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

Lahaina, Maui

5/16/2024 – 5/22/2024

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

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

This approach includes ambient community air monitoring and sampling to monitor conditions and determine whether debris removal activities, managed by the U.S. Army Corps of Engineers (USACE), significantly impact air quality in Lahaina. Data collected is made available to HDOH via online shared site and this weekly report. This approach to air monitoring and sampling will continue until debris removal activities are complete or until HDOH CAB advises otherwise.

Air quality monitoring for particulate matter was collected at all four community locations over a 24-hour period each day in accordance with the draft CAMSP. Additionally, daily air samples were collected at all community locations, as depicted in **Figure 1**. Summary analytical data is presented in **Tables 1 and 2**. **Appendix 1** provides detailed analytical results for all community locations where air sampling was performed. Analytical results were compared to site-specific screening levels for particulate matter, asbestos, and heavy metals as described in the draft CAMSP. A summary of meteorological data is presented in **Table 3.** Overall wind conditions show approximately 1.3 mph in a generally Southerly direction.

Results for Community Locations:
Ambient air monitoring was performed to assess the presence of airborne particulates with a particle size diameter of 10 micrometers (µm), as this is the size that is recognized as being small enough to be inhaled into a person's lungs. This particle size diameter is recognized for health evaluations and is identified as "PM_{10}". Monitoring for PM_{10} was conducted 24 hours a day, 7 days a week from May 16- May 22 at each of the following locations: Leialii Hawaiian Homelands, WW Pump Station #4, and Lahaina Boys & Girls Club, with the exception of Lahaina Intermediate School on May 19 and 20 because the weather head for the instrument malfunctioned and was being replaced.

The PM_{10} monitoring results were not found to have exceeded the screening level during this reporting period, as shown in **Table 2**.

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

There were 28 samples collected for asbestos fibers at community monitoring locations throughout this reporting period. All asbestos results were below the Site Screening Action Level (SSAL) of 0.003 fibers per cubic centimeter (fibers/cc) and less than the laboratory's analytical sensitivity (see Table 1). Notably, the laboratory commented "Numerous gypsum fibers present" on samples collected at the following monitoring stations:

- Leialii Hawaiian Homelands on May 18, 20 and 22

- WW Pump Station #4 on May 16-20 and 22
- Lahaina Intermediate School on May 17, 19, 20, and 22
- Lahaina Boys & Girls Club on May 18-20, and 22

Gypsum is a common ingredient in drywall, plaster and cement so its presence in the sample filters is likely due to debris removal operations or other disturbances of built-environment fire debris. The presence of gypsum fibers found in the samples were not sufficient to obscure asbestos analysis; nor are they indicative of a health and safety concern. Occupational health exposure thresholds (National Institute for Occupational Safety and Health [NIOSH] and OSHA) for gypsum are 5 milligrams per cubic meter (mg/m^3) for respirable dust, and 10 mg/m^3 and 15 mg/m^3 respectively for total dust as time-weighted averages. While total dust sampling has not been conducted, the size-discriminated particulate sampling (PM_{10}) at these locations indicates these thresholds are not being approached and are orders of magnitude less than occupational gypsum exposure criteria.

Low levels of heavy metals were detected in ambient air samples at all of the other community sampling locations. Although heavy metals were detected, all concentrations were below the SSALs (see Table 1). The laboratory data sheets for the metals and asbestos samples collected from the community locations are found in **Appendix 1.**

Quality Control:

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

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

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

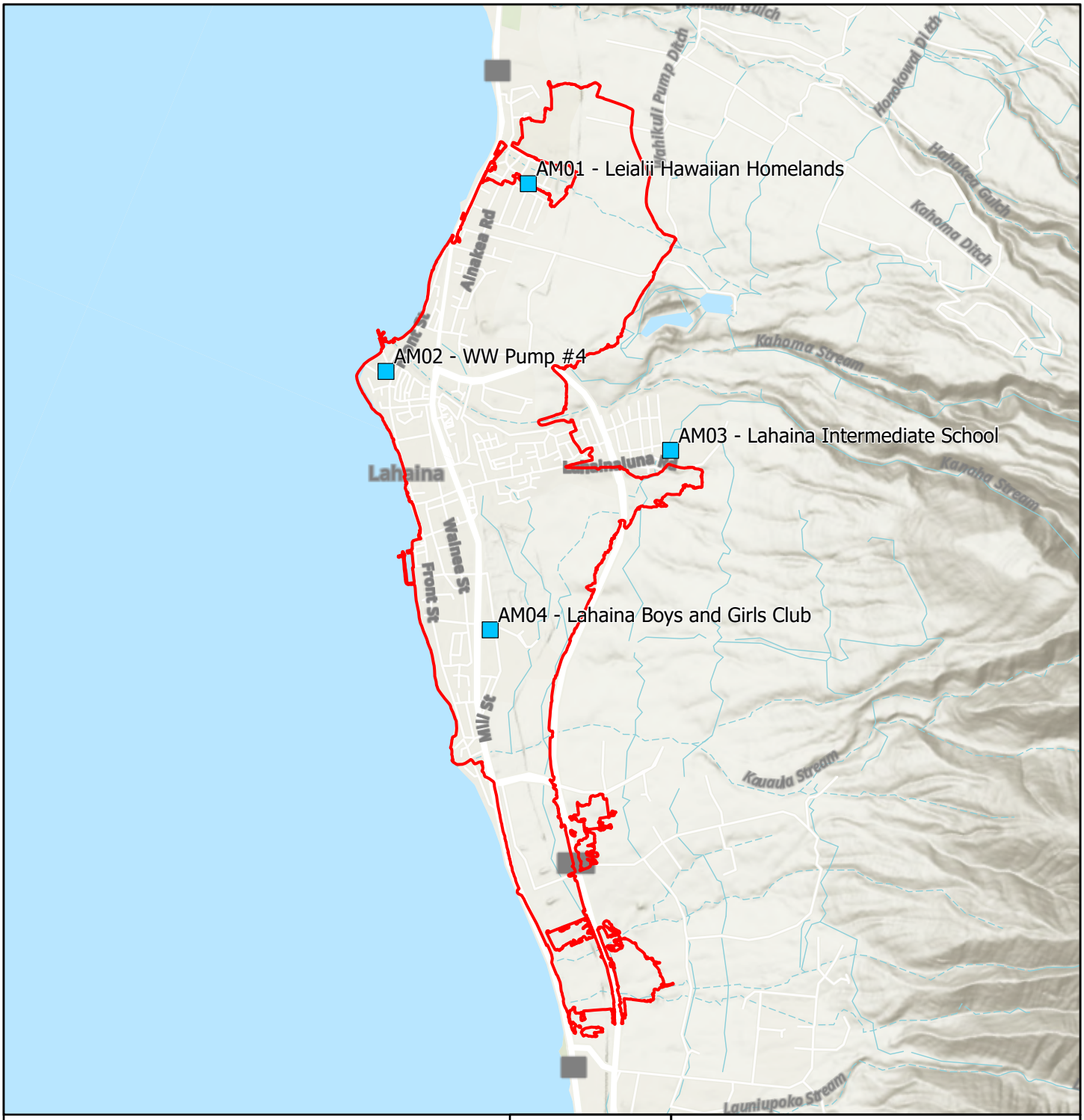
Tetra Tech is using Tisch Environmental High Volume Air Samplers, or equivalent, collocated with the real-time particulate monitors and asbestos samplers described above. Air samples for elemental metals at community locations are collected and analyzed in accordance with the following methods:

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

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

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

Attachments



Air Sampling Locations

Lahaina Fire Perimeter

N

0 0.3 0.6
Miles

TETRA TECH

Figure 1
Air Sampling Locations

Hawaii DOH
2023 Lahaina Wildfire

Basemap: ESRI ArcGIS World Street Map

Table 1
HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results by Date
Maui Wildfire, Lahaina
5/16/2024-5/22/2024

Analyte		Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Units		s/cc	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Screening Level*		0.003 [1]	0.7	0.05	1.2	0.05	0.02	12	0.01	240	1.5	0.12	4.8	0.02	48	24	0.24	1200
5/16/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.000108	0.00136	0.00566	0.0000198	ND	0.00480	0.000951	0.0458	0.00123	0.0227	0.00188	0.00308	0.000252	0.00000207	0.00238	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000571	0.000555	0.000961	0.00000284	ND	ND	0.0000750	0.0374	0.000360	0.00206	0.00135	ND	0.000200	0.00000113	0.000198	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000567	0.000107	0.00160	0.00000440	ND	ND	0.0000982	0.0156	0.000269	0.00205	0.000850	0.000538	0.000202	0.00000106	0.000195	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.0000836	0.000538	0.00176	0.00000480	ND	ND	0.000165	0.0451	0.000644	0.00453	0.00200	0.000670	0.000210	0.00000114	0.000367	ND
5/17/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.000189	0.00213	0.00635	0.0000224	ND	0.00587	0.00117	0.0573	0.00123	0.0274	0.00239	0.00328	0.000367	0.00000199	0.00302	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000841	0.00128	0.00169	0.00000535	ND	0.00208	0.000138	0.0670	0.00106	0.00435	0.00197	0.000734	0.000303	0.00000141	0.000405	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000793	0.000321	0.00265	0.00000856	ND	0.00232	0.000332	0.0253	0.000408	0.00665	0.00127	0.00127	0.000306	0.00000139	0.000790	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.0000944	0.000472	0.00205	0.00000557	0.0000702	0.00195	0.000190	0.0403	0.000835	0.00482	0.00173	0.000765	0.000317	0.00000137	0.000462	ND
5/18/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.000106	0.000371	0.00343	0.00000863	ND	0.00278	0.000387	0.153	0.000513	0.00939	0.00532	0.00158	0.000326	0.00000134	0.00132	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000682	0.000298	0.00193	0.00000574	ND	0.00198	0.000150	0.0327	0.000556	0.00451	0.00141	0.000990	0.000324	0.00000117	0.000709	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000551	0.000221	0.00288	0.0000153	ND	0.00269	0.000456	0.0211	0.000306	0.00973	0.000927	0.00158	0.000327	0.00000128	0.00128	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000196	0.000618	0.00463	0.00000921	ND	0.00261	0.000335	0.0330	0.00151	0.00884	0.000998	0.00125	0.000311	0.00000126	0.00106	ND
5/19/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.000103	0.00110	0.00382	0.00000753	ND	0.00237	0.000310	0.150	0.000507	0.00865	0.00515	0.00135	0.000252	0.00000166	0.00136	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000709	0.000345	0.00223	0.00000412	ND	0.00193	0.000115	0.0325	0.000544	0.00366	0.00134	0.00122	0.000250	0.00000121	0.000790	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000679	0.000166	0.00283	0.00000684	ND	0.00189	0.000281	0.0201	0.000318	0.00635	0.000844	0.00121	0.000208	0.00000124	0.000953	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000125	0.000516	0.00321	0.00000447	ND	ND	0.000144	0.0334	0.000753	0.00450	0.00116	0.000953	0.000214	0.00000129	0.000718	ND
5/20/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.0000983	0.00227	0.00374	0.00000678	ND	0.00256	0.000312	0.198	0.000556	0.00819	0.00623	0.00145	0.000257	0.00000183	0.00134	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000104	0.000631	0.00370	0.00000458	ND	0.00220	0.000130	0.0353	0.000625	0.00394	0.00135	0.00136	0.000281	0.00000199	0.000974	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000835	0.000245	0.00327	0.00000743	ND	0.00204	0.000290	0.0390	0.000438	0.00687	0.00180	0.00128	0.000276	0.00000190	0.00123	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.0000768	0.000364	0.00245	0.00000610	ND	ND	0.000180	0.0268	0.000593	0.00530	0.00105	0.000890	0.000249	0.00000178	0.000994	ND
5/21/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.0000804	0.000189	0.00226	0.00000449	ND	0.00199	0.000163	0.164	0.000287	0.00412	0.00590	0.000856	0.000191	0.00000130	0.000840	ND
	WW Pump Station #4 (AM-02)	<0.0027	0.000108	0.000383	0.00346	0.00000618	ND	0.00207	0.000240	0.0277	0.000432	0.00638	0.00104	0.00139	0.000160	0.00000104	0.000942	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000808	0.000252	0.00444	0.0000136	ND	0.00300	0.000530	0.0383	0.000987	0.0120	0.00213	0.00180	0.000212	0.00000151	0.00175	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000117	0.000414	0.00492	0.0000122	ND	0.00254	0.000386	0.0233	0.00116	0.0116	0.000975	0.00148	0.000225	0.00000141	0.00139	ND
5/22/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.0000816	0.000842	0.00664	0.0000236	ND	0.00572	0.00129	0.176	0.000669	0.0297	0.00828	0.00360	0.000284	0.00000191	0.00358	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.0000960	0.000971	0.00440	0.00000950	ND	0.00275	0.000304	0.0305	0.000641	0.0101	0.00125	0.00153	0.000211	0.00000138	0.00111	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000814	0.000292	0.00512	0.0000531	ND	0.00323	0.000678	0.0245	0.000554	0.0151	0.00174	0.00200	0.000261	0.00000162	0.00167	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.0000964	0.000497	0.00457	0.0000122	ND	0.00260	0.000369	0.0268	0.000834	0.0114	0.00136	0.00129	0.000211	0.00000142	0.00132	ND
95% Upper Confidence Limit[2]		NA	0.000110	0.000860	0.00414	0.0000130	NA	0.00314	0.000480	0.0743	0.000800	0.0119	0.00284	0.00170	0.000280	0.00000160	0.00161	NA

Notes:
[1] Asbestos result determined by transmission electron microscopy (TEM) in accordance with ISO Method 10312. PCMe results are presented here.
[2] 95% UCL determined through 'best fit' lognormal or normal parametric statistics via W test
s/cc = structures per cubic centimeter
ug/m3 = micrograms per cubic meter
NA = Not Applicable
ND = Not detected at or above the laboratory reporting limit
* Laboratory data provided in nanograms per cubic meter, however data shown in Table 1 has been converted to micrograms per cubic meter so data was comparable to SSALs

Table 2
HDOH CAB Ambient Community Monitoring and Sampling
Particulate Monitoring Results for PM_{10}
Maui Wildfire, Lahaina
5/16/2024 - 5/22/2024

Screening Level		**150 µg/m^3**
5/16/2024	Leialii Hawaiian Homelands (AM-01)	10
	WW Pump Station #4 (AM-02)	20
	Lahaina Intermediate School (AM-03)	76
	Lahaina Boys & Girls Club (AM-04)	12
5/17/2024	Leialii Hawaiian Homelands (AM-01)	12
	WW Pump Station #4 (AM-02)	27
	Lahaina Intermediate School (AM-03)	14
	Lahaina Boys & Girls Club (AM-04)	14
5/18/2024	Leialii Hawaiian Homelands (AM-01)	10
	WW Pump Station #4 (AM-02)	17
	Lahaina Intermediate School (AM-03)	8.7
	Lahaina Boys & Girls Club (AM-04)	11
5/19/2024	Leialii Hawaiian Homelands (AM-01)	8.9
	WW Pump Station #4 (AM-02)	17
	Lahaina Intermediate School (AM-03)	
	Lahaina Boys & Girls Club (AM-04)	9.7
5/20/2024	Leialii Hawaiian Homelands (AM-01)	9.8
	WW Pump Station #4 (AM-02)	15
	Lahaina Intermediate School (AM-03)	
	Lahaina Boys & Girls Club (AM-04)	10
5/21/2024	Leialii Hawaiian Homelands (AM-01)	9.7
	WW Pump Station #4 (AM-02)	17
	Lahaina Intermediate School (AM-03)	9.4
	Lahaina Boys & Girls Club (AM-04)	9.2
5/22/2024	Leialii Hawaiian Homelands (AM-01)	8.0
	WW Pump Station #4 (AM-02)	11
	Lahaina Intermediate School (AM-03)	11
	Lahaina Boys & Girls Club (AM-04)	7.3

Notes:
µg/m3 = micrograms per cubic meter
24 hour TWA calculation results are shown in two significant figures
Results are based on 24 hour TWA calculation except for the following:
Results for Leialii Hawaiian Homelands (AM-01) on 5/16 are based on a 21 hr. TWA because of equipment maintenance.
Results for WW Pump Station #4 (AM-02) on 5/16 are based on a 22 hr. TWA because of equipment maintenance.
Results for Lahaina Boys & Girls Club (AM-04) on 5/18 are based on a 22 hr. TWA because of equipment maintenance.
Results for Lahaina Intermediate School (AM-03) on 5/18 are based on a 8 hr. TWA because of equipment malfunction.
Results for Lahaina Intermediate School (AM-03) on 5/21 are based on a 7 hr. TWA because of equipment malfunction.
No 24hr TWA results for Lahaina Intermediate School (AM-03) on 5/19 and 5/20 because of equipment malfunction and repair.

Table 3
Maui Wildfire - Lahaina
Meteorological Data
5/16/2024-5/22/2024

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
5/16/2024	AM-01	Leialii Hawaiian Homelands	2.0	SSE	80	76	756.9
5/16/2024	AM-02	WW Pump Station #4	1.7	SSE	80	81	759.2
5/16/2024	AM-03	Lahaina Intermediate School	3.5	SSE	78	84	749.9
5/16/2024	AM-04	Lahaina Boys & Girls Club	1.7	SSE	78	80	758.9
5/17/2024	AM-01	Leialii Hawaiian Homelands	1.5	SSW	83	70	758.4
5/17/2024	AM-02	WW Pump Station #4	1.0	S	83	76	760.6
5/17/2024	AM-03	Lahaina Intermediate School	1.7	SSE	80	77	751.4
5/17/2024	AM-04	Lahaina Boys & Girls Club	1.7	S	80	76	760.3
5/18/2024	AM-01	Leialii Hawaiian Homelands	1.0	S	80	76	760.0
5/18/2024	AM-02	WW Pump Station #4	0.7	S	82	79	762.1
5/18/2024	AM-03	Lahaina Intermediate School	2.6	SSE	79	80	750.7
5/18/2024	AM-04	Lahaina Boys & Girls Club	1.1	SW	78	79	761.8
5/19/2024	AM-01	Leialii Hawaiian Homelands	1.3	S	79	72	761.0
5/19/2024	AM-02	WW Pump Station #4	0.8	S	80	77	763.2
5/19/2024	AM-03	Lahaina Intermediate School					
5/19/2024	AM-04	Lahaina Boys & Girls Club	1.0	SSW	77	75	762.8
5/20/2024	AM-01	Leialii Hawaiian Homelands	1.0	SSE	81	66	761.1
5/20/2024	AM-02	WW Pump Station #4	0.9	S	81	71	763.2
5/20/2024	AM-03	Lahaina Intermediate School					
5/20/2024	AM-04	Lahaina Boys & Girls Club	1.1	SSW	77	71	762.9
5/21/2024	AM-01	Leialii Hawaiian Homelands	1.2	SE	81	63	760.8
5/21/2024	AM-02	WW Pump Station #4	1.0	SSE	81	69	763.0
5/21/2024	AM-03	Lahaina Intermediate School	1.3	ESE	78	69	752.7
5/21/2024	AM-04	Lahaina Boys & Girls Club	1.0	S	78	69	762.6
5/22/2024	AM-01	Leialii Hawaiian Homelands	0.8	S	83	63	761.0
5/22/2024	AM-02	WW Pump Station #4	1.1	S	82	70	763.2
5/22/2024	AM-03	Lahaina Intermediate School	1.2	SSE	80	67	753.7
5/22/2024	AM-04	Lahaina Boys & Girls Club	1.2	SW	79	69	762.8

Notes:
°F - Fahrenheit
mBar - millibar
mph - miles per hour
Weather data for Lahaina Intermediate School on May 18 and 21 are averaged over an 8 hr period due to Equipment Malfunction

Appendix 1

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

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

EMSL Order:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/24/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-051624-AB** **Sample Description:** **Dk797097**

EMSL Sample Number:	042410348-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7180.9
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:	G.Barry
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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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Approved Signatory

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EMSL Order ID: 042410348
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: 042410348-0001 **Customer Sample:** MFL-AM01-051624-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	G5	None Detected									
B1	D2	None Detected									
B1	A4	None Detected									
B2	I6	None Detected									
B2	C6	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/24/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-051624-AB** **Sample Description: DK797135**

EMSL Sample Number:	042410348-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7148.5
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	9			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
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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: 042410348-0002 **Customer Sample:** MFL-AM02-051624-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	F4	None Detected									
B5	A7	None Detected									
B6	C8	None Detected									
B6	G7	None Detected									

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

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EMSL Order:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-051624-AB** **Sample Description: DK797128**

EMSL Sample Number:	042410348-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7283.4
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0003 **Customer Sample:** MFL-AM03-051624-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	B6	None Detected									
C1	F8	None Detected									
C1	I5	None Detected									
C2	J8	None Detected									
C2	D4	None Detected									

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

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EMSL Order:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/25/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-051624-AB** **Sample Description: DK797093**

EMSL Sample Number:	042410348-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7148.5
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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:	**042410348**
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: 042410348-0004 **Customer Sample:** MFL-AM04-051624-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	A6	None Detected									
C5	F3	None Detected									
C5	I5	None Detected									
C6	B3	None Detected									
C6	E5	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Project: **Maui Fires - Lahaina**

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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/28/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-051624-AB** **Sample Description: DK797079**

EMSL Sample Number:	042410348-0005		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0005 **Customer Sample:** MFL-FB01-051624-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	J8	None Detected									
D2	I3	None Detected									
D2	E5	None Detected									
D2	A10	None Detected									
D3	J9	None Detected									
D3	H4	None Detected									
D3	F7	None Detected									
D4	J5	None Detected									
D4	G1	None Detected									
D4	C4	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Fax:	N/A
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Analysis Date:	05/28/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-051724-AB** **Sample Description: DK797113**

EMSL Sample Number:	042410348-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7106.2
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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

Robyn Ray
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EMSL Order ID: 042410348
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: 042410348-0006 **Customer Sample:** MFL-AM01-051724-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	D5	None Detected									
D5	I2	None Detected									
D6	H7	None Detected									
D6	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 ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/23/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-051724-AB**		**Sample Description:**	**DK797098**
EMSL Sample Number:	042410348-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7198.3
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	9			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

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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: 042410348-0007 **Customer Sample:** MFL-AM02-051724-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	B5	None Detected									
E2	F8	None Detected									
E2	J7	None Detected									
E3	I4	None Detected									
E3	E7	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:	05/28/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-051724-AB**		**Sample Description:**	**DK797122**
EMSL Sample Number:	042410348-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7254.1
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
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EMSL Order ID: 042410348
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: 042410348-0008 **Customer Sample:** MFL-AM03-051724-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	J9	None Detected									
E5	G5	None Detected									
E5	B4	None Detected									
E6	H6	None Detected									
E6	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
Project ID:	N/A

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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-051724-AB**		**Sample Description:**	**DK797091**
EMSL Sample Number:	042410348-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7219.7
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	7			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0009 **Customer Sample:** MFL-AM04-051724-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	C3	None Detected									
F1	F5	None Detected									
F1	J8	None Detected									
F2	H6	None Detected									
F2	D5	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-051724-AB** **Sample Description: DK797075**

EMSL Sample Number:	042410348-0010		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0010 **Customer Sample:** MFL-FB01-051724-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	A8	None Detected									
F5	B4	None Detected									
F5	F4	None Detected									
F5	I7	None Detected									
F6	A3	None Detected									
F6	E7	None Detected									
F6	H8	None Detected									
F7	J4	None Detected									
F7	G2	None Detected									
F7	D5	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:	042410348
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Customer PO:	1207085
Project ID:	N/A

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Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-051824-AB** **Sample Description: DK797095**

EMSL Sample Number:	042410348-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7228.4
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	9			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410348
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: 042410348-0011 **Customer Sample:** MFL-AM01-051824-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	H4	None Detected									
G1	E5	None Detected									
G1	A8	None Detected									
G2	D3	None Detected									
G2	G6	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-051824-AB**		**Sample Description:**	**DK797104**
EMSL Sample Number:	042410348-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7227.9
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	9			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID:	**042410348**
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: 042410348-0012 **Customer Sample:** MFL-AM02-051824-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	E7	None Detected									
G5	J3	None Detected									
G6	I7	None Detected									
G6	D4	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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Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-051824-AB** **Sample Description: DK797086**

EMSL Sample Number:	042410348-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7238.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	6			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0013 **Customer Sample:** MFL-AM03-051824-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	I3	None Detected									
H1	F6	None Detected									
H1	B7	None Detected									
H2	A7	None Detected									
H2	G5	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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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-051824-AB** **Sample Description: DK797111**

EMSL Sample Number:	042410348-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7228.2
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410348
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: 042410348-0014 **Customer Sample:** MFL-AM04-051824-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	J6	None Detected									
H5	G3	None Detected									
H5	C5	None Detected									
H6	H4	None Detected									
H6	E7	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-051824-AB** **Sample Description:** **DK797112**

EMSL Sample Number:	042410348-0015		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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: 042410348
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: 042410348-0015 **Customer Sample:** MFL-FB01-051824-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	B8	None Detected									
I1	C5	None Detected									
I1	J8	None Detected									
I2	A5	None Detected									
I2	C9	None Detected									
I2	F6	None Detected									
I2	J4	None Detected									
I3	A6	None Detected									
I3	E5	None Detected									
I3	J6	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:	042410348
Customer ID:	TTDC42
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Project ID:	N/A

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-051924-AB** **Sample Description: DK797110**

EMSL Sample Number:	042410348-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7218.0
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	6			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410348
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: 042410348-0016 **Customer Sample:** MFL-AM01-051924-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
I5	B4	None Detected									
I5	F8	None Detected									
I5	I5	None Detected									
I6	J4	None Detected									
I6	E3	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-051924-AB** **Sample Description: DK797114**

EMSL Sample Number:	042410348-0017		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7119.6
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	7			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410348
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: 042410348-0017 **Customer Sample:** MFL-AM02-051924-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					
J1	I3	None Detected									
J1	G8	None Detected									
J1	A4	None Detected									
J2	D7	None Detected									
J2	H4	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Project: **Maui Fires - Lahaina**

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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-051924-AB** **Sample Description: DK797137**

EMSL Sample Number:	042410348-0018		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7229.1
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	7			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

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EMSL Order ID: 042410348
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: 042410348-0018 **Customer Sample:** MFL-AM03-051924-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	J7	None Detected									
J5	G4	None Detected									
J5	C6	None Detected									
J6	I6	None Detected									
J6	E4	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:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Analysis Date:	05/29/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-051924-AB** **Sample Description: DK797103**

EMSL Sample Number:	042410348-0019		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7123.2
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410348
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: 042410348-0019 **Customer Sample:** MFL-AM04-051924-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					
K1	A4	None Detected									
K1	D7	None Detected									
K1	H5	None Detected									
K2	I4	None Detected									
K2	F3	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:	042410348
Customer ID:	TTDC42
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Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-051924-AB** **Sample Description: DK797105**

EMSL Sample Number:	042410348-0020		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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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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: 042410348-0020 **Customer Sample:** MFL-FB01-051924-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	J3	None Detected									
K5	I7	None Detected									
K5	E5	None Detected									
K5	A8	None Detected									
K6	H6	None Detected									
K6	D3	None Detected									
K6	B6	None Detected									
K7	I3	None Detected									
K7	G6	None Detected									
K7	A4	None Detected									

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

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

EMSL Order:	042410348
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/22/2024 09:40 AM
Analysis Date:	05/24/2024
Report Date:	05/30/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042410348-0021		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	0			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410348
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: 042410348-0021 **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	J7	None Detected									
A1	H4	None Detected									
A1	D8	None Detected									
A1	A6	None Detected									
A2	B7	None Detected									
A2	A5	None Detected									
A2	I4	None Detected									
A3	J3	None Detected									
A3	H6	None Detected									
A3	C6	None Detected									

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

OrderID: 042410348

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042410348

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: (800) 220-3675
EMAIL: CinnAsblab@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:
Country:	USA		
Phone:	703-489-2674	Phone:	
Email(s) for Report:	chelsea.saber@tetratech.com	Email(s) for Invoice:	

Project Information

Project Name/No:	MAUI FIRES- LAHAINA	Purchase Order:	1207085
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	HI
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	E. KARYSA SALDAÑA	Sampled By Signature:	
No. of Samples in Shipment	20		

Turn-Around-Time (TAT)

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

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

Test Selection

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

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

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

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

Other Test (please specify)

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

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

*Please call with your project-specific requirements.

RECEIVED EMSL CINNAMINSON, NJ MAY 22 PM 12:24

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA)

Filter Pore Size (Air Samples) ☐ 0.8um ☒ 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM01-051624-AB	DK797097	7,180.901	05/16/24 1104
MFL-AM02-051624-AB	DK797135	7,148.498	05/16/24 1120
MFL-AM03-051624-AB	DK797128	7,283.437	05/16/24 1303
MFL-AM04-051624-AB	DK797093	7,148.501	05/16/24 1323
MFL-FB01-051624-AB	DK797079	0	05/16/24 1200
MFL-AM01-051724-AB	DK797113	7,106.190	05/17/24 1052
MFL-AM02-051724-AB	DK797098	7,198.344	05/17/24 1124
MFL-AM03-051724-AB	DK797122	7,254.104	05/17/24 1257

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

All samples received acceptable for analysis.

Method of Shipment:	FEDEX	Sample Condition Upon Receipt:	
Relinquished by:		Date/Time: 05/20/24 1100	Received by: FF
Date/Time: 5/22/24 940			
Relinquished by:		Date/Time:	Received by:
Date/Time			

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

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

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

20 MC

OrderID: 042410348

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042410348

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

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

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

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

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM04-051724-AB	DK797091	7,219.656	05/17/24 1326
MFL-FB01-051724-AB	DK797075	0	05/17/24 1200
MFL-AM01-051824-AB	DK797095	7,228.368	05/18/24 1055
MFL-AM02-051824-AB	DK797104	7,227.942	05/18/24 1124
MFL-AM03-051824-AB	DK797086	7,238.880	05/18/24 1301
MFL-AM04-051824-AB	DK797111	7,228.239	05/18/24 1346
MFL-FB01-051824-AB	DK797112	0	05/18/24 1200
MFL-AM01-051924-AB	DK797110	7,218.039	05/19/24 1100
MFL-AM02-051924-AB	DK797114	7,119.564	05/19/24 1117
MFL-AM03-051924-AB	DK797137	7,229.081	05/19/24 1306
MFL-AM04-051924-AB	DK797103	7,123.181	05/19/24 1328
MFL-FB01-051924-AB	DK797105	0	05/19/24 1200

RECEIVED
EMSL
CINNAMINSON, NJ
24 MAY 22 PM 12:24

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 05/20/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

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

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

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

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 05/30/2024 and Shanna Vasser 06/03/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 05/16/2024 – 05/19/2024
Report No: 42410348

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-052024-AB**		**Sample Description:**	**DK797088**
EMSL Sample Number:	042410618-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7257.3
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0001 **Customer Sample:** MFL-AM01-052024-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	A4	None Detected									
B2	E7	None Detected									
B2	H5	None Detected									
B3	C8	None Detected									
B3	F4	None Detected									

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

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-052024-AB** **Sample Description: DK797144**

EMSL Sample Number:	042410618-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7364.9
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0002 **Customer Sample:** MFL-AM02-052024-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	G7	None Detected									
B5	D4	None Detected									
B5	A3	None Detected									
B6	B5	None Detected									
B6	F9	None Detected									

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

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-052024-AB** **Sample Description: DK797390**

EMSL Sample Number:	042410618-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7193.9
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	6			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410618
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: 042410618-0003 **Customer Sample:** MFL-AM03-052024-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	I3	None Detected									
C2	F7	None Detected									
C2	B4	None Detected									
C3	A3	None Detected									
C3	E5	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:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-052024-AB** **Sample Description: DK797377**

EMSL Sample Number:	042410618-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7256.9
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
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: 042410618-0004 **Customer Sample:** MFL-AM04-052024-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	G3	None Detected									
C5	D6	None Detected									
C5	A8	None Detected									
C6	H4	None Detected									
C6	C7	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:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-052024-AB**		**Sample Description:**	**DK797405**
EMSL Sample Number:	042410618-0005		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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: 042410618
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: 042410618-0005 **Customer Sample:** MFL-FB01-052024-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	A3	None Detected									
D1	C8	None Detected									
D1	F4	None Detected									
D1	J7	None Detected									
D2	B7	None Detected									
D2	D9	None Detected									
D2	H4	None Detected									
D3	A2	None Detected									
D3	E8	None Detected									
D3	I6	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:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-052124-AB** **Sample Description: DK797379**

EMSL Sample Number:	042410618-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7418.5
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:	G.Barry
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410618
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: 042410618-0006 **Customer Sample:** MFL-AM01-052124-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	J8	None Detected									
D5	G5	None Detected									
D5	C3	None Detected									
D6	I6	None Detected									
D6	D6	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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Received Date:	05/28/2024 09:10 AM
Analysis Date:	05/31/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-052124-AB**	**Sample Description:**	**DK797432**
EMSL Sample Number:	042410618-0007	Sample Matrix:	Air
Magnification used for fiber counting:	20,000	Volume (L) :	7073.6
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX		
Estimated Particulate Loading on Filter %:	9		
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410618
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: 042410618-0007 **Customer Sample:** MFL-AM02-052124-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	C7	None Detected									
E1	F4	None Detected									
E1	J6	None Detected									
E2	H8	None Detected									
E2	D6	None Detected									

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

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EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-052124-AB** **Sample Description: DK797402**

EMSL Sample Number:	042410618-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7199.0
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	7			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0008 **Customer Sample:** MFL-AM03-052124-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	A9	None Detected									
E5	F3	None Detected									
E5	I6	None Detected									
E6	J8	None Detected									
E6	E2	None Detected									

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

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EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-052124-AB** **Sample Description: DK797411**

EMSL Sample Number:	042410618-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7157.3
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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: 042410618
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: 042410618-0009 **Customer Sample:** MFL-AM04-052124-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	I5	None Detected									
F1	F3	None Detected									
F1	A7	None Detected									
F2	G6	None Detected									
F2	D4	None Detected									

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

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EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

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Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-052124-AB** **Sample Description: DK797381**

EMSL Sample Number:	042410618-0010		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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: 042410618
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: 042410618-0010 **Customer Sample:** MFL-FB01-052124-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	A7	None Detected									
F5	D9	None Detected									
F5	F6	None Detected									
F5	J4	None Detected									
F7	A6	None Detected									
F7	D5	None Detected									
F7	J6	None Detected									
F8	B8	None Detected									
F8	F4	None Detected									
F8	I2	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:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

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Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-052224-AB** **Sample Description: DK797389**

EMSL Sample Number:	042410618-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7376.2
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	7			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410618
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: 042410618-0011 **Customer Sample:** MFL-AM01-052224-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	D7	None Detected									
G1	G6	None Detected									
G1	J4	None Detected									
G2	H5	None Detected									
G2	F4	None Detected									

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

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EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

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Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-052224-AB** **Sample Description: DK797396**

EMSL Sample Number:	042410618-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7383.2
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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EMSL Order ID: 042410618
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: 042410618-0012 **Customer Sample:** MFL-AM02-052224-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	E7	None Detected									
G5	H6	None Detected									
G6	A7	None Detected									
G6	G6	None Detected									

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

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-052224-AB**		**Sample Description:**	**DK797391**
EMSL Sample Number:	042410618-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7186.0
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	6			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0013 **Customer Sample:** MFL-AM03-052224-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	I6	None Detected									
H1	F9	None Detected									
H1	C6	None Detected									
H2	G4	None Detected									
H2	B6	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
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http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-052224-AB**		**Sample Description:**	**DK797388**
EMSL Sample Number:	042410618-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7264.8
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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	8			
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 Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) 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.

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0014 **Customer Sample:** MFL-AM04-052224-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					
H6	J7	None Detected									
H6	G3	None Detected									
H6	D6	None Detected									
H7	A3	None Detected									
H7	F8	None Detected									

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

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	06/01/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-052224-AB** **Sample Description: DK797395**

EMSL Sample Number:	042410618-0015		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

Analytical Sensitivity (Structures/cc): **N/A** **Limit of Detection (Structures/cc):** **N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0015 **Customer Sample:** MFL-FB01-052224-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	J4	None Detected									
I1	G2	None Detected									
I1	C4	None Detected									
I2	A5	None Detected									
I2	D8	None Detected									
I2	F3	None Detected									
I2	I5	None Detected									
I3	C2	None Detected									
I3	C7	None Detected									
I3	G5	None Detected									

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

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

EMSL Order:	042410618
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	05/28/2024 09:10 AM
Analysis Date:	05/30/2024
Report Date:	06/04/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042410618-0016		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:	G.Barry
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	95 % Confidence Interval (S/cc) 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 Primary	Fibers Detected Total	Density (F/mm^2)	Concentration (F/cc)	95 % Confidence Interval (F/cc) Lower	95 % Confidence Interval (F/cc) 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

Robyn Ray
Approved Signatory

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

EMSL Order ID: 042410618
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: 042410618-0016 **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	J4	None Detected									
A1	F7	None Detected									
A1	E3	None Detected									
A1	A5	None Detected									
A3	I8	None Detected									
A3	G4	None Detected									
A3	C3	None Detected									
A4	B8	None Detected									
A4	D4	None Detected									
A4	I5	None Detected									

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

OrderID: 042410618

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042410618

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

RECEIVED EMSL CINNAMINSON, NJ 24 MAY 28 AM 9:58

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

Customer Information

Customer ID:
Company Name: TETRA TECH
Contact Name: CHELSEA SABER
Street Address: 1560 BROADWAY STE 1400
City, State, Zip: DENVER, CO 80202 Country: USA
Phone: 703-489-2674
Email(s) for Report: chelsea.saber@tetratech.com

Billing Information

Billing ID:
Company Name:
Billing Contact:
Street Address:
City, State, Zip: Country:
Phone:
Email(s) for Invoice:

Project Information

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: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name: E. KARYSA SALDAÑA
Sampled By Signature:
No. of Samples in Shipment: 15

Turn-Around-Time (TAT)

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

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

Test Selection

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

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

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

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

Other Test (please specify)

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

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

*Please call with your project-specific requirements.

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

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM01-052024-AB3	DK797088	7,257.336	05/20/24 1050
MFL-AM02-052024-AB3	DK797144	7,364.912	05/20/24 1118
MFL-AM03-052024-AB3	DK797390	7,193.909	05/20/24 1307
MFL-AM04-052024-AB3	DK797377	7,256.880	05/20/24 1331
MFL-FB01-052024-AB	DK797405	418.0	05/20/24 1200
MFL-AM01-052124-AB3	DK797379	7,~~448~~.477	05/21/24 1057
MFL-AM02-052124-AB3	DK797432	7,073.638 (EKS)	05/21/24 1119
MFL-AM03-052124-AB3	DK797402	7,199.016	05/21/24 1306

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

All samples received acceptable for analysis.

(15) SB

Method of Shipment: FED EX
Relinquished by: Date/Time: 05/23/24 1100
Relinquished by: Date/Time:
Sample Condition Upon Receipt:
Received by: FedEx Date/Time 5/28/24 9:10 A
Received by: Date/Time

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

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

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

OrderID: 042410618

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042410618

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

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

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

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

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM04-052124-AB	DIC797411	7,157.309	05/21/24 1323
MFL-FB01-052124-AB	DK797381	0	05/21/24 1200
MFL-AM01-052224-AB	DIC797389	7,376.170	05/22/24 1059
MFL-AM02-052224-AB	DIC797396	7,383.162	05/22/24 1120
MFL-AM03-052224-AB	DIC797391	7,185.974	05/22/24 1306
MFL-AM04-052224-AB	DIC797388	7,264.800	05/22/24 1326
MFL-FB01-052224-AB	DIC797395	0	05/22/24 1200

RECEIVED
EMSL
CINNAMINSON, NJ
24 MAY 28 AM 9:58

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 05/23/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

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

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

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

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 06/05/2024 and Shanna Vasser 06/06/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 05/20/2024 – 05/22/2024
Report No: 42410618

√	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

June 04, 2024

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

Dear Ms. Chelsea Saber,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 05/28/24 13:27.

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

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

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

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

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
MFL-AM01-051624-HM	4052830-01	Air	05/16/24 23:59	05/28/24 13:27
MFL-AM02-051624-HM	4052830-02	Air	05/16/24 23:59	05/28/24 13:27
MFL-AM03-051624-HM	4052830-03	Air	05/16/24 23:59	05/28/24 13:27
MFL-AM04-051624-HM	4052830-04	Air	05/16/24 23:59	05/28/24 13:27
MFL-AM01-051724-HM	4052830-05	Air	05/17/24 23:59	05/28/24 13:27
MFL-AM02-051724-HM	4052830-06	Air	05/17/24 23:59	05/28/24 13:27
MFL-AM03-051724-HM	4052830-07	Air	05/17/24 23:59	05/28/24 13:27
MFL-AM04-051724-HM	4052830-08	Air	05/17/24 23:59	05/28/24 13:27
MFL-FB01-051724-HM	4052830-09	Air	05/17/24 00:00	05/28/24 13:27
MFL-AM01-051824-HM	4052830-10	Air	05/18/24 23:59	05/28/24 13:27
MFL-AM02-051824-HM	4052830-11	Air	05/18/24 23:59	05/28/24 13:27
MFL-AM03-051824-HM	4052830-12	Air	05/18/24 23:59	05/28/24 13:27
MFL-AM04-051824-HM	4052830-13	Air	05/18/24 23:59	05/28/24 13:27
MFL-AM01-051924-HM	4052830-14	Air	05/19/24 23:59	05/28/24 13:27
MFL-AM02-051924-HM	4052830-15	Air	05/19/24 23:59	05/28/24 13:27
MFL-AM03-051924-HM	4052830-16	Air	05/19/24 23:59	05/28/24 13:27
MFL-AM04-051924-HM	4052830-17	Air	05/19/24 23:59	05/28/24 13:27
MFL-FB01-051924-HM	4052830-18	Air	05/19/24 00:00	05/28/24 13:27
MFL-AM01-052024-HM	4052830-19	Air	05/20/24 23:59	05/28/24 13:27
MFL-AM02-052024-HM	4052830-20	Air	05/20/24 23:59	05/28/24 13:27
MFL-AM03-052024-HM	4052830-21	Air	05/20/24 23:59	05/28/24 13:27

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

MFL-AM04-052024-HM	4052830-22	Air	05/20/24 23:59	05/28/24 13:27
MFL-AM01-052124-HM	4052830-23	Air	05/21/24 23:59	05/28/24 13:27
MFL-AM02-052124-HM	4052830-24	Air	05/21/24 23:59	05/28/24 13:27
MFL-AM03-052124-HM	4052830-25	Air	05/21/24 23:59	05/28/24 13:27
MFL-AM04-052124-HM	4052830-26	Air	05/21/24 23:59	05/28/24 13:27
MFL-FB01-052124-HM	4052830-27	Air	05/21/24 00:00	05/28/24 13:27
MFL-AM01-052224-HM	4052830-28	Air	05/22/24 23:59	05/28/24 13:27
MFL-AM02-052224-HM	4052830-29	Air	05/22/24 23:59	05/28/24 13:27
MFL-AM03-052224-HM	4052830-30	Air	05/22/24 23:59	05/28/24 13:27
MFL-AM04-052224-HM	4052830-31	Air	05/22/24 23:59	05/28/24 13:27

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051624-HM
Matrix: Air
Lab ID: 4052830-01
Sample Volume: 1732.089 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 01:01

Comments: Q9543326 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.108**	SL	**0.0363**
Barium	**7440-39-3**	**5.66**		**1.01**
Beryllium	**7440-41-7**	**0.0198**		**0.00301**
Cadmium	7440-43-9	0.0274	U	0.0696
Chromium	**7440-47-3**	**4.80**		**2.08**
Cobalt	**7440-48-4**	**0.951**		**0.0410**
Copper	**7440-50-8**	**45.8**		**2.47**
Lead	**7439-92-1**	**1.23**		**0.201**
Manganese	**7439-96-5**	**22.7**		**1.78**
Molybdenum	**7439-98-7**	**1.88**		**0.337**
Nickel	**7440-02-0**	**3.08**		**0.612**
Selenium	**7782-49-2**	**0.252**		**0.00842**
Thallium	**7440-28-0**	**0.00207**		**5.53E-4**
Vanadium	**7440-62-2**	**2.38**		**0.0497**
Zinc	7440-66-6	51.7	U	72.1

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051624-HM
Matrix: Air
Lab ID: 4052830-01RE1
Sample Volume: 1732.089 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 14:04

Comments: Q9543326 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	1.36		0.00880

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051624-HM
Matrix: Air
Lab ID: 4052830-02
Sample Volume: 2068.175 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 01:19

Comments: Q9543324 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0571**	SL	**0.0304**
Barium	**7440-39-3**	**0.961**		**0.842**
Beryllium	**7440-41-7**	**0.00284**		**0.00252**
Cadmium	7440-43-9	0.0102	U	0.0583
Chromium	7440-47-3	1.48	U	1.74
Cobalt	**7440-48-4**	**0.0750**		**0.0343**
Copper	**7440-50-8**	**37.4**		**2.07**
Lead	**7439-92-1**	**0.360**		**0.168**
Manganese	**7439-96-5**	**2.06**		**1.49**
Molybdenum	**7439-98-7**	**1.35**		**0.282**
Nickel	7440-02-0	0.473	U	0.513
Selenium	**7782-49-2**	**0.200**		**0.00705**
Thallium	**7440-28-0**	**0.00113**		**4.63E-4**
Vanadium	**7440-62-2**	**0.198**		**0.0416**
Zinc	7440-66-6	32.2	U	60.4

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051624-HM
Matrix: Air
Lab ID: 4052830-02RE1
Sample Volume: 2068.175 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 14:14

Comments: Q9543324 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.555		0.00737

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051624-HM
Matrix: Air
Lab ID: 4052830-03
Sample Volume: 1995.485 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 01:52

Comments: Q9543321 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0567**	SL	**0.0315**
Barium	**7440-39-3**	**1.60**		**0.872**
Beryllium	**7440-41-7**	**0.00440**		**0.00261**
Cadmium	7440-43-9	0.0117	U	0.0604
Chromium	7440-47-3	1.50	U	1.80
Cobalt	**7440-48-4**	**0.0982**		**0.0355**
Copper	**7440-50-8**	**15.6**		**2.14**
Lead	**7439-92-1**	**0.269**		**0.174**
Manganese	**7439-96-5**	**2.05**		**1.54**
Molybdenum	**7439-98-7**	**0.850**		**0.293**
Nickel	**7440-02-0**	**0.538**		**0.532**
Selenium	**7782-49-2**	**0.202**		**0.00731**
Thallium	**7440-28-0**	**0.00106**		**4.80E-4**
Vanadium	**7440-62-2**	**0.195**		**0.0431**
Zinc	7440-66-6	30.6	U	62.6

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051624-HM
Matrix: Air
Lab ID: 4052830-03RE1
Sample Volume: 1995.485 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 14:46
Comments: Q9543321 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.107		0.00764

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051624-HM
Matrix: Air
Lab ID: 4052830-04
Sample Volume: 1800.333 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 02:07

Comments: Q9543320 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0836**	SL	**0.0349**
Barium	**7440-39-3**	**1.76**		**0.967**
Beryllium	**7440-41-7**	**0.00480**		**0.00289**
Cadmium	7440-43-9	0.0213	U	0.0670
Chromium	7440-47-3	1.91	U	2.00
Cobalt	**7440-48-4**	**0.165**		**0.0394**
Copper	**7440-50-8**	**45.1**		**2.38**
Lead	**7439-92-1**	**0.644**		**0.193**
Manganese	**7439-96-5**	**4.53**		**1.71**
Molybdenum	**7439-98-7**	**2.00**		**0.324**
Nickel	**7440-02-0**	**0.670**		**0.589**
Selenium	**7782-49-2**	**0.210**		**0.00810**
Thallium	**7440-28-0**	**0.00114**		**5.32E-4**
Vanadium	**7440-62-2**	**0.367**		**0.0478**
Zinc	7440-66-6	38.5	U	69.4

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051624-HM
Matrix: Air
Lab ID: 4052830-04RE1
Sample Volume: 1800.333 m³
Filter ID:
Sampled: 05/16/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 14:56

Comments: Q9543320 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.538		0.00847

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051724-HM
Matrix: Air
Lab ID: 4052830-05
Sample Volume: 1934.531 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 02:22

Comments: Q9543319 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.189**	SL	**0.0325**
Barium	**7440-39-3**	**6.35**		**0.900**
Beryllium	**7440-41-7**	**0.0224**		**0.00269**
Cadmium	7440-43-9	0.0318	U	0.0623
Chromium	**7440-47-3**	**5.87**		**1.86**
Cobalt	**7440-48-4**	**1.17**		**0.0367**
Copper	**7440-50-8**	**57.3**		**2.21**
Lead	**7439-92-1**	**1.23**		**0.180**
Manganese	**7439-96-5**	**27.4**		**1.59**
Molybdenum	**7439-98-7**	**2.39**		**0.302**
Nickel	**7440-02-0**	**3.28**		**0.548**
Selenium	**7782-49-2**	**0.367**		**0.00754**
Thallium	**7440-28-0**	**0.00199**		**4.95E-4**
Vanadium	**7440-62-2**	**3.02**		**0.0445**
Zinc	7440-66-6	45.8	U	64.6

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051724-HM
Matrix: Air
Lab ID: 4052830-05RE1
Sample Volume: 1934.531 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 15:06

Comments: Q9543319 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	**7440-38-2**	**2.13**	LJ, QX	**0.00788**

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051724-HM
Matrix: Air
Lab ID: 4052830-06
Sample Volume: 2139.635 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 02:38

Comments: Q9543318 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0841**	SL	**0.0294**
Barium	**7440-39-3**	**1.69**		**0.814**
Beryllium	**7440-41-7**	**0.00535**		**0.00243**
Cadmium	7440-43-9	0.0364	U	0.0563
Chromium	**7440-47-3**	**2.08**		**1.68**
Cobalt	**7440-48-4**	**0.138**		**0.0332**
Copper	**7440-50-8**	**67.0**		**2.00**
Lead	**7439-92-1**	**1.06**		**0.163**
Manganese	**7439-96-5**	**4.35**		**1.44**
Molybdenum	**7439-98-7**	**1.97**		**0.273**
Nickel	**7440-02-0**	**0.734**		**0.496**
Selenium	**7782-49-2**	**0.303**		**0.00681**
Thallium	**7440-28-0**	**0.00141**		**4.48E-4**
Vanadium	**7440-62-2**	**0.405**		**0.0402**
Zinc	7440-66-6	28.2	U	58.4

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051724-HM
Matrix: Air
Lab ID: 4052830-06RE1
Sample Volume: 2139.635 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 15:17

Comments: Q9543318 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	1.28		0.00713

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051724-HM
Matrix: Air
Lab ID: 4052830-07
Sample Volume: 1950.459 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 02:55

Comments: Q9543317 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0793**	SL	**0.0322**
Barium	**7440-39-3**	**2.65**		**0.893**
Beryllium	**7440-41-7**	**0.00856**		**0.00267**
Cadmium	7440-43-9	0.0376	U	0.0618
Chromium	**7440-47-3**	**2.32**		**1.84**
Cobalt	**7440-48-4**	**0.332**		**0.0364**
Copper	**7440-50-8**	**25.3**		**2.19**
Lead	**7439-92-1**	**0.408**		**0.179**
Manganese	**7439-96-5**	**6.65**		**1.58**
Molybdenum	**7439-98-7**	**1.27**		**0.299**
Nickel	**7440-02-0**	**1.27**		**0.544**
Selenium	**7782-49-2**	**0.306**		**0.00747**
Thallium	**7440-28-0**	**0.00139**		**4.91E-4**
Vanadium	**7440-62-2**	**0.790**		**0.0441**
Zinc	7440-66-6	32.6	U	64.1

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051724-HM
Matrix: Air
Lab ID: 4052830-07RE1
Sample Volume: 1950.459 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 15:27
Comments: Q9543317 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.321		0.00782

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051724-HM
Matrix: Air
Lab ID: 4052830-08
Sample Volume: 1846.553 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 03:09

Comments: Q9543316 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0944**	SL	**0.0340**
Barium	**7440-39-3**	**2.05**		**0.943**
Beryllium	**7440-41-7**	**0.00557**		**0.00282**
Cadmium	**7440-43-9**	**0.0702**		**0.0653**
Chromium	**7440-47-3**	**1.95**		**1.95**
Cobalt	**7440-48-4**	**0.190**		**0.0384**
Copper	**7440-50-8**	**40.3**		**2.32**
Lead	**7439-92-1**	**0.835**		**0.189**
Manganese	**7439-96-5**	**4.82**		**1.67**
Molybdenum	**7439-98-7**	**1.73**		**0.316**
Nickel	**7440-02-0**	**0.765**		**0.574**
Selenium	**7782-49-2**	**0.317**		**0.00789**
Thallium	**7440-28-0**	**0.00137**		**5.19E-4**
Vanadium	**7440-62-2**	**0.462**		**0.0466**
Zinc	7440-66-6	30.5	U	67.7

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051724-HM
Matrix: Air
Lab ID: 4052830-08RE1
Sample Volume: 1846.553 m³
Filter ID:
Sampled: 05/17/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 15:38
Comments: Q9543316 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.472		0.00826

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-051724-HM
Matrix: Air
Lab ID: 4052830-09
Sample Volume: 1934.531 m³
Filter ID:
Sampled: 05/17/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 03:25

Comments: Q9543312 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0120	SL, U	0.0325
Barium	7440-39-3	0.430	U	0.900
Beryllium	7440-41-7	8.88E-4	U	0.00269
Cadmium	7440-43-9	0.00657	U	0.0623
Chromium	7440-47-3	1.19	U	1.86
Cobalt	7440-48-4	0.0244	U	0.0367
Copper	7440-50-8	1.24	U	2.21
Lead	7439-92-1	0.0333	U	0.180
Manganese	7439-96-5	0.146	U	1.59
Molybdenum	7439-98-7	0.217	U	0.302
Nickel	7440-02-0	0.257	U	0.548
Selenium	7782-49-2	ND	U	0.00754
Thallium	7440-28-0	1.21E-4	U	4.95E-4
Vanadium	7440-62-2	0.0194	U	0.0445
Zinc	7440-66-6	21.7	U	64.6

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-051724-HM
Matrix: Air
Lab ID: 4052830-09RE1
Sample Volume: 1934.531 m³
Filter ID:
Sampled: 05/17/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 16:30

Comments: Q9543312 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.00279	U	0.00788

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051824-HM
Matrix: Air
Lab ID: 4052830-10
Sample Volume: 1829.679 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 04:32

Comments: Q9543315 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.106**	SL	**0.0343**
Barium	**7440-39-3**	**3.43**		**0.951**
Beryllium	**7440-41-7**	**0.00863**		**0.00285**
Cadmium	7440-43-9	0.0272	U	0.0659
Chromium	**7440-47-3**	**2.78**		**1.97**
Cobalt	**7440-48-4**	**0.387**		**0.0388**
Copper	**7440-50-8**	**153**		**2.34**
Lead	**7439-92-1**	**0.513**		**0.190**
Manganese	**7439-96-5**	**9.39**		**1.68**
Molybdenum	**7439-98-7**	**5.32**		**0.319**
Nickel	**7440-02-0**	**1.58**		**0.580**
Selenium	**7782-49-2**	**0.326**		**0.00797**
Thallium	**7440-28-0**	**0.00134**	QB-04	**5.24E-4**
Vanadium	**7440-62-2**	**1.32**		**0.0470**
Zinc	7440-66-6	27.6	U	68.3

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051824-HM
Matrix: Air
Lab ID: 4052830-10RE1
Sample Volume: 1829.679 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 16:40

Comments: Q9543315 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.371		0.00833

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051824-HM
Matrix: Air
Lab ID: 4052830-11
Sample Volume: 1945.953 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 04:48

Comments: Q9543313 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0682**	SL	**0.0323**
Barium	**7440-39-3**	**1.93**		**0.895**
Beryllium	**7440-41-7**	**0.00574**		**0.00268**
Cadmium	7440-43-9	0.0172	U	0.0620
Chromium	**7440-47-3**	**1.98**		**1.85**
Cobalt	**7440-48-4**	**0.150**		**0.0365**
Copper	**7440-50-8**	**32.7**		**2.20**
Lead	**7439-92-1**	**0.556**		**0.179**
Manganese	**7439-96-5**	**4.51**		**1.58**
Molybdenum	**7439-98-7**	**1.41**		**0.300**
Nickel	**7440-02-0**	**0.990**		**0.545**
Selenium	**7782-49-2**	**0.324**		**0.00749**
Thallium	**7440-28-0**	**0.00117**	QB-04	**4.92E-4**
Vanadium	**7440-62-2**	**0.709**		**0.0442**
Zinc	7440-66-6	21.1	U	64.2

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051824-HM
Matrix: Air
Lab ID: 4052830-11RE1
Sample Volume: 1945.953 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 16:50

Comments: Q9543313 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.298		0.00783

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051824-HM
Matrix: Air
Lab ID: 4052830-12
Sample Volume: 1943.122 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 05:03

Comments: Q9543311 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0551**	SL	**0.0323**
Barium	**7440-39-3**	**2.88**		**0.896**
Beryllium	**7440-41-7**	**0.0153**		**0.00268**
Cadmium	7440-43-9	0.0215	U	0.0620
Chromium	**7440-47-3**	**2.69**		**1.85**
Cobalt	**7440-48-4**	**0.456**		**0.0365**
Copper	**7440-50-8**	**21.1**		**2.20**
Lead	**7439-92-1**	**0.306**		**0.179**
Manganese	**7439-96-5**	**9.73**		**1.58**
Molybdenum	**7439-98-7**	**0.927**		**0.301**
Nickel	**7440-02-0**	**1.58**		**0.546**
Selenium	**7782-49-2**	**0.327**		**0.00750**
Thallium	**7440-28-0**	**0.00128**	QB-04	**4.93E-4**
Vanadium	**7440-62-2**	**1.28**		**0.0443**
Zinc	7440-66-6	30.2	U	64.3

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051824-HM
Matrix: Air
Lab ID: 4052830-12RE1
Sample Volume: 1943.122 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:01

Comments: Q9543311 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.221		0.00785

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051824-HM
Matrix: Air
Lab ID: 4052830-13
Sample Volume: 1751.718 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 05:18

Comments: Q9543310 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.196**	SL	**0.0359**
Barium	**7440-39-3**	**4.63**		**0.994**
Beryllium	**7440-41-7**	**0.00921**		**0.00297**
Cadmium	7440-43-9	0.0397	U	0.0688
Chromium	**7440-47-3**	**2.61**		**2.05**
Cobalt	**7440-48-4**	**0.335**		**0.0405**
Copper	**7440-50-8**	**33.0**		**2.44**
Lead	**7439-92-1**	**1.51**		**0.199**
Manganese	**7439-96-5**	**8.84**		**1.76**
Molybdenum	**7439-98-7**	**0.998**		**0.333**
Nickel	**7440-02-0**	**1.25**		**0.606**
Selenium	**7782-49-2**	**0.311**		**0.00832**
Thallium	**7440-28-0**	**0.00126**	QB-04	**5.47E-4**
Vanadium	**7440-62-2**	**1.06**		**0.0491**
Zinc	7440-66-6	40.5	U	71.3

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ATTN: Ms. Chelsea Saber
PHONE: (703) 885-5495 **FAX:**

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051824-HM
Matrix: Air
Lab ID: 4052830-13RE1
Sample Volume: 1751.718 m³
Filter ID:
Sampled: 05/18/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:11

Comments: Q9543310 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.618		0.00870

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-051924-HM
Matrix: Air
Lab ID: 4052830-14
Sample Volume: 1914.695 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/30/24 18:12

Comments: Q8504028 - MS/MSD - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.103**	SL	**0.0328**
Arsenic	**7440-38-2**	**1.10**		**0.00796**
Barium	**7440-39-3**	**3.82**		**0.909**
Beryllium	**7440-41-7**	**0.00753**		**0.00272**
Cadmium	7440-43-9	0.0144	U	0.0630
Chromium	**7440-47-3**	**2.37**		**1.88**
Cobalt	**7440-48-4**	**0.310**		**0.0370**
Copper	**7440-50-8**	**150**	QM-4X	**2.23**
Lead	**7439-92-1**	**0.507**		**0.182**
Manganese	**7439-96-5**	**8.65**		**1.61**
Molybdenum	**7439-98-7**	**5.15**		**0.305**
Nickel	**7440-02-0**	**1.35**		**0.554**
Selenium	**7782-49-2**	**0.252**		**0.00761**
Thallium	**7440-28-0**	**0.00166**	QB-04	**5.00E-4**
Vanadium	**7440-62-2**	**1.36**		**0.0450**
Zinc	7440-66-6	29.5	U	65.3

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051924-HM
Matrix: Air
Lab ID: 4052830-15
Sample Volume: 2090.067 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 05:35

Comments: Q8504026 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0709**	SL	**0.0300**
Barium	**7440-39-3**	**2.23**		**0.833**
Beryllium	**7440-41-7**	**0.00412**		**0.00249**
Cadmium	7440-43-9	0.0124	U	0.0577
Chromium	**7440-47-3**	**1.93**		**1.72**
Cobalt	**7440-48-4**	**0.115**		**0.0339**
Copper	**7440-50-8**	**32.5**		**2.05**
Lead	**7439-92-1**	**0.544**		**0.167**
Manganese	**7439-96-5**	**3.66**		**1.47**
Molybdenum	**7439-98-7**	**1.34**		**0.279**
Nickel	**7440-02-0**	**1.22**		**0.508**
Selenium	**7782-49-2**	**0.250**		**0.00697**
Thallium	**7440-28-0**	**0.00121**	QB-04	**4.59E-4**
Vanadium	**7440-62-2**	**0.790**		**0.0412**
Zinc	7440-66-6	25.7	U	59.8

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: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-051924-HM
Matrix: Air
Lab ID: 4052830-15RE1
Sample Volume: 2090.067 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:21
Comments: Q8504026 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.345		0.00729

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051924-HM
Matrix: Air
Lab ID: 4052830-16
Sample Volume: 2100.478 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 05:50

Comments: Q8504025 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0679**	SL	**0.0299**
Barium	**7440-39-3**	**2.83**		**0.829**
Beryllium	**7440-41-7**	**0.00684**		**0.00248**
Cadmium	7440-43-9	0.00856	U	0.0574
Chromium	**7440-47-3**	**1.89**		**1.71**
Cobalt	**7440-48-4**	**0.281**		**0.0338**
Copper	**7440-50-8**	**20.1**		**2.04**
Lead	**7439-92-1**	**0.318**		**0.166**
Manganese	**7439-96-5**	**6.35**		**1.46**
Molybdenum	**7439-98-7**	**0.844**		**0.278**
Nickel	**7440-02-0**	**1.21**		**0.505**
Selenium	**7782-49-2**	**0.208**		**0.00694**
Thallium	**7440-28-0**	**0.00124**	QB-04	**4.56E-4**
Vanadium	**7440-62-2**	**0.953**		**0.0410**
Zinc	7440-66-6	18.8	U	59.5

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-051924-HM
Matrix: Air
Lab ID: 4052830-16RE1
Sample Volume: 2100.478 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:32
Comments: Q8504025 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.166		0.00726

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051924-HM
Matrix: Air
Lab ID: 4052830-17
Sample Volume: 1857.392 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 06:06

Comments: Q8504024 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.125**	SL	**0.0338**
Barium	**7440-39-3**	**3.21**		**0.937**
Beryllium	**7440-41-7**	**0.00447**		**0.00280**
Cadmium	7440-43-9	0.0174	U	0.0649
Chromium	7440-47-3	1.75	U	1.94
Cobalt	**7440-48-4**	**0.144**		**0.0382**
Copper	**7440-50-8**	**33.4**		**2.30**
Lead	**7439-92-1**	**0.753**		**0.187**
Manganese	**7439-96-5**	**4.50**		**1.66**
Molybdenum	**7439-98-7**	**1.16**		**0.314**
Nickel	**7440-02-0**	**0.953**		**0.571**
Selenium	**7782-49-2**	**0.214**		**0.00785**
Thallium	**7440-28-0**	**0.00129**	QB-04	**5.16E-4**
Vanadium	**7440-62-2**	**0.718**		**0.0463**
Zinc	7440-66-6	28.2	U	67.3

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-051924-HM
Matrix: Air
Lab ID: 4052830-17RE1
Sample Volume: 1857.392 m³
Filter ID:
Sampled: 05/19/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:42
Comments: Q8504024 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.516		0.00821

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-051924-HM
Matrix: Air
Lab ID: 4052830-18
Sample Volume: 1914.695 m³
Filter ID:
Sampled: 05/19/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 06:22

Comments: Q9543307 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0176	SL, U	0.0328
Barium	7440-39-3	0.453	U	0.909
Beryllium	7440-41-7	7.43E-4	U	0.00272
Cadmium	7440-43-9	0.00408	U	0.0630
Chromium	7440-47-3	1.31	U	1.88
Cobalt	7440-48-4	0.0256	U	0.0370
Copper	7440-50-8	1.61	U	2.23
Lead	7439-92-1	0.0836	U	0.182
Manganese	7439-96-5	0.206	U	1.61
Molybdenum	7439-98-7	0.197	U	0.305
Nickel	7440-02-0	0.328	U	0.554
Selenium	7782-49-2	ND	U	0.00761
Thallium	7440-28-0	1.65E-4	QB-04, U	5.00E-4
Vanadium	7440-62-2	0.0269	U	0.0450
Zinc	7440-66-6	27.8	U	65.3

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-051924-HM
Matrix: Air
Lab ID: 4052830-18RE1
Sample Volume: 1914.695 m³
Filter ID:
Sampled: 05/19/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 17:53

Comments: Q9543307 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.00753	U	0.00796

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052024-HM
Matrix: Air
Lab ID: 4052830-19
Sample Volume: 1950.586 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 06:36

Comments: Q8504023 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0983**	SL	**0.0322**
Barium	**7440-39-3**	**3.74**		**0.892**
Beryllium	**7440-41-7**	**0.00678**		**0.00267**
Cadmium	7440-43-9	0.0157	U	0.0618
Chromium	**7440-47-3**	**2.56**		**1.84**
Cobalt	**7440-48-4**	**0.312**		**0.0364**
Copper	**7440-50-8**	**198**		**2.19**
Lead	**7439-92-1**	**0.556**		**0.178**
Manganese	**7439-96-5**	**8.19**		**1.58**
Molybdenum	**7439-98-7**	**6.23**		**0.299**
Nickel	**7440-02-0**	**1.45**		**0.544**
Selenium	**7782-49-2**	**0.257**		**0.00747**
Thallium	**7440-28-0**	**0.00183**	QB-04	**4.91E-4**
Vanadium	**7440-62-2**	**1.34**		**0.0441**
Zinc	7440-66-6	28.0	U	64.1

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052024-HM
Matrix: Air
Lab ID: 4052830-19RE1
Sample Volume: 1950.586 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 18:03
Comments: Q8504023 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	2.27		0.00782

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052024-HM
Matrix: Air
Lab ID: 4052830-20
Sample Volume: 2104.136 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 06:51

Comments: Q8504022 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.104**	SL	**0.0298**
Barium	**7440-39-3**	**3.70**		**0.827**
Beryllium	**7440-41-7**	**0.00458**		**0.00247**
Cadmium	7440-43-9	0.0166	U	0.0573
Chromium	**7440-47-3**	**2.20**		**1.71**
Cobalt	**7440-48-4**	**0.130**		**0.0337**
Copper	**7440-50-8**	**35.3**		**2.03**
Lead	**7439-92-1**	**0.625**		**0.165**
Manganese	**7439-96-5**	**3.94**		**1.46**
Molybdenum	**7439-98-7**	**1.35**		**0.278**
Nickel	**7440-02-0**	**1.36**		**0.504**
Selenium	**7782-49-2**	**0.281**		**0.00693**
Thallium	**7440-28-0**	**0.00199**	QB-04	**4.55E-4**
Vanadium	**7440-62-2**	**0.974**		**0.0409**
Zinc	7440-66-6	25.1	U	59.4

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Tetra Tech, Inc.
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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052024-HM
Matrix: Air
Lab ID: 4052830-20RE1
Sample Volume: 2104.136 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 18:55

Comments: Q8504022 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.631		0.00725

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-052024-HM
Matrix: Air
Lab ID: 4052830-21
Sample Volume: 1837.386 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/30/24 22:14

Comments: Q8504021 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0835**	SL	**0.0342**
Arsenic	**7440-38-2**	**0.245**		**0.00830**
Barium	**7440-39-3**	**3.27**		**0.947**
Beryllium	**7440-41-7**	**0.00743**		**0.00283**
Cadmium	7440-43-9	0.0119	U	0.0656
Chromium	**7440-47-3**	**2.04**		**1.96**
Cobalt	**7440-48-4**	**0.290**		**0.0386**
Copper	**7440-50-8**	**39.0**		**2.33**
Lead	**7439-92-1**	**0.438**		**0.189**
Manganese	**7439-96-5**	**6.87**		**1.67**
Molybdenum	**7439-98-7**	**1.80**		**0.318**
Nickel	**7440-02-0**	**1.28**		**0.577**
Selenium	**7782-49-2**	**0.276**		**0.00793**
Thallium	**7440-28-0**	**0.00190**		**5.22E-4**
Vanadium	**7440-62-2**	**1.23**		**0.0468**
Zinc	7440-66-6	25.2	U	68.0

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-052024-HM
Matrix: Air
Lab ID: 4052830-22
Sample Volume: 1891.321 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 08:18

Comments: Q9543308 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0768**	SL	**0.0332**
Barium	**7440-39-3**	**2.45**		**0.920**
Beryllium	**7440-41-7**	**0.00610**		**0.00275**
Cadmium	7440-43-9	0.0147	U	0.0637
Chromium	7440-47-3	1.77	U	1.90
Cobalt	**7440-48-4**	**0.180**		**0.0375**
Copper	**7440-50-8**	**26.8**		**2.26**
Lead	**7439-92-1**	**0.593**		**0.184**
Manganese	**7439-96-5**	**5.30**		**1.63**
Molybdenum	**7439-98-7**	**1.05**		**0.309**
Nickel	**7440-02-0**	**0.890**		**0.561**
Selenium	**7782-49-2**	**0.249**		**0.00771**
Thallium	**7440-28-0**	**0.00178**	QB-04	**5.07E-4**
Vanadium	**7440-62-2**	**0.994**		**0.0455**
Zinc	7440-66-6	23.9	U	66.1

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-052024-HM
Matrix: Air
Lab ID: 4052830-22RE1
Sample Volume: 1891.321 m³
Filter ID:
Sampled: 05/20/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:05
Comments: Q9543308 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.364		0.00806

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052124-HM
Matrix: Air
Lab ID: 4052830-23
Sample Volume: 1880.131 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 08:33

Comments: Q9543306 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0804**	SL	**0.0334**
Barium	**7440-39-3**	**2.26**		**0.926**
Beryllium	**7440-41-7**	**0.00449**		**0.00277**
Cadmium	7440-43-9	0.0145	U	0.0641
Chromium	**7440-47-3**	**1.99**		**1.91**
Cobalt	**7440-48-4**	**0.163**		**0.0377**
Copper	**7440-50-8**	**164**		**2.28**
Lead	**7439-92-1**	**0.287**		**0.185**
Manganese	**7439-96-5**	**4.12**		**1.64**
Molybdenum	**7439-98-7**	**5.90**		**0.311**
Nickel	**7440-02-0**	**0.856**		**0.564**
Selenium	**7782-49-2**	**0.191**		**0.00775**
Thallium	**7440-28-0**	**0.00130**	QB-04	**5.10E-4**
Vanadium	**7440-62-2**	**0.840**		**0.0458**
Zinc	7440-66-6	27.7	U	66.5

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052124-HM
Matrix: Air
Lab ID: 4052830-23RE1
Sample Volume: 1880.131 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:16
Comments: Q9543306 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.189		0.00811

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052124-HM
Matrix: Air
Lab ID: 4052830-24
Sample Volume: 2300.935 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 08:48

Comments: Q8504018 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.108**	SL	**0.0273**
Barium	**7440-39-3**	**3.46**		**0.757**
Beryllium	**7440-41-7**	**0.00618**		**0.00226**
Cadmium	7440-43-9	0.0139	U	0.0524
Chromium	**7440-47-3**	**2.07**		**1.56**
Cobalt	**7440-48-4**	**0.240**		**0.0308**
Copper	**7440-50-8**	**27.7**		**1.86**
Lead	**7439-92-1**	**0.432**		**0.151**
Manganese	**7439-96-5**	**6.38**		**1.34**
Molybdenum	**7439-98-7**	**1.04**		**0.254**
Nickel	**7440-02-0**	**1.39**		**0.461**
Selenium	**7782-49-2**	**0.160**		**0.00634**
Thallium	**7440-28-0**	**0.00104**	QB-04	**4.16E-4**
Vanadium	**7440-62-2**	**0.942**		**0.0374**
Zinc	7440-66-6	19.0	U	54.3

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052124-HM
Matrix: Air
Lab ID: 4052830-24RE1
Sample Volume: 2300.935 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:26

Comments: Q8504018 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.383		0.00663

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-052124-HM
Matrix: Air
Lab ID: 4052830-25
Sample Volume: 1778.319 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 09:02

Comments: Q8504017 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0808**	SL	**0.0353**
Barium	**7440-39-3**	**4.44**		**0.979**
Beryllium	**7440-41-7**	**0.0136**		**0.00293**
Cadmium	7440-43-9	0.0104	U	0.0678
Chromium	**7440-47-3**	**3.00**		**2.02**
Cobalt	**7440-48-4**	**0.530**		**0.0399**
Copper	**7440-50-8**	**38.3**		**2.41**
Lead	**7439-92-1**	**0.987**		**0.196**
Manganese	**7439-96-5**	**12.0**		**1.73**
Molybdenum	**7439-98-7**	**2.13**		**0.328**
Nickel	**7440-02-0**	**1.80**		**0.597**
Selenium	**7782-49-2**	**0.212**		**0.00820**
Thallium	**7440-28-0**	**0.00151**	QB-04	**5.39E-4**
Vanadium	**7440-62-2**	**1.75**		**0.0484**
Zinc	7440-66-6	20.6	U	70.3

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-052124-HM
Matrix: Air
Lab ID: 4052830-25RE1
Sample Volume: 1778.319 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:36

Comments: Q8504017 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.252		0.00857

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-052124-HM
Matrix: Air
Lab ID: 4052830-26
Sample Volume: 1842.662 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 09:16

Comments: Q8504015 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.117**	SL	**0.0341**
Barium	**7440-39-3**	**4.92**		**0.945**
Beryllium	**7440-41-7**	**0.0122**		**0.00283**
Cadmium	7440-43-9	0.0189	U	0.0654
Chromium	**7440-47-3**	**2.54**		**1.95**
Cobalt	**7440-48-4**	**0.386**		**0.0385**
Copper	**7440-50-8**	**23.3**		**2.32**
Lead	**7439-92-1**	**1.16**		**0.189**
Manganese	**7439-96-5**	**11.6**		**1.67**
Molybdenum	**7439-98-7**	**0.975**		**0.317**
Nickel	**7440-02-0**	**1.48**		**0.576**
Selenium	**7782-49-2**	**0.225**		**0.00791**
Thallium	**7440-28-0**	**0.00141**	QB-04	**5.20E-4**
Vanadium	**7440-62-2**	**1.39**		**0.0467**
Zinc	7440-66-6	26.2	U	67.8

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-052124-HM
Matrix: Air
Lab ID: 4052830-26RE1
Sample Volume: 1842.662 m³
Filter ID:
Sampled: 05/21/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:47
Comments: Q8504015 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.414		0.00827

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-052124-HM
Matrix: Air
Lab ID: 4052830-27
Sample Volume: 1880.131 m³
Filter ID:
Sampled: 05/21/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 09:33

Comments: Q8504012 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	7440-36-0	0.0164	SL, U	0.0334
Barium	**7440-39-3**	**1.22**	FB-01	**0.926**
Beryllium	7440-41-7	8.00E-4	U	0.00277
Cadmium	7440-43-9	0.00188	U	0.0641
Chromium	7440-47-3	1.05	U	1.91
Cobalt	7440-48-4	0.0110	U	0.0377
Copper	7440-50-8	0.460	U	2.28
Lead	7439-92-1	0.0309	U	0.185
Manganese	7439-96-5	0.179	U	1.64
Molybdenum	7439-98-7	0.163	U	0.311
Nickel	7440-02-0	0.465	U	0.564
Selenium	7782-49-2	0.00157	U	0.00775
Thallium	7440-28-0	1.23E-4	QB-04, U	5.10E-4
Vanadium	7440-62-2	0.0214	U	0.0458
Zinc	7440-66-6	14.4	U	66.5

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-052124-HM
Matrix: Air
Lab ID: 4052830-27RE1
Sample Volume: 1880.131 m³
Filter ID:
Sampled: 05/21/24 00:00
Received: 05/28/24 13:27
Analysis Date: 05/31/24 19:57

Comments: Q8504012 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.00383	U	0.00811

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052224-HM
Matrix: Air
Lab ID: 4052830-28
Sample Volume: 1914.695 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 09:46

Comments: Q8504014 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0816**	SL	**0.0328**
Barium	**7440-39-3**	**6.64**		**0.909**
Beryllium	**7440-41-7**	**0.0236**		**0.00272**
Cadmium	7440-43-9	0.0456	U	0.0630
Chromium	**7440-47-3**	**5.72**		**1.88**
Cobalt	**7440-48-4**	**1.29**		**0.0370**
Copper	**7440-50-8**	**176**		**2.23**
Lead	**7439-92-1**	**0.669**		**0.182**
Manganese	**7439-96-5**	**29.7**		**1.61**
Molybdenum	**7439-98-7**	**8.28**		**0.305**
Nickel	**7440-02-0**	**3.60**		**0.554**
Selenium	**7782-49-2**	**0.284**		**0.00761**
Thallium	**7440-28-0**	**0.00191**	QB-04	**5.00E-4**
Vanadium	**7440-62-2**	**3.58**		**0.0450**
Zinc	7440-66-6	22.9	U	65.3

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-052224-HM
Matrix: Air
Lab ID: 4052830-28RE1
Sample Volume: 1914.695 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 20:07

Comments: Q8504014 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	**7440-38-2**	**0.842**	LJ, QX	**0.00796**

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052224-HM
Matrix: Air
Lab ID: 4052830-29
Sample Volume: 2081.718 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 10:04

Comments: Q8504011 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0960**	SL	**0.0302**
Barium	**7440-39-3**	**4.40**		**0.836**
Beryllium	**7440-41-7**	**0.00950**		**0.00250**
Cadmium	7440-43-9	0.0170	U	0.0579
Chromium	**7440-47-3**	**2.75**		**1.73**
Cobalt	**7440-48-4**	**0.304**		**0.0341**
Copper	**7440-50-8**	**30.5**		**2.06**
Lead	**7439-92-1**	**0.641**		**0.167**
Manganese	**7439-96-5**	**10.1**		**1.48**
Molybdenum	**7439-98-7**	**1.25**		**0.281**
Nickel	**7440-02-0**	**1.53**		**0.510**
Selenium	**7782-49-2**	**0.211**		**0.00700**
Thallium	**7440-28-0**	**0.00138**	QB-04	**4.60E-4**
Vanadium	**7440-62-2**	**1.11**		**0.0413**
Zinc	7440-66-6	21.2	U	60.0

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Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-052224-HM
Matrix: Air
Lab ID: 4052830-29RE1
Sample Volume: 2081.718 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 20:18

Comments: Q8504011 - Received in good condition - nonhomogenous

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	7440-38-2	0.971		0.00732

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-052224-HM
Matrix: Air
Lab ID: 4052830-30
Sample Volume: 1793.281 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 10:20

Comments: Q8504009 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0814**	SL	**0.0350**
Barium	**7440-39-3**	**5.12**		**0.971**
Beryllium	**7440-41-7**	**0.0531**		**0.00290**
Cadmium	7440-43-9	0.00971	U	0.0672
Chromium	**7440-47-3**	**3.23**		**2.01**
Cobalt	**7440-48-4**	**0.678**		**0.0396**
Copper	**7440-50-8**	**24.5**		**2.39**
Lead	**7439-92-1**	**0.554**		**0.194**
Manganese	**7439-96-5**	**15.1**		**1.71**
Molybdenum	**7439-98-7**	**1.74**		**0.326**
Nickel	**7440-02-0**	**2.00**		**0.592**
Selenium	**7782-49-2**	**0.261**		**0.00813**
Thallium	**7440-28-0**	**0.00162**	QB-04	**5.34E-4**
Vanadium	**7440-62-2**	**1.67**		**0.0480**
Zinc	7440-66-6	17.0	U	69.7

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-052224-HM
Matrix: Air
Lab ID: 4052830-30RE1
Sample Volume: 1793.281 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 20:28

Comments: Q8504009 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Arsenic	**7440-38-2**	**0.292**	LJ, QX	**0.00850**

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-052224-HM
Matrix: Air
Lab ID: 4052830-31
Sample Volume: 1858.983 m³
Filter ID:
Sampled: 05/22/24 23:59
Received: 05/28/24 13:27
Analysis Date: 05/31/24 11:30

Comments: Q8504005 - Received in good condition

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0964**	SL	**0.0338**
Arsenic	**7440-38-2**	**0.497**		**0.00820**
Barium	**7440-39-3**	**4.57**		**0.936**
Beryllium	**7440-41-7**	**0.0122**		**0.00280**
Cadmium	7440-43-9	0.0150	U	0.0649
Chromium	**7440-47-3**	**2.60**		**1.93**
Cobalt	**7440-48-4**	**0.369**		**0.0382**
Copper	**7440-50-8**	**26.8**		**2.30**
Lead	**7439-92-1**	**0.834**		**0.187**
Manganese	**7439-96-5**	**11.4**		**1.65**
Molybdenum	**7439-98-7**	**1.36**		**0.314**
Nickel	**7440-02-0**	**1.29**		**0.571**
Selenium	**7782-49-2**	**0.211**		**0.00784**
Thallium	**7440-28-0**	**0.00142**		**5.15E-4**
Vanadium	**7440-62-2**	**1.32**		**0.0463**
Zinc	7440-66-6	20.3	U	67.2

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Blank (2405091-CCB1)				Prepared & Analyzed: 05/30/24						
Antimony	0.669		ng/l							
Arsenic	12.1		ng/l							
Barium	8.13		ng/l							
Beryllium	-0.174		ng/l							U
Cadmium	0.681		ng/l							
Chromium	7.55		ng/l							
Cobalt	1.88		ng/l							
Copper	394		ng/l							
Lead	13.4		ng/l							
Manganese	19.8		ng/l							
Molybdenum	22.4		ng/l							
Nickel	6.65		ng/l							
Selenium	-7.92		ng/l							U
Thallium	1.36		ng/l							QB-04
Vanadium	-28.8		ng/l							U
Zinc	-279		ng/l							U
Calibration Blank (2405091-CCB2)				Prepared & Analyzed: 05/30/24						
Antimony	0.149		ng/l							
Arsenic	13.3		ng/l							
Barium	2.40		ng/l							
Beryllium	0.217		ng/l							
Cadmium	0.0497		ng/l							
Chromium	1.39		ng/l							
Cobalt	0.523		ng/l							
Copper	191		ng/l							
Lead	3.57		ng/l							
Manganese	7.71		ng/l							
Molybdenum	6.15		ng/l							
Nickel	3.37		ng/l							
Selenium	-7.73		ng/l							U
Thallium	1.13		ng/l							
Vanadium	-24.9		ng/l							U
Zinc	-304		ng/l							U
Calibration Blank (2405091-CCB3)				Prepared: 05/30/24 Analyzed: 05/31/24						
Antimony	0.321		ng/l							
Arsenic	15.8		ng/l							
Barium	3.05		ng/l							
Beryllium	-0.125		ng/l							U

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FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Blank (2405091-CCB3) Contin				Prepared: 05/30/24 Analyzed: 05/31/24						
Cadmium	0.228		ng/l							
Chromium	2.76		ng/l							
Cobalt	0.544		ng/l							
Copper	150		ng/l							
Lead	3.13		ng/l							
Manganese	8.66		ng/l							
Molybdenum	6.73		ng/l							
Nickel	1.85		ng/l							
Selenium	0.185		ng/l							
Thallium	1.10		ng/l							
Vanadium	-33.6		ng/l							U
Zinc	-297		ng/l							U
Calibration Blank (2405091-CCB4)				Prepared: 05/30/24 Analyzed: 05/31/24						
Antimony	-0.0153		ng/l							U
Arsenic	21.4		ng/l							QB-04
Barium	2.04		ng/l							
Beryllium	-0.481		ng/l							U
Cadmium	0.172		ng/l							
Chromium	3.40		ng/l							
Cobalt	0.746		ng/l							
Copper	125		ng/l							
Lead	3.30		ng/l							
Manganese	9.21		ng/l							
Molybdenum	4.99		ng/l							
Nickel	4.25		ng/l							
Selenium	5.03		ng/l							
Thallium	0.917		ng/l							
Vanadium	-31.7		ng/l							U
Zinc	-296		ng/l							U
Calibration Blank (2405091-CCB5)				Prepared: 05/30/24 Analyzed: 05/31/24						
Antimony	0.321		ng/l							
Arsenic	17.9		ng/l							QB-04
Barium	2.43		ng/l							
Beryllium	-0.511		ng/l							U
Cadmium	0.137		ng/l							
Chromium	2.57		ng/l							
Cobalt	0.630		ng/l							
Copper	124		ng/l							

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: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Blank (2405091-CCB5) Contin				Prepared: 05/30/24 Analyzed: 05/31/24						
Lead	3.38		ng/l							
Manganese	9.97		ng/l							
Molybdenum	7.40		ng/l							
Nickel	4.04		ng/l							
Selenium	3.33		ng/l							
Thallium	1.49		ng/l							QB-04
Vanadium	-37.9		ng/l							U
Zinc	-316		ng/l							U
Calibration Blank (2405091-CCB6)				Prepared: 05/30/24 Analyzed: 05/31/24						
Antimony	-0.173		ng/l							U
Arsenic	17.3		ng/l							
Barium	2.45		ng/l							
Beryllium	-1.10		ng/l							U
Cadmium	0.0916		ng/l							
Chromium	1.93		ng/l							
Cobalt	0.531		ng/l							
Copper	45.2		ng/l							
Lead	2.27		ng/l							
Manganese	7.52		ng/l							
Molybdenum	5.31		ng/l							
Nickel	3.62		ng/l							
Selenium	-2.45		ng/l							U
Thallium	0.933		ng/l							
Vanadium	-42.5		ng/l							U
Zinc	-312		ng/l							U
Calibration Blank (2405091-CCB7)				Prepared: 05/30/24 Analyzed: 05/31/24						
Antimony	0.944		ng/l							
Arsenic	16.6		ng/l							
Barium	4.75		ng/l							
Beryllium	-0.518		ng/l							U
Cadmium	0.202		ng/l							
Chromium	4.07		ng/l							
Cobalt	1.09		ng/l							
Copper	106		ng/l							
Lead	6.60		ng/l							
Manganese	12.6		ng/l							
Molybdenum	20.7		ng/l							
Nickel	3.51		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Blank (2405091-CCB7) Contin				Prepared: 05/30/24 Analyzed: 05/31/24						
Selenium	-9.14		ng/l							U
Thallium	2.89		ng/l							QB-04
Vanadium	-51.5		ng/l							U
Zinc	-280		ng/l							U
Calibration Check (2405091-CCV1)				Prepared & Analyzed: 05/30/24						
Antimony	20100		ng/l	20000		100	90-110			
Arsenic	19800		ng/l	20000		98.9	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4960		ng/l	5000.0		99.2	90-110			
Cadmium	20000		ng/l	20000		100	90-110			
Chromium	234000		ng/l	240000		97.4	90-110			
Cobalt	50800		ng/l	50000		102	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Lead	197000		ng/l	200000		98.4	90-110			
Manganese	491000		ng/l	500000		98.2	90-110			
Molybdenum	49400		ng/l	50000		98.8	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20000		ng/l	20000		99.9	90-110			
Thallium	488		ng/l	500.00		97.6	90-110			
Vanadium	19500		ng/l	20000		97.3	90-110			
Zinc	503000		ng/l	500000		101	90-110			
Calibration Check (2405091-CCV2)				Prepared & Analyzed: 05/30/24						
Antimony	20200		ng/l	20000		101	90-110			
Arsenic	19700		ng/l	20000		98.7	90-110			
Barium	200000		ng/l	200000		99.8	90-110			
Beryllium	4980		ng/l	5000.0		99.7	90-110			
Cadmium	20000		ng/l	20000		100	90-110			
Chromium	233000		ng/l	240000		97.0	90-110			
Cobalt	50500		ng/l	50000		101	90-110			
Copper	2.01E6		ng/l	2.0000E6		100	90-110			
Lead	197000		ng/l	200000		98.6	90-110			
Manganese	491000		ng/l	500000		98.3	90-110			
Molybdenum	49500		ng/l	50000		99.1	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	19800		ng/l	20000		99.2	90-110			
Thallium	477		ng/l	500.00		95.3	90-110			
Vanadium	19200		ng/l	20000		96.2	90-110			
Zinc	505000		ng/l	500000		101	90-110			

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

Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2405091 - B4E2906

Calibration Check (2405091-CCV3)				Prepared: 05/30/24	Analyzed: 05/31/24					
Antimony	20400		ng/l	20000		102	90-110			
Arsenic	19900		ng/l	20000		99.6	90-110			
Barium	199000		ng/l	200000		99.3	90-110			
Beryllium	4920		ng/l	5000.0		98.4	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	236000		ng/l	240000		98.4	90-110			
Cobalt	50700		ng/l	50000		101	90-110			
Copper	2.03E6		ng/l	2.0000E6		101	90-110			
Lead	197000		ng/l	200000		98.5	90-110			
Manganese	495000		ng/l	500000		99.0	90-110			
Molybdenum	49800		ng/l	50000		99.5	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	19800		ng/l	20000		99.2	90-110			
Thallium	469		ng/l	500.00		93.9	90-110			
Vanadium	19500		ng/l	20000		97.5	90-110			
Zinc	510000		ng/l	500000		102	90-110			
Calibration Check (2405091-CCV4)				Prepared: 05/30/24	Analyzed: 05/31/24					
Antimony	20700		ng/l	20000		103	90-110			
Arsenic	20200		ng/l	20000		101	90-110			
Barium	208000		ng/l	200000		104	90-110			
Beryllium	5000		ng/l	5000.0		100	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	238000		ng/l	240000		99.3	90-110			
Cobalt	51300		ng/l	50000		103	90-110			
Copper	2.07E6		ng/l	2.0000E6		103	90-110			
Lead	202000		ng/l	200000		101	90-110			
Manganese	504000		ng/l	500000		101	90-110			
Molybdenum	50800		ng/l	50000		102	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Selenium	20300		ng/l	20000		101	90-110			
Thallium	473		ng/l	500.00		94.5	90-110			
Vanadium	19700		ng/l	20000		98.5	90-110			
Zinc	525000		ng/l	500000		105	90-110			
Calibration Check (2405091-CCV5)				Prepared: 05/30/24	Analyzed: 05/31/24					
Antimony	21000		ng/l	20000		105	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	210000		ng/l	200000		105	90-110			
Beryllium	4950		ng/l	5000.0		99.0	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Check (2405091-CCV5) Contin					Prepared: 05/30/24 Analyzed: 05/31/24					
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	237000		ng/l	240000		98.7	90-110			
Cobalt	51400		ng/l	50000		103	90-110			
Copper	2.06E6		ng/l	2.0000E6		103	90-110			
Lead	203000		ng/l	200000		102	90-110			
Manganese	503000		ng/l	500000		101	90-110			
Molybdenum	51400		ng/l	50000		103	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Thallium	481		ng/l	500.00		96.2	90-110			
Vanadium	19600		ng/l	20000		97.9	90-110			
Zinc	521000		ng/l	500000		104	90-110			
Calibration Check (2405091-CCV6)					Prepared: 05/30/24 Analyzed: 05/31/24					
Antimony	21000		ng/l	20000		105	90-110			
Arsenic	20600		ng/l	20000		103	90-110			
Barium	214000		ng/l	200000		107	90-110			
Beryllium	5050		ng/l	5000.0		101	90-110			
Cadmium	20700		ng/l	20000		103	90-110			
Chromium	240000		ng/l	240000		100	90-110			
Cobalt	52000		ng/l	50000		104	90-110			
Copper	2.11E6		ng/l	2.0000E6		105	90-110			
Lead	204000		ng/l	200000		102	90-110			
Manganese	516000		ng/l	500000		103	90-110			
Molybdenum	52600		ng/l	50000		105	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Thallium	472		ng/l	500.00		94.5	90-110			
Vanadium	19500		ng/l	20000		97.6	90-110			
Zinc	533000		ng/l	500000		107	90-110			
Calibration Check (2405091-CCV7)					Prepared: 05/30/24 Analyzed: 05/31/24					
Antimony	20700		ng/l	20000		103	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	214000		ng/l	200000		107	90-110			
Beryllium	4970		ng/l	5000.0		99.4	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	242000		ng/l	240000		101	90-110			
Cobalt	52200		ng/l	50000		104	90-110			
Copper	2.12E6		ng/l	2.0000E6		106	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Calibration Check (2405091-CCV7) Contin					Prepared: 05/30/24 Analyzed: 05/31/24					
Lead	204000		ng/l	200000		102	90-110			
Manganese	516000		ng/l	500000		103	90-110			
Molybdenum	52800		ng/l	50000		106	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Selenium	20100		ng/l	20000		100	90-110			
Thallium	470		ng/l	500.00		94.0	90-110			
Vanadium	19600		ng/l	20000		98.0	90-110			
Zinc	532000		ng/l	500000		106	90-110			
High Cal Check (2405091-HCV1)					Prepared & Analyzed: 05/30/24					
Antimony	40900		ng/l	40000		102	95-105			
Arsenic	39900		ng/l	40000		99.9	95-105			
Barium	405000		ng/l	400000		101	95-105			
Beryllium	10200		ng/l	10000		102	95-105			
Cadmium	40400		ng/l	40000		101	95-105			
Chromium	478000		ng/l	480000		99.5	95-105			
Cobalt	99000		ng/l	100000		99.0	95-105			
Copper	3.95E6		ng/l	4.0000E6		98.7	95-105			
Lead	401000		ng/l	400000		100	95-105			
Manganese	999000		ng/l	1.0000E6		99.9	95-105			
Molybdenum	99800		ng/l	100000		99.8	95-105			
Nickel	238000		ng/l	240000		99.1	95-105			
Selenium	40100		ng/l	40000		100	95-105			
Thallium	1000		ng/l	1000.0		100	95-105			
Vanadium	39700		ng/l	40000		99.2	95-105			
Zinc	999000		ng/l	1.0000E6		99.9	95-105			
Initial Cal Blank (2405091-ICB1)					Prepared & Analyzed: 05/30/24					
Antimony	0.581		ng/l							
Arsenic	4.71		ng/l							
Barium	0.884		ng/l							
Beryllium	-0.250		ng/l							U
Cadmium	-0.0988		ng/l							U
Chromium	0.144		ng/l							
Cobalt	0.218		ng/l							
Copper	327		ng/l							
Lead	13.8		ng/l							
Manganese	4.19		ng/l							
Molybdenum	7.40		ng/l							
Nickel	-1.20		ng/l							U

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Initial Cal Blank (2405091-ICB1) Continu				Prepared & Analyzed: 05/30/24						
Selenium	-6.10		ng/l							U
Thallium	1.11		ng/l							
Vanadium	-31.7		ng/l							U
Zinc	-282		ng/l							U
Initial Cal Check (2405091-ICV1)				Prepared & Analyzed: 05/30/24						
Antimony	19900		ng/l	20000		99.3	90-110			
Arsenic	19400		ng/l	20000		97.1	90-110			
Barium	199000		ng/l	200000		99.6	90-110			
Beryllium	5090		ng/l	5000.0		102	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	235000		ng/l	240000		97.9	90-110			
Cobalt	50100		ng/l	50000		100	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Lead	198000		ng/l	200000		99.0	90-110			
Manganese	489000		ng/l	500000		97.7	90-110			
Molybdenum	49400		ng/l	50000		98.7	90-110			
Nickel	120000		ng/l	120000		99.8	90-110			
Selenium	20300		ng/l	20000		102	90-110			
Thallium	509		ng/l	500.00		102	90-110			
Vanadium	19700		ng/l	20000		98.5	90-110			
Zinc	508000		ng/l	500000		102	90-110			
Interference Check A (2405091-IFA1)				Prepared & Analyzed: 05/30/24						
Antimony	0.00		ng/l				80-120			U
Arsenic	0.00		ng/l				80-120			U
Barium	0.00		ng/l				80-120			U
Beryllium	0.00		ng/l				80-120			U
Cadmium	0.00		ng/l				80-120			U
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U
Lead	0.00		ng/l				80-120			U
Manganese	0.00		ng/l				80-120			U
Molybdenum	296000		ng/l	300000		98.7	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405091 - B4E2906										
Interference Check B (2405091-IFB1)					Prepared & Analyzed: 05/30/24					
Antimony	21000		ng/l	20000		105	80-120			
Arsenic	20700		ng/l	20000		103	80-120			
Barium	205000		ng/l	200000		103	80-120			
Beryllium	4820		ng/l	5000.0		96.4	80-120			
Cadmium	20200		ng/l	20000		101	80-120			
Chromium	230000		ng/l	240000		95.8	80-120			
Cobalt	49900		ng/l	50000		99.7	80-120			
Copper	1.89E6		ng/l	2.0000E6		94.7	80-120			
Lead	208000		ng/l	200000		104	80-120			
Manganese	501000		ng/l	500000		100	80-120			
Molybdenum	350000		ng/l	350000		99.9	80-120			
Nickel	117000		ng/l	120000		97.6	80-120			
Selenium	19300		ng/l	20000		96.3	80-120			
Thallium	527		ng/l	500.00		105	80-120			
Vanadium	19500		ng/l	20000		97.5	80-120			
Zinc	483000		ng/l	500000		96.7	80-120			
Batch 2405094 - B4E2906										
Calibration Blank (2405094-CCB1)					Prepared & Analyzed: 05/31/24					
Arsenic	0.487		ng/l							
Calibration Blank (2405094-CCB2)					Prepared & Analyzed: 05/31/24					
Arsenic	0.514		ng/l							
Calibration Blank (2405094-CCB3)					Prepared & Analyzed: 05/31/24					
Arsenic	1.26		ng/l							
Calibration Blank (2405094-CCB4)					Prepared & Analyzed: 05/31/24					
Arsenic	1.39		ng/l							
Calibration Check (2405094-CCV1)					Prepared & Analyzed: 05/31/24					
Arsenic	19700		ng/l	20000		98.6	90-110			
Calibration Check (2405094-CCV2)					Prepared & Analyzed: 05/31/24					
Arsenic	19600		ng/l	20000		98.1	90-110			
Calibration Check (2405094-CCV3)					Prepared & Analyzed: 05/31/24					
Arsenic	19700		ng/l	20000		98.5	90-110			
Calibration Check (2405094-CCV4)					Prepared & Analyzed: 05/31/24					
Arsenic	20100		ng/l	20000		101	90-110			
High Cal Check (2405094-HCV1)					Prepared & Analyzed: 05/31/24					
Arsenic	40000		ng/l	40000		100	95-105			
Initial Cal Blank (2405094-ICB1)					Prepared & Analyzed: 05/31/24					

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

FILE #: 4205.00.003.001
REPORTED: 06/04/24 14:44
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AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2405094 - B4E2906										
Initial Cal Blank (2405094-ICB1) Continu					Prepared & Analyzed: 05/31/24					
Arsenic	0.592		ng/l							
Initial Cal Check (2405094-ICV1)					Prepared & Analyzed: 05/31/24					
Arsenic	19500		ng/l	20000		97.5	90-110			
Interference Check A (2405094-IFA1)					Prepared & Analyzed: 05/31/24					
Arsenic	0.00		ng/l				80-120			U
Interference Check B (2405094-IFB1)					Prepared & Analyzed: 05/31/24					
Arsenic	20400		ng/l	20000		102	80-120			
Batch B4E2906 - ICP-MS Extraction										
Blank (B4E2906-BLK1)					Prepared: 05/29/24 Analyzed: 05/30/24					
Antimony	ND	0.0386	ng/m³ Air							SL, U
Arsenic	ND	0.00937	ng/m³ Air							U
Barium	ND	1.07	ng/m³ Air							U
Beryllium	ND	0.00320	ng/m³ Air							U
Cadmium	ND	0.0741	ng/m³ Air							U
Chromium	ND	2.21	ng/m³ Air							U
Cobalt	ND	0.0436	ng/m³ Air							U
Copper	ND	2.63	ng/m³ Air							U
Lead	ND	0.214	ng/m³ Air							U
Manganese	ND	1.89	ng/m³ Air							U
Molybdenum	ND	0.359	ng/m³ Air							U
Nickel	ND	0.652	ng/m³ Air							U
Selenium	ND	0.00896	ng/m³ Air							U
Thallium	ND	5.89E-4	ng/m³ Air							QB-04, U
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4E2906-BS1)					Prepared: 05/29/24 Analyzed: 05/30/24					
Antimony	0.793	0.0386	ng/m³ Air	1.3829		57.3	80-120			SL
Arsenic	2.69	0.00937	ng/m³ Air	2.7658		97.3	80-120			
Barium	28.5	1.07	ng/m³ Air	27.658		103	80-120			
Beryllium	1.33	0.00320	ng/m³ Air	1.3829		95.9	80-120			
Cadmium	1.31	0.0741	ng/m³ Air	1.3829		94.6	80-120			
Chromium	15.1	2.21	ng/m³ Air	13.829		109	80-120			
Cobalt	1.41	0.0436	ng/m³ Air	1.3829		102	80-120			
Copper	28.9	2.63	ng/m³ Air	27.658		104	80-120			
Lead	13.6	0.214	ng/m³ Air	13.829		98.2	80-120			
Manganese	8.36	1.89	ng/m³ Air	8.2975		101	80-120			
Molybdenum	1.49	0.359	ng/m³ Air	1.3829		107	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
LCS (B4E2906-BS1) Continued				Prepared: 05/29/24 Analyzed: 05/30/24						
Nickel	3.19	0.652	ng/m³ Air	2.7658		115	80-120			
Selenium	2.71	0.00896	ng/m³ Air	2.7658		97.9	80-120			
Thallium	0.134	5.89E-4	ng/m³ Air	0.13829		97.1	80-120			QB-04
Vanadium	2.67	0.0529	ng/m³ Air	2.7658		96.5	80-120			
Zinc	137	76.8	ng/m³ Air	82.975		165	80-120			
LCS (B4E2906-BS2)				Prepared: 05/29/24 Analyzed: 05/30/24						
Antimony	0.771	0.0386	ng/m³ Air	1.3829		55.7	80-120			SL
Arsenic	2.72	0.00937	ng/m³ Air	2.7658		98.4	80-120			
Barium	28.6	1.07	ng/m³ Air	27.658		103	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.6	80-120			
Cadmium	1.34	0.0741	ng/m³ Air	1.3829		97.0	80-120			
Chromium	15.2	2.21	ng/m³ Air	13.829		110	80-120			
Cobalt	1.42	0.0436	ng/m³ Air	1.3829		103	80-120			
Copper	29.3	2.63	ng/m³ Air	27.658		106	80-120			
Lead	13.7	0.214	ng/m³ Air	13.829		99.0	80-120			
Manganese	8.42	1.89	ng/m³ Air	8.2975		102	80-120			
Molybdenum	1.52	0.359	ng/m³ Air	1.3829		110	80-120			
Nickel	3.22	0.652	ng/m³ Air	2.7658		116	80-120			
Selenium	2.74	0.00896	ng/m³ Air	2.7658		99.0	80-120			
Thallium	0.136	5.89E-4	ng/m³ Air	0.13829		98.5	80-120			
Vanadium	2.71	0.0529	ng/m³ Air	2.7658		98.0	80-120			
Zinc	130	76.8	ng/m³ Air	82.975		157	80-120			
Duplicate (B4E2906-DUP1)		**Source: 4052830-14**		Prepared: 05/29/24 Analyzed: 05/30/24						
Antimony	0.106	0.0328	ng/m³ Air		0.103			3.22	10	SL
Arsenic	1.13	0.00796	ng/m³ Air		1.10			2.78	10	
Barium	3.91	0.909	ng/m³ Air		3.82			2.50	10	
Beryllium	0.00773	0.00272	ng/m³ Air		0.00753			2.60	10	
Cadmium	ND	0.0630	ng/m³ Air		ND				10	U
Chromium	2.50	1.88	ng/m³ Air		2.37			5.36	10	
Cobalt	0.327	0.0370	ng/m³ Air		0.310			5.57	10	
Copper	158	2.23	ng/m³ Air		150			5.15	10	
Lead	0.443	0.182	ng/m³ Air		0.507			13.4	10	
Manganese	9.06	1.61	ng/m³ Air		8.65			4.68	10	
Molybdenum	5.40	0.305	ng/m³ Air		5.15			4.82	10	
Nickel	1.51	0.554	ng/m³ Air		1.35			11.0	10	
Selenium	0.270	0.00761	ng/m³ Air		0.252			6.82	10	
Thallium	0.00164	5.00E-4	ng/m³ Air		0.00166			1.22	10	QB-04
Vanadium	1.40	0.0450	ng/m³ Air		1.36			2.84	10	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Duplicate (B4E2906-DUP1) Continued			**Source: 4052830-14**		Prepared: 05/29/24		Analyzed: 05/30/24			
Zinc	ND	65.3	ng/m³ Air		ND				10	U
Duplicate (B4E2906-DUP2)			**Source: 4052830-21**		Prepared: 05/29/24		Analyzed: 05/30/24			
Antimony	0.0802	0.0342	ng/m³ Air		0.0835			4.10	10	SL
Arsenic	0.251	0.00830	ng/m³ Air		0.245			2.27	10	
Barium	3.28	0.947	ng/m³ Air		3.27			0.304	10	
Beryllium	0.00850	0.00283	ng/m³ Air		0.00743			13.4	10	
Cadmium	ND	0.0656	ng/m³ Air		ND				10	U
Chromium	2.11	1.96	ng/m³ Air		2.04			3.42	10	
Cobalt	0.305	0.0386	ng/m³ Air		0.290			4.80	10	
Copper	40.2	2.33	ng/m³ Air		39.0			3.19	10	
Lead	0.497	0.189	ng/m³ Air		0.438			12.8	10	
Manganese	7.10	1.67	ng/m³ Air		6.87			3.41	10	
Molybdenum	1.87	0.318	ng/m³ Air		1.80			3.87	10	
Nickel	1.32	0.577	ng/m³ Air		1.28			3.17	10	
Selenium	0.268	0.00793	ng/m³ Air		0.276			2.89	10	
Thallium	0.00195	5.22E-4	ng/m³ Air		0.00190			2.98	10	
Vanadium	1.27	0.0468	ng/m³ Air		1.23			3.64	10	
Zinc	ND	68.0	ng/m³ Air		ND				10	U
Duplicate (B4E2906-DUP3)			**Source: 4052830-02**		Prepared: 05/29/24		Analyzed: 05/31/24			
Antimony	0.0569	0.0304	ng/m³ Air		0.0571			0.412	10	SL
Arsenic	0.571	0.00737	ng/m³ Air		0.577			1.03	10	QB-04
Barium	0.968	0.842	ng/m³ Air		0.961			0.712	10	
Beryllium	ND	0.00252	ng/m³ Air		0.00284				10	U
Cadmium	ND	0.0583	ng/m³ Air		ND				10	U
Chromium	ND	1.74	ng/m³ Air		ND				10	U
Cobalt	0.0750	0.0343	ng/m³ Air		0.0750			0.0558	10	
Copper	37.5	2.07	ng/m³ Air		37.4			0.299	10	
Lead	0.357	0.168	ng/m³ Air		0.360			0.669	10	
Manganese	2.05	1.49	ng/m³ Air		2.06			0.196	10	
Molybdenum	1.35	0.282	ng/m³ Air		1.35			0.203	10	
Nickel	ND	0.513	ng/m³ Air		ND				10	U
Selenium	0.198	0.00705	ng/m³ Air		0.200			0.823	10	
Thallium	0.00107	4.63E-4	ng/m³ Air		0.00113			5.62	10	
Vanadium	0.200	0.0416	ng/m³ Air		0.198			1.05	10	
Zinc	ND	60.4	ng/m³ Air		ND				10	U
Duplicate (B4E2906-DUP4)			**Source: 4052830-31**		Prepared: 05/29/24		Analyzed: 05/31/24			
Antimony	0.0982	0.0338	ng/m³ Air		0.0964			1.89	10	SL
Arsenic	0.501	0.00820	ng/m³ Air		0.497			0.824	10	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Duplicate (B4E2906-DUP4) Continued		**Source: 4052830-31**		Prepared: 05/29/24	Analyzed: 05/31/24					
Barium	4.55	0.936	ng/m³ Air		4.57			0.414	10	
Beryllium	0.0119	0.00280	ng/m³ Air		0.0122			1.97	10	
Cadmium	ND	0.0649	ng/m³ Air		ND				10	U
Chromium	2.61	1.93	ng/m³ Air		2.60			0.617	10	
Cobalt	0.373	0.0382	ng/m³ Air		0.369			1.10	10	
Copper	27.0	2.30	ng/m³ Air		26.8			0.872	10	
Lead	0.833	0.187	ng/m³ Air		0.834			0.164	10	
Manganese	11.5	1.65	ng/m³ Air		11.4			0.898	10	
Molybdenum	1.35	0.314	ng/m³ Air		1.36			0.672	10	
Nickel	1.31	0.571	ng/m³ Air		1.29			1.51	10	
Selenium	0.226	0.00784	ng/m³ Air		0.211			6.92	10	
Thallium	0.00140	5.15E-4	ng/m³ Air		0.00142			1.36	10	
Vanadium	1.32	0.0463	ng/m³ Air		1.32			0.218	10	
Zinc	ND	67.2	ng/m³ Air		ND				10	U
Duplicate (B4E2906-DUP5)		**Source: 4052830-02R**		Prepared: 05/29/24	Analyzed: 05/31/24					
Arsenic	0.561	0.00737	ng/m³ Air		0.555			0.924	10	
Matrix Spike (B4E2906-MS1)		**Source: 4052830-14**		Prepared: 05/29/24	Analyzed: 05/30/24					
Antimony	0.757	0.0328	ng/m³ Air	1.1751	0.103	55.7	80-120			SL
Arsenic	3.29	0.00796	ng/m³ Air	2.3502	1.10	93.5	80-120			
Barium	26.8	0.909	ng/m³ Air	23.502	3.82	97.7	80-120			
Beryllium	1.20	0.00272	ng/m³ Air	1.1751	0.00753	101	80-120			
Cadmium	1.09	0.0630	ng/m³ Air	1.1751	ND	92.5	80-120			
Chromium	13.6	1.88	ng/m³ Air	11.751	2.37	95.9	80-120			
Cobalt	1.45	0.0370	ng/m³ Air	1.1751	0.310	97.0	80-120			
Copper	171	2.23	ng/m³ Air	23.502	150	89.3	80-120			
Lead	11.9	0.182	ng/m³ Air	11.751	0.507	96.7	80-120			
Manganese	15.2	1.61	ng/m³ Air	7.0507	8.65	92.5	80-120			
Molybdenum	6.16	0.305	ng/m³ Air	1.1751	5.15	86.2	80-120			
Nickel	3.55	0.554	ng/m³ Air	2.3502	1.35	93.8	80-120			
Selenium	2.50	0.00761	ng/m³ Air	2.3502	0.252	95.6	80-120			
Thallium	0.110	5.00E-4	ng/m³ Air	0.11751	0.00166	92.0	80-120			QB-04
Vanadium	3.51	0.0450	ng/m³ Air	2.3502	1.36	91.3	80-120			
Zinc	95.7	65.3	ng/m³ Air	70.507	ND	136	80-120			
Matrix Spike (B4E2906-MS2)		**Source: 4052830-21**		Prepared: 05/29/24	Analyzed: 05/30/24					
Antimony	0.799	0.0342	ng/m³ Air	1.2246	0.0835	58.5	80-120			SL
Arsenic	2.63	0.00830	ng/m³ Air	2.4491	0.245	97.4	80-120			
Barium	27.5	0.947	ng/m³ Air	24.491	3.27	99.0	80-120			
Beryllium	1.18	0.00283	ng/m³ Air	1.2246	0.00743	95.8	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Matrix Spike (B4E2906-MS2) Continued	**Source: 4052830-21**			Prepared: 05/29/24	Analyzed: 05/30/24					
Cadmium	1.20	0.0656	ng/m³ Air	1.2246	ND	97.7	80-120			
Chromium	14.2	1.96	ng/m³ Air	12.246	2.04	99.5	80-120			
Cobalt	1.54	0.0386	ng/m³ Air	1.2246	0.290	102	80-120			
Copper	64.9	2.33	ng/m³ Air	24.491	39.0	106	80-120			
Lead	12.8	0.189	ng/m³ Air	12.246	0.438	101	80-120			
Manganese	14.3	1.67	ng/m³ Air	7.3474	6.87	101	80-120			
Molybdenum	3.10	0.318	ng/m³ Air	1.2246	1.80	106	80-120			
Nickel	3.75	0.577	ng/m³ Air	2.4491	1.28	101	80-120			
Selenium	2.65	0.00793	ng/m³ Air	2.4491	0.276	96.7	80-120			
Thallium	0.120	5.22E-4	ng/m³ Air	0.12246	0.00190	96.6	80-120			
Vanadium	3.59	0.0468	ng/m³ Air	2.4491	1.23	96.5	80-120			
Zinc	98.7	68.0	ng/m³ Air	73.474	ND	134	80-120			
Matrix Spike Dup (B4E2906-MSD1)	**Source: 4052830-14**			Prepared: 05/29/24	Analyzed: 05/30/24					
Antimony	0.750	0.0328	ng/m³ Air	1.1751	0.103	55.1	80-120	0.942	20	SL
Arsenic	3.34	0.00796	ng/m³ Air	2.3502	1.10	95.6	80-120	1.50	20	
Barium	27.3	0.909	ng/m³ Air	23.502	3.82	99.8	80-120	1.84	20	
Beryllium	1.11	0.00272	ng/m³ Air	1.1751	0.00753	94.0	80-120	7.23	20	
Cadmium	1.11	0.0630	ng/m³ Air	1.1751	ND	94.3	80-120	1.85	20	
Chromium	13.9	1.88	ng/m³ Air	11.751	2.37	97.7	80-120	1.58	20	
Cobalt	1.48	0.0370	ng/m³ Air	1.1751	0.310	99.7	80-120	2.18	20	
Copper	169	2.23	ng/m³ Air	23.502	150	79.7	80-120	1.33	20	QM-4X
Lead	12.0	0.182	ng/m³ Air	11.751	0.507	97.4	80-120	0.729	20	
Manganese	15.3	1.61	ng/m³ Air	7.0507	8.65	94.9	80-120	1.10	20	
Molybdenum	6.28	0.305	ng/m³ Air	1.1751	5.15	96.2	80-120	1.89	20	
Nickel	3.62	0.554	ng/m³ Air	2.3502	1.35	96.7	80-120	1.89	20	
Selenium	2.48	0.00761	ng/m³ Air	2.3502	0.252	94.8	80-120	0.758	20	
Thallium	0.110	5.00E-4	ng/m³ Air	0.11751	0.00166	92.6	80-120	0.605	20	QB-04
Vanadium	3.56	0.0450	ng/m³ Air	2.3502	1.36	93.4	80-120	1.43	20	
Zinc	95.6	65.3	ng/m³ Air	70.507	ND	136	80-120	0.0785	20	
Matrix Spike Dup (B4E2906-MSD2)	**Source: 4052830-21**			Prepared: 05/29/24	Analyzed: 05/30/24					
Antimony	0.739	0.0342	ng/m³ Air	1.2246	0.0835	53.5	80-120	7.89	20	SL
Arsenic	2.67	0.00830	ng/m³ Air	2.4491	0.245	99.1	80-120	1.57	20	
Barium	27.3	0.947	ng/m³ Air	24.491	3.27	98.0	80-120	0.815	20	
Beryllium	1.23	0.00283	ng/m³ Air	1.2246	0.00743	99.6	80-120	3.87	20	
Cadmium	1.18	0.0656	ng/m³ Air	1.2246	ND	96.7	80-120	1.04	20	
Chromium	14.4	1.96	ng/m³ Air	12.246	2.04	101	80-120	0.964	20	
Cobalt	1.56	0.0386	ng/m³ Air	1.2246	0.290	104	80-120	1.29	20	
Copper	67.0	2.33	ng/m³ Air	24.491	39.0	114	80-120	3.15	20	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Matrix Spike Dup (B4E2906-MSD2) Contir		**Source: 4052830-21**			Prepared: 05/29/24		Analyzed: 05/30/24			
Lead	12.7	0.189	ng/m³ Air	12.246	0.438	99.9	80-120	1.11	20	
Manganese	14.4	1.67	ng/m³ Air	7.3474	6.87	102	80-120	0.562	20	
Molybdenum	3.16	0.318	ng/m³ Air	1.2246	1.80	111	80-120	1.82	20	
Nickel	3.74	0.577	ng/m³ Air	2.4491	1.28	101	80-120	0.231	20	
Selenium	2.60	0.00793	ng/m³ Air	2.4491	0.276	94.9	80-120	1.71	20	
Thallium	0.120	5.22E-4	ng/m³ Air	0.12246	0.00190	96.5	80-120	0.166	20	
Vanadium	3.63	0.0468	ng/m³ Air	2.4491	1.23	98.3	80-120	1.22	20	
Zinc	94.9	68.0	ng/m³ Air	73.474	ND	129	80-120	3.98	20	
Post Spike (B4E2906-PS1)		**Source: 4052830-14**			Prepared: 05/29/24		Analyzed: 05/30/24			
Antimony	0.337	0.0328	ng/m³ Air	0.23502	0.103	99.6	75-125			SL
Arsenic	2.21	0.00796	ng/m³ Air	1.1751	1.10	94.5	75-125			
Barium	6.10	0.909	ng/m³ Air	2.3502	3.82	97.3	75-125			
Beryllium	0.230	0.00272	ng/m³ Air	0.23502	0.00753	94.7	75-125			
Cadmium	0.132	0.0630	ng/m³ Air	0.11751	ND	112	75-125			
Chromium	3.49	1.88	ng/m³ Air	1.1751	2.37	95.7	75-125			
Cobalt	0.541	0.0370	ng/m³ Air	0.23502	0.310	98.3	75-125			
Copper	162	2.23	ng/m³ Air	11.751	150	103	75-125			
Lead	23.5	0.182	ng/m³ Air	23.502	0.507	97.7	75-125			
Manganese	10.8	1.61	ng/m³ Air	2.3502	8.65	92.3	75-125			
Molybdenum	6.29	0.305	ng/m³ Air	1.1751	5.15	97.3	75-125			
Nickel	3.66	0.554	ng/m³ Air	2.3502	1.35	98.2	75-125			
Selenium	1.39	0.00761	ng/m³ Air	1.1751	0.252	97.2	75-125			
Thallium	0.0581	5.00E-4	ng/m³ Air	5.8756E-2	0.00166	96.1	75-125			QB-04
Vanadium	2.46	0.0450	ng/m³ Air	1.1751	1.36	93.4	75-125			
Zinc	ND	65.3	ng/m³ Air	23.502	ND		75-125			U
Post Spike (B4E2906-PS2)		**Source: 4052830-21**			Prepared: 05/29/24		Analyzed: 05/30/24			
Antimony	0.335	0.0342	ng/m³ Air	0.24491	0.0835	103	75-125			SL
Arsenic	1.43	0.00830	ng/m³ Air	1.2246	0.245	96.7	75-125			
Barium	5.63	0.947	ng/m³ Air	2.4491	3.27	96.3	75-125			
Beryllium	0.246	0.00283	ng/m³ Air	0.24491	0.00743	97.4	75-125			
Cadmium	0.136	0.0656	ng/m³ Air	0.12246	ND	111	75-125			
Chromium	3.21	1.96	ng/m³ Air	1.2246	2.04	96.1	75-125			
Cobalt	0.535	0.0386	ng/m³ Air	0.24491	0.290	99.7	75-125			
Copper	51.7	2.33	ng/m³ Air	12.246	39.0	104	75-125			
Lead	25.0	0.189	ng/m³ Air	24.491	0.438	100	75-125			
Manganese	9.25	1.67	ng/m³ Air	2.4491	6.87	97.4	75-125			
Molybdenum	2.98	0.318	ng/m³ Air	1.2246	1.80	96.3	75-125			
Nickel	3.71	0.577	ng/m³ Air	2.4491	1.28	99.3	75-125			

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: 06/04/24 14:44
SUBMITTED: 05/28/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Post Spike (B4E2906-PS2) Continued		**Source: 4052830-21**		Prepared: 05/29/24 Analyzed: 05/30/24						
Selenium	1.44	0.00793	ng/m³ Air	1.2246	0.276	94.9	75-125			
Thallium	0.0629	5.22E-4	ng/m³ Air	6.1228E-2	0.00190	99.6	75-125			
Vanadium	2.39	0.0468	ng/m³ Air	1.2246	1.23	95.3	75-125			
Zinc	ND	68.0	ng/m³ Air	24.491	ND		75-125			U
Dilution Check (B4E2906-SRL1)		**Source: 4052830-14**		Prepared: 05/29/24 Analyzed: 05/30/24						
Antimony	ND	0.164	ng/m³ Air		ND				10	SL, U
Arsenic	1.09	0.0398	ng/m³ Air		1.10			0.625	10	
Barium	ND	4.55	ng/m³ Air		ND				10	U
Beryllium	ND	0.0136	ng/m³ Air		ND				10	U
Cadmium	ND	0.315	ng/m³ Air		ND				10	U
Chromium	ND	9.39	ng/m³ Air		ND				10	U
Cobalt	0.315	0.185	ng/m³ Air		0.310			1.61	10	
Copper	151	11.2	ng/m³ Air		150			1.00	10	
Lead	ND	0.909	ng/m³ Air		ND				10	U
Manganese	8.77	8.03	ng/m³ Air		8.65			1.46	10	
Molybdenum	5.12	1.53	ng/m³ Air		5.15			0.492	10	
Nickel	ND	2.77	ng/m³ Air		ND				10	U
Selenium	0.277	0.0381	ng/m³ Air		0.252			9.30	10	
Thallium	0.00447	0.00250	ng/m³ Air		ND			91.5	10	QB-04
Vanadium	1.35	0.225	ng/m³ Air		1.36			0.856	10	
Zinc	ND	326	ng/m³ Air		ND				10	U
Dilution Check (B4E2906-SRL2)		**Source: 4052830-21**		Prepared: 05/29/24 Analyzed: 05/30/24						
Antimony	ND	0.171	ng/m³ Air		ND				10	SL, U
Arsenic	0.254	0.0415	ng/m³ Air		0.245			3.46	10	
Barium	ND	4.74	ng/m³ Air		ND				10	U
Beryllium	ND	0.0142	ng/m³ Air		ND				10	U
Cadmium	ND	0.328	ng/m³ Air		ND				10	U
Chromium	ND	9.78	ng/m³ Air		ND				10	U
Cobalt	0.293	0.193	ng/m³ Air		0.290			0.860	10	
Copper	40.1	11.6	ng/m³ Air		39.0			2.92	10	
Lead	ND	0.947	ng/m³ Air		ND				10	U
Manganese	ND	8.37	ng/m³ Air		ND				10	U
Molybdenum	1.79	1.59	ng/m³ Air		1.80			0.731	10	
Nickel	ND	2.89	ng/m³ Air		ND				10	U
Selenium	0.256	0.0397	ng/m³ Air		0.276			7.61	10	
Thallium	0.00326	0.00261	ng/m³ Air		ND			52.9	10	
Vanadium	1.21	0.234	ng/m³ Air		1.23			1.43	10	
Zinc	ND	340	ng/m³ Air		ND				10	U

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AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4E2906 - ICP-MS Extraction										
Dilution Check (B4E2906-SRL3)				**Source: 4052830-02R**		Prepared: 05/29/24		Analyzed: 05/31/24		
Arsenic	0.553	0.0369	ng/m³ Air		0.555			0.370	10	

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AQS SITE CODE:
SITE CODE: Lahaina fires

Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
QM-4X	The MS/MSD recovery exceeds criteria because the parent sample concentration is greater than 4x the spike concentration.
QB-04	Analyte exceeds continuing calibration blank criteria
LJ	Identification of analyte is acceptable; reported value is an estimate.
FB-01	Analyte exceeds Field Blank criteria.
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

Stage 1 Data Verification Checklist – Metals

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 06/05/2024 and Shanna Vasser 06/06/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 05/16/2024 – 05/22/2024
Report No: 4052830

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

Discrepancies:

13. Field blank detections above the method detection limit were reported for barium in MFL-FB01-052124-HM.

Notes:

2. The laboratory stated that all samples were received in good condition. Samples MFL-AM02-051624-HM, MFL-AM04-051624-HM, MFL-AM01-051724-HM, MFL-AM02-051724-HM, MFL-AM01-051824-HM, MFL-AM02-051824-HM, MFL-AM03-051824-HM, MFL-AM04-051824-HM, MFL-AM02-052024-HM, MFL-AM01-052224-HM, and MFL-AM02-052224-HM were nonhomogeneous samples. There were no additional details; therefore, it is assumed the other samples met method criteria for analysis.