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

Lahaina, Maui

2/22/2024 – 2/28/2024
[Report Updated: 3/25/2024]

Due to ongoing debris removal operations in response to the Maui Wildfires, a Community Air Monitoring and Sampling Plan (CAMSP) has been drafted 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 determine whether debris removal activities, managed by the U.S. Army Corps of Engineers (USACE), 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.

Air quality monitoring for particulate matter was collected at all four community locations over a 24-hour period each day in accordance with the draft CAMSP. Additionally, daily air samples were collected at all community locations, as depicted in **Figure 1**. Summary analytical data is presented in **Tables 1 and 2**. **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 described in the draft CAMSP. A summary of meteorological data is presented in **Table 3.** Overall wind conditions show approximately 1.2 mph in a generally SSE direction.

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 (February 22-28), WW Pump Station #4 (February 22-28), Lahaina Intermediate School (February 22-28), Lahaina Boys & Girls Club (February 22-28).

The PM_{10} monitoring results were not found to have exceeded the screening level 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 28 samples collected for asbestos fibers at community monitoring locations throughout this reporting period. All asbestos results were below the Site Screening Action Level (SSAL) of 0.003 fibers/cc and less than the lab's analytical sensitivity (see Table 1). Notably, the laboratory commented "Numerous gypsum fibers present" on samples collected at all monitoring stations from February 22-28, except the samples taken at WW Pump Station #4 on February 24, at Lahaina Intermediate School on February 28, and at Lahaina Boys & Girls Club on February 26 and 28. Gypsum is a common ingredient in drywall, plaster and cement so its presence in the sample filters is likely due to debris removal operations or other disturbances of built-environment fire debris. The presence of gypsum fibers found

in the samples were not sufficient to obscure asbestos analysis; nor are they indicative of a health and safety concern to the public. Exposure thresholds (NIOSH and OSHA) for gypsum are 5 mg/m^3 for respirable dust, and 10 mg/m^3 and 15 mg/m^3 respectively for total dust as time-weighted averages. While total dust sampling has not been conducted, the size-discriminated particulate sampling (PM2.5 and PM10) at these locations indicates these thresholds are not being approached and are orders of magnitude less than applicable gypsum exposure criteria.

As previously reported, low levels of heavy metals were detected in ambient air samples at all community sampling locations (see Table 1). Although heavy metals were detected, all concentrations were below the SSALs (see Table 1). The revisions in this report are due to incorrect calibration values used for volume calculations for select metals samples. These values have been corrected and the correct volumes and results are reflected in the most recent lab reports and attached tables.

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 utilizing 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, which were performed prior to sampling according to the manufacturer's procedures.

For asbestos sampling, Tetra Tech uses a Casella Vortex 3 or similar air sampling pump. 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 are 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.

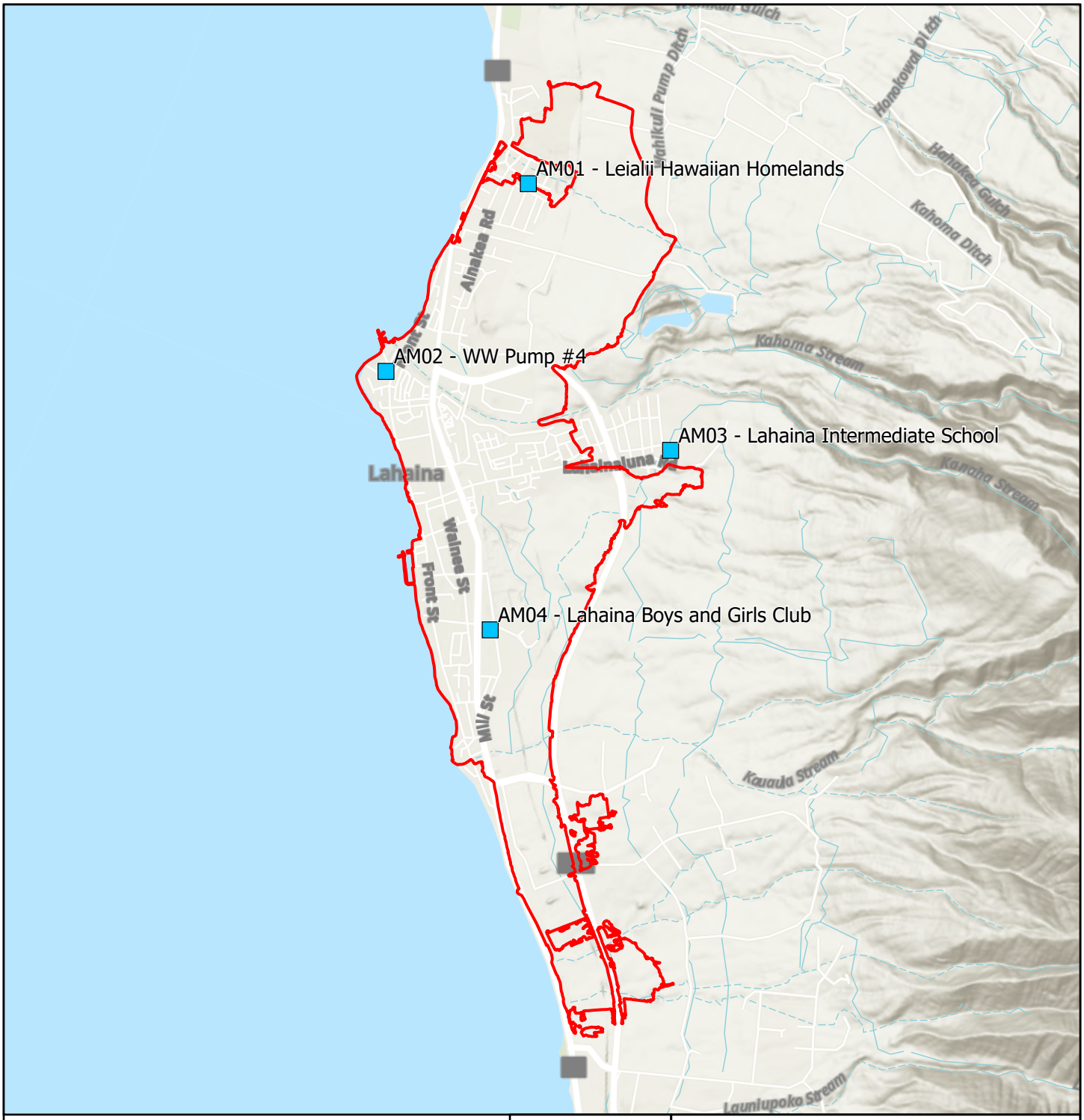
Tetra Tech is using Tisch Environmental High Volume Air Samplers, or equivalent, collocated with the real-time particulate monitors and asbestos samplers described above. Air samples for elemental metals at community locations are collected and analyzed in accordance with the following methods:

- 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



Basemap: ESRI ArcGIS World Street Map

Table 1
HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results by Date
Maui Wildfire, Lahaina
2/22//2024-2/28/2024
[Report Updated: 3/25/2024]

Analyte		Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Units		s/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
2/22/2024	Leialii Hawaiian Homelands (AM-01)	<0.0025	0.000146	0.00101	0.00285	0.00000574	ND	0.00217	0.000223	0.0360	0.000540	0.00641	0.00156	0.000723	0.000133	0.000000891	0.000818	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.000234	0.000462	0.00455	0.0000125	ND	0.00276	0.000422	0.0231	0.000893	0.0113	0.00101	0.00193	0.000160	0.00000105	0.00138	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.000213	0.000712	0.00388	0.0000319	ND	0.00332	0.000528	0.0565	0.000457	0.0129	0.00229	0.00153	0.000187	0.00000103	0.00146	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.000199	0.000460	0.00286	0.00000726	ND	0.00233	0.000201	0.0193	0.000646	0.00625	0.00106	0.000930	0.000138	0.000000776	0.000881	ND
2/23/2024	Leialii Hawaiian Homelands (AM-01)	<0.0025	0.0000359	0.000275	0.00156	0.00000298	ND	0.00181	0.000209	0.0378	0.000301	0.00274	0.00144	0.000576	0.0000862	0.000000502	0.000423	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.000109	0.000227	0.00419	0.00000811	ND	0.00225	0.000280	0.0217	0.000588	0.00772	0.00102	0.00118	0.000154	0.000000742	0.00102	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000473	0.000319	0.00325	0.0000234	ND	0.00305	0.000424	0.0454	0.000405	0.00952	0.00219	0.00155	0.000162	0.000000802	0.00118	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000557	0.000180	0.00258	0.00000682	ND	0.00231	0.000194	0.0265	0.000616	0.00599	0.00122	0.000753	0.000144	0.000000842	0.000774	ND
2/24/2024	Leialii Hawaiian Homelands (AM-01)	<0.0025	0.0000745	0.000484	0.0132	0.00000886	ND	0.00248	0.000300	0.0469	0.000632	0.00926	0.00293	0.00105	0.000143	0.000000895	0.000930	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.0000963	0.000237	0.00409	0.0000104	ND	0.00247	0.000321	0.0272	0.000635	0.00989	0.00158	0.00121	0.000161	0.00000111	0.00103	ND
	Lahaina Intermediate School (AM-03)	<0.0025	ND	0.000149	0.00201	0.0000117	ND	0.00227	0.000239	0.0394	0.000264	0.00654	0.00168	0.000876	0.000130	0.000000703	0.000741	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0026	0.0000741	0.000780	0.00361	0.0000112	ND	0.00318	0.000340	0.0311	0.00163	0.0109	0.00112	0.00109	0.000150	0.000000978	0.00109	ND
2/25/2024	Leialii Hawaiian Homelands (AM-01)	<0.0025	0.0000354	0.000586	0.00189	0.00000423	ND	0.00200	0.000132	0.0538	0.000405	0.00404	0.00404	0.000588	0.000115	0.000000831	0.000357	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.0000924	0.000219	0.00362	0.00000631	ND	0.00210	0.000162	0.0333	0.000495	0.00512	0.00185	0.000725	0.000166	0.000000983	0.000476	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000289	0.000126	0.00168	0.00000513	ND	0.00168	0.000169	0.0398	0.000299	0.00292	0.00146	0.000612	0.000130	0.000000756	0.000276	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0028	0.0000473	0.000130	0.00201	0.00000376	ND	ND	0.0000968	0.0301	0.000449	0.00255	0.00113	ND	0.000135	0.000000920	0.000257	ND
2/26/2024	Leialii Hawaiian Homelands (AM-01)	<0.0026	0.0000408	0.00113	0.00313	0.00000945	ND	0.00294	0.000332	0.0554	0.000530	0.00941	0.00386	0.000939	0.000156	0.00000115	0.000878	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.000137	0.000310	0.00597	0.0000118	ND	0.00269	0.000420	0.0302	0.000727	0.0110	0.00193	0.00140	0.000174	0.00000112	0.00104	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000351	0.000175	0.00243	0.0000222	ND	0.00268	0.000414	0.0380	0.000482	0.00899	0.00138	0.00109	0.000151	0.000000959	0.000839	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000581	0.000174	0.00268	0.00000611	ND	0.00210	0.000158	0.0301	0.000621	0.00477	0.00109	0.000629	0.000135	0.000000825	0.000396	ND
2/27/2024	Leialii Hawaiian Homelands (AM-01)	<0.0026	0.0000437	0.000487	0.00272	0.00000911	ND	0.00301	0.000336	0.0362	0.000414	0.00969	0.00184	0.00105	0.000151	0.00000119	0.000844	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.0000836	0.000490	0.00587	0.0000189	0.0000907	0.00381	0.000771	0.0309	0.00118	0.0196	0.00162	0.00297	0.000215	0.00000149	0.00177	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000376	0.000319	0.00483	0.0000719	ND	0.00490	0.00101	0.0338	0.000582	0.0216	0.00131	0.00232	0.000283	0.00000156	0.00234	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000511	0.000347	0.00373	0.0000145	ND	0.00292	0.000442	0.0250	0.000987	0.0135	0.000961	0.00123	0.000192	0.00000142	0.00111	ND
2/28/2024	Leialii Hawaiian Homelands (AM-01)	<0.0026	0.0000425	0.000569	0.00420	0.0000117	ND	0.00285	0.000535	0.0593	0.00139	0.0127	0.00222	0.00118	0.000153	0.00000151	0.00114	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.0000778	0.000313	0.00346	0.0000106	ND	0.00241	0.000294	0.0327	0.000900	0.00884	0.00200	0.00120	0.000174	0.00000141	0.000777	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000607	0.000259	0.00321	0.0000244	0.0000548	0.00286	0.000480	0.0323	0.000603	0.0115	0.00131	0.00137	0.000183	0.00000140	0.00100	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000445	0.000292	0.00269	0.00000799	ND	0.00202	0.000201	0.0202	0.000689	0.00661	0.000996	0.000671	0.000141	0.00000121	0.000514	ND
95% Upper Confidence Limit[2]		NA	0.000100	0.000510	0.00425	0.0000170	NA	0.00286	0.000420	0.0394	0.000770	0.0112	0.00196	0.00135	0.000170	0.00000110	0.00114	NA

Notes:
Heavy metals results for stations AM02-AM04 from 2/25-2/27 were reissued due to calibration and volume corrections

[1] Asbestos result determined by transmission electron microscopy (TEM) in accordance with ISO Method 10312. PCMe results are presented here.

[2] 95% UCL determined through 'best fit' lognormal or normal parametric statistics via W test

s/cc = structures per cubic centimeter

ug/m3 = micrograms per cubic meter

NA = Not Applicable

ND = Not detected at or above the laboratory reporting limit

* 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

Table 2
HDOH CAB Ambient Community Monitoring and Sampling
Particulate Monitoring Results for PM_{10}
Maui Wildfire, Lahaina
2/22/2024 - 2/28/2024
[Report Updated: 3/25/2024]

Screening Level		150 µg/m^3
2/22/2024	Leialii Hawaiian Homelands (AM-01)	5.6
	WW Pump Station #4 (AM-02)	6.3
	Lahaina Intermediate School (AM-03)	6.3
	Lahaina Boys & Girls Club (AM-04)	6.8
2/23/2024	Leialii Hawaiian Homelands (AM-01)	7.2
	WW Pump Station #4 (AM-02)	6.8
	Lahaina Intermediate School (AM-03)	6.1
	Lahaina Boys & Girls Club (AM-04)	5.7
2/24/2024	Leialii Hawaiian Homelands (AM-01)	5.0
	WW Pump Station #4 (AM-02)	7.6
	Lahaina Intermediate School (AM-03)	7.5
	Lahaina Boys & Girls Club (AM-04)	6.5
2/25/2024	Leialii Hawaiian Homelands (AM-01)	8.2
	WW Pump Station #4 (AM-02)	8.9
	Lahaina Intermediate School (AM-03)	7.2
	Lahaina Boys & Girls Club (AM-04)	6.8
2/26/2024	Leialii Hawaiian Homelands (AM-01)	7.5
	WW Pump Station #4 (AM-02)	8.0
	Lahaina Intermediate School (AM-03)	6.4
	Lahaina Boys & Girls Club (AM-04)	5.9
2/27/2024	Leialii Hawaiian Homelands (AM-01)	9.4
	WW Pump Station #4 (AM-02)	13
	Lahaina Intermediate School (AM-03)	11
	Lahaina Boys & Girls Club (AM-04)	9.1
2/28/2024	Leialii Hawaiian Homelands (AM-01)	7.6
	WW Pump Station #4 (AM-02)	7.7
	Lahaina Intermediate School (AM-03)	9.2
	Lahaina Boys & Girls Club (AM-04)	7.8

Notes:
µg/m3 = micrograms per cubic meter
All Stations on February 18 are based off of a 23 hr TWA calculation
24 hour TWA calculation results are shown in two significant figures
Results are based on 24 hour TWA calculation

Table 3
Maui Wildfire - Lahaina
Meteorological Data
2/22/2024-2/28/2024

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
2/22/2024	AM-01	Leialii Hawaiian Homelands	1.1	SSE	76	62	763.3
2/22/2024	AM-02	WW Pump Station #4	0.9	S	76	64	765.4
2/22/2024	AM-03	Lahaina Intermediate School	1.1	SSE	76	67	755.8
2/22/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	77	65	764.8
2/23/2024	AM-01	Leialii Hawaiian Homelands	1.1	SE	76	61	761.3
2/23/2024	AM-02	WW Pump Station #4	1.0	SE	76	64	763.4
2/23/2024	AM-03	Lahaina Intermediate School	1.1	SE	75	67	753.9
2/23/2024	AM-04	Lahaina Boys & Girls Club	1.1	S	76	66	762.9
2/24/2024	AM-01	Leialii Hawaiian Homelands	1.1	SE	74	67	761.2
2/24/2024	AM-02	WW Pump Station #4	0.9	SSE	75	68	763.3
2/24/2024	AM-03	Lahaina Intermediate School	1.0	SE	74	71	753.7
2/24/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	75	70	762.7
2/25/2024	AM-01	Leialii Hawaiian Homelands	1.2	SE	76	55	762.0
2/25/2024	AM-02	WW Pump Station #4	1.1	SE	75	59	764.1
2/25/2024	AM-03	Lahaina Intermediate School	1.1	ESE	75	62	754.6
2/25/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	75	61	763.7
2/26/2024	AM-01	Leialii Hawaiian Homelands	1.3	ESE	75	58	763.5
2/26/2024	AM-02	WW Pump Station #4	1.0	SE	75	61	765.6
2/26/2024	AM-03	Lahaina Intermediate School	1.1	SE	75	64	756.1
2/26/2024	AM-04	Lahaina Boys & Girls Club	1.1	SSW	75	64	765.4
2/27/2024	AM-01	Leialii Hawaiian Homelands	1.8	SE	77	55	763.4
2/27/2024	AM-02	WW Pump Station #4	1.5	SE	77	58	765.5
2/27/2024	AM-03	Lahaina Intermediate School	1.5	SE	77	60	755.9
2/27/2024	AM-04	Lahaina Boys & Girls Club	1.3	S	77	58	765.2
2/28/2024	AM-01	Leialii Hawaiian Homelands	1.2	SSE	76	57	762.2
2/28/2024	AM-02	WW Pump Station #4	1.1	SSE	76	61	764.2
2/28/2024	AM-03	Lahaina Intermediate School	1.2	SSE	76	62	754.7
2/28/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	76	62	764.0

Notes:
°F - Fahrenheit
mBar - millibar
mph - miles per hour

Appendix 1

Please note, comments pertaining to gypsum may be mentioned in the lab reports below. Gypsum is a common ingredient in drywall, plaster and cement so its presence in the sample filters is likely due to debris removal operations or other disturbances of built-environment fire debris. A more indepth discussion can be found in the attached weekly report.

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022224-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7119.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	Random	*(4.00)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**1**	**1**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0040**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**1**	**1**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0040**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**1**	**1**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0040**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID: 042403988
Client: Tetra Tech
Project ID: Maui Fires - Lahaina

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0001 **Customer Sample:** MFL-AM01-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B2	A6	None Detected									
B2	D8	B	1	1	1.48	0.08	CD	Chrysotile		MG_22, MG_23	
B2	H6	None Detected									
B3	B7	None Detected									
B3	H7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022224-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6961.4
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0002 **Customer Sample:** MFL-AM02-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B5	J3	None Detected									
B5	F2	None Detected									
B5	B5	None Detected									
B6	J5	None Detected									
B6	C7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022224-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7240.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0003 **Customer Sample:** MFL-AM03-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C2	J6	None Detected									
C2	G4	None Detected									
C2	B4	None Detected									
C3	B7	None Detected									
C3	H5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022224-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7162.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0004 **Customer Sample:** MFL-AM04-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C5	J5	None Detected									
C5	F2	None Detected									
C5	B1	None Detected									
C6	B8	None Detected									
C6	G9	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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EMSL Order:	042403988
Customer ID:	TTDC42
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Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

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Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022224-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0005		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
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EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0005 **Customer Sample:** MFL-FB01-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D2	A9	None Detected									
D2	C7	None Detected									
D2	E7	None Detected									
D2	G8	None Detected									
D2	I6	None Detected									
D3	J4	None Detected									
D3	H3	None Detected									
D3	F2	None Detected									
D3	D4	None Detected									
D3	B5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Project: **Maui Fires - Lahaina**

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Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022324-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7180.4
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0006 **Customer Sample:** MFL-AM01-022324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D5	J5	None Detected									
D5	H8	None Detected									
D5	E9	None Detected									
D6	H8	None Detected									
D6	B6	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022324-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7194.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0007 **Customer Sample:** MFL-AM02-022324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E2	A5	None Detected									
E2	D3	None Detected									
E2	G2	None Detected									
E3	C3	None Detected									
E3	G6	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022324-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7082.4
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0008 **Customer Sample:** MFL-AM03-022324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E5	B7	None Detected									
E5	D6	None Detected									
E5	G4	None Detected									
E6	C5	None Detected									
E6	H8	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022324-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7207.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0009 **Customer Sample:** MFL-AM04-022324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F2	A5	None Detected									
F2	E3	None Detected									
F2	I5	None Detected									
F3	B7	None Detected									
F3	I9	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042403988
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Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022324-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0010		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0010 **Customer Sample:** MFL-FB01-022324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F5	A4	None Detected									
F5	C5	None Detected									
F5	E2	None Detected									
F5	G3	None Detected									
F5	I5	None Detected									
F6	A4	None Detected									
F6	C5	None Detected									
F6	E7	None Detected									
F6	G6	None Detected									
F6	I4	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022424-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7060.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0011 **Customer Sample:** MFL-AM01-022424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G2	J4	None Detected									
G2	F3	None Detected									
G2	B1	None Detected									
G3	I1	None Detected									
G3	C3	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022424-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6970.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


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EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0012 **Customer Sample:** MFL-AM02-022424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G5	I2	None Detected									
G5	F3	None Detected									
G5	D5	None Detected									
G6	C4	None Detected									
G6	I3	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
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Project: **Maui Fires - Lahaina**

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Analysis Date:	03/04/2024
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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022424-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7190.4
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment

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EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0013 **Customer Sample:** MFL-AM03-022424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H2	J7	None Detected									
H2	G5	None Detected									
H2	E7	None Detected									
H3	H6	None Detected									
H3	C5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022424-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6952.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.36	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.

Approved Signatory

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Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0014 **Customer Sample:** MFL-AM04-022424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H5	B6	None Detected									
H5	D8	None Detected									
H5	G7	None Detected									
H6	B9	None Detected									
H6	H7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022424-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0015		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0015 **Customer Sample:** MFL-FB01-022424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
I3	J3	None Detected									
I3	I5	None Detected									
I3	H8	None Detected									
I3	G6	None Detected									
I3	D3	None Detected									
I4	A8	None Detected									
I4	C6	None Detected									
I4	E4	None Detected									
I4	G5	None Detected									
I4	I6	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022524-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7068.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0016 **Customer Sample:** MFL-AM01-022524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
I5	B6	None Detected									
I5	D8	None Detected									
I5	G10	None Detected									
I6	J1	None Detected									
I6	B1	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022524-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0017		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7217.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0017 **Customer Sample:** MFL-AM02-022524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
J2	B9	None Detected									
J2	E9	None Detected									
J2	I8	None Detected									
J3	H3	None Detected									
J3	B5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022524-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0018		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7259.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0018 **Customer Sample:** MFL-AM03-022524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
J5	A6	None Detected									
J5	E8	None Detected									
J5	H9	None Detected									
J6	A8	None Detected									
J6	H8	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022524-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0019		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6484.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0028**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.36	< 0.0028	Not Applicable	- 0.0028
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0028**	**Not Applicable**	**- 0.0028**

Comment
Numerous gypsum fibers present.


Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0019 **Customer Sample:** MFL-AM04-022524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
K2	J3	None Detected									
K2	G1	None Detected									
K2	B4	None Detected									
K3	G6	None Detected									
K3	C5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042403988
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Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/04/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022524-AB**		**Sample Description:**	
EMSL Sample Number:	042403988-0020		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0020 **Customer Sample:** MFL-FB01-022524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
K5	A3	None Detected									
K5	C4	None Detected									
K5	E3	None Detected									
K5	G4	None Detected									
K5	I5	None Detected									
K6	A5	None Detected									
K6	C3	None Detected									
K6	E1	None Detected									
K6	G2	None Detected									
K6	I4	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042403988
Customer ID:	TTDC42
Customer PO:	1206126
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	02/28/2024 09:50 AM
Analysis Date:	03/01/2024
Report Date:	03/05/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022224-AB**		**Sample Description:**	**Labblank**
EMSL Sample Number:	042403988-0021		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.18	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.18**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042403988**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042403988-0021 LB **Customer Sample:** MFL-AM01-022224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A1	J5	None Detected									
A1	H4	None Detected									
A1	F3	None Detected									
A1	D4	None Detected									
A1	B3	None Detected									
A2	A8	None Detected									
A2	C7	None Detected									
A2	E8	None Detected									
A2	G7	None Detected									
A2	I8	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

OrderID: 042403988

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

EMSL Order Number / Lab Use Only

#042403988 RECEIVED EMSL

24 FEB 28 AM 10:53

200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnAslab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information		Billing Information	
Customer ID:		Billing ID:	CINNAMINSON, NJ
Company Name:	TetraTech	Company Name:	
Contact Name:	Chelsea Saber	Billing Contact:	
Street Address:	1560 Broadway, Ste 1400	Street Address:	
City, State, Zip:	Denver, CO 80202	Country: USA	City, State, Zip: Country:
Phone:	703-489-2674		Phone:
Email(s) for Report:	chelsea.saber@tetratech.com		Email(s) for Invoice:

Project Information

Project Name/No:	Maui Fires - Lahaina	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	HI
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	Elin Wangen Saldaña	Sampled By Signature:	
No. of Samples in Shipment	20		

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 4-4.5 Hour AHERA ONLY ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

PCM Air
- ☐ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☒ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.8um ☒ 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM01-022224-AB		7,119.207	02/22/24 1106
MFL-AM02-022224-AB		6,961.426	02/22/24 1128
MFL-AM03-022224-AB		7,240.320	02/22/24 1306
MFL-AM04-022224-AB		7,162.272	02/22/24 1335
MFL-FB01-022224-AB		0	02/22/24 1200
MFL-AM01-022324-AB		7,180.439	02/23/24 1051
MFL-AM02-022324-AB		7,194.528	02/23/24 1131
MFL-AM03-022324-AB		7,082.406	02/23/24 1307

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

All samples received acceptable for analysis.

Method of Shipment:	FedEx	Sample Condition Upon Receipt:	
Relinquished by:		Date/Time: 02/26/24 1100	Received by: FX
Relinquished by:		Date/Time:	Received by:

Date/Time: 2/28/24 950am

Controlled Document - COC-05 Asbestos R16 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 042403988

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042403988 RECEIVED EMSL CINNAMINSON, NJ

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE (800) 220-3675
EMAIL CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

24 FEB 28 AM 10:53

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM04-022324-AB		7,207.632	02/23/24 1344
MFL-FB01-022324-AB		0	02/23/24 1200
MFL-AM01-022424-AB		7,060.879	02/24/24 1059
MFL-AM02-022424-AB		6,970.572	02/24/24 1125
MFL-AM03-022424-AB		7,190.363	02/24/24 1305
MFL-AM04-022424-AB		6,952.046	02/24/24 1329
MFL-FB01-022424-AB		0	02/24/24 1200
MFL-AM01-022524-AB		7,068.236	02/25/24 1100
MFL-AM02-022524-AB		7,217.179	02/25/24 1123
MFL-AM03-022524-AB		7,259.698	02/25/24 1306
MFL-AM04-022524-AB		6,484.335	02/25/24 1329
MFL-FB01-022524-AB		0	02/25/24 1200

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 02/26/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-05 Asbestos R16 10/26/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/5/2024 and Shanna Vasser 3/6/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 2/22/2024 - 2/25/2024
Report No: 42403988

√	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: None

Notes:

1. A revised report was issued on 3/6/2024 to correct sample ID in lab blank.

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022624-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6798.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0001 **Customer Sample:** MFL-AM01-022624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A5	A6	None Detected									
A5	D7	None Detected									
A5	H5	None Detected									
A6	D6	None Detected									
A6	H8	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022624-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7040.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0002 **Customer Sample:** MFL-AM02-022624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B2	A6	None Detected									
B2	D9	None Detected									
B2	G7	None Detected									
B3	I4	None Detected									
B3	D3	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022624-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7165.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0129
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.36	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.36**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0003 **Customer Sample:** MFL-AM03-022624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B5	J4	None Detected									
B5	F3	None Detected									
B5	C5	None Detected									
B6	I5	None Detected									
B6	D7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Tel/Fax: (800) 220-3675 / (856) 786-5974
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EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022624-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7167.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment


Approved Signatory

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0004 **Customer Sample:** MFL-AM04-022624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C2	J2	None Detected									
C2	G5	None Detected									
C2	B6	None Detected									
C3	I7	None Detected									
C3	B4	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
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EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022624-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0005		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	S / mm²	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

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EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0005 **Customer Sample:** MFL-FB01-022624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C5	J3	None Detected									
C5	H4	None Detected									
C5	F2	None Detected									
C5	D5	None Detected									
C5	B4	None Detected									
C6	A8	None Detected									
C6	C9	None Detected									
C6	E8	None Detected									
C6	G7	None Detected									
C6	I5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042404387
Customer ID:	TTDC42
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Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022724-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7020.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0006 **Customer Sample:** MFL-AM01-022724-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D2	J4	None Detected									
D2	G3	None Detected									
D2	C5	None Detected									
D3	B5	None Detected									
D3	H7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022724-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7062.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0007 **Customer Sample:** MFL-AM02-022724-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D5	A7	None Detected									
D5	E8	None Detected									
D5	H6	None Detected									
D6	C6	None Detected									
D6	I7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022724-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7163.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0008 **Customer Sample:** MFL-AM03-022724-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E2	J5	None Detected									
E2	F4	None Detected									
E2	C3	None Detected									
E3	C8	None Detected									
E3	I5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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EMSL Order:	042404387
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Customer PO:	1207085
Project ID:	

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022724-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7147.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.

Approved Signatory

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Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0009 **Customer Sample:** MFL-AM04-022724-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E5	A6	None Detected									
E5	D8	None Detected									
E5	H10	None Detected									
E6	H4	None Detected									
E6	B5	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022724-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0010		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

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EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0010 **Customer Sample:** MFL-FB01-022724-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F2	A9	None Detected									
F2	C8	None Detected									
F2	E9	None Detected									
F2	G10	None Detected									
F2	I8	None Detected									
F3	A8	None Detected									
F3	C7	None Detected									
F3	E8	None Detected									
F3	G9	None Detected									
F3	I7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022824-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7006.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0011 **Customer Sample:** MFL-AM01-022824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F5	J3	None Detected									
F5	G4	None Detected									
F5	A6	None Detected									
F6	C5	None Detected									
F6	H3	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022824-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7028.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 46.72	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0012 **Customer Sample:** MFL-AM02-022824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G2	J8	None Detected									
G2	H7	None Detected									
G2	B6	None Detected									
G3	B4	None Detected									
G3	H3	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

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200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022824-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7217.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment

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EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0013 **Customer Sample:** MFL-AM03-022824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G5	J7	None Detected									
G5	F7	None Detected									
G5	B8	None Detected									
G6	I7	None Detected									
G6	B9	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022824-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7166.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 46.72	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	-	**0**	**0**	**< 46.72**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment


Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0014 **Customer Sample:** MFL-AM04-022824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H2	J9	None Detected									
H2	G7	None Detected									
H2	B6	None Detected									
H3	H7	None Detected									
H3	B7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022824-AB**		**Sample Description:**	
EMSL Sample Number:	042404387-0015		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042404387**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0015 **Customer Sample:** MFL-FB01-022824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H5	J7	None Detected									
H5	H5	None Detected									
H5	F4	None Detected									
H5	D3	None Detected									
H5	B2	None Detected									
H6	J2	None Detected									
H6	H3	None Detected									
H6	F2	None Detected									
H6	D3	None Detected									
H6	B1	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

EMSL Analytical, Inc.
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Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042404387
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
Tetra Tech
1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/04/2024 08:50 AM
Analysis Date:	03/05/2024
Report Date:	03/06/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042404387-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

PCM EQUIVALENT (PCMe) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Actinolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Amosite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Anthophyllite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Crocidolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Tremolite	ADX	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**
Other Minerals	-	0	0	< 23.36	< N/A	Not Applicable	- Not Applicable
Total All Structures (PCMe)	-	**0**	**0**	**< 23.36**	**< N/A**	**Not Applicable**	**- Not Applicable**

Comment

Approved Signatory

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	042404387
Client:	Tetra Tech
Project ID:	Maui Fires - Lahaina

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404387-0016 **Customer Sample:** Lab Blank

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A2	J7	None Detected									
A2	I9	None Detected									
A3	D10	None Detected									
A3	F8	None Detected									
A3	H8	None Detected									
A4	J3	None Detected									
A4	H2	None Detected									
A4	F4	None Detected									
A4	D5	None Detected									
A4	B7	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
XCGBLD - Crosses Countable Grid Bar Length Doubled

OrderID: 042404387

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

EMSL Order Number / Lab Use Only

#042404387

200 Route 130 North
Cinnaminson, NJ 08077
PHONE (800) 220-3675
EMAIL CinnAslab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

RECEIVED EMSL CINNAMINSON, NJ 24 MAR -4 AM 11:28

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Tetra Tech	Company Name:	
Contact Name:	Chelsea Sauber	Billing Contact:	
Street Address:	1560 Broadway Ste 1400	Street Address:	
City, State, Zip:	Denver, CO 80202	City, State, Zip:	
Country:	USA	Country:	
Phone:	703-489-2674	Phone:	
Email(s) for Report:	chelsea.sauber@tetratech.com	Email(s) for Invoice:	

Project Information

Project Name/No:	Maui Fires - Lahaina	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name:	Elizabeth Grayson Saulsbury	Sampled By Signature:	No. of Samples in Shipment: 15

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 4-4.5 Hour AHERA ONLY ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

PCM Air
- ☐ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- POINT COUNT w/ GRAVIMETRIC ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198.1 (Friable - NY)
- ☐ NYS 198.6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☒ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.8um ☒ 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM01-022624-AB		6,798.917	02/26/24 1101
MFL-AM02-022624-AB		7,040.040	02/26/24 1121
MFL-AM03-022624-AB		7,165.008	02/26/24 1309
MFL-AM04-022624-AB		7,167.744	02/26/24 1331
MFL-FB01-022624-AB		0	02/26/24 1200
MFL-AM01-022724-AB		7,020.160	02/27/24 1101
MFL-AM02-022724-AB		7,062.902	02/27/24 1122
MFL-AM03-022724-AB		7,163.342	02/27/24 1315

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

All samples received acceptable for analysis.

Method of Shipment:	FedEx	Sample Condition Upon Receipt:	
Relinquished by:		Date/Time: 02/29/24 1100	Received by: FX
Relinquished by:		Date/Time:	Received by:

Date/Time: 3/4/24 850

Controlled Document - COC-05 Asbestos R16 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 042404387

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404387

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE (800) 220-3675
EMAIL CinnAsblab@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM04-022724-AB		7,147.735	02/27/24 1337
MFL-FB01-022724-AB		0	02/27/24 1200
MFL-AM01-022824-AB		7,006.612	02/28/24 1059
MFL-AM02-022824-AB		7,028.028	02/28/24 1116
MFL-AM03-022824-AB		7,217.897	02/28/24 1317
MFL-AM04-022824-AB		7,166.880	02/28/24 1343
MFL-FB01-022824-AB		0	02/28/24 1200

RECEIVED
EMSL
CINNAMINSON, NJ
24 MAR -4 AM 11:28

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 02/29/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/8/2024 and Shanna Vasser 3/11/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 2/26/2024 - 2/28/2024
Report No: 42404387

√	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: None.

Notes: None.

[redacted]

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

March 20, 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 03/04/24 13:11.

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

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
MFL-AM01-022224-HM	4030429-05	Air	02/22/24 23:59	03/04/24 13:11
MFL-AM02-022224-HM	4030429-06	Air	02/22/24 23:59	03/04/24 13:11
MFL-AM03-022224-HM	4030429-07	Air	02/22/24 23:59	03/04/24 13:11
MFL-AM04-022224-HM	4030429-08	Air	02/22/24 23:59	03/04/24 13:11
MFL-AM01-022324-HM	4030429-09	Air	02/23/24 23:59	03/04/24 13:11
MFL-AM02-022324-HM	4030429-10	Air	02/23/24 23:59	03/04/24 13:11
MFL-AM03-022324-HM/MS/I	4030429-11	Air	02/23/24 23:59	03/04/24 13:11
MFL-AM04-022324-HM	4030429-12	Air	02/23/24 23:59	03/04/24 13:11
MFL-FB01-022324-HM	4030429-13	Air	02/23/24 00:00	03/04/24 13:11
MFL-AM01-022424-HM	4030429-14	Air	02/24/24 23:59	03/04/24 13:11
MFL-AM02-022424-HM	4030429-15	Air	02/24/24 23:59	03/04/24 13:11
MFL-AM03-022424-HM	4030429-16	Air	02/24/24 23:59	03/04/24 13:11
MFL-AM04-022424-HM	4030429-17	Air	02/24/24 23:59	03/04/24 13:11
MFL-AM01-022524-HM	4030429-18	Air	02/25/24 23:59	03/04/24 13:11
MFL-AM02-022524-HM	4030429-19	Air	02/25/24 23:59	03/04/24 13:11
MFL-AM03-022524-HM	4030429-20	Air	02/25/24 23:59	03/04/24 13:11
MFL-AM04-022524-HM	4030429-21	Air	02/25/24 23:59	03/04/24 13:11

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

MFL-FB01-022524-HM	4030429-22	Air	02/25/24 00:00	03/04/24 13:11
MFL-AM01-022624-HM	4030429-23	Air	02/26/24 23:59	03/04/24 13:11
MFL-AM02-022624-HM	4030429-24	Air	02/26/24 23:59	03/04/24 13:11
MFL-AM03-022624-HM	4030429-25	Air	02/26/24 23:59	03/04/24 13:11
MFL-AM04-022624-HM	4030429-26	Air	02/26/24 23:59	03/04/24 13:11
MFL-AM01-022724-HM	4030429-27	Air	02/27/24 23:59	03/04/24 13:11
MFL-AM02-022724-HM	4030429-28	Air	02/27/24 23:59	03/04/24 13:11
MFL-AM03-022724-HM	4030429-29	Air	02/27/24 23:59	03/04/24 13:11
MFL-AM04-022724-HM	4030429-30	Air	02/27/24 23:59	03/04/24 13:11
MFL-FB01-022724-HM	4030429-31	Air	02/27/24 00:00	03/04/24 13:11
MFL-AM01-022824-HM/MS/I	4030429-32	Air	02/28/24 23:59	03/04/24 13:11
MFL-AM02-022824-HM	4030429-33	Air	02/28/24 23:59	03/04/24 13:11
MFL-AM03-022824-HM	4030429-34	Air	02/28/24 23:59	03/04/24 13:11
MFL-AM04-022824-HM	4030429-35	Air	02/28/24 23:59	03/04/24 13:11

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022224-HM
Matrix: Air
Lab ID: 4030429-05
Sample Volume: 2082.186 m³
Filter ID:
Sampled: 02/22/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 00:43

Comments: Q9545023 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.146**	SL	**0.0302**
Arsenic	**7440-38-2**	**1.01**		**0.00732**
Barium	**7440-39-3**	**2.85**		**0.836**
Beryllium	**7440-41-7**	**0.00574**		**0.00250**
Cadmium	7440-43-9	0.0292	U	0.0579
Chromium	**7440-47-3**	**2.17**		**1.73**
Cobalt	**7440-48-4**	**0.223**		**0.0341**
Copper	**7440-50-8**	**36.0**		**2.06**
Lead	**7439-92-1**	**0.540**		**0.167**
Manganese	**7439-96-5**	**6.41**		**1.48**
Molybdenum	**7439-98-7**	**1.56**		**0.281**
Nickel	**7440-02-0**	**0.723**		**0.509**
Selenium	**7782-49-2**	**0.133**		**0.00700**
Thallium	**7440-28-0**	**8.91E-4**	QB-01	**4.60E-4**
Vanadium	**7440-62-2**	**0.818**		**0.0413**
Zinc	7440-66-6	34.4	U	60.0

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022224-HM
Matrix: Air
Lab ID: 4030429-06
Sample Volume: 2115.561 m³
Filter ID:
Sampled: 02/22/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 00:59

Comments: Q9545020 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.234**	SL	**0.0297**
Arsenic	**7440-38-2**	**0.462**		**0.00721**
Barium	**7440-39-3**	**4.55**		**0.823**
Beryllium	**7440-41-7**	**0.0125**		**0.00246**
Cadmium	7440-43-9	0.0499	U	0.0570
Chromium	**7440-47-3**	**2.76**		**1.70**
Cobalt	**7440-48-4**	**0.422**		**0.0335**
Copper	**7440-50-8**	**23.1**		**2.02**
Lead	**7439-92-1**	**0.893**		**0.165**
Manganese	**7439-96-5**	**11.3**		**1.45**
Molybdenum	**7439-98-7**	**1.01**		**0.276**
Nickel	**7440-02-0**	**1.93**		**0.501**
Selenium	**7782-49-2**	**0.160**		**0.00689**
Thallium	**7440-28-0**	**0.00105**	QB-01	**4.53E-4**
Vanadium	**7440-62-2**	**1.38**		**0.0407**
Zinc	7440-66-6	37.0	U	59.1

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022224-HM
Matrix: Air
Lab ID: 4030429-07
Sample Volume: 1966.603 m³
Filter ID:
Sampled: 02/22/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 01:16

Comments: Q9545019 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.213**	SL	**0.0319**
Arsenic	**7440-38-2**	**0.712**		**0.00775**
Barium	**7440-39-3**	**3.88**		**0.885**
Beryllium	**7440-41-7**	**0.0319**		**0.00265**
Cadmium	7440-43-9	0.0482	U	0.0613
Chromium	**7440-47-3**	**3.32**		**1.83**
Cobalt	**7440-48-4**	**0.528**		**0.0361**
Copper	**7440-50-8**	**56.5**		**2.18**
Lead	**7439-92-1**	**0.457**		**0.177**
Manganese	**7439-96-5**	**12.9**		**1.56**
Molybdenum	**7439-98-7**	**2.29**		**0.297**
Nickel	**7440-02-0**	**1.53**		**0.539**
Selenium	**7782-49-2**	**0.187**		**0.00741**
Thallium	**7440-28-0**	**0.00103**	QB-01	**4.87E-4**
Vanadium	**7440-62-2**	**1.46**		**0.0438**
Zinc	7440-66-6	32.4	U	63.5

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022224-HM
Matrix: Air
Lab ID: 4030429-08
Sample Volume: 1997.093 m³
Filter ID:
Sampled: 02/22/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 01:31

Comments: Q9545018 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.199**	SL	**0.0314**
Arsenic	**7440-38-2**	**0.460**		**0.00763**
Barium	**7440-39-3**	**2.86**		**0.872**
Beryllium	**7440-41-7**	**0.00726**		**0.00261**
Cadmium	7440-43-9	0.0361	U	0.0604
Chromium	**7440-47-3**	**2.33**		**1.80**
Cobalt	**7440-48-4**	**0.201**		**0.0355**
Copper	**7440-50-8**	**19.3**		**2.14**
Lead	**7439-92-1**	**0.646**		**0.174**
Manganese	**7439-96-5**	**6.25**		**1.54**
Molybdenum	**7439-98-7**	**1.06**		**0.292**
Nickel	**7440-02-0**	**0.930**		**0.531**
Selenium	**7782-49-2**	**0.138**		**0.00730**
Thallium	**7440-28-0**	**7.76E-4**	QB-01	**4.80E-4**
Vanadium	**7440-62-2**	**0.881**		**0.0431**
Zinc	7440-66-6	35.2	U	62.6

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022324-HM
Matrix: Air
Lab ID: 4030429-09
Sample Volume: 2238.375 m³
Filter ID:
Sampled: 02/23/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 01:47

Comments: Q9545016- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0359**	SL	**0.0281**
Arsenic	**7440-38-2**	**0.275**		**0.00681**
Barium	**7440-39-3**	**1.56**		**0.778**
Beryllium	**7440-41-7**	**0.00298**		**0.00233**
Cadmium	7440-43-9	0.00703	U	0.0539
Chromium	**7440-47-3**	**1.81**		**1.61**
Cobalt	**7440-48-4**	**0.209**		**0.0317**
Copper	**7440-50-8**	**37.8**		**1.91**
Lead	**7439-92-1**	**0.301**		**0.156**
Manganese	**7439-96-5**	**2.74**		**1.37**
Molybdenum	**7439-98-7**	**1.44**		**0.261**
Nickel	**7440-02-0**	**0.576**		**0.474**
Selenium	**7782-49-2**	**0.0862**		**0.00651**
Thallium	**7440-28-0**	**5.02E-4**	QB-01	**4.28E-4**
Vanadium	**7440-62-2**	**0.423**		**0.0385**
Zinc	7440-66-6	42.5	U	55.8

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022324-HM
Matrix: Air
Lab ID: 4030429-10
Sample Volume: 2170.834 m³
Filter ID:
Sampled: 02/23/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 02:02

Comments: Q9545013- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.109**	SL	**0.0289**
Arsenic	**7440-38-2**	**0.227**		**0.00702**
Barium	**7440-39-3**	**4.19**		**0.802**
Beryllium	**7440-41-7**	**0.00811**		**0.00240**
Cadmium	7440-43-9	0.0134	U	0.0555
Chromium	**7440-47-3**	**2.25**		**1.66**
Cobalt	**7440-48-4**	**0.280**		**0.0327**
Copper	**7440-50-8**	**21.7**		**1.97**
Lead	**7439-92-1**	**0.588**		**0.160**
Manganese	**7439-96-5**	**7.72**		**1.42**
Molybdenum	**7439-98-7**	**1.02**		**0.269**
Nickel	**7440-02-0**	**1.18**		**0.489**
Selenium	**7782-49-2**	**0.154**		**0.00672**
Thallium	**7440-28-0**	**7.42E-4**	QB-01	**4.41E-4**
Vanadium	**7440-62-2**	**1.02**		**0.0396**
Zinc	7440-66-6	35.6	U	57.6

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022324-HM/MS/MS
Matrix: Air
Lab ID: 4030429-11
Sample Volume: 1934.051 m³
Filter ID:
Sampled: 02/23/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/05/24 17:12

Comments: Q9545011- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0473**	SL	**0.0325**
Arsenic	**7440-38-2**	**0.319**		**0.00788**
Barium	**7440-39-3**	**3.25**		**0.900**
Beryllium	**7440-41-7**	**0.0234**		**0.00269**
Cadmium	7440-43-9	0.00891	U	0.0623
Chromium	**7440-47-3**	**3.05**		**1.86**
Cobalt	**7440-48-4**	**0.424**		**0.0367**
Copper	**7440-50-8**	**45.4**		**2.21**
Lead	**7439-92-1**	**0.405**		**0.180**
Manganese	**7439-96-5**	**9.52**		**1.59**
Molybdenum	**7439-98-7**	**2.19**		**0.302**
Nickel	**7440-02-0**	**1.55**		**0.548**
Selenium	**7782-49-2**	**0.162**		**0.00754**
Thallium	**7440-28-0**	**8.02E-4**	QB-01	**4.95E-4**
Vanadium	**7440-62-2**	**1.18**		**0.0445**
Zinc	7440-66-6	32.2	U	64.6

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022324-HM
Matrix: Air
Lab ID: 4030429-12
Sample Volume: 1897.505 m³
Filter ID:
Sampled: 02/23/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 03:27

Comments: Q9545009- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0557**	SL	**0.0331**
Arsenic	**7440-38-2**	**0.180**		**0.00803**
Barium	**7440-39-3**	**2.58**		**0.917**
Beryllium	**7440-41-7**	**0.00682**		**0.00274**
Cadmium	7440-43-9	0.00909	U	0.0635
Chromium	**7440-47-3**	**2.31**		**1.89**
Cobalt	**7440-48-4**	**0.194**		**0.0374**
Copper	**7440-50-8**	**26.5**		**2.26**
Lead	**7439-92-1**	**0.616**		**0.183**
Manganese	**7439-96-5**	**5.99**		**1.62**
Molybdenum	**7439-98-7**	**1.22**		**0.308**
Nickel	**7440-02-0**	**0.753**		**0.559**
Selenium	**7782-49-2**	**0.144**		**0.00768**
Thallium	**7440-28-0**	**8.42E-4**	QB-01	**5.05E-4**
Vanadium	**7440-62-2**	**0.774**		**0.0454**
Zinc	7440-66-6	43.3	U	65.9

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-022324-HM
Matrix: Air
Lab ID: 4030429-13
Sample Volume: 2238.375 m³
Filter ID:
Sampled: 02/23/24 00:00
Received: 03/04/24 13:11
Analysis Date: 03/06/24 03:42

Comments: Q9545003- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.00625	SL, U	0.0281
Arsenic	7440-38-2	0.00446	U	0.00681
Barium	7440-39-3	0.485	U	0.778
Beryllium	7440-41-7	8.86E-4	U	0.00233
Cadmium	7440-43-9	0.00231	U	0.0539
Chromium	**7440-47-3**	**1.68**	FB-01	**1.61**
Cobalt	7440-48-4	0.0229	U	0.0317
Copper	**7440-50-8**	**2.05**	FB-01	**1.91**
Lead	7439-92-1	0.0897	U	0.156
Manganese	7439-96-5	0.175	U	1.37
Molybdenum	7439-98-7	0.236	U	0.261
Nickel	7440-02-0	0.228	U	0.474
Selenium	7782-49-2	0.00289	U	0.00651
Thallium	7440-28-0	1.91E-4	QB-01, U	4.28E-4
Vanadium	7440-62-2	0.0157	U	0.0385
Zinc	7440-66-6	18.5	U	55.8

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022424-HM
Matrix: Air
Lab ID: 4030429-14
Sample Volume: 1940.503 m³
Filter ID:
Sampled: 02/24/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 03:58

Comments: Q9545008- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0745**	SL	**0.0324**
Arsenic	**7440-38-2**	**0.484**		**0.00786**
Barium	**7440-39-3**	**13.2**		**0.897**
Beryllium	**7440-41-7**	**0.00886**		**0.00268**
Cadmium	7440-43-9	0.0126	U	0.0621
Chromium	**7440-47-3**	**2.48**		**1.85**
Cobalt	**7440-48-4**	**0.300**		**0.0366**
Copper	**7440-50-8**	**46.9**		**2.21**
Lead	**7439-92-1**	**0.632**		**0.179**
Manganese	**7439-96-5**	**9.26**		**1.58**
Molybdenum	**7439-98-7**	**2.93**		**0.301**
Nickel	**7440-02-0**	**1.05**		**0.547**
Selenium	**7782-49-2**	**0.143**		**0.00751**
Thallium	**7440-28-0**	**8.95E-4**	QB-01	**4.94E-4**
Vanadium	**7440-62-2**	**0.930**		**0.0444**
Zinc	7440-66-6	24.3	U	64.4

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022424-HM
Matrix: Air
Lab ID: 4030429-15
Sample Volume: 1950.897 m³
Filter ID:
Sampled: 02/24/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 04:14

Comments: Q9545007- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0963**	SL	**0.0322**
Arsenic	**7440-38-2**	**0.237**		**0.00781**
Barium	**7440-39-3**	**4.09**		**0.892**
Beryllium	**7440-41-7**	**0.0104**		**0.00267**
Cadmium	7440-43-9	0.0229	U	0.0618
Chromium	**7440-47-3**	**2.47**		**1.84**
Cobalt	**7440-48-4**	**0.321**		**0.0364**
Copper	**7440-50-8**	**27.2**		**2.19**
Lead	**7439-92-1**	**0.635**		**0.178**
Manganese	**7439-96-5**	**9.89**		**1.58**
Molybdenum	**7439-98-7**	**1.58**		**0.299**
Nickel	**7440-02-0**	**1.21**		**0.544**
Selenium	**7782-49-2**	**0.161**		**0.00747**
Thallium	**7440-28-0**	**0.00111**	QB-01	**4.91E-4**
Vanadium	**7440-62-2**	**1.03**		**0.0441**
Zinc	7440-66-6	36.5	U	64.0

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022424-HM
Matrix: Air
Lab ID: 4030429-16
Sample Volume: 2112.661 m³
Filter ID:
Sampled: 02/24/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 04:45

Comments: Q9545006- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0295	SL, U	0.0297
Arsenic	**7440-38-2**	**0.149**		**0.00722**
Barium	**7440-39-3**	**2.01**		**0.824**
Beryllium	**7440-41-7**	**0.0117**		**0.00246**
Cadmium	7440-43-9	0.00826	U	0.0571
Chromium	**7440-47-3**	**2.27**		**1.70**
Cobalt	**7440-48-4**	**0.239**		**0.0336**
Copper	**7440-50-8**	**39.4**		**2.03**
Lead	**7439-92-1**	**0.264**		**0.165**
Manganese	**7439-96-5**	**6.54**		**1.46**
Molybdenum	**7439-98-7**	**1.68**		**0.276**
Nickel	**7440-02-0**	**0.876**		**0.502**
Selenium	**7782-49-2**	**0.130**		**0.00690**
Thallium	**7440-28-0**	**7.03E-4**	QB-01	**4.54E-4**
Vanadium	**7440-62-2**	**0.741**		**0.0407**
Zinc	7440-66-6	21.1	U	59.1

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022424-HM
Matrix: Air
Lab ID: 4030429-17
Sample Volume: 1779.407 m³
Filter ID:
Sampled: 02/24/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 04:59

Comments: Q9545002- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0741**	SL	**0.0353**
Arsenic	**7440-38-2**	**0.780**		**0.00857**
Barium	**7440-39-3**	**3.61**		**0.978**
Beryllium	**7440-41-7**	**0.0112**		**0.00293**
Cadmium	7440-43-9	0.0127	U	0.0678
Chromium	**7440-47-3**	**3.18**		**2.02**
Cobalt	**7440-48-4**	**0.340**		**0.0399**
Copper	**7440-50-8**	**31.1**		**2.40**
Lead	**7439-92-1**	**1.63**		**0.196**
Manganese	**7439-96-5**	**10.9**		**1.73**
Molybdenum	**7439-98-7**	**1.12**		**0.328**
Nickel	**7440-02-0**	**1.09**		**0.596**
Selenium	**7782-49-2**	**0.150**		**0.00819**
Thallium	**7440-28-0**	**9.78E-4**	QB-01	**5.39E-4**
Vanadium	**7440-62-2**	**1.09**		**0.0484**
Zinc	7440-66-6	33.2	U	70.2

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022524-HM
Matrix: Air
Lab ID: 4030429-18
Sample Volume: 1987.062 m³
Filter ID:
Sampled: 02/25/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 05:15

Comments: Q9545001- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0354**	SL	**0.0316**
Arsenic	**7440-38-2**	**0.586**		**0.00767**
Barium	**7440-39-3**	**1.89**		**0.876**
Beryllium	**7440-41-7**	**0.00423**		**0.00262**
Cadmium	7440-43-9	0.0147	U	0.0607
Chromium	**7440-47-3**	**2.00**		**1.81**
Cobalt	**7440-48-4**	**0.132**		**0.0357**
Copper	**7440-50-8**	**53.8**		**2.15**
Lead	**7439-92-1**	**0.405**		**0.175**
Manganese	**7439-96-5**	**4.04**		**1.55**
Molybdenum	**7439-98-7**	**4.04**		**0.294**
Nickel	**7440-02-0**	**0.588**		**0.534**
Selenium	**7782-49-2**	**0.115**		**0.00734**
Thallium	**7440-28-0**	**8.31E-4**	QB-01	**4.82E-4**
Vanadium	**7440-62-2**	**0.357**		**0.0433**
Zinc	7440-66-6	26.3	U	62.9

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022524-HM
Matrix: Air
Lab ID: 4030429-19
Sample Volume: 2086.037 m³
Filter ID:
Sampled: 02/25/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 05:30

Comments: Q9537249- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0924**	SL	**0.0301**
Arsenic	**7440-38-2**	**0.219**		**0.00731**
Barium	**7440-39-3**	**3.62**		**0.835**
Beryllium	**7440-41-7**	**0.00631**		**0.00250**
Cadmium	7440-43-9	0.0104	U	0.0578
Chromium	**7440-47-3**	**2.10**		**1.72**
Cobalt	**7440-48-4**	**0.162**		**0.0340**
Copper	**7440-50-8**	**33.3**		**2.05**
Lead	**7439-92-1**	**0.495**		**0.167**
Manganese	**7439-96-5**	**5.12**		**1.47**
Molybdenum	**7439-98-7**	**1.85**		**0.280**
Nickel	**7440-02-0**	**0.725**		**0.509**
Selenium	**7782-49-2**	**0.166**		**0.00699**
Thallium	**7440-28-0**	**9.83E-4**	QB-01	**4.59E-4**
Vanadium	**7440-62-2**	**0.476**		**0.0413**
Zinc	7440-66-6	26.5	U	59.9

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022524-HM
Matrix: Air
Lab ID: 4030429-20
Sample Volume: 2199.916 m³
Filter ID:
Sampled: 02/25/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 05:45

Comments: Q9537259- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0289**	SL	**0.0285**
Arsenic	**7440-38-2**	**0.126**		**0.00693**
Barium	**7440-39-3**	**1.68**		**0.791**
Beryllium	**7440-41-7**	**0.00513**		**0.00237**
Cadmium	7440-43-9	0.00907	U	0.0548
Chromium	**7440-47-3**	**1.68**		**1.63**
Cobalt	**7440-48-4**	**0.169**		**0.0322**
Copper	**7440-50-8**	**39.8**		**1.95**
Lead	**7439-92-1**	**0.299**		**0.158**
Manganese	**7439-96-5**	**2.92**		**1.40**
Molybdenum	**7439-98-7**	**1.46**		**0.266**
Nickel	**7440-02-0**	**0.612**		**0.482**
Selenium	**7782-49-2**	**0.130**		**0.00663**
Thallium	**7440-28-0**	**7.56E-4**	QB-01	**4.36E-4**
Vanadium	**7440-62-2**	**0.276**		**0.0391**
Zinc	7440-66-6	18.0	U	56.8

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022524-HM
Matrix: Air
Lab ID: 4030429-21
Sample Volume: 1549.608 m³
Filter ID:
Sampled: 02/25/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 06:49

Comments: Q9537258- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0473**	SL	**0.0405**
Arsenic	**7440-38-2**	**0.130**		**0.00984**
Barium	**7440-39-3**	**2.01**		**1.12**
Beryllium	**7440-41-7**	**0.00376**		**0.00336**
Cadmium	7440-43-9	0.00946	U	0.0778
Chromium	7440-47-3	2.23	U	2.32
Cobalt	**7440-48-4**	**0.0968**		**0.0458**
Copper	**7440-50-8**	**30.1**		**2.76**
Lead	**7439-92-1**	**0.449**		**0.225**
Manganese	**7439-96-5**	**2.55**		**1.98**
Molybdenum	**7439-98-7**	**1.13**		**0.377**
Nickel	7440-02-0	0.535	U	0.685
Selenium	**7782-49-2**	**0.135**		**0.00941**
Thallium	**7440-28-0**	**9.20E-4**	QB-01	**6.18E-4**
Vanadium	**7440-62-2**	**0.257**		**0.0555**
Zinc	7440-66-6	28.4	U	80.6

[redacted]

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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-022524-HM
Matrix: Air
Lab ID: 4030429-22
Sample Volume: 1987.062 m³
Filter ID:
Sampled: 02/25/24 00:00
Received: 03/04/24 13:11
Analysis Date: 03/06/24 07:04

Comments: Q9537251- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.00647	SL, U	0.0316
Arsenic	7440-38-2	0.00484	U	0.00767
Barium	7440-39-3	0.805	U	0.876
Beryllium	7440-41-7	8.71E-4	U	0.00262
Cadmium	7440-43-9	0.00302	U	0.0607
Chromium	7440-47-3	1.53	U	1.81
Cobalt	7440-48-4	0.0221	U	0.0357
Copper	7440-50-8	1.03	U	2.15
Lead	7439-92-1	0.0755	U	0.175
Manganese	7439-96-5	0.163	U	1.55
Molybdenum	7439-98-7	0.261	U	0.294
Nickel	7440-02-0	0.244	U	0.534
Selenium	7782-49-2	0.00298	U	0.00734
Thallium	7440-28-0	2.01E-4	QB-01, U	4.82E-4
Vanadium	7440-62-2	0.0204	U	0.0433
Zinc	7440-66-6	25.2	U	62.9

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022624-HM
Matrix: Air
Lab ID: 4030429-23
Sample Volume: 1999.994 m³
Filter ID:
Sampled: 02/26/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 07:19

Comments: Q9537254- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0408**	SL	**0.0314**
Arsenic	**7440-38-2**	**1.13**		**0.00762**
Barium	**7440-39-3**	**3.13**		**0.870**
Beryllium	**7440-41-7**	**0.00945**		**0.00260**
Cadmium	7440-43-9	0.0198	U	0.0603
Chromium	**7440-47-3**	**2.94**		**1.80**
Cobalt	**7440-48-4**	**0.332**		**0.0355**
Copper	**7440-50-8**	**55.4**		**2.14**
Lead	**7439-92-1**	**0.530**		**0.174**
Manganese	**7439-96-5**	**9.41**		**1.54**
Molybdenum	**7439-98-7**	**3.86**		**0.292**
Nickel	**7440-02-0**	**0.939**		**0.530**
Selenium	**7782-49-2**	**0.156**		**0.00729**
Thallium	**7440-28-0**	**0.00115**	QB-01	**4.79E-4**
Vanadium	**7440-62-2**	**0.878**		**0.0430**
Zinc	7440-66-6	24.4	U	62.5

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022624-HM
Matrix: Air
Lab ID: 4030429-24
Sample Volume: 2114.089 m³
Filter ID:
Sampled: 02/26/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 07:33

Comments: Q9537253- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.137**	SL	**0.0297**
Arsenic	**7440-38-2**	**0.310**		**0.00721**
Barium	**7440-39-3**	**5.97**		**0.823**
Beryllium	**7440-41-7**	**0.0118**		**0.00246**
Cadmium	7440-43-9	0.0143	U	0.0570
Chromium	**7440-47-3**	**2.69**		**1.70**
Cobalt	**7440-48-4**	**0.420**		**0.0336**
Copper	**7440-50-8**	**30.2**		**2.02**
Lead	**7439-92-1**	**0.727**		**0.165**
Manganese	**7439-96-5**	**11.0**		**1.45**
Molybdenum	**7439-98-7**	**1.93**		**0.276**
Nickel	**7440-02-0**	**1.40**		**0.502**
Selenium	**7782-49-2**	**0.174**		**0.00690**
Thallium	**7440-28-0**	**0.00112**	QB-01	**4.53E-4**
Vanadium	**7440-62-2**	**1.04**		**0.0407**
Zinc	7440-66-6	29.4	U	59.1

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022624-HM
Matrix: Air
Lab ID: 4030429-25
Sample Volume: 2186.5 m³
Filter ID:
Sampled: 02/26/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 07:48

Comments: Q9537252- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0351**	SL	**0.0287**
Arsenic	**7440-38-2**	**0.175**		**0.00697**
Barium	**7440-39-3**	**2.43**		**0.796**
Beryllium	**7440-41-7**	**0.0222**		**0.00238**
Cadmium	7440-43-9	0.00968	U	0.0551
Chromium	**7440-47-3**	**2.68**		**1.64**
Cobalt	**7440-48-4**	**0.414**		**0.0324**
Copper	**7440-50-8**	**38.0**		**1.96**
Lead	**7439-92-1**	**0.482**		**0.159**
Manganese	**7439-96-5**	**8.99**		**1.41**
Molybdenum	**7439-98-7**	**1.38**		**0.267**
Nickel	**7440-02-0**	**1.09**		**0.485**
Selenium	**7782-49-2**	**0.151**		**0.00667**
Thallium	**7440-28-0**	**9.59E-4**	QB-01	**4.38E-4**
Vanadium	**7440-62-2**	**0.839**		**0.0394**
Zinc	7440-66-6	22.8	U	57.1

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022624-HM
Matrix: Air
Lab ID: 4030429-26
Sample Volume: 1869.937 m³
Filter ID:
Sampled: 02/26/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 08:04

Comments: Q9544998- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0581**	SL	**0.0336**
Arsenic	**7440-38-2**	**0.174**		**0.00815**
Barium	**7440-39-3**	**2.68**		**0.931**
Beryllium	**7440-41-7**	**0.00611**		**0.00278**
Cadmium	7440-43-9	0.0106	U	0.0645
Chromium	**7440-47-3**	**2.10**		**1.92**
Cobalt	**7440-48-4**	**0.158**		**0.0379**
Copper	**7440-50-8**	**30.1**		**2.29**
Lead	**7439-92-1**	**0.621**		**0.186**
Manganese	**7439-96-5**	**4.77**		**1.64**
Molybdenum	**7439-98-7**	**1.09**		**0.312**
Nickel	**7440-02-0**	**0.629**		**0.567**
Selenium	**7782-49-2**	**0.135**		**0.00780**
Thallium	**7440-28-0**	**8.25E-4**	QB-01	**5.12E-4**
Vanadium	**7440-62-2**	**0.396**		**0.0460**
Zinc	7440-66-6	24.6	U	66.8

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022724-HM
Matrix: Air
Lab ID: 4030429-27
Sample Volume: 2016.236 m³
Filter ID:
Sampled: 02/27/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 08:36

Comments: Q9544997- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0437**	SL	**0.0311**
Arsenic	**7440-38-2**	**0.487**		**0.00756**
Barium	**7440-39-3**	**2.72**		**0.863**
Beryllium	**7440-41-7**	**0.00911**		**0.00258**
Cadmium	7440-43-9	0.0127	U	0.0598
Chromium	**7440-47-3**	**3.01**		**1.78**
Cobalt	**7440-48-4**	**0.336**		**0.0352**
Copper	**7440-50-8**	**36.2**		**2.12**
Lead	**7439-92-1**	**0.414**		**0.173**
Manganese	**7439-96-5**	**9.69**		**1.53**
Molybdenum	**7439-98-7**	**1.84**		**0.290**
Nickel	**7440-02-0**	**1.05**		**0.526**
Selenium	**7782-49-2**	**0.151**		**0.00723**
Thallium	**7440-28-0**	**0.00119**	QB-01	**4.75E-4**
Vanadium	**7440-62-2**	**0.844**		**0.0427**
Zinc	7440-66-6	18.8	U	62.0

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022724-HM
Matrix: Air
Lab ID: 4030429-28
Sample Volume: 2064.893 m³
Filter ID:
Sampled: 02/27/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 08:51

Comments: Q9544996- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0836**	SL	**0.0304**
Arsenic	**7440-38-2**	**0.490**		**0.00738**
Barium	**7440-39-3**	**5.87**		**0.843**
Beryllium	**7440-41-7**	**0.0189**		**0.00252**
Cadmium	**7440-43-9**	**0.0907**		**0.0584**
Chromium	**7440-47-3**	**3.81**		**1.74**
Cobalt	**7440-48-4**	**0.771**		**0.0344**
Copper	**7440-50-8**	**30.9**		**2.07**
Lead	**7439-92-1**	**1.18**		**0.169**
Manganese	**7439-96-5**	**19.6**		**1.49**
Molybdenum	**7439-98-7**	**1.62**		**0.283**
Nickel	**7440-02-0**	**2.97**		**0.514**
Selenium	**7782-49-2**	**0.215**		**0.00706**
Thallium	**7440-28-0**	**0.00149**	QB-01	**4.64E-4**
Vanadium	**7440-62-2**	**1.77**		**0.0417**
Zinc	7440-66-6	35.0	U	60.5

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022724-HM
Matrix: Air
Lab ID: 4030429-29
Sample Volume: 2148.517 m³
Filter ID:
Sampled: 02/27/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 09:07

Comments: Q9554717- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0376**	SL	**0.0292**
Arsenic	**7440-38-2**	**0.319**		**0.00710**
Barium	**7440-39-3**	**4.83**		**0.810**
Beryllium	**7440-41-7**	**0.0719**		**0.00242**
Cadmium	7440-43-9	0.0186	U	0.0561
Chromium	**7440-47-3**	**4.90**		**1.67**
Cobalt	**7440-48-4**	**1.01**		**0.0330**
Copper	**7440-50-8**	**33.8**		**1.99**
Lead	**7439-92-1**	**0.582**		**0.162**
Manganese	**7439-96-5**	**21.6**		**1.43**
Molybdenum	**7439-98-7**	**1.31**		**0.272**
Nickel	**7440-02-0**	**2.32**		**0.494**
Selenium	**7782-49-2**	**0.283**		**0.00679**
Thallium	**7440-28-0**	**0.00156**	QB-01	**4.46E-4**
Vanadium	**7440-62-2**	**2.34**		**0.0401**
Zinc	7440-66-6	23.6	U	58.2

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022724-HM
Matrix: Air
Lab ID: 4030429-30
Sample Volume: 1859.012 m³
Filter ID:
Sampled: 02/27/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 10:13

Comments: Q9554716- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0511**	SL	**0.0338**
Arsenic	**7440-38-2**	**0.347**		**0.00820**
Barium	**7440-39-3**	**3.73**		**0.936**
Beryllium	**7440-41-7**	**0.0145**		**0.00280**
Cadmium	7440-43-9	0.0220	U	0.0649
Chromium	**7440-47-3**	**2.92**		**1.93**
Cobalt	**7440-48-4**	**0.442**		**0.0382**
Copper	**7440-50-8**	**25.0**		**2.30**
Lead	**7439-92-1**	**0.987**		**0.187**
Manganese	**7439-96-5**	**13.5**		**1.65**
Molybdenum	**7439-98-7**	**0.961**		**0.314**
Nickel	**7440-02-0**	**1.23**		**0.571**
Selenium	**7782-49-2**	**0.192**		**0.00784**
Thallium	**7440-28-0**	**0.00142**	QB-01	**5.15E-4**
Vanadium	**7440-62-2**	**1.11**		**0.0463**
Zinc	7440-66-6	29.2	U	67.2

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-022724-HM
Matrix: Air
Lab ID: 4030429-31
Sample Volume: 2016.236 m³
Filter ID:
Sampled: 02/27/24 00:00
Received: 03/04/24 13:11
Analysis Date: 03/06/24 10:29

Comments: Q9554714- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.00679	SL, U	0.0311
Arsenic	7440-38-2	0.00659	U	0.00756
Barium	7440-39-3	0.624	U	0.863
Beryllium	7440-41-7	0.00121	U	0.00258
Cadmium	7440-43-9	0.00143	U	0.0598
Chromium	7440-47-3	1.24	U	1.78
Cobalt	7440-48-4	0.0199	U	0.0352
Copper	7440-50-8	0.931	U	2.12
Lead	7439-92-1	0.0695	U	0.173
Manganese	7439-96-5	0.312	U	1.53
Molybdenum	7439-98-7	0.230	U	0.290
Nickel	7440-02-0	0.264	U	0.526
Selenium	7782-49-2	0.00242	U	0.00723
Thallium	7440-28-0	1.81E-4	QB-01, U	4.75E-4
Vanadium	7440-62-2	0.0179	U	0.0427
Zinc	7440-66-6	16.4	U	62.0

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022824-HM/MS/MS
Matrix: Air
Lab ID: 4030429-32
Sample Volume: 1972.928 m³
Filter ID:
Sampled: 02/28/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/05/24 20:56

Comments: Q9554715- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0425**	SL	**0.0318**
Arsenic	**7440-38-2**	**0.569**		**0.00773**
Barium	**7440-39-3**	**4.20**		**0.882**
Beryllium	**7440-41-7**	**0.0117**		**0.00264**
Cadmium	7440-43-9	0.0247	U	0.0611
Chromium	**7440-47-3**	**2.85**		**1.82**
Cobalt	**7440-48-4**	**0.535**		**0.0360**
Copper	**7440-50-8**	**59.3**	QM-07	**2.17**
Lead	**7439-92-1**	**1.39**		**0.176**
Manganese	**7439-96-5**	**12.7**		**1.56**
Molybdenum	**7439-98-7**	**2.22**		**0.296**
Nickel	**7440-02-0**	**1.18**		**0.538**
Selenium	**7782-49-2**	**0.153**		**0.00739**
Thallium	**7440-28-0**	**0.00151**	QB-01	**4.86E-4**
Vanadium	**7440-62-2**	**1.14**		**0.0436**
Zinc	7440-66-6	32.6	U	63.3

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022824-HM
Matrix: Air
Lab ID: 4030429-33
Sample Volume: 2012.102 m³
Filter ID:
Sampled: 02/28/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 10:43

Comments: Q9554713- Received in good condition.

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	**0.0312**
Arsenic	**7440-38-2**	**0.313**		**0.00758**
Barium	**7440-39-3**	**3.46**		**0.865**
Beryllium	**7440-41-7**	**0.0106**		**0.00259**
Cadmium	7440-43-9	0.0559	U	0.0599
Chromium	**7440-47-3**	**2.41**		**1.79**
Cobalt	**7440-48-4**	**0.294**		**0.0353**
Copper	**7440-50-8**	**32.7**		**2.13**
Lead	**7439-92-1**	**0.900**		**0.173**
Manganese	**7439-96-5**	**8.84**		**1.53**
Molybdenum	**7439-98-7**	**2.00**		**0.290**
Nickel	**7440-02-0**	**1.20**		**0.527**
Selenium	**7782-49-2**	**0.174**		**0.00725**
Thallium	**7440-28-0**	**0.00141**	QB-01	**4.76E-4**
Vanadium	**7440-62-2**	**0.777**		**0.0428**
Zinc	7440-66-6	38.8	U	62.1

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022824-HM
Matrix: Air
Lab ID: 4030429-34
Sample Volume: 2205.444 m³
Filter ID:
Sampled: 02/28/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 10:59

Comments: Q9554711- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0607**	SL	**0.0285**
Arsenic	**7440-38-2**	**0.259**		**0.00691**
Barium	**7440-39-3**	**3.21**		**0.789**
Beryllium	**7440-41-7**	**0.0244**		**0.00236**
Cadmium	**7440-43-9**	**0.0548**		**0.0547**
Chromium	**7440-47-3**	**2.86**		**1.63**
Cobalt	**7440-48-4**	**0.480**		**0.0322**
Copper	**7440-50-8**	**32.3**		**1.94**
Lead	**7439-92-1**	**0.603**		**0.158**
Manganese	**7439-96-5**	**11.5**		**1.39**
Molybdenum	**7439-98-7**	**1.31**		**0.265**
Nickel	**7440-02-0**	**1.37**		**0.481**
Selenium	**7782-49-2**	**0.183**		**0.00661**
Thallium	**7440-28-0**	**0.00140**	QB-01	**4.35E-4**
Vanadium	**7440-62-2**	**1.00**		**0.0390**
Zinc	7440-66-6	28.0	U	56.7

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022824-HM
Matrix: Air
Lab ID: 4030429-35
Sample Volume: 1869.158 m³
Filter ID:
Sampled: 02/28/24 23:59
Received: 03/04/24 13:11
Analysis Date: 03/06/24 11:14

Comments: Q9554710- Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0445**	SL	**0.0336**
Arsenic	**7440-38-2**	**0.292**		**0.00816**
Barium	**7440-39-3**	**2.69**		**0.931**
Beryllium	**7440-41-7**	**0.00799**		**0.00279**
Cadmium	7440-43-9	0.0108	U	0.0645
Chromium	**7440-47-3**	**2.02**		**1.92**
Cobalt	**7440-48-4**	**0.201**		**0.0380**
Copper	**7440-50-8**	**20.2**		**2.29**
Lead	**7439-92-1**	**0.689**		**0.186**
Manganese	**7439-96-5**	**6.61**		**1.65**
Molybdenum	**7439-98-7**	**0.996**		**0.312**
Nickel	**7440-02-0**	**0.671**		**0.568**
Selenium	**7782-49-2**	**0.141**		**0.00780**
Thallium	**7440-28-0**	**0.00121**	QB-01	**5.13E-4**
Vanadium	**7440-62-2**	**0.514**		**0.0460**
Zinc	7440-66-6	25.2	U	66.9

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
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 2403017 - B4C0503										
Calibration Blank (2403017-CCB1)				Prepared & Analyzed: 03/05/24						
Antimony	0.500		ng/l							
Arsenic	3.38		ng/l							
Barium	0.774		ng/l							
Beryllium	0.281		ng/l							
Cadmium	0.196		ng/l							
Chromium	3.68		ng/l							
Cobalt	0.759		ng/l							
Copper	490		ng/l							
Lead	3.80		ng/l							
Manganese	11.5		ng/l							
Molybdenum	17.9		ng/l							
Nickel	2.87		ng/l							
Selenium	4.63		ng/l							
Thallium	1.03		ng/l							
Vanadium	39.5		ng/l							
Zinc	-2.46		ng/l							U
Calibration Blank (2403017-CCB2)				Prepared & Analyzed: 03/05/24						
Antimony	0.435		ng/l							
Arsenic	2.13		ng/l							
Barium	-0.0640		ng/l							U
Beryllium	0.113		ng/l							
Cadmium	-0.0828		ng/l							U
Chromium	1.55		ng/l							
Cobalt	0.290		ng/l							
Copper	324		ng/l							
Lead	1.97		ng/l							
Manganese	6.68		ng/l							
Molybdenum	5.27		ng/l							
Nickel	1.14		ng/l							
Selenium	-1.24		ng/l							U
Thallium	0.935		ng/l							
Vanadium	36.0		ng/l							
Zinc	-2.83		ng/l							U
Calibration Blank (2403017-CCB3)				Prepared & Analyzed: 03/05/24						
Antimony	0.441		ng/l							
Arsenic	6.74		ng/l							
Barium	0.476		ng/l							
Beryllium	-0.318		ng/l							U

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REPORTED: 03/20/24 12:21
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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 2403017 - B4C0503										
Calibration Blank (2403017-CCB3) Contin				Prepared & Analyzed: 03/05/24						
Cadmium	-0.0245		ng/l							U
Chromium	1.52		ng/l							
Cobalt	0.300		ng/l							
Copper	223		ng/l							
Lead	2.59		ng/l							
Manganese	6.47		ng/l							
Molybdenum	4.22		ng/l							
Nickel	2.00		ng/l							
Selenium	-0.354		ng/l							U
Thallium	1.00		ng/l							
Vanadium	25.9		ng/l							
Zinc	-72.7		ng/l							U
Calibration Blank (2403017-CCB4)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	0.242		ng/l							
Arsenic	5.97		ng/l							
Barium	-0.229		ng/l							U
Beryllium	0.0307		ng/l							
Cadmium	-0.0462		ng/l							U
Chromium	1.48		ng/l							
Cobalt	0.442		ng/l							
Copper	302		ng/l							
Lead	2.16		ng/l							
Manganese	8.25		ng/l							
Molybdenum	6.09		ng/l							
Nickel	2.42		ng/l							
Selenium	-2.15		ng/l							U
Thallium	1.25		ng/l							
Vanadium	28.1		ng/l							
Zinc	-73.4		ng/l							U
Calibration Blank (2403017-CCB5)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	0.157		ng/l							
Arsenic	7.77		ng/l							
Barium	0.790		ng/l							
Beryllium	-0.685		ng/l							U
Cadmium	0.168		ng/l							
Chromium	1.67		ng/l							
Cobalt	1.88		ng/l							
Copper	131		ng/l							

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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 2403017 - B4C0503										
Calibration Blank (2403017-CCB5) Contin				Prepared: 03/05/24 Analyzed: 03/06/24						
Lead	1.86		ng/l							
Manganese	9.55		ng/l							
Molybdenum	5.81		ng/l							
Nickel	2.76		ng/l							
Selenium	1.97		ng/l							
Thallium	0.919		ng/l							
Vanadium	14.5		ng/l							
Zinc	-57.3		ng/l							U
Calibration Blank (2403017-CCB6)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	0.715		ng/l							
Arsenic	9.27		ng/l							
Barium	2.62		ng/l							
Beryllium	-0.313		ng/l							U
Cadmium	0.180		ng/l							
Chromium	5.38		ng/l							
Cobalt	0.855		ng/l							
Copper	129		ng/l							
Lead	3.63		ng/l							
Manganese	12.0		ng/l							
Molybdenum	7.00		ng/l							
Nickel	2.89		ng/l							
Selenium	2.34		ng/l							
Thallium	0.904		ng/l							
Vanadium	13.9		ng/l							
Zinc	-60.7		ng/l							U
Calibration Blank (2403017-CCB7)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	0.302		ng/l							
Arsenic	10.6		ng/l							
Barium	0.761		ng/l							
Beryllium	-0.517		ng/l							U
Cadmium	0.0665		ng/l							
Chromium	1.06		ng/l							
Cobalt	0.521		ng/l							
Copper	104		ng/l							
Lead	2.06		ng/l							
Manganese	7.44		ng/l							
Molybdenum	5.32		ng/l							
Nickel	1.92		ng/l							

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REPORTED: 03/20/24 12:21
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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 2403017 - B4C0503										
Calibration Blank (2403017-CCB7) Contin				Prepared: 03/05/24 Analyzed: 03/06/24						
Selenium	-7.74		ng/l							U
Thallium	1.12		ng/l							
Vanadium	10.3		ng/l							
Zinc	-70.1		ng/l							U
Calibration Check (2403017-CCV1)				Prepared & Analyzed: 03/05/24						
Antimony	20200		ng/l	20000		101	90-110			
Arsenic	20100		ng/l	20000		101	90-110			
Barium	201000		ng/l	200000		101	90-110			
Beryllium	4870		ng/l	5000.0		97.4	90-110			
Cadmium	20500		ng/l	20000		102	90-110			
Chromium	240000		ng/l	240000		99.9	90-110			
Cobalt	51100		ng/l	50000		102	90-110			
Copper	2.06E6		ng/l	2.0000E6		103	90-110			
Lead	202000		ng/l	200000		101	90-110			
Manganese	507000		ng/l	500000		101	90-110			
Molybdenum	50800		ng/l	50000		102	90-110			
Nickel	123000		ng/l	120000		103	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Thallium	503		ng/l	500.00		101	90-110			
Vanadium	19900		ng/l	20000		99.3	90-110			
Zinc	537000		ng/l	500000		107	90-110			
Calibration Check (2403017-CCV2)				Prepared & Analyzed: 03/05/24						
Antimony	20300		ng/l	20000		101	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	198000		ng/l	200000		99.2	90-110			
Beryllium	4880		ng/l	5000.0		97.7	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	50700		ng/l	50000		101	90-110			
Copper	2.08E6		ng/l	2.0000E6		104	90-110			
Lead	201000		ng/l	200000		101	90-110			
Manganese	505000		ng/l	500000		101	90-110			
Molybdenum	51100		ng/l	50000		102	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Thallium	488		ng/l	500.00		97.7	90-110			
Vanadium	20300		ng/l	20000		102	90-110			
Zinc	540000		ng/l	500000		108	90-110			

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
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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 2403017 - B4C0503										
Calibration Check (2403017-CCV3)				Prepared & Analyzed: 03/05/24						
Antimony	20100		ng/l	20000		100	90-110			
Arsenic	20100		ng/l	20000		101	90-110			
Barium	199000		ng/l	200000		99.3	90-110			
Beryllium	4940		ng/l	5000.0		98.8	90-110			
Cadmium	20300		ng/l	20000		101	90-110			
Chromium	240000		ng/l	240000		100	90-110			
Cobalt	50000		ng/l	50000		99.9	90-110			
Copper	2.05E6		ng/l	2.0000E6		103	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	501000		ng/l	500000		100	90-110			
Molybdenum	50000		ng/l	50000		100	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	19900		ng/l	20000		99.6	90-110			
Thallium	479		ng/l	500.00		95.8	90-110			
Vanadium	19900		ng/l	20000		99.4	90-110			
Zinc	533000		ng/l	500000		107	90-110			
Calibration Check (2403017-CCV4)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	20500		ng/l	20000		103	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4880		ng/l	5000.0		97.5	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	243000		ng/l	240000		101	90-110			
Cobalt	50500		ng/l	50000		101	90-110			
Copper	2.07E6		ng/l	2.0000E6		103	90-110			
Lead	203000		ng/l	200000		101	90-110			
Manganese	512000		ng/l	500000		102	90-110			
Molybdenum	50400		ng/l	50000		101	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Thallium	490		ng/l	500.00		98.0	90-110			
Vanadium	20300		ng/l	20000		101	90-110			
Zinc	541000		ng/l	500000		108	90-110			
Calibration Check (2403017-CCV5)				Prepared: 03/05/24 Analyzed: 03/06/24						
Antimony	20100		ng/l	20000		101	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	197000		ng/l	200000		98.7	90-110			
Beryllium	4870		ng/l	5000.0		97.5	90-110			

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
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 2403017 - B4C0503										
Calibration Check (2403017-CCV5) Contin					Prepared: 03/05/24 Analyzed: 03/06/24					
Cadmium	20200		ng/l	20000		101	90-110			
Chromium	238000		ng/l	240000		99.3	90-110			
Cobalt	49700		ng/l	50000		99.3	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	199000		ng/l	200000		99.7	90-110			
Manganese	504000		ng/l	500000		101	90-110			
Molybdenum	49700		ng/l	50000		99.4	90-110			
Nickel	120000		ng/l	120000		99.7	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Thallium	472		ng/l	500.00		94.4	90-110			
Vanadium	19700		ng/l	20000		98.3	90-110			
Zinc	531000		ng/l	500000		106	90-110			
Calibration Check (2403017-CCV6)					Prepared: 03/05/24 Analyzed: 03/06/24					
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20600		ng/l	20000		103	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4770		ng/l	5000.0		95.3	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	50900		ng/l	50000		102	90-110			
Copper	2.09E6		ng/l	2.0000E6		104	90-110			
Lead	204000		ng/l	200000		102	90-110			
Manganese	516000		ng/l	500000		103	90-110			
Molybdenum	50600		ng/l	50000		101	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	477		ng/l	500.00		95.4	90-110			
Vanadium	20000		ng/l	20000		100	90-110			
Zinc	543000		ng/l	500000		109	90-110			
Calibration Check (2403017-CCV7)					Prepared: 03/05/24 Analyzed: 03/06/24					
Antimony	20400		ng/l	20000		102	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	201000		ng/l	200000		101	90-110			
Beryllium	4650		ng/l	5000.0		92.9	90-110			
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	242000		ng/l	240000		101	90-110			
Cobalt	50700		ng/l	50000		101	90-110			
Copper	2.09E6		ng/l	2.0000E6		104	90-110			

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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: 03/20/24 12:21
SUBMITTED: 03/04/24
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 2403017 - B4C0503										
Calibration Check (2403017-CCV7) Contin				Prepared: 03/05/24 Analyzed: 03/06/24						
Lead	203000		ng/l	200000		102	90-110			
Manganese	514000		ng/l	500000		103	90-110			
Molybdenum	50800		ng/l	50000		102	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20500		ng/l	20000		102	90-110			
Thallium	476		ng/l	500.00		95.3	90-110			
Vanadium	20000		ng/l	20000		100	90-110			
Zinc	537000		ng/l	500000		107	90-110			
High Cal Check (2403017-HCV1)				Prepared & Analyzed: 03/05/24						
Antimony	39600		ng/l	40000		99.0	95-105			
Arsenic	39500		ng/l	40000		98.7	95-105			
Barium	393000		ng/l	400000		98.3	95-105			
Beryllium	9560		ng/l	10000		95.6	95-105			
Cadmium	39300		ng/l	40000		98.3	95-105			
Chromium	477000		ng/l	480000		99.3	95-105			
Cobalt	97900		ng/l	100000		97.9	95-105			
Copper	3.91E6		ng/l	4.0000E6		97.8	95-105			
Lead	397000		ng/l	400000		99.2	95-105			
Manganese	980000		ng/l	1.0000E6		98.0	95-105			
Molybdenum	98500		ng/l	100000		98.5	95-105			
Nickel	234000		ng/l	240000		97.7	95-105			
Selenium	39600		ng/l	40000		99.0	95-105			
Thallium	991		ng/l	1000.0		99.1	95-105			
Vanadium	40100		ng/l	40000		100	95-105			
Zinc	967000		ng/l	1.0000E6		96.7	95-105			
Initial Cal Blank (2403017-ICB1)				Prepared & Analyzed: 03/05/24						
Antimony	0.941		ng/l							
Arsenic	-4.14		ng/l							U
Barium	-0.264		ng/l							U
Beryllium	-0.0451		ng/l							U
Cadmium	-0.0173		ng/l							U
Chromium	0.416		ng/l							
Cobalt	0.311		ng/l							
Copper	464		ng/l							
Lead	2.55		ng/l							
Manganese	9.55		ng/l							
Molybdenum	8.14		ng/l							
Nickel	-2.34		ng/l							U

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403017 - B4C0503										
Initial Cal Blank (2403017-ICB1) Continu				Prepared & Analyzed: 03/05/24						
Selenium	-6.77		ng/l							U
Thallium	0.812		ng/l							
Vanadium	56.9		ng/l							
Zinc	-44.9		ng/l							U
Initial Cal Check (2403017-ICV1)				Prepared & Analyzed: 03/05/24						
Antimony	19500		ng/l	20000		97.5	90-110			
Arsenic	19700		ng/l	20000		98.5	90-110			
Barium	195000		ng/l	200000		97.4	90-110			
Beryllium	5030		ng/l	5000.0		101	90-110			
Cadmium	20300		ng/l	20000		101	90-110			
Chromium	233000		ng/l	240000		97.0	90-110			
Cobalt	48700		ng/l	50000		97.4	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.3	90-110			
Lead	193000		ng/l	200000		96.5	90-110			
Manganese	475000		ng/l	500000		94.9	90-110			
Molybdenum	49000		ng/l	50000		97.9	90-110			
Nickel	117000		ng/l	120000		97.3	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Thallium	492		ng/l	500.00		98.3	90-110			
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	523000		ng/l	500000		105	90-110			
Interference Check A (2403017-IFA1)				Prepared & Analyzed: 03/05/24						
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
Lead	0.00		ng/l				80-120			U
Manganese	0.00		ng/l				80-120			U
Molybdenum	297000		ng/l	300000		99.1	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

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403017 - B4C0503										
Interference Check B (2403017-IFB1)				Prepared & Analyzed: 03/05/24						
Antimony	20300		ng/l	20000		102	80-120			
Arsenic	20300		ng/l	20000		102	80-120			
Barium	202000		ng/l	200000		101	80-120			
Beryllium	4880		ng/l	5000.0		97.5	80-120			
Cadmium	19500		ng/l	20000		97.4	80-120			
Chromium	229000		ng/l	240000		95.5	80-120			
Cobalt	48900		ng/l	50000		97.9	80-120			
Copper	1.90E6		ng/l	2.0000E6		95.0	80-120			
Lead	206000		ng/l	200000		103	80-120			
Manganese	512000		ng/l	500000		102	80-120			
Molybdenum	352000		ng/l	350000		101	80-120			
Nickel	115000		ng/l	120000		96.1	80-120			
Selenium	19200		ng/l	20000		95.9	80-120			
Thallium	514		ng/l	500.00		103	80-120			
Vanadium	18900		ng/l	20000		94.3	80-120			
Zinc	487000		ng/l	500000		97.4	80-120			
Batch B4C0503 - ICP-MS Extraction										
Blank (B4C0503-BLK1)				Prepared & Analyzed: 03/05/24						
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	0.0741	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
Nickel	ND	0.652	ng/m³ Air							U
Selenium	ND	0.00896	ng/m³ Air							U
Thallium	ND	5.89E-4	ng/m³ Air							QB-01, U
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4C0503-BS1)				Prepared & Analyzed: 03/05/24						
Antimony	0.923	0.0386	ng/m³ Air	1.3829		66.7	80-120			SL
Arsenic	2.71	0.00937	ng/m³ Air	2.7658		98.0	80-120			
Barium	27.3	1.07	ng/m³ Air	27.658		98.9	80-120			

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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 B4C0503 - ICP-MS Extraction										
LCS (B4C0503-BS1) Continued					Prepared & Analyzed: 03/05/24					
Beryllium	1.38	0.00320	ng/m³ Air	1.3829		100	80-120			
Cadmium	1.39	0.0741	ng/m³ Air	1.3829		101	80-120			
Chromium	15.4	2.21	ng/m³ Air	13.829		111	80-120			
Cobalt	1.37	0.0436	ng/m³ Air	1.3829		99.4	80-120			
Copper	30.5	2.63	ng/m³ Air	27.658		110	80-120			
Lead	13.6	0.214	ng/m³ Air	13.829		98.1	80-120			
Manganese	8.62	1.89	ng/m³ Air	8.2975		104	80-120			
Molybdenum	1.46	0.359	ng/m³ Air	1.3829		106	80-120			
Nickel	2.90	0.652	ng/m³ Air	2.7658		105	80-120			
Selenium	2.76	0.00896	ng/m³ Air	2.7658		99.9	80-120			
Thallium	0.137	5.89E-4	ng/m³ Air	0.13829		99.1	80-120			QB-01
Vanadium	2.77	0.0529	ng/m³ Air	2.7658		100	80-120			
Zinc	126	76.8	ng/m³ Air	82.975		152	80-120			
LCS (B4C0503-BS2)					Prepared & Analyzed: 03/05/24					
Antimony	0.913	0.0386	ng/m³ Air	1.3829		66.0	80-120			SL
Arsenic	2.66	0.00937	ng/m³ Air	2.7658		96.0	80-120			
Barium	27.2	1.07	ng/m³ Air	27.658		98.4	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.5	80-120			
Cadmium	1.38	0.0741	ng/m³ Air	1.3829		99.6	80-120			
Chromium	15.2	2.21	ng/m³ Air	13.829		110	80-120			
Cobalt	1.35	0.0436	ng/m³ Air	1.3829		97.6	80-120			
Copper	30.0	2.63	ng/m³ Air	27.658		108	80-120			
Lead	13.4	0.214	ng/m³ Air	13.829		96.7	80-120			
Manganese	8.45	1.89	ng/m³ Air	8.2975		102	80-120			
Molybdenum	1.43	0.359	ng/m³ Air	1.3829		103	80-120			
Nickel	2.89	0.652	ng/m³ Air	2.7658		104	80-120			
Selenium	2.68	0.00896	ng/m³ Air	2.7658		97.1	80-120			
Thallium	0.135	5.89E-4	ng/m³ Air	0.13829		97.7	80-120			QB-01
Vanadium	2.75	0.0529	ng/m³ Air	2.7658		99.5	80-120			
Zinc	122	76.8	ng/m³ Air	82.975		148	80-120			
Duplicate (B4C0503-DUP1)		**Source: 4030429-11**			Prepared & Analyzed: 03/05/24					
Antimony	0.0536	0.0325	ng/m³ Air		0.0473			12.6	10	SL
Arsenic	0.350	0.00788	ng/m³ Air		0.319			9.14	10	
Barium	3.32	0.900	ng/m³ Air		3.25			2.05	10	
Beryllium	0.0233	0.00269	ng/m³ Air		0.0234			0.546	10	
Cadmium	ND	0.0623	ng/m³ Air		ND				10	U
Chromium	3.23	1.86	ng/m³ Air		3.05			5.65	10	
Cobalt	0.443	0.0367	ng/m³ Air		0.424			4.37	10	

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4C0503 - ICP-MS Extraction										
Duplicate (B4C0503-DUP1) Continued			**Source: 4030429-11**		Prepared & Analyzed: 03/05/24					
Copper	49.0	2.21	ng/m³ Air		45.4			7.63	10	
Lead	0.412	0.180	ng/m³ Air		0.405			1.58	10	
Manganese	9.89	1.59	ng/m³ Air		9.52			3.81	10	
Molybdenum	2.30	0.302	ng/m³ Air		2.19			4.94	10	
Nickel	1.64	0.548	ng/m³ Air		1.55			5.25	10	
Selenium	0.164	0.00754	ng/m³ Air		0.162			1.14	10	
Thallium	8.23E-4	4.95E-4	ng/m³ Air		8.02E-4			2.59	10	QB-01
Vanadium	1.25	0.0445	ng/m³ Air		1.18			5.54	10	
Zinc	ND	64.6	ng/m³ Air		ND				10	U
Duplicate (B4C0503-DUP2)			**Source: 4030429-32**		Prepared & Analyzed: 03/05/24					
Antimony	0.0465	0.0318	ng/m³ Air		0.0425			9.04	10	SL
Arsenic	0.524	0.00773	ng/m³ Air		0.569			8.28	10	
Barium	4.21	0.882	ng/m³ Air		4.20			0.341	10	
Beryllium	0.0128	0.00264	ng/m³ Air		0.0117			8.35	10	
Cadmium	ND	0.0611	ng/m³ Air		ND				10	U
Chromium	2.84	1.82	ng/m³ Air		2.85			0.0852	10	
Cobalt	0.570	0.0360	ng/m³ Air		0.535			6.36	10	
Copper	56.9	2.17	ng/m³ Air		59.3			4.21	10	
Lead	1.28	0.176	ng/m³ Air		1.39			8.54	10	
Manganese	13.4	1.56	ng/m³ Air		12.7			5.46	10	
Molybdenum	2.37	0.296	ng/m³ Air		2.22			6.25	10	
Nickel	1.26	0.538	ng/m³ Air		1.18			6.39	10	
Selenium	0.168	0.00739	ng/m³ Air		0.153			9.27	10	
Thallium	0.00147	4.86E-4	ng/m³ Air		0.00151			2.57	10	QB-01
Vanadium	1.23	0.0436	ng/m³ Air		1.14			7.49	10	
Zinc	ND	63.3	ng/m³ Air		ND				10	U
Duplicate (B4C0503-DUP3)			**Source: 4030429-15**		Prepared: 03/05/24 Analyzed: 03/06/24					
Antimony	0.0974	0.0322	ng/m³ Air		0.0963			1.08	10	SL
Arsenic	0.243	0.00781	ng/m³ Air		0.237			2.40	10	
Barium	4.18	0.892	ng/m³ Air		4.09			2.33	10	
Beryllium	0.0101	0.00267	ng/m³ Air		0.0104			2.58	10	
Cadmium	ND	0.0618	ng/m³ Air		ND				10	U
Chromium	2.53	1.84	ng/m³ Air		2.47			2.42	10	
Cobalt	0.329	0.0364	ng/m³ Air		0.321			2.64	10	
Copper	27.9	2.19	ng/m³ Air		27.2			2.34	10	
Lead	0.648	0.178	ng/m³ Air		0.635			2.03	10	
Manganese	10.1	1.58	ng/m³ Air		9.89			2.50	10	
Molybdenum	1.60	0.299	ng/m³ Air		1.58			1.09	10	

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4C0503 - ICP-MS Extraction										
Duplicate (B4C0503-DUP3) Continued			**Source: 4030429-15**		Prepared: 03/05/24		Analyzed: 03/06/24			
Nickel	1.25	0.544	ng/m³ Air		1.21			3.26	10	
Selenium	0.158	0.00747	ng/m³ Air		0.161			2.42	10	
Thallium	0.00116	4.91E-4	ng/m³ Air		0.00111			4.02	10	QB-01
Vanadium	1.04	0.0441	ng/m³ Air		1.03			1.55	10	
Zinc	ND	64.0	ng/m³ Air		ND				10	U
Duplicate (B4C0503-DUP4)			**Source: 4030429-26**		Prepared: 03/05/24		Analyzed: 03/06/24			
Antimony	0.0559	0.0336	ng/m³ Air		0.0581			3.97	10	SL
Arsenic	0.171	0.00815	ng/m³ Air		0.174			1.94	10	
Barium	2.69	0.931	ng/m³ Air		2.68			0.376	10	
Beryllium	0.00587	0.00278	ng/m³ Air		0.00611			4.05	10	
Cadmium	ND	0.0645	ng/m³ Air		ND				10	U
Chromium	2.11	1.92	ng/m³ Air		2.10			0.579	10	
Cobalt	0.157	0.0379	ng/m³ Air		0.158			0.271	10	
Copper	29.9	2.29	ng/m³ Air		30.1			0.501	10	
Lead	0.621	0.186	ng/m³ Air		0.621			0.106	10	
Manganese	4.76	1.64	ng/m³ Air		4.77			0.331	10	
Molybdenum	1.10	0.312	ng/m³ Air		1.09			1.07	10	
Nickel	0.631	0.567	ng/m³ Air		0.629			0.270	10	
Selenium	0.133	0.00780	ng/m³ Air		0.135			1.49	10	
Thallium	8.66E-4	5.12E-4	ng/m³ Air		8.25E-4			4.86	10	QB-01
Vanadium	0.393	0.0460	ng/m³ Air		0.396			0.785	10	
Zinc	ND	66.8	ng/m³ Air		ND				10	U
Matrix Spike (B4C0503-MS1)			**Source: 4030429-11**		Prepared & Analyzed: 03/05/24					
Antimony	0.499	0.0325	ng/m³ Air	1.1634	0.0473	38.8	80-120			SL
Arsenic	2.52	0.00788	ng/m³ Air	2.3267	0.319	94.4	80-120			
Barium	25.7	0.900	ng/m³ Air	23.267	3.25	96.7	80-120			
Beryllium	1.16	0.00269	ng/m³ Air	1.1634	0.0234	97.8	80-120			
Cadmium	1.18	0.0623	ng/m³ Air	1.1634	ND	101	80-120			
Chromium	15.1	1.86	ng/m³ Air	11.634	3.05	103	80-120			
Cobalt	1.60	0.0367	ng/m³ Air	1.1634	0.424	101	80-120			
Copper	70.5	2.21	ng/m³ Air	23.267	45.4	108	80-120			
Lead	11.9	0.180	ng/m³ Air	11.634	0.405	98.9	80-120			
Manganese	17.0	1.59	ng/m³ Air	6.9802	9.52	107	80-120			
Molybdenum	3.38	0.302	ng/m³ Air	1.1634	2.19	103	80-120			
Nickel	3.75	0.548	ng/m³ Air	2.3267	1.55	94.5	80-120			
Selenium	2.43	0.00754	ng/m³ Air	2.3267	0.162	97.5	80-120			
Thallium	0.116	4.95E-4	ng/m³ Air	0.11634	8.02E-4	98.7	80-120			QB-01
Vanadium	3.51	0.0445	ng/m³ Air	2.3267	1.18	100	80-120			

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Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
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 B4C0503 - ICP-MS Extraction										
Matrix Spike (B4C0503-MS1) Continued Source: 4030429-11 Prepared & Analyzed: 03/05/24										
Zinc	104	64.6	ng/m³ Air	69.802	ND	149	80-120			
Matrix Spike (B4C0503-MS2) Source: 4030429-32 Prepared & Analyzed: 03/05/24										
Antimony	0.437	0.0318	ng/m³ Air	1.1404	0.0425	34.6	80-120			SL
Arsenic	2.69	0.00773	ng/m³ Air	2.2809	0.569	93.2	80-120			
Barium	26.2	0.882	ng/m³ Air	22.809	4.20	96.6	80-120			
Beryllium	1.18	0.00264	ng/m³ Air	1.1404	0.0117	103	80-120			
Cadmium	1.16	0.0611	ng/m³ Air	1.1404	ND	102	80-120			
Chromium	14.4	1.82	ng/m³ Air	11.404	2.85	101	80-120			
Cobalt	1.65	0.0360	ng/m³ Air	1.1404	0.535	98.1	80-120			
Copper	81.0	2.17	ng/m³ Air	22.809	59.3	94.8	80-120			
Lead	12.6	0.176	ng/m³ Air	11.404	1.39	98.5	80-120			
Manganese	20.1	1.56	ng/m³ Air	6.8426	12.7	109	80-120			
Molybdenum	3.47	0.296	ng/m³ Air	1.1404	2.22	110	80-120			
Nickel	3.44	0.538	ng/m³ Air	2.2809	1.18	99.3	80-120			
Selenium	2.35	0.00739	ng/m³ Air	2.2809	0.153	96.4	80-120			
Thallium	0.110	4.86E-4	ng/m³ Air	0.11404	0.00151	95.2	80-120			QB-01
Vanadium	3.37	0.0436	ng/m³ Air	2.2809	1.14	97.7	80-120			
Zinc	101	63.3	ng/m³ Air	68.426	ND	148	80-120			
Matrix Spike Dup (B4C0503-MSD1) Source: 4030429-11 Prepared & Analyzed: 03/05/24										
Antimony	0.506	0.0325	ng/m³ Air	1.1634	0.0473	39.4	80-120	1.34	20	SL
Arsenic	2.54	0.00788	ng/m³ Air	2.3267	0.319	95.4	80-120	0.906	20	
Barium	26.1	0.900	ng/m³ Air	23.267	3.25	98.1	80-120	1.26	20	
Beryllium	1.17	0.00269	ng/m³ Air	1.1634	0.0234	98.9	80-120	1.03	20	
Cadmium	1.18	0.0623	ng/m³ Air	1.1634	ND	102	80-120	0.341	20	
Chromium	15.0	1.86	ng/m³ Air	11.634	3.05	102	80-120	0.825	20	
Cobalt	1.60	0.0367	ng/m³ Air	1.1634	0.424	101	80-120	0.113	20	
Copper	71.7	2.21	ng/m³ Air	23.267	45.4	113	80-120	1.81	20	
Lead	11.8	0.180	ng/m³ Air	11.634	0.405	98.3	80-120	0.603	20	
Manganese	17.1	1.59	ng/m³ Air	6.9802	9.52	108	80-120	0.348	20	
Molybdenum	3.51	0.302	ng/m³ Air	1.1634	2.19	114	80-120	3.63	20	
Nickel	3.78	0.548	ng/m³ Air	2.3267	1.55	95.9	80-120	0.845	20	
Selenium	2.40	0.00754	ng/m³ Air	2.3267	0.162	96.2	80-120	1.25	20	
Thallium	0.114	4.95E-4	ng/m³ Air	0.11634	8.02E-4	97.4	80-120	1.39	20	QB-01
Vanadium	3.50	0.0445	ng/m³ Air	2.3267	1.18	99.6	80-120	0.269	20	
Zinc	103	64.6	ng/m³ Air	69.802	ND	147	80-120	1.20	20	
Matrix Spike Dup (B4C0503-MSD2) Source: 4030429-32 Prepared & Analyzed: 03/05/24										
Antimony	0.437	0.0318	ng/m³ Air	1.1404	0.0425	34.6	80-120	0.0813	20	SL
Arsenic	2.72	0.00773	ng/m³ Air	2.2809	0.569	94.4	80-120	1.07	20	

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FILE #: 4205.00.003.001
REPORTED: 03/20/24 12:21
SUBMITTED: 03/04/24
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 B4C0503 - ICP-MS Extraction										
Matrix Spike Dup (B4C0503-MSD2) Conti			**Source: 4030429-32**		Prepared & Analyzed: 03/05/24					
Barium	25.6	0.882	ng/m³ Air	22.809	4.20	93.8	80-120	2.43	20	
Beryllium	1.16	0.00264	ng/m³ Air	1.1404	0.0117	101	80-120	2.22	20	
Cadmium	1.25	0.0611	ng/m³ Air	1.1404	ND	109	80-120	7.38	20	
Chromium	14.0	1.82	ng/m³ Air	11.404	2.85	97.7	80-120	2.67	20	
Cobalt	1.63	0.0360	ng/m³ Air	1.1404	0.535	96.3	80-120	1.25	20	
Copper	68.6	2.17	ng/m³ Air	22.809	59.3	40.7	80-120	16.5	20	QM-07
Lead	11.9	0.176	ng/m³ Air	11.404	1.39	92.3	80-120	5.73	20	
Manganese	19.6	1.56	ng/m³ Air	6.8426	12.7	102	80-120	2.42	20	
Molybdenum	3.36	0.296	ng/m³ Air	1.1404	2.22	99.6	80-120	3.38	20	
Nickel	3.24	0.538	ng/m³ Air	2.2809	1.18	90.4	80-120	6.07	20	
Selenium	2.39	0.00739	ng/m³ Air	2.2809	0.153	97.9	80-120	1.49	20	
Thallium	0.112	4.86E-4	ng/m³ Air	0.11404	0.00151	97.2	80-120	1.99	20	QB-01
Vanadium	3.32	0.0436	ng/m³ Air	2.2809	1.14	95.5	80-120	1.51	20	
Zinc	90.2	63.3	ng/m³ Air	68.426	ND	132	80-120	11.3	20	
Post Spike (B4C0503-PS1)			**Source: 4030429-11**		Prepared & Analyzed: 03/05/24					
Antimony	0.278	0.0325	ng/m³ Air	0.23267	0.0473	99.1	75-125			SL
Arsenic	1.44	0.00788	ng/m³ Air	1.1634	0.319	96.5	75-125			
Barium	5.59	0.900	ng/m³ Air	2.3267	3.25	100	75-125			
Beryllium	0.257	0.00269	ng/m³ Air	0.23267	0.0234	100	75-125			
Cadmium	0.127	0.0623	ng/m³ Air	0.11634	ND	109	75-125			
Chromium	4.26	1.86	ng/m³ Air	1.1634	3.05	104	75-125			
Cobalt	0.665	0.0367	ng/m³ Air	0.23267	0.424	104	75-125			
Copper	58.5	2.21	ng/m³ Air	11.634	45.4	113	75-125			
Lead	23.2	0.180	ng/m³ Air	23.267	0.405	98.2	75-125			
Manganese	12.1	1.59	ng/m³ Air	2.3267	9.52	110	75-125			
Molybdenum	3.38	0.302	ng/m³ Air	1.1634	2.19	102	75-125			
Nickel	3.85	0.548	ng/m³ Air	2.3267	1.55	98.7	75-125			
Selenium	1.27	0.00754	ng/m³ Air	1.1634	0.162	95.5	75-125			
Thallium	0.0591	4.95E-4	ng/m³ Air	5.8168E-2	8.02E-4	100	75-125			QB-01
Vanadium	2.30	0.0445	ng/m³ Air	1.1634	1.18	96.8	75-125			
Zinc	ND	64.6	ng/m³ Air	23.267	ND		75-125			U
Post Spike (B4C0503-PS2)			**Source: 4030429-32**		Prepared & Analyzed: 03/05/24					
Antimony	0.271	0.0318	ng/m³ Air	0.22809	0.0425	100	75-125			SL
Arsenic	1.71	0.00773	ng/m³ Air	1.1404	0.569	99.6	75-125			
Barium	6.39	0.882	ng/m³ Air	2.2809	4.20	96.1	75-125			
Beryllium	0.229	0.00264	ng/m³ Air	0.22809	0.0117	95.2	75-125			
Cadmium	0.141	0.0611	ng/m³ Air	0.11404	ND	123	75-125			
Chromium	3.99	1.82	ng/m³ Air	1.1404	2.85	100	75-125			

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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 B4C0503 - ICP-MS Extraction										
Post Spike (B4C0503-PS2) Continued			**Source: 4030429-32**		Prepared & Analyzed: 03/05/24					
Cobalt	0.770	0.0360	ng/m³ Air	0.22809	0.535	103	75-125			
Copper	72.2	2.17	ng/m³ Air	11.404	59.3	113	75-125			
Lead	24.0	0.176	ng/m³ Air	22.809	1.39	99.3	75-125			
Manganese	15.3	1.56	ng/m³ Air	2.2809	12.7	116	75-125			
Molybdenum	3.34	0.296	ng/m³ Air	1.1404	2.22	98.4	75-125			
Nickel	3.43	0.538	ng/m³ Air	2.2809	1.18	98.7	75-125			
Selenium	1.29	0.00739	ng/m³ Air	1.1404	0.153	100	75-125			
Thallium	0.0594	4.86E-4	ng/m³ Air	5.7022E-2	0.00151	102	75-125			QB-01
Vanadium	2.22	0.0436	ng/m³ Air	1.1404	1.14	95.1	75-125			
Zinc	ND	63.3	ng/m³ Air	22.809	ND		75-125			U
Dilution Check (B4C0503-SRL1)			**Source: 4030429-11**		Prepared & Analyzed: 03/05/24					
Antimony	ND	0.162	ng/m³ Air		ND				10	SL, U
Arsenic	0.337	0.0394	ng/m³ Air		0.319			5.55	10	
Barium	ND	4.50	ng/m³ Air		ND				10	U
Beryllium	0.0230	0.0135	ng/m³ Air		0.0234			1.59	10	
Cadmium	ND	0.312	ng/m³ Air		ND				10	U
Chromium	ND	9.30	ng/m³ Air		ND				10	U
Cobalt	0.436	0.183	ng/m³ Air		0.424			2.73	10	
Copper	49.0	11.1	ng/m³ Air		45.4			7.71	10	
Lead	ND	0.900	ng/m³ Air		ND				10	U
Manganese	9.74	7.95	ng/m³ Air		9.52			2.36	10	
Molybdenum	2.29	1.51	ng/m³ Air		2.19			4.75	10	
Nickel	ND	2.74	ng/m³ Air		ND				10	U
Selenium	0.175	0.0377	ng/m³ Air		0.162			7.66	10	
Thallium	ND	0.00248	ng/m³ Air		ND				10	QB-01, U
Vanadium	1.24	0.223	ng/m³ Air		1.18			5.38	10	
Zinc	ND	323	ng/m³ Air		ND				10	U
Dilution Check (B4C0503-SRL2)			**Source: 4030429-32**		Prepared & Analyzed: 03/05/24					
Antimony	ND	0.159	ng/m³ Air		ND				10	SL, U
Arsenic	0.594	0.0386	ng/m³ Air		0.569			4.34	10	
Barium	ND	4.41	ng/m³ Air		ND				10	U
Beryllium	ND	0.0132	ng/m³ Air		ND				10	U
Cadmium	ND	0.306	ng/m³ Air		ND				10	U
Chromium	ND	9.11	ng/m³ Air		ND				10	U
Cobalt	0.539	0.180	ng/m³ Air		0.535			0.813	10	
Copper	62.8	10.8	ng/m³ Air		59.3			5.66	10	
Lead	1.38	0.882	ng/m³ Air		1.39			1.02	10	
Manganese	12.9	7.79	ng/m³ Air		12.7			1.73	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 B4C0503 - ICP-MS Extraction										
Dilution Check (B4C0503-SRL2) Continue				**Source: 4030429-32**	Prepared & Analyzed: 03/05/24					
Molybdenum	2.25	1.48	ng/m³ Air		2.22			1.17	10	
Nickel	ND	2.69	ng/m³ Air		ND				10	U
Selenium	0.163	0.0369	ng/m³ Air		0.153			6.04	10	
Thallium	0.00264	0.00243	ng/m³ Air		ND			54.8	10	QB-01
Vanadium	1.20	0.218	ng/m³ Air		1.14			5.06	10	
Zinc	ND	317	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.
QB-01	Analyte exceeds method blank criteria
FB-01	Analyte exceeds Field 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:
Kierra Johnson 3/21/2024 and Shanna Vasser 3/21/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 2/8/2024 and 2/22/24 - 2/28/2024
Report No: 4030429

√	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.
√	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:

13. Field blank detections above the method detection limit were reported for chromium and copper in MFL-FB01-022324-HM.

Notes:

1. Report was revised on March 20, 2024 to match updated volumes on the revised chain of custody.