron	80.0 to 120.	250.	258.	103.				250.	258.	103.
Lead	90.0 to 110.				12.5	12.6	101.			
Nickel	80.0 to 120.				10.0	10.1	101.			
Phosphorus	80.0 to 120.				2.50	2.54	102.			

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG571643-24 CCVA IH730505 ICP4 Oct 05, 2023 11:16	WG571643-25 CCVB IH730506 ICP4 Oct 05, 2023 11:20	WG571643-27 CCVA IH730505 ICP4 Oct 05, 2023 11:38						
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	250.	99.9			
Cobalt	80.0 to 120.	12.5	12.5	99.7				12.5	12.6	100.
Copper	80.0 to 120.	12.5	12.5	100.				12.5	12.5	100.
Iron	80.0 to 120.				250.	256.	102.			
Lead	90.0 to 110.	12.5	12.5	100.				12.5	12.6	101.
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	10.1	101.
Phosphorus	80.0 to 120.	2.50	2.54	102.				2.50	2.55	102.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG571643-28 CCVB IH730506 ICP4 Oct 05, 2023 11:42	WG571643-30 CCVA IH730505 ICP4 Oct 05, 2023 13:35	WG571643-31 CCVB IH730506 ICP4 Oct 05, 2023 13:39					
Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	247.	98.8			250.	248.	99.2
Cobalt	80.0 to 120.			12.5	12.6	101.			
Copper	80.0 to 120.			12.5	12.6	101.			
Iron	80.0 to 120.	250.	258.	103.			250.	251.	100.
Lead	90.0 to 110.			12.5	12.4	99.2			
Nickel	80.0 to 120.			10.0	9.98	99.8			
Phosphorus	80.0 to 120.			2.50	2.52	101.			

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571643-36			WG571643-37					
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (%)	Found (%)	Recovery (%)
Aluminum	80.0 to 120.				250.	254.	101.			
Cobalt	80.0 to 120.	12.5	12.9	103.						
Copper	80.0 to 120.	12.5	13.1	105.						
Iron	80.0 to 120.				250.	249.	99.5			
Lead	90.0 to 110.	12.5	12.5	99.9						
Nickel	80.0 to 120.	10.0	10.1	101.						
Phosphorus	80.0 to 120.	2.50	2.55	102.						

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L606869

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG571643-4 CCB ICB ICP4 10/05/23 09:14	WG571643-7 CCB ICP4 10/05/23 09:25	WG571643-13 CCB ICP4 10/05/23 09:51	WG571643-20 CCB ICP4 10/05/23 10:17	WG571643-26 CCB ICP4 10/05/23 11:24	WG571643-32 CCB ICP4 10/05/23 13:43	WG571643-38 CCB ICP4 10/05/23 14:27	
LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	
Aluminum	0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.03	<0.03	<0.015	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Iron	0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus	1	<1	<0.5	<1	<1	<1	<1	<1

JJL 10/5/2023

DETECTION LIMIT STANDARD RECOVERY REPORT

Client : Center for Toxicology & Env. Health LLC
 Account No: 13913
 Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571643-8								
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	0.500	0.509	102.						
Cobalt	80.0 to 120.	0.0300	0.0310	103.						
Copper	80.0 to 120.	0.0200	0.0202	101.						
Iron	80.0 to 120.	0.500	0.539	108.						
Lead	80.0 to 120.	0.0250	0.0251	100.						
Nickel	80.0 to 120.	0.0200	0.0199	99.5						
Phosphorus	80.0 to 120.	0.499	0.518	104.						

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L606869

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG571672-2			WG571672-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Aluminum	85.4 to 114.	150.	144.	95.9	150.	149.	99.4	3.54	15.0
Cobalt	91.4 to 119.	15.0	15.0	100.	15.0	15.4	103.	2.57	11.7
Copper	90.4 to 120.	15.0	15.0	100.	15.0	15.5	103.	2.95	11.8
Iron	93.0 to 123.	75.0	76.2	102.	75.0	79.1	105.	3.63	10.4
Iron Oxide	93.0 to 123.	75.0	76.2	102.	75.0	79.1	105.	3.63	10.4
Lead	87.6 to 117.	15.0	14.5	96.9	15.0	14.9	99.0	2.21	20.0
Nickel	88.3 to 121.	15.0	14.7	97.7	15.0	15.0	99.9	2.22	10.0
Phosphorus	90.4 to 121.	50.0	50.0	100.	50.0	50.9	102.	1.81	10.0

METHOD BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L606869

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG571672-1 MBLANK ICP4 10/05/23 12:59	LOQ (ug)	Found (ug)						
Aluminum	7.5	<7.5							
Cobalt	0.45	<0.45							
Copper	0.30	<0.30							
Iron	7.5	<7.5							
Iron Oxide	11.	<11.							
Lead	0.38	<0.38							
Nickel	0.30	<0.30							
Phosphorus	15.	<15.							

CTEH

THE SCIENCE OF READY™

784629500527
 Date: 10/05/23
 Shipper: FEDEX
 Initials: AMF
 Prep: UNKNOWN

TODAY AND ANALYSIS REQUEST FORM

36

Send Report to	JT Wilson
Company	CTEH, LLC
Address	5120 North Shore Drive, North Little Rock, Arkansas 72118
Phone	(501)801-8500
e-mail	labresults@cteh.com; jt.wilson@cteh.com; smalina@cteh.com
Accounting	Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

CTEH Project # 031332

Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

Lab Contact Information	Secondary Sample Identification	Samples Received in Light-Protective Material						Method	Matrix
		Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time		
Primary Sample Identification									
MEID1003PAH01		899.2	L						A
MEID1003PAH02		704.6	L						A
MEID1003PAH03		960.8	L						A
MEID1003PAH04		852.5	L						A
MEID1003PAH05		—	—						A
MEID1003PAH06		—	—						A
MEID1003PAH07		—	—						A
MEID1003MET01		2,736.5	L						A
MEID1003MET02		1,969.7	L						A
MEID1003MET03		2,277.7	L						A

Rec'd intact & accounted for? Yes or No
 Rec'd w/custody seals intact? Yes, No, NA
 Rec'd in light sensitive packaging? Yes, No, NA
 Rec'd with ice pack? Yes or No
 Rec'd temperature compliant? Yes, No, NA

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
JT Wilson	10/4/23	Fed EX	10/4/23	7303: Ni, Co, Pb, Li, Cu, K, Fe, Al, Fe Oxide
Fed EX		Ava Ferreira	10/5/23	Remove potassium add phosphorus.

SDG #

#orbo 43 and PTF 0am 10/5/23

② UW MCE am 10/5/23

Page 50 of 51 Report Reference: Generated: 09-OCT-2023 KMS 10/05/23

CTEH

THE SCIENCE OF READY™

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

Send Report to JT Wilson Scott Malm
 Company CTEH, LLC
 Address 5120 North Shore Drive, North Little Rock, Arkansas 72118
 Phone (501)801-8500
 e-mail labresults@cteh.com; jt.wilson@cteh.com; smalm@cteh.com
 Accounting Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

CTEH Project # 031332Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

Lab Contact Information <i>SGS Gudson 6601 Kirkville Rd East Syracuse, NY</i>	Secondary Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	Method		Matrix A = air B = bulk S = soil SW = wipe T = tape W = water
									7303	N/007	
MEID1003MET05		—	—	—	—	—	—	JT	X	A	
MEID1003MET06		—	—	—	—	—	—	JT	X	A	
</td											

Lab Results
Center for Toxicology & Env. Health LLC
5120 North Shore Drive
North Little Rock, AR 72118

October 16, 2023

Account# 13913

Login# L607156

Dear Lab Results:

Enclosed are the analytical results for the samples received by our laboratory on October 07, 2023. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson



Lisa Swab
Laboratory Director

Enclosure(s)

Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
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Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com.
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

Accreditations SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgsgalson.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials

Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms



GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY ANALYSIS REPORT

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET01A
Date Sampled : 10/04/23

Lab ID : L607156-5 Air Volume : 2579.995 L
Date Analyzed : 10/13/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0029	mg/m ³
Cobalt	0.45	<0.45	<0.00017	mg/m ³
Copper	0.30	<0.30	<0.00012	mg/m ³
Iron	7.5	<7.5	<0.0029	mg/m ³
Iron Oxide	11.	<11	<0.0042	mg/m ³
Lead	0.38	<0.38	<0.00015	mg/m ³
Lithium	0.15	<0.15	<0.000058	mg/m ³
Nickel	0.30	<0.30	<0.00012	mg/m ³
Phosphorus Particulate	15.	<15	<0.0058	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET02A
Date Sampled : 10/04/23

Lab ID : L607156-6 Air Volume : 2823.195 L
Date Analyzed : 10/13/23

<u>Parameter</u>	LOQ uq	Total uq	Conc	Units
Aluminum	7.5	<7.5	<0.0027	mg/m3
Cobalt	0.45	<0.45	<0.00016	mg/m3
Copper	0.30	<0.30	<0.00011	mg/m3
Iron	7.5	<7.5	<0.0027	mg/m3
Iron Oxide	11.	<11	<0.0038	mg/m3
Lead	0.38	<0.38	<0.00013	mg/m3
Lithium	0.15	<0.15	<0.000053	mg/m3
Nickel	0.30	<0.30	<0.00011	mg/m3
Phosphorus Particulate	15.	<15	<0.0053	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET03A
Date Sampled : 10/04/23

Lab ID : L607156-7 **Air Volume : 3120.064 L**
Date Analyzed : 10/13/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0024	mg/m ³
Cobalt	0.45	<0.45	<0.00014	mg/m ³
Copper	0.30	<0.30	<0.000096	mg/m ³
Iron	7.5	<7.5	<0.0024	mg/m ³
Iron Oxide	11.	<11	<0.0034	mg/m ³
Lead	0.38	<0.38	<0.00012	mg/m ³
Lithium	0.15	<0.15	<0.000048	mg/m ³
Nickel	0.30	<0.30	<0.000096	mg/m ³
Phosphorus Particulate	15.	<15	<0.0048	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



LABORATORY ANALYSIS REPORT

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Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET04A
Date Sampled : 10/04/23

Lab ID : L607156-8 **Air Volume : 2981.775 L**
Date Analyzed : 10/14/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0025	mg/m ³
Cobalt	0.45	<0.45	<0.00015	mg/m ³
Copper	0.30	<0.30	<0.00010	mg/m ³
Iron	7.5	<7.5	<0.0025	mg/m ³
Iron Oxide	11.	<11	<0.0036	mg/m ³
Lead	0.38	<0.38	<0.00013	mg/m ³
Lithium	0.15	<0.15	<0.000050	mg/m ³
Nickel	0.30	<0.30	<0.00010	mg/m ³
Phosphorus Particulate	15.	<15	<0.0050	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET01
Date Sampled : 10/05/23

Lab ID : L607156-14
Date Analyzed : 10/14/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0024	mg/m ³
Cobalt	0.45	<0.45	<0.00014	mg/m ³
Copper	0.30	<0.30	<0.000096	mg/m ³
Iron	7.5	<7.5	<0.0024	mg/m ³
Iron Oxide	11.	<11	<0.0034	mg/m ³
Lead	0.38	<0.38	<0.00012	mg/m ³
Lithium	0.15	<0.15	<0.000048	mg/m ³
Nickel	0.30	<0.30	<0.000096	mg/m ³
Phosphorus Particulate	15.	<15	<0.0048	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET02
Date Sampled : 10/05/23

Lab ID : L607156-15 **Air Volume : 2520.5 L**
Date Analyzed : 10/14/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0030	mg/m ³
Cobalt	0.45	<0.45	<0.00018	mg/m ³
Copper	0.30	<0.30	<0.00012	mg/m ³
Iron	7.5	<7.5	<0.0030	mg/m ³
Iron Oxide	11.	<11	<0.0043	mg/m ³
Lead	0.38	<0.38	<0.00015	mg/m ³
Lithium	0.15	<0.15	<0.000060	mg/m ³
Nickel	0.30	<0.30	<0.00012	mg/m ³
Phosphorus Particulate	15.	<15	<0.0060	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET04
Date Sampled : 10/05/23

Lab ID : L607156-16
Date Analyzed : 10/14/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0036	mg/m3
Cobalt	0.45	<0.45	<0.00022	mg/m3
Copper	0.30	<0.30	<0.00014	mg/m3
Iron	7.5	<7.5	<0.0036	mg/m3
Iron Oxide	11.	<11	<0.0052	mg/m3
Lead	0.38	<0.38	<0.00018	mg/m3
Lithium	0.15	<0.15	<0.000072	mg/m3
Nickel	0.30	<0.30	<0.00014	mg/m3
Phosphorus Particulate	15.	<15	<0.0072	mg/m3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1004MET05
Date Sampled : 10/05/23

Lab ID : L607156-17
Date Analyzed : 10/14/23

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	<0.0025	mg/m ³
Cobalt	0.45	<0.45	<0.00015	mg/m ³
Copper	0.30	<0.30	<0.000098	mg/m ³
Iron	7.5	<7.5	<0.0025	mg/m ³
Iron Oxide	11.	<11	<0.0035	mg/m ³
Lead	0.38	<0.38	<0.00012	mg/m ³
Lithium	0.15	<0.15	<0.000049	mg/m ³
Nickel	0.30	<0.30	<0.000098	mg/m ³
Phosphorus Particulate	15.	<15	<0.0049	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1005MET01FB **Lab ID : L607156-21** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/14/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	NA	mg/m ³
Cobalt	0.45	<0.45	NA	mg/m ³
Copper	0.30	<0.30	NA	mg/m ³
Iron	7.5	<7.5	NA	mg/m ³
Iron Oxide	11.	<11	NA	mg/m ³
Lead	0.38	<0.38	NA	mg/m ³
Lithium	0.15	<0.15	NA	mg/m ³
Nickel	0.30	<0.30	NA	mg/m ³
Phosphorus Particulate	15.	<15	NA	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 13-OCT-23 - 14-OCT-23
Date Received : 07-OCT-23 Report ID : 1385979

Client ID : MEID1005MET02FB**Lab ID : L607156-22****Air Volume : NA****Date Sampled :****Date Analyzed : 10/14/23**

<u>Parameter</u>	<u>LOQ</u> uq	<u>Total</u> uq	<u>Conc</u>	<u>Units</u>
Aluminum	7.5	<7.5	NA	mg/m ³
Cobalt	0.45	<0.45	NA	mg/m ³
Copper	0.30	<0.30	NA	mg/m ³
Iron	7.5	<7.5	NA	mg/m ³
Iron Oxide	11.	<11	NA	mg/m ³
Lead	0.38	<0.38	NA	mg/m ³
Lithium	0.15	<0.15	NA	mg/m ³
Nickel	0.30	<0.30	NA	mg/m ³
Phosphorus Particulate	15.	<15	NA	mg/m ³

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: MCE UW 37mm
Date : 16-OCT-23

Submitted by: EJB/MSC/CAW/MWS
Supervisor : JJL

Approved by: JJL



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Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH01A
Date Sampled : 10/04/23

Lab ID : L607156-1 Air Volume : 1074.442 L
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00029	<0.000051
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00031	<0.000053
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00031	<0.000049
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00029	<0.000047
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00033	<0.000045
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00036	<0.000038
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00042	<0.000041
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00039	<0.000038
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00047	<0.000042
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00039	<0.000038
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00036	<0.000039
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00039	<0.000034
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00034	<0.000041
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00031	<0.000046
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00044	<0.000039

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH01A
Date Sampled : 10/04/23

Lab ID : L607156-1 Air Volume : 1074.442 L
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00030	<0.000058
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00032	<0.000045
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00034	<0.000041

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH02A
Date Sampled : 10/04/23

Lab ID : L607156-2 **Air Volume : 940.08 L**
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00034	<0.000058
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000060
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000056
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00033	<0.000053
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00038	<0.000052
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00041	<0.000044
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00048	<0.000047
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00054	<0.000048
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00041	<0.000044
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000039
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00038	<0.000046
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000052
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00050	<0.000044

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH02A
Date Sampled : 10/04/23

Lab ID : L607156-2 Air Volume : 940.08 L
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000066
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00039	<0.000047

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH03A
Date Sampled : 10/04/23

Lab ID : L607156-3 **Air Volume : 943.464 L**
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00033	<0.000058
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000060
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000056
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00033	<0.000053
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00041	<0.000044
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00048	<0.000047
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00054	<0.000048
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00041	<0.000044
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000039
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00038	<0.000046
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000052
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00050	<0.000044

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH03A
Date Sampled : 10/04/23

Lab ID : L607156-3 Air Volume : 943.464 L
Date Analyzed : 10/11/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000066
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00039	<0.000047

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

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Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH04A
Date Sampled : 10/04/23

Lab ID : L607156-4 **Air Volume : 920.64 L**
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00034	<0.000059
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000062
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000057
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00034	<0.000055
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00038	<0.000053
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00042	<0.000045
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00049	<0.000048
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000044
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00055	<0.000049
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000044
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00042	<0.000045
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000040
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00039	<0.000047
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000053
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00051	<0.000045

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH04A
Date Sampled : 10/04/23

Lab ID : L607156-4 Air Volume : 920.64 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000068
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00038	<0.000052
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00040	<0.000048

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH01
Date Sampled : 10/05/23

Lab ID : L607156-9 Air Volume : 799.637 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00039	<0.000068
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00041	<0.000071
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00042	<0.000066
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00039	<0.000063
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00044	<0.000061
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00048	<0.000052
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00057	<0.000055
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00052	<0.000050
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00064	<0.000056
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00052	<0.000050
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00049	<0.000052
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00052	<0.000046
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00045	<0.000055
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00042	<0.000061
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00059	<0.000052

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Project No. : 031332
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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH01
Date Sampled : 10/05/23

Lab ID : L607156-9 Air Volume : 799.637 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00041	<0.000078
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00044	<0.000060
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00046	<0.000055

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH02
Date Sampled : 10/05/23

Lab ID : L607156-10
Date Analyzed : 10/12/23

Air Volume : 935.064 L

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00034	<0.000058
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000061
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000057
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00033	<0.000054
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00038	<0.000052
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00041	<0.000044
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00049	<0.000047
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000043
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00054	<0.000048
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000043
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00042	<0.000045
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000039
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00039	<0.000047
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000052
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00050	<0.000044

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH02
Date Sampled : 10/05/23

Lab ID : L607156-10 Air Volume : 935.064 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000067
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00039	<0.000047

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
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Supervisor : SMM

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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH03
Date Sampled : 10/05/23

Lab ID : L607156-11
Air Volume : 966.888 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00033	<0.000056
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000059
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000055
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00032	<0.000052
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000050
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00040	<0.000043
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00047	<0.000046
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000042
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00053	<0.000047
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000042
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00040	<0.000043
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00043	<0.000038
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00037	<0.000045
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000051
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00048	<0.000043

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Project No. : 031332
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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH03
Date Sampled : 10/05/23

Lab ID : L607156-11 Air Volume : 966.888 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00034	<0.000064
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00036	<0.000049
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00038	<0.000046

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH04
Date Sampled : 10/05/23

Lab ID : L607156-12 Air Volume : 932.472 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00034	<0.000058
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000061
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000057
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00034	<0.000054
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00038	<0.000052
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00041	<0.000044
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00049	<0.000047
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000043
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00055	<0.000048
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000043
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00042	<0.000045
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00045	<0.000039
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00039	<0.000047
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00036	<0.000053
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00050	<0.000044

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH04
Date Sampled : 10/05/23

Lab ID : L607156-12 Air Volume : 932.472 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000067
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00039	<0.000047

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH05
Date Sampled : 10/05/23

Lab ID : L607156-13
Date Analyzed : 10/12/23

Air Volume : 945.024 L

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	<0.00033	<0.000057
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000060
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000056
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	<0.00033	<0.000053
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	<0.00041	<0.000044
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	<0.00048	<0.000047
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	<0.00054	<0.000048
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000043
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	<0.00041	<0.000044
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	<0.00044	<0.000039
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	<0.00038	<0.000046
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000052
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	<0.00050	<0.000044

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1004PAH05
Date Sampled : 10/05/23

Lab ID : L607156-13 Air Volume : 945.024 L
Date Analyzed : 10/12/23

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	<0.00035	<0.000066
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	<0.00037	<0.000051
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	<0.00039	<0.000047

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



LABORATORY ANALYSIS REPORT

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East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1005PAH01FB **Lab ID : L607156-18** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mq/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Date : 16-OCT-23

Submitted by: JLL

Supervisor : SMM

Approved by: KLS



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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1005PAH01FB **Lab ID : L607156-18** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1005PAH02FB **Lab ID : L607156-19** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mq/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

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Client ID : MEID1005PAH02FB **Lab ID : L607156-19** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : MEID1005PAH03FB **Lab ID : L607156-20** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

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Client ID : MEID1005PAH03FB **Lab ID : L607156-20** **Air Volume : NA**
Date Sampled : **Date Analyzed : 10/12/23**

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-23

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

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Client ID : LAB BLANK

Lab ID : L607156-23

Date Sampled :

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-24

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK
Date Sampled :

Lab ID : L607156-24
Date Analyzed : 10/12/23

Air Volume : NA

<u>Parameter</u>	<u>LOQ</u> <u>ug</u>	<u>Filter</u> <u>ug</u>	<u>Front</u> <u>ug</u>	<u>Back</u> <u>ug</u>	<u>Total</u> <u>ug</u>	<u>Conc</u> <u>mg/m3</u>	<u>ppm</u>
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-25

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

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Client ID : LAB BLANK

Lab ID : L607156-25

Date Sampled :

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mc/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-26

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Supervisor : SMM

Approved by: KLS



LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client : Center for Toxicology & Env. H Account No.: 13913
Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK
Date Sampled :

Lab ID : L607156-26
Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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Site : NS Login No. : L607156
Project No. : 031332
Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-27

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

Date : 16-OCT-23

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Client ID : LAB BLANK
Date Sampled :

Lab ID : L607156-27
Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
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Date Sampled : 04-OCT-23 - 05-OCT-23 Date Analyzed : 11-OCT-23 - 12-OCT-23
Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK

Date Sampled :

Lab ID : L607156-28

Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
1-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.32	NA	NA
2-Methylnaphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Acenaphthylene	0.30	<0.30	<0.30	<0.30	<0.31	NA	NA
Anthracene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Benzo(a)anthracene	0.30	<0.30	<0.30	<0.30	<0.38	NA	NA
Benzo(a)pyrene	0.30	<0.30	<0.30	<0.30	<0.45	NA	NA
Benzo(b)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Benzo(g,h,i)perylene	0.30	<0.30	<0.30	<0.30	<0.51	NA	NA
Benzo(k)fluoranthene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Chrysene	0.30	<0.30	<0.30	<0.30	<0.39	NA	NA
Dibenz(a,h)anthracene	0.30	<0.30	<0.30	<0.30	<0.42	NA	NA
Fluoranthene	0.30	<0.30	<0.30	<0.30	<0.36	NA	NA
Fluorene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Indeno(1,2,3-cd)pyrene	0.30	<0.30	<0.30	<0.30	<0.47	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube

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Date Received : 07-OCT-23 Report ID : 1385539

Client ID : LAB BLANK
Date Sampled :

Lab ID : L607156-28
Date Analyzed : 10/12/23

Air Volume : NA

Parameter	LOQ uq	Filter uq	Front uq	Back uq	Total uq	Conc mg/m3	ppm
Naphthalene	0.30	<0.30	<0.30	<0.30	<0.33	NA	NA
Phenanthrene	0.30	<0.30	<0.30	<0.30	<0.35	NA	NA
Pyrene	0.30	<0.30	<0.30	<0.30	<0.37	NA	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media: FilterTube
Date : 16-OCT-23

Submitted by: JLL
Supervisor : SMM

Approved by: KLS



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LABORATORY FOOTNOTE REPORT

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Client Name : Center for Toxicology & Env. Health LLC
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Date Sampled : 04-OCT-23 - 05-OCT-23 Account No.: 13913
Date Received: 07-OCT-23 Login No. : L607156
Date Analyzed: 11-OCT-23 - 14-OCT-23

L607156 (Report ID: 1385979):

For applicable NYS sampling events, laboratory accreditation through NYSDOH applies only to Lead results.

Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.

SOPs: MT-SOP-27(20), MT-SOP-28(15), MT-SOP-29(12)

Reported Iron Oxide(Fe2O3) results assume that all detected Iron is present as Iron Oxide. ICP analysis does not differentiate allotropes of phosphorus.

L607156-8 (Report ID: 1385979):

Particulate present on the back-up pad. Back-up pad was included in the digestion and analysis. Reported results greater than LOQ may be biased high due to possible background from back-up pad.

Statistical accuracy statements do not apply to samples that include back-up pad media.

L607156 (Report ID: 1385979):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Aluminum	+/-9.5%	99.6%
Cobalt	+/-8.8%	105%
Copper	+/-9.3%	105%
Iron	+/-9.3%	108%
Iron Oxide	+/-9.3%	108%
Lead	+/-9.6%	102%
Lithium	+/-9.7%	102%
Nickel	+/-10.3%	104%
Phosphorus Particulate	+/-9.6%	106%

Parameter	Method
Aluminum	mod. NIOSH 7303; ICP
Cobalt	mod. NIOSH 7303; ICP
Copper	mod. NIOSH 7303; ICP
Iron	mod. NIOSH 7303; ICP
Iron Oxide	mod. NIOSH 7303; ICP
Lead	mod. NIOSH 7303; ICP
Lithium	mod. NIOSH 7303; ICP/MS
Nickel	mod. NIOSH 7303; ICP



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L607156 (Report ID: 1385979):

Parameter	Method
Phosphorus Particulate	mod. NIOSH 7303; ICP

L607156 (Report ID: 1385539):

Results have been corrected for matrix and compound-specific desorption efficiencies, which are attached.
SOPs: 11-n5506(17)
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 82.7 to 122.% at 35.9% recovery for 1-METHYLNAPHTHALENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 35.7% recovery for ACENAPHTHENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 85.1 to 127.% at 37.7% recovery for BENZO(B)FLUORANTHENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 90.2 to 123.% at 72.0% recovery for NAPHTHALENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 35.3% recovery for BENZO(K)FLUORANTHENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 35.8% recovery for PHENANTHRENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 39.5% recovery for ANTHRACENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 44.1% recovery for BENZO(A)PYRENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 35.7% recovery for PYRENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 76.8 to 116.% at 53.7% recovery for ACENAPHTHYLENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 34.8% recovery for CHRYSENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 72.1 to 125.% at 33.2% recovery for DIBENZ(A,H)ANTHRACENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 72.8 to 123.% at 31.7% recovery for INDENO-1,2,3-CD-PYRENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 83.7 to 119.% at 39.5% recovery for 2-METHYLNAPHTHALENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 32.9% recovery for BENZO(A)ANTHRACENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 39.6% recovery for BENZO(G,H,I)PERYLENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.% at 35.2% recovery for FLUORANTHENE on the tube media.
The Blank Spike Duplicate (BSD) recovery was outside the control limits of 75.0 to 125.%



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Date Analyzed: 11-OCT-23 - 14-OCT-23

L607156 (Report ID: 1385539):

at 35.0% recovery for FLUORENE on the tube media.

Where possible, control limits are statistically generated in-house.

In the absence of statistical limits, BS/BSD guidance default limits of 75-125% are used.

L607156 (Report ID: 1385539):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
1-Methylnaphthalene	+/-12.7%	102%
2-Methylnaphthalene	+/-11.5%	101%
Acenaphthene	+/-11.7%	103%
Acenaphthylene	+/-13.6%	96.5%
Anthracene	+/-9.9%	107%
Benzo(a)anthracene	+/-13.7%	102%
Benzo(a)pyrene	+/-19.1%	113%
Benzo(b)fluoranthene	+/-13.2%	106%
Benzo(g,h,i)perylene	+/-17.9%	102%
Benzo(k)fluoranthene	+/-14.8%	104%
Chrysene	+/-15.6%	103%
Dibenz(a,h)anthracene	+/-18%	98.8%
Fluoranthene	+/-11.7%	104%
Fluorene	+/-10.1%	103%
Indeno(1,2,3-cd)pyrene	+/-17.1%	98%
Naphthalene	+/-10.2%	106%
Phenanthrene	+/-11.3%	104%
Pyrene	+/-14%	98.3%

Parameter	Method
1-Methylnaphthalene	mod. NIOSH 5506; HPLC/UV
2-Methylnaphthalene	mod. NIOSH 5506; HPLC/UV
Acenaphthene	mod. NIOSH 5506; HPLC/UV
Acenaphthylene	mod. NIOSH 5506; HPLC/UV
Anthracene	mod. NIOSH 5506; HPLC/UV
Benzo(a)anthracene	mod. NIOSH 5506; HPLC/UV
Benzo(a)pyrene	mod. NIOSH 5506; HPLC/UV
Benzo(b)fluoranthene	mod. NIOSH 5506; HPLC/UV
Benzo(g,h,i)perylene	mod. NIOSH 5506; HPLC/UV
Benzo(k)fluoranthene	mod. NIOSH 5506; HPLC/UV



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Date Received: 07-OCT-23 Login No. : L607156
Date Analyzed: 11-OCT-23 - 14-OCT-23

L607156 (Report ID: 1385539):

Parameter	Method
Chrysene	mod. NIOSH 5506; HPLC/UV
Dibenz(a,h)anthracene	mod. NIOSH 5506; HPLC/UV
Fluoranthene	mod. NIOSH 5506; HPLC/UV
Fluorene	mod. NIOSH 5506; HPLC/UV
Indeno(1,2,3-cd)pyrene	mod. NIOSH 5506; HPLC/UV
Naphthalene	mod. NIOSH 5506; HPLC/UV
Phenanthrene	mod. NIOSH 5506; HPLC/UV
Pyrene	mod. NIOSH 5506; HPLC/UV

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-2								
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	90.0 to 120.	0.0200	0.720	3600						
Lead	90.0 to 110.	0.0250	1.01	4040						
Lithium	90.0 to 110.	80.0 to 120.	1250	1220	97.7					
JJL 10/16/2023										

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-5			WG572449-12			WG572449-16		
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	80.0 to 120.	0.0200	1.00	5010	0.0200	1.02	5120	0.0200	1.02	5110
Lead	00.0 to 110.	0.0250	1.27	5420	0.0250	1.01	7620	0.0250	1.02	7700
Lithium	80.0 to 120.	1250	1270	101.	1250	1260	101.	1250	1260	101.

JJL 10/16/2023

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-20			WG572449-32			WG572449-25		
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	80.0 to 120.	0.0200	0.000	5000	0.0200	1.01	5010	0.0200	0.042	1710
Lead	80.0 to 110.	0.0250	1.02	7670	0.0250	1.00	7530	0.0250	1.02	7660
Lithium	80.0 to 120.	1250	1260	101.	1250	1240	99.1	1250	1220	97.3

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-36			WG572449-40			WG572449-47		
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	80.0 to 120.	0.0200	1.00	5010	0.0200	1.25	6210	0.0200	0.000	1050
Lead	80.0 to 110.	0.0250	1.07	7800	0.0250	2.01	8050	0.0250	2.05	8100
Lithium	80.0 to 120.	1250	1200	95.6	1250	1210	96.8	1250	1200	96.2
JJL 10/16/2023										

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-51			WG572449-70			WG572449-81		
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	80.0 to 120.	0.0200	1.00	50.00	0.0200	1.10	50.10	0.0200	1.17	50.70
Lead	80.0 to 110.	0.0250	2.01	112.00	0.0250	2.20	88.20	0.0250	2.10	80.00
Lithium	80.0 to 120.	1250	1130	90.5	1250	1240	98.9	1250	1260	101.

JJL 10/16/2023

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
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Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-85			WG572449-100			WG572449-92		
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)	True Value (ppb)	Found (ppb)	Recovery (%)
Copper	80.0 to 120.	0.0200	1.11	5550	0.0200	1.10	5700	0.0200	1.27	6220
Lead	80.0 to 110.	0.0250	2.27	9000	0.0250	2.23	8800	0.0250	2.28	9040
Lithium	80.0 to 120.	1250	1230	98.5	1250	1230	98.5	1250	1260	101.

JJL 10/16/2023

INITIAL/CONTINUING CALIBRATION REPORT

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Account No: 13913
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Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-77 CCVD IH728953 ICPMS2 Oct 14, 2023 09:08			True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
		True Value (ppb)	Found (ppb)	Recovery (%)						
Copper	80.0 to 120.	0.0200	1.20	6450						
Lead	90.0 to 110.	0.0250	2.20	8820						
Lithium	80.0 to 120.	1250	1240	99.4						
JJL 10/16/2023										

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572468-4 CCB ICP5 10/13/23 10:26	WG572468-7 CCB ICP5 10/13/23 10:36	WG572468-13 CCB ICP5 10/13/23 10:59	WG572468-20 CCB ICP5 10/13/23 11:23	WG572468-26 CCB ICP5 10/13/23 11:53	WG572468-29 CCB ICP5 10/13/23 12:03	WG572468-32 CCB ICP5 10/13/23 12:13	WG572468-38 CCB ICP5 10/13/23 12:51
LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)
Aluminum	0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.03	<0.03	<0.015	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Iron	0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus	1	<1	<0.5	<1	<1	<1	<1	<1

JJL 10/16/2023

INITIAL/CONTINUING BLANK REPORT

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Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572468-44 CCB ICP5 10/13/23 13:31	WG572468-50 CCB ICP5 10/13/23 13:51	WG572468-41 CCB ICP5 10/13/23 14:34	WG572468-62 CCB ICP5 10/13/23 15:14	WG572468-98 CCB ICP5 10/13/23 15:37	WG572468-53 CCB ICP5 10/13/23 16:16	WG572468-56 CCB ICP5 10/13/23 17:00	WG572468-65 CCB ICP5 10/13/23 18:19
LOQ ppm	Found (ppm)							
Aluminum	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Iron	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus	1	<1	<1	<1	<1	<1	<1	<1

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572468-68 CCB ICP5 10/13/23 18:52	LOQ ppm	Found (ppm)						
Aluminum	0.5	<0.5							
Cobalt	0.03	<0.03							
Copper	0.02	<0.02							
Iron	0.5	<0.5							
Lead	0.01	<0.01							
Nickel	0.02	<0.02							
Phosphorus	1	<1							

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-1			WG572468-3			WG572468-2		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value ()	Found ()	Recovery (%)
Aluminum	90.0 to 110.	90.0 to 120.			250.	250.	99.9			
Cobalt	for all	90.0 to 120.	12.5	12.8	102.					
Copper		90.0 to 120.	12.5	12.4	99.2					
Iron		90.0 to 120.			250.	251.	101.			
Lead		90.0 to 110.	12.5	12.6	100.					
Nickel		90.0 to 120.	10.0	10.4	104.					
Phosphorus		90.0 to 120.						2.5	2.44	97.6
JJL 10/16/2023										

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG572468-5 CCVA IH730721 ICP5 Oct 13, 2023 10:30	WG572468-6 CCVB IH730506 ICP5 Oct 13, 2023 10:33	WG572468-11 CCVA IH730721 ICP5 Oct 13, 2023 10:53						
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	251.	100.			
Cobalt	80.0 to 120.	12.5	12.6	101.				12.5	12.7	101.
Copper	80.0 to 120.	12.5	12.8	102.				12.5	12.9	104.
Iron	80.0 to 120.				250.	255.	102.			
Lead	90.0 to 110.	12.5	12.6	101.				12.5	12.7	101.
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	10.1	101.
Phosphorus	80.0 to 120.	2.50	2.53	101.				2.50	2.51	101.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-12 CCVB IH730506 ICP5 Oct 13, 2023 10:56			WG572468-18 CCVA IH730721 ICP5 Oct 13, 2023 11:16			WG572468-19 CCVB IH730506 ICP5 Oct 13, 2023 11:20		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	247.	98.8				250.	248.	99.2
Cobalt	80.0 to 120.				12.5	12.6	101.			
Copper	80.0 to 120.				12.5	12.8	102.			
Iron	80.0 to 120.	250.	252.	101.				250.	252.	101.
Lead	90.0 to 110.				12.5	12.6	101.			
Nickel	80.0 to 120.				10.0	10.1	101.			
Phosphorus	80.0 to 120.				2.50	2.53	101.			

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-24 CCVA IH730721 ICP5 Oct 13, 2023 11:46			WG572468-25 CCVB IH730506 ICP5 Oct 13, 2023 11:50			WG572468-27 CCVA IH730721 ICP5 Oct 13, 2023 11:56		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	249.	99.7			
Cobalt	80.0 to 120.	12.5	12.6	101.				12.5	12.6	101.
Copper	80.0 to 120.	12.5	13.1	104.				12.5	13.3	106.
Iron	80.0 to 120.				250.	253.	101.			
Lead	90.0 to 110.	12.5	12.6	100.				12.5	12.6	101.
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	10.1	101.
Phosphorus	80.0 to 120.	2.50	2.53	101.				2.50	2.53	101.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-28			WG572468-30			WG572468-31		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	247.	98.8				250.	246.	98.6
Cobalt	80.0 to 120.				12.5	12.6	101.			
Copper	80.0 to 120.				12.5	13.1	105.			
Iron	80.0 to 120.	250.	251.	100.				250.	250.	100.
Lead	90.0 to 110.				12.5	12.6	101.			
Nickel	80.0 to 120.				10.0	10.1	101.			
Phosphorus	80.0 to 120.				2.50	2.53	102.			

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-36 CCVA IH730721 ICP5 Oct 13, 2023 12:26			WG572468-37 CCVB IH730506 ICP5 Oct 13, 2023 12:29			WG572468-42 CCVA IH730721 ICP5 Oct 13, 2023 13:24		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	246.	98.2			
Cobalt	80.0 to 120.	12.5	12.6	101.				12.5	12.5	99.8
Copper	80.0 to 120.	12.5	13.2	106.				12.5	13.0	104.
Iron	80.0 to 120.				250.	249.	99.6			
Lead	90.0 to 110.	12.5	12.6	101.				12.5	12.5	99.7
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	9.93	99.3
Phosphorus	80.0 to 120.	2.50	2.52	101.				2.50	2.50	100.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-48 CCVA IH730721 ICP5 Oct 13, 2023 13:44			WG572468-49 CCVB IH730506 ICP5 Oct 13, 2023 13:47			WG572468-39 CCVA IH730721 ICP5 Oct 13, 2023 14:27		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	247.	98.6			
Cobalt	80.0 to 120.	12.5	12.6	101.				12.5	12.5	100.
Copper	80.0 to 120.	12.5	13.3	107.				12.5	13.0	104.
Iron	80.0 to 120.				250.	250.	100.			
Lead	90.0 to 110.	12.5	12.6	101.				12.5	12.5	99.8
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	9.94	99.4
Phosphorus	80.0 to 120.	2.50	2.53	101.				2.50	2.50	100.

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-40 CCVB IH730506 ICP5 Oct 13, 2023 14:31	WG572468-60 CCVA IH730721 ICP5 Oct 13, 2023 15:07	WG572468-61 CCVB IH730506 ICP5 Oct 13, 2023 15:10					
	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	243.	97.3			250.	245.	97.9
Cobalt	80.0 to 120.				12.5	12.5	100.		
Copper	80.0 to 120.				12.5	13.4	107.		
Iron	80.0 to 120.	250.	247.	98.6			250.	249.	99.6
Lead	90.0 to 110.				12.5	12.6	100.		
Nickel	80.0 to 120.				10.0	9.93	99.3		
Phosphorus	80.0 to 120.				2.50	2.50	100.		

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-96 CCVA IH730721 ICP5 Oct 13, 2023 15:30			WG572468-97 CCVB IH730506 ICP5 Oct 13, 2023 15:34			WG572468-51 CCVA IH730721 ICP5 Oct 13, 2023 16:09		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	249.	99.4			
Cobalt	80.0 to 120.	12.5	12.8	102.				12.5	12.8	102.
Copper	80.0 to 120.	12.5	12.4	99.4				12.5	12.4	99.0
Iron	80.0 to 120.				250.	255.	102.			
Lead	90.0 to 110.	12.5	12.7	102.				12.5	12.7	102.
Nickel	80.0 to 120.	10.0	10.1	101.				10.0	10.0	100.
Phosphorus	80.0 to 120.	2.50	2.52	101.				2.50	2.47	99.1

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-52 CCVB IH730506 ICP5 Oct 13, 2023 16:13			WG572468-54 CCVA IH730721 ICP5 Oct 13, 2023 16:53			WG572468-55 CCVB IH730506 ICP5 Oct 13, 2023 16:56		
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	240.	96.1				250.	243.	97.1
Cobalt	80.0 to 120.				12.5	12.8	102.			
Copper	80.0 to 120.				12.5	12.8	102.			
Iron	80.0 to 120.	250.	247.	98.6				250.	249.	99.5
Lead	90.0 to 110.				12.5	12.7	102.			
Nickel	80.0 to 120.				10.0	10.0	100.			
Phosphorus	80.0 to 120.				2.50	2.47	98.8			

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG572468-72 CCVA IH730721 ICP5 Oct 13, 2023 17:37	WG572468-73 CCVB IH730506 ICP5 Oct 13, 2023 17:40	WG572468-63 CCVA IH730721 ICP5 Oct 13, 2023 18:13						
	Limits (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.				250.	242.	96.7			
Cobalt	80.0 to 120.	12.5	12.8	102.				12.5	12.8	102.
Copper	80.0 to 120.	12.5	12.8	103.				12.5	12.7	101.
Iron	80.0 to 120.				250.	247.	98.9			
Lead	90.0 to 110.	12.5	12.7	102.				12.5	12.8	102.
Nickel	80.0 to 120.	10.0	10.0	100.				10.0	10.0	100.
Phosphorus	80.0 to 120.	2.50	2.47	99.1				2.50	2.49	99.6

INITIAL/CONTINUING CALIBRATION REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-64 CCVB IH730506 ICP5 Oct 13, 2023 18:16	WG572468-66 CCVA IH730721 ICP5 Oct 13, 2023 18:46	WG572468-67 CCVB IH730506 ICP5 Oct 13, 2023 18:49					
	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	250.	242.	96.9			250.	240.	96.1
Cobalt	80.0 to 120.			12.5	12.8	103.			
Copper	80.0 to 120.			12.5	12.9	104.			
Iron	80.0 to 120.	250.	248.	99.0			250.	246.	98.6
Lead	90.0 to 110.			12.5	12.8	102.			
Nickel	80.0 to 120.			10.0	10.1	101.			
Phosphorus	80.0 to 120.			2.50	2.48	99.2			

DETECTION LIMIT STANDARD RECOVERY REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572468-8								
		True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)	True Value (mg/l)	Found (mg/l)	Recovery (%)
Aluminum	80.0 to 120.	0.500	0.492	98.3						
Cobalt	80.0 to 120.	0.0300	0.0311	104.						
Copper	80.0 to 120.	0.0200	0.0210	105.						
Iron	80.0 to 120.	0.500	0.530	106.						
Lead	80.0 to 120.	0.0250	0.0259	104.						
Nickel	80.0 to 120.	0.0200	0.0210	105.						
Phosphorus	80.0 to 120.	0.499	0.503	101.						

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572485-2			WG572485-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Aluminum	85.4 to 114.	150.	147.	98.3	150.	151.	100.	2.15	15.0
Cobalt	91.4 to 119.	15.0	15.9	106.	15.0	16.2	108.	1.68	11.7
Copper	90.4 to 120.	15.0	16.0	106.	15.0	16.3	109.	2.05	11.8
Iron	93.0 to 123.	75.0	78.5	105.	75.0	80.0	107.	1.95	10.4
Iron Oxide	93.0 to 123.	75.0	78.5	105.	75.0	80.0	107.	1.95	10.4
Lead	87.6 to 117.	15.0	15.7	105.	15.0	16.0	107.	1.80	20.0
Nickel	88.3 to 121.	15.0	15.9	106.	15.0	16.2	108.	1.69	10.0
Phosphorus	90.4 to 121.	50.0	53.3	107.	50.0	54.3	109.	1.87	10.0

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572510-2			WG572510-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Aluminum	85.4 to 114.	150.	147.	98.0	150.	148.	98.7	0.711	15.0
Cobalt	91.4 to 119.	15.0	16.5	110.	15.0	16.5	110.	0	11.7
Copper	90.4 to 120.	15.0	15.8	106.	15.0	15.9	106.	0.284	11.8
Iron	93.0 to 123.	75.0	80.0	107.	75.0	80.5	107.	0.598	10.4
Iron Oxide	93.0 to 123.	75.0	80.0	107.	75.0	80.5	107.	0.598	10.4
Lead	87.6 to 117.	15.0	16.3	108.	15.0	16.3	109.	0.0922	20.0
Nickel	88.3 to 121.	15.0	16.2	108.	15.0	16.2	108.	0.0926	10.0
Phosphorus	90.4 to 121.	50.0	54.5	109.	50.0	54.4	109.	0.331	10.0

METHOD BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572485-1 MBLANK ICP5 10/13/23 13:54	WG572510-1 MBLANK ICP5 10/13/23 18:23	Found (ug)	Found (ug)					
	LOQ (ug)								
Aluminum	7.5	<7.5	<7.5						
Cobalt	0.45	<0.45	<0.45						
Copper	0.30	<0.30	<0.30						
Iron	7.5	<7.5	<7.5						
Iron Oxide	11.	<11.	<11.						
Lead	0.38	<0.38	<0.38						
Nickel	0.30	<0.30	<0.30						
Phosphorus	15.	<15.	<15.						

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572449-4 CCB ICPMS2 10/13/23 13:46	WG572449-7 CCB ICPMS2 10/13/23 14:24	WG572449-14 CCB ICPMS2 10/13/23 16:08	WG572449-18 CCB ICPMS2 10/13/23 17:24	WG572449-23 CCB ICPMS2 10/13/23 18:40	WG572449-34 CCB ICPMS2 10/13/23 19:37	WG572449-27 CCB ICPMS2 10/13/23 20:54	WG572449-38 CCB ICPMS2 10/13/23 22:10
LOQ ppm	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)	Found (ppm)
Aluminum	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Cobalt	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Iron	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron Oxide	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Lithium	0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
JJL 10/16/2023								

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID		WG572449-42	WG572449-49	WG572449-53	WG572449-72	WG572449-83	WG572449-87	WG572449-102	WG572449-94
Type	CCB	CCB							
Instrument	ICPMS2	ICPMS2							
Analysis Date	10/13/23	10/14/23	10/14/23	10/14/23	10/14/23	10/14/23	10/14/23	10/14/23	10/14/23
Analysis Time	23:26	00:42	01:59	03:15	04:31	05:48	07:04	08:21	
LOQ ppm	Found (ppm)	Found (ppm)							
Aluminum	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cobalt	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Copper	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Iron	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Iron Oxide	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Lithium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

JJL 10/16/2023

INITIAL/CONTINUING BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID		WG572449-79						
Type		CCB						
Instrument		ICPMS2						
Analysis Date		10/14/23						
Analysis Time		09:19						
LOQ	ppm	Found	(ppm)					
Aluminum	0.2	0.2						
Cobalt	0.02	<0.02						
Copper	0.02	<0.02						
Iron	0.5	<0.5						
Iron Oxide	0.5	<0.5						
Lead	0.025	<0.025						
Lithium	0.1	<0.1						
Nickel	0.02	<0.02						

JJL 10/16/2023

DETECTION LIMIT STANDARD RECOVERY REPORT

Client : Center for Toxicology & Env. Health LLC
Account No: 13913
Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572449-125								
		True Value (ppb)	Found (ppb)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Aluminum	80.0 to 120.	500.	474.	94.9						
Cobalt	80.0 to 120.	3.00	3.46	115.						
Copper	80.0 to 120.	20.0	22.0	110.						
Iron	80.0 to 120.	500.	512.	102.						
Lead	80.0 to 120.	5.00	5.48	110.						
Lithium	80.0 to 120.	10.0	10.7	107.						
Nickel	80.0 to 120.	10.0	11.0	110.						



6601 Kirkville Rd. E Syracuse, NY 13057

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
 Account No: 13913
 Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572485-2			WG572485-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Aluminum	88.2 to 113.	130.	100.	100.	130.	104.	100.	2.91	10.8
Cobalt	87.5 to 112.	15.0	14.5	96.4	15.0	15.3	102.	5.55	12.2
Copper	87.0 to 113.	15.0	15.0	100.	15.0	15.0	100.	0.00	10.0
Iron	84.8 to 118.	75.0	62.7	110.	75.0	68.0	110.	1.00	12.0
Lead	87.0 to 115.	15.0	14.0	93.3	15.0	15.1	101.	1.26	20.0
Lithium	87.0 to 117.	15.0	14.3	95.2	15.0	14.6	97.3	2.11	12.3
Nickel	88.1 to 111.	15.0	15.0	100.	15.0	16.0	112.	0.15	11.0

JJL 10/16/2023

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Example Calculation:

Formula: $\text{ug/L} \times \text{L} = \text{Total ug} / \text{Air Vol. (L)} = \text{mg/m}^3$
 Sample : L607156-8 Analyte: LITHIUM $< 10 \text{ ug/L} \times 0.015 \text{ L} = < 0.15 \text{ ug} / 2981.775 \text{ L} = < 0.000050 \text{ mg/m}^3$



6601 Kirkville Rd. E Syracuse, NY 13057

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : Center for Toxicology & Env. Health LLC
 Account No: 13913
 Login No. : L607156

Lab Sample ID Type Spike Lot # Instrument Analysis Date	Limits (%)	WG572510-2			WG572510-3			RPD	RPD Limits
		True Value (ug/sample)	Found (ug/sample)	Recovery (%)	True Value (ug/sample)	Found (ug/sample)	Recovery (%)		
Aluminum	88.2 to 113.	130.	130.	100.	130.	137.	111.	5.31	10.8
Cobalt	87.5 to 112.	15.0	15.0	100.	15.0	15.5	103.	3.15	12.2
Copper	87.0 to 113.	15.0	15.0	100.	15.0	16.0	107.	2.33	10.0
Iron	84.0 to 118.	75.0	80.1	115.	75.0	80.4	101.	1.02	12.6
Lead	87.0 to 115.	15.0	15.4	102.	15.0	15.7	105.	2.45	20.0
Lithium	87.0 to 117.	15.0	15.8	106.	15.0	14.6	97.5	8.06	12.3
Nickel	86.1 to 114.	15.0	16.0	113.	15.0	16.0	113.	0.343	11.8

JJL 10/16/2023

page 2 of 2

Example Calculation:

Formula: $\text{ug/L} \times \text{L} = \text{Total ug} / \text{Air Vol. (L)} = \text{mg/m}^3$
 Sample : L607156-8 Analyte: LITHIUM $< 10 \text{ ug/L} \times 0.015 \text{ L} = < 0.15 \text{ ug} / 2981.775 \text{ L} = < 0.000050 \text{ mg/m}^3$

METHOD BLANK REPORT

Client Center for Toxicology & Env. Health LLC
Account No 13913
Login No. L607156

Lab Sample ID Type Instrument Analysis Date Analysis Time	WG572485-1 MBLANK ICPMS2 10/13/23 23:37	WG572510-1 MBLANK ICPMS2 10/14/23 08:27	Found (ug)	Found (ug)					
Lithium	0.15	<0.15	<0.15						

Analyte	PTFE DE	XAD DE
BENZO(B)FLUORANTHENE	97	72
BENZO(K)FLUORANTHENE	97	72
BENZO(A)PYRENE	98	66
DIBENZO(A,H)ANTHRACENE	99	72
BENZO(G,H,I)PERYLENE	96	59
INDENO-1,2,3-CD-PYRENE	98	64
NAPHTHALENE	99	92
ACENAPHTHYLENE	102	96
ACENAPHTHENE	102	90
FLUORENE	97	90
PHENANTHRENE	98	86
ANTHRACENE	98	85
FLUORANTHENE	98	83
PYRENE	99	82
BENZO(A)ANTHRACENE	98	78
CHRYSENE	98	77
1-METHYLNAPHTHALENE	98	95
2-METHYLNAPHTHALENE	99	91

Sample: WG572147-1

QC Type: DLS

Analysis date: 10/11/23 16:53:51

Spikelot: IH730610-2

Raw File: WG572147-
1A.UV_VIS_1.0004_1127528_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	.1011546	.1008	100	70.0 to 130.				
PYRENE	.1081910	.1004	108	70.0 to 130.				
BENZO(A)ANTHRACENE	.0855750	.1006	85.1	70.0 to 130.				
CHRYSENE	.1004439	.1002	100	70.0 to 130.				
BENZO(B)FLUORANTHENE	.1023833	.1002	102	70.0 to 130.				
BENZO(K)FLUORANTHENE	.0850980	.1006	84.6	70.0 to 130.				
BENZO(A)PYRENE	.1101939	.1002	110	70.0 to 130.				
DIBENZ(A,H)ANTHRACENE	.0964638	.1004	96.1	70.0 to 130.				
BENZO(G,H,I)PERYLENE	.0963825	.1002	96.2	70.0 to 130.				
ACENAPHTHYLENE	.0982104	.1005	97.7	70.0 to 130.				
INDENO-1,2,3-CD-PYRENE	.0890218	.1006	88.5	70.0 to 130.				
1-METHYLNAPHTHALENE	.0972671	.1004	96.9	70.0 to 130.				
2-METHYLNAPHTHALENE	.0936353	.1004	93.3	70.0 to 130.				
ACENAPHTHENE	.0958579	.1008	95.1	70.0 to 130.				
FLUORENE	.0937106	.1008	93	70.0 to 130.				
PHENANTHRENE	.0965132	.1004	96.1	70.0 to 130.				
ANTHRACENE	.1019465	.1004	102	70.0 to 130.				
FLUORANTHENE	.0948306	.1004	94.5	70.0 to 130.				

Sample: WG572147-2

QC Type: CCV

Analysis date: 10/11/23 17:06:11

Spikelot: IH730610-1

Raw File: WG572147-
2A.UV_VIS_1.0005_1127528_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.327149	5.04	106	80.0 to 120.				
PYRENE	5.074331	5.02	101	80.0 to 120.				
BENZO(A)ANTHRACENE	5.228197	5.03	104	80.0 to 120.				
CHRYSENE	5.129509	5.01	102	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.364785	5.01	107	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.222346	5.03	104	80.0 to 120.				
ACENAPHTHYLENE	5.012948	5.026	99.7	80.0 to 120.				
BENZO(A)PYRENE	5.652949	5.01	113	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.098379	5.02	102	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.145562	5.01	103	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.871397	5.03	96.8	80.0 to 120.				

Sample: WG572147-2

QC Type: CCV

Spikelot: IH730610-1

Raw File: WG572147-
2A.UV_VIS_1.0005_1127528_LC6_20231

Analysis date: 10/11/23 17:06:11

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE	5.226472	5.02	104	80.0 to 120.				
2-METHYLNAPHTHALENE	5.129718	5.02	102	80.0 to 120.				
ACENAPHTHENE	5.284556	5.04	105	80.0 to 120.				
FLUORENE	5.145719	5.04	102	80.0 to 120.				
PHENANTHRENE	5.154192	5.02	103	80.0 to 120.				
ANTHRACENE	5.195284	5.02	103	80.0 to 120.				
FLUORANTHENE	5.161034	5.02	103	80.0 to 120.				

Sample: WG572136-2

Spikelot: NA

QC Type: MBLANK

Raw File: WG572136-
2A.UV_VIS_1.0008_1127531_LC6_20231

Analysis date: 10/11/23 17:43:14

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE (FRONT)	0	<0.30						
1-METHYLNAPHTHALENE (BACK)	0	<0.30						
2-METHYLNAPHTHALENE (FRONT)	0	<0.30						
2-METHYLNAPHTHALENE (BACK)	0	<0.30						
ACENAPHTHENE (FRONT)	0	<.30						
ACENAPHTHENE (BACK)	0	<.30						
ACENAPHTHYLENE (FRONT)	0	<.30						
ACENAPHTHYLENE (BACK)	0	<.30						
ANTHRACENE (FRONT)	0	<.30						
ANTHRACENE (BACK)	0	<.30						
BENZO (A) ANTHRACENE (FRONT)	0	<.30						
BENZO (A) ANTHRACENE (BACK)	0	<.30						
BENZO (A) PYRENE (FRONT)	0	<.30						
BENZO (A) PYRENE (BACK)	0	<.30						
BENZO (B) FLUORANTHENE (FRONT)	0	<.30						
BENZO (B) FLUORANTHENE (BACK)	0	<.30						
BENZO (G, H, I) PERYLENE (FRONT)	0	<.30						
BENZO (G, H, I) PERYLENE (BACK)	0	<.30						
BENZO (K) FLUORANTHENE (FRONT)	0	<.30						
BENZO (K) FLUORANTHENE (BACK)	0	<.30						
CHRYSENE (FRONT)	0	<.30						
CHRYSENE (BACK)	0	<.30						

Sample: WG572136-2

QC Type: MBLANK

Spikelot: NA

Raw File: WG572136-
2A.UV_VIS_1.0008_1127531_LC6_20231

Analysis date: 10/11/23 17:43:14

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE Rec.	Limits	RPD	Limits
DIBENZ (A, H) ANTHRACENE (FRONT)	0	< .30						
DIBENZ (A, H) ANTHRACENE (BACK)	0	< .30						
FLUORANTHENE (FRONT)	0	< .30						
FLUORANTHENE (BACK)	0	< .30						
FLUORENE (FRONT)	0	< .30						
FLUORENE (BACK)	0	< .30						
INDENO-1, 2, 3-CD-PYRENE (FRONT)	0	< .30						
INDENO-1, 2, 3-CD-PYRENE (BACK)	0	< .30						
NAPHTHALENE (FRONT)	0	< .30						
NAPHTHALENE (BACK)	0	< .30						
PHENANTHRENE (FRONT)	0	< .30						
PHENANTHRENE (BACK)	0	< .30						
PYRENE (FRONT)	0	< .30						
PYRENE (BACK)	0	< .30						

Sample: WG572136-3

QC Type: BS

Spikelot: IH730610

Raw File: WG572136-
3F.UV_VIS_1.0010_1127531_LC6_20231

Analysis date: 10/11/23 18:07:54

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE Rec.	Limits	RPD	Limits
NAPHTHALENE	5.300471	5.04	105		106	90.2 to 123.		
PYRENE	5.029427	5.02	100		101	75.0 to 125.		
BENZO(A) ANTHRACENE	5.037373	5.03	100		102	75.0 to 125.		
CHRYSENE	4.967753	5.01	99.2		101	75.0 to 125.		
BENZO(B) FLUORANTHENE	5.261034	5.01	105		108	85.1 to 127.		
ACENAPHTHYLENE	4.878897	5.026	97.1		95.2	76.8 to 116.		
BENZO(K) FLUORANTHENE	5.186530	5.03	103		106	75.0 to 125.		
BENZO(A) PYRENE	5.565064	5.01	111		113	75.0 to 125.		
DIBENZ (A, H) ANTHRACENE	5.036055	5.02	100		101	72.1 to 125.		
BENZO(G, H, I) PERYLENE	5.006864	5.01	99.9		104	75.0 to 125.		
INDENO-1, 2, 3-CD-PYRENE	4.734536	5.03	94.1		95.1	72.8 to 123.		
1-METHYLNAPHTHALENE	5.075160	5.02	101		103	82.7 to 122.		
2-METHYLNAPHTHALENE	5.033070	5.02	100		101	83.7 to 119.		
ACENAPHTHENE	5.137927	5.04	102		99.9	75.0 to 125.		
FLUORENE	4.984528	5.04	98.9		102	75.0 to 125.		

Sample: WG572136-3

QC Type: BS

Analysis date: 10/11/23 18:07:54

Instrument: LC6

Spikelot: IH730610

Raw File: WG572136-
3F.UV_VIS_1.0010_1127531_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
PHENANTHRENE	5.062590	5.02	101		103	75.0 to 125.		
ANTHRACENE	5.199190	5.02	104		106	75.0 to 125.		
FLUORANTHENE	4.961364	5.02	98.8		101	75.0 to 125.		

Sample: WG572136-4

QC Type: BSD

Analysis date: 10/11/23 18:20:14

Spikelot: IH730610

Raw File: WG572136-
4F.UV_VIS_1.0011_1127531_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.029060	5.04	99.8		101	90.2 to 123.	4.83	-20 to 20.0
PYRENE	4.736818	5.02	94.4		95.3	75.0 to 125.	5.81	-20 to 20.0
BENZO(A)ANTHRACENE	4.739733	5.03	94.2		96.2	75.0 to 125.	5.85	-20 to 20.0
CHRYSENE	4.712291	5.01	94.1		96	75.0 to 125.	5.08	-20 to 20.0
BENZO(B)FLUORANTHENE	4.989550	5.01	99.6		103	85.1 to 127.	4.74	0 to 13.8
ACENAPHTHYLENE	4.640092	5.026	92.3		90.5	76.8 to 116.	5.06	-20 to 20.0
BENZO(K)FLUORANTHENE	4.795436	5.03	95.3		98.3	75.0 to 125.	7.54	-20 to 20.0
BENZO(A)PYRENE	5.300211	5.01	106		108	75.0 to 125.	4.52	-20 to 20.0
DIBENZ(A,H)ANTHRACENE	4.760630	5.02	94.8		95.8	72.1 to 125.	5.28	-20 to 20.0
BENZO(G,H,I)PERYLENE	4.754917	5.01	94.9		98.9	75.0 to 125.	5.03	-20 to 20.0
INDENO-1,2,3-CD-PYRENE	4.481607	5.03	89.1		90	72.8 to 123.	5.51	-20 to 20.0
1-METHYLNAPHTHALENE	4.837751	5.02	96.4		98.3	82.7 to 122.	4.67	0 to 13.4
2-METHYLNAPHTHALENE	4.808099	5.02	95.8		96.7	83.7 to 119.	4.35	0 to 13.2
ACENAPHTHENE	4.875438	5.04	96.7		94.8	75.0 to 125.	5.24	-20 to 20.0
FLUORENE	4.710579	5.04	93.5		96.4	75.0 to 125.	5.65	-20 to 20.0
PHENANTHRENE	4.781814	5.02	95.3		97.2	75.0 to 125.	5.79	-20 to 20.0
ANTHRACENE	4.956745	5.02	98.7		101	75.0 to 125.	4.83	-20 to 20.0
FLUORANTHENE	4.689692	5.02	93.4		95.3	75.0 to 125.	5.81	-20 to 20.0

Sample: WG572136-5

QC Type: BS

Analysis date: 10/11/23 18:32:38

Spikelot: IH730610

Raw File: WG572136-
5A.UV_VIS_1.0012_1127531_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	4.949475	5.04	98.2		107	90.2 to 123.		
PYRENE	4.300001	5.02	85.7		104	75.0 to 125.		

Sample: WG572136-5

QC Type: BS

Analysis date: 10/11/23 18:32:38

Spikelot: IH730610

Raw File: WG572136-
5A.UV_VIS_1.0012_1127531_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
BENZO(A)ANTHRACENE	4.123260	5.03	82		105	75.0 to 125.		
CHRYSENE	3.999747	5.01	79.8		104	75.0 to 125.		
BENZO(B)FLUORANTHENE	3.998747	5.01	79.8		111	85.1 to 127.		
BENZO(K)FLUORANTHENE	3.855698	5.03	76.7		106	75.0 to 125.		
BENZO(A)PYRENE	3.768136	5.01	75.2		114	75.0 to 125.		
DIBENZ(A,H)ANTHRACENE	3.581297	5.02	71.3		99.1	72.1 to 125.		
BENZO(G,H,I)PERYLENE	3.079654	5.01	61.5		104	75.0 to 125.		
ACENAPHTHYLENE	4.537444	5.026	90.3		94	76.8 to 116.		
INDENO-1,2,3-CD-PYRENE	3.141195	5.03	62.4		97.6	72.8 to 123.		
1-METHYLNAPHTHALENE	4.771485	5.02	95		100	82.7 to 122.		
2-METHYLNAPHTHALENE	4.645824	5.02	92.5		102	83.7 to 119.		
ACENAPHTHENE	4.668590	5.04	92.6		103	75.0 to 125.		
FLUORENE	4.609341	5.04	91.5		102	75.0 to 125.		
PHENANTHRENE	4.566707	5.02	91		106	75.0 to 125.		
ANTHRACENE	4.600017	5.02	91.6		108	75.0 to 125.		
FLUORANTHENE	4.344370	5.02	86.5		104	75.0 to 125.		

Sample: WG572136-6

QC Type: BSD

Analysis date: 10/11/23 18:44:59

Spikelot: IH730610

Raw File: WG572136-
6A.UV_VIS_1.0013_1127531_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
ANTHRACENE	1.683994	5.02	33.5		39.5	75.0 to 125.	92.9	-20 to 20.0
FLUORANTHENE	1.465321	5.02	29.2		35.2	75.0 to 125.	98.9	-20 to 20.0
PYRENE	1.470162	5.02	29.3		35.7	75.0 to 125.	97.8	-20 to 20.0
BENZO(A)ANTHRACENE	1.289127	5.03	25.6		32.9	75.0 to 125.	105	-20 to 20.0
CHRYSENE	1.342681	5.01	26.8		34.8	75.0 to 125.	99.7	-20 to 20.0
NAPHTHALENE	3.336543	5.04	66.2		72	90.2 to 123.	39.1	-20 to 20.0
BENZO(B)FLUORANTHENE	1.360399	5.01	27.2		37.7	85.1 to 127.	98.6	0 to 13.8
BENZO(K)FLUORANTHENE	1.280139	5.03	25.5		35.3	75.0 to 125.	100	-20 to 20.0
BENZO(A)PYRENE	1.459380	5.01	29.1		44.1	75.0 to 125.	88.4	-20 to 20.0
DIBENZ(A,H)ANTHRACENE	1.198539	5.02	23.9		33.2	72.1 to 125.	99.6	-20 to 20.0
BENZO(G,H,I)PERYLENE	1.170356	5.01	23.4		39.6	75.0 to 125.	89.7	-20 to 20.0
INDENO-1,2,3-CD-PYRENE	1.019857	5.03	20.3		31.7	72.8 to 123.	102	-20 to 20.0
ACENAPHTHYLENE	2.589777	5.026	51.5		53.7	76.8 to 116.	54.6	-20 to 20.0

Sample: WG572136-6

QC Type: BSD

Analysis date: 10/11/23 18:44:59

Instrument: LC6

Spikelot: IH730610

Raw File: WG572136-
6A.UV_VIS_1.0013_1127531_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE	1.711038	5.02	34.1		35.9	82.7 to 122.	94.3	0 to 13.4
2-METHYLNAPHTHALENE	1.803041	5.02	35.9		39.5	83.7 to 119.	88.3	0 to 13.2
ACENAPHTHENE	1.617378	5.04	32.1		35.7	75.0 to 125.	97	-20 to 20.0
FLUORENE	1.588732	5.04	31.5		35	75.0 to 125.	97.8	-20 to 20.0
PHENANTHRENE	1.545324	5.02	30.8		35.8	75.0 to 125.	99	-20 to 20.0

Sample: WG572147-3

QC Type: CCV

Analysis date: 10/11/23 20:48:25

Instrument: LC6

Spikelot: IH730610-1

Raw File: WG572147-
3A.UV_VIS_1.0023_1127528_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.342948	5.04	106	80.0 to 120.				
PYRENE	5.100619	5.02	102	80.0 to 120.				
BENZO(A)ANTHRACENE	5.242802	5.03	104	80.0 to 120.				
CHRYSENE	5.089403	5.01	102	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.379702	5.01	107	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.280011	5.03	105	80.0 to 120.				
ACENAPHTHYLENE	5.029273	5.026	100	80.0 to 120.				
BENZO(A)PYRENE	5.683165	5.01	113	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.115849	5.02	102	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.175591	5.01	103	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.901481	5.03	97.4	80.0 to 120.				
1-METHYLNAPHTHALENE	5.245343	5.02	104	80.0 to 120.				
2-METHYLNAPHTHALENE	5.147477	5.02	103	80.0 to 120.				
ACENAPHTHENE	5.297642	5.04	105	80.0 to 120.				
FLUORENE	5.159912	5.04	102	80.0 to 120.				
PHENANTHRENE	5.167461	5.02	103	80.0 to 120.				
ANTHRACENE	5.211162	5.02	104	80.0 to 120.				
FLUORANTHENE	5.181672	5.02	103	80.0 to 120.				

Sample: WG572147-4

QC Type: CCV

Analysis date: 10/12/23 00:42:59

Instrument: LC6

Spikelot: IH730610-1

Raw File: WG572147-
4A.UV_VIS_1.0042_1127528_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
-----------	-------	------	------	--------	----	-------------	-----	--------

Sample: WG572147-4

QC Type: CCV

Analysis date: 10/12/23 00:42:59

Spikelot: IH730610-1

Raw File: WG572147-
4A.UV_VIS_1.0042_1127528_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.359034	5.04	106	80.0 to 120.				
PYRENE	5.108085	5.02	102	80.0 to 120.				
BENZO(A)ANTHRACENE	5.286799	5.03	105	80.0 to 120.				
CHRYSENE	5.105827	5.01	102	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.405262	5.01	108	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.305297	5.03	105	80.0 to 120.				
ACENAPHTHYLENE	5.042765	5.026	100	80.0 to 120.				
BENZO(A)PYRENE	5.702408	5.01	114	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.128480	5.02	102	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.197112	5.01	104	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.918003	5.03	97.8	80.0 to 120.				
1-METHYLNAPHTHALENE	5.262911	5.02	105	80.0 to 120.				
2-METHYLNAPHTHALENE	5.167655	5.02	103	80.0 to 120.				
ACENAPHTHENE	5.313622	5.04	105	80.0 to 120.				
FLUORENE	5.172699	5.04	103	80.0 to 120.				
PHENANTHRENE	5.183620	5.02	103	80.0 to 120.				
ANTHRACENE	5.230517	5.02	104	80.0 to 120.				
FLUORANTHENE	5.200014	5.02	104	80.0 to 120.				

Sample: WG572147-5

QC Type: CCV

Analysis date: 10/12/23 04:37:51

Spikelot: IH730610-1

Raw File: WG572147-
5A.UV_VIS_1.0061_1127528_LC6_20231

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.378309	5.04	107	80.0 to 120.				
PYRENE	5.111690	5.02	102	80.0 to 120.				
BENZO(A)ANTHRACENE	5.310571	5.03	106	80.0 to 120.				
CHRYSENE	5.122955	5.01	102	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.423780	5.01	108	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.326432	5.03	106	80.0 to 120.				
ACENAPHTHYLENE	5.054211	5.026	101	80.0 to 120.				
BENZO(A)PYRENE	5.727753	5.01	114	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.140981	5.02	102	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.214112	5.01	104	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.923919	5.03	97.9	80.0 to 120.				

Sample: WG572147-5

QC Type: CCV

Analysis date: 10/12/23 04:37:51

Instrument: LC6

Spikelot: IH730610-1

Raw File: WG572147-
5A.UV_VIS_1.0061_1127528_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
1-METHYLNAPHTHALENE	5.276458	5.02	105	80.0 to 120.				
2-METHYLNAPHTHALENE	5.180560	5.02	103	80.0 to 120.				
ACENAPHTHENE	5.329079	5.04	106	80.0 to 120.				
FLUORENE	5.182083	5.04	103	80.0 to 120.				
PHENANTHRENE	5.193900	5.02	103	80.0 to 120.				
ANTHRACENE	5.239336	5.02	104	80.0 to 120.				
FLUORANTHENE	5.212067	5.02	104	80.0 to 120.				

Sample: WG572147-6

QC Type: CCV

Analysis date: 10/12/23 07:18:29

Instrument: LC6

Spikelot: IH730610-1

Raw File: WG572147-
6A.UV_VIS_1.0074_1127528_LC6_20231

Approval Status: YES

Parameter	Found	True	Rec.	Limits	DE	Rec. Limits	RPD	Limits
NAPHTHALENE	5.397512	5.04	107	80.0 to 120.				
PYRENE	5.141313	5.02	102	80.0 to 120.				
BENZO(A)ANTHRACENE	5.301939	5.03	105	80.0 to 120.				
CHRYSENE	5.134038	5.01	102	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.427154	5.01	108	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.328418	5.03	106	80.0 to 120.				
ACENAPHTHYLENE	5.067031	5.026	101	80.0 to 120.				
BENZO(A)PYRENE	5.739531	5.01	115	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.151476	5.02	103	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.219825	5.01	104	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.930793	5.03	98	80.0 to 120.				
1-METHYLNAPHTHALENE	5.288648	5.02	105	80.0 to 120.				
2-METHYLNAPHTHALENE	5.203246	5.02	104	80.0 to 120.				
ACENAPHTHENE	5.341064	5.04	106	80.0 to 120.				
FLUORENE	5.197222	5.04	103	80.0 to 120.				
PHENANTHRENE	5.207613	5.02	104	80.0 to 120.				
ANTHRACENE	5.250889	5.02	105	80.0 to 120.				
FLUORANTHENE	5.233433	5.02	104	80.0 to 120.				

Sample: WG572147-7

QC Type: CCV

Analysis date: 10/12/23 09:59:42

Instrument: LC6

Spikelot: IH730610-1

Raw File: WG572147-
7A.UV_VIS_1.0087_1127528_LC6_20231

Approval Status: YES

Sample: WG572147-7

QC Type: CCV

Spikelet: IH730610-1

Raw File: WG572147-
7A.UV_VIS_1.0087_1127528_LC6_20231

Analysis date: 10/12/23 09:59:42

Approval Status: YES

Instrument: LC6

Parameter	Found	True	Rec.	Limits	DE Rec.	Limits	RPD	Limits
NAPHTHALENE	5.393266	5.04	107	80.0 to 120.				
PYRENE	5.159620	5.02	103	80.0 to 120.				
BENZO(A)ANTHRACENE	5.316771	5.03	106	80.0 to 120.				
CHRYSENE	5.143249	5.01	103	80.0 to 120.				
BENZO(B)FLUORANTHENE	5.444819	5.01	109	80.0 to 120.				
BENZO(K)FLUORANTHENE	5.345148	5.03	106	80.0 to 120.				
ACENAPHTHYLENE	5.087555	5.026	101	80.0 to 120.				
BENZO(A)PYRENE	5.757906	5.01	115	80.0 to 120.				
DIBENZ(A,H)ANTHRACENE	5.165162	5.02	103	80.0 to 120.				
BENZO(G,H,I)PERYLENE	5.229096	5.01	104	80.0 to 120.				
INDENO-1,2,3-CD-PYRENE	4.950081	5.03	98.4	80.0 to 120.				
1-METHYLNAPHTHALENE	5.298307	5.02	106	80.0 to 120.				
2-METHYLNAPHTHALENE	5.196697	5.02	104	80.0 to 120.				
ACENAPHTHENE	5.354152	5.04	106	80.0 to 120.				
FLUORENE	5.211504	5.04	103	80.0 to 120.				
PHENANTHRENE	5.227149	5.02	104	80.0 to 120.				
ANTHRACENE	5.261727	5.02	105	80.0 to 120.				
FLUORANTHENE	5.237719	5.02	104	80.0 to 120.				

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L607156

Please provide 6 media blanks for PNATT only. Thank You!

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

84-85

784722819554
Date: 10/07/23
Shipper: FEDEX
Initials: AMF



Prep: UNKNOWN

Samples Received in Light Protective Material.

KMS 10/16/23

CTEH Project # 031332

Send Report to jwilson@cteh.com; lclawitter@cteh.com
 Company CTEH, LLC
 Address 5120 North Shore Drive, North Little Rock, Arkansas 721
 Phone (501)801-8500
 e-mail labresults@cteh.com;
 Accounting Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

Lab Contact Information	Secondary Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	Method		Matrix
									NIDSH	SDG	
	* Orbo 43 & PTFE amt 10/7/23										
	② UW MCE 37mm amt 10/7/23										
Primary Sample Identification	Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	NIDSH	SDG	NIDSH
*	MEID1004PAH01A	PAH01A	1074.442	L	10/4/23	1118	10/4/23	2234	KO	X	
	MEID1004PAH02A	PAH02A	940.08	L	10/4/23	1018	10/4/23	2218	KO	X	
	MEID1004PAH03A	PAH03A	943.414	L	10/4/23	1001	10/4/23	2201	KO	X	
	MEID1004PAH04A	PAH04A	920.64	L	10/4/23	0921	10/4/23	2121	KO	X	
②	MEID1004MET01A	MET01A	2579.995	L	10/4/23	1123	10/4/23	2234	KO	X	
	MEID1004MET02A	MET02A	2823.195	L	10/4/23	1026	10/4/23	2218	KO	X	
	MEID1004MET03A	MET03A	3120.014	L	10/4/23	0946	10/4/23	2313	KO	X	
	MEID1004MET04A	MET04A	2981.775	L	10/4/23	0928	10/4/23	2158	KO	X	
*	MEID1004PAH01	PAH01	799.631	L	10/4/23	2259	10/5/23	0916	KO	X	
	MEID1004PAH02	PAH02	935.014	L	10/6/23	0251	10/6/23	1451	KO	X	

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	SDG #
Kimberly Odum	10/6/2023			
FedEx	10/7/23	Ava Ferreira	10/7/23 950	

KMS 10/16/23
 Rec'd intact & accounted for Yes or No
 Rec'd w/custody seals intact? Yes, No, NA
 Rec'd in light sensitive packaging? Yes, No, NA
 Rec'd with ice pack? Yes or No
 Rec'd temperature compliant? Yes, No, NA

CTEH

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CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

Samples Received in Light Protective Material.

KMS 10/16/23

Send Report to jtrikison@cteh.com; lclawitter@cteh.comCompany CTEH, LLCAddress 5120 North Shore Drive, North Little Rock, Arkansas 72118Phone (501)801-8500e-mail labresults@cteh.com;Accounting Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject lineCTEH Project # 031332Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

Lab Contact Information	Secondary Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	Method		Matrix
									FT	FT	
Primary Sample Identification									FT	FT	FT
MEID1004PAH03	PAH03	9166.888	L	10/5/23	0003	10/6/23	1203	KD	X		A
MEID1004PAH04	PAH04	932.472	L	10/4/23	2156	10/5/23	0956	KD	X		A
MEID1004PAH05	PAH05	945.024	L	10/5/23	2156 ¹²⁸	10/5/23	1328	KD	X		A
MEID1004MET01	MET01	3133.939	L	10/4/23	2301	10/6/23	1201	KD	X		A
MEID1004MET02	MET02	2520.5	L	10/5/23	0252	10/6/23	1336	KD	X		A
MEID1004MET04	MET04	2074.697	L	10/4/23	2157	10/5/23	0648	KD	X		A
MEID1005MET05	MET05	3053.262	L	10/5/23	0130	10/6/23	1410	KD	X		A
MEID1005PAH01FB	PAH01FB	—	—	—	—	—	—	KD	X		A
MEID1005PAH02FB	PAH02FB	—	—	—	—	—	—	KD	X		A
MEID1005PAH03FB	PAH03FB	—	—	—	—	—	—	KD	X		A

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

KMS 10/16/23

Kimberly Dabam

10/16/2023

FedEx

10/7/23

Ana Ferreira

10/7/23
750

Rec'd intact & accounted for? Yes or No
 Rec'd w/custody seals intact? Yes, No, NA
 Rec'd in light sensitive packaging? Yes, No,
 Rec'd with ice pack? Yes or No
 Rec'd temperature compliant? Yes, No,

SDG # _____



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CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

Samples Received in Light Protective Material. KMS 10/16/23

Send Report to	jtwilson@cteh.com ; lclawitter@cteh.com
Company	CTEH, LLC
Address	5120 North Shore Drive, North Little Rock, Arkansas 72118
Phone	(501)801-8500
e-mail	labresults@cteh.com ;
Accounting	Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

CTEH Project # D91331

Turnaround Requested: Normal Same Day Next Day

Two Day Other (Specify) _____

Data Packet Requested: Standard Level II. Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time

• Retain w/ storage fees after 2X hold time

KMS 10/16/23

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
Kimberly Odam	10/6/2023		
FedEx	10/7/23	Ava Ferreira AS 960	10/11/23

Rec'd intact & accounted for? Yes or No
Rec'd w/custody seals intact? Yes, No, NA
Rec'd in light sensitive packaging? Yes, No, NA
Rec'd with ice pack? Yes or No
Rec'd temperature compliant? Yes, No, NA

October 11, 2023

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ AI⁹ SC**CTEH - ER**

Sample Delivery Group: L1664005

Samples Received: 10/07/2023

Project Number: 031332

Description:

Report To: CTEH
5120 North Shore Drive
North Little Rock, AR 72118

Entire Report Reviewed By:



Jared Starkey
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

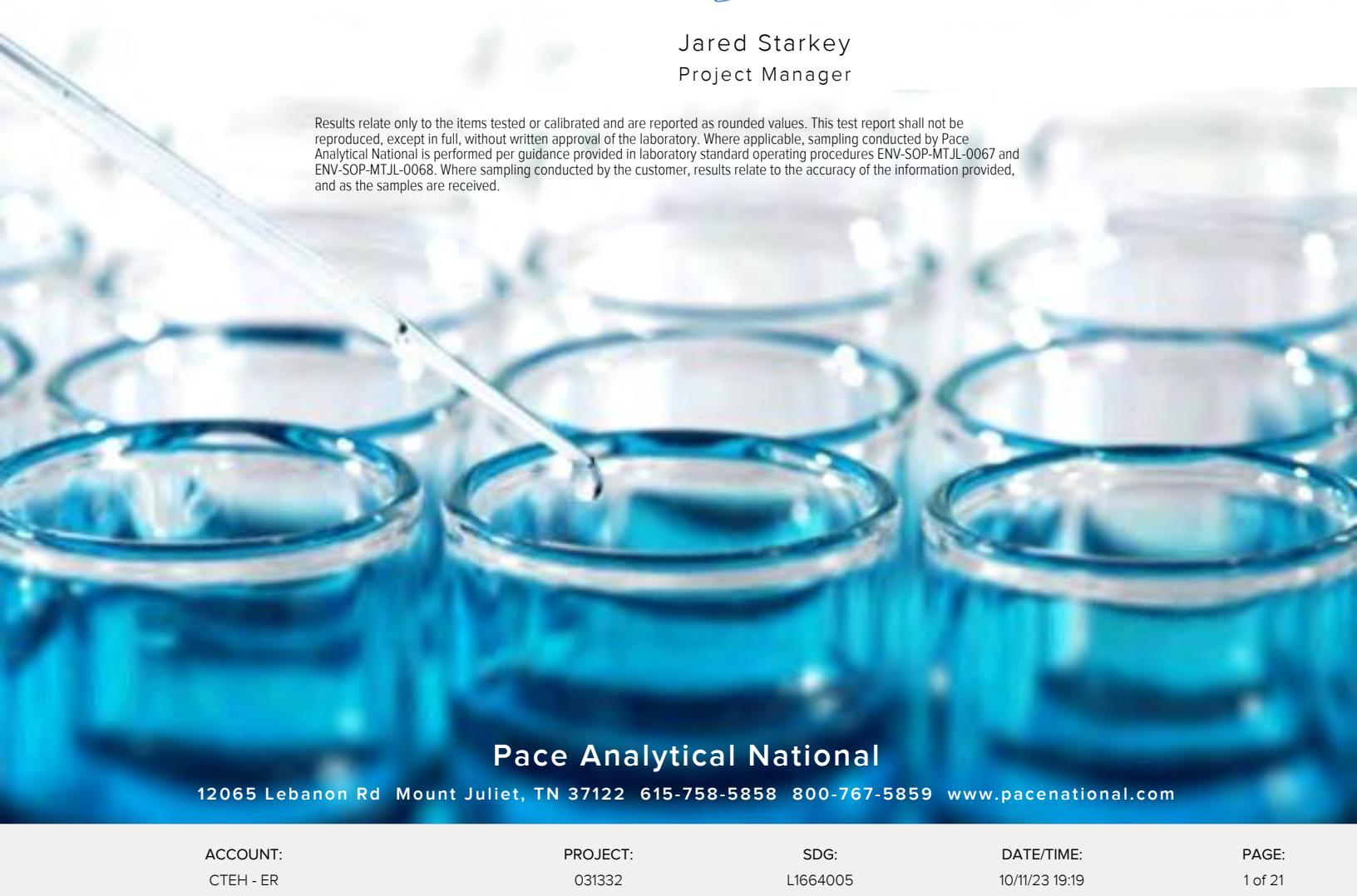
A blurred background image of laboratory glassware, including several test tubes and a pipette, containing a blue liquid.**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MEID1003MC01 L1664005-01 Air			Collected by KD	Collected date/time 10/04/23 22:35	Received date/time 10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 15:20	10/08/23 15:20	SDS	Mt. Juliet, TN
MEID1003MC02 L1664005-02 Air			Collected by KD	Collected date/time 10/04/23 23:25	Received date/time 10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 15:51	10/08/23 15:51	SDS	Mt. Juliet, TN
MEID1003MC04 L1664005-03 Air			Collected by KD	Collected date/time 10/04/23 21:40	Received date/time 10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 16:22	10/08/23 16:22	SDS	Mt. Juliet, TN
MEID1003MC03 L1664005-04 Air			Collected by KD	Collected date/time 10/04/23 23:41	Received date/time 10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 16:53	10/08/23 16:53	SDS	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

⁸ Al

⁹ Sc

CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jared Starkey
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

The associated batch QC was below the established quality control range for accuracy.

Batch	Lab Sample ID	Analytics
WG2147373	(LCS) R3984901-1, (LCSD) R3984901-3, L1664005-01, 02, 03, 04	1,2,4-Trichlorobenzene and Naphthalene

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ GI
- ⁸ AI
- ⁹ SC

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	12.0	28.5		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.447	1.43		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	0.218	0.972	J	1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	U	U		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.226	0.703		1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.623	1.64		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.861	1.78		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	U	U		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	0.0809	0.367	J	1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	61.9	117		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.187	1.05	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.454	2.25		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.170	0.695	J	1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.210	0.729		1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.634	1.87	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.258	0.761		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	1.04	2.56	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.0844	0.359	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.79	6.74		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		86.4				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	14.0	33.3		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	2.80	8.94		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	0.122	0.474	J	1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.253	0.600		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.175	0.545	J	1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.300	0.791		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	1.01	2.09		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	U	U		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	U	U		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	25.3	47.7		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.182	1.02	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.429	2.12		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	U	U		1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	1.23	6.05		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.170	0.590	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	1.11	3.27	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.804	2.37		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.639	1.57	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

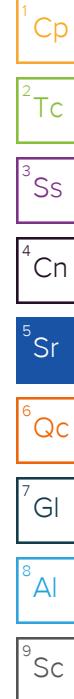
7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.366	1.56		1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.85	6.97		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		87.9				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	22.8	54.2		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	8.87	19.2		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.523	1.67		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.274	0.650		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.145	0.451	J	1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.178	0.470	J	1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.517	1.07		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	U	U		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	U	U		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	37.6	70.9		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.183	1.03	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.421	2.08		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.114	0.466	J	1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.167	0.580	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.688	2.03	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.306	0.903		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.511	1.26	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

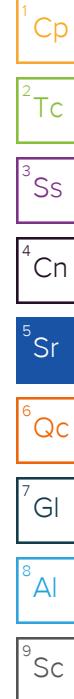
7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	U	U		1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	2.04	7.68		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140			83.8			WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	9.63	22.9		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.459	1.47		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.278	0.659		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.226	0.703		1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.658	1.74		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.752	1.55		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	U	U		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	U	U		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	65.0	123		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.193	1.08	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.447	2.21		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.152	0.622	J	1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.125	0.434	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.801	2.36	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.195	0.575	J	1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.922	2.27	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.176	0.749	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.71	6.44		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		85.0				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

QUALITY CONTROL SUMMARY

[L1664005-01,02,03,04](#)

Method Blank (MB)

(MB) R3984901-2 10/08/23 12:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	
Acetone	U		0.584	1.25	¹ Cp
Acetonitrile	U		0.235	5.00	² Tc
Acrylonitrile	U		0.226	5.00	³ Ss
Allyl chloride	U		0.114	0.200	⁴ Cn
Benzene	U		0.0715	0.200	⁵ Sr
Benzyl Chloride	U		0.0598	0.200	⁶ Qc
Bromodichloromethane	U		0.0702	0.200	⁷ Gl
Bromoform	U		0.0732	0.600	⁸ Al
Bromomethane	U		0.0982	0.200	⁹ Sc
Bromoethane	U		0.216	5.00	
1,3-Butadiene	U		0.104	2.00	
Butane	U		0.0522	0.200	
Carbon disulfide	U		0.102	0.200	
Carbon tetrachloride	U		0.0732	0.200	
Chlorobenzene	U		0.0832	0.200	
Chloroethane	U		0.0996	0.200	
Chloroform	U		0.0717	0.200	
Chloromethane	U		0.103	0.200	
2-Chlorotoluene	U		0.0828	0.200	
Cyclohexane	U		0.0753	0.200	
n-Decane	U		0.0784	0.200	
Dibromochloromethane	U		0.0727	0.200	
1,2-Dibromoethane	U		0.0721	0.200	
1,2-Dichlorobenzene	U		0.128	0.200	
1,3-Dichlorobenzene	U		0.182	0.200	
1,4-Dichlorobenzene	U		0.0557	0.200	
1,2-Dichloroethane	U		0.0700	0.200	
1,1-Dichloroethane	U		0.0723	0.200	
1,1-Dichloroethene	U		0.0762	0.200	
cis-1,2-Dichloroethene	U		0.0784	0.200	
trans-1,2-Dichloroethene	U		0.0673	0.200	
1,2-Dichloropropane	U		0.0760	0.200	
cis-1,3-Dichloropropene	U		0.0689	0.200	
trans-1,3-Dichloropropene	U		0.0728	0.200	
1,4-Dioxane	U		0.0833	0.200	
Ethanol	0.351	J	0.265	2.50	
Ethylbenzene	U		0.0835	0.200	
4-Ethyltoluene	U		0.0783	0.200	
Trichlorofluoromethane	U		0.0819	0.200	
Dichlorodifluoromethane	U		0.137	0.200	

QUALITY CONTROL SUMMARY

[L1664005-01,02,03,04](#)

Method Blank (MB)

(MB) R3984901-2 10/08/23 12:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200	¹ Cp
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200	² Tc
Heptane	U		0.104	0.200	³ Ss
Hexachloro-1,3-butadiene	U		0.105	0.630	⁴ Cn
n-Hexane	U		0.206	0.630	⁵ Sr
Isopropylbenzene	U		0.0777	0.200	⁶ Qc
Methylene Chloride	U		0.0979	0.200	⁷ Gl
Methyl Butyl Ketone	U		0.133	1.25	⁸ Al
2-Butanone (MEK)	U		0.0814	1.25	⁹ Sc
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25	
Methyl methacrylate	U		0.0876	0.200	
MTBE	U		0.0647	0.200	
Naphthalene	U		0.350	0.630	
Nonane	U		0.0363	0.200	
Pentane	U		0.0503	0.200	
2-Propanol	U		0.264	1.25	
Propene	U		0.0932	1.25	
Styrene	U		0.0788	0.200	
1,1,2,2-Tetrachloroethane	U		0.0743	0.200	
Tetrachloroethylene	U		0.0814	0.200	
Tetrahydrofuran	U		0.0734	0.200	
Toluene	U		0.0870	0.500	
1,2,4-Trichlorobenzene	U		0.148	0.630	
1,1,1-Trichloroethane	U		0.0736	0.200	
1,1,2-Trichloroethane	U		0.0775	0.200	
Trichloroethylene	U		0.0680	0.200	
1,2,4-Trimethylbenzene	U		0.0764	0.200	
1,3,5-Trimethylbenzene	U		0.0779	0.200	
2,2,4-Trimethylpentane	U		0.133	0.200	
Vinyl chloride	U		0.0949	0.200	
Vinyl Bromide	U		0.0852	0.200	
Vinyl acetate	U		0.116	0.200	
m&p-Xylene	U		0.135	0.400	
o-Xylene	U		0.0828	0.200	
(S) 1,4-Bromofluorobenzene	76.6		60.0-140		

Method Blank (MB) - TENTATIVELY IDENTIFIED COMPOUNDS

(MB) R3984901-2 10/08/23 12:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	CAS #
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Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Acetone	3.75	3.65	3.88	97.3	103	70.0-130			6.11	25
Acetonitrile	18.8	18.9	19.6	101	104	70.0-130			3.64	25
Acrylonitrile	3.75	3.67	3.84	97.9	102	70.0-130			4.53	25
Allyl chloride	3.75	3.09	3.26	82.4	86.9	70.0-130			5.35	25
Benzene	3.75	3.37	3.43	89.9	91.5	70.0-130			1.76	25
Benzyl Chloride	3.75	3.47	3.58	92.5	95.5	70.0-152			3.12	25
Bromodichloromethane	3.75	3.07	3.18	81.9	84.8	70.0-130			3.52	25
Bromoform	3.75	3.46	3.48	92.3	92.8	70.0-130			0.576	25
Bromomethane	3.75	3.56	3.65	94.9	97.3	70.0-130			2.50	25
Bromoethane	3.75	3.48	3.62	92.8	96.5	70.0-130			3.94	25
1,3-Butadiene	3.75	3.21	3.41	85.6	90.9	70.0-130			6.04	25
Butane	3.75	3.39	3.51	90.4	93.6	70.0-130			3.48	25
Carbon disulfide	3.75	3.63	3.77	96.8	101	70.0-130			3.78	25
Carbon tetrachloride	3.75	3.36	3.49	89.6	93.1	70.0-130			3.80	25
Chlorobenzene	3.75	3.44	3.58	91.7	95.5	70.0-130			3.99	25
Chloroethane	3.75	3.49	3.65	93.1	97.3	70.0-130			4.48	25
Chloroform	3.75	3.44	3.55	91.7	94.7	70.0-130			3.15	25
Chloromethane	3.75	3.39	3.52	90.4	93.9	70.0-130			3.76	25
2-Chlorotoluene	3.75	3.42	3.51	91.2	93.6	70.0-130			2.60	25
Cyclohexane	3.75	3.21	3.34	85.6	89.1	70.0-130			3.97	25
n-Decane	3.75	3.29	3.46	87.7	92.3	70.0-130			5.04	25
Dibromochloromethane	3.75	3.31	3.43	88.3	91.5	70.0-130			3.56	25
1,2-Dibromoethane	3.75	3.30	3.40	88.0	90.7	70.0-130			2.99	25
1,2-Dichlorobenzene	3.75	3.63	3.72	96.8	99.2	70.0-130			2.45	25
1,3-Dichlorobenzene	3.75	3.72	3.77	99.2	101	70.0-130			1.34	25
1,4-Dichlorobenzene	3.75	3.76	3.87	100	103	70.0-130			2.88	25
1,2-Dichloroethane	3.75	2.86	2.98	76.3	79.5	70.0-130			4.11	25
1,1-Dichloroethane	3.75	3.49	3.65	93.1	97.3	70.0-130			4.48	25
1,1-Dichloroethene	3.75	3.44	3.55	91.7	94.7	70.0-130			3.15	25
cis-1,2-Dichloroethene	3.75	3.13	3.32	83.5	88.5	70.0-130			5.89	25

QUALITY CONTROL SUMMARY

[L1664005-01,02,03,04](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
trans-1,2-Dichloroethene	3.75	3.21	3.33	85.6	88.8	70.0-130			3.67	25
1,2-Dichloropropane	3.75	3.09	3.16	82.4	84.3	70.0-130			2.24	25
cis-1,3-Dichloropropene	3.75	2.63	2.69	70.1	71.7	70.0-130			2.26	25
trans-1,3-Dichloropropene	3.75	3.01	3.04	80.3	81.1	70.0-130			0.992	25
1,4-Dioxane	3.75	2.87	2.80	76.5	74.7	70.0-140			2.47	25
Ethanol	3.75	3.83	3.82	102	102	55.0-148			0.261	25
Ethylbenzene	3.75	3.37	3.37	89.9	89.9	70.0-130			0.000	25
4-Ethyltoluene	3.75	3.68	3.66	98.1	97.6	70.0-130			0.545	25
Trichlorofluoromethane	3.75	3.44	3.69	91.7	98.4	70.0-130			7.01	25
Dichlorodifluoromethane	3.75	3.54	3.64	94.4	97.1	64.0-139			2.79	25
1,1,2-Trichlorotrifluoroethane	3.75	3.52	3.74	93.9	99.7	70.0-130			6.06	25
1,2-Dichlorotetrafluoroethane	3.75	3.68	3.90	98.1	104	70.0-130			5.80	25
Heptane	3.75	2.87	2.92	76.5	77.9	70.0-130			1.73	25
Hexachloro-1,3-butadiene	3.75	3.73	3.81	99.5	102	70.0-151			2.12	25
n-Hexane	3.75	3.24	3.35	86.4	89.3	70.0-130			3.34	25
Isopropylbenzene	3.75	3.60	3.64	96.0	97.1	70.0-130			1.10	25
Methylene Chloride	3.75	3.28	3.42	87.5	91.2	70.0-130			4.18	25
Methyl Butyl Ketone	3.75	2.65	2.74	70.7	73.1	70.0-149			3.34	25
2-Butanone (MEK)	3.75	3.36	3.56	89.6	94.9	70.0-130			5.78	25
4-Methyl-2-pentanone (MIBK)	3.75	2.95	3.02	78.7	80.5	70.0-139			2.35	25
Methyl methacrylate	3.75	3.02	3.10	80.5	82.7	70.0-130			2.61	25
MTBE	3.75	3.27	3.43	87.2	91.5	70.0-130			4.78	25
Naphthalene	3.75	2.72	2.62	72.5	69.9	70.0-159	J4		3.75	25
Nonane	3.75	3.14	3.24	83.7	86.4	70.0-130			3.13	25
Pentane	3.75	3.56	3.69	94.9	98.4	70.0-130			3.59	25
2-Propanol	3.75	3.61	3.76	96.3	100	70.0-139			4.07	25
Propene	3.75	3.49	3.47	93.1	92.5	64.0-144			0.575	25
Styrene	3.75	3.39	3.48	90.4	92.8	70.0-130			2.62	25
1,1,2,2-Tetrachloroethane	3.75	3.58	3.67	95.5	97.9	70.0-130			2.48	25
Tetrachloroethylene	3.75	3.33	3.58	88.8	95.5	70.0-130			7.24	25
Tetrahydrofuran	3.75	2.90	3.02	77.3	80.5	70.0-137			4.05	25
Toluene	3.75	3.24	3.30	86.4	88.0	70.0-130			1.83	25
1,2,4-Trichlorobenzene	3.75	2.52	2.49	67.2	66.4	70.0-160	J4	J4	1.20	25
1,1,1-Trichloroethane	3.75	3.24	3.34	86.4	89.1	70.0-130			3.04	25
1,1,2-Trichloroethane	3.75	3.36	3.60	89.6	96.0	70.0-130			6.90	25
Trichloroethylene	3.75	3.20	3.26	85.3	86.9	70.0-130			1.86	25
1,2,4-Trimethylbenzene	3.75	3.62	3.69	96.5	98.4	70.0-130			1.92	25
1,3,5-Trimethylbenzene	3.75	3.56	3.76	94.9	100	70.0-130			5.46	25
2,2,4-Trimethylpentane	3.75	3.46	3.59	92.3	95.7	70.0-130			3.69	25
Vinyl chloride	3.75	3.63	3.77	96.8	101	70.0-130			3.78	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

QUALITY CONTROL SUMMARY

[L1664005-01,02,03,04](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

Analyst	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Vinyl Bromide	3.75	3.60	3.82	96.0	102	70.0-130			5.93	25
Vinyl acetate	3.75	3.02	3.08	80.5	82.1	70.0-130			1.97	25
m&p-Xylene	7.50	7.01	7.13	93.5	95.1	70.0-130			1.70	25
o-Xylene	3.75	3.51	3.69	93.6	98.4	70.0-130			5.00	25
(S) 1,4-Bromofluorobenzene			92.5	94.6	60.0-140					

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RT	Retention Time.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gi

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

M090

Send Report to	itwilson@cteh.com; clawitter@cteh.com
Company	CTEH, LLC
Address	5120 North Shore Drive, North Little Rock, Arkansas 72118
Phone	(501)801-8500
e-mail	labresults@cteh.com;
Accounting	Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

CTEH Project # 031332

Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

10/6/2023

Lab Contact Information	Secondary Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	Method		Matrix
									5	8	
Primary Sample Identification											
MEID1003MC01	MC01	1.4	L	10/4/23	0008	10/4/23	2235	KD	X		A-01
MEID1003-KD											A-KD
MEID1003MC02	MC02	1.4	L	10/3/23	2312	10/4/23	2325	KD	X		A-02
MEID1003MC04	MC04	1.4	L	10/3/23	2136	10/4/23	2140	KD	X		A-03
MEID1003MC03	MC03	1.4	L	10/3/23	2212	10/4/23	2341	KD	X		KD 10/6/2023 A-04
											10/6/2023
Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> <input type="checkbox"/> If Applicable COC Signed/Accurate: <input checked="" type="checkbox"/> <input type="checkbox"/> VOA Zero Headspace: <input type="checkbox"/> <input checked="" type="checkbox"/> Bottles arrive intact: <input checked="" type="checkbox"/> <input type="checkbox"/> Pres. Correct/Check: <input type="checkbox"/> <input checked="" type="checkbox"/> Correct bottles used: <input checked="" type="checkbox"/> <input type="checkbox"/> Sufficient volume sent: <input checked="" type="checkbox"/> <input type="checkbox"/> RA Screen <0.5 mR/hr: <input checked="" type="checkbox"/> <input type="checkbox"/>											

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
Kimberly Ddam	10/6/2023	Erin Wilson	10/7 0900	

SDG # _____

Page 1 of 1

10/7-NCF-L1664005 CTEHER

R5

Time estimate: 0h**Time spent:** 0h**Members** Hailey Melson (responsible) JS Jared Starkey

Due on 11 October 2023 8:00 AM for target Done

- Login Clarification needed
- Chain of custody is incomplete
- Please specify Metals requested
- Please specify TCLP requested
- Received additional samples not listed on COC
- Sample IDs on containers do not match IDs on COC
- Client did not "X" analysis
- Chain of Custody is missing
- If no COC; Received by: _____
- If no COC; Date/Time: _____
- If no COC; Temp./Cont.Rec./pH: _____
- If no COC; Carrier: _____
- If no COC; Tracking #: _____
- Client informed by call
- Client informed by Email
- Client informed by Voicemail
- Date/Time: _____
- PM initials: _____
- Client Contact: _____

Comments*Hailey Melson**7 October 2023 12:47 PM*

Received 2 canisters with ID: MEID1003MC03 written on them but no canister for ID: MEID1003MC02. One canister has time 2325 and the other has 2341. Currently logged per the times on the canisters, 2325 (MEID1003MC2), 2341 (MEID1003MC03).

*Jared Starkey**9 October 2023 11:35 AM*

Continue as logged

*Hailey Melson**10 October 2023 8:06 AM*

Done

October 11, 2023

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ AI⁹ SC**CTEH - ER**

Sample Delivery Group: L1664006

Samples Received: 10/07/2023

Project Number: 031332

Description:

Report To: CTEH
5120 North Shore Drive
North Little Rock, AR 72118

Entire Report Reviewed By:



Jared Starkey
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

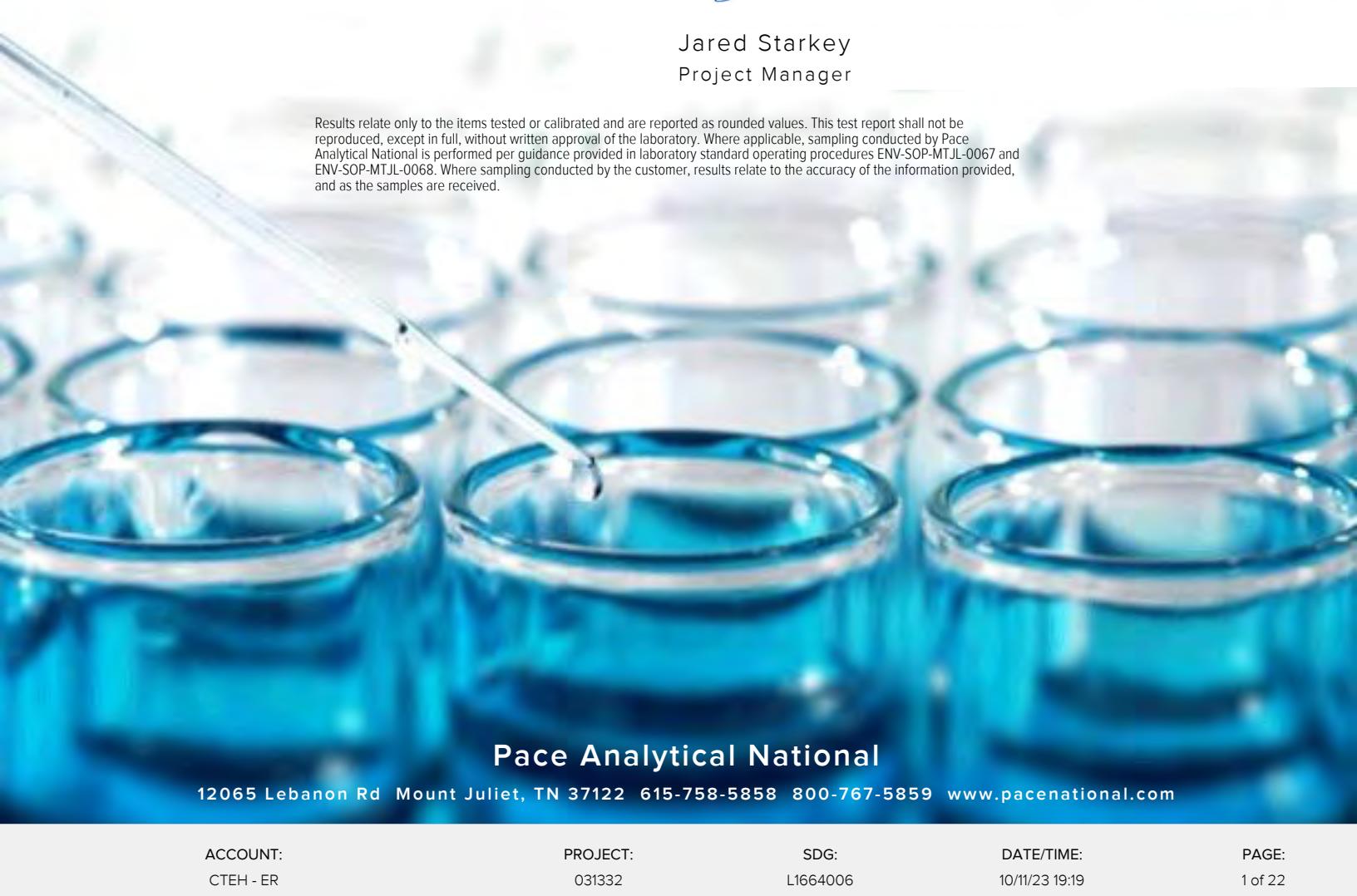
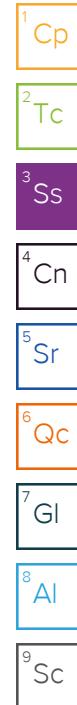
A blurred background image of laboratory glassware, including several test tubes and a pipette, containing a blue liquid.**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	 1 Cp
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Qc: Quality Control Summary	15	
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Sc: Sample Chain of Custody	22	 9 Sc

SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
			KD	10/05/23 23:21	10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 17:23	10/08/23 17:23	SDS	Mt. Juliet, TN
MEID1004MC01 L1664006-01 Air			Collected by	Collected date/time	Received date/time	
			KD	10/05/23 23:29	10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 17:54	10/08/23 17:54	SDS	Mt. Juliet, TN
MEID1004MC02 L1664006-02 Air			Collected by	Collected date/time	Received date/time	
			KD	10/05/23 23:41	10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 18:25	10/08/23 18:25	SDS	Mt. Juliet, TN
MEID1004MC03 L1664006-03 Air			Collected by	Collected date/time	Received date/time	
			KD	10/05/23 23:12	10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 18:56	10/08/23 18:56	SDS	Mt. Juliet, TN
MEID1004MC04 L1664006-04 Air			Collected by	Collected date/time	Received date/time	
			KD	10/05/23 01:35	10/07/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2147373	1	10/08/23 19:26	10/08/23 19:26	SDS	Mt. Juliet, TN



CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jared Starkey
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

Batch	Lab Sample ID	Analytics
WG2147373	L1664006-02	Ethanol

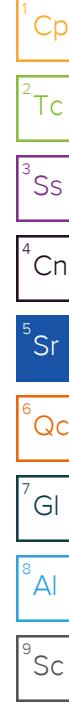
The associated batch QC was below the established quality control range for accuracy.

Batch	Lab Sample ID	Analytics
WG2147373	(LCS) R3984901-1, (LCSD) R3984901-3, L1664006-01, 02, 03, 04, 05	1,2,4-Trichlorobenzene and Naphthalene

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 GI
- 8 AI
- 9 SC

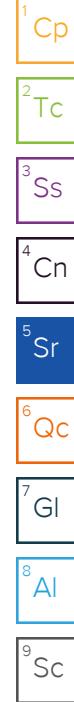
Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	22.1	52.5		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.560	1.79		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	0.240	1.07	J	1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.320	0.759		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.381	1.19		1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.919	2.42		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.860	1.78		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	0.236	1.07		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	0.394	1.79		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	67.3	127		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.197	1.11	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.444	2.20		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.203	0.830		1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	0.134	0.659	J	1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.151	0.524	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.996	2.94	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.251	0.741		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	1.32	3.24		1	WG2147373



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.151	0.642	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	2.44	9.19		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		86.0				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
Number of TICs found: 0			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	7.10	16.9		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.168	0.537	J	1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	1.17	2.78		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.157	0.489	J	1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	U	U		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.450	0.929		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	U	U		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	U	U		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	180	339	E	1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.224	1.26		1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.413	2.04		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	U	U		1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	5.59	19.4		1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.183	0.540	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	10.3	30.4		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	11.9	29.3		1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

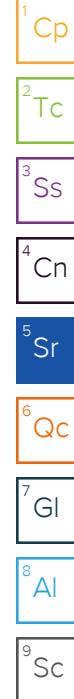
7 Gl

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.0932	0.396	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	0.673	2.54		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		84.5				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	6.59	15.7		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.202	0.645		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.270	0.640		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.129	0.402	J	1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.215	0.567		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.581	1.20		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	0.294	1.33		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	0.488	2.22		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	25.5	48.1		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.196	1.10	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.421	2.08		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	U	U		1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	U	U		1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.542	1.60	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.449	1.32		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.780	1.92	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	U	U		1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	U	U		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.14	4.29		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140			80.5			WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	11.4	27.1		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.321	1.03		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.283	0.671		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.196	0.610	J	1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.520	1.37		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	0.730	1.51		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	0.421	1.91		1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	0.744	3.38		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	43.1	81.3		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.183	1.03	J	1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.402	1.99		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.157	0.642	J	1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.163	0.566	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	0.679	2.00	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.220	0.649		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.853	2.10	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

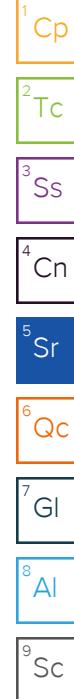
7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.0945	0.402	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	0.254	1.72		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.69	6.37		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		84.0				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	0.584	1.25	2.97	16.1	38.3		1	WG2147373
Acetonitrile	75-05-8	41.05	0.235	5.00	8.39	U	U		1	WG2147373
Acrylonitrile	107-13-1	53	0.226	5.00	10.8	U	U		1	WG2147373
Allyl chloride	107-05-1	76.53	0.114	0.200	0.626	U	U		1	WG2147373
Benzene	71-43-2	78.10	0.0715	0.200	0.639	0.376	1.20		1	WG2147373
Benzyl Chloride	100-44-7	127	0.0598	0.200	1.04	U	U		1	WG2147373
Bromodichloromethane	75-27-4	164	0.0702	0.200	1.34	U	U		1	WG2147373
Bromoform	75-25-2	253	0.0732	0.600	6.21	U	U		1	WG2147373
Bromomethane	74-83-9	94.90	0.0982	0.200	0.776	U	U		1	WG2147373
Bromoethane	74-96-4	108.97	0.216	5.00	22.3	U	U		1	WG2147373
1,3-Butadiene	106-99-0	54.10	0.104	2.00	4.43	U	U		1	WG2147373
Butane	106-97-8	58	0.0522	0.200	0.474	0.335	0.795		1	WG2147373
Carbon disulfide	75-15-0	76.10	0.102	0.200	0.622	0.300	0.934		1	WG2147373
Carbon tetrachloride	56-23-5	154	0.0732	0.200	1.26	U	U		1	WG2147373
Chlorobenzene	108-90-7	113	0.0832	0.200	0.924	U	U		1	WG2147373
Chloroethane	75-00-3	64.50	0.0996	0.200	0.528	0.614	1.62		1	WG2147373
Chloroform	67-66-3	119	0.0717	0.200	0.973	U	U		1	WG2147373
Chloromethane	74-87-3	50.50	0.103	0.200	0.413	1.13	2.33		1	WG2147373
2-Chlorotoluene	95-49-8	126	0.0828	0.200	1.03	U	U		1	WG2147373
Cyclohexane	110-82-7	84.20	0.0753	0.200	0.689	U	U		1	WG2147373
n-Decane	124-18-5	142.28	0.0784	0.200	1.16	U	U		1	WG2147373
Dibromochloromethane	124-48-1	208	0.0727	0.200	1.70	U	U		1	WG2147373
1,2-Dibromoethane	106-93-4	188	0.0721	0.200	1.54	U	U		1	WG2147373
1,2-Dichlorobenzene	95-50-1	147	0.128	0.200	1.20	U	U		1	WG2147373
1,3-Dichlorobenzene	541-73-1	147	0.182	0.200	1.20	U	U		1	WG2147373
1,4-Dichlorobenzene	106-46-7	147	0.0557	0.200	1.20	U	U		1	WG2147373
1,2-Dichloroethane	107-06-2	99	0.0700	0.200	0.810	U	U		1	WG2147373
1,1-Dichloroethane	75-34-3	98	0.0723	0.200	0.802	U	U		1	WG2147373
1,1-Dichloroethene	75-35-4	96.90	0.0762	0.200	0.793	U	U		1	WG2147373
cis-1,2-Dichloroethene	156-59-2	96.90	0.0784	0.200	0.793	U	U		1	WG2147373
trans-1,2-Dichloroethene	156-60-5	96.90	0.0673	0.200	0.793	U	U		1	WG2147373
1,2-Dichloropropane	78-87-5	113	0.0760	0.200	0.924	U	U		1	WG2147373
cis-1,3-Dichloropropene	10061-01-5	111	0.0689	0.200	0.908	0.116	0.527	J	1	WG2147373
trans-1,3-Dichloropropene	10061-02-6	111	0.0728	0.200	0.908	U	U		1	WG2147373
1,4-Dioxane	123-91-1	88.10	0.0833	0.200	0.721	U	U		1	WG2147373
Ethanol	64-17-5	46.10	0.265	2.50	4.71	51.0	96.2		1	WG2147373
Ethylbenzene	100-41-4	106	0.0835	0.200	0.867	U	U		1	WG2147373
4-Ethyltoluene	622-96-8	120	0.0783	0.200	0.982	U	U		1	WG2147373
Trichlorofluoromethane	75-69-4	137.40	0.0819	0.200	1.12	0.205	1.15		1	WG2147373
Dichlorodifluoromethane	75-71-8	120.92	0.137	0.200	0.989	0.452	2.24		1	WG2147373
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.0793	0.200	1.53	U	U		1	WG2147373
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.0890	0.200	1.40	U	U		1	WG2147373
Heptane	142-82-5	100	0.104	0.200	0.818	0.174	0.712	J	1	WG2147373
Hexachloro-1,3-butadiene	87-68-3	261	0.105	0.630	6.73	U	U		1	WG2147373
n-Hexane	110-54-3	86.20	0.206	0.630	2.22	U	U		1	WG2147373
Isopropylbenzene	98-82-8	120.20	0.0777	0.200	0.983	U	U		1	WG2147373
Methylene Chloride	75-09-2	84.90	0.0979	0.200	0.694	0.167	0.580	J	1	WG2147373
Methyl Butyl Ketone	591-78-6	100	0.133	1.25	5.11	U	U		1	WG2147373
2-Butanone (MEK)	78-93-3	72.10	0.0814	1.25	3.69	1.24	3.66	J	1	WG2147373
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.0765	1.25	5.12	U	U		1	WG2147373
Methyl methacrylate	80-62-6	100.12	0.0876	0.200	0.819	U	U		1	WG2147373
MTBE	1634-04-4	88.10	0.0647	0.200	0.721	U	U		1	WG2147373
Naphthalene	91-20-3	128	0.350	0.630	3.30	U	U	J4	1	WG2147373
Nonane	111-84-2	128.26	0.0363	0.200	1.05	U	U		1	WG2147373
Pentane	109-66-0	72.15	0.0503	0.200	0.590	0.252	0.744		1	WG2147373
2-Propanol	67-63-0	60.10	0.264	1.25	3.07	0.959	2.36	J	1	WG2147373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
			ppbv	ppbv	ug/m3	ppbv	ug/m3			
Propene	115-07-1	42.10	0.0932	1.25	2.15	U	U		1	WG2147373
Styrene	100-42-5	104	0.0788	0.200	0.851	0.0975	0.415	J	1	WG2147373
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0743	0.200	1.37	U	U		1	WG2147373
Tetrachloroethylene	127-18-4	166	0.0814	0.200	1.36	0.224	1.52		1	WG2147373
Tetrahydrofuran	109-99-9	72.10	0.0734	0.200	0.590	U	U		1	WG2147373
Toluene	108-88-3	92.10	0.0870	0.500	1.88	1.73	6.52		1	WG2147373
1,2,4-Trichlorobenzene	120-82-1	181	0.148	0.630	4.66	U	U	J4	1	WG2147373
1,1,1-Trichloroethane	71-55-6	133	0.0736	0.200	1.09	U	U		1	WG2147373
1,1,2-Trichloroethane	79-00-5	133	0.0775	0.200	1.09	U	U		1	WG2147373
Trichloroethylene	79-01-6	131	0.0680	0.200	1.07	U	U		1	WG2147373
1,2,4-Trimethylbenzene	95-63-6	120	0.0764	0.200	0.982	U	U		1	WG2147373
1,3,5-Trimethylbenzene	108-67-8	120	0.0779	0.200	0.982	U	U		1	WG2147373
2,2,4-Trimethylpentane	540-84-1	114.22	0.133	0.200	0.934	U	U		1	WG2147373
Vinyl chloride	75-01-4	62.50	0.0949	0.200	0.511	U	U		1	WG2147373
Vinyl Bromide	593-60-2	106.95	0.0852	0.200	0.875	U	U		1	WG2147373
Vinyl acetate	108-05-4	86.10	0.116	0.200	0.704	U	U		1	WG2147373
m&p-Xylene	1330-20-7	106	0.135	0.400	1.73	U	U		1	WG2147373
o-Xylene	95-47-6	106	0.0828	0.200	0.867	U	U		1	WG2147373
(S)-1,4-Bromofluorobenzene	460-00-4	175		60.0-140		85.6				WG2147373



Volatile Organic Compounds (MS) by Method TO-15 - TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	CAS #	Mol. Wt.	MDL1	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch	RT
			ppbv	ppbv	ug/m3	ppbv	ug/m3				

Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

QUALITY CONTROL SUMMARY

[L1664006-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3984901-2 10/08/23 12:28

Analyst	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	1 ¹ Cp
Acetone	U		0.584	1.25	
Acetonitrile	U		0.235	5.00	
Acrylonitrile	U		0.226	5.00	
Allyl chloride	U		0.114	0.200	
Benzene	U		0.0715	0.200	
Benzyl Chloride	U		0.0598	0.200	
Bromodichloromethane	U		0.0702	0.200	
Bromoform	U		0.0732	0.600	
Bromomethane	U		0.0982	0.200	
Bromoethane	U		0.216	5.00	
1,3-Butadiene	U		0.104	2.00	
Butane	U		0.0522	0.200	
Carbon disulfide	U		0.102	0.200	
Carbon tetrachloride	U		0.0732	0.200	
Chlorobenzene	U		0.0832	0.200	
Chloroethane	U		0.0996	0.200	
Chloroform	U		0.0717	0.200	
Chloromethane	U		0.103	0.200	
2-Chlorotoluene	U		0.0828	0.200	
Cyclohexane	U		0.0753	0.200	
n-Decane	U		0.0784	0.200	
Dibromochloromethane	U		0.0727	0.200	
1,2-Dibromoethane	U		0.0721	0.200	
1,2-Dichlorobenzene	U		0.128	0.200	
1,3-Dichlorobenzene	U		0.182	0.200	
1,4-Dichlorobenzene	U		0.0557	0.200	
1,2-Dichloroethane	U		0.0700	0.200	
1,1-Dichloroethane	U		0.0723	0.200	
1,1-Dichloroethene	U		0.0762	0.200	
cis-1,2-Dichloroethene	U		0.0784	0.200	
trans-1,2-Dichloroethene	U		0.0673	0.200	
1,2-Dichloropropane	U		0.0760	0.200	
cis-1,3-Dichloropropene	U		0.0689	0.200	
trans-1,3-Dichloropropene	U		0.0728	0.200	
1,4-Dioxane	U		0.0833	0.200	
Ethanol	0.351	J	0.265	2.50	
Ethylbenzene	U		0.0835	0.200	
4-Ethyltoluene	U		0.0783	0.200	
Trichlorofluoromethane	U		0.0819	0.200	
Dichlorodifluoromethane	U		0.137	0.200	

QUALITY CONTROL SUMMARY

[L1664006-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3984901-2 10/08/23 12:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200	¹ Cp
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200	² Tc
Heptane	U		0.104	0.200	³ Ss
Hexachloro-1,3-butadiene	U		0.105	0.630	⁴ Cn
n-Hexane	U		0.206	0.630	⁵ Sr
Isopropylbenzene	U		0.0777	0.200	⁶ Qc
Methylene Chloride	U		0.0979	0.200	⁷ Gl
Methyl Butyl Ketone	U		0.133	1.25	⁸ Al
2-Butanone (MEK)	U		0.0814	1.25	⁹ Sc
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25	
Methyl methacrylate	U		0.0876	0.200	
MTBE	U		0.0647	0.200	
Naphthalene	U		0.350	0.630	
Nonane	U		0.0363	0.200	
Pentane	U		0.0503	0.200	
2-Propanol	U		0.264	1.25	
Propene	U		0.0932	1.25	
Styrene	U		0.0788	0.200	
1,1,2,2-Tetrachloroethane	U		0.0743	0.200	
Tetrachloroethylene	U		0.0814	0.200	
Tetrahydrofuran	U		0.0734	0.200	
Toluene	U		0.0870	0.500	
1,2,4-Trichlorobenzene	U		0.148	0.630	
1,1,1-Trichloroethane	U		0.0736	0.200	
1,1,2-Trichloroethane	U		0.0775	0.200	
Trichloroethylene	U		0.0680	0.200	
1,2,4-Trimethylbenzene	U		0.0764	0.200	
1,3,5-Trimethylbenzene	U		0.0779	0.200	
2,2,4-Trimethylpentane	U		0.133	0.200	
Vinyl chloride	U		0.0949	0.200	
Vinyl Bromide	U		0.0852	0.200	
Vinyl acetate	U		0.116	0.200	
m&p-Xylene	U		0.135	0.400	
o-Xylene	U		0.0828	0.200	
(S) 1,4-Bromofluorobenzene	76.6		60.0-140		

Method Blank (MB) - TENTATIVELY IDENTIFIED COMPOUNDS

(MB) R3984901-2 10/08/23 12:28

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv	CAS #
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Number of TICs found: 0

Tentatively Identified compounds (TIC) refers to substances not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search routine of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation is accomplished by relative peak area of the TIC compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is 10% or more of that of the nearest internal standard.

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Acetone	3.75	3.65	3.88	97.3	103	70.0-130			6.11	25
Acetonitrile	18.8	18.9	19.6	101	104	70.0-130			3.64	25
Acrylonitrile	3.75	3.67	3.84	97.9	102	70.0-130			4.53	25
Allyl chloride	3.75	3.09	3.26	82.4	86.9	70.0-130			5.35	25
Benzene	3.75	3.37	3.43	89.9	91.5	70.0-130			1.76	25
Benzyl Chloride	3.75	3.47	3.58	92.5	95.5	70.0-152			3.12	25
Bromodichloromethane	3.75	3.07	3.18	81.9	84.8	70.0-130			3.52	25
Bromoform	3.75	3.46	3.48	92.3	92.8	70.0-130			0.576	25
Bromomethane	3.75	3.56	3.65	94.9	97.3	70.0-130			2.50	25
Bromoethane	3.75	3.48	3.62	92.8	96.5	70.0-130			3.94	25
1,3-Butadiene	3.75	3.21	3.41	85.6	90.9	70.0-130			6.04	25
Butane	3.75	3.39	3.51	90.4	93.6	70.0-130			3.48	25
Carbon disulfide	3.75	3.63	3.77	96.8	101	70.0-130			3.78	25
Carbon tetrachloride	3.75	3.36	3.49	89.6	93.1	70.0-130			3.80	25
Chlorobenzene	3.75	3.44	3.58	91.7	95.5	70.0-130			3.99	25
Chloroethane	3.75	3.49	3.65	93.1	97.3	70.0-130			4.48	25
Chloroform	3.75	3.44	3.55	91.7	94.7	70.0-130			3.15	25
Chloromethane	3.75	3.39	3.52	90.4	93.9	70.0-130			3.76	25
2-Chlorotoluene	3.75	3.42	3.51	91.2	93.6	70.0-130			2.60	25
Cyclohexane	3.75	3.21	3.34	85.6	89.1	70.0-130			3.97	25
n-Decane	3.75	3.29	3.46	87.7	92.3	70.0-130			5.04	25
Dibromochloromethane	3.75	3.31	3.43	88.3	91.5	70.0-130			3.56	25
1,2-Dibromoethane	3.75	3.30	3.40	88.0	90.7	70.0-130			2.99	25
1,2-Dichlorobenzene	3.75	3.63	3.72	96.8	99.2	70.0-130			2.45	25
1,3-Dichlorobenzene	3.75	3.72	3.77	99.2	101	70.0-130			1.34	25
1,4-Dichlorobenzene	3.75	3.76	3.87	100	103	70.0-130			2.88	25
1,2-Dichloroethane	3.75	2.86	2.98	76.3	79.5	70.0-130			4.11	25
1,1-Dichloroethane	3.75	3.49	3.65	93.1	97.3	70.0-130			4.48	25
1,1-Dichloroethene	3.75	3.44	3.55	91.7	94.7	70.0-130			3.15	25
cis-1,2-Dichloroethene	3.75	3.13	3.32	83.5	88.5	70.0-130			5.89	25

QUALITY CONTROL SUMMARY

L1664006-01,02,03,04,05

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,2-Dichloroethene	3.75	3.21	3.33	85.6	88.8	70.0-130			3.67	25
1,2-Dichloropropane	3.75	3.09	3.16	82.4	84.3	70.0-130			2.24	25
cis-1,3-Dichloropropene	3.75	2.63	2.69	70.1	71.7	70.0-130			2.26	25
trans-1,3-Dichloropropene	3.75	3.01	3.04	80.3	81.1	70.0-130			0.992	25
1,4-Dioxane	3.75	2.87	2.80	76.5	74.7	70.0-140			2.47	25
Ethanol	3.75	3.83	3.82	102	102	55.0-148			0.261	25
Ethylbenzene	3.75	3.37	3.37	89.9	89.9	70.0-130			0.000	25
4-Ethyltoluene	3.75	3.68	3.66	98.1	97.6	70.0-130			0.545	25
Trichlorofluoromethane	3.75	3.44	3.69	91.7	98.4	70.0-130			7.01	25
Dichlorodifluoromethane	3.75	3.54	3.64	94.4	97.1	64.0-139			2.79	25
1,1,2-Trichlorotrifluoroethane	3.75	3.52	3.74	93.9	99.7	70.0-130			6.06	25
1,2-Dichlorotetrafluoroethane	3.75	3.68	3.90	98.1	104	70.0-130			5.80	25
Heptane	3.75	2.87	2.92	76.5	77.9	70.0-130			1.73	25
Hexachloro-1,3-butadiene	3.75	3.73	3.81	99.5	102	70.0-151			2.12	25
n-Hexane	3.75	3.24	3.35	86.4	89.3	70.0-130			3.34	25
Isopropylbenzene	3.75	3.60	3.64	96.0	97.1	70.0-130			1.10	25
Methylene Chloride	3.75	3.28	3.42	87.5	91.2	70.0-130			4.18	25
Methyl Butyl Ketone	3.75	2.65	2.74	70.7	73.1	70.0-149			3.34	25
2-Butanone (MEK)	3.75	3.36	3.56	89.6	94.9	70.0-130			5.78	25
4-Methyl-2-pentanone (MIBK)	3.75	2.95	3.02	78.7	80.5	70.0-139			2.35	25
Methyl methacrylate	3.75	3.02	3.10	80.5	82.7	70.0-130			2.61	25
MTBE	3.75	3.27	3.43	87.2	91.5	70.0-130			4.78	25
Naphthalene	3.75	2.72	2.62	72.5	69.9	70.0-159	J4		3.75	25
Nonane	3.75	3.14	3.24	83.7	86.4	70.0-130			3.13	25
Pentane	3.75	3.56	3.69	94.9	98.4	70.0-130			3.59	25
2-Propanol	3.75	3.61	3.76	96.3	100	70.0-139			4.07	25
Propene	3.75	3.49	3.47	93.1	92.5	64.0-144			0.575	25
Styrene	3.75	3.39	3.48	90.4	92.8	70.0-130			2.62	25
1,1,2,2-Tetrachloroethane	3.75	3.58	3.67	95.5	97.9	70.0-130			2.48	25
Tetrachloroethylene	3.75	3.33	3.58	88.8	95.5	70.0-130			7.24	25
Tetrahydrofuran	3.75	2.90	3.02	77.3	80.5	70.0-137			4.05	25
Toluene	3.75	3.24	3.30	86.4	88.0	70.0-130			1.83	25
1,2,4-Trichlorobenzene	3.75	2.52	2.49	67.2	66.4	70.0-160	J4	J4	1.20	25
1,1,1-Trichloroethane	3.75	3.24	3.34	86.4	89.1	70.0-130			3.04	25
1,1,2-Trichloroethane	3.75	3.36	3.60	89.6	96.0	70.0-130			6.90	25
Trichloroethylene	3.75	3.20	3.26	85.3	86.9	70.0-130			1.86	25
1,2,4-Trimethylbenzene	3.75	3.62	3.69	96.5	98.4	70.0-130			1.92	25
1,3,5-Trimethylbenzene	3.75	3.56	3.76	94.9	100	70.0-130			5.46	25
2,2,4-Trimethylpentane	3.75	3.46	3.59	92.3	95.7	70.0-130			3.69	25
Vinyl chloride	3.75	3.63	3.77	96.8	101	70.0-130			3.78	25

QUALITY CONTROL SUMMARY

[L1664006-01,02,03,04,05](#)

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3984901-1 10/08/23 09:23 • (LCSD) R3984901-3 10/08/23 13:00

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Vinyl Bromide	3.75	3.60	3.82	96.0	102	70.0-130			5.93	25
Vinyl acetate	3.75	3.02	3.08	80.5	82.1	70.0-130			1.97	25
m&p-Xylene	7.50	7.01	7.13	93.5	95.1	70.0-130			1.70	25
o-Xylene	3.75	3.51	3.69	93.6	98.4	70.0-130			5.00	25
(S) 1,4-Bromofluorobenzene			92.5	94.6	60.0-140					

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RT	Retention Time.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gi

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

M091

Send Report to	jtwilson@cteh.com; lclawitter@cteh.com
Company	CTEH, LLC
Address	5120 North Shore Drive, North Little Rock, Arkansas 72118
Phone	(501)801-8500
e-mail	labresults@cteh.com;
Accounting	Send invoices to CTEHAP@montrose-env.com with Invoice # and Vendor name in subject line

CTEH Project # 031332

Turnaround Requested: Normal Same Day Next Day Two Day Other (Specify) _____Data Packet Requested: Standard Level II Other _____

Sample and Extract Retention/Disposal:

Dispose after 2X hold time Retain w/ storage fees after 2X hold time

Hold 4000

Lab Contact Information		Secondary Sample Identification	Sample Size	Units	Sample Start Date	Sample Start Time	Sample Stop Date	Sample Stop Time	Initials	Method	Matrix
Primary Sample Identification	Sample Identification										
MEID1004MC01	MC01	1.4	L	10/4/23	2312	10/5/23	2321	KD	X		A-01
MEID1004MC02	MC02	1.4	L	10/4/23	2329	10/5/23	2329	KD	X		A-02
MEID1004MC03	MC03	1.4	L	10/4/23	2345	10/5/23	2341	KD	X		A-03
MEID1004MC04	MC04	1.4	L	10/4/23	2141	10/5/23	2312	KD	X		A-04
MEID1004MC05	MC05	1.4	L	10/5/23	0132	10/6/23	0135	KD	X		A-05
											10/6/2023

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RA Screen <0.5 mR/hr: Y N

KD 10/6/2023

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
Kimberly Odam	10/6/2023	Eliza Wahr	10/7/2023	

Attachment G

Meteorological Conditions

