Ambient Community Air Monitoring Weekly Report
For the Hawaii Department of Health – Clean Air Branch

Lahaina, Maui

1/13/2024 – 1/17/2024
[Report Updated: 5/28/2024]

Due to ongoing debris removal operations in response to the Maui Wildfires, a Community Air Monitoring and Sampling Plan (CAMSP) is under development and sampling is being performed at four community locations across Lahaina listed below and shown on **Figure 1**:

- Leialii Hawaiian Homelands (AM-01)
- WW Pump Station #4 (AM-02)
- Lahaina Intermediate School (AM-03)
- Lahaina Boys & Girls Club (AM-04)

This approach includes ambient community air monitoring and sampling to monitor conditions and ensure debris removal activities, taking place under the U.S. Army Corps of Engineers (USACE), does not significantly impact air quality in Lahaina. Data collected is made available to HDOH via online shared site and this weekly report. This approach to air monitoring and sampling will continue until debris removal activities are complete or until HDOH CAB advises otherwise.

Field operations, including site reconnaissance and set up of the air monitoring and sampling equipment began on January 13th at Leialii Hawaiian Homelands, WW Pump Station #4, and Lahaina Intermediate School. Due to site accessibility, equipment and sampling set up began a day later at the Lahaina Boys & Girls Club on January 14th. The first 24-hour sampling period for asbestos and heavy metals began on January 14th, with the first samples being collected for shipment on the 15th. One exception is the metal sample at the Lahaina Boys & Girls Club, which was delayed due to equipment issues, as shown in **Table 1**.

Air quality monitoring for particulate matter was collected at all four community locations over a 24-hour period each day in accordance with the CAMSP. Additionally, daily air samples were collected at all community locations. Summary analytical data is presented in **Tables 1 and 2**. **Figure 1** depicts the community air monitoring and sampling locations. **Appendix 1** provides detailed analytical results for all community locations where air sampling was performed. Analytical results were compared to site-specific screening levels for particulate matter, asbestos, and heavy metals as will be published in the CAMSP. A summary of meteorological data is presented in **Table 3.** Overall wind conditions show generally 1.5 mph in a SSE direction except for January 16, 2024 at Lahaina Intermediate School, where average wind speed was approximately 11.4 mph and a higher 24hr TWA reading of 97 µg/m^3 was also recorded.

Results for Community Locations:
Ambient air monitoring was performed to assess the presence of airborne particulates with a particle size diameter of 10 micrometers (µm), as this is the size that is recognized as being small enough to be inhaled into a person's lungs. This particle size diameter is recognized for health evaluations and is identified as "PM_{10}". Monitoring for PM_{10} was conducted 24 hours a day, 7 days a week at each of the following locations: Leialii Hawaiian Homelands (January 13-17), WW Pump Station #4 (January 13-17), Lahaina Intermediate School (January 13-17), Lahaina Boys & Girls Club (January 14-17).

The results of PM10 monitoring found that screening levels were not exceeded during this reporting period as shown in **Table 2**.

Please note that ambient air monitoring for fine particulate matter, with a particle size diameter of 2.5 micrometers or less (PM2.5) is not included in this report. This monitoring is being performed by the Department of Health/EPA at six locations in Lahaina and can be viewed at: https://fire.airnow.gov/.

There were twelve samples collected for asbestos fibers at community monitoring locations throughout this time period. Of the twelve samples collected, one was voided. The voided sample from WW Pump Station #4 on 1/15 was due to greater than 10% discrepancy between the pre and post calibration values, as stated in the asbestos sampling SOP. All asbestos results were below the public health screening level of 0.003 fibers/cc and less than the analytical sensitivity.

Some extremely low levels of heavy metals were detected in ambient air samples at community locations. Although detected, all detections were well below the public health screening levels for heavy metals. The laboratory data sheets for the metals and asbestos samples collected from the community locations are found in **Appendix 1.**

Quality Control:

This section briefly discusses the quality control efforts made by Tetra Tech throughout the air monitoring and sampling process. All references and SOPs can be found provided with the CAMSP.

Tetra Tech is using Met One Instruments, Inc., environmental beta attenuation mass monitors (E-BAM) to allow for comparison to the National Ambient Air Quality Standards (NAAQS) for particulates. E-BAMs are factory-calibrated annually and do not require daily calibration, except for a leak check and a flow audit was performed prior to sampling according to the manufacturer's procedures.

For asbestos sampling, Tetra Tech is using a Casella Vortex 3 or similar. Sampling flow rates will be determined and documented by pre- and post- calibration of each sampling pump using a primary calibration standard. Calibration and sampling is conducted in accordance with Tetra Tech SOPs 064-2, "Calibration of Air Sampling Pump" and 073-3, "Air Quality Monitoring" (Appendix A) and U.S. EPA ERT SOPs No. 2008, "General Air Monitoring and Sampling Guidelines" and 2015 "Asbestos Air Sampling," included in the CAMSP.

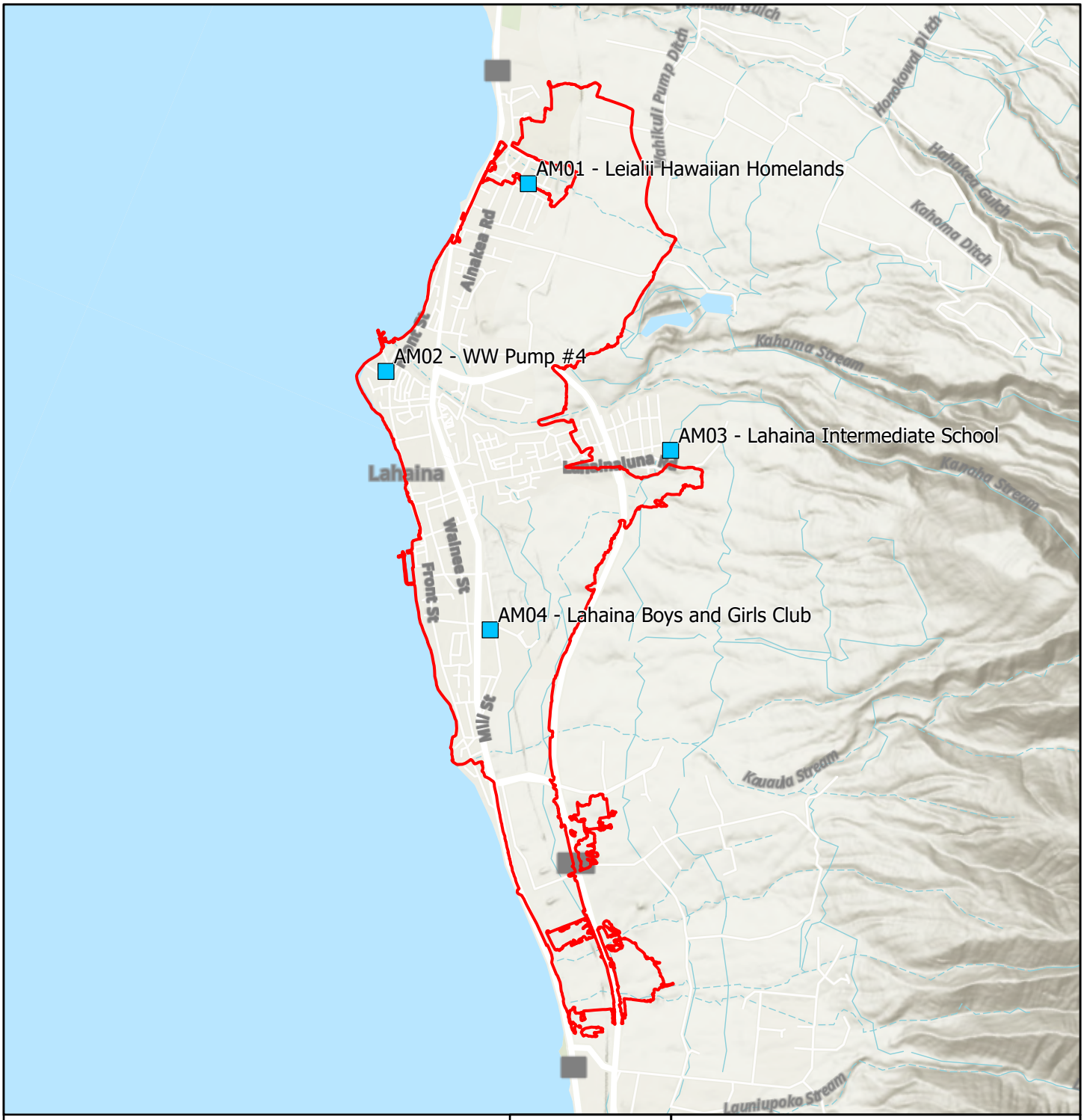
Tetra Tech is using Tisch Environmental High Volume Air Samplers, or equivalent, collocated with the real-time particulate monitors and asbestos samplers described above. Air samples for elemental metals at community locations are collected and analyzed in accordance with the following methods:

- U.S. EPA Compendium Method IO-2.1, Sampling of Ambient Air for Total Suspended Particulate Matter (SPM) and PM10 Using High Volume (HV) Sampler
- U.S. EPA Compendium Method IO-3.5: Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air: Determination of Metals in Ambient Particulate Matter Using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). EPA/625/R-96/010a
- U.S. EPA 40 Code of Federal Regulations (CFR) Part 50, Method for the Determination of Lead in Total Suspended Particulate Matter.
- U.S. EPA 40 CFR Part 58, Appendix E: Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring
- Standard Operating Procedures for Lead Monitoring Using a TSP High Volume Sampler

Field technicians conducted photographic and written documentation in accordance with Tetra Tech SOP No. 024- 4, "Recording of Notes in Field Logbook."

Following receipt of air sampling results from the off-site analytical laboratories, analytical data is maintained in an electronic database and compared to the SSALs. Level 1 data verification is completed on all analytical data and results are reviewed by an industrial hygienist.

Attachments



Air Sampling Locations

Lahaina Fire Perimeter

N

0 0.3 0.6
Miles

TETRA TECH

Figure 1
Air Sampling Locations

Hawaii DOH
2023 Lahaina Wildfire

Basemap: ESRI ArcGIS World Street Map

Table 1
HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results by Date
Maui Wildfire, Lahaina
1/15/2024-1/17/2024
[Report Updated: 5/28/2024]

Analyte		Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Units		f/cc	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Screening Level*		0.003 [1]	0.7	0.05	1.2	0.05	0.02	12	0.01	240	1.5	0.12	4.8	0.02	48	24	0.24	1200
1/15/2024	Leialii Hawaiian Homelands (AM-01)	<0.00043	0.000047	0.000118	0.00156	ND	ND	ND	0.0000624	0.0397	0.000321	ND	0.00157	0.000755	0.000238	0.000000919	0.000686	ND
	WW Pump Station #4 (AM-02)	NA	0.0000867	0.000335	0.00312	0.00000426	ND	0.00228	0.000133	0.0234	0.000535	0.00328	0.00106	0.00106	0.000266	0.000000892	0.000929	ND
	Lahaina Intermediate School (AM-03)	<0.00062	0.000134	0.0000719	0.00161	ND	ND	ND	0.0000868	0.0366	0.000525	0.0019	0.00138	0.00139	0.00022	0.000000967	0.000839	ND
	Lahaina Boys & Girls Club (AM-04)	<0.00048																
1/16/2024	Leialii Hawaiian Homelands (AM-01)	<0.00049	0.000225	0.00207	0.00639	0.00000283	ND	ND	0.00018	0.0232	0.00154	0.00414	0.000646	0.000683	0.000145	0.000000785	0.000361	ND
	WW Pump Station #4 (AM-02)	<0.00063	0.000104	0.000428	0.00114	ND	ND	ND	0.0000443	0.0175	0.000566	0.00148	0.000484	ND	0.000125	0.000000518	0.000143	ND
	Lahaina Intermediate School (AM-03)	<0.00117	0.00011	0.0000544	0.00146	0.00000447	ND	ND	0.000122	0.0105	ND	0.0023	0.000514	0.00109	0.000129	0.000000671	0.00022	ND
	Lahaina Boys & Girls Club (AM-04)	<0.00043	0.0000778	0.000122	0.00103	ND	ND	ND	0.0000464	0.0256	0.000419	ND	0.000722	ND	0.000115	ND	0.00012	ND
1/17/2024	Leialii Hawaiian Homelands (AM-01)	<0.00066	0.0000832	0.000478	0.00207	ND	ND	ND	0.0000807	0.0198	0.000526	0.00222	0.000722	ND	0.000124	ND	0.000181	ND
	WW Pump Station #4 (AM-02)	<0.00145	0.000156	0.00117	0.00144	ND	ND	ND	0.0000882	0.027	0.000845	0.00237	0.00058	0.00074	0.000127	0.000000626	0.000173	ND
	Lahaina Intermediate School (AM-03)	<0.00136	0.000091	0.0000597	0.00169	0.00000355	ND	ND	0.0000751	0.0124	ND	ND	0.000694	0.00066	0.00013	ND	0.000146	ND
	Lahaina Boys & Girls Club (AM-04)	<0.00244	0.0000429	0.000126	0.000924	ND	ND	ND	0.0000859	0.0298	0.000424	ND	0.000763	ND	0.000109	ND	0.0000814	ND
95% Upper Confidence Limit[3]		NA	0.00015	0.00177	0.00294	0.000005	NA	NA	0.00012	0.0319	0.0009	0.00289	0.00106	0.00116	0.00019	0.0000009	0.00073	NA

Notes:

[1] Fiber count sample result via Phase Contrast Microscopy

[2] Confirmed asbestos sample result via Transmission Electron Microscopy

[3] 95% UCL determined through 'best fit' lognormal or normal parametric statistics via W test

Asbestos sampling was voided at theWW Pump Station #4 (AM-02) on 1/15 due to greater than 10% discrepancy between the pre and post calibration values

Data unavailable, prior to start of air monitoring or final set up of equipment

f/cc = fibers per cubic centimeter

Laboratory data provided in nanograms per cubic meter, however data shown in Table 1 has been converted to micrograms per cubic meter so data was comparable to SSALs

mg/m3 = milligrams per cubic meter

NA = Not Applicable

ND = Not detected at or above the laboratory reporting limit

No heavy metal sample at WW Pump Station #4 (AM-04) was collected on 1/15 due to equipment malfunction.

The 24-hour sampling period commenced on 1/14 after mobilzation and set up 1/13-1/14

This report has been updated with new SSALs in accordance with the CAMSP Rev 2, May 2024

Table 2
HDOH CAB Ambient Community Monitoring and Sampling
Particulate Monitoring Results for PM_{10}
Maui Wildfire, Lahaina
1/13/2024 - 1/17/2024
[Report Updated: 5/28/2024]

Screening Level		**150 µg/m^3**
1/13/2024	Leialii Hawaiian Homelands (AM-01)	13
	WW Pump Station #4 (AM-02)	15
	Lahaina Intermediate School (AM-03)	9.4
	Lahaina Boys & Girls Club (AM-04)	
1/14/2024	Leialii Hawaiian Homelands (AM-01)	8.5
	WW Pump Station #4 (AM-02)	13
	Lahaina Intermediate School (AM-03)	9.3
	Lahaina Boys & Girls Club (AM-04)	8.5
1/15/2024	Leialii Hawaiian Homelands (AM-01)	6.3
	WW Pump Station #4 (AM-02)	8.4
	Lahaina Intermediate School (AM-03)	7.7
	Lahaina Boys & Girls Club (AM-04)	6.3
1/16/2024	Leialii Hawaiian Homelands (AM-01)	5.6
	WW Pump Station #4 (AM-02)	9.3
	Lahaina Intermediate School (AM-03)	97
	Lahaina Boys & Girls Club (AM-04)	6.00
1/17/2024	Leialii Hawaiian Homelands (AM-01)	10
	WW Pump Station #4 (AM-02)	13
	Lahaina Intermediate School (AM-03)	99
	Lahaina Boys & Girls Club (AM-04)	8.2

Notes:
µg/m3 = micrograms per cubic meter
24 hour TWA calculation is presented in two significant figures
Location for station AM-04 was not accesssible on 1/13 at start of sampling. Station was set up on 1/14
Monitoring commenced 1/13 when authorization was given by the HDOH
Results are based on 24 hour TWA calculation
TWA results for 1/13 AM-01 based on a 7 hr TWA
TWA results for 1/13 AM-02 based on a 9 hr TWA
TWA results for 1/13 AM-03 based on a 13 hr TWA
TWA results for 1/14 AM-04 based on a 5 hr TWA
Data unavailable, prior to start of air monitoring or final set up of equipment

Table 3
Maui Wildfire - Lahaina
Meteorological Data
1/13/2024-1/17/2024
[Report Updated: 5/28/2024]

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
1/13/2024	AM-01	Leialii Hawaiian Homelands	9.1	NE	68	61	756.8
1/13/2024	AM-02	WW Pump Station #4	1.7	NE	72	59	758.8
1/13/2024	AM-03	Lahaina Intermediate School	2.5	ESE	76	55	749.0
1/13/2024	AM-04	Lahaina Boys & Girls Club	9.1	NE	68	61	756.8
1/14/2024	AM-01	Leialii Hawaiian Homelands	1.0	SSW	74	63	757.1
1/14/2024	AM-02	WW Pump Station #4	1.0	SE	72	67	759.3
1/14/2024	AM-03	Lahaina Intermediate School	1.1	SE	76	63	749.6
1/14/2024	AM-04	Lahaina Boys & Girls Club	0.8	S	70	74	759.4
1/15/2024	AM-01	Leialii Hawaiian Homelands	1.6	SE	73	71	755.6
1/15/2024	AM-02	WW Pump Station #4	1.3	SE	74	75	758.0
1/15/2024	AM-03	Lahaina Intermediate School	2.0	ESE	78	69	748.4
1/15/2024	AM-04	Lahaina Boys & Girls Club	1.1	SSE	73	73	757.6
1/16/2024	AM-01	Leialii Hawaiian Homelands	2.3	SSE	75	90	754.2
1/16/2024	AM-02	WW Pump Station #4	4.8	SSE	76	93	756.6
1/16/2024	AM-03	Lahaina Intermediate School	11.4	SSE	79	93	747.1
1/16/2024	AM-04	Lahaina Boys & Girls Club	1.5	SSE	75	92	756.3
1/17/2024	AM-01	Leialii Hawaiian Homelands	1.4	SSE	75	82	756.1
1/17/2024	AM-02	WW Pump Station #4	1.2	SSE	76	85	758.6
1/17/2024	AM-03	Lahaina Intermediate School	1.5	SSE	79	89	749.0
1/17/2024	AM-04	Lahaina Boys & Girls Club	1.0	SSE	75	85	758.1

Notes:
Meteorological data at Station (AM-04) and (AM-01) on 1/13/2024 were pulled from Weather Underground due gaps in data exports during equipment set up
°F - Fahrenheit
mBar - millibar
mph - miles per hour

Appendix 1

Eurofins Built Environment Testing
6110 W. 34th Street, Houston, Texas 77092
Phone: (713) 290-0221 Fax: (713) 290-0248
www.EurofinsBuiltEnv.com

Airborne Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)
ISO 10312:2019 - Ambient Air - Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy Method

Chelsea Saber
Tetra Tech
1999 Harrison St, Ste. 500
Oakland, CA 94612

EJ3 Order #: 3513040_V1
Project #: 1032864023141
Receipt Date: 22-Jan-2024
Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM01-011524-AB**

Air Volume, L:	6738.706
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.43282
Analytical Sensitivity: f/cm3:	0.00043
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00043
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00043
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00043
Concentration of Asbestos (Chrysotile), Str/L:	<0.43282
Concentration of Asbestos (Amphibole), Str/L:	<0.43282
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.6
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.6

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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EJ3 Order #: 3513040_V1
Project #: 1032864023141
Receipt Date: 22-Jan-2024
Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM03-011524-AB**

Air Volume, L:	4687.842
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.62218
Analytical Sensitivity: f/cm3:	0.00062
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00062
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00062
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00062
Concentration of Asbestos (Chrysotile), Str/L:	<0.62218
Concentration of Asbestos (Amphibole), Str/L:	<0.62218
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2.3
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.3

Analyst: Taylor Smylie

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Project #: 1032864023141
Receipt Date: 22-Jan-2024
Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM04-011524-AB**

Air Volume, L:	6113.32
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.47710
Analytical Sensitivity: f/cm3:	0.00048
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00048
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00048
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00048
Concentration of Asbestos (Chrysotile), Str/L:	<0.4771
Concentration of Asbestos (Amphibole), Str/L:	<0.4771
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.8
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.8

Analyst: Taylor Smylie

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Project #: 1032864023141
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Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-FB01-011524-AB**

Air Volume, L:	0
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Amphibole), f/cm^3:	N/A
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

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EJ3 Order #: 3513040_V1
Project #: 1032864023141
Receipt Date: 22-Jan-2024
Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-LB01-011524-AB**

Air Volume, L:	0
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Amphibole), f/cm^3:	N/A
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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Airborne Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)
ISO 10312:2019 - Ambient Air - Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy Method

Chelsea Saber
Tetra Tech
1999 Harrison St, Ste. 500
Oakland, CA 94612

EJ3 Order #: 3513040_V1
Project #: 1032864023141
Receipt Date: 22-Jan-2024
Analysis Date: 25-Jan-2024
Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM01-011624-AB**

Air Volume, L:	5970.879
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.48848
Analytical Sensitivity: f/cm3:	0.00049
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00049
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00049
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00049
Concentration of Asbestos (Chrysotile), Str/L:	<0.48848
Concentration of Asbestos (Amphibole), Str/L:	<0.48848
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.8
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.8

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM02-011624-AB**

Air Volume, L:	4597.753
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.63437
Analytical Sensitivity: f/cm3:	0.00063
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00063
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00063
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00063
Concentration of Asbestos (Chrysotile), Str/L:	<0.63437
Concentration of Asbestos (Amphibole), Str/L:	<0.63437
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2.3
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.3

Analyst: Taylor Smylie

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HDOH Lahaina Community Air

Sample Number **MFL-AM03-011624-AB**

Air Volume, L:	2502.76
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	1.16538
Analytical Sensitivity: f/cm3:	0.00117
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00117
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00117
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00117
Concentration of Asbestos (Chrysotile), Str/L:	<1.16538
Concentration of Asbestos (Amphibole), Str/L:	<1.16538
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	4.3
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	4.3

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM04-011624-AB**

Air Volume, L:	6782.819
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.43001
Analytical Sensitivity: f/cm3:	0.00043
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00043
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00043
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00043
Concentration of Asbestos (Chrysotile), Str/L:	<0.43001
Concentration of Asbestos (Amphibole), Str/L:	<0.43001
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.6
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.6

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-FB01-011624-AB**

Air Volume, L:	0
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Amphibole), f/cm^3:	N/A
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM01-011724-AB**

Air Volume, L:	4411.252
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.66119
Analytical Sensitivity: f/cm3:	0.00066
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00066
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00066
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00066
Concentration of Asbestos (Chrysotile), Str/L:	<0.66119
Concentration of Asbestos (Amphibole), Str/L:	<0.66119
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.4

Analyst: Taylor Smylie

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM02-011724-AB**

Air Volume, L:	2006.352
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	1.45372
Analytical Sensitivity: f/cm3:	0.00145
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00145
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00145
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00145
Concentration of Asbestos (Chrysotile), Str/L:	<1.45372
Concentration of Asbestos (Amphibole), Str/L:	<1.45372
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	5.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	5.4

Analyst: Taylor Smylie

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Report Date: 25-Jan-2024

HDOH Lahaina Community Air

Sample Number **MFL-AM03-011724-AB**

Air Volume, L:	2149.337
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	1.35701
Analytical Sensitivity: f/cm3:	0.00136
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00136
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00136
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00136
Concentration of Asbestos (Chrysotile), Str/L:	<1.35701
Concentration of Asbestos (Amphibole), Str/L:	<1.35701
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	5

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HDOH Lahaina Community Air

Sample Number **MFL-AM04-011724-AB**

Air Volume, L:	1194.332
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	2.44209
Analytical Sensitivity: f/cm3:	0.00244
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	<0.00244
Concentration of Asbestos (Amphibole), f/cm^3:	<0.00244
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	<0.00244
Concentration of Asbestos (Chrysotile), Str/L:	<2.44209
Concentration of Asbestos (Amphibole), Str/L:	<2.44209
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	9
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	9

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HDOH Lahaina Community Air

Sample Number **MFL-FB01-011724-AB**

Air Volume, L:	0
Effective Filter Area, mm^2:	385.0
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs), mm^2:	0.0132
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 µm:	0
Number of asbestos fibers and bundles > 5 µm:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Amphibole), f/cm^3:	N/A
Concentration of PCME Asbestos (Chrysotile), f/cm^3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:

Talaidh Isaacs 02/01/2024 and Shanna Vasser 02/02/2024

Laboratory: Eurofins Built Environment Testing – Houston, TX

Collection date(s): 1/15/2024 - 1/17/2024

Report No: 3513040

√	1.	Chain of custody (CoC) documentation is present.
√	2.	Sample receipt condition information is present and acceptable.
√	3.	Laboratory conducting the analysis is identified.
√	4.	All samples submitted to the laboratory are accounted for.
√	5.	Requested analytical methods were performed.
√	6.	Analysis dates are provided.
√	7.	Analyte results are provided.
NA	8.	Result qualifiers and definitions are provided.
√	9.	Result units are reported.
√	10.	Requested reporting limits are present.
NA	11.	Method detection limits are present.
√	12.	Sample collection date and time are present.
√	13.	No detections in field QC blanks (lot/media blanks, field blanks, etc).

Discrepancies:

MFL-AM02-011524-AB was listed on the CoC but crossed off and noted that it was void and not shipped to the laboratory. No results were present in the laboratory report for this sample because it was not shipped.

Notes: None

Eastern Research Group
601 Keystone Park Drive
Suite 700
Morrisville, NC 27560

January 31, 2024

Ms. Chelsea Saber
Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
Project Name: Lahaina fires

Dear Ms. Chelsea Saber,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 01/23/24 15:07.

Values below the MDL for QC results in this report are recorded as ND, however the actual values are reported in the accompanying Excel report with a "U" flag (Under the detection limit). The actual values are reported in AQS.

This test is accredited under the 2016 TNI Standard for Environmental Laboratories (FL DOH Certification # E87673). All analyses were performed as described in the US EPA-approved QAPP, under the contract for National Hazardous Air Pollutant Support (US EPA Contract No. 68HERH22D0002). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7924.

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
TetraTech Q9543026	4012337-01	Air	01/15/24 23:59	01/23/24 15:07
TetraTech Q9543025	4012337-02	Air	01/15/24 23:59	01/23/24 15:07
TetraTech Q9524443	4012337-03	Air	01/15/24 23:59	01/23/24 15:07
TetraTech Q9524451 FB	4012337-04	Air	01/15/24 00:00	01/23/24 15:07
TetraTech Q9524441	4012337-05	Air	01/16/24 23:59	01/23/24 15:07
TetraTech Q9524453	4012337-06	Air	01/16/24 23:59	01/23/24 15:07
TetraTech Q9524452	4012337-07	Air	01/16/24 23:59	01/23/24 15:07
TetraTech Q9524442	4012337-08	Air	01/16/24 23:59	01/23/24 15:07
TetraTech Q9524446 FB	4012337-09	Air	01/16/24 00:00	01/23/24 15:07
TetraTech Q9524450	4012337-10	Air	01/17/24 23:59	01/23/24 15:07
TetraTech Q9524449	4012337-11	Air	01/17/24 23:59	01/23/24 15:07
TetraTech Q9524448	4012337-12	Air	01/17/24 23:59	01/23/24 15:07
TetraTech Q9524447	4012337-13	Air	01/17/24 23:59	01/23/24 15:07
TetraTech Q9524461 FB	4012337-14	Air	01/17/24 00:00	01/23/24 15:07

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9543026
Matrix: Air
Comments: MFL-AM01-011524-HM

Lab ID: 4012337-01
Sample Volume: 1941.922 m³
Filter ID:

Sampled: 01/15/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 17:18

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0470**	SL	**0.0323**
Arsenic	**7440-38-2**	**0.118**		**0.00785**
Barium	**7440-39-3**	**1.56**		**0.896**
Beryllium	7440-41-7	0.00212	U	0.00268
Cadmium	7440-43-9	0.00842	U	0.0664
Chromium	7440-47-3	1.71	U	1.85
Cobalt	**7440-48-4**	**0.0624**		**0.0365**
Copper	**7440-50-8**	**39.7**	QM-07	**2.20**
Lead	**7439-92-1**	**0.321**		**0.179**
Manganese	7439-96-5	1.39	U	1.58
Molybdenum	**7439-98-7**	**1.57**		**0.301**
Nickel	**7440-02-0**	**0.755**	QB-01	**0.546**
Selenium	**7782-49-2**	**0.238**		**0.00751**
Thallium	**7440-28-0**	**9.19E-4**		**4.93E-4**
Vanadium	**7440-62-2**	**0.686**		**0.0443**
Zinc	7440-66-6	36.7	U	64.3

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9543025
Matrix: Air
Comments: MFL-AM02-011524-HM

Lab ID: 4012337-02
Sample Volume: 2078.015 m³
Filter ID:

Sampled: 01/15/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 20:06

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0867**	SL	**0.0302**
Arsenic	**7440-38-2**	**0.335**		**0.00734**
Barium	**7440-39-3**	**3.12**		**0.838**
Beryllium	**7440-41-7**	**0.00426**		**0.00251**
Cadmium	7440-43-9	0.0171	U	0.0621
Chromium	**7440-47-3**	**2.28**		**1.73**
Cobalt	**7440-48-4**	**0.133**		**0.0341**
Copper	**7440-50-8**	**23.4**		**2.06**
Lead	**7439-92-1**	**0.535**		**0.168**
Manganese	**7439-96-5**	**3.28**		**1.48**
Molybdenum	**7439-98-7**	**1.06**		**0.281**
Nickel	**7440-02-0**	**1.06**	QB-01	**0.510**
Selenium	**7782-49-2**	**0.266**		**0.00702**
Thallium	**7440-28-0**	**8.92E-4**		**4.61E-4**
Vanadium	**7440-62-2**	**0.929**		**0.0414**
Zinc	7440-66-6	27.6	U	60.1

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524443
Matrix: Air
Comments: MFL-AM03-011524-HM

Lab ID: 4012337-03
Sample Volume: 1872.11 m³
Filter ID:

Sampled: 01/15/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 20:26

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.134**	SL	**0.0335**
Arsenic	**7440-38-2**	**0.0719**		**0.00814**
Barium	**7440-39-3**	**1.61**		**0.930**
Beryllium	7440-41-7	0.00265	U	0.00278
Cadmium	7440-43-9	0.0120	U	0.0689
Chromium	7440-47-3	1.74	U	1.92
Cobalt	**7440-48-4**	**0.0868**		**0.0379**
Copper	**7440-50-8**	**36.6**		**2.29**
Lead	**7439-92-1**	**0.525**		**0.186**
Manganese	**7439-96-5**	**1.90**		**1.64**
Molybdenum	**7439-98-7**	**1.38**		**0.312**
Nickel	**7440-02-0**	**1.39**	QB-01	**0.567**
Selenium	**7782-49-2**	**0.220**		**0.00779**
Thallium	**7440-28-0**	**9.67E-4**		**5.12E-4**
Vanadium	**7440-62-2**	**0.839**		**0.0460**
Zinc	7440-66-6	41.8	U	66.7

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524451 FB
Matrix: Air
Lab ID: 4012337-04
Sample Volume: 1941.922 m³
Filter ID:
Sampled: 01/15/24 00:00
Received: 01/23/24 15:07
Analysis Date: 01/25/24 20:43

Comments: MFL-FB01-011524-HM Field Blank

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0161	SL, U	0.0323
Arsenic	7440-38-2	0.00374	U	0.00785
Barium	7440-39-3	0.634	U	0.896
Beryllium	7440-41-7	5.79E-4	U	0.00268
Cadmium	7440-43-9	6.61E-4	U	0.0664
Chromium	7440-47-3	0.645	U	1.85
Cobalt	7440-48-4	0.00480	U	0.0365
Copper	7440-50-8	0.299	U	2.20
Lead	7439-92-1	0.0318	U	0.179
Manganese	7439-96-5	0.119	U	1.58
Molybdenum	7439-98-7	0.0869	U	0.301
Nickel	7440-02-0	0.211	QB-01, U	0.546
Selenium	7782-49-2	0.00366	U	0.00751
Thallium	7440-28-0	1.69E-4	U	4.93E-4
Vanadium	7440-62-2	0.0130	U	0.0443
Zinc	7440-66-6	18.7	U	64.3

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
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PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524441
Matrix: Air
Comments: MFL-AM01-011624-HM

Lab ID: 4012337-05
Sample Volume: 2098.221 m³
Filter ID:

Sampled: 01/16/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 20:58

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.225**	SL	**0.0299**
Arsenic	**7440-38-2**	**2.07**		**0.00727**
Barium	**7440-39-3**	**6.39**		**0.830**
Beryllium	**7440-41-7**	**0.00283**		**0.00248**
Cadmium	7440-43-9	0.0288	U	0.0615
Chromium	7440-47-3	1.52	U	1.71
Cobalt	**7440-48-4**	**0.180**		**0.0338**
Copper	**7440-50-8**	**23.2**		**2.04**
Lead	**7439-92-1**	**1.54**		**0.166**
Manganese	**7439-96-5**	**4.14**		**1.47**
Molybdenum	**7439-98-7**	**0.646**		**0.278**
Nickel	**7440-02-0**	**0.683**	QB-01	**0.506**
Selenium	**7782-49-2**	**0.145**		**0.00695**
Thallium	**7440-28-0**	**7.85E-4**		**4.57E-4**
Vanadium	**7440-62-2**	**0.361**		**0.0410**
Zinc	7440-66-6	48.1	U	59.6

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524453
Matrix: Air
Comments: MFL-AM02-011624-HM

Lab ID: 4012337-06
Sample Volume: 2097.489 m³
Filter ID:

Sampled: 01/16/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 21:18

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.104**	SL	**0.0299**
Arsenic	**7440-38-2**	**0.428**		**0.00727**
Barium	**7440-39-3**	**1.14**		**0.830**
Beryllium	7440-41-7	0.00127	U	0.00248
Cadmium	7440-43-9	0.0147	U	0.0615
Chromium	7440-47-3	0.843	U	1.71
Cobalt	**7440-48-4**	**0.0443**		**0.0338**
Copper	**7440-50-8**	**17.5**		**2.04**
Lead	**7439-92-1**	**0.566**		**0.166**
Manganese	**7439-96-5**	**1.48**		**1.47**
Molybdenum	**7439-98-7**	**0.484**		**0.278**
Nickel	7440-02-0	0.486	QB-01, U	0.506
Selenium	**7782-49-2**	**0.125**		**0.00695**
Thallium	**7440-28-0**	**5.18E-4**		**4.57E-4**
Vanadium	**7440-62-2**	**0.143**		**0.0410**
Zinc	7440-66-6	39.5	U	59.6

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524452
Matrix: Air
Comments: MFL-AM03-011624-HM

Lab ID: 4012337-07
Sample Volume: 2094.66 m³
Filter ID:

Sampled: 01/16/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 21:37

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.110**	SL	**0.0300**
Arsenic	**7440-38-2**	**0.0544**		**0.00728**
Barium	**7440-39-3**	**1.46**		**0.831**
Beryllium	**7440-41-7**	**0.00447**		**0.00249**
Cadmium	7440-43-9	0.00417	U	0.0616
Chromium	7440-47-3	1.54	U	1.72
Cobalt	**7440-48-4**	**0.122**		**0.0339**
Copper	**7440-50-8**	**10.5**		**2.04**
Lead	7439-92-1	0.145	U	0.166
Manganese	**7439-96-5**	**2.30**		**1.47**
Molybdenum	**7439-98-7**	**0.514**		**0.279**
Nickel	**7440-02-0**	**1.09**	QB-01	**0.506**
Selenium	**7782-49-2**	**0.129**		**0.00696**
Thallium	**7440-28-0**	**6.71E-4**		**4.57E-4**
Vanadium	**7440-62-2**	**0.220**		**0.0411**
Zinc	7440-66-6	49.4	U	59.7

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524442
Matrix: Air
Comments: MFL-AM04-011624-HM

Lab ID: 4012337-08
Sample Volume: 1915.529 m³
Filter ID:

Sampled: 01/16/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 21:51

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0778**	SL	**0.0328**
Arsenic	**7440-38-2**	**0.122**		**0.00796**
Barium	**7440-39-3**	**1.03**		**0.909**
Beryllium	7440-41-7	0.00155	U	0.00272
Cadmium	7440-43-9	0.00545	U	0.0674
Chromium	7440-47-3	0.799	U	1.88
Cobalt	**7440-48-4**	**0.0464**		**0.0370**
Copper	**7440-50-8**	**25.6**		**2.23**
Lead	**7439-92-1**	**0.419**		**0.182**
Manganese	7439-96-5	1.06	U	1.61
Molybdenum	**7439-98-7**	**0.722**		**0.305**
Nickel	7440-02-0	0.381	QB-01, U	0.554
Selenium	**7782-49-2**	**0.115**		**0.00761**
Thallium	7440-28-0	4.94E-4	U	5.00E-4
Vanadium	**7440-62-2**	**0.120**		**0.0449**
Zinc	7440-66-6	26.9	U	65.2

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524446 FB
Matrix: Air
Lab ID: 4012337-09
Sample Volume: 2098.221 m³
Filter ID:
Sampled: 01/16/24 00:00
Received: 01/23/24 15:07
Analysis Date: 01/25/24 22:06

Comments: MFL-FB01-011624-HM Field Blank

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0186	SL, U	0.0299
Arsenic	7440-38-2	0.00259	U	0.00727
Barium	7440-39-3	0.598	U	0.830
Beryllium	7440-41-7	5.16E-4	U	0.00248
Cadmium	7440-43-9	6.25E-4	U	0.0615
Chromium	7440-47-3	0.579	U	1.71
Cobalt	7440-48-4	0.00556	U	0.0338
Copper	7440-50-8	0.294	U	2.04
Lead	7439-92-1	0.0318	U	0.166
Manganese	7439-96-5	0.101	U	1.47
Molybdenum	7439-98-7	0.0786	U	0.278
Nickel	7440-02-0	0.168	QB-01, U	0.506
Selenium	7782-49-2	0.00285	U	0.00695
Thallium	7440-28-0	1.54E-4	U	4.57E-4
Vanadium	7440-62-2	0.0145	U	0.0410
Zinc	7440-66-6	12.8	U	59.6

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524450
Matrix: Air
Lab ID: 4012337-10
Sample Volume: 2072.005 m³
Filter ID:
Sampled: 01/17/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 22:21

Comments: MFL-AM01-011724-HM - CoC states filter ID Q9524456, physical filter is Q952445

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0832**	SL	**0.0303**
Arsenic	**7440-38-2**	**0.478**		**0.00736**
Barium	**7440-39-3**	**2.07**		**0.840**
Beryllium	7440-41-7	0.00197	U	0.00251
Cadmium	7440-43-9	0.00698	U	0.0623
Chromium	7440-47-3	0.916	U	1.74
Cobalt	**7440-48-4**	**0.0807**		**0.0342**
Copper	**7440-50-8**	**19.8**		**2.07**
Lead	**7439-92-1**	**0.526**		**0.168**
Manganese	**7439-96-5**	**2.22**		**1.48**
Molybdenum	**7439-98-7**	**0.722**		**0.282**
Nickel	7440-02-0	0.432	QB-01, U	0.512
Selenium	**7782-49-2**	**0.124**		**0.00704**
Thallium	7440-28-0	4.18E-4	U	4.63E-4
Vanadium	**7440-62-2**	**0.181**		**0.0415**
Zinc	7440-66-6	26.8	U	60.3

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524449
Matrix: Air
Comments: MFL-AM02-011724-HM

Lab ID: 4012337-11
Sample Volume: 2133.93 m³
Filter ID:

Sampled: 01/17/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/25/24 23:30

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.156**	SL	**0.0294**
Arsenic	**7440-38-2**	**1.17**		**0.00714**
Barium	**7440-39-3**	**1.44**		**0.816**
Beryllium	7440-41-7	0.00189	U	0.00244
Cadmium	7440-43-9	0.0110	U	0.0605
Chromium	7440-47-3	1.48	U	1.68
Cobalt	**7440-48-4**	**0.0882**		**0.0332**
Copper	**7440-50-8**	**27.0**		**2.01**
Lead	**7439-92-1**	**0.845**		**0.163**
Manganese	**7439-96-5**	**2.37**		**1.44**
Molybdenum	**7439-98-7**	**0.580**		**0.274**
Nickel	**7440-02-0**	**0.740**	QB-01	**0.497**
Selenium	**7782-49-2**	**0.127**		**0.00683**
Thallium	**7440-28-0**	**6.26E-4**		**4.49E-4**
Vanadium	**7440-62-2**	**0.173**		**0.0403**
Zinc	7440-66-6	44.0	U	58.6

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524448
Matrix: Air
Comments: MFL-AM03-011724-HM

Lab ID: 4012337-12
Sample Volume: 2028.254 m³
Filter ID:

Sampled: 01/17/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/26/24 00:07

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0910**	SL	**0.0310**
Arsenic	**7440-38-2**	**0.0597**		**0.00752**
Barium	**7440-39-3**	**1.69**		**0.858**
Beryllium	**7440-41-7**	**0.00355**		**0.00257**
Cadmium	7440-43-9	0.00326	U	0.0636
Chromium	7440-47-3	0.988	U	1.77
Cobalt	**7440-48-4**	**0.0751**		**0.0350**
Copper	**7440-50-8**	**12.4**		**2.11**
Lead	7439-92-1	0.107	U	0.172
Manganese	7439-96-5	1.48	U	1.52
Molybdenum	**7439-98-7**	**0.694**		**0.288**
Nickel	**7440-02-0**	**0.660**	QB-01	**0.523**
Selenium	**7782-49-2**	**0.130**		**0.00719**
Thallium	7440-28-0	3.82E-4	U	4.72E-4
Vanadium	**7440-62-2**	**0.146**		**0.0424**
Zinc	7440-66-6	26.3	U	61.6

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524447
Matrix: Air
Comments: MFL-AM04-011724-HM

Lab ID: 4012337-13
Sample Volume: 1974.12 m³
Filter ID:

Sampled: 01/17/24 23:59
Received: 01/23/24 15:07
Analysis Date: 01/26/24 00:23

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0429**	SL	**0.0318**
Arsenic	**7440-38-2**	**0.126**		**0.00772**
Barium	**7440-39-3**	**0.924**		**0.882**
Beryllium	7440-41-7	0.00117	U	0.00264
Cadmium	7440-43-9	0.00517	U	0.0654
Chromium	7440-47-3	0.767	U	1.82
Cobalt	**7440-48-4**	**0.0859**		**0.0359**
Copper	**7440-50-8**	**29.8**		**2.17**
Lead	**7439-92-1**	**0.424**		**0.176**
Manganese	7439-96-5	0.874	U	1.56
Molybdenum	**7439-98-7**	**0.763**		**0.296**
Nickel	7440-02-0	0.415	QB-01, U	0.537
Selenium	**7782-49-2**	**0.109**		**0.00738**
Thallium	7440-28-0	2.69E-4	U	4.85E-4
Vanadium	**7440-62-2**	**0.0814**		**0.0436**
Zinc	7440-66-6	15.8	U	63.3

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FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: TetraTech Q9524461 FB
Matrix: Air
Lab ID: 4012337-14
Sample Volume: 2072.005 m³
Filter ID:
Sampled: 01/17/24 00:00
Received: 01/23/24 15:07
Analysis Date: 01/26/24 00:40

Comments: MFL-FB01-011724-HM Field Blank

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0134	SL, U	0.0303
Arsenic	7440-38-2	0.00379	U	0.00736
Barium	7440-39-3	0.636	U	0.840
Beryllium	7440-41-7	4.49E-4	U	0.00251
Cadmium	7440-43-9	5.33E-4	U	0.0623
Chromium	7440-47-3	0.569	U	1.74
Cobalt	7440-48-4	0.00389	U	0.0342
Copper	7440-50-8	0.251	U	2.07
Lead	7439-92-1	0.0268	U	0.168
Manganese	7439-96-5	0.0831	U	1.48
Molybdenum	7439-98-7	0.0774	U	0.282
Nickel	7440-02-0	0.168	QB-01, U	0.512
Selenium	7782-49-2	0.00562	U	0.00704
Thallium	7440-28-0	1.01E-4	U	4.63E-4
Vanadium	7440-62-2	0.0109	U	0.0415
Zinc	7440-66-6	10.8	U	60.3

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REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Calibration Blank (2401066-CCB1)				Prepared & Analyzed: 01/25/24						
Antimony	-0.0741		ng/l							U
Arsenic	0.491		ng/l							
Barium	1.39		ng/l							
Beryllium	0.0284		ng/l							
Cadmium	0.153		ng/l							
Chromium	2.57		ng/l							
Cobalt	0.175		ng/l							
Copper	98.1		ng/l							
Lead	3.06		ng/l							
Manganese	6.46		ng/l							
Molybdenum	11.9		ng/l							
Nickel	0.843		ng/l							
Selenium	-0.981		ng/l							U
Thallium	0.699		ng/l							
Vanadium	-39.9		ng/l							U
Zinc	-19.2		ng/l							U
Calibration Blank (2401066-CCB2)				Prepared & Analyzed: 01/25/24						
Antimony	0.0385		ng/l							
Arsenic	4.42		ng/l							
Barium	0.607		ng/l							
Beryllium	0.0388		ng/l							
Cadmium	0.145		ng/l							
Chromium	2.71		ng/l							
Cobalt	0.123		ng/l							
Copper	28.3		ng/l							
Lead	1.31		ng/l							
Manganese	5.84		ng/l							
Molybdenum	3.41		ng/l							
Nickel	0.444		ng/l							
Selenium	10.8		ng/l							
Thallium	0.668		ng/l							
Vanadium	-35.8		ng/l							U
Zinc	-53.0		ng/l							U
Calibration Blank (2401066-CCB3)				Prepared & Analyzed: 01/25/24						
Antimony	-0.342		ng/l							U
Arsenic	1.43		ng/l							
Barium	1.06		ng/l							
Beryllium	-0.0124		ng/l							U

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Calibration Blank (2401066-CCB3) Contin				Prepared & Analyzed: 01/25/24						
Cadmium	0.0232		ng/l							
Chromium	2.03		ng/l							
Cobalt	0.0739		ng/l							
Copper	24.7		ng/l							
Lead	0.831		ng/l							
Manganese	7.28		ng/l							
Molybdenum	3.57		ng/l							
Nickel	0.352		ng/l							
Selenium	11.6		ng/l							
Thallium	0.758		ng/l							
Vanadium	-38.5		ng/l							U
Zinc	-52.0		ng/l							U
Calibration Blank (2401066-CCB4)				Prepared: 01/25/24 Analyzed: 01/26/24						
Antimony	-0.205		ng/l							U
Arsenic	4.57		ng/l							
Barium	0.951		ng/l							
Beryllium	0.00507		ng/l							
Cadmium	0.0722		ng/l							
Chromium	2.04		ng/l							
Cobalt	0.115		ng/l							
Copper	26.2		ng/l							
Lead	1.03		ng/l							
Manganese	6.25		ng/l							
Molybdenum	3.03		ng/l							
Nickel	1.13		ng/l							
Selenium	11.0		ng/l							
Thallium	0.555		ng/l							
Vanadium	-38.5		ng/l							U
Zinc	-56.7		ng/l							U
Calibration Blank (2401066-CCB5)				Prepared: 01/25/24 Analyzed: 01/26/24						
Antimony	-0.00315		ng/l							U
Arsenic	3.25		ng/l							
Barium	0.533		ng/l							
Beryllium	0.0234		ng/l							
Cadmium	0.0884		ng/l							
Chromium	1.25		ng/l							
Cobalt	0.147		ng/l							
Copper	33.6		ng/l							

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Calibration Blank (2401066-CCB5) Contin				Prepared: 01/25/24 Analyzed: 01/26/24						
Lead	0.982		ng/l							
Manganese	5.89		ng/l							
Molybdenum	2.83		ng/l							
Nickel	0.474		ng/l							
Selenium	14.1		ng/l							
Thallium	0.656		ng/l							
Vanadium	-40.0		ng/l							U
Zinc	-58.9		ng/l							U
Calibration Check (2401066-CCV1)				Prepared & Analyzed: 01/25/24						
Antimony	19900		ng/l	20000		99.6	90-110			
Arsenic	20000		ng/l	20000		99.9	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	5270		ng/l	5000.0		105	90-110			
Cadmium	20000		ng/l	20000		100	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	50900		ng/l	50000		102	90-110			
Copper	2.05E6		ng/l	2.0000E6		102	90-110			
Lead	199000		ng/l	200000		99.7	90-110			
Manganese	499000		ng/l	500000		99.7	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Selenium	19900		ng/l	20000		99.7	90-110			
Thallium	498		ng/l	500.00		99.7	90-110			
Vanadium	19500		ng/l	20000		97.3	90-110			
Zinc	503000		ng/l	500000		101	90-110			
Calibration Check (2401066-CCV2)				Prepared & Analyzed: 01/25/24						
Antimony	19800		ng/l	20000		98.8	90-110			
Arsenic	19600		ng/l	20000		98.2	90-110			
Barium	196000		ng/l	200000		98.1	90-110			
Beryllium	4750		ng/l	5000.0		95.0	90-110			
Cadmium	19800		ng/l	20000		98.9	90-110			
Chromium	245000		ng/l	240000		102	90-110			
Cobalt	48500		ng/l	50000		97.1	90-110			
Copper	1.98E6		ng/l	2.0000E6		99.2	90-110			
Lead	195000		ng/l	200000		97.5	90-110			
Manganese	486000		ng/l	500000		97.3	90-110			
Molybdenum	49100		ng/l	50000		98.1	90-110			
Nickel	118000		ng/l	120000		98.2	90-110			

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AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Calibration Check (2401066-CCV2) Contin					Prepared & Analyzed: 01/25/24					
Selenium	19600		ng/l	20000		98.2	90-110			
Thallium	469		ng/l	500.00		93.7	90-110			
Vanadium	19300		ng/l	20000		96.6	90-110			
Zinc	499000		ng/l	500000		99.7	90-110			
Calibration Check (2401066-CCV3)					Prepared & Analyzed: 01/25/24					
Antimony	20000		ng/l	20000		100	90-110			
Arsenic	19900		ng/l	20000		99.5	90-110			
Barium	199000		ng/l	200000		99.4	90-110			
Beryllium	5340		ng/l	5000.0		107	90-110			
Cadmium	20200		ng/l	20000		101	90-110			
Chromium	245000		ng/l	240000		102	90-110			
Cobalt	49400		ng/l	50000		98.9	90-110			
Copper	2.02E6		ng/l	2.0000E6		101	90-110			
Lead	198000		ng/l	200000		99.0	90-110			
Manganese	497000		ng/l	500000		99.5	90-110			
Molybdenum	49300		ng/l	50000		98.7	90-110			
Nickel	119000		ng/l	120000		99.3	90-110			
Selenium	20000		ng/l	20000		99.8	90-110			
Thallium	473		ng/l	500.00		94.7	90-110			
Vanadium	19500		ng/l	20000		97.5	90-110			
Zinc	506000		ng/l	500000		101	90-110			
Calibration Check (2401066-CCV4)					Prepared: 01/25/24 Analyzed: 01/26/24					
Antimony	19900		ng/l	20000		99.4	90-110			
Arsenic	20000		ng/l	20000		99.9	90-110			
Barium	196000		ng/l	200000		98.1	90-110			
Beryllium	4880		ng/l	5000.0		97.6	90-110			
Cadmium	19900		ng/l	20000		99.7	90-110			
Chromium	242000		ng/l	240000		101	90-110			
Cobalt	49500		ng/l	50000		99.0	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	199000		ng/l	200000		99.3	90-110			
Manganese	500000		ng/l	500000		100	90-110			
Molybdenum	49100		ng/l	50000		98.3	90-110			
Nickel	120000		ng/l	120000		99.7	90-110			
Selenium	20100		ng/l	20000		101	90-110			
Thallium	467		ng/l	500.00		93.4	90-110			
Vanadium	19300		ng/l	20000		96.6	90-110			
Zinc	504000		ng/l	500000		101	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2401066 - B4A1801

Calibration Check (2401066-CCV5)					Prepared: 01/25/24 Analyzed: 01/26/24					
Antimony	20200		ng/l	20000		101	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	199000		ng/l	200000		99.4	90-110			
Beryllium	4770		ng/l	5000.0		95.3	90-110			
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	250000		ng/l	240000		104	90-110			
Cobalt	50000		ng/l	50000		100	90-110			
Copper	2.07E6		ng/l	2.0000E6		103	90-110			
Lead	200000		ng/l	200000		99.9	90-110			
Manganese	505000		ng/l	500000		101	90-110			
Molybdenum	49900		ng/l	50000		99.9	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	20100		ng/l	20000		101	90-110			
Thallium	474		ng/l	500.00		94.8	90-110			
Vanadium	19500		ng/l	20000		97.6	90-110			
Zinc	510000		ng/l	500000		102	90-110			
High Cal Check (2401066-HCV1)					Prepared & Analyzed: 01/25/24					
Antimony	39600		ng/l	40000		99.1	95-105			
Arsenic	39800		ng/l	40000		99.4	95-105			
Barium	395000		ng/l	400000		98.8	95-105			
Beryllium	10300		ng/l	10000		103	95-105			
Cadmium	39500		ng/l	40000		98.7	95-105			
Chromium	461000		ng/l	480000		96.1	95-105			
Cobalt	98600		ng/l	100000		98.6	95-105			
Copper	3.93E6		ng/l	4.0000E6		98.2	95-105			
Lead	395000		ng/l	400000		98.7	95-105			
Manganese	983000		ng/l	1.0000E6		98.3	95-105			
Molybdenum	99500		ng/l	100000		99.5	95-105			
Nickel	237000		ng/l	240000		98.7	95-105			
Selenium	39900		ng/l	40000		99.8	95-105			
Thallium	983		ng/l	1000.0		98.3	95-105			
Vanadium	39300		ng/l	40000		98.4	95-105			
Zinc	984000		ng/l	1.0000E6		98.4	95-105			
Initial Cal Blank (2401066-ICB1)					Prepared & Analyzed: 01/25/24					
Antimony	0.892		ng/l							
Arsenic	5.52		ng/l							
Barium	3.84		ng/l							
Beryllium	0.151		ng/l							

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Initial Cal Blank (2401066-ICB1) Continu				Prepared & Analyzed: 01/25/24						
Cadmium	0.390		ng/l							
Chromium	5.99		ng/l							
Cobalt	1.02		ng/l							
Copper	150		ng/l							
Lead	23.4		ng/l							
Manganese	14.6		ng/l							
Molybdenum	14.5		ng/l							
Nickel	2.03		ng/l							
Selenium	1.98		ng/l							
Thallium	1.04		ng/l							
Vanadium	-43.7		ng/l							U
Zinc	-41.1		ng/l							U
Initial Cal Check (2401066-ICV1)				Prepared & Analyzed: 01/25/24						
Antimony	19500		ng/l	20000		97.5	90-110			
Arsenic	19900		ng/l	20000		99.3	90-110			
Barium	196000		ng/l	200000		97.9	90-110			
Beryllium	5110		ng/l	5000.0		102	90-110			
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	49500		ng/l	50000		98.9	90-110			
Copper	1.98E6		ng/l	2.0000E6		99.2	90-110			
Lead	193000		ng/l	200000		96.6	90-110			
Manganese	479000		ng/l	500000		95.7	90-110			
Molybdenum	49700		ng/l	50000		99.3	90-110			
Nickel	118000		ng/l	120000		98.6	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Thallium	492		ng/l	500.00		98.5	90-110			
Vanadium	19700		ng/l	20000		98.6	90-110			
Zinc	501000		ng/l	500000		100	90-110			
Interference Check A (2401066-IFA1)				Prepared & Analyzed: 01/25/24						
Antimony	0.00		ng/l				80-120			U
Arsenic	0.00		ng/l				80-120			U
Barium	0.00		ng/l				80-120			U
Beryllium	0.00		ng/l				80-120			U
Cadmium	0.00		ng/l				80-120			U
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U

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REPORTED: 01/31/24 14:01
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AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2401066 - B4A1801										
Interference Check A (2401066-IFA1) Co					Prepared & Analyzed: 01/25/24					
Lead	0.00		ng/l				80-120			U
Manganese	0.00		ng/l				80-120			U
Molybdenum	298000		ng/l	300000		99.5	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U
Interference Check B (2401066-IFB1)					Prepared & Analyzed: 01/25/24					
Antimony	20200		ng/l	20000		101	80-120			
Arsenic	20300		ng/l	20000		102	80-120			
Barium	201000		ng/l	200000		100	80-120			
Beryllium	5090		ng/l	5000.0		102	80-120			
Cadmium	19600		ng/l	20000		98.0	80-120			
Chromium	239000		ng/l	240000		99.6	80-120			
Cobalt	49300		ng/l	50000		98.5	80-120			
Copper	1.91E6		ng/l	2.0000E6		95.7	80-120			
Lead	202000		ng/l	200000		101	80-120			
Manganese	507000		ng/l	500000		101	80-120			
Molybdenum	349000		ng/l	350000		99.6	80-120			
Nickel	116000		ng/l	120000		96.7	80-120			
Selenium	19200		ng/l	20000		95.8	80-120			
Thallium	502		ng/l	500.00		100	80-120			
Vanadium	18800		ng/l	20000		94.1	80-120			
Zinc	461000		ng/l	500000		92.3	80-120			
Batch B4A2501 - ICP-MS Extraction										
Blank (B4A2501-BLK1)					Prepared & Analyzed: 01/25/24					
Antimony	ND	0.0386	ng/m³ Air							SL, U
Arsenic	ND	0.00937	ng/m³ Air							U
Barium	ND	1.07	ng/m³ Air							U
Beryllium	ND	0.00320	ng/m³ Air							U
Cadmium	ND	0.0793	ng/m³ Air							U
Chromium	ND	2.21	ng/m³ Air							U
Cobalt	ND	0.0436	ng/m³ Air							U
Copper	ND	2.63	ng/m³ Air							U
Lead	ND	0.214	ng/m³ Air							U
Manganese	ND	1.89	ng/m³ Air							U
Molybdenum	ND	0.359	ng/m³ Air							U

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Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 01/31/24 14:01
SUBMITTED: 01/23/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4A2501 - ICP-MS Extraction										
Blank (B4A2501-BLK1) Continued				Prepared & Analyzed: 01/25/24						
Nickel	ND	0.652	ng/m³ Air							QB-01, U
Selenium	ND	0.00896	ng/m³ Air							U
Thallium	ND	5.89E-4	ng/m³ Air							U
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4A2501-BS1)				Prepared & Analyzed: 01/25/24						
Antimony	0.679	0.0386	ng/m³ Air	1.3829		49.1	80-120			SL
Arsenic	2.76	0.00937	ng/m³ Air	2.7658		100	80-120			
Barium	28.3	1.07	ng/m³ Air	27.658		102	80-120			
Beryllium	1.30	0.00320	ng/m³ Air	1.3829		93.7	80-120			
Cadmium	1.41	0.0793	ng/m³ Air	1.3829		102	80-120			
Chromium	16.5	2.21	ng/m³ Air	13.829		119	80-120			
Cobalt	1.43	0.0436	ng/m³ Air	1.3829		103	80-120			
Copper	31.3	2.63	ng/m³ Air	27.658		113	80-120			
Lead	13.9	0.214	ng/m³ Air	13.829		101	80-120			
Manganese	8.97	1.89	ng/m³ Air	8.2975		108	80-120			
Molybdenum	1.67	0.359	ng/m³ Air	1.3829		121	80-120			
Nickel	3.07	0.652	ng/m³ Air	2.7658		111	80-120			QB-01
Selenium	2.71	0.00896	ng/m³ Air	2.7658		98.1	80-120			
Thallium	0.132	5.89E-4	ng/m³ Air	0.13829		95.7	80-120			
Vanadium	2.73	0.0529	ng/m³ Air	2.7658		98.6	80-120			
Zinc	129	76.8	ng/m³ Air	82.975		156	80-120			
Duplicate (B4A2501-DUP1)		**Source: 4012337-01**		Prepared & Analyzed: 01/25/24						
Antimony	0.0508	0.0323	ng/m³ Air		0.0470			7.67	10	SL
Arsenic	0.127	0.00785	ng/m³ Air		0.118			6.98	10	
Barium	1.76	0.896	ng/m³ Air		1.56			12.0	10	
Beryllium	ND	0.00268	ng/m³ Air		ND				10	U
Cadmium	ND	0.0664	ng/m³ Air		ND				10	U
Chromium	ND	1.85	ng/m³ Air		ND				10	U
Cobalt	0.0612	0.0365	ng/m³ Air		0.0624			1.94	10	
Copper	44.0	2.20	ng/m³ Air		39.7			10.4	10	
Lead	0.516	0.179	ng/m³ Air		0.321			46.7	10	
Manganese	ND	1.58	ng/m³ Air		ND				10	U
Molybdenum	1.58	0.301	ng/m³ Air		1.57			0.935	10	
Nickel	0.773	0.546	ng/m³ Air		0.755			2.41	10	QB-01
Selenium	0.236	0.00751	ng/m³ Air		0.238			1.03	10	
Thallium	8.50E-4	4.93E-4	ng/m³ Air		9.19E-4			7.70	10	
Vanadium	0.699	0.0443	ng/m³ Air		0.686			1.82	10	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4A2501 - ICP-MS Extraction										
Duplicate (B4A2501-DUP1) Continued		**Source: 4012337-01**		Prepared & Analyzed: 01/25/24						
Zinc	ND	64.3	ng/m³ Air		ND				10	U
Duplicate (B4A2501-DUP2)		**Source: 4012337-11**		Prepared & Analyzed: 01/25/24						
Antimony	0.157	0.0294	ng/m³ Air		0.156			0.885	10	SL
Arsenic	1.15	0.00714	ng/m³ Air		1.17			1.29	10	
Barium	1.44	0.816	ng/m³ Air		1.44			0.00637	10	
Beryllium	ND	0.00244	ng/m³ Air		ND				10	U
Cadmium	ND	0.0605	ng/m³ Air		ND				10	U
Chromium	ND	1.68	ng/m³ Air		ND				10	U
Cobalt	0.0879	0.0332	ng/m³ Air		0.0882			0.326	10	
Copper	26.9	2.01	ng/m³ Air		27.0			0.543	10	
Lead	0.832	0.163	ng/m³ Air		0.845			1.54	10	
Manganese	2.35	1.44	ng/m³ Air		2.37			0.923	10	
Molybdenum	0.578	0.274	ng/m³ Air		0.580			0.261	10	
Nickel	0.734	0.497	ng/m³ Air		0.740			0.874	10	QB-01
Selenium	0.122	0.00683	ng/m³ Air		0.127			3.85	10	
Thallium	5.25E-4	4.49E-4	ng/m³ Air		6.26E-4			17.5	10	
Vanadium	0.175	0.0403	ng/m³ Air		0.173			0.998	10	
Zinc	ND	58.6	ng/m³ Air		ND				10	U
Matrix Spike (B4A2501-MS1)		**Source: 4012337-01**		Prepared & Analyzed: 01/25/24						
Antimony	0.590	0.0323	ng/m³ Air	1.1586	0.0470	46.8	80-120			SL
Arsenic	2.44	0.00785	ng/m³ Air	2.3173	0.118	100	80-120			
Barium	24.8	0.896	ng/m³ Air	23.173	1.56	100	80-120			
Beryllium	1.16	0.00268	ng/m³ Air	1.1586	ND	100	80-120			
Cadmium	1.18	0.0664	ng/m³ Air	1.1586	ND	102	80-120			
Chromium	13.6	1.85	ng/m³ Air	11.586	ND	117	80-120			
Cobalt	1.24	0.0365	ng/m³ Air	1.1586	0.0624	102	80-120			
Copper	71.2	2.20	ng/m³ Air	23.173	39.7	136	80-120			QM-07
Lead	12.5	0.179	ng/m³ Air	11.586	0.321	105	80-120			
Manganese	8.90	1.58	ng/m³ Air	6.9519	ND	128	80-120			
Molybdenum	2.81	0.301	ng/m³ Air	1.1586	1.57	107	80-120			
Nickel	3.00	0.546	ng/m³ Air	2.3173	0.755	97.1	80-120			QB-01
Selenium	2.49	0.00751	ng/m³ Air	2.3173	0.238	97.2	80-120			
Thallium	0.113	4.93E-4	ng/m³ Air	0.11586	9.19E-4	96.5	80-120			
Vanadium	3.00	0.0443	ng/m³ Air	2.3173	0.686	99.9	80-120			
Zinc	114	64.3	ng/m³ Air	69.519	ND	164	80-120			
Matrix Spike Dup (B4A2501-MSD1)		**Source: 4012337-01**		Prepared & Analyzed: 01/25/24						
Antimony	0.576	0.0323	ng/m³ Air	1.1586	0.0470	45.7	80-120	2.33	20	SL
Arsenic	2.41	0.00785	ng/m³ Air	2.3173	0.118	99.0	80-120	1.16	20	

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AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4A2501 - ICP-MS Extraction										
Matrix Spike Dup (B4A2501-MSD1) Conti			**Source: 4012337-01**		Prepared & Analyzed: 01/25/24					
Barium	24.4	0.896	ng/m³ Air	23.173	1.56	98.5	80-120	1.68	20	
Beryllium	1.19	0.00268	ng/m³ Air	1.1586	ND	103	80-120	2.52	20	
Cadmium	1.16	0.0664	ng/m³ Air	1.1586	ND	100	80-120	1.50	20	
Chromium	13.6	1.85	ng/m³ Air	11.586	ND	117	80-120	0.194	20	
Cobalt	1.22	0.0365	ng/m³ Air	1.1586	0.0624	99.9	80-120	1.79	20	
Copper	71.4	2.20	ng/m³ Air	23.173	39.7	137	80-120	0.293	20	QM-07
Lead	12.4	0.179	ng/m³ Air	11.586	0.321	104	80-120	0.800	20	
Manganese	8.54	1.58	ng/m³ Air	6.9519	ND	123	80-120	4.14	20	
Molybdenum	2.73	0.301	ng/m³ Air	1.1586	1.57	99.9	80-120	3.00	20	
Nickel	3.00	0.546	ng/m³ Air	2.3173	0.755	96.7	80-120	0.273	20	QB-01
Selenium	2.56	0.00751	ng/m³ Air	2.3173	0.238	100	80-120	2.55	20	
Thallium	0.113	4.93E-4	ng/m³ Air	0.11586	9.19E-4	96.3	80-120	0.155	20	
Vanadium	2.94	0.0443	ng/m³ Air	2.3173	0.686	97.3	80-120	1.98	20	
Zinc	107	64.3	ng/m³ Air	69.519	ND	153	80-120	6.79	20	
Post Spike (B4A2501-PS1)			**Source: 4012337-01**		Prepared & Analyzed: 01/25/24					
Antimony	0.282	0.0323	ng/m³ Air	0.23173	0.0470	101	75-125			SL
Arsenic	1.27	0.00785	ng/m³ Air	1.1586	0.118	99.1	75-125			
Barium	3.89	0.896	ng/m³ Air	2.3173	1.56	101	75-125			
Beryllium	0.235	0.00268	ng/m³ Air	0.23173	ND	101	75-125			
Cadmium	0.128	0.0664	ng/m³ Air	0.11586	ND	110	75-125			
Chromium	2.90	1.85	ng/m³ Air	1.1586	ND	250	75-125			
Cobalt	0.300	0.0365	ng/m³ Air	0.23173	0.0624	102	75-125			
Copper	52.4	2.20	ng/m³ Air	11.586	39.7	110	75-125			
Lead	23.7	0.179	ng/m³ Air	23.173	0.321	101	75-125			
Manganese	3.79	1.58	ng/m³ Air	2.3173	ND	163	75-125			
Molybdenum	2.72	0.301	ng/m³ Air	1.1586	1.57	99.5	75-125			
Nickel	3.09	0.546	ng/m³ Air	2.3173	0.755	101	75-125			QB-01
Selenium	1.36	0.00751	ng/m³ Air	1.1586	0.238	96.8	75-125			
Thallium	0.0589	4.93E-4	ng/m³ Air	5.7932E-2	9.19E-4	100	75-125			
Vanadium	1.83	0.0443	ng/m³ Air	1.1586	0.686	98.8	75-125			
Zinc	ND	64.3	ng/m³ Air	23.173	ND		75-125			U
Dilution Check (B4A2501-SRL1)			**Source: 4012337-01**		Prepared & Analyzed: 01/25/24					
Antimony	ND	0.162	ng/m³ Air		ND				10	SL, U
Arsenic	0.120	0.0393	ng/m³ Air		0.118			1.53	10	
Barium	ND	4.48	ng/m³ Air		ND				10	U
Beryllium	ND	0.0134	ng/m³ Air		ND				10	U
Cadmium	ND	0.332	ng/m³ Air		ND				10	U
Chromium	ND	9.26	ng/m³ Air		ND				10	U

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4A2501 - ICP-MS Extraction										
Dilution Check (B4A2501-SRL1) ContinueSource: 4012337-01 Prepared & Analyzed: 01/25/24										
Cobalt	ND	0.183	ng/m³ Air		ND				10	U
Copper	39.5	11.0	ng/m³ Air		39.7			0.512	10	
Lead	ND	0.896	ng/m³ Air		ND				10	U
Manganese	ND	7.92	ng/m³ Air		ND				10	U
Molybdenum	1.54	1.50	ng/m³ Air		1.57			1.86	10	
Nickel	ND	2.73	ng/m³ Air		ND				10	QB-01, U
Selenium	0.238	0.0375	ng/m³ Air		0.238			0.0599	10	
Thallium	ND	0.00247	ng/m³ Air		ND				10	U
Vanadium	0.688	0.222	ng/m³ Air		0.686			0.268	10	
Zinc	ND	322	ng/m³ Air		ND				10	U

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Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QB-01	Analyte exceeds method blank criteria
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: This test is accredited under the 2016 TNI Standard.

Stage 1 Data Verification Checklist – Metals

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Talaidh Isaacs 02/01/2024 and Shanna Vasser 2/2/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 1/15/2024 - 1/17/2024
Report No: 4012337

√	1.	Chain of custody (CoC) documentation is present.
X	2.	Sample receipt condition information is present and acceptable.
√	3.	Laboratory conducting the analysis is identified.
√	4.	All samples submitted to the laboratory are accounted for.
√	5.	Requested analytical methods were performed.
√	6.	Analysis dates are provided.
√	7.	Analyte results are provided.
√	8.	Result qualifiers and definitions are provided.
√	9.	Result units are reported.
NA	10.	Requested reporting limits are present.
√	11.	Method detection limits are present.
√	12.	Sample collection date and time are present.
√	13.	No detections in field QC blanks (lot/media blanks, field blanks, etc).

Discrepancies: MFL-AM01-011724-HM has the filter ID, Q9524456, listed; however, the filter ID noted by the laboratory is Q9524450.
Notes: No sample receipt information was included.