

**State of Hawaii, Department of Health, Clean Air Branch**  
**2023 Maui Wildfires**  
**Ambient Community Air Monitoring and Sampling Weekly Report**  
**Lahaina, Maui**

**January 2 through January 8, 2025**

Tetra Tech, Inc. (Tetra Tech) prepared a Community Air Monitoring and Sampling Plan (CAMSP) to address the evaluation and documentation of air quality and inhalation exposure risks during debris removal operations performed in response to the 2023 Maui Wildfires. Air monitoring and sampling as prescribed in the CAMSP will continue until debris removal activities are complete or until HDOH advises otherwise.

Particulate monitoring and air sampling occurred from January 2 through January 8, 2025, at the community locations listed below and shown on **Figure 1**.

- WW Pump Station #4 (AM-02)
- Lahaina Intermediate School (AM-03)
- Opukea Townhomes (AM-05)
- Lahaina Pump Station #6 (AM-08)

Real-time air quality monitoring for particulate matter was collected at each community location over a 24-hour period each day in accordance with the CAMSP. Ambient air monitoring was performed to assess the presence of airborne particulates with a particle size diameter of 10 micrometers ( $\mu\text{m}$ ), which 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<sub>10</sub>". Monitoring for PM<sub>10</sub> was conducted 24 hours a day, 7 days a week from January 2 through January 8, 2025 at each of the community locations. Ambient air monitoring results were compared to the National Ambient Air Quality Standard (NAAQS) for PM<sub>10</sub>, 24-hour time-weighted average of 150 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), which was selected as the screening level for this activity.

This weekly report does not address air quality monitoring results for fine particulate matter (particle size diameter of 2.5  $\mu\text{m}$  or less [PM<sub>2.5</sub>]). This was not necessary because the Department of Health/U.S. Environmental Protection Agency (EPA) monitors for this parameter at six locations in Lahaina, and the results from that monitoring are accessible at <https://fire.airnow.gov/>.

Air samples were analyzed for asbestos and 16 metals, including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, thallium, vanadium, and zinc. Analytical results were compared to Site Screening Action Levels (SSALs) as presented in the CAMSP.

### ***Air Monitoring Results***

In addition to the air sampling activities, real-time PM<sub>10</sub> concentrations were collected at each of the four monitoring locations throughout this reporting period. Monitoring was conducted 24 hours a day at each station.

The PM<sub>10</sub> monitoring results were found to have exceeded the 150  $\mu\text{g}/\text{m}^3$  TWA screening level on one day, at the Lahaina Intermediate School and Lahaina Pump Station #6 monitoring locations on January 6, as shown in **Table 1**.

The air monitoring and sampling stations at Lahaina Intermediate School and Lahaina Pump Station #6 exceedances may have been attributable to documented vog (volcanic smog) and high humidity. The exceedances on January 6 are described below:

- On January 6, no United States Army Corps of Engineers (USACE) debris crew or private contractor activities were observed near either the Lahaina Intermediate School or the Lahaina Pump Station #6 monitoring station. Air monitoring data were not related to USACE operations because debris removal operations were not being conducted near those monitoring locations.
  - Humidity averaged 87 percent at Lahaina Intermediate School and 81 percent at Lahaina Pump Station #6 with humidity reaching as high as 96 percent throughout the day. Excessive humid conditions can create a cumulative build-up on the particulate measurement tape utilized at the monitoring stations. The heating element used in the instrument is not able to evaporate the excess moisture resulting in the reporting of elevated particulate data.
  - Recent volcanic activity from Kīlauea, southeast of Lahaina and upwind of the monitoring stations, may have contributed to elevated levels of particulate matter due to vog, a mix of sulfur dioxide gas and aerosols, which can affect air quality in downwind areas.

### ***Air Sampling Results***

A total of 24 samples for asbestos fibers were collected during this reporting period. With the approval of the HDOH, Tetra Tech field teams were not dispatched on January 1 in observance of the New Year’s Holiday. The field teams did not deploy air samples at any of the four air sampling stations on January 1. Subsequently, samples were not collected on January 2 because of the approximate 24-hr sampling period for asbestos and heavy metals requirements described in the CAMSP. All analytical results from this reporting period were below the SSAL for asbestos of 0.003 structures per cubic centimeter (s/cc), as results were below the laboratory’s analytical sensitivity (see **Table 2**). The laboratory included the comment “Numerous gypsum fibers present” for samples collected at the following monitoring stations:

- Opukea Townhomes on January 6
- WW Pump Station #4 on January 5 through 7
- Lahaina Intermediate School on January 5
- Lahaina Pump Station #6 on January 4, 7, and 8

Gypsum is a common material used in drywall, plaster, and cement, so its presence in the sample filters likely resulted from debris removal operations or other disturbances of built-environment fire debris. The presence of gypsum fibers in the samples was not sufficient to obscure asbestos analyses; nor did this pose a health and safety concern. Occupational health exposure thresholds for gypsum are 5 milligrams per cubic meter (mg/m<sup>3</sup>) for respirable dust, and 10 mg/m<sup>3</sup> and 15 mg/m<sup>3</sup> for total dust (both as time-weighted averages), specified by the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA). While total dust sampling was not performed, results of size-discriminated particulate sampling (PM<sub>10</sub>) at these locations did not approach these thresholds and are orders of magnitude less than occupational gypsum exposure criteria.

Low levels of metals were detected from samples collected at all community locations. However, all detections were below their respective SSALs (see **Table 2**).

Laboratory data sheets conveying asbestos and metals results are in **Appendix 1**.

### ***Meteorological Summary***

Overall wind conditions during this weekly event averaged 1.7 miles per hour and were generally from a south-southeast direction. **Table 3** summarizes the collected meteorological data.

### ***Quality Control Summary***

This section presents quality control measures implemented throughout the air monitoring and sampling reporting period. All references and standard operating procedures (SOPs) are included in the CAMSP.

Air monitoring was performed using Met One Instruments, Inc., environmental beta attenuation mass monitors (E-BAM) to allow comparison to NAAQS for particulates. E-BAMs are factory-calibrated annually and do not require daily calibrations. Leak checks and a flow audit were performed before each monitoring activity, in accordance with the manufacturer's procedures.

Asbestos sampling was performed using Casella Vortex 3 (or similar) air sampling pumps. Sampling flow rates were determined and documented by pre- and post-calibration of each sampling pump, using a primary calibration standard. Pump calibration and sampling were performed according to Tetra Tech SOPs 064-2 "Calibration of Air Sampling Pump" and 073-3, "Air Quality Monitoring" and EPA Environmental Response Team (ERT) SOPs 2008 "General Air Monitoring and Sampling Guidelines" and 2015 "Asbestos Air Sampling," included in the CAMSP.

Sampling for metals occurred using Tisch Environmental High Volume Air Samplers (or equivalent) in accordance with the following methods:

- EPA Compendium Method IO-2.1, Sampling of Ambient Air for Total Suspended Particulate Matter (SPM) and for PM<sub>10</sub> by Use of a High Volume (HV) Sampler
- EPA Compendium Method IO-3.5: Compendium of Methods for Determination of Inorganic Compounds in Ambient Air: Determination of Metals in Ambient Particulate Matter Via Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) EPA/625/R-96/010a
- EPA 40 *Code of Federal Regulations* (CFR) Part 50, Method for Determination of Lead in Total Suspended Particulate Matter
- EPA 40 CFR Part 58, Appendix E: Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring
- American Society for Testing and Materials (ASTM) SOPs for Lead Monitoring by Use of a Total Suspended Particulate (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 off-site analytical laboratories, analytical data were compared to SSALs and are maintained in an electronic database. All data were subjected to Level 1 data verification and are reviewed by an industrial hygienist.

## **Attachments**



- Air Sampling Locations
- Lahaina Fire Perimeter

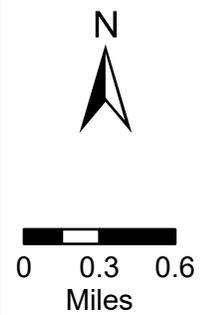


Figure 1  
Air Sampling Locations

Hawaii DOH  
2023 Lahaina Wildfire

**Table 1**  
**State of Hawaii, Department of Health, Clean Air Branch**  
**Particulate Monitoring Results for PM<sub>10</sub>**  
**Maui Wildfires, Lahaina**  
**January 2 through January 8, 2025**

Screening Level		TWA Results 150 (µg/m <sup>3</sup> )
1/2/2025	Opukea Townhomes (AM-05)	6.7
	WW Pump Station #4 (AM-02)	7.6
	Lahaina Intermediate School (AM-03)	37
	Lahaina Pump Station #6 (AM-08)	19
1/3/2025	Opukea Townhomes (AM-05)	9.3
	WW Pump Station #4 (AM-02)	7.9
	Lahaina Intermediate School (AM-03)	37
	Lahaina Pump Station #6 (AM-08)	11
1/4/2025	Opukea Townhomes (AM-05)	19
	WW Pump Station #4 (AM-02)	17
	Lahaina Intermediate School (AM-03)	27
	Lahaina Pump Station #6 (AM-08)	13
1/5/2025	Opukea Townhomes (AM-05)	16
	WW Pump Station #4 (AM-02)	18
	Lahaina Intermediate School (AM-03)	38
	Lahaina Pump Station #6 (AM-08)	17
1/6/2025	Opukea Townhomes (AM-05)	9.2
	WW Pump Station #4 (AM-02)	5.3
	Lahaina Intermediate School (AM-03)	<b>163</b>
	Lahaina Pump Station #6 (AM-08)	<b>260</b>
1/7/2025	Opukea Townhomes (AM-05)	9.1
	WW Pump Station #4 (AM-02)	8.1
	Lahaina Intermediate School (AM-03)	110
	Lahaina Pump Station #6 (AM-08)	97
1/8/2025	Opukea Townhomes (AM-05)	6.9
	WW Pump Station #4 (AM-02)	7.3
	Lahaina Intermediate School (AM-03)	11
	Lahaina Pump Station #6 (AM-08)	6.8

**Notes:**

µg/m<sup>3</sup> = micrograms per cubic meter

TWA = 24-Hour Time-Weighted Average

TWA calculation results are shown in two significant figures

Shaded cell indicates an exceedance of screening level

**Table 2**  
**State of Hawaii, Department of Health, Clean Air Branch**  
**Asbestos and Metals Sampling Results**  
**Maui Wildfires, Lahaina**  
**January 2 through January 8, 2025**

Analyte	Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc	
Units*	s/cc	µg/m <sup>3</sup>																
Site Screening Action Level	0.003 <sup>1</sup>	0.7	0.05	1.2	0.05	0.02	12	0.01	240	1.5	0.12	4.8	0.02	48	24	0.24	1200	
1/2/2025	Opukea Townhomes (AM-05)																	
	WW Pump Station #4 (AM-02)																	
	Lahaina Intermediate School (AM-03)																	
	Lahaina Pump Station #6 (AM-08)																	
1/3/2025	Opukea Townhomes (AM-05)	<0.0024	0.000110	0.000157	0.00704	0.00000841	0.00000738	0.00217	0.000334	0.0426	0.000413	0.00942	0.00242	0.00131	0.000222	0.00000877	0.00155	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000270	0.000349	0.0102	0.0000187	0.0000143	0.00312	0.000663	0.0330	0.00122	0.0188	0.00180	0.00190	0.000266	0.00000119	0.00260	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000508	0.000180	0.00488	0.0000197	0.0000160	0.00259	0.000415	0.0875	0.000212	0.0101	0.00250	0.00138	0.000205	0.00000796	0.00135	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000139	0.000290	0.00489	0.00000933	0.0000106	0.00228	0.000343	0.0323	0.000486	0.00945	0.00128	0.00123	0.000212	0.00000750	0.00124	ND
1/4/2025	Opukea Townhomes (AM-05)	<0.0024	0.000139	0.000535	0.00943	0.0000269	0.000136	0.00341	0.000847	0.0493	0.000628	0.0310	0.00257	0.00180	0.00111	0.00000859	0.00280	ND
	WW Pump Station #4 (AM-02)	<0.0027	0.000150	0.000305	0.00733	0.0000142	0.000113	0.00252	0.000471	0.0417	0.000909	0.0133	0.00188	0.00153	0.00103	0.00000715	0.00175	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000484	0.000173	0.00382	0.0000135	0.000129	0.00225	0.000343	0.0905	0.000224	0.00803	0.00249	0.00140	0.00113	0.00000788	0.00138	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000116	0.000364	0.00347	0.00000786	0.000146	ND	0.000278	0.0323	0.000581	0.00799	0.00135	0.00138	0.00126	0.00000971	0.00175	ND
1/5/2025	Opukea Townhomes (AM-05)	<0.0024	0.000122	0.000973	0.0101	0.0000420	0.000376	0.00460	0.00131	0.0540	0.00114	0.0488	0.00215	0.00297	0.00290	0.0000266	0.00498	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000134	0.000658	0.0440	0.0000231	0.000356	0.00403	0.000663	0.0854	0.00153	0.0216	0.00203	0.00233	0.00296	0.0000232	0.00315	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000348	0.000228	0.00259	0.0000109	0.000305	ND	0.000246	0.0877	0.000290	0.00569	0.00235	0.00117	0.00231	0.0000214	0.000997	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.0000762	0.000527	0.00294	0.00000750	0.000336	0.00210	0.000295	0.0246	0.000681	0.00814	0.00126	0.00107	0.00269	0.0000243	0.000944	ND
1/6/2025	Opukea Townhomes (AM-05)	<0.0024	0.0000678	0.000208	0.00275	0.00000297	0.0000895	ND	0.000131	0.0367	0.000431	0.00409	0.00169	0.000951	0.000545	0.00000317	0.000325	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000102	0.000205	0.00305	0.00000475	0.0000558	ND	0.000177	0.0409	0.000618	0.00523	0.00140	0.000856	0.000551	0.00000302	0.000468	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000434	0.0000778	0.00217	0.00000603	0.0000695	0.00491	0.000242	0.0370	0.000176	0.00447	0.00146	0.00469	0.000341	0.00000168	0.000266	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000152	0.000389	0.00211	0.00000331	0.0000596	ND	0.000156	0.0352	0.000435	0.00439	0.00169	0.00116	0.000312	0.00000156	0.000309	ND
1/7/2025	Opukea Townhomes (AM-05)	<0.0024	0.0000737	0.000216	0.00274	0.00000231	0.0000179	0.00356	0.000214	0.0222	0.000507	0.00334	0.00113	0.00387	0.000197	0.00000946	0.000312	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000544	0.000159	0.00274	0.00000174	0.00000992	ND	0.0000617	0.0283	0.000196	0.00169	0.00126	ND	0.000210	0.00000109	0.000242	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000571	0.000105	0.00252	0.00000489	0.0000245	ND	0.000133	0.0325	0.000161	0.00340	0.00131	0.00125	0.000207	0.00000141	0.000342	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.0000743	0.000425	0.00224	0.00000467	0.000892	ND	0.000139	0.0337	0.000381	0.00474	0.00164	0.000731	0.000223	0.00000159	0.000396	ND
1/8/2025	Opukea Townhomes (AM-05)	<0.0024	0.0000812	0.000329	0.00348	0.00000396	0.0000471	ND	0.000157	0.0303	0.000550	0.00429	0.00163	0.000824	0.000456	0.00000530	0.000427	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000942	0.000329	0.00678	0.00000422	0.0000640	0.00205	0.000143	0.0253	0.000520	0.00459	0.00102	0.000988	0.000457	0.00000514	0.000429	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000407	0.0000787	0.00231	0.00000664	0.0000362	ND	0.000152	0.0359	ND	0.00330	0.00118	0.00104	0.000349	0.00000416	0.000384	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000107	0.000698	0.00397	0.0000122	0.0000844	0.00222	0.000335	0.0242	0.000813	0.0117	0.00123	0.00127	0.000433	0.00000471	0.000934	ND
95% Upper Confidence Limit <sup>2</sup>	NA	0.000120	0.000450	0.00764	0.0000160	0.000338	0.00350	0.000470	0.0510	0.00076	0.0145	0.00189	0.00193	0.00134	0.0000140	0.00193	NA	

**Notes:**

<sup>1</sup> Asbestos result determined by transmission electron microscopy (TEM) in accordance with ISO Method 10312. PCMe results are presented.

<sup>2</sup> 95% UCL determined through 'best fit' lognormal or normal parametric statistics via W test

s/cc = structures per cubic centimeter

µg/m<sup>3</sup> = 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 presented has been converted to micrograms per cubic meter so data was comparable to the Site Screening Action Levels presented in the CAMSP

New Year's Holiday Observance

**Table 3**  
**State of Hawaii, Department of Health, Clean Air Branch**  
**Averaged Meteorological Data**  
**Maui Wildfires, Lahaina**  
**January 2 through January 8, 2025**

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
1/2/2025	AM-02	WW Pump Station #4	0.9	SE	77	66	762.3
1/2/2025	AM-03	Lahaina Intermediate School	1.1	SE	76	67	753.5
1/2/2025	AM-05	Opukea Townhomes	0.9	SSE	78	66	762.6
1/2/2025	AM-08	Lahaina Pump Station #6	1.4	SSE	77	65	762.4
1/3/2024	AM-02	WW Pump Station #4	0.8	SSE	77	64	762.3
1/3/2024	AM-03	Lahaina Intermediate School	1.2	SSE	76	65	753.5
1/3/2024	AM-05	Opukea Townhomes	0.8	SE	78	64	762.6
1/3/2024	AM-08	Lahaina Pump Station #6	1.4	SSE	77	62	762.4
1/4/2025	AM-02	WW Pump Station #4	0.8	SE	76	65	762.0
1/4/2025	AM-03	Lahaina Intermediate School	1.0	SE	75	65	753.3
1/4/2025	AM-05	Opukea Townhomes	1.1	S	77	65	762.4
1/4/2025	AM-08	Lahaina Pump Station #6	1.6	SE	76	62	762.2
1/5/2025	AM-02	WW Pump Station #4	1.1	SE	76	71	761.6
1/5/2025	AM-03	Lahaina Intermediate School	1.7	SSE	76	71	752.9
1/5/2025	AM-05	Opukea Townhomes	1.7	S	77	72	761.9
1/5/2025	AM-08	Lahaina Pump Station #6	2.0	SE	76	70	761.8
1/6/2025	AM-02	WW Pump Station #4	1.2	SSE	77	82	761.5
1/6/2025	AM-03	Lahaina Intermediate School	2.0	SSE	75	87	752.9
1/6/2025	AM-05	Opukea Townhomes	2.3	S	77	84	761.9
1/6/2025	AM-08	Lahaina Pump Station #6	2.8	S	77	81	761.8
1/7/2025	AM-02	WW Pump Station #4	1.7	S	77	75	761.6
1/7/2025	AM-03	Lahaina Intermediate School	3.2	SSE	76	77	752.9
1/7/2025	AM-05	Opukea Townhomes	3.3	S	77	76	762.0
1/7/2025	AM-08	Lahaina Pump Station #6	4.1	S	77	75	761.8
1/8/2025	AM-02	WW Pump Station #4	1.1	SE	76	69	763.7
1/8/2025	AM-03	Lahaina Intermediate School	1.7	SE	75	68	755.0
1/8/2025	AM-05	Opukea Townhomes	1.6	S	76	69	764.1
1/8/2025	AM-08	Lahaina Pump Station #6	2.0	SE	76	67	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.



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**EMSL Order:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-FB01-010225-AB</b>	<b>Sample Description:</b>	<b>DL698360</b>
EMSL Sample Number:	042500171-0001	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

  
 Approved Signatory

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<http://www.EMSL.com> / [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

EMSL Order ID: **042500171**  
 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:		042500171-0001					Customer Sample:		MFL-FB01-010225-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	A1	None Detected									
A5	C3	None Detected									
A5	E4	None Detected									
A5	G6	None Detected									
A5	I6	None Detected									
A6	J2	None Detected									
A6	H4	None Detected									
A6	F10	None Detected									
A6	D9	None Detected									
A6	B10	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
 Tetra Tech  
 1560 Broadway, Suite 1400  
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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM05-010325-AB</b>	<b>Sample Description:</b>	<b>DL698019</b>
EMSL Sample Number:	042500171-0002	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7195.7
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

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**EMSL Order ID: 042500171**  
**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: 042500171-0002		Customer Sample: MFL-AM05-010325-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	I3	None Detected									
B2	E7	None Detected									
B2	B7	None Detected									
B3	H6	None Detected									
B3	F7	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM02-010325-AB</b>	<b>Sample Description:</b>	<b>DL698514</b>
EMSL Sample Number:	042500171-0003	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7303.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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 %:	5		
Target Analytical Sensitivity (Structures/cc):	0.001		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

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**EMSL Order ID: 042500171**  
**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: 042500171-0003			Customer Sample: MFL-AM02-010325-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	B3	None Detected									
B5	E4	None Detected									
B5	G5	None Detected									
B6	B3	None Detected									
B6	I3	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Phone:** (703) 489-2674  
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**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	MFL-AM03-010325-AB	<b>Sample Description:</b>	DL698484
EMSL Sample Number:	042500171-0004	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7461.9
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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**EMSL Order ID: 042500171**  
**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: 042500171-0004			Customer Sample: MFL-AM03-010325-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	A3	None Detected									
C2	F7	None Detected									
C2	H10	None Detected									
C3	B9	None Detected									
C3	H6	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	<b>MFL-AM08-010325-AB</b>	<b>Sample Description:</b>	<b>DL914461</b>
EMSL Sample Number:	042500171-0005	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7522.7
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

  
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EMSL Order ID: 042500171

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: 042500171-0005		Customer Sample: MFL-AM08-010325-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	B5	None Detected									
C5	E1	None Detected									
C5	I2	None Detected									
C6	I8	None Detected									
C6	A8	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	<b>MFL-FB01-010325-AB</b>	<b>Sample Description:</b>	<b>DL914460</b>
EMSL Sample Number:	042500171-0006	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

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EMSL Order ID: 042500171

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:		042500171-0006		Customer Sample:		MFL-FB01-010325-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	A1	None Detected									
D2	A2	None Detected									
D2	E1	None Detected									
D2	G4	None Detected									
D2	I5	None Detected									
D3	J10	None Detected									
D3	H8	None Detected									
D3	F4	None Detected									
D3	D8	None Detected									
D3	B6	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM05-010425-AB</b>	<b>Sample Description:</b>	<b>DL914512</b>
EMSL Sample Number:	042500171-0007	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7342.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

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**EMSL Order ID: 042500171**  
**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: 042500171-0007			Customer Sample: MFL-AM05-010425-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					
D6	J9	None Detected									
D6	G8	None Detected									
D6	E7	None Detected									
D7	E3	None Detected									
D7	I1	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM02-010425-AB</b>	<b>Sample Description:</b>	<b>DL914500</b>
EMSL Sample Number:	042500171-0008	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	6728.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0009</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0027</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
Other Minerals	-	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	
Other Minerals	-	0	0	< 46.36	< 0.0027	Not Applicable - 0.0027	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0027</b>	<b>Not Applicable - 0.0027</b>	

**Comment**

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**EMSL Order ID: 042500171**  
**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: 042500171-0008			Customer Sample: MFL-AM02-010425-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					
E1	C1	None Detected									
E1	F3	None Detected									
E1	G1	None Detected									
E2	C1	None Detected									
E2	G4	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM03-010425-AB</b>	<b>Sample Description:</b>	<b>DL914474</b>
EMSL Sample Number:	042500171-0009	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7119.5
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order ID: **042500171**  
 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: <b>042500171-0009</b>			Customer Sample: <b>MFL-AM03-010425-AB</b>								
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	B5	None Detected									
E5	E7	None Detected									
E5	H6	None Detected									
E6	I5	None Detected									
E6	E2	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM08-010425-AB</b>	<b>Sample Description:</b>	<b>DL914471</b>
EMSL Sample Number:	042500171-0010	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7180.2
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**  
 Numerous gypsum fibers present.

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**EMSL Order ID: 042500171**  
**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: 042500171-0010			Customer Sample: MFL-AM08-010425-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	H4	None Detected									
F2	F4	None Detected									
F2	D6	None Detected									
F3	I6	None Detected									
F3	B8	None Detected									

*Abbreviations used:*  
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**EMSL Order:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
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**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-FB01-010425-AB</b>	<b>Sample Description:</b>	<b>DL914486</b>
EMSL Sample Number:	042500171-0011	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

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EMSL Order ID: **042500171**  
 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:		042500171-0011						Customer Sample:		MFL-FB01-010425-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	J8	None Detected									
F5	H10	None Detected									
F5	F7	None Detected									
F5	D7	None Detected									
F5	C4	None Detected									
F6	J10	None Detected									
F6	H8	None Detected									
F6	F7	None Detected									
F6	E9	None Detected									
F6	C8	None Detected									

Abbreviations used:  
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**EMSL Order:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM05-010525-AB</b>	<b>Sample Description:</b>	<b>DL914522</b>
EMSL Sample Number:	042500171-0012	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7263.3
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

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**EMSL Order ID: 042500171**  
**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: 042500171-0012			Customer Sample: MFL-AM05-010525-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	B4	None Detected									
G2	E2	None Detected									
G2	H4	None Detected									
G3	H8	None Detected									
G3	D6	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM02-010525-AB</b>	<b>Sample Description:</b>	<b>DL914480</b>
EMSL Sample Number:	042500171-0013	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7198.7
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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 %:	5		
Target Analytical Sensitivity (Structures/cc):	0.001		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

**EMSL Order ID: 042500171**  
**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: 042500171-0013			Customer Sample: MFL-AM02-010525-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	J5	None Detected									
G5	H7	None Detected									
G5	C9	None Detected									
G6	F10	None Detected									
G6	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM03-010525-AB</b>	<b>Sample Description:</b>	<b>DL914492</b>
EMSL Sample Number:	042500171-0014	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7298.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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**EMSL Order ID: 042500171**  
**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: 042500171-0014			Customer Sample: MFL-AM03-010525-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					
H1	A6	None Detected									
H1	E4	None Detected									
H1	J4	None Detected									
H2	D5	None Detected									
H2	G7	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
 Tetra Tech  
 1560 Broadway, Suite 1400  
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**Phone:** (703) 489-2674  
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**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-AM08-010525-AB</b>	<b>Sample Description:</b>	<b>DL914476</b>
EMSL Sample Number:	042500171-0015	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7327.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 46.36</b>	<b>&lt; 0.0024</b>	<b>Not Applicable - 0.0024</b>	

**Comment**

Approved Signatory

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**EMSL Order ID: 042500171**  
**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: 042500171-0015			Customer Sample: MFL-AM08-010525-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	B9	None Detected									
H5	D7	None Detected									
H5	E4	None Detected									
H6	G7	None Detected									
H6	B9	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
 Tetra Tech  
 1560 Broadway, Suite 1400  
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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-FB01-010525-AB</b>	<b>Sample Description:</b>	<b>DL914487</b>
EMSL Sample Number:	042500171-0016	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

Approved Signatory

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EMSL Order ID: **042500171**  
 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: <b>042500171-0016</b>		Customer Sample: <b>MFL-FB01-010525-AB</b>									
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					
I2	J7	None Detected									
I2	H4	None Detected									
I2	F6	None Detected									
I2	D6	None Detected									
I2	B3	None Detected									
I3	A1	None Detected									
I3	C6	None Detected									
I3	E4	None Detected									
I3	G5	None Detected									
I3	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> / [cinnaaslab@EMSL.com](mailto:cinnaaslab@EMSL.com)

**EMSL Order:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>MFL-LB01-010325-AB</b>	<b>Sample Description:</b>	<b>DL914524</b>
EMSL Sample Number:	042500171-0017	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

Approved Signatory

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

EMSL Order ID: **042500171**  
 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: <b>042500171-0017</b>			Customer Sample: <b>MFL-LB01-010325-AB</b>								
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	J8	None Detected									
I5	H10	None Detected									
I5	F7	None Detected									
I5	D4	None Detected									
I5	B4	None Detected									
I6	A3	None Detected									
I6	C7	None Detected									
I6	E2	None Detected									
I6	H8	None Detected									
I6	J2	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:** 042500171  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/08/2025 09:30 AM  
**Analysis Date:** 01/10/2025  
**Report Date:** 01/13/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

<b>Customer Sample Number:</b>	<b>Lab Blank</b>	<b>Sample Description: Lab Blank</b>
EMSL Sample Number:	042500171-0018	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 (mm <sup>2</sup> ): 385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ): 0.0129
Chi <sup>2</sup> 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	
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc): N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order ID: **042500171**  
 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: <b>042500171-0018</b>			Customer Sample: <b>Lab Blank</b>								
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	J10	None Detected									
A2	H8	None Detected									
A2	F9	None Detected									
A2	D6	None Detected									
A2	B6	None Detected									
A3	A1	None Detected									
A3	C5	None Detected									
A3	E1	None Detected									
A3	G3	None Detected									
A3	I5	None Detected									

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



# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

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

## #042500171

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

EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

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

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

RECEIVED  
EMSL  
CINNAMINSON, NJ  
5 JAN - 8 AM 9:47

Project Name/No: <b>Maui Fires Lahaina</b>		Purchase Order: <b>1207085</b>
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: <b>HI</b>	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: <b>Itai Bojdat-Yater</b>	Sampled By Signature: <i>[Signature]</i>	No. of Samples in Shipment: <b>17</b>

Turn-Around-Time (TAT)

3 Hour  4-4.5 Hour  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.

<p><b>PCM Air</b></p> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> NIOSH 7400 w/ 8hr. TWA <p><b>PLM - Bulk (reporting limit)</b></p> <input type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> POINT COUNT <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<p><b>TEM - Air</b></p> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input checked="" type="checkbox"/> ISO 10312* <p><b>TEM - Bulk</b></p> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable-NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)	<p><b>TEM - Settled Dust</b></p> <input type="checkbox"/> Microvac - ASTM D5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Qualitative via Filtration Prep <input type="checkbox"/> Qualitative via Drop Mount Prep <p><b>Soil - Rock - Vermiculite (reporting limit)*</b></p> <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> 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-FB01-010225-AB	DL698360	0	01/02/25 1200
MFL-AM05-010325-AB	DL698019	7195.652	01/03/25 1051
MFL-AM02-010325-AB	DL698514	7303.619	01/03/25 1108
MFL-AM03-010325-AB	DL698484	7461.870	01/03/25 1251
MFL-AM08-010325-AB	DL914461	7522.741	01/03/25 1313
MFL-FB01-010325-AB	DL914460	0	01/03/25 1200
MFL-AM05-010425-AB	DL914512	7341.997	01/04/25 1051
MFL-AM02-010425-AB	DL914500	6728.555	01/04/25 1108

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

All samples received acceptable for analysis.

(17) SP

Method of Shipment: <b>FedEx</b>	Sample Condition Upon Receipt:
Relinquished by: <i>[Signature]</i> Date/Time: <b>01/06/24 1100</b>	Received by: <i>[Signature]</i> - FedEx Date/Time: <b>1/8/25 9:30 A</b>
Relinquished by:	Received by:

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 01/13/2025 and Shanna Vasser 01/14/2025

Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ

Collection date(s): 01/02/2025 – 01/05/2025

Report No: 42500171

- √ 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.



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<http://www.EMSL.com> / [cinnaaslab@EMSL.com](mailto:cinnaaslab@EMSL.com)

**EMSL Order:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/15/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM05-010625-AB      **Sample Description:** DL914525

EMSL Sample Number: 042500692-0001      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7340.6  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> Test for Random Distribution on Filter: N/A (N/A)      Grid Openings Analyzed: 5  
 Minimum Level of analysis (chrysotile): CD      Analyst: G.Barry  
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 5  
 Target Analytical Sensitivity (Structures/cc): 0.001

**Analytical Sensitivity (Structures/cc): 0.0008      Limit of Detection (Structures/cc): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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**EMSL Order ID: 042500692**  
**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: 042500692-0001			Customer Sample: MFL-AM05-010625-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	B4	None Detected									
A5	F7	None Detected									
A5	I4	None Detected									
A6	C3	None Detected									
A6	G7	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/15/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM02-010625-AB      **Sample Description:** DL914490

EMSL Sample Number: 042500692-0002      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7064.5  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> Test for Random Distribution on Filter: N/A (N/A)      Grid Openings Analyzed: 5  
 Minimum Level of analysis (chrysotile): CD      Analyst: G.Barry  
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 5  
 Target Analytical Sensitivity (Structures/cc): 0.001

**Analytical Sensitivity (Structures/cc): 0.0008      Limit of Detection (Structures/cc): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

**EMSL Order ID: 042500692**  
**Client: Tetra Tech**  
**Project ID: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Analytical Bench Sheet Data**

<b>EMSL Sample ID: 042500692-0002</b>			<b>Customer Sample: MFL-AM02-010625-AB</b>								
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					
B1	B7	None Detected									
B1	F4	None Detected									
B1	J7	None Detected									
B3	H6	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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**EMSL Order:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

**Attn: Chelsea Saber**  
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 1560 Broadway, Suite 1400  
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**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/15/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM03-010625-AB      **Sample Description:** DL914469

EMSL Sample Number: 042500692-0003      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7216.3  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> Test for Random Distribution on Filter: N/A (N/A)      Grid Openings Analyzed: 5  
 Minimum Level of analysis (chrysotile): CD      Analyst: G.Barry  
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 5  
 Target Analytical Sensitivity (Structures/cc): 0.001

**Analytical Sensitivity (Structures/cc): 0.0008      Limit of Detection (Structures/cc): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order ID: **042500692**  
 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: <b>042500692-0003</b>			Customer Sample: <b>MFL-AM03-010625-AB</b>								
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	A5	None Detected									
B5	D8	None Detected									
B5	I4	None Detected									
B6	J7	None Detected									
B6	F6	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM08-010625-AB      **Sample Description:** DL914523

EMSL Sample Number: 042500692-0004      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7251.7  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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EMSL Order ID: 042500692

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: 042500692-0004			Customer Sample: MFL-AM08-010625-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	A1	None Detected									
C2	D5	None Detected									
C2	H3	None Detected									
C3	H7	None Detected									
C3	C9	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	<b>MFL-FB01-010625-AB</b>	<b>Sample Description:</b>	<b>DL914485</b>
EMSL Sample Number:	042500692-0005	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 (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc):</b>	<b>N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

Approved Signatory

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**EMSL Order ID: 042500692**  
**Client: Tetra Tech**  
**Project ID: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Analytical Bench Sheet Data**

<b>EMSL Sample ID: 042500692-0005</b>		<b>Customer Sample: MFL-FB01-010625-AB</b>									
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					
C6	A5	None Detected									
C6	C7	None Detected									
C6	E9	None Detected									
C6	G5	None Detected									
C6	I8	None Detected									
C7	I6	None Detected									
C7	G3	None Detected									
C7	E3	None Detected									
C7	C7	None Detected									
C7	A4	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	MFL-AM05-010725-AB	<b>Sample Description:</b>	DL914521
EMSL Sample Number:	042500692-0006	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7171.2
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order ID: **042500692**  
 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: <b>042500692-0006</b>			Customer Sample: <b>MFL-AM05-010725-AB</b>								
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					
D1	B4	None Detected									
D1	E2	None Detected									
D1	G4	None Detected									
D2	A10	None Detected									
D2	H7	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	MFL-AM02-010725-AB	<b>Sample Description:</b>	DL914513
EMSL Sample Number:	042500692-0007	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7128.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm <sup>2</sup> ):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ):	0.0129
Chi <sup>2</sup> 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		
<b>Analytical Sensitivity (Structures/cc):</b>	<b>0.0008</b>	<b>Limit of Detection (Structures/cc):</b>	<b>0.0024</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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**EMSL Order ID: 042500692**  
**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: 042500692-0007			Customer Sample: MFL-AM02-010725-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	I8	None Detected									
D5	F10	None Detected									
D5	D8	None Detected									
D6	G9	None Detected									
D6	D7	None Detected									

*Abbreviations used:*  
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 XCGBLD - Crosses Countable Grid Bar Length Doubled



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**Customer PO:** 1207085  
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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM03-010725-AB      **Sample Description:** DL914483

EMSL Sample Number: 042500692-0008      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7238.9  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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**EMSL Order ID: 042500692**  
**Client: Tetra Tech**  
**Project ID: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Analytical Bench Sheet Data**

<b>EMSL Sample ID: 042500692-0008</b>			<b>Customer Sample: MFL-AM03-010725-AB</b>								
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					
E1	I6	None Detected									
E1	F8	None Detected									
E1	C5	None Detected									
E2	I5	None Detected									
E2	D8	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:** 1207085  
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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM08-010725-AB      **Sample Description:** DL914481

EMSL Sample Number: 042500692-0009      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7268.9  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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**EMSL Order ID: 042500692**  
**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: 042500692-0009			Customer Sample: MFL-AM08-010725-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	J5	None Detected									
E5	F2	None Detected									
E5	C4	None Detected									
E6	C7	None Detected									
E6	I4	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:** 042500692  
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**Customer PO:** 1207085  
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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-FB01-010725-AB      **Sample Description:** DL914464

EMSL Sample Number: 042500692-0010      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 (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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 (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 23.18			
<b>Total Amphibole</b>	ADX	0	0	< 23.18			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 23.18			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	-	0	0	< 23.18			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 23.18			
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 23.18			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 23.18			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	-	0	0	< 23.18			

**Comment**

Approved Signatory

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EMSL Order ID: **042500692**  
 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:		042500692-0010		Customer Sample:		MFL-FB01-010725-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					
F1	J8	None Detected									
F1	H5	None Detected									
F1	F2	None Detected									
F1	D1	None Detected									
F1	B4	None Detected									
F2	J3	None Detected									
F2	H1	None Detected									
F2	F4	None Detected									
F2	D2	None Detected									
F2	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**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM05-010825-AB      **Sample Description:** DL914518

EMSL Sample Number: 042500692-0011      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7254.3  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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**EMSL Order ID: 042500692**  
**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: 042500692-0011			Customer Sample: MFL-AM05-010825-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					
F6	B7	None Detected									
F6	D5	None Detected									
F6	G2	None Detected									
F7	H8	None Detected									
F7	B4	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM02-010825-AB      **Sample Description:** DL914516

EMSL Sample Number: 042500692-0012      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7072.6  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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EMSL Order ID: **042500692**  
 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: <b>042500692-0012</b>			Customer Sample: <b>MFL-AM02-010825-AB</b>								
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					
G1	C6	None Detected									
G1	F8	None Detected									
G1	H10	None Detected									
G2	B8	None Detected									
G2	D4	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM03-010825-AB      **Sample Description:** DL914477

EMSL Sample Number: 042500692-0013      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7211.0  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**

Approved Signatory

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EMSL Order ID: **042500692**  
 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: <b>042500692-0013</b>			Customer Sample: <b>MFL-AM03-010825-AB</b>								
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	B4	None Detected									
G5	E5	None Detected									
G5	H3	None Detected									
G6	B2	None Detected									
G6	F4	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-AM08-010825-AB      **Sample Description:** DL914482

EMSL Sample Number: 042500692-0014      Sample Matrix: Air  
 Magnification used for fiber counting: 20,000      Volume (L): 7468.6  
 Aspect ratio for fiber definition: 3:1      Area of original collection filter (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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 %: 5  
 Target Analytical Sensitivity (Structures/cc): 0.001

**Analytical Sensitivity (Structures/cc): 0.0008      Limit of Detection (Structures/cc): 0.0024**

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	
<b>Total All Structures (PCMe)</b>	-	0	0	< 46.36	< 0.0024	Not Applicable - 0.0024	

**Comment**  
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: **042500692**  
 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: <b>042500692-0014</b>			Customer Sample: <b>MFL-AM08-010825-AB</b>								
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					
H1	B4	None Detected									
H1	E7	None Detected									
H1	G6	None Detected									
H2	E3	None Detected									
H2	B4	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:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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**Phone:** (703) 489-2674  
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**Analysis Date:** 01/16/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

**ISO 10312 Determination of Asbestos Fibers  
 Direct Transfer Transmission Electron Microscopy**

**Customer Sample Number:** MFL-FB01-010825-AB      **Sample Description:** DL914506

EMSL Sample Number: 042500692-0015      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 (mm<sup>2</sup>): 385  
 Minimum Length (µm): ≥ 0.5      Grid Opening Area (mm<sup>2</sup>): 0.0129  
 Chi<sup>2</sup> 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 (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	CD	0	0	< 23.18			
<b>Total Amphibole</b>	ADX	0	0	< 23.18			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	CD/ADX	0	0	< 23.18			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	-	0	0	< 23.18			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	CD	0	0	< 23.18			
<b>Total Amphibole (PCMe)</b>	ADX	0	0	< 23.18			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	CD/ADX	0	0	< 23.18			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	-	0	0	< 23.18			

**Comment**

Approved Signatory

Concentrations and 95% Confidence Intervals are based on a Poissonian distribution. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to the cost of analysis. This report relates only to the samples reported above and may not be reproduced except in full without the written approval of EMSL. EMSL is not responsible for sample collection activities or analytical limitations. Interpretation and use of results are the responsibility of the client.



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: 042500692

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:		042500692-0015					Customer Sample:		MFL-FB01-010825-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	A9	None Detected									
H5	H7	None Detected									
H5	F7	None Detected									
H5	D4	None Detected									
H5	B5	None Detected									
H6	A9	None Detected									
H6	C7	None Detected									
H6	E7	None Detected									
H6	G9	None Detected									
H6	I6	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> / [cinnaaslab@EMSL.com](mailto:cinnaaslab@EMSL.com)

**EMSL Order:** 042500692  
**Customer ID:** TTDC42  
**Customer PO:** 1207085  
**Project ID:** N/A

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

**Phone:** (703) 489-2674  
**Fax:** N/A  
**Received Date:** 01/14/2025 09:20 AM  
**Analysis Date:** 01/15/2025  
**Report Date:** 01/16/2025

**Project: Maui Fires Lahaina**

### ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

<b>Customer Sample Number:</b>	<b>Lab Blank</b>	<b>Sample Description: Lab Blank</b>
EMSL Sample Number:	042500692-0016	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 (mm <sup>2</sup> ): 385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm <sup>2</sup> ): 0.0129
Chi <sup>2</sup> Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed: 10
Minimum Level of analysis (chrysotile):	CD	Analyst: G.Barry
Minimum Level of analysis (amphibole):	ADX	
Estimated Particulate Loading on Filter %:	1	
Target Analytical Sensitivity (Structures/cc):	0.001	
<b>Analytical Sensitivity (Structures/cc):</b>	<b>N/A</b>	<b>Limit of Detection (Structures/cc): N/A</b>

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm <sup>2</sup> )	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm <sup>2</sup> )	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
<b>Total Chrysotile (PCMe)</b>	<b>CD</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
<b>Total Amphibole (PCMe)</b>	<b>ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Actinolite	ADX	0	0	< 23.18			
Amosite	ADX	0	0	< 23.18			
Anthophyllite	ADX	0	0	< 23.18			
Crocidolite	ADX	0	0	< 23.18			
Tremolite	ADX	0	0	< 23.18			
<b>Total Asbestos Structures (PCMe)</b>	<b>CD/ADX</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			
Other Minerals	-	0	0	< 23.18			
<b>Total All Structures (PCMe)</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>&lt; 23.18</b>			

**Comment**

Approved Signatory

Concentrations and 95% Confidence Intervals are based on a Poissonian distribution. Structure counts above 31 may be better expressed with a Gaussian distribution. EMSL maintains liability limited to the cost of analysis. This report relates only to the samples reported above and may not be reproduced except in full without the written approval of EMSL. EMSL is not responsible for sample collection activities or analytical limitations. Interpretation and use of results are the responsibility of the client.



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 Tel/Fax: (800) 220-3675 / (856) 786-5974  
<http://www.EMSL.com> / [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

EMSL Order ID: **042500692**  
 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: 042500692-0016			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					
A1	J9	None Detected									
A1	G5	None Detected									
A1	D3	None Detected									
A1	A6	None Detected									
A2	I4	None Detected									
A2	G8	None Detected									
A2	A3	None Detected									
A3	H2	None Detected									
A3	F4	None Detected									
A3	C7	None Detected									

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



# Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

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

## #042500692

PHONE: (800) 220-0675  
EMAIL: [cust@emsl.com](mailto:cust@emsl.com)

EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

RECEIVED  
EMSL  
CINNAMINSON, NJ  
JAN 14 AM 9:39

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

<b>Customer Information</b>		<b>Billing Information</b>	
Customer ID:		Billing ID:	
Company Name:	Tetra Tech	Company Name:	
Contact Name:	Chelsea Saber	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.saber@tetratech.com	Email(s) for Invoice:	

<b>Project Information</b>		Purchase Order:	1207085
Project Name/No:	Maui Fires Lahaina	US State where samples collected:	HI
EMSL LIMS Project ID:		State of Connecticut (CT) must select project location:	
Sampled By Name:	Jtai Bojdar-Yates	Commercial (Taxable)	<input type="checkbox"/>
Sampled By Signature:	<i>[Signature]</i>	Residential (Non-Taxable)	<input type="checkbox"/>
		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**

<b>PCM Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> NIOSH 7400 w/ 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <input type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> POINT COUNT <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<b>TEM - Air</b> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input checked="" type="checkbox"/> ISO 10312* <b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable-NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)	<b>TEM - Settled Dust</b> <input type="checkbox"/> Microvac - ASTM D5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Qualitative via Filtration Prep <input type="checkbox"/> 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-AM05-010625-AB	DL914525	7340.645	01/06/25 1058
MFL-AM02-010625-AB	DL914490	7064.496	01/06/25 1113
MFL-AM03-010625-AB	DL914469	7216.278	01/06/25 1249
MFL-AM08-010625-AB	DL914523	7251.688	01/06/25 1317
MFL-FB01-010625-AB	DL914485	0	01/06/25 1200
MFL-AM05-010725-AB	DL914521	7171.161	01/07/25 1051
MFL-AM02-010725-AB	DL914513	7128.628	01/07/25 1106
MFL-AM03-010725-AB	DL914483	7238.880	01/07/25 1252

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:	<i>[Signature]</i>	Date/Time:	01/09/25 1100
Relinquished by:		Received by:	<i>[Signature]</i> - FedEx
		Date/Time:	1/14/25 9:20A

Controlled Document - COC-05 Asbestos R16 10/29/2021

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 01/16/2025 and Shanna Vasser 01/17/2025

Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ

Collection date(s): 01/06/2025 – 01/08/2025

Report No: 42500692

- √ 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.



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

January 21, 2025

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

Dear Ms. Chelsea Saber,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 01/13/25 12:39.

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](mailto:julie.swift@erg.com)

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify [julie.swift@erg.com](mailto:julie.swift@erg.com) and delete the report without retaining any copies.



# CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.  
1777 Sentry Pkwy, Bldg 12  
Blue Bell, PA 19422

ATTN: Ms. Chelsea Saber

PHONE: (703) 885-5495 FAX:

FILE #: 4205.00.003.001

REPORTED: 01/21/25 14:52

SUBMITTED: 01/13/25

AQS SITE CODE:

SITE CODE: Lahaina fires

## ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
MFL-FB01-010225-HM	5011327-01	Air	01/02/25 00:00	01/13/25 12:39
MFL-AM05-010325-HM	5011327-02	Air	01/03/25 23:59	01/13/25 12:39
MFL-AM02-010325-HM	5011327-03	Air	01/03/25 23:59	01/13/25 12:39
MFL-AM03-010325-HM	5011327-04	Air	01/03/25 23:59	01/13/25 12:39
MFL-AM08-010325-HM	5011327-05	Air	01/03/25 23:59	01/13/25 12:39
MFL-AM05-010425-HM	5011327-06	Air	01/04/25 23:59	01/13/25 12:39
MFL-AM02-010425-HM	5011327-07	Air	01/04/25 23:59	01/13/25 12:39
MFL-AM03-010425-HM	5011327-08	Air	01/04/25 23:59	01/13/25 12:39
MFL-AM08-010425-HM	5011327-09	Air	01/04/25 23:59	01/13/25 12:39
MFL-FB01-010425-HM	5011327-10	Air	01/04/25 00:00	01/13/25 12:39
MFL-AM05-010525-HM	5011327-11	Air	01/05/25 23:59	01/13/25 12:39
MFL-AM02-010525-HM	5011327-12	Air	01/05/25 23:59	01/13/25 12:39
MFL-AM03-010525-HM	5011327-13	Air	01/05/25 23:59	01/13/25 12:39
MFL-AM08-010525-HM	5011327-14	Air	01/05/25 23:59	01/13/25 12:39
MFL-AM05-010625-HM	5011327-15	Air	01/06/25 23:59	01/13/25 12:39
MFL-AM02-010625-HM	5011327-16	Air	01/06/25 23:59	01/13/25 12:39
MFL-AM03-010625-HM	5011327-17	Air	01/06/25 23:59	01/13/25 12:39
MFL-AM08-010625-HM	5011327-18	Air	01/06/25 23:59	01/13/25 12:39
MFL-FB01-010625-HM	5011327-19	Air	01/06/25 00:00	01/13/25 12:39
MFL-AM05-010725-HM	5011327-20	Air	01/07/25 23:59	01/13/25 12:39
MFL-AM02-010725-HM	5011327-21	Air	01/07/25 23:59	01/13/25 12:39



# CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.  
 1777 Sentry Pkwy, Bldg 12  
 Blue Bell, PA 19422  
**ATTN:** Ms. Chelsea Saber

**FILE #:** 4205.00.003.001  
**REPORTED:** 01/21/25 14:52  
**SUBMITTED:** 01/13/25  
**AQS SITE CODE:**

<b>PHONE:</b> (703) 885-5495	<b>FAX:</b>			<b>SITE CODE:</b>	Lahaina fires
MFL-AM03-010725-HM	5011327-22	Air	01/07/25 23:59	01/13/25 12:39	
MFL-AM08-010725-HM	5011327-23	Air	01/07/25 23:59	01/13/25 12:39	
MFL-AM05-010825-HM	5011327-24	Air	01/08/25 23:59	01/13/25 12:39	
MFL-AM02-010825-HM	5011327-25	Air	01/08/25 23:59	01/13/25 12:39	
MFL-AM03-010825-HM	5011327-26	Air	01/08/25 23:59	01/13/25 12:39	
MFL-AM08-010825-HM	5011327-27	Air	01/08/25 23:59	01/13/25 12:39	
MFL-FB01-010825-HM	5011327-28	Air	01/08/25 00:00	01/13/25 12:39	
MFL-LB01-010325-HM	5011327-29	Air	01/03/25 00:00	01/13/25 12:39	



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-FB01-010225-HM      **Lab ID:** 5011327-01      **Sampled:** 01/02/25 00:00  
**Matrix:** Air      **Sample Volume:** 1967.731 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 00:47  
**Comments:** Q8515136 Field Blank - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0148	SL, U	0.0289	
Arsenic	7440-38-2	0.00341	U	0.00735	
Barium	7440-39-3	0.966	U	1.27	
Beryllium	7440-41-7	2.53E-4	U	0.00157	
Cadmium	7440-43-9	7.27E-4	U	0.00423	
Chromium	7440-47-3	0.997	U	2.02	
Cobalt	7440-48-4	0.0108	U	0.0430	
Copper	7440-50-8	0.544	U	0.622	
Lead	7439-92-1	0.0331	U	0.111	
Manganese	7439-96-5	0.273	QB-01, U	0.461	
Molybdenum	7439-98-7	0.152	U	0.326	
Nickel	7440-02-0	0.404	U	0.611	
Selenium	7782-49-2	1.81E-4	U	0.00835	
Thallium	7440-28-0	2.62E-4	U	7.12E-4	
Vanadium	7440-62-2	0.0133	U	0.0379	
Zinc	7440-66-6	3.76	U	94.3	



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM05-010325-HM      **Lab ID:** 5011327-02      **Sampled:** 01/03/25 23:59  
**Matrix:** Air      **Sample Volume:** 1967.731 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 01:00  
**Comments:** Q8515143 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.110	SL	0.0289	
Arsenic	7440-38-2	0.157		0.00735	
Barium	7440-39-3	7.04		1.27	
Beryllium	7440-41-7	0.00841		0.00157	
Cadmium	7440-43-9	0.00738		0.00423	
Chromium	7440-47-3	2.17		2.02	
Cobalt	7440-48-4	0.334		0.0430	
Copper	7440-50-8	42.6		0.622	
Lead	7439-92-1	0.413		0.111	
Manganese	7439-96-5	9.42	QB-01	0.461	
Molybdenum	7439-98-7	2.42		0.326	
Nickel	7440-02-0	1.31		0.611	
Selenium	7782-49-2	0.222		0.00835	
Thallium	7440-28-0	8.77E-4		7.12E-4	
Vanadium	7440-62-2	1.55		0.0379	
Zinc	7440-66-6	11.7	U	94.3	



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM02-010325-HM      **Lab ID:** 5011327-03      **Sampled:** 01/03/25 23:59  
**Matrix:** Air      **Sample Volume:** 2039.425 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/14/25 22:17  
**Comments:** Q8515141 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	
Antimony	7440-36-0	0.270	SL	0.0279
Arsenic	7440-38-2	0.349		0.00709
Barium	7440-39-3	10.2		1.23
Beryllium	7440-41-7	0.0187		0.00152
Cadmium	7440-43-9	0.0143		0.00408
Chromium	7440-47-3	3.12		1.95
Cobalt	7440-48-4	0.663		0.0415
Copper	7440-50-8	33.0		0.600
Lead	7439-92-1	1.22		0.107
Manganese	7439-96-5	18.8	QB-01	0.444
Molybdenum	7439-98-7	1.80		0.314
Nickel	7440-02-0	1.90		0.590
Selenium	7782-49-2	0.266		0.00806
Thallium	7440-28-0	0.00119		6.87E-4
Vanadium	7440-62-2	2.60		0.0365
Zinc	7440-66-6	20.2	U	90.9



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM03-010325-HM      **Lab ID:** 5011327-04      **Sampled:** 01/03/25 23:59  
**Matrix:** Air      **Sample Volume:** 1859.482 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 01:14  
**Comments:** Q8515139 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0508	SL	0.0306	
Arsenic	7440-38-2	0.180		0.00778	
Barium	7440-39-3	4.88		1.35	
Beryllium	7440-41-7	0.0197		0.00166	
Cadmium	7440-43-9	0.0160		0.00448	
Chromium	7440-47-3	2.59		2.13	
Cobalt	7440-48-4	0.415		0.0455	
Copper	7440-50-8	87.5		0.658	
Lead	7439-92-1	0.212		0.117	
Manganese	7439-96-5	10.1	QB-01	0.487	
Molybdenum	7439-98-7	2.50		0.345	
Nickel	7440-02-0	1.38		0.647	
Selenium	7782-49-2	0.205		0.00884	
Thallium	7440-28-0	7.96E-4		7.53E-4	
Vanadium	7440-62-2	1.35		0.0401	
Zinc	7440-66-6	6.88	U	99.7	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM08-010325-HM      **Lab ID:** 5011327-05      **Sampled:** 01/03/25 23:59  
**Matrix:** Air      **Sample Volume:** 1928.773 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 01:28  
**Comments:** Q8515138 - Received in good condition.

### Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.139	SL	0.0295
Arsenic	7440-38-2	0.290		0.00750
Barium	7440-39-3	4.89		1.30
Beryllium	7440-41-7	0.00933		0.00160
Cadmium	7440-43-9	0.0106		0.00432
Chromium	7440-47-3	2.28		2.06
Cobalt	7440-48-4	0.343		0.0439
Copper	7440-50-8	32.3		0.634
Lead	7439-92-1	0.486		0.113
Manganese	7439-96-5	9.45	QB-01	0.470
Molybdenum	7439-98-7	1.28		0.332
Nickel	7440-02-0	1.23		0.623
Selenium	7782-49-2	0.212		0.00852
Thallium	7440-28-0	7.50E-4		7.26E-4
Vanadium	7440-62-2	1.24		0.0386
Zinc	7440-66-6	12.8	U	96.2



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM05-010425-HM      **Lab ID:** 5011327-06      **Sampled:** 01/04/25 23:59  
**Matrix:** Air      **Sample Volume:** 1950.381 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 01:42  
**Comments:** Q8515135 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.139	SL	0.0292	
Arsenic	7440-38-2	0.535		0.00742	
Barium	7440-39-3	9.43		1.28	
Beryllium	7440-41-7	0.0269		0.00158	
Cadmium	7440-43-9	0.136		0.00427	
Chromium	7440-47-3	3.41		2.04	
Cobalt	7440-48-4	0.847		0.0434	
Copper	7440-50-8	49.3		0.627	
Lead	7439-92-1	0.628		0.112	
Manganese	7439-96-5	31.0	QB-01	0.465	
Molybdenum	7439-98-7	2.57		0.329	
Nickel	7440-02-0	1.80		0.616	
Selenium	7782-49-2	1.11		0.00843	
Thallium	7440-28-0	0.00859		7.18E-4	
Vanadium	7440-62-2	2.80		0.0382	
Zinc	7440-66-6	27.0	U	95.1	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM02-010425-HM      **Lab ID:** 5011327-07      **Sampled:** 01/04/25 23:59  
**Matrix:** Air      **Sample Volume:** 2050.583 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 01:57  
**Comments:** Q8515133 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.150	SL	0.0278
Arsenic	7440-38-2	0.305		0.00705
Barium	7440-39-3	7.33		1.22
Beryllium	7440-41-7	0.0142		0.00151
Cadmium	7440-43-9	0.113		0.00406
Chromium	7440-47-3	2.52		1.94
Cobalt	7440-48-4	0.471		0.0413
Copper	7440-50-8	41.7		0.597
Lead	7439-92-1	0.909		0.106
Manganese	7439-96-5	13.3	QB-01	0.442
Molybdenum	7439-98-7	1.88		0.313
Nickel	7440-02-0	1.53		0.586
Selenium	7782-49-2	1.03		0.00801
Thallium	7440-28-0	0.00715		6.83E-4
Vanadium	7440-62-2	1.75		0.0363
Zinc	7440-66-6	16.8	U	90.5



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM03-010425-HM      **Lab ID:** 5011327-08      **Sampled:** 01/04/25 23:59  
**Matrix:** Air      **Sample Volume:** 1854.825 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 02:11  
**Comments:** Q8515132 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0484	SL	0.0307	
Arsenic	7440-38-2	0.173		0.00780	
Barium	7440-39-3	3.82		1.35	
Beryllium	7440-41-7	0.0135		0.00167	
Cadmium	7440-43-9	0.129		0.00449	
Chromium	7440-47-3	2.25		2.14	
Cobalt	7440-48-4	0.343		0.0456	
Copper	7440-50-8	90.5		0.660	
Lead	7439-92-1	0.224		0.118	
Manganese	7439-96-5	8.03	QB-01	0.489	
Molybdenum	7439-98-7	2.49		0.346	
Nickel	7440-02-0	1.40		0.648	
Selenium	7782-49-2	1.13		0.00886	
Thallium	7440-28-0	0.00788		7.55E-4	
Vanadium	7440-62-2	1.38		0.0402	
Zinc	7440-66-6	12.1	U	100	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM08-010425-HM      **Lab ID:** 5011327-09      **Sampled:** 01/04/25 23:59  
**Matrix:** Air      **Sample Volume:** 1945.017 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 02:25  
**Comments:** Q8515131 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.116	SL	0.0293	
Arsenic	7440-38-2	0.364		0.00744	
Barium	7440-39-3	3.47		1.29	
Beryllium	7440-41-7	0.00786		0.00159	
Cadmium	7440-43-9	0.146		0.00428	
Chromium	7440-47-3	2.02	U	2.04	
Cobalt	7440-48-4	0.278		0.0435	
Copper	7440-50-8	32.3		0.629	
Lead	7439-92-1	0.581		0.112	
Manganese	7439-96-5	7.99	QB-01	0.466	
Molybdenum	7439-98-7	1.35		0.330	
Nickel	7440-02-0	1.38		0.618	
Selenium	7782-49-2	1.26		0.00845	
Thallium	7440-28-0	0.00971		7.20E-4	
Vanadium	7440-62-2	1.75		0.0383	
Zinc	7440-66-6	12.5	U	95.4	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-FB01-010425-HM      **Lab ID:** 5011327-10      **Sampled:** 01/04/25 00:00  
**Matrix:** Air      **Sample Volume:** 1950.381 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 02:39  
**Comments:** Q8515128 Field Blank - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0149	SL, U	0.0292	
Arsenic	7440-38-2	0.00660	U	0.00742	
Barium	7440-39-3	0.991	U	1.28	
Beryllium	7440-41-7	2.29E-4	U	0.00158	
Cadmium	7440-43-9	5.90E-4	U	0.00427	
Chromium	7440-47-3	1.24	U	2.04	
Cobalt	7440-48-4	0.0109	U	0.0434	
Copper	7440-50-8	0.427	U	0.627	
Lead	7439-92-1	0.0235	U	0.112	
Manganese	7439-96-5	0.304	QB-01, U	0.465	
Molybdenum	7439-98-7	0.167	U	0.329	
Nickel	7440-02-0	0.376	U	0.616	
Selenium	7782-49-2	0.00106	U	0.00843	
Thallium	7440-28-0	1.00E-4	U	7.18E-4	
Vanadium	7440-62-2	0.0343	U	0.0382	
Zinc	7440-66-6	5.64	U	95.1	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM05-010525-HM      **Lab ID:** 5011327-11      **Sampled:** 01/05/25 23:59  
**Matrix:** Air      **Sample Volume:** 1952.833 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/14/25 18:23  
**Comments:** Q8515130 MS/MSD - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.122	SL	0.0292	
Arsenic	7440-38-2	0.973		0.00741	
Barium	7440-39-3	10.1		1.28	
Beryllium	7440-41-7	0.0420		0.00158	
Cadmium	7440-43-9	0.376		0.00427	
Chromium	7440-47-3	4.60		2.03	
Cobalt	7440-48-4	1.31	A-01	0.0433	
Copper	7440-50-8	54.0		0.627	
Lead	7439-92-1	1.14		0.112	
Manganese	7439-96-5	48.8	A-01, QB-01, QM-07	0.464	
Molybdenum	7439-98-7	2.15		0.328	
Nickel	7440-02-0	2.97		0.616	
Selenium	7782-49-2	2.90		0.00841	
Thallium	7440-28-0	0.0266		7.17E-4	
Vanadium	7440-62-2	4.98		0.0382	
Zinc	7440-66-6	29.7	U	95.0	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-AM02-010525-HM      **Lab ID:** 5011327-12      **Sampled:** 01/05/25 23:59  
**Matrix:** Air      **Sample Volume:** 2044.575 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 02:53  
**Comments:** Q8515129 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.134	SL	0.0279
Arsenic	7440-38-2	0.658		0.00707
Barium	7440-39-3	44.0		1.23
Beryllium	7440-41-7	0.0231		0.00151
Cadmium	7440-43-9	0.356		0.00407
Chromium	7440-47-3	4.03		1.94
Cobalt	7440-48-4	0.663		0.0414
Copper	7440-50-8	85.4		0.598
Lead	7439-92-1	1.53		0.107
Manganese	7439-96-5	21.6	QB-01	0.443
Molybdenum	7439-98-7	2.03		0.314
Nickel	7440-02-0	2.33		0.588
Selenium	7782-49-2	2.96		0.00804
Thallium	7440-28-0	0.0232		6.85E-4
Vanadium	7440-62-2	3.15		0.0364
Zinc	7440-66-6	26.3	U	90.7



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 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-AM03-010525-HM      **Lab ID:** 5011327-13      **Sampled:** 01/05/25 23:59  
**Matrix:** Air      **Sample Volume:** 1876.948 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 04:19  
**Comments:** Q8515127 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0348	SL	0.0303	
Arsenic	7440-38-2	0.228		0.00771	
Barium	7440-39-3	2.59	LJ, QX	1.33	
Beryllium	7440-41-7	0.0109		0.00165	
Cadmium	7440-43-9	0.305		0.00444	
Chromium	7440-47-3	1.94	U	2.12	
Cobalt	7440-48-4	0.246		0.0451	
Copper	7440-50-8	87.7		0.652	
Lead	7439-92-1	0.290		0.116	
Manganese	7439-96-5	5.69	QB-01	0.483	
Molybdenum	7439-98-7	2.35		0.342	
Nickel	7440-02-0	1.17		0.641	
Selenium	7782-49-2	2.31		0.00876	
Thallium	7440-28-0	0.0214		7.46E-4	
Vanadium	7440-62-2	0.997		0.0397	
Zinc	7440-66-6	14.6	U	98.8	



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 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM08-010525-HM      **Lab ID:** 5011327-14      **Sampled:** 01/05/25 23:59  
**Matrix:** Air      **Sample Volume:** 1928.773 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 04:37  
**Comments:** Q8515126 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0762	SL	0.0295	
Arsenic	7440-38-2	0.527		0.00750	
Barium	7440-39-3	2.94	LJ, QX	1.30	
Beryllium	7440-41-7	0.00750		0.00160	
Cadmium	7440-43-9	0.336		0.00432	
Chromium	7440-47-3	2.10		2.06	
Cobalt	7440-48-4	0.295		0.0439	
Copper	7440-50-8	24.6		0.634	
Lead	7439-92-1	0.681		0.113	
Manganese	7439-96-5	8.14	QB-01	0.470	
Molybdenum	7439-98-7	1.26		0.332	
Nickel	7440-02-0	1.07		0.623	
Selenium	7782-49-2	2.69		0.00852	
Thallium	7440-28-0	0.0243		7.26E-4	
Vanadium	7440-62-2	0.944		0.0386	
Zinc	7440-66-6	14.6	U	96.2	



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM05-010625-HM      **Lab ID:** 5011327-15      **Sampled:** 01/06/25 23:59  
**Matrix:** Air      **Sample Volume:** 1961.821 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 04:54  
**Comments:** Q8515125 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0678	SL	0.0290	
Arsenic	7440-38-2	0.208		0.00737	
Barium	7440-39-3	2.75	LJ, QX	1.28	
Beryllium	7440-41-7	0.00297		0.00158	
Cadmium	7440-43-9	0.0895		0.00425	
Chromium	7440-47-3	1.65	U	2.02	
Cobalt	7440-48-4	0.131		0.0431	
Copper	7440-50-8	36.7		0.624	
Lead	7439-92-1	0.431		0.111	
Manganese	7439-96-5	4.09	QB-01	0.462	
Molybdenum	7439-98-7	1.69		0.327	
Nickel	7440-02-0	0.951		0.613	
Selenium	7782-49-2	0.545		0.00838	
Thallium	7440-28-0	0.00317		7.14E-4	
Vanadium	7440-62-2	0.325		0.0380	
Zinc	7440-66-6	17.0	U	94.5	



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 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM02-010625-HM      **Lab ID:** 5011327-16      **Sampled:** 01/06/25 23:59  
**Matrix:** Air      **Sample Volume:** 2042.315 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 05:08  
**Comments:** Q8515122 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.102	SL	0.0279	
Arsenic	7440-38-2	0.205		0.00708	
Barium	7440-39-3	3.05	LJ, QX	1.23	
Beryllium	7440-41-7	0.00475		0.00151	
Cadmium	7440-43-9	0.0558		0.00408	
Chromium	7440-47-3	1.55	U	1.94	
Cobalt	7440-48-4	0.177		0.0414	
Copper	7440-50-8	40.9		0.599	
Lead	7439-92-1	0.618		0.107	
Manganese	7439-96-5	5.23	QB-01	0.444	
Molybdenum	7439-98-7	1.40		0.314	
Nickel	7440-02-0	0.856		0.589	
Selenium	7782-49-2	0.551		0.00805	
Thallium	7440-28-0	0.00302		6.86E-4	
Vanadium	7440-62-2	0.468		0.0365	
Zinc	7440-66-6	17.1	U	90.8	



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 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-AM03-010625-HM      **Lab ID:** 5011327-17      **Sampled:** 01/06/25 23:59  
**Matrix:** Air      **Sample Volume:** 1832.702 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 05:22  
**Comments:** Q8515120 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0434	SL	0.0311	
Arsenic	7440-38-2	0.0778		0.00789	
Barium	7440-39-3	2.17	LJ, QX	1.37	
Beryllium	7440-41-7	0.00603		0.00169	
Cadmium	7440-43-9	0.0695		0.00455	
Chromium	7440-47-3	4.91		2.17	
Cobalt	7440-48-4	0.242		0.0462	
Copper	7440-50-8	37.0		0.668	
Lead	7439-92-1	0.176		0.119	
Manganese	7439-96-5	4.47	QB-01	0.494	
Molybdenum	7439-98-7	1.46		0.350	
Nickel	7440-02-0	4.69		0.656	
Selenium	7782-49-2	0.341		0.00897	
Thallium	7440-28-0	0.00168		7.64E-4	
Vanadium	7440-62-2	0.266		0.0407	
Zinc	7440-66-6	29.6	U	101	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM08-010625-HM      **Lab ID:** 5011327-18      **Sampled:** 01/06/25 23:59  
**Matrix:** Air      **Sample Volume:** 1915.591 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 05:49  
**Comments:** Q8515119 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.152	SL	0.0297	
Arsenic	7440-38-2	0.389		0.00755	
Barium	7440-39-3	2.11	LJ, QX	1.31	
Beryllium	7440-41-7	0.00331		0.00161	
Cadmium	7440-43-9	0.0596		0.00435	
Chromium	7440-47-3	1.84	U	2.07	
Cobalt	7440-48-4	0.156		0.0442	
Copper	7440-50-8	35.2		0.639	
Lead	7439-92-1	0.435		0.114	
Manganese	7439-96-5	4.39	QB-01	0.473	
Molybdenum	7439-98-7	1.69		0.335	
Nickel	7440-02-0	1.16		0.628	
Selenium	7782-49-2	0.312		0.00858	
Thallium	7440-28-0	0.00156		7.31E-4	
Vanadium	7440-62-2	0.309		0.0389	
Zinc	7440-66-6	19.7	U	96.8	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-FB01-010625-HM      **Lab ID:** 5011327-19      **Sampled:** 01/06/25 00:00  
**Matrix:** Air      **Sample Volume:** 1961.821 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 06:03  
**Comments:** Q8515110 Field Blank - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0148	SL, U	0.0290	
Arsenic	7440-38-2	0.00454	U	0.00737	
<b>Barium</b>	<b>7440-39-3</b>	<b>1.66</b>	FB-01, LJ, QX	<b>1.28</b>	
Beryllium	7440-41-7	1.06E-4	U	0.00158	
Cadmium	7440-43-9	6.48E-4	U	0.00425	
Chromium	7440-47-3	0.986	U	2.02	
Cobalt	7440-48-4	0.00971	U	0.0431	
Copper	7440-50-8	0.283	U	0.624	
Lead	7439-92-1	0.0263	U	0.111	
Manganese	7439-96-5	0.157	QB-01, U	0.462	
Molybdenum	7439-98-7	0.148	U	0.327	
Nickel	7440-02-0	0.378	U	0.613	
Selenium	7782-49-2	0.00153	U	0.00838	
Thallium	7440-28-0	9.29E-5	U	7.14E-4	
Vanadium	7440-62-2	0.0269	U	0.0380	
Zinc	7440-66-6	3.56	U	94.5	



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 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-AM05-010725-HM      **Lab ID:** 5011327-20      **Sampled:** 01/07/25 23:59  
**Matrix:** Air      **Sample Volume:** 1924.894 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 06:17  
**Comments:** Q8515115 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0737	SL	0.0296	
Arsenic	7440-38-2	0.216		0.00751	
Barium	7440-39-3	2.74	LJ, QX	1.30	
Beryllium	7440-41-7	0.00231		0.00161	
Cadmium	7440-43-9	0.0179		0.00433	
Chromium	7440-47-3	3.56		2.06	
Cobalt	7440-48-4	0.214		0.0440	
Copper	7440-50-8	22.2		0.636	
Lead	7439-92-1	0.507		0.113	
Manganese	7439-96-5	3.34	QB-01	0.471	
Molybdenum	7439-98-7	1.13		0.333	
Nickel	7440-02-0	3.87		0.625	
Selenium	7782-49-2	0.197		0.00854	
Thallium	7440-28-0	9.46E-4		7.28E-4	
Vanadium	7440-62-2	0.312		0.0387	
Zinc	7440-66-6	20.7	U	96.4	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM02-010725-HM      **Lab ID:** 5011327-21      **Sampled:** 01/07/25 23:59  
**Matrix:** Air      **Sample Volume:** 2010.26 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 06:31  
**Comments:** Q8515112 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0544	SL	0.0283	
Arsenic	7440-38-2	0.159		0.00720	
Barium	7440-39-3	2.74	LJ, QX	1.25	
Beryllium	7440-41-7	0.00174		0.00154	
Cadmium	7440-43-9	0.00992		0.00414	
Chromium	7440-47-3	1.15	U	1.97	
Cobalt	7440-48-4	0.0617		0.0421	
Copper	7440-50-8	28.3		0.609	
Lead	7439-92-1	0.196		0.108	
Manganese	7439-96-5	1.69	QB-01	0.451	
Molybdenum	7439-98-7	1.26		0.319	
Nickel	7440-02-0	0.582	U	0.598	
Selenium	7782-49-2	0.210		0.00817	
Thallium	7440-28-0	0.00109		6.97E-4	
Vanadium	7440-62-2	0.242		0.0371	
Zinc	7440-66-6	14.6	U	92.3	



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FILE #: 4205.00.003.001  
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 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM03-010725-HM      **Lab ID:** 5011327-22      **Sampled:** 01/07/25 23:59  
**Matrix:** Air      **Sample Volume:** 1835.769 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 07:54  
**Comments:** Q8515111 - Received in good condition.

### Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0571	SL	0.0310	
Arsenic	7440-38-2	0.105		0.00788	
Barium	7440-39-3	2.52	LJ, QX	1.36	
Beryllium	7440-41-7	0.00489		0.00168	
Cadmium	7440-43-9	0.0245		0.00454	
Chromium	7440-47-3	1.71	U	2.16	
Cobalt	7440-48-4	0.133		0.0461	
Copper	7440-50-8	32.5		0.666	
Lead	7439-92-1	0.161		0.119	
Manganese	7439-96-5	3.40	QB-01	0.494	
Molybdenum	7439-98-7	1.31		0.349	
Nickel	7440-02-0	1.25		0.655	
Selenium	7782-49-2	0.207		0.00895	
Thallium	7440-28-0	0.00141		7.63E-4	
Vanadium	7440-62-2	0.342		0.0406	
Zinc	7440-66-6	16.9	U	101	



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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-AM08-010725-HM      **Lab ID:** 5011327-23      **Sampled:** 01/07/25 23:59  
**Matrix:** Air      **Sample Volume:** 1924.74 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 08:07  
**Comments:** Q8515109 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0743	SL	0.0296	
Arsenic	7440-38-2	0.425		0.00751	
Barium	7440-39-3	2.24	LJ, QX	1.30	
Beryllium	7440-41-7	0.00467		0.00161	
Cadmium	7440-43-9	0.892		0.00433	
Chromium	7440-47-3	1.63	U	2.06	
Cobalt	7440-48-4	0.139		0.0440	
Copper	7440-50-8	33.7		0.636	
Lead	7439-92-1	0.381		0.113	
Manganese	7439-96-5	4.74	QB-01	0.471	
Molybdenum	7439-98-7	1.64		0.333	
Nickel	7440-02-0	0.731		0.625	
Selenium	7782-49-2	0.223		0.00854	
Thallium	7440-28-0	0.00159		7.28E-4	
Vanadium	7440-62-2	0.396		0.0387	
Zinc	7440-66-6	14.0	U	96.4	



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 AQS SITE CODE:  
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**Description:** MFL-AM05-010825-HM      **Lab ID:** 5011327-24      **Sampled:** 01/08/25 23:59  
**Matrix:** Air      **Sample Volume:** 1869.509 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 08:22  
**Comments:** Q8515108 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0812	SL	0.0305	
Arsenic	7440-38-2	0.329		0.00774	
Barium	7440-39-3	3.48	LJ, QX	1.34	
Beryllium	7440-41-7	0.00396		0.00165	
Cadmium	7440-43-9	0.0471		0.00446	
Chromium	7440-47-3	1.75	U	2.12	
Cobalt	7440-48-4	0.157		0.0453	
Copper	7440-50-8	30.3		0.654	
Lead	7439-92-1	0.550		0.117	
Manganese	7439-96-5	4.29	QB-01	0.485	
Molybdenum	7439-98-7	1.63		0.343	
Nickel	7440-02-0	0.824		0.643	
Selenium	7782-49-2	0.456		0.00879	
Thallium	7440-28-0	0.00530		7.49E-4	
Vanadium	7440-62-2	0.427		0.0399	
Zinc	7440-66-6	27.2	U	99.2	



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 AQS SITE CODE:  
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**Description:** MFL-AM02-010825-HM      **Lab ID:** 5011327-25      **Sampled:** 01/08/25 23:59  
**Matrix:** Air      **Sample Volume:** 2030.407 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 08:36  
**Comments:** Q8515106 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.0942	SL	0.0280
Arsenic	7440-38-2	0.329		0.00712
Barium	7440-39-3	6.78	LJ, QX	1.23
Beryllium	7440-41-7	0.00422		0.00152
Cadmium	7440-43-9	0.0640		0.00410
Chromium	7440-47-3	2.05		1.96
Cobalt	7440-48-4	0.143		0.0417
Copper	7440-50-8	25.3		0.603
Lead	7439-92-1	0.520		0.107
Manganese	7439-96-5	4.59	QB-01	0.446
Molybdenum	7439-98-7	1.02		0.316
Nickel	7440-02-0	0.988		0.592
Selenium	7782-49-2	0.457		0.00809
Thallium	7440-28-0	0.00514		6.90E-4
Vanadium	7440-62-2	0.429		0.0367
Zinc	7440-66-6	16.6	U	91.4



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM03-010825-HM      **Lab ID:** 5011327-26      **Sampled:** 01/08/25 23:59  
**Matrix:** Air      **Sample Volume:** 1832.702 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 08:49  
**Comments:** Q8515105 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.0407	SL	0.0311
Arsenic	7440-38-2	0.0787		0.00789
Barium	7440-39-3	2.31	LJ, QX	1.37
Beryllium	7440-41-7	0.00664		0.00169
Cadmium	7440-43-9	0.0362		0.00455
Chromium	7440-47-3	1.69	U	2.17
Cobalt	7440-48-4	0.152		0.0462
Copper	7440-50-8	35.9		0.668
Lead	7439-92-1	0.111	U	0.119
Manganese	7439-96-5	3.30	QB-01	0.494
Molybdenum	7439-98-7	1.18		0.350
Nickel	7440-02-0	1.04		0.656
Selenium	7782-49-2	0.349		0.00897
Thallium	7440-28-0	0.00416		7.64E-4
Vanadium	7440-62-2	0.384		0.0407
Zinc	7440-66-6	11.2	U	101



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 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-AM08-010825-HM      **Lab ID:** 5011327-27      **Sampled:** 01/08/25 23:59  
**Matrix:** Air      **Sample Volume:** 1944.201 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 09:03  
**Comments:** Q8515102 - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.107	SL	0.0293
Arsenic	7440-38-2	0.698		0.00744
Barium	7440-39-3	3.97	LJ, QX	1.29
Beryllium	7440-41-7	0.0122		0.00159
Cadmium	7440-43-9	0.0844		0.00428
Chromium	7440-47-3	2.22		2.04
Cobalt	7440-48-4	0.335		0.0435
Copper	7440-50-8	24.2		0.629
Lead	7439-92-1	0.813		0.112
Manganese	7439-96-5	11.7	QB-01	0.466
Molybdenum	7439-98-7	1.23		0.330
Nickel	7440-02-0	1.27		0.618
Selenium	7782-49-2	0.433		0.00845
Thallium	7440-28-0	0.00471		7.21E-4
Vanadium	7440-62-2	0.934		0.0383
Zinc	7440-66-6	16.8	U	95.4



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 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
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**Description:** MFL-FB01-010825-HM      **Lab ID:** 5011327-28      **Sampled:** 01/08/25 00:00  
**Matrix:** Air      **Sample Volume:** 1869.509 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 09:32  
**Comments:** Q8515094 Field Blank - Received in good condition.

## Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>	
Antimony	7440-36-0	0.0204	SL, U	0.0305	
<b>Arsenic</b>	<b>7440-38-2</b>	<b>0.00816</b>	FB-01	<b>0.00774</b>	
Barium	7440-39-3	1.30	LJ, QX, U	1.34	
Beryllium	7440-41-7	1.40E-4	U	0.00165	
Cadmium	7440-43-9	7.75E-4	U	0.00446	
Chromium	7440-47-3	1.14	U	2.12	
Cobalt	7440-48-4	0.0124	U	0.0453	
<b>Copper</b>	<b>7440-50-8</b>	<b>0.941</b>	FB-01	<b>0.654</b>	
Lead	7439-92-1	0.0354	U	0.117	
Manganese	7439-96-5	0.281	QB-01, U	0.485	
Molybdenum	7439-98-7	0.181	U	0.343	
Nickel	7440-02-0	0.485	U	0.643	
Selenium	7782-49-2	0.00108	U	0.00879	
Thallium	7440-28-0	1.40E-4	U	7.49E-4	
Vanadium	7440-62-2	0.0326	U	0.0399	
Zinc	7440-66-6	8.76	U	99.2	



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 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

**Description:** MFL-LB01-010325-HM      **Lab ID:** 5011327-29      **Sampled:** 01/03/25 00:00  
**Matrix:** Air      **Sample Volume:** 1869.509 m<sup>3</sup>      **Received:** 01/13/25 12:39  
**Filter ID:**      **Analysis Date:** 01/15/25 09:46  
**Comments:** Q8515134 Lot Blank - Received in good condition.

### Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m<sup>3</sup> Air</u>	<u>Flag</u>	<u>ng/m<sup>3</sup> Air</u>
Antimony	7440-36-0	0.0168	SL, U	0.0305
Arsenic	7440-38-2	0.00705	U	0.00774
Barium	7440-39-3	1.13	LJ, QX, U	1.34
Beryllium	7440-41-7	2.16E-4	U	0.00165
Cadmium	7440-43-9	8.49E-4	U	0.00446
Chromium	7440-47-3	1.05	U	2.12
Cobalt	7440-48-4	0.0159	U	0.0453
<b>Copper</b>	<b>7440-50-8</b>	<b>3.70</b>		<b>0.654</b>
Lead	7439-92-1	0.0379	U	0.117
Manganese	7439-96-5	0.297	QB-01, U	0.485
Molybdenum	7439-98-7	0.337	U	0.343
Nickel	7440-02-0	0.521	U	0.643
Selenium	7782-49-2	0.00101	U	0.00879
Thallium	7440-28-0	9.25E-5	U	7.49E-4
<b>Vanadium</b>	<b>7440-62-2</b>	<b>0.0476</b>		<b>0.0399</b>
Zinc	7440-66-6	5.89	U	99.2



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 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Blank (2501034-CCB1)

Prepared & Analyzed: 01/14/25

Antimony	0.659		ng/l							
Arsenic	1.72		ng/l							
Barium	1.98		ng/l							
Beryllium	-0.872		ng/l							U
Cadmium	0.251		ng/l							
Chromium	1.67		ng/l							
Cobalt	0.0213		ng/l							
Copper	40.2		ng/l							
Lead	3.59		ng/l							
Manganese	4.65		ng/l							
Molybdenum	29.3		ng/l							
Nickel	-0.465		ng/l							U
Selenium	-2.27		ng/l							U
Thallium	1.56		ng/l							
Vanadium	-53.4		ng/l							U
Zinc	391		ng/l							

### Calibration Blank (2501034-CCB2)

Prepared & Analyzed: 01/14/25

Antimony	0.494		ng/l							
Arsenic	7.03		ng/l							
Barium	4.08		ng/l							
Beryllium	-1.65		ng/l							U
Cadmium	0.110		ng/l							
Chromium	3.02		ng/l							
Cobalt	0.292		ng/l							
Copper	19.8		ng/l							
Lead	2.66		ng/l							
Manganese	3.62		ng/l							
Molybdenum	7.00		ng/l							
Nickel	3.55		ng/l							
Selenium	1.43		ng/l							
Thallium	1.14		ng/l							
Vanadium	-62.1		ng/l							U
Zinc	-29.0		ng/l							U

### Calibration Blank (2501034-CCB3)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.636		ng/l							
Arsenic	5.37		ng/l							
Barium	2.80		ng/l							
Beryllium	-1.63		ng/l							U

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Blank (2501034-CCB3) Contin

Prepared: 01/14/25 Analyzed: 01/15/25

Cadmium	0.174		ng/l							
Chromium	4.25		ng/l							
Cobalt	0.301		ng/l							
Copper	20.8		ng/l							
Lead	2.97		ng/l							
Manganese	4.42		ng/l							
Molybdenum	7.68		ng/l							
Nickel	4.57		ng/l							
Selenium	-0.0928		ng/l							U
Thallium	1.30		ng/l							
Vanadium	-59.2		ng/l							U
Zinc	-39.0		ng/l							U

### Calibration Blank (2501034-CCB4)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.933		ng/l							
Arsenic	9.17		ng/l							
Barium	2.89		ng/l							
Beryllium	-1.91		ng/l							U
Cadmium	0.102		ng/l							
Chromium	3.65		ng/l							
Cobalt	0.281		ng/l							
Copper	25.7		ng/l							
Lead	3.07		ng/l							
Manganese	4.81		ng/l							
Molybdenum	12.2		ng/l							
Nickel	4.27		ng/l							
Selenium	9.84		ng/l							
Thallium	1.63		ng/l							
Vanadium	-67.9		ng/l							U
Zinc	-39.9		ng/l							U

### Calibration Blank (2501034-CCB5)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.892		ng/l							
Arsenic	7.36		ng/l							
Barium	2.29		ng/l							
Beryllium	-1.94		ng/l							U
Cadmium	0.202		ng/l							
Chromium	3.75		ng/l							
Cobalt	0.321		ng/l							
Copper	23.6		ng/l							

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Blank (2501034-CCB5) Contin

Prepared: 01/14/25 Analyzed: 01/15/25

Lead	2.85		ng/l							
Manganese	5.19		ng/l							
Molybdenum	11.2		ng/l							
Nickel	5.26		ng/l							
Selenium	-1.69		ng/l							U
Thallium	1.57		ng/l							
Vanadium	-70.2		ng/l							U
Zinc	-39.2		ng/l							U

### Calibration Blank (2501034-CCB6)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.850		ng/l							
Arsenic	3.60		ng/l							
Barium	2.06		ng/l							
Beryllium	-2.04		ng/l							U
Cadmium	0.121		ng/l							
Chromium	3.40		ng/l							
Cobalt	0.423		ng/l							
Copper	28.3		ng/l							
Lead	2.58		ng/l							
Manganese	6.60		ng/l							
Molybdenum	9.67		ng/l							
Nickel	4.28		ng/l							
Selenium	13.7		ng/l							
Thallium	1.32		ng/l							
Vanadium	-74.7		ng/l							U
Zinc	22.1		ng/l							

### Calibration Check (2501034-CCV1)

Prepared & Analyzed: 01/14/25

Antimony	20000		ng/l	20008		99.8	90-110			
Arsenic	19900		ng/l	20004		99.7	90-110			
Barium	200000		ng/l	200200		99.7	90-110			
Beryllium	4940		ng/l	5002.5		98.8	90-110			
Cadmium	20100		ng/l	20014		100	90-110			
Chromium	245000		ng/l	240050		102	90-110			
Cobalt	50800		ng/l	50020		101	90-110			
Copper	2.05E6		ng/l	2.0020E6		102	90-110			
Lead	199000		ng/l	200060		99.3	90-110			
Manganese	495000		ng/l	498900		99.2	90-110			
Molybdenum	50000		ng/l	50005		100	90-110			
Nickel	123000		ng/l	120040		102	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Check (2501034-CCV1) Contin

Prepared & Analyzed: 01/14/25

Selenium	20000		ng/l	20002		100	90-110			
Thallium	495		ng/l	499.95		99.0	90-110			
Vanadium	19900		ng/l	20030		99.5	90-110			
Zinc	522000		ng/l	500000		104	90-110			

### Calibration Check (2501034-CCV2)

Prepared & Analyzed: 01/14/25

Antimony	20100		ng/l	20008		101	90-110			
Arsenic	20100		ng/l	20004		100	90-110			
Barium	199000		ng/l	200200		99.4	90-110			
Beryllium	4930		ng/l	5002.5		98.6	90-110			
Cadmium	20600		ng/l	20014		103	90-110			
Chromium	250000		ng/l	240050		104	90-110			
Cobalt	51600		ng/l	50020		103	90-110			
Copper	2.10E6		ng/l	2.0020E6		105	90-110			
Lead	200000		ng/l	200060		99.8	90-110			
Manganese	504000		ng/l	498900		101	90-110			
Molybdenum	51300		ng/l	50005		103	90-110			
Nickel	125000		ng/l	120040		104	90-110			
Selenium	19600		ng/l	20002		98.1	90-110			
Thallium	491		ng/l	499.95		98.3	90-110			
Vanadium	20000		ng/l	20030		99.6	90-110			
Zinc	528000		ng/l	500000		106	90-110			

### Calibration Check (2501034-CCV3)

Prepared & Analyzed: 01/14/25

Antimony	20500		ng/l	20008		102	90-110			
Arsenic	20400		ng/l	20004		102	90-110			
Barium	208000		ng/l	200200		104	90-110			
Beryllium	5040		ng/l	5002.5		101	90-110			
Cadmium	20800		ng/l	20014		104	90-110			
Chromium	250000		ng/l	240050		104	90-110			
Cobalt	52000		ng/l	50020		104	90-110			
Copper	2.11E6		ng/l	2.0020E6		105	90-110			
Lead	204000		ng/l	200060		102	90-110			
Manganese	511000		ng/l	498900		102	90-110			
Molybdenum	52200		ng/l	50005		104	90-110			
Nickel	125000		ng/l	120040		104	90-110			
Selenium	20200		ng/l	20002		101	90-110			
Thallium	495		ng/l	499.95		99.1	90-110			
Vanadium	20200		ng/l	20030		101	90-110			
Zinc	530000		ng/l	500000		106	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Check (2501034-CCV4)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	20600		ng/l	20008		103	90-110			
Arsenic	20400		ng/l	20004		102	90-110			
Barium	213000		ng/l	200200		106	90-110			
Beryllium	5000		ng/l	5002.5		100	90-110			
Cadmium	20900		ng/l	20014		104	90-110			
Chromium	258000		ng/l	240050		107	90-110			
Cobalt	52600		ng/l	50020		105	90-110			
Copper	2.13E6		ng/l	2.0020E6		106	90-110			
Lead	205000		ng/l	200060		103	90-110			
Manganese	516000		ng/l	498900		104	90-110			
Molybdenum	53200		ng/l	50005		106	90-110			
Nickel	126000		ng/l	120040		105	90-110			
Selenium	20100		ng/l	20002		100	90-110			
Thallium	498		ng/l	499.95		99.7	90-110			
Vanadium	20300		ng/l	20030		102	90-110			
Zinc	535000		ng/l	500000		107	90-110			

### Calibration Check (2501034-CCV5)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	20800		ng/l	20008		104	90-110			
Arsenic	20500		ng/l	20004		102	90-110			
Barium	223000		ng/l	200200		111	90-110			LJ, QX
Beryllium	5040		ng/l	5002.5		101	90-110			
Cadmium	21100		ng/l	20014		105	90-110			
Chromium	260000		ng/l	240050		108	90-110			
Cobalt	52700		ng/l	50020		105	90-110			
Copper	2.13E6		ng/l	2.0020E6		107	90-110			
Lead	206000		ng/l	200060		103	90-110			
Manganese	521000		ng/l	498900		104	90-110			
Molybdenum	54200		ng/l	50005		108	90-110			
Nickel	126000		ng/l	120040		105	90-110			
Selenium	20300		ng/l	20002		102	90-110			
Thallium	506		ng/l	499.95		101	90-110			
Vanadium	20600		ng/l	20030		103	90-110			
Zinc	537000		ng/l	500000		107	90-110			

### Calibration Check (2501034-CCV6)

Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	21200		ng/l	20008		106	90-110			
Arsenic	20400		ng/l	20004		102	90-110			
Barium	224000		ng/l	200200		112	90-110			LJ, QX
Beryllium	4940		ng/l	5002.5		98.8	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: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Calibration Check (2501034-CCV6) Contin

Prepared: 01/14/25 Analyzed: 01/15/25

Cadmium	21400		ng/l	20014		107	90-110			
Chromium	256000		ng/l	240050		107	90-110			
Cobalt	52300		ng/l	50020		104	90-110			
Copper	2.13E6		ng/l	2.0020E6		107	90-110			
Lead	207000		ng/l	200060		104	90-110			
Manganese	519000		ng/l	498900		104	90-110			
Molybdenum	55100		ng/l	50005		110	90-110			
Nickel	125000		ng/l	120040		104	90-110			
Selenium	20000		ng/l	20002		99.9	90-110			
Thallium	496		ng/l	499.95		99.3	90-110			
Vanadium	20600		ng/l	20030		103	90-110			
Zinc	538000		ng/l	500000		108	90-110			

### High Cal Check (2501034-HCV1)

Prepared & Analyzed: 01/14/25

Antimony	39300		ng/l	40016		98.1	95-105			
Arsenic	39100		ng/l	40008		97.7	95-105			
Barium	389000		ng/l	400400		97.1	95-105			
Beryllium	10000		ng/l	10005		99.9	95-105			
Cadmium	38800		ng/l	40028		97.0	95-105			
Chromium	468000		ng/l	480100		97.5	95-105			
Cobalt	97100		ng/l	100040		97.1	95-105			
Copper	3.88E6		ng/l	4.0040E6		97.0	95-105			
Lead	390000		ng/l	400120		97.4	95-105			
Manganese	975000		ng/l	997800		97.7	95-105			
Molybdenum	97500		ng/l	100010		97.5	95-105			
Nickel	233000		ng/l	240070		97.0	95-105			
Selenium	39200		ng/l	40004		98.1	95-105			
Thallium	975		ng/l	999.90		97.5	95-105			
Vanadium	39500		ng/l	40060		98.5	95-105			
Zinc	970000		ng/l	1.0000E6		97.0	95-105			

### Initial Cal Blank (2501034-ICB1)

Prepared & Analyzed: 01/14/25

Antimony	0.740		ng/l							
Arsenic	-0.425		ng/l							U
Barium	0.397		ng/l							
Beryllium	-1.05		ng/l							U
Cadmium	0.104		ng/l							
Chromium	2.73		ng/l							
Cobalt	0.0693		ng/l							
Copper	21.7		ng/l							

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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Initial Cal Blank (2501034-ICB1) Continuu

Prepared & Analyzed: 01/14/25

Lead	3.44		ng/l							
Manganese	5.38		ng/l							
Molybdenum	9.62		ng/l							
Nickel	-2.73		ng/l							U
Selenium	-5.14		ng/l							U
Thallium	0.928		ng/l							
Vanadium	-51.0		ng/l							U
Zinc	-26.2		ng/l							U

### Initial Cal Check (2501034-ICV1)

Prepared & Analyzed: 01/14/25

Antimony	19900		ng/l	20000		99.5	90-110			
Arsenic	20100		ng/l	20000		100	90-110			
Barium	199000		ng/l	200000		99.5	90-110			
Beryllium	5140		ng/l	5000.0		103	90-110			
Cadmium	20500		ng/l	20000		102	90-110			
Chromium	246000		ng/l	240000		102	90-110			
Cobalt	50300		ng/l	50000		101	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	495000		ng/l	500000		98.9	90-110			
Molybdenum	49300		ng/l	50000		98.7	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	503		ng/l	500.00		101	90-110			
Vanadium	20500		ng/l	20000		103	90-110			
Zinc	528000		ng/l	500000		106	90-110			

### Interference Check A (2501034-IFA1)

Prepared & Analyzed: 01/14/25

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	304000		ng/l	300000		101	80-120			
Nickel	0.00		ng/l				80-120			U

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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2501034 - B5A1406

### Interference Check A (2501034-IFA1) Co

Prepared & Analyzed: 01/14/25

Selenium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U

### Interference Check B (2501034-IFB1)

Prepared & Analyzed: 01/14/25

Antimony	20400		ng/l	20008		102	80-120			
Arsenic	20200		ng/l	20004		101	80-120			
Barium	200000		ng/l	200200		99.8	80-120			
Beryllium	4790		ng/l	5002.5		95.7	80-120			
Cadmium	19800		ng/l	20014		99.0	80-120			
Chromium	240000		ng/l	240050		99.9	80-120			
Cobalt	50200		ng/l	50020		100	80-120			
Copper	1.92E6		ng/l	2.0020E6		96.0	80-120			
Lead	204000		ng/l	200060		102	80-120			
Manganese	496000		ng/l	498900		99.4	80-120			
Molybdenum	357000		ng/l	350000		102	80-120			
Nickel	117000		ng/l	120040		97.8	80-120			
Selenium	19200		ng/l	20002		96.1	80-120			
Thallium	515		ng/l	499.95		103	80-120			
Vanadium	19200		ng/l	20030		95.7	80-120			
Zinc	483000		ng/l	500000		96.6	80-120			

Batch B5A1406 - ICP-MS Extraction

### Blank (B5A1406-BLK1)

Prepared & Analyzed: 01/14/25

Antimony	ND	0.0350	ng/m <sup>3</sup> Air							SL, U
Arsenic	ND	0.00889	ng/m <sup>3</sup> Air							U
Barium	ND	1.54	ng/m <sup>3</sup> Air							U
Beryllium	ND	0.00190	ng/m <sup>3</sup> Air							U
Cadmium	ND	0.00512	ng/m <sup>3</sup> Air							U
Chromium	ND	2.44	ng/m <sup>3</sup> Air							U
Cobalt	ND	0.0520	ng/m <sup>3</sup> Air							U
Copper	ND	0.752	ng/m <sup>3</sup> Air							U
Lead	ND	0.134	ng/m <sup>3</sup> Air							U
Manganese	ND	0.557	ng/m <sup>3</sup> Air							QB-01, U
Molybdenum	ND	0.394	ng/m <sup>3</sup> Air							U
Nickel	ND	0.739	ng/m <sup>3</sup> Air							U
Selenium	ND	0.0101	ng/m <sup>3</sup> Air							U
Thallium	ND	8.61E-4	ng/m <sup>3</sup> Air							U
Vanadium	ND	0.0458	ng/m <sup>3</sup> Air							U

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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

### Blank (B5A1406-BLK1) Continued

Prepared & Analyzed: 01/14/25

Zinc	ND	114	ng/m <sup>3</sup> Air							U
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### LCS (B5A1406-BS1)

Prepared & Analyzed: 01/14/25

Antimony	0.851	0.0350	ng/m <sup>3</sup> Air	1.3835		61.5	80-120			SL
Arsenic	2.71	0.00889	ng/m <sup>3</sup> Air	2.7664		98.0	80-120			
Barium	29.1	1.54	ng/m <sup>3</sup> Air	27.686		105	80-120			
Beryllium	1.33	0.00190	ng/m <sup>3</sup> Air	1.3836		95.9	80-120			
Cadmium	1.38	0.00512	ng/m <sup>3</sup> Air	1.3839		99.9	80-120			
Chromium	15.4	2.44	ng/m <sup>3</sup> Air	13.832		111	80-120			
Cobalt	1.37	0.0520	ng/m <sup>3</sup> Air	1.3835		99.4	80-120			
Copper	29.3	0.752	ng/m <sup>3</sup> Air	27.686		106	80-120			
Lead	13.7	0.134	ng/m <sup>3</sup> Air	13.833		99.0	80-120			
Manganese	8.71	0.557	ng/m <sup>3</sup> Air	8.2792		105	80-120			QB-01
Molybdenum	1.51	0.394	ng/m <sup>3</sup> Air	1.3831		109	80-120			
Nickel	3.16	0.739	ng/m <sup>3</sup> Air	2.7667		114	80-120			
Selenium	2.73	0.0101	ng/m <sup>3</sup> Air	2.7661		98.5	80-120			
Thallium	0.136	8.61E-4	ng/m <sup>3</sup> Air	0.13828		98.5	80-120			
Vanadium	2.81	0.0458	ng/m <sup>3</sup> Air	2.7700		102	80-120			
Zinc	ND	114	ng/m <sup>3</sup> Air	82.975			80-120			U

### LCS (B5A1406-BS2)

Prepared & Analyzed: 01/14/25

Antimony	0.849	0.0350	ng/m <sup>3</sup> Air	1.3835		61.4	80-120			SL
Arsenic	2.74	0.00889	ng/m <sup>3</sup> Air	2.7664		98.9	80-120			
Barium	29.4	1.54	ng/m <sup>3</sup> Air	27.686		106	80-120			
Beryllium	1.32	0.00190	ng/m <sup>3</sup> Air	1.3836		95.5	80-120			
Cadmium	1.41	0.00512	ng/m <sup>3</sup> Air	1.3839		102	80-120			
Chromium	15.4	2.44	ng/m <sup>3</sup> Air	13.832		111	80-120			
Cobalt	1.39	0.0520	ng/m <sup>3</sup> Air	1.3835		100	80-120			
Copper	29.6	0.752	ng/m <sup>3</sup> Air	27.686		107	80-120			
Lead	13.8	0.134	ng/m <sup>3</sup> Air	13.833		100	80-120			
Manganese	8.72	0.557	ng/m <sup>3</sup> Air	8.2792		105	80-120			QB-01
Molybdenum	1.59	0.394	ng/m <sup>3</sup> Air	1.3831		115	80-120			
Nickel	3.21	0.739	ng/m <sup>3</sup> Air	2.7667		116	80-120			
Selenium	2.76	0.0101	ng/m <sup>3</sup> Air	2.7661		99.8	80-120			
Thallium	0.137	8.61E-4	ng/m <sup>3</sup> Air	0.13828		99.3	80-120			
Vanadium	2.80	0.0458	ng/m <sup>3</sup> Air	2.7700		101	80-120			
Zinc	ND	114	ng/m <sup>3</sup> Air	82.975			80-120			U

### LCS (B5A1406-BS3)

Prepared & Analyzed: 01/14/25

Antimony	1.38	0.0350	ng/m <sup>3</sup> Air	1.3835		99.6	80-120			SL
Arsenic	2.73	0.00889	ng/m <sup>3</sup> Air	2.7664		98.7	80-120			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

### LCS (B5A1406-BS3) Continued

Prepared & Analyzed: 01/14/25

Barium	28.2	1.54	ng/m <sup>3</sup> Air	27.686		102	80-120			
Beryllium	1.33	0.00190	ng/m <sup>3</sup> Air	1.3836		96.4	80-120			
Cadmium	1.40	0.00512	ng/m <sup>3</sup> Air	1.3839		101	80-120			
Chromium	14.5	2.44	ng/m <sup>3</sup> Air	13.832		105	80-120			
Cobalt	1.36	0.0520	ng/m <sup>3</sup> Air	1.3835		98.2	80-120			
Copper	28.4	0.752	ng/m <sup>3</sup> Air	27.686		103	80-120			
Lead	13.7	0.134	ng/m <sup>3</sup> Air	13.833		98.8	80-120			
Manganese	8.42	0.557	ng/m <sup>3</sup> Air	8.2792		102	80-120			QB-01
Molybdenum	1.37	0.394	ng/m <sup>3</sup> Air	1.3831		99.3	80-120			
Nickel	2.78	0.739	ng/m <sup>3</sup> Air	2.7667		100	80-120			
Selenium	2.83	0.0101	ng/m <sup>3</sup> Air	2.7661		102	80-120			
Thallium	0.137	8.61E-4	ng/m <sup>3</sup> Air	0.13828		99.3	80-120			
Vanadium	2.80	0.0458	ng/m <sup>3</sup> Air	2.7700		101	80-120			
Zinc	ND	114	ng/m <sup>3</sup> Air	82.975			80-120			U

### LCS (B5A1406-BS4)

Prepared & Analyzed: 01/14/25

Antimony	1.38	0.0350	ng/m <sup>3</sup> Air	1.3835		99.6	80-120			SL
Arsenic	2.74	0.00889	ng/m <sup>3</sup> Air	2.7664		99.2	80-120			
Barium	28.6	1.54	ng/m <sup>3</sup> Air	27.686		103	80-120			
Beryllium	1.35	0.00190	ng/m <sup>3</sup> Air	1.3836		97.9	80-120			
Cadmium	1.41	0.00512	ng/m <sup>3</sup> Air	1.3839		102	80-120			
Chromium	14.5	2.44	ng/m <sup>3</sup> Air	13.832		105	80-120			
Cobalt	1.38	0.0520	ng/m <sup>3</sup> Air	1.3835		99.7	80-120			
Copper	28.8	0.752	ng/m <sup>3</sup> Air	27.686		104	80-120			
Lead	13.8	0.134	ng/m <sup>3</sup> Air	13.833		99.8	80-120			
Manganese	8.45	0.557	ng/m <sup>3</sup> Air	8.2792		102	80-120			QB-01
Molybdenum	1.39	0.394	ng/m <sup>3</sup> Air	1.3831		100	80-120			
Nickel	2.80	0.739	ng/m <sup>3</sup> Air	2.7667		101	80-120			
Selenium	2.74	0.0101	ng/m <sup>3</sup> Air	2.7661		99.1	80-120			
Thallium	0.137	8.61E-4	ng/m <sup>3</sup> Air	0.13828		99.3	80-120			
Vanadium	2.77	0.0458	ng/m <sup>3</sup> Air	2.7700		100	80-120			
Zinc	ND	114	ng/m <sup>3</sup> Air	82.975			80-120			U

### Duplicate (B5A1406-DUP1)

Source: 5011327-11

Prepared & Analyzed: 01/14/25

Antimony	0.120	0.0292	ng/m <sup>3</sup> Air		0.122			1.61	10	SL
Arsenic	0.926	0.00741	ng/m <sup>3</sup> Air		0.973			4.93	10	
Barium	9.15	1.28	ng/m <sup>3</sup> Air		10.1			9.87	10	
Beryllium	0.0379	0.00158	ng/m <sup>3</sup> Air		0.0420			10.3	10	
Cadmium	0.374	0.00427	ng/m <sup>3</sup> Air		0.376			0.455	10	
Chromium	4.32	2.03	ng/m <sup>3</sup> Air		4.60			6.20	10	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

**Duplicate (B5A1406-DUP1) Continued** Source: 5011327-11 Prepared & Analyzed: 01/14/25

Cobalt	1.22	0.0433	ng/m <sup>3</sup> Air		1.31			7.07	10	
Copper	55.4	0.627	ng/m <sup>3</sup> Air		54.0			2.50	10	
Lead	1.13	0.112	ng/m <sup>3</sup> Air		1.14			1.22	10	
Manganese	45.6	0.464	ng/m <sup>3</sup> Air		48.8			6.66	10	QB-01
Molybdenum	2.18	0.328	ng/m <sup>3</sup> Air		2.15			1.60	10	
Nickel	2.79	0.616	ng/m <sup>3</sup> Air		2.97			6.29	10	
Selenium	2.90	0.00841	ng/m <sup>3</sup> Air		2.90			0.0773	10	
Thallium	0.0274	7.17E-4	ng/m <sup>3</sup> Air		0.0266			2.77	10	
Vanadium	4.62	0.0382	ng/m <sup>3</sup> Air		4.98			7.59	10	
Zinc	ND	95.0	ng/m <sup>3</sup> Air		ND				10	U

**Duplicate (B5A1406-DUP2)** Source: 5011327-03 Prepared & Analyzed: 01/14/25

Antimony	0.265	0.0279	ng/m <sup>3</sup> Air		0.270			2.02	10	SL
Arsenic	0.369	0.00709	ng/m <sup>3</sup> Air		0.349			5.56	10	
Barium	10.4	1.23	ng/m <sup>3</sup> Air		10.2			2.13	10	
Beryllium	0.0187	0.00152	ng/m <sup>3</sup> Air		0.0187			0.159	10	
Cadmium	0.0141	0.00408	ng/m <sup>3</sup> Air		0.0143			1.01	10	
Chromium	3.17	1.95	ng/m <sup>3</sup> Air		3.12			1.67	10	
Cobalt	0.671	0.0415	ng/m <sup>3</sup> Air		0.663			1.22	10	
Copper	37.3	0.600	ng/m <sup>3</sup> Air		33.0			12.4	10	
Lead	1.32	0.107	ng/m <sup>3</sup> Air		1.22			8.21	10	
Manganese	19.1	0.444	ng/m <sup>3</sup> Air		18.8			2.04	10	QB-01
Molybdenum	1.95	0.314	ng/m <sup>3</sup> Air		1.80			8.25	10	
Nickel	1.95	0.590	ng/m <sup>3</sup> Air		1.90			2.20	10	
Selenium	0.279	0.00806	ng/m <sup>3</sup> Air		0.266			4.99	10	
Thallium	0.00120	6.87E-4	ng/m <sup>3</sup> Air		0.00119			0.880	10	
Vanadium	2.63	0.0365	ng/m <sup>3</sup> Air		2.60			1.14	10	
Zinc	ND	90.9	ng/m <sup>3</sup> Air		ND				10	U

**Duplicate (B5A1406-DUP3)** Source: 5011327-17 Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.0432	0.0311	ng/m <sup>3</sup> Air		0.0434			0.281	10	SL
Arsenic	0.0781	0.00789	ng/m <sup>3</sup> Air		0.0778			0.410	10	
Barium	2.16	1.37	ng/m <sup>3</sup> Air		2.17			0.258	10	LJ, QX
Beryllium	0.00563	0.00169	ng/m <sup>3</sup> Air		0.00603			6.85	10	
Cadmium	0.0696	0.00455	ng/m <sup>3</sup> Air		0.0695			0.103	10	
Chromium	4.94	2.17	ng/m <sup>3</sup> Air		4.91			0.615	10	
Cobalt	0.240	0.0462	ng/m <sup>3</sup> Air		0.242			0.647	10	
Copper	37.1	0.668	ng/m <sup>3</sup> Air		37.0			0.186	10	
Lead	0.175	0.119	ng/m <sup>3</sup> Air		0.176			0.301	10	
Manganese	4.48	0.494	ng/m <sup>3</sup> Air		4.47			0.249	10	QB-01

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FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
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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
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

**Duplicate (B5A1406-DUP3) Continued** Source: 5011327-17 Prepared: 01/14/25 Analyzed: 01/15/25

Molybdenum	1.46	0.350	ng/m <sup>3</sup> Air		1.46			0.113	10	
Nickel	4.69	0.656	ng/m <sup>3</sup> Air		4.69			0.0801	10	
Selenium	0.329	0.00897	ng/m <sup>3</sup> Air		0.341			3.63	10	
Thallium	0.00170	7.64E-4	ng/m <sup>3</sup> Air		0.00168			0.969	10	
Vanadium	0.268	0.0407	ng/m <sup>3</sup> Air		0.266			0.944	10	
Zinc	ND	101	ng/m <sup>3</sup> Air		ND				10	U

**Duplicate (B5A1406-DUP4)** Source: 5011327-27 Prepared: 01/14/25 Analyzed: 01/15/25

Antimony	0.108	0.0293	ng/m <sup>3</sup> Air		0.107			0.978	10	SL
Arsenic	0.693	0.00744	ng/m <sup>3</sup> Air		0.698			0.597	10	
Barium	3.98	1.29	ng/m <sup>3</sup> Air		3.97			0.330	10	LJ, QX
Beryllium	0.0118	0.00159	ng/m <sup>3</sup> Air		0.0122			3.73	10	
Cadmium	0.0858	0.00428	ng/m <sup>3</sup> Air		0.0844			1.65	10	
Chromium	2.24	2.04	ng/m <sup>3</sup> Air		2.22			0.953	10	
Cobalt	0.338	0.0435	ng/m <sup>3</sup> Air		0.335			0.941	10	
Copper	24.4	0.629	ng/m <sup>3</sup> Air		24.2			0.937	10	
Lead	0.819	0.112	ng/m <sup>3</sup> Air		0.813			0.782	10	
Manganese	11.8	0.466	ng/m <sup>3</sup> Air		11.7			0.953	10	QB-01
Molybdenum	1.24	0.330	ng/m <sup>3</sup> Air		1.23			1.06	10	
Nickel	1.27	0.618	ng/m <sup>3</sup> Air		1.27			0.470	10	
Selenium	0.418	0.00845	ng/m <sup>3</sup> Air		0.433			3.53	10	
Thallium	0.00483	7.21E-4	ng/m <sup>3</sup> Air		0.00471			2.43	10	
Vanadium	0.943	0.0383	ng/m <sup>3</sup> Air		0.934			0.942	10	
Zinc	ND	95.4	ng/m <sup>3</sup> Air		ND				10	U

**Matrix Spike (B5A1406-MS1)** Source: 5011327-11 Prepared & Analyzed: 01/14/25

Antimony	0.671	0.0292	ng/m <sup>3</sup> Air	1.1526	0.122	47.7	80-120			SL
Arsenic	3.11	0.00741	ng/m <sup>3</sup> Air	2.3048	0.973	92.8	80-120			
Barium	32.8	1.28	ng/m <sup>3</sup> Air	23.066	10.1	98.6	80-120			
Beryllium	1.15	0.00158	ng/m <sup>3</sup> Air	1.1527	0.0420	95.8	80-120			
Cadmium	1.52	0.00427	ng/m <sup>3</sup> Air	1.1530	0.376	99.3	80-120			
Chromium	16.3	2.03	ng/m <sup>3</sup> Air	11.524	4.60	102	80-120			
Cobalt	2.46	0.0433	ng/m <sup>3</sup> Air	1.1526	1.31	100	80-120			
Copper	80.6	0.627	ng/m <sup>3</sup> Air	23.066	54.0	115	80-120			
Lead	12.6	0.112	ng/m <sup>3</sup> Air	11.525	1.14	99.3	80-120			
Manganese	55.3	0.464	ng/m <sup>3</sup> Air	6.8978	48.8	95.5	80-120			QB-01
Molybdenum	3.25	0.328	ng/m <sup>3</sup> Air	1.1523	2.15	95.8	80-120			
Nickel	5.26	0.616	ng/m <sup>3</sup> Air	2.3050	2.97	99.2	80-120			
Selenium	5.05	0.00841	ng/m <sup>3</sup> Air	2.3046	2.90	93.1	80-120			
Thallium	0.138	7.17E-4	ng/m <sup>3</sup> Air	0.11521	0.0266	96.5	80-120			

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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

### Matrix Spike (B5A1406-MS1) Continued Source: 5011327-11 Prepared & Analyzed: 01/14/25

Vanadium	7.05	0.0382	ng/m <sup>3</sup> Air	2.3078	4.98	89.5	80-120			
Zinc	97.8	95.0	ng/m <sup>3</sup> Air	69.130	ND	141	80-120			

### Matrix Spike (B5A1406-MS2) Source: 5011327-03 Prepared & Analyzed: 01/14/25

Antimony	0.851	0.0279	ng/m <sup>3</sup> Air	1.1037	0.270	52.6	80-120			SL
Arsenic	2.52	0.00709	ng/m <sup>3</sup> Air	2.2069	0.349	98.3	80-120			
Barium	33.4	1.23	ng/m <sup>3</sup> Air	22.087	10.2	105	80-120			
Beryllium	1.10	0.00152	ng/m <sup>3</sup> Air	1.1038	0.0187	97.7	80-120			
Cadmium	1.14	0.00408	ng/m <sup>3</sup> Air	1.1040	0.0143	102	80-120			
Chromium	14.9	1.95	ng/m <sup>3</sup> Air	11.035	3.12	107	80-120			
Cobalt	1.80	0.0415	ng/m <sup>3</sup> Air	1.1037	0.663	103	80-120			
Copper	57.6	0.600	ng/m <sup>3</sup> Air	22.087	33.0	112	80-120			
Lead	12.4	0.107	ng/m <sup>3</sup> Air	11.036	1.22	101	80-120			
Manganese	25.8	0.444	ng/m <sup>3</sup> Air	6.6050	18.8	106	80-120			QB-01
Molybdenum	2.94	0.314	ng/m <sup>3</sup> Air	1.1034	1.80	104	80-120			
Nickel	4.26	0.590	ng/m <sup>3</sup> Air	2.2072	1.90	107	80-120			
Selenium	2.41	0.00806	ng/m <sup>3</sup> Air	2.2067	0.266	97.2	80-120			
Thallium	0.109	6.87E-4	ng/m <sup>3</sup> Air	0.11031	0.00119	97.7	80-120			
Vanadium	4.78	0.0365	ng/m <sup>3</sup> Air	2.2098	2.60	98.8	80-120			
Zinc	91.3	90.9	ng/m <sup>3</sup> Air	66.195	ND	138	80-120			

### Matrix Spike Dup (B5A1406-MSD1) Source: 5011327-11 Prepared & Analyzed: 01/14/25

Antimony	0.668	0.0292	ng/m <sup>3</sup> Air	1.1526	0.122	47.4	80-120	0.516	20	SL
Arsenic	3.17	0.00741	ng/m <sup>3</sup> Air	2.3048	0.973	95.3	80-120	1.83	20	
Barium	33.3	1.28	ng/m <sup>3</sup> Air	23.066	10.1	101	80-120	1.45	20	
Beryllium	1.16	0.00158	ng/m <sup>3</sup> Air	1.1527	0.0420	97.0	80-120	1.23	20	
Cadmium	1.53	0.00427	ng/m <sup>3</sup> Air	1.1530	0.376	100	80-120	0.854	20	
Chromium	16.8	2.03	ng/m <sup>3</sup> Air	11.524	4.60	106	80-120	2.56	20	
Cobalt	2.54	0.0433	ng/m <sup>3</sup> Air	1.1526	1.31	107	80-120	3.22	20	
Copper	80.7	0.627	ng/m <sup>3</sup> Air	23.066	54.0	116	80-120	0.157	20	
Lead	12.8	0.112	ng/m <sup>3</sup> Air	11.525	1.14	101	80-120	1.37	20	
Manganese	59.2	0.464	ng/m <sup>3</sup> Air	6.8978	48.8	151	80-120	6.72	20	QB-01, QM-07
Molybdenum	3.27	0.328	ng/m <sup>3</sup> Air	1.1523	2.15	97.7	80-120	0.679	20	
Nickel	5.41	0.616	ng/m <sup>3</sup> Air	2.3050	2.97	106	80-120	2.85	20	
Selenium	4.96	0.00841	ng/m <sup>3</sup> Air	2.3046	2.90	89.2	80-120	1.79	20	
Thallium	0.138	7.17E-4	ng/m <sup>3</sup> Air	0.11521	0.0266	97.1	80-120	0.445	20	
Vanadium	7.36	0.0382	ng/m <sup>3</sup> Air	2.3078	4.98	103	80-120	4.38	20	
Zinc	ND	95.0	ng/m <sup>3</sup> Air	69.130	ND		80-120		20	U

### Matrix Spike Dup (B5A1406-MSD2) Source: 5011327-03 Prepared & Analyzed: 01/14/25

Antimony	0.854	0.0279	ng/m <sup>3</sup> Air	1.1037	0.270	52.9	80-120	0.353	20	SL
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

**Matrix Spike Dup (B5A1406-MSD2) ContiSource: 5011327-03** Prepared & Analyzed: 01/14/25

Arsenic	2.51	0.00709	ng/m <sup>3</sup> Air	2.2069	0.349	97.8	80-120	0.458	20	
Barium	33.4	1.23	ng/m <sup>3</sup> Air	22.087	10.2	105	80-120	0.0628	20	
Beryllium	1.10	0.00152	ng/m <sup>3</sup> Air	1.1038	0.0187	97.9	80-120	0.179	20	
Cadmium	1.13	0.00408	ng/m <sup>3</sup> Air	1.1040	0.0143	101	80-120	0.664	20	
Chromium	14.8	1.95	ng/m <sup>3</sup> Air	11.035	3.12	106	80-120	0.469	20	
Cobalt	1.78	0.0415	ng/m <sup>3</sup> Air	1.1037	0.663	101	80-120	1.16	20	
Copper	57.4	0.600	ng/m <sup>3</sup> Air	22.087	33.0	111	80-120	0.351	20	
Lead	12.4	0.107	ng/m <sup>3</sup> Air	11.036	1.22	101	80-120	0.0494	20	
Manganese	25.3	0.444	ng/m <sup>3</sup> Air	6.6050	18.8	99.0	80-120	1.88	20	QB-01
Molybdenum	2.95	0.314	ng/m <sup>3</sup> Air	1.1034	1.80	104	80-120	0.170	20	
Nickel	4.18	0.590	ng/m <sup>3</sup> Air	2.2072	1.90	103	80-120	1.85	20	
Selenium	2.39	0.00806	ng/m <sup>3</sup> Air	2.2067	0.266	96.4	80-120	0.712	20	
Thallium	0.108	6.87E-4	ng/m <sup>3</sup> Air	0.11031	0.00119	97.2	80-120	0.482	20	
Vanadium	4.83	0.0365	ng/m <sup>3</sup> Air	2.2098	2.60	101	80-120	1.05	20	
Zinc	ND	90.9	ng/m <sup>3</sup> Air	66.195	ND		80-120		20	U

**Post Spike (B5A1406-PS1) Source: 5011327-11** Prepared & Analyzed: 01/14/25

Antimony	0.354	0.0292	ng/m <sup>3</sup> Air	0.23043	0.122	101	75-125			SL
Arsenic	2.11	0.00741	ng/m <sup>3</sup> Air	1.1522	0.973	98.3	75-125			
Barium	12.2	1.28	ng/m <sup>3</sup> Air	2.3043	10.1	92.0	75-125			
Beryllium	0.264	0.00158	ng/m <sup>3</sup> Air	0.23043	0.0420	96.3	75-125			
Cadmium	0.504	0.00427	ng/m <sup>3</sup> Air	0.11522	0.376	111	75-125			
Chromium	5.95	2.03	ng/m <sup>3</sup> Air	1.1522	4.60	117	75-125			
Cobalt	1.61	0.0433	ng/m <sup>3</sup> Air	0.23043	1.31	131	75-125			A-01
Copper	68.3	0.627	ng/m <sup>3</sup> Air	11.522	54.0	124	75-125			
Lead	24.3	0.112	ng/m <sup>3</sup> Air	23.043	1.14	100	75-125			
Manganese	52.5	0.464	ng/m <sup>3</sup> Air	2.3043	48.8	164	75-125			A-01, QB-01
Molybdenum	3.28	0.328	ng/m <sup>3</sup> Air	1.1522	2.15	97.9	75-125			
Nickel	5.52	0.616	ng/m <sup>3</sup> Air	2.3043	2.97	110	75-125			
Selenium	4.00	0.00841	ng/m <sup>3</sup> Air	1.1522	2.90	95.1	75-125			
Thallium	0.0833	7.17E-4	ng/m <sup>3</sup> Air	5.7609E-2	0.0266	98.5	75-125			
Vanadium	6.18	0.0382	ng/m <sup>3</sup> Air	1.1522	4.98	104	75-125			
Zinc	ND	95.0	ng/m <sup>3</sup> Air	23.043	ND		75-125			U

**Post Spike (B5A1406-PS2) Source: 5011327-03** Prepared & Analyzed: 01/14/25

Antimony	0.482	0.0279	ng/m <sup>3</sup> Air	0.22065	0.270	96.0	75-125			SL
Arsenic	1.41	0.00709	ng/m <sup>3</sup> Air	1.1033	0.349	96.0	75-125			
Barium	12.2	1.23	ng/m <sup>3</sup> Air	2.2065	10.2	91.6	75-125			
Beryllium	0.239	0.00152	ng/m <sup>3</sup> Air	0.22065	0.0187	99.7	75-125			
Cadmium	0.124	0.00408	ng/m <sup>3</sup> Air	0.11033	0.0143	99.4	75-125			

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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

### Post Spike (B5A1406-PS2) Continued Source: 5011327-03 Prepared & Analyzed: 01/14/25

Chromium	4.17	1.95	ng/m <sup>3</sup> Air	1.1033	3.12	95.1	75-125			
Cobalt	0.884	0.0415	ng/m <sup>3</sup> Air	0.22065	0.663	100	75-125			
Copper	44.3	0.600	ng/m <sup>3</sup> Air	11.033	33.0	103	75-125			
Lead	23.2	0.107	ng/m <sup>3</sup> Air	22.065	1.22	99.7	75-125			
Manganese	20.7	0.444	ng/m <sup>3</sup> Air	2.2065	18.8	86.4	75-125			QB-01
Molybdenum	2.84	0.314	ng/m <sup>3</sup> Air	1.1033	1.80	94.9	75-125			
Nickel	4.07	0.590	ng/m <sup>3</sup> Air	2.2065	1.90	97.9	75-125			
Selenium	1.31	0.00806	ng/m <sup>3</sup> Air	1.1033	0.266	94.6	75-125			
Thallium	0.0555	6.87E-4	ng/m <sup>3</sup> Air	5.5163E-2	0.00119	98.4	75-125			
Vanadium	3.64	0.0365	ng/m <sup>3</sup> Air	1.1033	2.60	94.3	75-125			
Zinc	ND	90.9	ng/m <sup>3</sup> Air	22.065	ND		75-125			U

### Dilution Check (B5A1406-SRL1) Source: 5011327-11 Prepared & Analyzed: 01/14/25

Antimony	ND	0.146	ng/m <sup>3</sup> Air		ND			10		SL, U
Arsenic	0.994	0.0370	ng/m <sup>3</sup> Air		0.973			2.13	10	
Barium	9.89	6.42	ng/m <sup>3</sup> Air		10.1			2.10	10	
Beryllium	0.0398	0.00791	ng/m <sup>3</sup> Air		0.0420			5.34	10	
Cadmium	0.393	0.0213	ng/m <sup>3</sup> Air		0.376			4.40	10	
Chromium	ND	10.2	ng/m <sup>3</sup> Air		ND				10	U
Cobalt	1.37	0.217	ng/m <sup>3</sup> Air		1.31			4.74	10	
Copper	56.6	3.13	ng/m <sup>3</sup> Air		54.0			4.68	10	
Lead	1.13	0.558	ng/m <sup>3</sup> Air		1.14			1.31	10	
Manganese	50.2	2.32	ng/m <sup>3</sup> Air		48.8			2.94	10	QB-01
Molybdenum	2.29	1.64	ng/m <sup>3</sup> Air		2.15			6.36	10	
Nickel	3.15	3.08	ng/m <sup>3</sup> Air		ND			5.88	10	
Selenium	3.00	0.0421	ng/m <sup>3</sup> Air		2.90			3.27	10	
Thallium	0.0291	0.00359	ng/m <sup>3</sup> Air		0.0266			9.08	10	
Vanadium	5.02	0.191	ng/m <sup>3</sup> Air		4.98			0.686	10	
Zinc	ND	475	ng/m <sup>3</sup> Air		ND				10	U

### Dilution Check (B5A1406-SRL2) Source: 5011327-03 Prepared & Analyzed: 01/14/25

Antimony	0.263	0.140	ng/m <sup>3</sup> Air		0.270			2.57	10	SL
Arsenic	0.364	0.0355	ng/m <sup>3</sup> Air		0.349			4.20	10	
Barium	10.2	6.14	ng/m <sup>3</sup> Air		10.2			0.158	10	
Beryllium	0.0166	0.00758	ng/m <sup>3</sup> Air		0.0187			11.7	10	
Cadmium	ND	0.0204	ng/m <sup>3</sup> Air		ND				10	U
Chromium	ND	9.73	ng/m <sup>3</sup> Air		ND				10	U
Cobalt	0.690	0.207	ng/m <sup>3</sup> Air		0.663			4.08	10	
Copper	34.2	3.00	ng/m <sup>3</sup> Air		33.0			3.72	10	
Lead	1.21	0.535	ng/m <sup>3</sup> Air		1.22			1.06	10	

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



# CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001  
 REPORTED: 01/21/25 14:52  
 SUBMITTED: 01/13/25  
 AQS SITE CODE:  
 SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5A1406 - ICP-MS Extraction

**Dilution Check (B5A1406-SRL2) ContinueSource: 5011327-03**

Prepared & Analyzed: 01/14/25

Manganese	19.4	2.22	ng/m <sup>3</sup> Air		18.8			3.25	10	QB-01
Molybdenum	1.86	1.57	ng/m <sup>3</sup> Air		1.80			3.58	10	
Nickel	ND	2.95	ng/m <sup>3</sup> Air		ND				10	U
Selenium	0.282	0.0403	ng/m <sup>3</sup> Air		0.266			5.94	10	
Thallium	ND	0.00343	ng/m <sup>3</sup> Air		ND				10	U
Vanadium	2.64	0.183	ng/m <sup>3</sup> Air		2.60			1.74	10	
Zinc	ND	455	ng/m <sup>3</sup> Air		ND				10	U



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**AQS SITE CODE:**  
**SITE CODE:** Lahaina fires

## Notes and Definitions

U Under Detection Limit  
SL The spike recovery was outside acceptance limits. Reported value may be biased low.  
QX Compound does not meet QC criteria. Results should be considered an estimate.  
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD.  
QB-01 Analyte exceeds method blank criteria  
LJ Identification of analyte is acceptable; reported value is an estimate.  
FB-01 Analyte exceeds Field Blank criteria.  
A-01 Parent sample >4x spike amount  
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 01/22/2025 and Shanna Vasser 01/23/2025

Laboratory: Eastern Research Group – Morrisville, NC

Collection date(s): 01/02/2025 – 01/08/2025

Report No: 5011327

- √ 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.
- X 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 barium in MFL-FB01-010625-HM, for arsenic and copper in MFL-FB01-010825-HM, and for copper and vanadium in MFL-LB01-010325-HM.

Notes: None.