

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

February 6 through February 12, 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 February 6 through February 12, 2025, at the community locations listed below and shown on **Figure 1**.

- WW Pump Station #4 (AM-02)
- Opukea Townhomes (AM-05)
- Lahaina Pump Station #6 (AM-08)
- Maria Lanakila Catholic Church (AM-09)

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 (μm), 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 "PM₁₀". Monitoring for PM₁₀ was conducted 24 hours a day, 7 days a week from February 6 through February 12, 2025 at each of the community locations. Ambient air monitoring results were compared to the National Ambient Air Quality Standard (NAAQS) for PM₁₀, 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 μm or less [PM_{2.5}]). 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 PM₁₀ concentrations were collected at each of the four monitoring locations throughout this reporting period. Monitoring was conducted 24 hours a day at each station except for instances of equipment faults and maintenance, as described below:

- Because of equipment maintenance, the air monitoring period was interrupted at Opukea Townhomes, WW Pump Station #4, and Lahaina Pump Station #6, for one hour on February 12, resulting in the collection of 23 hours of PM₁₀ data.

None of the PM₁₀ monitoring results exceeded the 150 $\mu\text{g}/\text{m}^3$ screening level established in the CAMSP, as shown in **Table 1**.

Air Sampling Results

A total of 28 samples for asbestos fibers were collected during this reporting period. 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 February 6 through 8 and 11 through 12
- WW Pump Station #4 on February 7 through 8 and 10 through 12
- Lahaina Pump Station #6 on February 6 through 8 and 10 through 12
- Maria Lanakila Catholic Church on February 6 through 7 and 11 through 12

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^3) for respirable dust, and $10 \text{ mg}/\text{m}^3$ and $15 \text{ mg}/\text{m}^3$ 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_{10}) 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 1.2 miles per hour and were generally from a 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 PM₁₀ 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



- Lahaina Fire Perimeter
- Air Sampling Locations

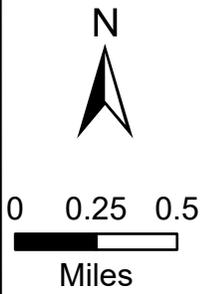


Figure 1
Air Sampling Locations

Hawaii DOH
2023 Lahaina Wildfire

Table 1
State of Hawaii, Department of Health, Clean Air Branch
Particulate Monitoring Results for PM₁₀
Maui Wildfires, Lahaina
February 6 through February 12, 2025

Screening Level		TWA Results 150 (µg/m ³)
2/6/2025	Opukea Townhomes (AM-05)	9.4
	WW Pump Station #4 (AM-02)	8.5
	Maria Lanakila Catholic Church (AM-09)	12
	Lahaina Pump Station #6 (AM-08)	9.1
2/7/2025	Opukea Townhomes (AM-05)	12
	WW Pump Station #4 (AM-02)	7.8
	Maria Lanakila Catholic Church (AM-09)	16
	Lahaina Pump Station #6 (AM-08)	8.2
2/8/2025	Opukea Townhomes (AM-05)	13
	WW Pump Station #4 (AM-02)	7.3
	Maria Lanakila Catholic Church (AM-09)	8.5
	Lahaina Pump Station #6 (AM-08)	8.7
2/9/2025	Opukea Townhomes (AM-05)	9.3
	WW Pump Station #4 (AM-02)	5.7
	Maria Lanakila Catholic Church (AM-09)	14
	Lahaina Pump Station #6 (AM-08)	7.2
2/10/2025	Opukea Townhomes (AM-05)	10
	WW Pump Station #4 (AM-02)	6.8
	Maria Lanakila Catholic Church (AM-09)	14
	Lahaina Pump Station #6 (AM-08)	10
2/11/2025	Opukea Townhomes (AM-05)	12
	WW Pump Station #4 (AM-02)	8.9
	Maria Lanakila Catholic Church (AM-09)	13
	Lahaina Pump Station #6 (AM-08)	10
2/12/2025	Opukea Townhomes (AM-05)	14*
	WW Pump Station #4 (AM-02)	7.7*
	Maria Lanakila Catholic Church (AM-09)	9.6
	Lahaina Pump Station #6 (AM-08)	8.5*

Notes:

µg/m³ = micrograms per cubic meter

TWA = 24-Hour Time-Weighted Average

TWA calculation results are shown in two significant figures

* These results were a 23-hour TWA due to an interrupted monitoring period

Table 2
State of Hawaii, Department of Health, Clean Air Branch
Asbestos and Metals Sampling Results
Maui Wildfires, Lahaina
February 6 through February 12, 2025

Analyte	Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc	
Units*	s/cc	µg/m ³																
Site Screening Action Level	0.003 ¹	0.7	0.05	1.2	0.05	0.02	12	0.01	240	1.5	0.12	4.8	0.02	48	24	0.24	1200	
2/6/2025	Opukea Townhomes (AM-05)	<0.0024	0.000213	0.000586	0.00887	0.0000299	0.0000372	0.00404	0.000925	0.0391	0.000989	0.0347	0.00136	0.00294	0.000208	0.00000303	0.00285	ND
	WW Pump Station #4 (AM-02)	<0.0027	0.000597	0.000279	0.0103	0.0000155	0.0000196	0.00240	0.000461	0.0546	0.000849	0.0149	0.00276	0.00166	0.000180	0.00000169	0.00144	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0027	0.000188	0.000247	0.00468	0.00000967	0.0000148	0.00258	0.000291	0.0313	0.000797	0.00877	0.00153	0.00153	0.000140	0.00000133	0.000770	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000172	0.000209	0.00320	0.00000507	0.0000167	ND	0.000148	0.0635	0.000439	0.00498	0.00217	0.000943	0.000105	0.00000116	0.000448	ND
2/7/2025	Opukea Townhomes (AM-05)	<0.0024	0.000101	0.000189	0.00334	0.00000607	0.0000410	ND	0.000195	0.0324	0.000540	0.00641	0.00133	0.00110	0.000292	0.00000283	0.000697	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000376	0.000241	0.00654	0.00000968	0.0000734	0.00278	0.000337	0.0515	0.000716	0.00996	0.00281	0.00232	0.000337	0.00000302	0.00108	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.0000854	0.000146	0.00279	0.00000508	0.0000291	ND	0.000168	0.0174	0.000297	0.00442	0.00105	0.00166	0.000187	0.00000171	0.000453	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000159	0.000410	0.00417	0.00000965	0.0000412	ND	0.000313	0.0432	0.000874	0.0104	0.00235	0.00151	0.000327	0.00000281	0.00106	ND
2/8/2025	Opukea Townhomes (AM-05)	<0.0024	0.000128	0.000258	0.00370	0.00000739	0.0000210	ND	0.000178	0.0305	0.000541	0.00709	0.00144	0.000990	0.000190	0.00000257	0.000825	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000540	0.000290	0.00546	0.0000101	0.0000477	ND	0.000251	0.0526	0.000670	0.00932	0.00303	0.00116	0.000210	0.00000300	0.00108	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.000119	0.000341	0.00409	0.0000116	0.0000215	0.00278	0.000251	0.0244	0.000780	0.00972	0.00148	0.00112	0.000221	0.00000275	0.000943	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000116	0.000389	0.00357	0.00000872	0.0000199	ND	0.000223	0.0334	0.000797	0.00842	0.00216	0.00103	0.000200	0.00000259	0.000875	ND
2/9/2025	Opukea Townhomes (AM-05)	<0.0024	0.000121	0.000366	0.00353	0.00000902	0.0000188	ND	0.000214	0.0252	0.000600	0.00889	0.00127	0.000935	0.000150	0.00000257	0.000837	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000308	0.000450	0.00588	0.0000134	0.0000219	0.00205	0.000321	0.0533	0.00103	0.0121	0.00317	0.00159	0.000196	0.00000262	0.00119	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.000113	0.000428	0.00409	0.00000821	0.0000211	ND	0.000175	0.0205	0.000650	0.00747	0.00124	0.00104	0.000177	0.00000251	0.000717	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000151	0.000407	0.00291	0.00000745	0.0000224	ND	0.000142	0.0327	0.000587	0.00635	0.00224	0.000840	0.000172	0.00000261	0.000645	ND
2/10/2025	Opukea Townhomes (AM-05)	<0.0024	0.000122	0.000353	0.00381	0.00000762	0.0000702	0.00197	0.000253	0.0303	0.000652	0.00899	0.00163	0.00145	0.000204	0.00000191	0.00101	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000151	0.000355	0.00447	0.00000951	0.0000190	0.00217	0.000261	0.0592	0.000651	0.00918	0.00350	0.00127	0.000224	0.00000245	0.00114	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.000119	0.000311	0.00298	0.00000555	0.0000145	ND	0.000141	0.0247	0.000543	0.00508	0.00161	0.000925	0.000197	0.00000184	0.000739	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000107	0.000292	0.00286	0.00000588	0.0000121	ND	0.000143	0.0477	0.000435	0.00540	0.00272	0.000694	0.000188	0.00000174	0.000832	ND
2/11/2025	Opukea Townhomes (AM-05)	<0.0024	0.000172	0.000217	0.00463	0.00000991	0.0000409	ND	0.000283	0.0232	0.000446	0.00975	0.00131	0.00109	0.000205	0.00000205	0.00104	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000307	0.000619	0.00911	0.0000221	0.0000234	0.00297	0.000765	0.0762	0.000951	0.0216	0.00391	0.00237	0.000276	0.00000230	0.00248	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.000133	0.000260	0.00385	0.00000890	0.0000168	ND	0.000248	0.0242	0.000698	0.00826	0.00122	0.000944	0.000216	0.00000210	0.000846	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000118	0.000257	0.00349	0.00000741	0.0000151	ND	0.000209	0.0470	0.000437	0.00712	0.00278	0.000733	0.000210	0.00000198	0.000727	ND
2/12/2025	Opukea Townhomes (AM-05)	<0.0024	0.000121	0.000230	0.00406	0.00000859	0.0000204	ND	0.000238	0.0345	0.000445	0.00860	0.00194	0.000967	0.000297	0.00000255	0.00103	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000187	0.000288	0.00517	0.0000114	0.0000284	ND	0.000312	0.0660	0.000614	0.0105	0.00334	0.00122	0.000324	0.00000263	0.00128	ND
	Maria Lanakila Catholic Church (AM-09)	<0.0024	0.000106	0.000244	0.00307	0.00000762	0.0000206	ND	0.000189	0.0339	0.000581	0.00667	0.00167	0.000903	0.000289	0.00000271	0.000929	ND
	Lahaina Pump Station #6 (AM-08)	<0.0024	0.000111	0.000287	0.00288	0.00000782	0.0000185	ND	0.000202	0.0370	0.000423	0.00756	0.00229	0.000871	0.000277	0.00000244	0.00111	ND
95% Upper Confidence Limit ²	NA	0.000220	0.000360	0.00513	0.0000110	0.0000320	0.00306	0.000320	0.0455	0.000720	0.0112	0.00243	0.00144	0.000240	0.00000260	0.00119	NA	

Notes:

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

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

s/cc = structures per cubic centimeter

µg/m³ = micrograms per cubic meter

NA = Not Applicable

ND = Not detected at or above the laboratory reporting limit

* Laboratory data provided in nanograms per cubic meter, however data presented has been converted to micrograms per cubic meter so data was comparable to the Site Screening Action Levels presented in the CAMSP

Table 3
State of Hawaii, Department of Health, Clean Air Branch
Averaged Meteorological Data
Maui Wildfires, Lahaina
February 6 through February 12, 2025

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
2/6/2025	AM-02	WW Pump Station #4	0.9	ESE	74	66	762.5
2/6/2025	AM-09	Maria Lanakila Catholic Church	1.1	ESE	73	69	761.7
2/6/2025	AM-05	Opukea Townhomes	1.1	SE	74	66	762.1
2/6/2025	AM-08	Lahaina Pump Station #6	1.5	ESE	72	68	762.1
2/7/2025	AM-02	WW Pump Station #4	1.0	SE	75	68	763.0
2/7/2025	AM-09	Maria Lanakila Catholic Church	1.0	SE	74	70	762.3
2/7/2025	AM-05	Opukea Townhomes	1.3	SE	75	68	762.5
2/7/2025	AM-08	Lahaina Pump Station #6	1.6	SE	73	69	762.6
2/8/2025	AM-02	WW Pump Station #4	1.0	SE	75	63	763.3
2/8/2025	AM-09	Maria Lanakila Catholic Church	1.2	SSE	74	65	762.6
2/8/2025	AM-05	Opukea Townhomes	1.1	ESE	75	63	762.8
2/8/2025	AM-08	Lahaina Pump Station #6	1.7	SSE	73	64	762.9
2/9/2025	AM-02	WW Pump Station #4	1.2	SSE	76	64	763.6
2/9/2025	AM-09	Maria Lanakila Catholic Church	1.1	SSE	76	65	762.9
2/9/2025	AM-05	Opukea Townhomes	1.4	SSE	76	64	763.1
2/9/2025	AM-08	Lahaina Pump Station #6	1.8	SSE	75	65	763.2
2/10/2025	AM-02	WW Pump Station #4	0.9	SE	76	67	764.4
2/10/2025	AM-09	Maria Lanakila Catholic Church	1.1	SE	75	68	763.6
2/10/2025	AM-05	Opukea Townhomes	1.2	SE	76	67	763.8
2/10/2025	AM-08	Lahaina Pump Station #6	1.6	SE	75	67	764.0
2/11/2025	AM-02	WW Pump Station #4	0.8	SSE	77	66	764.9
2/11/2025	AM-09	Maria Lanakila Catholic Church	1.2	SSE	76	66	764.1
2/11/2025	AM-05	Opukea Townhomes	1.3	ESE	77	65	764.2
2/11/2025	AM-08	Lahaina Pump Station #6	1.3	SSE	75	66	764.4
2/12/2025	AM-02	WW Pump Station #4	0.9	SSE	76	69	763.1
2/12/2025	AM-09	Maria Lanakila Catholic Church	1.2	SSE	75	70	762.5
2/12/2025	AM-05	Opukea Townhomes	1.0	ESE	77	68	762.5
2/12/2025	AM-08	Lahaina Pump Station #6	1.6	SSE	76	68	762.8

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: 042502693
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: 02/13/2025 09:30 AM
Analysis Date: 02/17/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM05-020625-AB	Sample Description:	TEM0682898
EMSL Sample Number:	042502693-0001	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7109.5
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502693
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: 042502693-0001			Customer Sample: MFL-AM05-020625-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	I9	None Detected									
B2	G5	None Detected									
B2	D2	None Detected									
B3	F3	None Detected									
B3	C5	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
Project ID: N/A

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Analysis Date: 02/17/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-020625-AB	Sample Description:	TEM0682794
EMSL Sample Number:	042502693-0002	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7057.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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):	0.0009	Limit of Detection (Structures/cc):	0.0027

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Amphibole	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total All Structures	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	

Comment

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EMSL Order ID: 042502693
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: 042502693-0002			Customer Sample: MFL-AM02-020625-AB								
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B5	J3	None Detected									
B5	F1	None Detected									
B5	C3	None Detected									
B6	C9	None Detected									
B6	I4	None Detected									

Abbreviations used:
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Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-020625-AB	Sample Description:	TEM0683115
EMSL Sample Number:	042502693-0003	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7045.1
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	3		
Target Analytical Sensitivity (Structures/cc):	0.001		
Analytical Sensitivity (Structures/cc):	0.0009	Limit of Detection (Structures/cc):	0.0027

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Amphibole	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total All Structures	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0027	Not Applicable - 0.0027	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502693
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: 042502693-0003			Customer Sample: MFL-AM09-020625-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	H2	None Detected									
C2	F4	None Detected									
C2	C7	None Detected									
C3	B5	None Detected									
C3	F7	None Detected									

Abbreviations used:
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Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM08-020625-AB	Sample Description:	TEM0682803
EMSL Sample Number:	042502693-0004	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7129.5
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0004			Customer Sample: MFL-AM08-020625-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	B6	None Detected									
C5	D4	None Detected									
C5	G6	None Detected									
C6	B9	None Detected									
C6	H6	None Detected									

Abbreviations used:
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Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	MFL-FB01-020625-AB	Sample Description:	TEM0682932
EMSL Sample Number:	042502693-0005	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 ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0005		Customer Sample: MFL-FB01-020625-AB									
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D2	A9	None Detected									
D2	C8	None Detected									
D2	E10	None Detected									
D2	G5	None Detected									
D2	I8	None Detected									
D3	J2	None Detected									
D3	H5	None Detected									
D3	F2	None Detected									
D3	D4	None Detected									
D3	B6	None Detected									

Abbreviations used:
 XNCGBLD - Crosses Non-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-AM05-020725-AB	Sample Description:	TEM0682787
EMSL Sample Number:	042502693-0006	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7260.5
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502693

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: 042502693-0006			Customer Sample: MFL-AM05-020725-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	A8	None Detected									
D5	D7	None Detected									
D5	G5	None Detected									
D6	G6	None Detected									
D6	D9	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
Project ID: N/A

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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number: MFL-AM02-020725-AB **Sample Description:** TEM0683060

EMSL Sample Number: 042502693-0007 Sample Matrix: Air
 Magnification used for fiber counting: 20,000 Volume (L): 7175.6
 Aspect ratio for fiber definition: 3:1 Area of original collection filter (mm²): 385
 Minimum Length (µm): ≥ 0.5 Grid Opening Area (mm²): 0.0128
 Chi² Test for Random Distribution on Filter: N/A (N/A) Grid Openings Analyzed: 5
 Minimum Level of analysis (chrysotile): CD Analyst: P. Harrison
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502693
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: 042502693-0007		Customer Sample: MFL-AM02-020725-AB									
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E2	I6	None Detected									
E2	F3	None Detected									
E2	C5	None Detected									
E3	C7	None Detected									
E3	H10	None Detected									

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



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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-020725-AB	Sample Description:	TEM0682863
EMSL Sample Number:	042502693-0008	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7346.8
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0008			Customer Sample: MFL-AM09-020725-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	I2	None Detected									
E5	G5	None Detected									
E5	E7	None Detected									
E6	A7	None Detected									
E6	G4	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-AM08-020725-AB	Sample Description:	TEM0682751
EMSL Sample Number:	042502693-0009	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7333.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: **042502693**
 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: 042502693-0009			Customer Sample: MFL-AM08-020725-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	B8	None Detected									
F2	E7	None Detected									
F2	H6	None Detected									
F3	G6	None Detected									
F3	D10	None Detected									

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



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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-FB01-020725-AB	Sample Description:	TEM0683068
EMSL Sample Number:	042502693-0010	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 ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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Client: Tetra Tech

Project ID: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0010		Customer Sample: MFL-FB01-020725-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	A6	None Detected									
F5	C5	None Detected									
F5	E7	None Detected									
F5	G7	None Detected									
F5	I4	None Detected									
F6	J4	None Detected									
F6	H5	None Detected									
F6	F2	None Detected									
F6	D5	None Detected									
F6	B7	None Detected									

Abbreviations used:

XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled

XCGBLD - Crosses Countable Grid Bar Length Doubled



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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM05-020825-AB	Sample Description:	TEM0682913
EMSL Sample Number:	042502693-0011	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7216.2
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

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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EMSL Order ID: **042502693**
 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: 042502693-0011			Customer Sample: MFL-AM05-020825-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	B8	None Detected									
G2	E4	None Detected									
G2	H8	None Detected									
G3	H5	None Detected									
G3	B4	None Detected									

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



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Customer ID: TTDC42
Customer PO: 1207085
Project ID: N/A

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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-020825-AB	Sample Description:	TEM0682868
EMSL Sample Number:	042502693-0012	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7215.3
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502693
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: 042502693-0012			Customer Sample: MFL-AM02-020825-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	D5	None Detected									
G5	G7	None Detected									
G5	J6	None Detected									
G6	C5	None Detected									
G6	F4	None Detected									

Abbreviations used:
 XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number: MFL-AM09-020825-AB **Sample Description:** TEM0682892

EMSL Sample Number: 042502693-0013 Sample Matrix: Air
 Magnification used for fiber counting: 20,000 Volume (L): 7152.5
 Aspect ratio for fiber definition: 3:1 Area of original collection filter (mm²): 385
 Minimum Length (µm): ≥ 0.5 Grid Opening Area (mm²): 0.0128
 Chi² Test for Random Distribution on Filter: N/A (N/A) Grid Openings Analyzed: 5
 Minimum Level of analysis (chrysotile): CD Analyst: P. Harrison
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 3
 Target Analytical Sensitivity (Structures/cc): 0.001

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

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0013			Customer Sample: MFL-AM09-020825-AB								
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H2	I5	None Detected									
H2	G3	None Detected									
H2	D6	None Detected									
H3	I7	None Detected									
H3	D4	None Detected									

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



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Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM08-020825-AB	Sample Description:	TEM0682885
EMSL Sample Number:	042502693-0014	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7195.9
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0014			Customer Sample: MFL-AM08-020825-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	B7	None Detected									
H5	E4	None Detected									
H5	I3	None Detected									
H6	I6	None Detected									
H6	C4	None Detected									

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



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Report Date: 02/19/2025

Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	MFL-FB01-020825-AB	Sample Description:	TEM0683139
EMSL Sample Number:	042502693-0015	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 ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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Client: Tetra Tech

Project ID: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0015		Customer Sample: MFL-FB01-020825-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					
I2	A9	None Detected									
I2	C7	None Detected									
I2	E9	None Detected									
I2	G6	None Detected									
I2	I8	None Detected									
I3	J4	None Detected									
I3	H1	None Detected									
I3	F1	None Detected									
I3	D5	None Detected									
I3	B6	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM05-020925-AB	Sample Description:	TEM0683030
EMSL Sample Number:	042502693-0016	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7236.9
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

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EMSL Order ID: 042502693
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: 042502693-0016			Customer Sample: MFL-AM05-020925-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					
I6	A4	None Detected									
I6	D5	None Detected									
I6	G3	None Detected									
I7	J6	None Detected									
I7	D3	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: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-020925-AB	Sample Description:	TEM0683171
EMSL Sample Number:	042502693-0017	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7262.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

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EMSL Order ID: 042502693
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: 042502693-0017			Customer Sample: MFL-AM02-020925-AB								
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
J2	H2	None Detected									
J2	D7	None Detected									
J2	B9	None Detected									
J3	C3	None Detected									
J3	G6	None Detected									

Abbreviations used:
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 XCGBLD - Crosses Countable Grid Bar Length Doubled



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Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-020925-AB	Sample Description:	TEM0683155
EMSL Sample Number:	042502693-0018	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7209.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

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EMSL Order ID: 042502693
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: 042502693-0018			Customer Sample: MFL-AM09-020925-AB								
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
J5	I6	None Detected									
J5	G3	None Detected									
J5	D6	None Detected									
J6	B5	None Detected									
J6	I3	None Detected									

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



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Received Date: 02/13/2025 09:30 AM
Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

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

Customer Sample Number: MFL-AM08-020925-AB **Sample Description:** TEM0682737

EMSL Sample Number: 042502693-0019 Sample Matrix: Air
 Magnification used for fiber counting: 20,000 Volume (L): 7243.7
 Aspect ratio for fiber definition: 3:1 Area of original collection filter (mm²): 385
 Minimum Length (µm): ≥ 0.5 Grid Opening Area (mm²): 0.0128
 Chi² Test for Random Distribution on Filter: N/A (N/A) Grid Openings Analyzed: 5
 Minimum Level of analysis (chrysotile): CD Analyst: P. Harrison
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 3
 Target Analytical Sensitivity (Structures/cc): 0.001

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

TOTAL STRUCTURES (All Sizes)							
	Minimum ID Level	Structures Detected		Density (S/mm ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502693-0019			Customer Sample: MFL-AM08-020925-AB								
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
K2	C3	None Detected									
K2	F7	None Detected									
K2	H4	None Detected									
K3	C5	None Detected									
K3	I2	None Detected									

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



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Received Date: 02/13/2025 09:30 AM
Analysis Date: 02/18/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	MFL-FB01-020925-AB	Sample Description:	TEM0682910
EMSL Sample Number:	042502693-0020	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	0.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

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EMSL Order ID: 042502693
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:		042502693-0020		Customer Sample:		MFL-FB01-020925-AB					
Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
K5	A2	None Detected									
K5	C1	None Detected									
K5	E4	None Detected									
K5	G1	None Detected									
K5	I2	None Detected									
K6	J10	None Detected									
K6	H5	None Detected									
K6	F8	None Detected									
K6	C5	None Detected									
K6	A3	None Detected									

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



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Received Date: 02/13/2025 09:30 AM
Analysis Date: 02/17/2025
Report Date: 02/19/2025

Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	Lab Blank	Sample Description: Lab Blank
EMSL Sample Number:	042502693-0021	Sample Matrix: Air
Magnification used for fiber counting:	20,000	Volume (L): 0.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²): 385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²): 0.0128
Chi ² 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

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 / cinnaslab@EMSL.com

EMSL Order ID: 042502693

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:		042502693-0021		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	J3	None Detected									
A1	H6	None Detected									
A1	F9	None Detected									
A1	D7	None Detected									
A1	B5	None Detected									
A2	J6	None Detected									
A2	H7	None Detected									
A2	F10	None Detected									
A2	D7	None Detected									
A2	B9	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

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

#042502693

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

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

Customer Information		Billing Information	
Customer ID:		Billing ID:	
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:
Phone:	(703) 489-2674	Phone:	
Email(s) for Report:	chelsea.saber@tetratech.com	Email(s) for Invoice:	

RECEIVED
EMSL
CINNAMINSON, NJ
25 FEB 13 AM 10:38

Project Information		Purchase Order:	1207085
Project Name/No:	Mauai Fires Lahaina	US State where samples collected:	HI
EMSL LIMS Project ID:	(If applicable, EMSL will provide)	State of Connecticut (CT) must select project location:	<input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name:	Shaina Epstein	Sampled By Signature:	<i>[Signature]</i>
		No. of Samples In Shipment:	20

Turn-around-Time (TAT)

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

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

Test Selection

<p>PCM Air</p> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> NIOSH 7400 w/ 8hr. TWA <p>PLM - Bulk (reporting limit)</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>TEM - Air</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>TEM - Bulk</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>Other Test (please specify)</p>	<p>TEM - Settled Dust</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>Soil - Rock - Vermiculite (reporting limit)*</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-AM05-020625-AB	TEM0682898	7,109.466	02/06/25 1053
MFL-AM02-020625-AB	TEM0682794	7,056.967	02/06/25 1112
MFL-AM09-020625-AB	TEM0683115	7,045.069	02/06/25 1127
MFL-AM08-020625-AB	TEM0682803	7,129.549	02/06/25 1190
MFL-FB01-020625-AB	TEM0682932	0	02/06/25 1200
MFL-AM05-020725-AB	TEM0682787	7,260.485	02/07/25 1050
MFL-AM02-020725-AB	TEM0683060	7,175.597	02/07/25 1105
MFL-AM09-020725-AB	TEM0682863	7,346.812	02/07/25 1251

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

All samples received acceptable for analysis.

20 *[Signature]*

Method of Shipment:	Fedex	Sample Condition Upon Receipt:	
Relinquished by:	<i>[Signature]</i>	Date/Time:	2/10/25 1100
Relinquished by:		Date/Time:	
Received by:	<i>[Signature]</i> - Fedex	Date/Time:	2/13/25 9:30A
Received by:		Date/Time:	

Controlled Document - C02-05 Asbestos R16 10/28/2021

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 02/19/2025 and Shanna Vasser 02/19/2025

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

Collection date(s): 02/06/2025 – 02/09/2025

Report No: 42502693

- √ 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.



EMSL Analytical, Inc.
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<http://www.EMSL.com> / cinnaaslab@EMSL.com

EMSL Order: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/19/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM05-021025-AB	Sample Description:	TEM0682822
EMSL Sample Number:	042502869-0001	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7262.3
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

Approved Signatory

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

EMSL Order ID: **042502869**
 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: 042502869-0001			Customer Sample: MFL-AM05-021025-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					
B1	C7	None Detected									
B1	D8	None Detected									
B3	J6	None Detected									
B3	I5	None Detected									
B4	A2	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: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/19/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-021025-AB	Sample Description:	TEM0682926
EMSL Sample Number:	042502869-0002	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7195.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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

EMSL Order ID: **042502869**
 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: 042502869-0002			Customer Sample: MFL-AM02-021025-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	J7	None Detected									
B5	H6	None Detected									
B6	I4	None Detected									
B6	G3	None Detected									
B7	C8	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: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/19/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-021025-AB	Sample Description:	TEM0682902
EMSL Sample Number:	042502869-0003	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7161.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment

Approved Signatory

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

EMSL Order ID: **042502869**
 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: 042502869-0003			Customer Sample: MFL-AM09-021025-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					
C1	A4	None Detected									
C1	B5	None Detected									
C2	D2	None Detected									
C2	E3	None Detected									
C3	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: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/19/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM08-021025-AB	Sample Description:	TEM0683106
EMSL Sample Number:	042502869-0004	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7260.0
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

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

EMSL Order ID: 042502869
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: 042502869-0004			Customer Sample: MFL-AM08-021025-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	J9	None Detected									
C5	I8	None Detected									
C6	D5	None Detected									
C6	F6	None Detected									
C7	G10	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
Project ID: N/A

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Fax: N/A
Received Date: 02/17/2025 08:00 AM
Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number: MFL-FB01-021025-AB **Sample Description:** TEM0682882

EMSL Sample Number: 042502869-0005 Sample Matrix: Air
 Magnification used for fiber counting: 20,000 Volume (L): 0.0
 Aspect ratio for fiber definition: 3:1 Area of original collection filter (mm²): 385
 Minimum Length (µm): ≥ 0.5 Grid Opening Area (mm²): 0.0128
 Chi² Test for Random Distribution on Filter: N/A (N/A) Grid Openings Analyzed: 10
 Minimum Level of analysis (chrysotile): CD Analyst: S. Richey
 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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EMSL Order ID: **042502869**
 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:		042502869-0005		Customer Sample:		MFL-FB01-021025-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					
D1	J8	None Detected									
D1	J6	None Detected									
D1	H7	None Detected									
D1	H5	None Detected									
D2	I5	None Detected									
D2	I3	None Detected									
D2	G4	None Detected									
D3	F2	None Detected									
D3	F4	None Detected									
D3	H5	None Detected									

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



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Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number: MFL-AM05-021125-AB **Sample Description:** TEM0682839

EMSL Sample Number: 042502869-0006 Sample Matrix: Air
 Magnification used for fiber counting: 20,000 Volume (L): 7242.0
 Aspect ratio for fiber definition: 3:1 Area of original collection filter (mm²): 385
 Minimum Length (µm): ≥ 0.5 Grid Opening Area (mm²): 0.0128
 Chi² Test for Random Distribution on Filter: N/A (N/A) Grid Openings Analyzed: 5
 Minimum Level of analysis (chrysotile): CD Analyst: S. Richey
 Minimum Level of analysis (amphibole): ADX

Estimated Particulate Loading on Filter %: 4
 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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502869
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: 042502869-0006			Customer Sample: MFL-AM05-021125-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	I7	None Detected									
D5	G6	None Detected									
D6	J9	None Detected									
D6	H10	None Detected									
D7	B6	None Detected									

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



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Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-021125-AB	Sample Description:	TEM0683157
EMSL Sample Number:	042502869-0007	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7182.8
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502869-0007			Customer Sample: MFL-AM02-021125-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	J5	None Detected									
E1	I6	None Detected									
E2	B3	None Detected									
E2	C8	None Detected									
E3	A7	None Detected									

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



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Received Date: 02/17/2025 08:00 AM
Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-021125-AB	Sample Description:	TEM0682941
EMSL Sample Number:	042502869-0008	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7225.6
Aspect ratio for fiber definition:	0.126	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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Client: Tetra Tech
Project ID: Maui Fires Lahaina

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

Analytical Bench Sheet Data

EMSL Sample ID: 042502869-0008			Customer Sample: MFL-AM09-021125-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	I4	None Detected									
E5	G6	None Detected									
E6	A3	None Detected									
E6	C1	None Detected									
E7	B5	None Detected									

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



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Received Date: 02/17/2025 08:00 AM
Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM08-021125-AB	Sample Description:	TEM0682617
EMSL Sample Number:	042502869-0009	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7258.5
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

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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EMSL Order ID: 042502869
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:		042502869-0009		Customer Sample:		MFL-AM08-021125-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	I8	None Detected									
F1	H9	None Detected									
F2	A5	None Detected									
F2	C6	None Detected									
F3	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: 042502869
Customer ID: TTDC42
Customer PO: 1207085
Project ID: N/A

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Analysis Date: 02/20/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	MFL-FB01-021125-AB	Sample Description:	TEM0682847
EMSL Sample Number:	042502869-0010	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 ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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EMSL Order ID: 042502869
 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:		042502869-0010		Customer Sample:		MFL-FB01-021125-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	B4	None Detected									
F5	B6	None Detected									
F5	C7	None Detected									
F5	C9	None Detected									
F6	J4	None Detected									
F6	J2	None Detected									
F6	I3	None Detected									
F7	A8	None Detected									
F7	A10	None Detected									
F7	B9	None Detected									

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



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Received Date: 02/17/2025 08:00 AM
Analysis Date: 02/21/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM05-021225-AB	Sample Description:	TEM0682930
EMSL Sample Number:	042502869-0011	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7199.8
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502869
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: 042502869-0011			Customer Sample: MFL-AM05-021225-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					
G1	J7	None Detected									
G1	H6	None Detected									
G2	I4	None Detected									
G2	E5	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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Received Date: 02/17/2025 08:00 AM
Analysis Date: 02/21/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM02-021225-AB	Sample Description:	TEM0682914
EMSL Sample Number:	042502869-0012	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7218.6
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: **042502869**
 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: 042502869-0012			Customer Sample: MFL-AM02-021225-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	B4	None Detected									
G5	C6	None Detected									
G6	A7	None Detected									
G6	D9	None Detected									
G7	J4	None Detected									

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



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Customer ID: TTDC42
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Analysis Date: 02/21/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM09-021225-AB	Sample Description:	TEM0682909
EMSL Sample Number:	042502869-0013	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7160.9
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

Approved Signatory

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EMSL Order ID: 042502869

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: 042502869-0013			Customer Sample: MFL-AM09-021225-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	J5	None Detected									
H1	I3	None Detected									
H2	H7	None Detected									
H2	G6	None Detected									
H3	F8	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

EMSL Order: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/21/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-AM08-021225-AB	Sample Description:	TEM0682842
EMSL Sample Number:	042502869-0014	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L):	7199.7
Aspect ratio for fiber definition:	3:1	Area of original collection filter (mm ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	4		
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures	-	0	0	< 46.72	< 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 ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Amphibole (PCMe)	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Actinolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Amosite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Anthophyllite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Crocidolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Tremolite	ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Other Minerals	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	
Total All Structures (PCMe)	-	0	0	< 46.72	< 0.0024	Not Applicable - 0.0024	

Comment
 Numerous gypsum fibers present.

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: 042502869
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: 042502869-0014			Customer Sample: MFL-AM08-021225-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	I8	None Detected									
H5	G7	None Detected									
H6	A5	None Detected									
H6	B4	None Detected									
H7	C8	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: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/21/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

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

Customer Sample Number:	MFL-FB01-021225-AB	Sample Description:	TEM0683814
EMSL Sample Number:	042502869-0015	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 ²):	385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²):	0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD	Analyst:	S. Richey
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

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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200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

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

EMSL Order ID: 042502869

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: 042502869-0015		Customer Sample: MFL-FB01-021225-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					
I1	J7	None Detected									
I1	J5	None Detected									
I1	H6	None Detected									
I1	H4	None Detected									
I2	G5	None Detected									
I2	G3	None Detected									
I2	F4	None Detected									
I3	C4	None Detected									
I3	C6	None Detected									
I3	D7	None Detected									

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



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<http://www.EMSL.com> / cinnaaslab@EMSL.com

EMSL Order: 042502869
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: 02/17/2025 08:00 AM
Analysis Date: 02/19/2025
Report Date: 02/24/2025

Project: Maui Fires Lahaina

ISO 10312 Determination of Asbestos Fibers Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	Lab Blank	Sample Description: Lab Blank
EMSL Sample Number:	042502869-0016	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 ²): 385
Minimum Length (µm):	≥ 0.5	Grid Opening Area (mm ²): 0.0128
Chi ² Test for Random Distribution on Filter:	N/A (N/A)	Grid Openings Analyzed: 10
Minimum Level of analysis (chrysotile):	CD	Analyst: S. Richey
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 ²)	Concentration (S/cc)	95 % Confidence Interval (S/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile	CD	0	0	< 23.36			
Total Amphibole	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures	-	0	0	< 23.36			

PCM EQUIVALENT (PCMe) Fibers (>5 microns in length with >3:1 Aspect Ratio)							
	Minimum ID Level	Fibers Detected		Density (F/mm ²)	Concentration (F/cc)	95 % Confidence Interval (F/cc)	
		Primary	Total			Lower	Upper
Total Chrysotile (PCMe)	CD	0	0	< 23.36			
Total Amphibole (PCMe)	ADX	0	0	< 23.36			
Actinolite	ADX	0	0	< 23.36			
Amosite	ADX	0	0	< 23.36			
Anthophyllite	ADX	0	0	< 23.36			
Crocidolite	ADX	0	0	< 23.36			
Tremolite	ADX	0	0	< 23.36			
Total Asbestos Structures (PCMe)	CD/ADX	0	0	< 23.36			
Other Minerals	-	0	0	< 23.36			
Total All Structures (PCMe)	-	0	0	< 23.36			

Comment

Approved Signatory

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<http://www.EMSL.com> / cinnaslab@EMSL.com

EMSL Order ID: **042502869**
 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: 042502869-0016			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	B5	None Detected									
A1	B7	None Detected									
A1	C8	None Detected									
A1	C10	None Detected									
A2	H3	None Detected									
A2	H5	None Detected									
A2	I4	None Detected									
A3	D7	None Detected									
A3	D9	None Detected									
A3	E8	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

#042502869

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

Project Name/No: Maui Fires Lahaina		Purchase Order: 1207085
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: HI	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: Sharna Epstein	Sampled By Signature: <i>[Signature]</i>	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 3-4 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

PCM Air

NIOSH 7400
 NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)

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

TEM - Air

AHERA 40 CFR, Part 783
 NIOSH 7402
 EPA Level II
 ISO 10312*

TEM - Bulk

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

TEM - Settled Dust

Microvac - ASTM D673
 Wipe - ASTM D6480
 Qualitative via Filtration Prep
 Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*

PLM EPA 600/R-93/116 with milling prep (<0.25%)
 PLM EPA 600/R-93/116 with milling prep (<0.1%)
 TEM EPA 600/R-93/116 with milling prep (<0.1%)
 TEM Qualitative via Filtration Prep
 TEM Qualitative via Drop Mount Prep

Other Test (please specify)

*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-AM05-021025-AB	TEM0682822	7,262.309	02/10/25 1059
MFL-AM02-021025-AB	TEM0682926	7,194.960	02/10/25 1111
MFL-AM09-021025-AB	TEM0682902	7,161.583	02/10/25 1247
MFL-AM08-021025-AB	TEM0683106	7,260.008	02/10/25 1303
MFL-FB01-021025-AB	TEM0682882	0	02/10/25 1200
MFL-AM05-021125-AB	TEM0682839	7,241.952	02/11/25 1056
MFL-AM02-021125-AB	TEM0683157	7,182.763	02/11/25 1112
MFL-AM09-021125-AB	TEM0682941	7,225.632	02/11/25 1251

All samples received acceptable for analysis.

Method of Shipment: Fedex	Sample Condition Upon Receipt:
Relinquished by: Sharna Epstein Date/Time: 02/13/25 1100	Received by: <i>[Signature]</i> FX Date/Time: 2/15/25 11:40am
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.

15 Am

Stage 1 Data Verification Checklist – Asbestos
HDOH CAB – Ambient Community Air Sampling – Lahaina
Task Order No. 23141

Reviewed by:

Kierra Johnson 02/24/2025 and Shanna Vasser 02/25/2025

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

Collection date(s): 02/10/2025 – 02/12/2025

Report No: 42502869

- √ 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

February 26, 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 02/17/25 07:15.

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

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 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: 02/26/25 13:50

SUBMITTED: 02/17/25

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-AM05-020625-HM	5021837-01	Air	02/06/25 23:59	02/17/25 07:15
MFL-AM02-020625-HM	5021837-02	Air	02/06/25 23:59	02/17/25 07:15
MFL-AM09-020625-HM	5021837-03	Air	02/06/25 23:59	02/17/25 07:15
MFL-AM08-020625-HM	5021837-04	Air	02/06/25 23:59	02/17/25 07:15
MFL-AM05-020725-HM	5021837-05	Air	02/07/25 23:59	02/17/25 07:15
MFL-AM02-020725-HM	5021837-06	Air	02/07/25 23:59	02/17/25 07:15
MFL-AM09-020725-HM	5021837-07	Air	02/07/25 23:59	02/17/25 07:15
MFL-AM08-020725-HM	5021837-08	Air	02/07/25 23:59	02/17/25 07:15
MFL-FB01-020725-HM	5021837-09	Air	02/07/25 00:00	02/17/25 07:15
MFL-AM05-020825-HM	5021837-10	Air	02/08/25 23:59	02/17/25 07:15
MFL-AM02-020825-HM	5021837-11	Air	02/08/25 23:59	02/17/25 07:15
MFL-AM09-020825-HM	5021837-12	Air	02/08/25 23:59	02/17/25 07:15
MFL-AM08-020825-HM	5021837-13	Air	02/08/25 23:59	02/17/25 07:15
MFL-AM05-020925-HM	5021837-14	Air	02/09/25 23:59	02/17/25 07:15
MFL-AM02-020925-HM	5021837-15	Air	02/09/25 23:59	02/17/25 07:15
MFL-AM09-020925-HM	5021837-16	Air	02/09/25 23:59	02/17/25 07:15
MFL-AM08-020925-HM	5021837-17	Air	02/09/25 23:59	02/17/25 07:15
MFL-FB01-020925-HM	5021837-18	Air	02/09/25 00:00	02/17/25 07:15
MFL-AM05-021025-HM	5021837-19	Air	02/10/25 23:59	02/17/25 07:15
MFL-AM02-021025-HM	5021837-20	Air	02/10/25 23:59	02/17/25 07:15
MFL-AM09-021025-HM	5021837-21	Air	02/10/25 23:59	02/17/25 07:15



CERTIFICATE OF ANALYSIS

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

ATTN: Ms. Chelsea Saber

PHONE: (703) 885-5495 **FAX:**

MFL-AM08-021025-HM	5021837-22	Air	02/10/25 23:59	02/17/25 07:15
MFL-LB01-021025-HM	5021837-23	Air	02/10/25 00:00	02/17/25 07:15
MFL-AM05-021125-HM	5021837-24	Air	02/11/25 23:59	02/17/25 07:15
MFL-AM02-021125-HM	5021837-25	Air	02/11/25 23:59	02/17/25 07:15
MFL-AM09-021125-HM	5021837-26	Air	02/11/25 23:59	02/17/25 07:15
MFL-AM08-021125-HM	5021837-27	Air	02/11/25 23:59	02/17/25 07:15
MFL-FB01-021125-HM	5021837-28	Air	02/11/25 23:59	02/17/25 07:15
MFL-AM05-021225-HM	5021837-29	Air	02/12/25 23:59	02/17/25 07:15
MFL-AM02-021225-HM	5021837-30	Air	02/12/25 23:59	02/17/25 07:15
MFL-AM09-021225-HM	5021837-31	Air	02/12/25 23:59	02/17/25 07:15
MFL-AM08-021225-HM	5021837-32	Air	02/12/25 23:59	02/17/25 07:15

FILE #: 4205.00.003.001

REPORTED: 02/26/25 13:50

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 Blue Bell, PA 19422
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 PHONE: (703) 885-5495 FAX:

FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-020625-HM **Lab ID:** 5021837-01 **Sampled:** 02/06/25 23:59
Matrix: Air **Sample Volume:** 2069.054 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/21/25 23:52
Comments: Q8521611 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.213	SL	0.0275
Arsenic	7440-38-2	0.586		0.00699
Barium	7440-39-3	8.87		1.21
Beryllium	7440-41-7	0.0299		0.00149
Cadmium	7440-43-9	0.0372		0.00403
Chromium	7440-47-3	4.04		1.92
Cobalt	7440-48-4	0.925		0.0409
Copper	7440-50-8	39.1		0.591
Lead	7439-92-1	0.989		0.105
Manganese	7439-96-5	34.7		0.438
Molybdenum	7439-98-7	1.36		0.310
Nickel	7440-02-0	2.94		0.581
Selenium	7782-49-2	0.208	LJ, QX	0.00794
Thallium	7440-28-0	0.00303		6.77E-4
Vanadium	7440-62-2	2.85		0.0360
Zinc	7440-66-6	32.8	U	89.6



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 REPORTED: 02/26/25 13:50
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 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-020625-HM **Lab ID:** 5021837-02 **Sampled:** 02/06/25 23:59
Matrix: Air **Sample Volume:** 2055.237 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 00:12
Comments: Q8521609 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.597	SL	0.0277
Arsenic	7440-38-2	0.279		0.00704
Barium	7440-39-3	10.3		1.22
Beryllium	7440-41-7	0.0155		0.00150
Cadmium	7440-43-9	0.0196		0.00405
Chromium	7440-47-3	2.40		1.93
Cobalt	7440-48-4	0.461		0.0412
Copper	7440-50-8	54.6		0.595
Lead	7439-92-1	0.849		0.106
Manganese	7439-96-5	14.9		0.441
Molybdenum	7439-98-7	2.76		0.312
Nickel	7440-02-0	1.66		0.585
Selenium	7782-49-2	0.180	LJ, QX	0.00800
Thallium	7440-28-0	0.00169		6.82E-4
Vanadium	7440-62-2	1.44		0.0363
Zinc	7440-66-6	33.3	U	90.2



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 REPORTED: 02/26/25 13:50
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 AQS SITE CODE:
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Description: MFL-AM09-020625-HM **Lab ID:** 5021837-03 **Sampled:** 02/06/25 23:59
Matrix: Air **Sample Volume:** 1918.043 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/21/25 17:37
Comments: Q8521608 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.188	SL	0.0297	
Arsenic	7440-38-2	0.247	D-F	0.00754	
Barium	7440-39-3	4.68		1.31	
Beryllium	7440-41-7	0.00967		0.00161	
Cadmium	7440-43-9	0.0148		0.00434	
Chromium	7440-47-3	2.58		2.07	
Cobalt	7440-48-4	0.291		0.0441	
Copper	7440-50-8	31.3	QM-07	0.638	
Lead	7439-92-1	0.797		0.114	
Manganese	7439-96-5	8.77		0.472	
Molybdenum	7439-98-7	1.53	QM-07	0.334	
Nickel	7440-02-0	1.53		0.627	
Selenium	7782-49-2	0.140	LJ, QX	0.00857	
Thallium	7440-28-0	0.00133		7.30E-4	
Vanadium	7440-62-2	0.770		0.0389	
Zinc	7440-66-6	29.6	U	96.7	



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Description: MFL-AM08-020625-HM **Lab ID:** 5021837-04 **Sampled:** 02/06/25 23:59
Matrix: Air **Sample Volume:** 1794.775 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 00:26
Comments: Q8521607 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.172	SL	0.0317
Arsenic	7440-38-2	0.209		0.00806
Barium	7440-39-3	3.20		1.40
Beryllium	7440-41-7	0.00507		0.00172
Cadmium	7440-43-9	0.0167		0.00464
Chromium	7440-47-3	1.46	U	2.21
Cobalt	7440-48-4	0.148		0.0471
Copper	7440-50-8	63.5		0.682
Lead	7439-92-1	0.439		0.121
Manganese	7439-96-5	4.98		0.505
Molybdenum	7439-98-7	2.17		0.357
Nickel	7440-02-0	0.943		0.670
Selenium	7782-49-2	0.105	LJ, QX	0.00916
Thallium	7440-28-0	0.00116		7.81E-4
Vanadium	7440-62-2	0.448		0.0415
Zinc	7440-66-6	22.9	U	103



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 REPORTED: 02/26/25 13:50
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 AQS SITE CODE:
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Description: MFL-AM05-020725-HM **Lab ID:** 5021837-05 **Sampled:** 02/07/25 23:59
Matrix: Air **Sample Volume:** 2072.533 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 00:40
Comments: Q8521604 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.101	SL	0.0275	
Arsenic	7440-38-2	0.189		0.00698	
Barium	7440-39-3	3.34		1.21	
Beryllium	7440-41-7	0.00607		0.00149	
Cadmium	7440-43-9	0.0410		0.00402	
Chromium	7440-47-3	1.58	U	1.92	
Cobalt	7440-48-4	0.195		0.0408	
Copper	7440-50-8	32.4		0.590	
Lead	7439-92-1	0.540		0.105	
Manganese	7439-96-5	6.41		0.437	
Molybdenum	7439-98-7	1.33		0.309	
Nickel	7440-02-0	1.10		0.580	
Selenium	7782-49-2	0.292	LJ, QX	0.00793	
Thallium	7440-28-0	0.00283		6.76E-4	
Vanadium	7440-62-2	0.697		0.0360	
Zinc	7440-66-6	20.4	U	89.5	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-020725-HM **Lab ID:** 5021837-06 **Sampled:** 02/07/25 23:59
Matrix: Air **Sample Volume:** 2073.759 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 00:53
Comments: Q8521603 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.376	SL	0.0275	
Arsenic	7440-38-2	0.241		0.00697	
Barium	7440-39-3	6.54		1.21	
Beryllium	7440-41-7	0.00968		0.00149	
Cadmium	7440-43-9	0.0734		0.00402	
Chromium	7440-47-3	2.78		1.91	
Cobalt	7440-48-4	0.337		0.0408	
Copper	7440-50-8	51.5		0.590	
Lead	7439-92-1	0.716		0.105	
Manganese	7439-96-5	9.96		0.437	
Molybdenum	7439-98-7	2.81		0.309	
Nickel	7440-02-0	2.32		0.580	
Selenium	7782-49-2	0.337	LJ, QX	0.00792	
Thallium	7440-28-0	0.00302		6.76E-4	
Vanadium	7440-62-2	1.08		0.0359	
Zinc	7440-66-6	21.6	U	89.4	



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 SUBMITTED: 02/17/25
 AQS SITE CODE:
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Description: MFL-AM09-020725-HM **Lab ID:** 5021837-07 **Sampled:** 02/07/25 23:59
Matrix: Air **Sample Volume:** 1961.56 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 01:11
Comments: Q8521602 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.0854	SL	0.0290
Arsenic	7440-38-2	0.146		0.00737
Barium	7440-39-3	2.79		1.28
Beryllium	7440-41-7	0.00508		0.00158
Cadmium	7440-43-9	0.0291		0.00425
Chromium	7440-47-3	1.52	U	2.02
Cobalt	7440-48-4	0.168		0.0431
Copper	7440-50-8	17.4		0.624
Lead	7439-92-1	0.297		0.111
Manganese	7439-96-5	4.42		0.462
Molybdenum	7439-98-7	1.05		0.327
Nickel	7440-02-0	1.66		0.613
Selenium	7782-49-2	0.187	LJ, QX	0.00838
Thallium	7440-28-0	0.00171		7.14E-4
Vanadium	7440-62-2	0.453		0.0380
Zinc	7440-66-6	11.3	U	94.6



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 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
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Description: MFL-AM08-020725-HM **Lab ID:** 5021837-08 **Sampled:** 02/07/25 23:59
Matrix: Air **Sample Volume:** 1931.806 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 01:25
Comments: Q8521601 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.159	SL	0.0295	
Arsenic	7440-38-2	0.410		0.00749	
Barium	7440-39-3	4.17		1.30	
Beryllium	7440-41-7	0.00965		0.00160	
Cadmium	7440-43-9	0.0412		0.00431	
Chromium	7440-47-3	1.94	U	2.06	
Cobalt	7440-48-4	0.313		0.0438	
Copper	7440-50-8	43.2		0.633	
Lead	7439-92-1	0.874		0.113	
Manganese	7439-96-5	10.4		0.469	
Molybdenum	7439-98-7	2.35		0.332	
Nickel	7440-02-0	1.51		0.622	
Selenium	7782-49-2	0.327	LJ, QX	0.00851	
Thallium	7440-28-0	0.00281		7.25E-4	
Vanadium	7440-62-2	1.06		0.0386	
Zinc	7440-66-6	18.6	U	96.0	



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 AQS SITE CODE:
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Description: MFL-FB01-020725-HM **Lab ID:** 5021837-09 **Sampled:** 02/07/25 00:00
Matrix: Air **Sample Volume:** 2072.533 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 01:39
Comments: Q8521597 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.0342	FB-01, SL	0.0275
Arsenic	7440-38-2	0.00788	FB-01	0.00698
Barium	7440-39-3	0.893	U	1.21
Beryllium	7440-41-7	7.05E-5	U	0.00149
Cadmium	7440-43-9	6.69E-4	U	0.00402
Chromium	7440-47-3	0.793	U	1.92
Cobalt	7440-48-4	0.0122	U	0.0408
Copper	7440-50-8	0.943	FB-01	0.590
Lead	7439-92-1	0.0318	U	0.105
Manganese	7439-96-5	0.287	U	0.437
Molybdenum	7439-98-7	0.155	U	0.309
Nickel	7440-02-0	0.396	U	0.580
Selenium	7782-49-2	0.00136	LJ, QX, U	0.00793
Thallium	7440-28-0	6.40E-5	U	6.76E-4
Vanadium	7440-62-2	0.0324	U	0.0360
Zinc	7440-66-6	5.93	U	89.5



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 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-020825-HM **Lab ID:** 5021837-10 **Sampled:** 02/08/25 23:59
Matrix: Air **Sample Volume:** 2078.621 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 01:52
Comments: Q8521600 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.128	SL	0.0274	
Arsenic	7440-38-2	0.258		0.00696	
Barium	7440-39-3	3.70		1.21	
Beryllium	7440-41-7	0.00739		0.00149	
Cadmium	7440-43-9	0.0210		0.00401	
Chromium	7440-47-3	1.41	U	1.91	
Cobalt	7440-48-4	0.178		0.0407	
Copper	7440-50-8	30.5		0.589	
Lead	7439-92-1	0.541		0.105	
Manganese	7439-96-5	7.09		0.436	
Molybdenum	7439-98-7	1.44		0.308	
Nickel	7440-02-0	0.990		0.578	
Selenium	7782-49-2	0.190	LJ, QX	0.00791	
Thallium	7440-28-0	0.00257		6.74E-4	
Vanadium	7440-62-2	0.825		0.0358	
Zinc	7440-66-6	14.4	U	89.2	



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 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
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Description: MFL-AM02-020825-HM **Lab ID:** 5021837-11 **Sampled:** 02/08/25 23:59
Matrix: Air **Sample Volume:** 2081.598 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 03:19
Comments: Q8521599 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.540	SL	0.0274	
Arsenic	7440-38-2	0.290		0.00695	
Barium	7440-39-3	5.46		1.20	
Beryllium	7440-41-7	0.0101		0.00149	
Cadmium	7440-43-9	0.0477		0.00400	
Chromium	7440-47-3	1.57	U	1.91	
Cobalt	7440-48-4	0.251		0.0406	
Copper	7440-50-8	52.6		0.588	
Lead	7439-92-1	0.670		0.105	
Manganese	7439-96-5	9.32		0.435	
Molybdenum	7439-98-7	3.03		0.308	
Nickel	7440-02-0	1.16		0.578	
Selenium	7782-49-2	0.210	LJ, QX	0.00789	
Thallium	7440-28-0	0.00300		6.73E-4	
Vanadium	7440-62-2	1.08		0.0358	
Zinc	7440-66-6	14.7	U	89.1	



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 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
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Description: MFL-AM09-020825-HM **Lab ID:** 5021837-12 **Sampled:** 02/08/25 23:59
Matrix: Air **Sample Volume:** 1984.255 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 03:55
Comments: Q8521596 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.119	SL	0.0287
Arsenic	7440-38-2	0.341		0.00729
Barium	7440-39-3	4.09		1.26
Beryllium	7440-41-7	0.0116		0.00156
Cadmium	7440-43-9	0.0215		0.00420
Chromium	7440-47-3	2.78		2.00
Cobalt	7440-48-4	0.251		0.0426
Copper	7440-50-8	24.4		0.617
Lead	7439-92-1	0.780		0.110
Manganese	7439-96-5	9.72		0.457
Molybdenum	7439-98-7	1.48		0.323
Nickel	7440-02-0	1.12		0.606
Selenium	7782-49-2	0.221	LJ, QX	0.00828
Thallium	7440-28-0	0.00275		7.06E-4
Vanadium	7440-62-2	0.943		0.0376
Zinc	7440-66-6	14.2	U	93.5



CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM08-020825-HM **Lab ID:** 5021837-13 **Sampled:** 02/08/25 23:59
Matrix: Air **Sample Volume:** 1998.88 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 04:15
Comments: Q8521594 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.116	SL	0.0285	
Arsenic	7440-38-2	0.389		0.00724	
Barium	7440-39-3	3.57		1.25	
Beryllium	7440-41-7	0.00872		0.00155	
Cadmium	7440-43-9	0.0199		0.00417	
Chromium	7440-47-3	1.37	U	1.99	
Cobalt	7440-48-4	0.223		0.0423	
Copper	7440-50-8	33.4		0.612	
Lead	7439-92-1	0.797		0.109	
Manganese	7439-96-5	8.42		0.453	
Molybdenum	7439-98-7	2.16		0.321	
Nickel	7440-02-0	1.03		0.602	
Selenium	7782-49-2	0.200	LJ, QX	0.00822	
Thallium	7440-28-0	0.00259		7.01E-4	
Vanadium	7440-62-2	0.875		0.0373	
Zinc	7440-66-6	12.7	U	92.8	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-020925-HM **Lab ID:** 5021837-14 **Sampled:** 02/09/25 23:59
Matrix: Air **Sample Volume:** 2167.611 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 04:30
Comments: Q8521593 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.121	SL	0.0263	
Arsenic	7440-38-2	0.366		0.00667	
Barium	7440-39-3	3.53		1.16	
Beryllium	7440-41-7	0.00902		0.00143	
Cadmium	7440-43-9	0.0188		0.00384	
Chromium	7440-47-3	1.36	U	1.83	
Cobalt	7440-48-4	0.214		0.0390	
Copper	7440-50-8	25.2		0.564	
Lead	7439-92-1	0.600		0.101	
Manganese	7439-96-5	8.89		0.418	
Molybdenum	7439-98-7	1.27		0.296	
Nickel	7440-02-0	0.935		0.555	
Selenium	7782-49-2	0.150	LJ, QX	0.00758	
Thallium	7440-28-0	0.00257		6.46E-4	
Vanadium	7440-62-2	0.837		0.0344	
Zinc	7440-66-6	12.7	U	85.6	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-020925-HM **Lab ID:** 5021837-15 **Sampled:** 02/09/25 23:59
Matrix: Air **Sample Volume:** 2078.985 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 04:43
Comments: Q8521590 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.308	SL	0.0274
Arsenic	7440-38-2	0.450		0.00696
Barium	7440-39-3	5.88		1.21
Beryllium	7440-41-7	0.0134		0.00149
Cadmium	7440-43-9	0.0219		0.00401
Chromium	7440-47-3	2.05		1.91
Cobalt	7440-48-4	0.321		0.0407
Copper	7440-50-8	53.3		0.589
Lead	7439-92-1	1.03		0.105
Manganese	7439-96-5	12.1		0.436
Molybdenum	7439-98-7	3.17		0.308
Nickel	7440-02-0	1.59		0.578
Selenium	7782-49-2	0.196	LJ, QX	0.00790
Thallium	7440-28-0	0.00262		6.74E-4
Vanadium	7440-62-2	1.19		0.0358
Zinc	7440-66-6	18.9	U	89.2



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM09-020925-HM **Lab ID:** 5021837-16 **Sampled:** 02/09/25 23:59
Matrix: Air **Sample Volume:** 2002.811 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 05:00
Comments: Q8521589 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.113	SL	0.0284	
Arsenic	7440-38-2	0.428		0.00722	
Barium	7440-39-3	4.09		1.25	
Beryllium	7440-41-7	0.00821		0.00154	
Cadmium	7440-43-9	0.0211		0.00416	
Chromium	7440-47-3	1.57	U	1.98	
Cobalt	7440-48-4	0.175		0.0422	
Copper	7440-50-8	20.5		0.611	
Lead	7439-92-1	0.650		0.109	
Manganese	7439-96-5	7.47		0.452	
Molybdenum	7439-98-7	1.24		0.320	
Nickel	7440-02-0	1.04		0.600	
Selenium	7782-49-2	0.177	LJ, QX	0.00820	
Thallium	7440-28-0	0.00251		6.99E-4	
Vanadium	7440-62-2	0.717		0.0372	
Zinc	7440-66-6	14.8	U	92.6	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM08-020925-HM **Lab ID:** 5021837-17 **Sampled:** 02/09/25 23:59
Matrix: Air **Sample Volume:** 1952.271 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 05:14
Comments: Q8521587 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.151	SL	0.0292	
Arsenic	7440-38-2	0.407		0.00741	
Barium	7440-39-3	2.91		1.28	
Beryllium	7440-41-7	0.00745		0.00158	
Cadmium	7440-43-9	0.0224		0.00427	
Chromium	7440-47-3	1.31	U	2.03	
Cobalt	7440-48-4	0.142		0.0433	
Copper	7440-50-8	32.7		0.627	
Lead	7439-92-1	0.587		0.112	
Manganese	7439-96-5	6.35		0.464	
Molybdenum	7439-98-7	2.24		0.328	
Nickel	7440-02-0	0.840		0.616	
Selenium	7782-49-2	0.172	LJ, QX	0.00842	
Thallium	7440-28-0	0.00261		7.18E-4	
Vanadium	7440-62-2	0.645		0.0382	
Zinc	7440-66-6	9.98	U	95.0	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-FB01-020925-HM **Lab ID:** 5021837-18 **Sampled:** 02/09/25 00:00
Matrix: Air **Sample Volume:** 2167.611 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 05:28
Comments: Q8521582 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.0193	SL, U	0.0263	
Arsenic	7440-38-2	0.00498	U	0.00667	
Barium	7440-39-3	1.45	FB-01	1.16	
Beryllium	7440-41-7	6.36E-5	U	0.00143	
Cadmium	7440-43-9	8.18E-4	U	0.00384	
Chromium	7440-47-3	0.773	U	1.83	
Cobalt	7440-48-4	0.00750	U	0.0390	
Copper	7440-50-8	1.28	FB-01	0.564	
Lead	7439-92-1	0.0507	U	0.101	
Manganese	7439-96-5	0.115	U	0.418	
Molybdenum	7439-98-7	0.130	U	0.296	
Nickel	7440-02-0	0.337	U	0.555	
Selenium	7782-49-2	ND	LJ, QX, U	0.00758	
Thallium	7440-28-0	5.27E-5	U	6.46E-4	
Vanadium	7440-62-2	0.0199	U	0.0344	
Zinc	7440-66-6	4.29	U	85.6	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-021025-HM **Lab ID:** 5021837-19 **Sampled:** 02/10/25 23:59
Matrix: Air **Sample Volume:** 2022.503 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 05:41
Comments: Q8521586 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.122	SL	0.0282
Arsenic	7440-38-2	0.353		0.00715
Barium	7440-39-3	3.81		1.24
Beryllium	7440-41-7	0.00762		0.00153
Cadmium	7440-43-9	0.0702		0.00412
Chromium	7440-47-3	1.97		1.96
Cobalt	7440-48-4	0.253		0.0418
Copper	7440-50-8	30.3		0.605
Lead	7439-92-1	0.652		0.108
Manganese	7439-96-5	8.99		0.448
Molybdenum	7439-98-7	1.63		0.317
Nickel	7440-02-0	1.45		0.594
Selenium	7782-49-2	0.204	LJ, QX	0.00812
Thallium	7440-28-0	0.00191		6.93E-4
Vanadium	7440-62-2	1.01		0.0368
Zinc	7440-66-6	17.6	U	91.7



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-021025-HM **Lab ID:** 5021837-20 **Sampled:** 02/10/25 23:59
Matrix: Air **Sample Volume:** 2055.909 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 07:09
Comments: Q8521585 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.151	SL	0.0277
Arsenic	7440-38-2	0.355		0.00704
Barium	7440-39-3	4.47		1.22
Beryllium	7440-41-7	0.00951		0.00150
Cadmium	7440-43-9	0.0190		0.00405
Chromium	7440-47-3	2.17		1.93
Cobalt	7440-48-4	0.261		0.0412
Copper	7440-50-8	59.2		0.595
Lead	7439-92-1	0.651		0.106
Manganese	7439-96-5	9.18		0.441
Molybdenum	7439-98-7	3.50		0.312
Nickel	7440-02-0	1.27		0.585
Selenium	7782-49-2	0.224	LJ, QX	0.00799
Thallium	7440-28-0	0.00245		6.81E-4
Vanadium	7440-62-2	1.14		0.0362
Zinc	7440-66-6	16.6	U	90.2



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FILE #: 4205.00.003.001
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 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM09-021025-HM **Lab ID:** 5021837-21 **Sampled:** 02/10/25 23:59
Matrix: Air **Sample Volume:** 1980.937 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 07:24
Comments: Q8521583 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.119	SL	0.0287
Arsenic	7440-38-2	0.311		0.00730
Barium	7440-39-3	2.98		1.26
Beryllium	7440-41-7	0.00555		0.00156
Cadmium	7440-43-9	0.0145		0.00421
Chromium	7440-47-3	1.38	U	2.00
Cobalt	7440-48-4	0.141		0.0427
Copper	7440-50-8	24.7		0.618
Lead	7439-92-1	0.543		0.110
Manganese	7439-96-5	5.08		0.457
Molybdenum	7439-98-7	1.61		0.324
Nickel	7440-02-0	0.925		0.607
Selenium	7782-49-2	0.197	LJ, QX	0.00830
Thallium	7440-28-0	0.00184		7.07E-4
Vanadium	7440-62-2	0.739		0.0376
Zinc	7440-66-6	13.8	U	93.6



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM08-021025-HM **Lab ID:** 5021837-22 **Sampled:** 02/10/25 23:59
Matrix: Air **Sample Volume:** 1949.82 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 07:38
Comments: Q9524310 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.107	SL	0.0292	
Arsenic	7440-38-2	0.292		0.00742	
Barium	7440-39-3	2.86		1.29	
Beryllium	7440-41-7	0.00588		0.00159	
Cadmium	7440-43-9	0.0121		0.00427	
Chromium	7440-47-3	1.22	U	2.04	
Cobalt	7440-48-4	0.143		0.0434	
Copper	7440-50-8	47.7		0.627	
Lead	7439-92-1	0.435		0.112	
Manganese	7439-96-5	5.40		0.465	
Molybdenum	7439-98-7	2.72		0.329	
Nickel	7440-02-0	0.694		0.617	
Selenium	7782-49-2	0.188	LJ, QX	0.00843	
Thallium	7440-28-0	0.00174		7.18E-4	
Vanadium	7440-62-2	0.832		0.0382	
Zinc	7440-66-6	11.2	U	95.1	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-LB01-021025-HM **Lab ID:** 5021837-23 **Sampled:** 02/10/25 00:00
Matrix: Air **Sample Volume:** 2022.503 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 07:52
Comments: Q9524309 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.0138	SL, U	0.0282	
Arsenic	7440-38-2	0.00554	U	0.00715	
Barium	7440-39-3	0.628	U	1.24	
Beryllium	7440-41-7	ND	U	0.00153	
Cadmium	7440-43-9	5.12E-4	U	0.00412	
Chromium	7440-47-3	0.697	U	1.96	
Cobalt	7440-48-4	0.00526	U	0.0418	
Copper	7440-50-8	0.334	U	0.605	
Lead	7439-92-1	0.0252	U	0.108	
Manganese	7439-96-5	0.112	U	0.448	
Molybdenum	7439-98-7	0.0969	U	0.317	
Nickel	7440-02-0	0.175	U	0.594	
Selenium	7782-49-2	ND	LJ, QX, U	0.00812	
Thallium	7440-28-0	1.28E-4	U	6.93E-4	
Vanadium	7440-62-2	0.0171	U	0.0368	
Zinc	7440-66-6	4.95	U	91.7	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-021125-HM **Lab ID:** 5021837-24 **Sampled:** 02/11/25 23:59
Matrix: Air **Sample Volume:** 2116.882 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/21/25 21:18
Comments: Q9524308 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.172	SL	0.0269	
Arsenic	7440-38-2	0.217		0.00683	
Barium	7440-39-3	4.63		1.18	
Beryllium	7440-41-7	0.00991		0.00146	
Cadmium	7440-43-9	0.0409	D-F	0.00394	
Chromium	7440-47-3	1.87	U	1.88	
Cobalt	7440-48-4	0.283		0.0400	
Copper	7440-50-8	23.2		0.578	
Lead	7439-92-1	0.446		0.103	
Manganese	7439-96-5	9.75		0.428	
Molybdenum	7439-98-7	1.31		0.303	
Nickel	7440-02-0	1.09		0.568	
Selenium	7782-49-2	0.205	LJ, QX	0.00776	
Thallium	7440-28-0	0.00205		6.62E-4	
Vanadium	7440-62-2	1.04		0.0352	
Zinc	7440-66-6	17.5	U	87.6	



CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-021125-HM **Lab ID:** 5021837-25 **Sampled:** 02/11/25 23:59
Matrix: Air **Sample Volume:** 2134.26 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 08:05
Comments: Q9524307 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.307	SL	0.0267
Arsenic	7440-38-2	0.619		0.00678
Barium	7440-39-3	9.11		1.17
Beryllium	7440-41-7	0.0221		0.00145
Cadmium	7440-43-9	0.0234		0.00390
Chromium	7440-47-3	2.97		1.86
Cobalt	7440-48-4	0.765		0.0396
Copper	7440-50-8	76.2		0.573
Lead	7439-92-1	0.951		0.102
Manganese	7439-96-5	21.6		0.425
Molybdenum	7439-98-7	3.91		0.300
Nickel	7440-02-0	2.37		0.563
Selenium	7782-49-2	0.276	LJ, QX	0.00770
Thallium	7440-28-0	0.00230		6.56E-4
Vanadium	7440-62-2	2.48		0.0349
Zinc	7440-66-6	26.2	U	86.9



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM09-021125-HM **Lab ID:** 5021837-26 **Sampled:** 02/11/25 23:59
Matrix: Air **Sample Volume:** 2048.37 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 08:21
Comments: Q9524306 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.133	SL	0.0278	
Arsenic	7440-38-2	0.260		0.00706	
Barium	7440-39-3	3.85		1.22	
Beryllium	7440-41-7	0.00890		0.00151	
Cadmium	7440-43-9	0.0168		0.00407	
Chromium	7440-47-3	1.77	U	1.94	
Cobalt	7440-48-4	0.248		0.0413	
Copper	7440-50-8	24.2		0.597	
Lead	7439-92-1	0.698		0.106	
Manganese	7439-96-5	8.26		0.442	
Molybdenum	7439-98-7	1.22		0.313	
Nickel	7440-02-0	0.944		0.587	
Selenium	7782-49-2	0.216	LJ, QX	0.00802	
Thallium	7440-28-0	0.00210		6.84E-4	
Vanadium	7440-62-2	0.846		0.0364	
Zinc	7440-66-6	14.6	U	90.5	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM08-021125-HM **Lab ID:** 5021837-27 **Sampled:** 02/11/25 23:59
Matrix: Air **Sample Volume:** 2007.24 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 08:36
Comments: Q9524305 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Antimony	7440-36-0	0.118	SL	0.0284
Arsenic	7440-38-2	0.257		0.00721
Barium	7440-39-3	3.49		1.25
Beryllium	7440-41-7	0.00741		0.00154
Cadmium	7440-43-9	0.0151		0.00415
Chromium	7440-47-3	1.31	U	1.98
Cobalt	7440-48-4	0.209		0.0421
Copper	7440-50-8	47.0		0.610
Lead	7439-92-1	0.437		0.109
Manganese	7439-96-5	7.12		0.451
Molybdenum	7439-98-7	2.78		0.319
Nickel	7440-02-0	0.733		0.599
Selenium	7782-49-2	0.210	LJ, QX	0.00819
Thallium	7440-28-0	0.00198		6.98E-4
Vanadium	7440-62-2	0.727		0.0371
Zinc	7440-66-6	11.9	U	92.4



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 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-FB01-021125-HM **Lab ID:** 5021837-28 **Sampled:** 02/11/25 23:59
Matrix: Air **Sample Volume:** 2116.882 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 08:50
Comments: Q9524298 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.0205	SL, U	0.0269	
Arsenic	7440-38-2	0.00792	FB-01	0.00683	
Barium	7440-39-3	0.750	U	1.18	
Beryllium	7440-41-7	1.10E-4	U	0.00146	
Cadmium	7440-43-9	9.93E-4	U	0.00394	
Chromium	7440-47-3	0.677	U	1.88	
Cobalt	7440-48-4	0.0103	U	0.0400	
Copper	7440-50-8	1.46	FB-01	0.578	
Lead	7439-92-1	0.0416	U	0.103	
Manganese	7439-96-5	0.193	U	0.428	
Molybdenum	7439-98-7	0.128	U	0.303	
Nickel	7440-02-0	0.206	U	0.568	
Selenium	7782-49-2	ND	LJ, QX, U	0.00776	
Thallium	7440-28-0	7.55E-5	U	6.62E-4	
Vanadium	7440-62-2	0.0258	U	0.0352	
Zinc	7440-66-6	10.6	U	87.6	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM05-021225-HM **Lab ID:** 5021837-29 **Sampled:** 02/12/25 23:59
Matrix: Air **Sample Volume:** 2123.986 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 09:03
Comments: Q9524304 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.121	SL	0.0268	
Arsenic	7440-38-2	0.230		0.00681	
Barium	7440-39-3	4.06		1.18	
Beryllium	7440-41-7	0.00859		0.00146	
Cadmium	7440-43-9	0.0204		0.00392	
Chromium	7440-47-3	1.36	U	1.87	
Cobalt	7440-48-4	0.238		0.0398	
Copper	7440-50-8	34.5		0.576	
Lead	7439-92-1	0.445		0.103	
Manganese	7439-96-5	8.60		0.427	
Molybdenum	7439-98-7	1.94		0.302	
Nickel	7440-02-0	0.967		0.566	
Selenium	7782-49-2	0.297	LJ, QX	0.00774	
Thallium	7440-28-0	0.00255		6.60E-4	
Vanadium	7440-62-2	1.03		0.0351	
Zinc	7440-66-6	16.6	U	87.3	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM02-021225-HM **Lab ID:** 5021837-30 **Sampled:** 02/12/25 23:59
Matrix: Air **Sample Volume:** 2136.046 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 09:16
Comments: Q9524303 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.187	SL	0.0267	
Arsenic	7440-38-2	0.288		0.00677	
Barium	7440-39-3	5.17		1.17	
Beryllium	7440-41-7	0.0114		0.00145	
Cadmium	7440-43-9	0.0284		0.00390	
Chromium	7440-47-3	1.56	U	1.86	
Cobalt	7440-48-4	0.312		0.0396	
Copper	7440-50-8	66.0		0.573	
Lead	7439-92-1	0.614		0.102	
Manganese	7439-96-5	10.5		0.424	
Molybdenum	7439-98-7	3.34		0.300	
Nickel	7440-02-0	1.22		0.563	
Selenium	7782-49-2	0.324	LJ, QX	0.00769	
Thallium	7440-28-0	0.00263		6.56E-4	
Vanadium	7440-62-2	1.28		0.0349	
Zinc	7440-66-6	16.9	U	86.8	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM09-021225-HM **Lab ID:** 5021837-31 **Sampled:** 02/12/25 23:59
Matrix: Air **Sample Volume:** 1982.596 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 10:43
Comments: Q9524300 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.106	SL	0.0287	
Arsenic	7440-38-2	0.244		0.00730	
Barium	7440-39-3	3.07		1.26	
Beryllium	7440-41-7	0.00762		0.00156	
Cadmium	7440-43-9	0.0206		0.00420	
Chromium	7440-47-3	1.48	U	2.00	
Cobalt	7440-48-4	0.189		0.0427	
Copper	7440-50-8	33.9		0.617	
Lead	7439-92-1	0.581		0.110	
Manganese	7439-96-5	6.67		0.457	
Molybdenum	7439-98-7	1.67		0.323	
Nickel	7440-02-0	0.903		0.606	
Selenium	7782-49-2	0.289	LJ, QX	0.00829	
Thallium	7440-28-0	0.00271		7.07E-4	
Vanadium	7440-62-2	0.929		0.0376	
Zinc	7440-66-6	12.5	U	93.6	



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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 AQS SITE CODE:
 SITE CODE: Lahaina fires

Description: MFL-AM08-021225-HM **Lab ID:** 5021837-32 **Sampled:** 02/12/25 23:59
Matrix: Air **Sample Volume:** 1949.003 m³ **Received:** 02/17/25 07:15
Filter ID: **Analysis Date:** 02/22/25 11:01
Comments: Q9524299 - 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/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Antimony	7440-36-0	0.111	SL	0.0292	
Arsenic	7440-38-2	0.287		0.00742	
Barium	7440-39-3	2.88		1.29	
Beryllium	7440-41-7	0.00782		0.00159	
Cadmium	7440-43-9	0.0185		0.00427	
Chromium	7440-47-3	1.32	U	2.04	
Cobalt	7440-48-4	0.202		0.0434	
Copper	7440-50-8	37.0		0.628	
Lead	7439-92-1	0.423		0.112	
Manganese	7439-96-5	7.56		0.465	
Molybdenum	7439-98-7	2.29		0.329	
Nickel	7440-02-0	0.871		0.617	
Selenium	7782-49-2	0.277	LJ, QX	0.00843	
Thallium	7440-28-0	0.00244		7.19E-4	
Vanadium	7440-62-2	1.11		0.0382	
Zinc	7440-66-6	11.6	U	95.2	



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 REPORTED: 02/26/25 13:50
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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 2502045 - B5B2105

Calibration Blank (2502045-CCB1)

Prepared & Analyzed: 02/21/25

Antimony	0.415		ng/l							
Arsenic	2.60		ng/l							
Barium	1.78		ng/l							
Beryllium	-0.781		ng/l							U
Cadmium	0.0945		ng/l							
Chromium	8.71		ng/l							
Cobalt	0.558		ng/l							
Copper	17.6		ng/l							
Lead	1.27		ng/l							
Manganese	3.53		ng/l							
Molybdenum	25.2		ng/l							
Nickel	0.335		ng/l							
Selenium	-12.6		ng/l							LJ, QX, U
Thallium	1.18		ng/l							
Vanadium	16.0		ng/l							
Zinc	-50.2		ng/l							U

Calibration Blank (2502045-CCB2)

Prepared & Analyzed: 02/21/25

Antimony	0.00822		ng/l							
Arsenic	6.30		ng/l							
Barium	0.746		ng/l							
Beryllium	-0.889		ng/l							U
Cadmium	0.124		ng/l							
Chromium	9.64		ng/l							
Cobalt	0.182		ng/l							
Copper	13.0		ng/l							
Lead	0.670		ng/l							
Manganese	3.10		ng/l							
Molybdenum	6.71		ng/l							
Nickel	1.66		ng/l							
Selenium	-14.7		ng/l							LJ, QX, U
Thallium	1.02		ng/l							
Vanadium	7.41		ng/l							
Zinc	-44.9		ng/l							U

Calibration Blank (2502045-CCB3)

Prepared & Analyzed: 02/21/25

Antimony	0.0610		ng/l							
Arsenic	18.2		ng/l							
Barium	0.119		ng/l							
Beryllium	-1.12		ng/l							U

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FILE #: 4205.00.003.001
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 SUBMITTED: 02/17/25
 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 2502045 - B5B2105

Calibration Blank (2502045-CCB3) Contin

Prepared & Analyzed: 02/21/25

Cadmium	0.0685		ng/l							
Chromium	9.28		ng/l							
Cobalt	0.154		ng/l							
Copper	9.69		ng/l							
Lead	0.299		ng/l							
Manganese	2.95		ng/l							
Molybdenum	5.73		ng/l							
Nickel	0.396		ng/l							
Selenium	-12.2		ng/l							LJ, QX, U
Thallium	1.15		ng/l							
Vanadium	-7.10		ng/l							U
Zinc	-43.3		ng/l							U

Calibration Blank (2502045-CCB4)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	-0.0350		ng/l							U
Arsenic	16.7		ng/l							
Barium	0.344		ng/l							
Beryllium	-1.27		ng/l							U
Cadmium	-0.0548		ng/l							U
Chromium	10.4		ng/l							
Cobalt	0.316		ng/l							
Copper	16.7		ng/l							
Lead	0.783		ng/l							
Manganese	3.07		ng/l							
Molybdenum	8.54		ng/l							
Nickel	4.46		ng/l							
Selenium	-9.25		ng/l							LJ, QX, U
Thallium	1.42		ng/l							
Vanadium	-7.06		ng/l							U
Zinc	-9.14		ng/l							U

Calibration Blank (2502045-CCB5)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	0.831		ng/l							
Arsenic	14.1		ng/l							
Barium	1.55		ng/l							
Beryllium	-1.48		ng/l							U
Cadmium	0.0562		ng/l							
Chromium	10.2		ng/l							
Cobalt	0.151		ng/l							
Copper	18.5		ng/l							

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FILE #: 4205.00.003.001
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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 2502045 - B5B2105

Calibration Blank (2502045-CCB5) Contin

Prepared: 02/21/25 Analyzed: 02/22/25

Lead	1.15		ng/l							
Manganese	4.07		ng/l							
Molybdenum	9.27		ng/l							
Nickel	1.86		ng/l							
Selenium	-16.9		ng/l							LJ, QX, U
Thallium	1.48		ng/l							
Vanadium	-11.0		ng/l							U
Zinc	-12.7		ng/l							U

Calibration Blank (2502045-CCB6)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	0.110		ng/l							
Arsenic	6.88		ng/l							
Barium	0.560		ng/l							
Beryllium	-1.65		ng/l							U
Cadmium	0.149		ng/l							
Chromium	8.90		ng/l							
Cobalt	0.151		ng/l							
Copper	13.9		ng/l							
Lead	0.973		ng/l							
Manganese	3.29		ng/l							
Molybdenum	7.94		ng/l							
Nickel	3.12		ng/l							
Selenium	3.35		ng/l							LJ, QX
Thallium	1.75		ng/l							
Vanadium	-12.5		ng/l							U
Zinc	-20.3		ng/l							U

Calibration Blank (2502045-CCB7)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	0.596		ng/l							
Arsenic	16.1		ng/l							
Barium	-0.147		ng/l							U
Beryllium	-1.52		ng/l							U
Cadmium	0.0411		ng/l							
Chromium	8.48		ng/l							
Cobalt	0.290		ng/l							
Copper	8.24		ng/l							
Lead	0.272		ng/l							
Manganese	2.09		ng/l							
Molybdenum	7.32		ng/l							
Nickel	2.97		ng/l							

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CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 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 2502045 - B5B2105

Calibration Blank (2502045-CCB7) Contin

Prepared: 02/21/25 Analyzed: 02/22/25

Selenium	-8.89		ng/l							LJ, QX, U
Thallium	1.38		ng/l							
Vanadium	-14.1		ng/l							U
Zinc	-11.5		ng/l							U

Calibration Check (2502045-CCV1)

Prepared & Analyzed: 02/21/25

Antimony	20200		ng/l	20008		101	90-110			
Arsenic	20000		ng/l	20004		100	90-110			
Barium	199000		ng/l	200200		99.3	90-110			
Beryllium	4930		ng/l	5002.5		98.6	90-110			
Cadmium	20400		ng/l	20014		102	90-110			
Chromium	246000		ng/l	240050		103	90-110			
Cobalt	51900		ng/l	50020		104	90-110			
Copper	2.10E6		ng/l	2.0020E6		105	90-110			
Lead	200000		ng/l	200060		100	90-110			
Manganese	508000		ng/l	498900		102	90-110			
Molybdenum	50900		ng/l	50005		102	90-110			
Nickel	125000		ng/l	120040		104	90-110			
Selenium	19800		ng/l	20002		98.8	90-110			LJ, QX
Thallium	495		ng/l	499.95		99.1	90-110			
Vanadium	20200		ng/l	20030		101	90-110			
Zinc	513000		ng/l	500000		103	90-110			

Calibration Check (2502045-CCV2)

Prepared & Analyzed: 02/21/25

Antimony	20300		ng/l	20008		102	90-110			
Arsenic	20100		ng/l	20004		101	90-110			
Barium	199000		ng/l	200200		99.2	90-110			
Beryllium	4930		ng/l	5002.5		98.6	90-110			
Cadmium	20500		ng/l	20014		103	90-110			
Chromium	245000		ng/l	240050		102	90-110			
Cobalt	51100		ng/l	50020		102	90-110			
Copper	2.10E6		ng/l	2.0020E6		105	90-110			
Lead	200000		ng/l	200060		99.9	90-110			
Manganese	510000		ng/l	498900		102	90-110			
Molybdenum	51100		ng/l	50005		102	90-110			
Nickel	123000		ng/l	120040		102	90-110			
Selenium	19900		ng/l	20002		99.7	90-110			LJ, QX
Thallium	478		ng/l	499.95		95.5	90-110			
Vanadium	20100		ng/l	20030		100	90-110			
Zinc	512000		ng/l	500000		102	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2502045 - B5B2105

Calibration Check (2502045-CCV3)

Prepared & Analyzed: 02/21/25

Antimony	20400		ng/l	20008		102	90-110			
Arsenic	20200		ng/l	20004		101	90-110			
Barium	202000		ng/l	200200		101	90-110			
Beryllium	4940		ng/l	5002.5		98.8	90-110			
Cadmium	20600		ng/l	20014		103	90-110			
Chromium	248000		ng/l	240050		103	90-110			
Cobalt	51500		ng/l	50020		103	90-110			
Copper	2.13E6		ng/l	2.0020E6		106	90-110			
Lead	202000		ng/l	200060		101	90-110			
Manganese	512000		ng/l	498900		103	90-110			
Molybdenum	51800		ng/l	50005		104	90-110			
Nickel	124000		ng/l	120040		103	90-110			
Selenium	19700		ng/l	20002		98.6	90-110			LJ, QX
Thallium	474		ng/l	499.95		94.8	90-110			
Vanadium	20300		ng/l	20030		102	90-110			
Zinc	516000		ng/l	500000		103	90-110			

Calibration Check (2502045-CCV4)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	20800		ng/l	20008		104	90-110			
Arsenic	20400		ng/l	20004		102	90-110			
Barium	206000		ng/l	200200		103	90-110			
Beryllium	4990		ng/l	5002.5		99.8	90-110			
Cadmium	21100		ng/l	20014		105	90-110			
Chromium	252000		ng/l	240050		105	90-110			
Cobalt	52500		ng/l	50020		105	90-110			
Copper	2.17E6		ng/l	2.0020E6		109	90-110			
Lead	205000		ng/l	200060		102	90-110			
Manganese	522000		ng/l	498900		105	90-110			
Molybdenum	53100		ng/l	50005		106	90-110			
Nickel	126000		ng/l	120040		105	90-110			
Selenium	20100		ng/l	20002		101	90-110			LJ, QX
Thallium	480		ng/l	499.95		96.0	90-110			
Vanadium	20500		ng/l	20030		102	90-110			
Zinc	524000		ng/l	500000		105	90-110			

Calibration Check (2502045-CCV5)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	20800		ng/l	20008		104	90-110			
Arsenic	20400		ng/l	20004		102	90-110			
Barium	207000		ng/l	200200		103	90-110			
Beryllium	5030		ng/l	5002.5		100	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2502045 - B5B2105

Calibration Check (2502045-CCV5) Contin

Prepared: 02/21/25 Analyzed: 02/22/25

Cadmium	21100		ng/l	20014		106	90-110			
Chromium	250000		ng/l	240050		104	90-110			
Cobalt	52400		ng/l	50020		105	90-110			
Copper	2.18E6		ng/l	2.0020E6		109	90-110			
Lead	206000		ng/l	200060		103	90-110			
Manganese	522000		ng/l	498900		105	90-110			
Molybdenum	53400		ng/l	50005		107	90-110			
Nickel	126000		ng/l	120040		105	90-110			
Selenium	20300		ng/l	20002		102	90-110			
Thallium	476		ng/l	499.95		95.3	90-110			LJ, QX
Vanadium	20600		ng/l	20030		103	90-110			
Zinc	524000		ng/l	500000		105	90-110			

Calibration Check (2502045-CCV6)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	20900		ng/l	20008		104	90-110			
Arsenic	20600		ng/l	20004		103	90-110			
Barium	207000		ng/l	200200		104	90-110			
Beryllium	5020		ng/l	5002.5		100	90-110			
Cadmium	21200		ng/l	20014		106	90-110			
Chromium	253000		ng/l	240050		105	90-110			
Cobalt	52500		ng/l	50020		105	90-110			
Copper	2.20E6		ng/l	2.0020E6		110	90-110			
Lead	206000		ng/l	200060		103	90-110			
Manganese	526000		ng/l	498900		105	90-110			
Molybdenum	53400		ng/l	50005		107	90-110			
Nickel	126000		ng/l	120040		105	90-110			
Selenium	20500		ng/l	20002		102	90-110			
Thallium	466		ng/l	499.95		93.1	90-110			LJ, QX
Vanadium	20600		ng/l	20030		103	90-110			
Zinc	526000		ng/l	500000		105	90-110			

Calibration Check (2502045-CCV7)

Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	20200		ng/l	20008		101	90-110			
Arsenic	20000		ng/l	20004		99.9	90-110			
Barium	199000		ng/l	200200		99.4	90-110			
Beryllium	4950		ng/l	5002.5		99.0	90-110			
Cadmium	20600		ng/l	20014		103	90-110			
Chromium	242000		ng/l	240050		101	90-110			
Cobalt	50900		ng/l	50020		102	90-110			
Copper	2.15E6		ng/l	2.0020E6		107	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2502045 - B5B2105

Calibration Check (2502045-CCV7) Contin

Prepared: 02/21/25 Analyzed: 02/22/25

Lead	200000		ng/l	200060		99.8	90-110			
Manganese	514000		ng/l	498900		103	90-110			
Molybdenum	51400		ng/l	50005		103	90-110			
Nickel	122000		ng/l	120040		102	90-110			
Selenium	19700		ng/l	20002		98.2	90-110			LJ, QX
Thallium	451		ng/l	499.95		90.2	90-110			
Vanadium	19900		ng/l	20030		99.5	90-110			
Zinc	510000		ng/l	500000		102	90-110			

High Cal Check (2502045-HCV1)

Prepared & Analyzed: 02/21/25

Antimony	39800		ng/l	40016		99.4	95-105			
Arsenic	39700		ng/l	40008		99.2	95-105			
Barium	396000		ng/l	400400		98.9	95-105			
Beryllium	9970		ng/l	10005		99.6	95-105			
Cadmium	39600		ng/l	40028		99.0	95-105			
Chromium	475000		ng/l	480100		98.9	95-105			
Cobalt	98100		ng/l	100040		98.1	95-105			
Copper	3.95E6		ng/l	4.0040E6		98.6	95-105			
Lead	399000		ng/l	400120		99.8	95-105			
Manganese	985000		ng/l	997800		98.7	95-105			
Molybdenum	99500		ng/l	100010		99.5	95-105			
Nickel	236000		ng/l	240070		98.2	95-105			
Selenium	39700		ng/l	40004		99.4	95-105			LJ, QX
Thallium	989		ng/l	999.90		99.0	95-105			
Vanadium	39900		ng/l	40060		99.5	95-105			
Zinc	986000		ng/l	1.0000E6		98.6	95-105			

Initial Cal Blank (2502045-ICB1)

Prepared & Analyzed: 02/21/25

Antimony	0.0996		ng/l							
Arsenic	1.15		ng/l							
Barium	-0.0293		ng/l							U
Beryllium	-0.784		ng/l							U
Cadmium	0.0456		ng/l							
Chromium	2.58		ng/l							
Cobalt	0.142		ng/l							
Copper	13.2		ng/l							
Lead	1.12		ng/l							
Manganese	5.65		ng/l							
Molybdenum	15.0		ng/l							
Nickel	-2.41		ng/l							U

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2502045 - B5B2105

Initial Cal Blank (2502045-ICB1) Continuum

Prepared & Analyzed: 02/21/25

Selenium	-13.3		ng/l							LJ, QX, U
Thallium	0.990		ng/l							
Vanadium	45.0		ng/l							
Zinc	-51.1		ng/l							U

Initial Cal Check (2502045-ICV1)

Prepared & Analyzed: 02/21/25

Antimony	20000		ng/l	20000		99.8	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	199000		ng/l	200000		99.4	90-110			
Beryllium	5080		ng/l	5000.0		102	90-110			
Cadmium	20500		ng/l	20000		103	90-110			
Chromium	245000		ng/l	240000		102	90-110			
Cobalt	50300		ng/l	50000		101	90-110			
Copper	2.06E6		ng/l	2.0000E6		103	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	491000		ng/l	500000		98.1	90-110			
Molybdenum	49800		ng/l	50000		99.7	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	20300		ng/l	20000		101	90-110			LJ, QX
Thallium	502		ng/l	500.00		100	90-110			
Vanadium	20300		ng/l	20000		101	90-110			
Zinc	515000		ng/l	500000		103	90-110			

Interference Check A (2502045-IFA1)

Prepared & Analyzed: 02/21/25

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	298000		ng/l	300000		99.3	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			LJ, QX, U
Thallium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U



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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2502045 - B5B2105

Interference Check B (2502045-IFB1)

Prepared & Analyzed: 02/21/25

Antimony	19800		ng/l	20008		99.0	80-120			
Arsenic	19600		ng/l	20004		98.2	80-120			
Barium	194000		ng/l	200200		96.8	80-120			
Beryllium	4750		ng/l	5002.5		95.0	80-120			
Cadmium	19300		ng/l	20014		96.4	80-120			
Chromium	224000		ng/l	240050		93.3	80-120			
Cobalt	48500		ng/l	50020		96.9	80-120			
Copper	1.87E6		ng/l	2.0020E6		93.2	80-120			
Lead	200000		ng/l	200060		99.8	80-120			
Manganese	498000		ng/l	498900		99.9	80-120			
Molybdenum	346000		ng/l	350000		98.9	80-120			
Nickel	113000		ng/l	120040		94.2	80-120			
Selenium	18500		ng/l	20002		92.4	80-120			LJ, QX
Thallium	500		ng/l	499.95		100	80-120			
Vanadium	18800		ng/l	20030		93.7	80-120			
Zinc	456000		ng/l	500000		91.1	80-120			

Batch B5B2105 - ICP-MS Extraction

Blank (B5B2105-BLK1)

Prepared & Analyzed: 02/21/25

Antimony	ND	0.0350	ng/m ³ Air							SL, U
Arsenic	ND	0.00889	ng/m ³ Air							U
Barium	ND	1.54	ng/m ³ Air							U
Beryllium	ND	0.00190	ng/m ³ Air							U
Cadmium	ND	0.00512	ng/m ³ Air							U
Chromium	ND	2.44	ng/m ³ Air							U
Cobalt	ND	0.0520	ng/m ³ Air							U
Copper	ND	0.752	ng/m ³ Air							U
Lead	ND	0.134	ng/m ³ Air							U
Manganese	ND	0.557	ng/m ³ Air							U
Molybdenum	ND	0.394	ng/m ³ Air							U
Nickel	ND	0.739	ng/m ³ Air							U
Selenium	ND	0.0101	ng/m ³ Air							LJ, QX, U
Thallium	ND	8.61E-4	ng/m ³ Air							U
Vanadium	ND	0.0458	ng/m ³ Air							U
Zinc	ND	114	ng/m ³ Air							U

LCS (B5B2105-BS1)

Prepared & Analyzed: 02/21/25

Antimony	0.939	0.0350	ng/m ³ Air	1.3835		67.9	80-120			SL
Arsenic	2.69	0.00889	ng/m ³ Air	2.7664		97.3	80-120			
Barium	27.7	1.54	ng/m ³ Air	27.686		100	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5B2105 - ICP-MS Extraction

LCS (B5B2105-BS1) Continued

Prepared & Analyzed: 02/21/25

Beryllium	1.31	0.00190	ng/m ³ Air	1.3836		94.5	80-120			
Cadmium	1.40	0.00512	ng/m ³ Air	1.3839		101	80-120			
Chromium	14.7	2.44	ng/m ³ Air	13.832		107	80-120			
Cobalt	1.39	0.0520	ng/m ³ Air	1.3835		100	80-120			
Copper	29.1	0.752	ng/m ³ Air	27.686		105	80-120			
Lead	13.6	0.134	ng/m ³ Air	13.833		98.1	80-120			
Manganese	8.48	0.557	ng/m ³ Air	8.2792		102	80-120			
Molybdenum	1.46	0.394	ng/m ³ Air	1.3831		106	80-120			
Nickel	3.00	0.739	ng/m ³ Air	2.7667		108	80-120			
Selenium	2.69	0.0101	ng/m ³ Air	2.7661		97.2	80-120			LJ, QX
Thallium	0.133	8.61E-4	ng/m ³ Air	0.13828		96.4	80-120			
Vanadium	2.77	0.0458	ng/m ³ Air	2.7700		99.9	80-120			
Zinc	ND	114	ng/m ³ Air	82.975			80-120			U

LCS (B5B2105-BS2)

Prepared & Analyzed: 02/21/25

Antimony	0.960	0.0350	ng/m ³ Air	1.3835		69.4	80-120			SL
Arsenic	2.73	0.00889	ng/m ³ Air	2.7664		98.6	80-120			
Barium	27.8	1.54	ng/m ³ Air	27.686		100	80-120			
Beryllium	1.33	0.00190	ng/m ³ Air	1.3836		96.2	80-120			
Cadmium	1.41	0.00512	ng/m ³ Air	1.3839		102	80-120			
Chromium	14.9	2.44	ng/m ³ Air	13.832		107	80-120			
Cobalt	1.40	0.0520	ng/m ³ Air	1.3835		101	80-120			
Copper	29.3	0.752	ng/m ³ Air	27.686		106	80-120			
Lead	13.7	0.134	ng/m ³ Air	13.833		98.8	80-120			
Manganese	8.58	0.557	ng/m ³ Air	8.2792		104	80-120			
Molybdenum	1.47	0.394	ng/m ³ Air	1.3831		106	80-120			
Nickel	3.04	0.739	ng/m ³ Air	2.7667		110	80-120			
Selenium	2.71	0.0101	ng/m ³ Air	2.7661		98.0	80-120			LJ, QX
Thallium	0.134	8.61E-4	ng/m ³ Air	0.13828		96.9	80-120			
Vanadium	2.79	0.0458	ng/m ³ Air	2.7700		101	80-120			
Zinc	ND	114	ng/m ³ Air	82.975			80-120			U

LCS (B5B2105-BS3)

Prepared & Analyzed: 02/21/25

Antimony	1.37	0.0350	ng/m ³ Air	1.3835		99.0	80-120			SL
Arsenic	2.70	0.00889	ng/m ³ Air	2.7664		97.4	80-120			
Barium	27.2	1.54	ng/m ³ Air	27.686		98.1	80-120			
Beryllium	1.33	0.00190	ng/m ³ Air	1.3836		95.8	80-120			
Cadmium	1.40	0.00512	ng/m ³ Air	1.3839		101	80-120			
Chromium	14.1	2.44	ng/m ³ Air	13.832		102	80-120			
Cobalt	1.38	0.0520	ng/m ³ Air	1.3835		100	80-120			

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FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 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 B5B2105 - ICP-MS Extraction

LCS (B5B2105-BS3) Continued

Prepared & Analyzed: 02/21/25

Copper	28.4	0.752	ng/m ³ Air	27.686		103	80-120			
Lead	13.5	0.134	ng/m ³ Air	13.833		97.6	80-120			
Manganese	8.44	0.557	ng/m ³ Air	8.2792		102	80-120			
Molybdenum	1.37	0.394	ng/m ³ Air	1.3831		98.9	80-120			
Nickel	2.82	0.739	ng/m ³ Air	2.7667		102	80-120			
Selenium	2.70	0.0101	ng/m ³ Air	2.7661		97.5	80-120			LJ, QX
Thallium	0.132	8.61E-4	ng/m ³ Air	0.13828		95.2	80-120			
Vanadium	2.76	0.0458	ng/m ³ Air	2.7700		99.5	80-120			
Zinc	ND	114	ng/m ³ Air	82.975			80-120			U

LCS (B5B2105-BS4)

Prepared & Analyzed: 02/21/25

Antimony	1.40	0.0350	ng/m ³ Air	1.3835		101	80-120			SL
Arsenic	2.74	0.00889	ng/m ³ Air	2.7664		99.1	80-120			
Barium	27.5	1.54	ng/m ³ Air	27.686		99.5	80-120			
Beryllium	1.32	0.00190	ng/m ³ Air	1.3836		95.6	80-120			
Cadmium	1.42	0.00512	ng/m ³ Air	1.3839		103	80-120			
Chromium	14.3	2.44	ng/m ³ Air	13.832		103	80-120			
Cobalt	1.40	0.0520	ng/m ³ Air	1.3835		101	80-120			
Copper	28.8	0.752	ng/m ³ Air	27.686		104	80-120			
Lead	13.7	0.134	ng/m ³ Air	13.833		99.0	80-120			
Manganese	8.55	0.557	ng/m ³ Air	8.2792		103	80-120			
Molybdenum	1.39	0.394	ng/m ³ Air	1.3831		100	80-120			
Nickel	2.85	0.739	ng/m ³ Air	2.7667		103	80-120			
Selenium	2.77	0.0101	ng/m ³ Air	2.7661		100	80-120			LJ, QX
Thallium	0.133	8.61E-4	ng/m ³ Air	0.13828		96.0	80-120			
Vanadium	2.79	0.0458	ng/m ³ Air	2.7700		101	80-120			
Zinc	ND	114	ng/m ³ Air	82.975			80-120			U

Duplicate (B5B2105-DUP1)

Source: 5021837-03

Prepared & Analyzed: 02/21/25

Antimony	0.192	0.0297	ng/m ³ Air		0.188		2.08	10		SL
Arsenic	0.376	0.00754	ng/m ³ Air		0.247		41.3	10		D-F
Barium	4.54	1.31	ng/m ³ Air		4.68		2.92	10		
Beryllium	0.00985	0.00161	ng/m ³ Air		0.00967		1.86	10		
Cadmium	0.0138	0.00434	ng/m ³ Air		0.0148		7.65	10		
Chromium	2.40	2.07	ng/m ³ Air		2.58		7.39	10		
Cobalt	0.293	0.0441	ng/m ³ Air		0.291		0.711	10		
Copper	31.9	0.638	ng/m ³ Air		31.3		1.94	10		
Lead	0.693	0.114	ng/m ³ Air		0.797		13.9	10		
Manganese	8.73	0.472	ng/m ³ Air		8.77		0.485	10		
Molybdenum	1.68	0.334	ng/m ³ Air		1.53		9.25	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 B5B2105 - ICP-MS Extraction

Duplicate (B5B2105-DUP1) Continued Source: 5021837-03 Prepared & Analyzed: 02/21/25

Nickel	1.62	0.627	ng/m ³ Air		1.53			5.61	10	
Selenium	0.148	0.00857	ng/m ³ Air		0.140			5.37	10	LJ, QX
Thallium	0.00133	7.30E-4	ng/m ³ Air		0.00133			0.576	10	
Vanadium	0.779	0.0389	ng/m ³ Air		0.770			1.10	10	
Zinc	ND	96.7	ng/m ³ Air		ND				10	U

Duplicate (B5B2105-DUP2) Source: 5021837-24 Prepared & Analyzed: 02/21/25

Antimony	0.172	0.0269	ng/m ³ Air		0.172			0.119	10	SL
Arsenic	0.215	0.00683	ng/m ³ Air		0.217			0.882	10	
Barium	4.66	1.18	ng/m ³ Air		4.63			0.684	10	
Beryllium	0.00982	0.00146	ng/m ³ Air		0.00991			0.885	10	
Cadmium	0.0205	0.00394	ng/m ³ Air		0.0409			66.5	10	D-F
Chromium	2.07	1.88	ng/m ³ Air		ND				10	
Cobalt	0.279	0.0400	ng/m ³ Air		0.283			1.57	10	
Copper	25.2	0.578	ng/m ³ Air		23.2			8.52	10	
Lead	0.451	0.103	ng/m ³ Air		0.446			1.20	10	
Manganese	9.63	0.428	ng/m ³ Air		9.75			1.27	10	
Molybdenum	1.37	0.303	ng/m ³ Air		1.31			4.87	10	
Nickel	1.09	0.568	ng/m ³ Air		1.09			0.260	10	
Selenium	0.196	0.00776	ng/m ³ Air		0.205			4.78	10	LJ, QX
Thallium	0.00209	6.62E-4	ng/m ³ Air		0.00205			2.13	10	
Vanadium	1.04	0.0352	ng/m ³ Air		1.04			0.581	10	
Zinc	ND	87.6	ng/m ³ Air		ND				10	U

Duplicate (B5B2105-DUP3) Source: 5021837-11 Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	0.546	0.0274	ng/m ³ Air		0.540			1.17	10	SL
Arsenic	0.303	0.00695	ng/m ³ Air		0.290			4.42	10	
Barium	5.48	1.20	ng/m ³ Air		5.46			0.362	10	
Beryllium	0.0101	0.00149	ng/m ³ Air		0.0101			0.271	10	
Cadmium	0.0484	0.00400	ng/m ³ Air		0.0477			1.46	10	
Chromium	ND	1.91	ng/m ³ Air		ND				10	U
Cobalt	0.254	0.0406	ng/m ³ Air		0.251			1.11	10	
Copper	53.5	0.588	ng/m ³ Air		52.6			1.71	10	
Lead	0.672	0.105	ng/m ³ Air		0.670			0.314	10	
Manganese	9.43	0.435	ng/m ³ Air		9.32			1.10	10	
Molybdenum	3.04	0.308	ng/m ³ Air		3.03			0.392	10	
Nickel	1.17	0.578	ng/m ³ Air		1.16			1.30	10	
Selenium	0.211	0.00789	ng/m ³ Air		0.210			0.580	10	LJ, QX
Thallium	0.00293	6.73E-4	ng/m ³ Air		0.00300			2.19	10	
Vanadium	1.08	0.0358	ng/m ³ Air		1.08			0.405	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 B5B2105 - ICP-MS Extraction

Duplicate (B5B2105-DUP3) Continued Source: 5021837-11 Prepared: 02/21/25 Analyzed: 02/22/25

Zinc	ND	89.1	ng/m ³ Air		ND				10	U
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Duplicate (B5B2105-DUP4) Source: 5021837-32 Prepared: 02/21/25 Analyzed: 02/22/25

Antimony	0.110	0.0292	ng/m ³ Air		0.111			1.07	10	SL
Arsenic	0.286	0.00742	ng/m ³ Air		0.287			0.383	10	
Barium	2.90	1.29	ng/m ³ Air		2.88			0.600	10	
Beryllium	0.00733	0.00159	ng/m ³ Air		0.00782			6.52	10	
Cadmium	0.0187	0.00427	ng/m ³ Air		0.0185			1.16	10	
Chromium	ND	2.04	ng/m ³ Air		ND				10	U
Cobalt	0.206	0.0434	ng/m ³ Air		0.202			1.61	10	
Copper	37.4	0.628	ng/m ³ Air		37.0			1.22	10	
Lead	0.425	0.112	ng/m ³ Air		0.423			0.489	10	
Manganese	7.64	0.465	ng/m ³ Air		7.56			0.978	10	
Molybdenum	2.31	0.329	ng/m ³ Air		2.29			0.800	10	
Nickel	0.882	0.617	ng/m ³ Air		0.871			1.21	10	
Selenium	0.285	0.00843	ng/m ³ Air		0.277			2.61	10	LJ, QX
Thallium	0.00255	7.19E-4	ng/m ³ Air		0.00244			4.43	10	
Vanadium	1.12	0.0382	ng/m ³ Air		1.11			0.826	10	
Zinc	ND	95.2	ng/m ³ Air		ND				10	U

Matrix Spike (B5B2105-MS1) Source: 5021837-03 Prepared & Analyzed: 02/21/25

Antimony	0.888	0.0297	ng/m ³ Air	1.1735	0.188	59.7	80-120			SL
Arsenic	2.48	0.00754	ng/m ³ Air	2.3466	0.247	95.3	80-120			
Barium	27.6	1.31	ng/m ³ Air	23.485	4.68	97.6	80-120			
Beryllium	1.17	0.00161	ng/m ³ Air	1.1737	0.00967	98.9	80-120			
Cadmium	1.20	0.00434	ng/m ³ Air	1.1739	0.0148	101	80-120			
Chromium	13.8	2.07	ng/m ³ Air	11.733	2.58	95.3	80-120			
Cobalt	1.46	0.0441	ng/m ³ Air	1.1735	0.291	99.6	80-120			
Copper	57.3	0.638	ng/m ³ Air	23.485	31.3	110	80-120			
Lead	11.7	0.114	ng/m ³ Air	11.734	0.797	92.6	80-120			
Manganese	15.7	0.472	ng/m ³ Air	7.0229	8.77	98.9	80-120			
Molybdenum	2.95	0.334	ng/m ³ Air	1.1732	1.53	121	80-120			QM-07
Nickel	3.76	0.627	ng/m ³ Air	2.3468	1.53	95.1	80-120			
Selenium	2.35	0.00857	ng/m ³ Air	2.3464	0.140	94.2	80-120			LJ, QX
Thallium	0.105	7.30E-4	ng/m ³ Air	0.11730	0.00133	88.5	80-120			
Vanadium	3.08	0.0389	ng/m ³ Air	2.3497	0.770	98.3	80-120			
Zinc	102	96.7	ng/m ³ Air	70.384	ND	145	80-120			

Matrix Spike (B5B2105-MS2) Source: 5021837-24 Prepared & Analyzed: 02/21/25

Antimony	0.848	0.0269	ng/m ³ Air	1.0633	0.172	63.6	80-120			SL
Arsenic	2.33	0.00683	ng/m ³ Air	2.1262	0.217	99.4	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5B2105 - ICP-MS Extraction

Matrix Spike (B5B2105-MS2) Continued Source: 5021837-24 Prepared & Analyzed: 02/21/25

Barium	26.0	1.18	ng/m ³ Air	21.279	4.63	101	80-120			
Beryllium	1.04	0.00146	ng/m ³ Air	1.0634	0.00991	96.6	80-120			
Cadmium	1.12	0.00394	ng/m ³ Air	1.0636	0.0409	101	80-120			
Chromium	12.9	1.88	ng/m ³ Air	10.631	ND	122	80-120			
Cobalt	1.38	0.0400	ng/m ³ Air	1.0633	0.283	103	80-120			
Copper	46.6	0.578	ng/m ³ Air	21.279	23.2	110	80-120			
Lead	11.2	0.103	ng/m ³ Air	10.632	0.446	101	80-120			
Manganese	16.5	0.428	ng/m ³ Air	6.3633	9.75	105	80-120			
Molybdenum	2.40	0.303	ng/m ³ Air	1.0630	1.31	102	80-120			
Nickel	3.32	0.568	ng/m ³ Air	2.1264	1.09	105	80-120			
Selenium	2.30	0.00776	ng/m ³ Air	2.1260	0.205	98.6	80-120			LJ, QX
Thallium	0.105	6.62E-4	ng/m ³ Air	0.10628	0.00205	97.3	80-120			
Vanadium	3.22	0.0352	ng/m ³ Air	2.1290	1.04	102	80-120			
Zinc	ND	87.6	ng/m ³ Air	63.773	ND		80-120			U

Matrix Spike Dup (B5B2105-MSD1) Source: 5021837-03 Prepared & Analyzed: 02/21/25

Antimony	0.924	0.0297	ng/m ³ Air	1.1735	0.188	62.7	80-120	3.93	20	SL
Arsenic	2.52	0.00754	ng/m ³ Air	2.3466	0.247	96.9	80-120	1.49	20	
Barium	27.8	1.31	ng/m ³ Air	23.485	4.68	98.6	80-120	0.881	20	
Beryllium	1.15	0.00161	ng/m ³ Air	1.1737	0.00967	97.4	80-120	1.56	20	
Cadmium	1.22	0.00434	ng/m ³ Air	1.1739	0.0148	103	80-120	2.21	20	
Chromium	13.7	2.07	ng/m ³ Air	11.733	2.58	94.7	80-120	0.524	20	
Cobalt	1.47	0.0441	ng/m ³ Air	1.1735	0.291	101	80-120	0.858	20	
Copper	59.7	0.638	ng/m ³ Air	23.485	31.3	121	80-120	4.16	20	QM-07
Lead	12.2	0.114	ng/m ³ Air	11.734	0.797	96.8	80-120	4.22	20	
Manganese	15.7	0.472	ng/m ³ Air	7.0229	8.77	98.1	80-120	0.359	20	
Molybdenum	2.89	0.334	ng/m ³ Air	1.1732	1.53	116	80-120	2.19	20	
Nickel	3.61	0.627	ng/m ³ Air	2.3468	1.53	88.6	80-120	4.18	20	
Selenium	2.41	0.00857	ng/m ³ Air	2.3464	0.140	96.8	80-120	2.51	20	LJ, QX
Thallium	0.110	7.30E-4	ng/m ³ Air	0.11730	0.00133	92.5	80-120	4.40	20	
Vanadium	3.10	0.0389	ng/m ³ Air	2.3497	0.770	99.1	80-120	0.583	20	
Zinc	ND	96.7	ng/m ³ Air	70.384	ND		80-120		20	U

Matrix Spike Dup (B5B2105-MSD2) Source: 5021837-24 Prepared & Analyzed: 02/21/25

Antimony	0.865	0.0269	ng/m ³ Air	1.0633	0.172	65.2	80-120	1.97	20	SL
Arsenic	2.32	0.00683	ng/m ³ Air	2.1262	0.217	99.0	80-120	0.351	20	
Barium	26.2	1.18	ng/m ³ Air	21.279	4.63	101	80-120	0.550	20	
Beryllium	1.03	0.00146	ng/m ³ Air	1.0634	0.00991	95.9	80-120	0.719	20	
Cadmium	1.12	0.00394	ng/m ³ Air	1.0636	0.0409	101	80-120	0.273	20	
Chromium	12.6	1.88	ng/m ³ Air	10.631	ND	119	80-120	2.50	20	

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B5B2105 - ICP-MS Extraction

Matrix Spike Dup (B5B2105-MSD2) ContiSource: 5021837-24 Prepared & Analyzed: 02/21/25

Cobalt	1.38	0.0400	ng/m ³ Air	1.0633	0.283	103	80-120	0.0833	20	
Copper	47.4	0.578	ng/m ³ Air	21.279	23.2	114	80-120	1.79	20	
Lead	11.2	0.103	ng/m ³ Air	10.632	0.446	101	80-120	0.278	20	
Manganese	16.7	0.428	ng/m ³ Air	6.3633	9.75	109	80-120	1.36	20	
Molybdenum	2.43	0.303	ng/m ³ Air	1.0630	1.31	106	80-120	1.56	20	
Nickel	3.27	0.568	ng/m ³ Air	2.1264	1.09	103	80-120	1.32	20	
Selenium	2.26	0.00776	ng/m ³ Air	2.1260	0.205	96.6	80-120	1.84	20	LJ, QX
Thallium	0.105	6.62E-4	ng/m ³ Air	0.10628	0.00205	96.8	80-120	0.504	20	
Vanadium	3.21	0.0352	ng/m ³ Air	2.1290	1.04	102	80-120	0.176	20	
Zinc	ND	87.6	ng/m ³ Air	63.773	ND		80-120		20	U

Post Spike (B5B2105-PS1) Source: 5021837-03 Prepared & Analyzed: 02/21/25

Antimony	0.417	0.0297	ng/m ³ Air	0.23461	0.188	97.4	75-125			SL
Arsenic	1.37	0.00754	ng/m ³ Air	1.1731	0.247	95.7	75-125			
Barium	6.80	1.31	ng/m ³ Air	2.3461	4.68	90.3	75-125			
Beryllium	0.243	0.00161	ng/m ³ Air	0.23461	0.00967	99.2	75-125			
Cadmium	0.134	0.00434	ng/m ³ Air	0.11731	0.0148	101	75-125			
Chromium	3.65	2.07	ng/m ³ Air	1.1731	2.58	91.6	75-125			
Cobalt	0.522	0.0441	ng/m ³ Air	0.23461	0.291	98.6	75-125			
Copper	42.7	0.638	ng/m ³ Air	11.731	31.3	97.1	75-125			
Lead	22.7	0.114	ng/m ³ Air	23.461	0.797	93.6	75-125			
Manganese	10.9	0.472	ng/m ³ Air	2.3461	8.77	92.2	75-125			
Molybdenum	2.63	0.334	ng/m ³ Air	1.1731	1.53	93.2	75-125			
Nickel	3.83	0.627	ng/m ³ Air	2.3461	1.53	98.1	75-125			
Selenium	1.29	0.00857	ng/m ³ Air	1.1731	0.140	98.1	75-125			LJ, QX
Thallium	0.0548	7.30E-4	ng/m ³ Air	5.8654E-2	0.00133	91.2	75-125			
Vanadium	1.92	0.0389	ng/m ³ Air	1.1731	0.770	97.8	75-125			
Zinc	ND	96.7	ng/m ³ Air	23.461	ND		75-125			U

Post Spike (B5B2105-PS2) Source: 5021837-24 Prepared & Analyzed: 02/21/25

Antimony	0.383	0.0269	ng/m ³ Air	0.21258	0.172	99.1	75-125			SL
Arsenic	1.25	0.00683	ng/m ³ Air	1.0629	0.217	97.4	75-125			
Barium	6.72	1.18	ng/m ³ Air	2.1258	4.63	98.2	75-125			
Beryllium	0.218	0.00146	ng/m ³ Air	0.21258	0.00991	98.0	75-125			
Cadmium	0.150	0.00394	ng/m ³ Air	0.10629	0.0409	102	75-125			
Chromium	2.90	1.88	ng/m ³ Air	1.0629	ND	273	75-125			
Cobalt	0.502	0.0400	ng/m ³ Air	0.21258	0.283	103	75-125			
Copper	34.3	0.578	ng/m ³ Air	10.629	23.2	105	75-125			
Lead	21.8	0.103	ng/m ³ Air	21.258	0.446	101	75-125			
Manganese	11.9	0.428	ng/m ³ Air	2.1258	9.75	99.5	75-125			

Eastern Research Group

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CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
 REPORTED: 02/26/25 13:50
 SUBMITTED: 02/17/25
 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 B5B2105 - ICP-MS Extraction

Post Spike (B5B2105-PS2) Continued Source: 5021837-24 Prepared & Analyzed: 02/21/25

Molybdenum	2.36	0.303	ng/m ³ Air	1.0629	1.31	99.1	75-125			
Nickel	3.21	0.568	ng/m ³ Air	2.1258	1.09	99.9	75-125			
Selenium	1.26	0.00776	ng/m ³ Air	1.0629	0.205	99.3	75-125			LJ, QX
Thallium	0.0537	6.62E-4	ng/m ³ Air	5.3144E-2	0.00205	97.2	75-125			
Vanadium	2.10	0.0352	ng/m ³ Air	1.0629	1.04	99.3	75-125			
Zinc	ND	87.6	ng/m ³ Air	21.258	ND		75-125			U

Dilution Check (B5B2105-SRL1) Source: 5021837-03 Prepared & Analyzed: 02/21/25

Antimony	0.179	0.148	ng/m ³ Air		0.188			5.28	10	SL
Arsenic	0.253	0.0377	ng/m ³ Air		0.247			2.36	10	
Barium	ND	6.53	ng/m ³ Air		ND				10	U
Beryllium	0.00909	0.00806	ng/m ³ Air		0.00967			6.10	10	
Cadmium	ND	0.0217	ng/m ³ Air		ND				10	U
Chromium	ND	10.3	ng/m ³ Air		ND				10	U
Cobalt	0.287	0.221	ng/m ³ Air		0.291			1.30	10	
Copper	30.7	3.19	ng/m ³ Air		31.3			1.98	10	
Lead	0.803	0.568	ng/m ³ Air		0.797			0.843	10	
Manganese	8.52	2.36	ng/m ³ Air		8.77			2.91	10	
Molybdenum	ND	1.67	ng/m ³ Air		ND				10	U
Nickel	ND	3.13	ng/m ³ Air		ND				10	U
Selenium	0.118	0.0428	ng/m ³ Air		0.140			16.9	10	LJ, QX
Thallium	ND	0.00365	ng/m ³ Air		ND				10	U
Vanadium	0.785	0.194	ng/m ³ Air		0.770			1.88	10	
Zinc	ND	484	ng/m ³ Air		ND				10	U

Dilution Check (B5B2105-SRL2) Source: 5021837-24 Prepared & Analyzed: 02/21/25

Antimony	0.165	0.135	ng/m ³ Air		0.172			3.97	10	SL
Arsenic	0.230	0.0342	ng/m ³ Air		0.217			5.81	10	
Barium	ND	5.92	ng/m ³ Air		ND				10	U
Beryllium	0.00885	0.00730	ng/m ³ Air		0.00991			11.3	10	
Cadmium	0.0429	0.0197	ng/m ³ Air		0.0409			4.80	10	
Chromium	ND	9.38	ng/m ³ Air		ND				10	U
Cobalt	0.286	0.200	ng/m ³ Air		0.283			1.12	10	
Copper	23.6	2.89	ng/m ³ Air		23.2			1.68	10	
Lead	ND	0.515	ng/m ³ Air		ND				10	U
Manganese	9.76	2.14	ng/m ³ Air		9.75			0.0705	10	
Molybdenum	ND	1.51	ng/m ³ Air		ND				10	U
Nickel	ND	2.84	ng/m ³ Air		ND				10	U
Selenium	0.197	0.0388	ng/m ³ Air		0.205			4.27	10	LJ, QX
Thallium	0.00331	0.00331	ng/m ³ Air		ND				10	

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PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 02/26/25 13:50
SUBMITTED: 02/17/25
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 B5B2105 - ICP-MS Extraction

Dilution Check (B5B2105-SRL2) ContinueSource: 5021837-24 Prepared & Analyzed: 02/21/25

Vanadium	1.08	0.176	ng/m ³ Air		1.04			3.99	10	
Zinc	ND	438	ng/m ³ Air		ND				10	U



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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.
LJ	Identification of analyte is acceptable; reported value is an estimate.
FB-01	Analyte exceeds Field Blank criteria.
D-F	Duplicate exceeds DQO criteria.
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

Stage 1 Data Verification Checklist – Metals
HDOH CAB – Ambient Community Air Sampling – Lahaina
Task Order No. 23141

Reviewed by:

Kierra Johnson 02/26/2025 and Shanna Vasser 02/28/2025

Laboratory: Eastern Research Group – Morrisville, NC

Collection date(s): 02/06/2025 – 02/12/2025

Report No: 5021837

- √ 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 antimony, arsenic, and copper in MFL-FB01-020725-HM, for barium and copper in MFL-FB01-020925-HM, and for arsenic and copper in MFL-FB01-021125-HM.

Notes: None.