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

Lahaina, Maui

3/28/2024 – 4/3/2024

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 mph in a generally SSE direction.

Results for Community Locations:
Ambient air monitoring was performed to assess the presence of airborne particulates with a particle size diameter of 10 micrometers (µm), as this is the size that is recognized as being small enough to be inhaled into a person's lungs. This particle size diameter is recognized for health evaluations and is identified as "PM_{10}". Monitoring for PM_{10} was conducted 24 hours a day, 7 days a week at each of the following locations: Leialii Hawaiian Homelands (March 28-April 3), WW Pump Station #4 (March 28-April 3), Lahaina Intermediate School (March 28-April 3), Lahaina Boys & Girls Club (March 28-April 3).

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

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

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

- WW Pump Station #4 on April 1
- Lahaina Intermediate School on April 1

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 community sampling locations (see Table 1). 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 sampling according to the manufacturer's procedures.

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

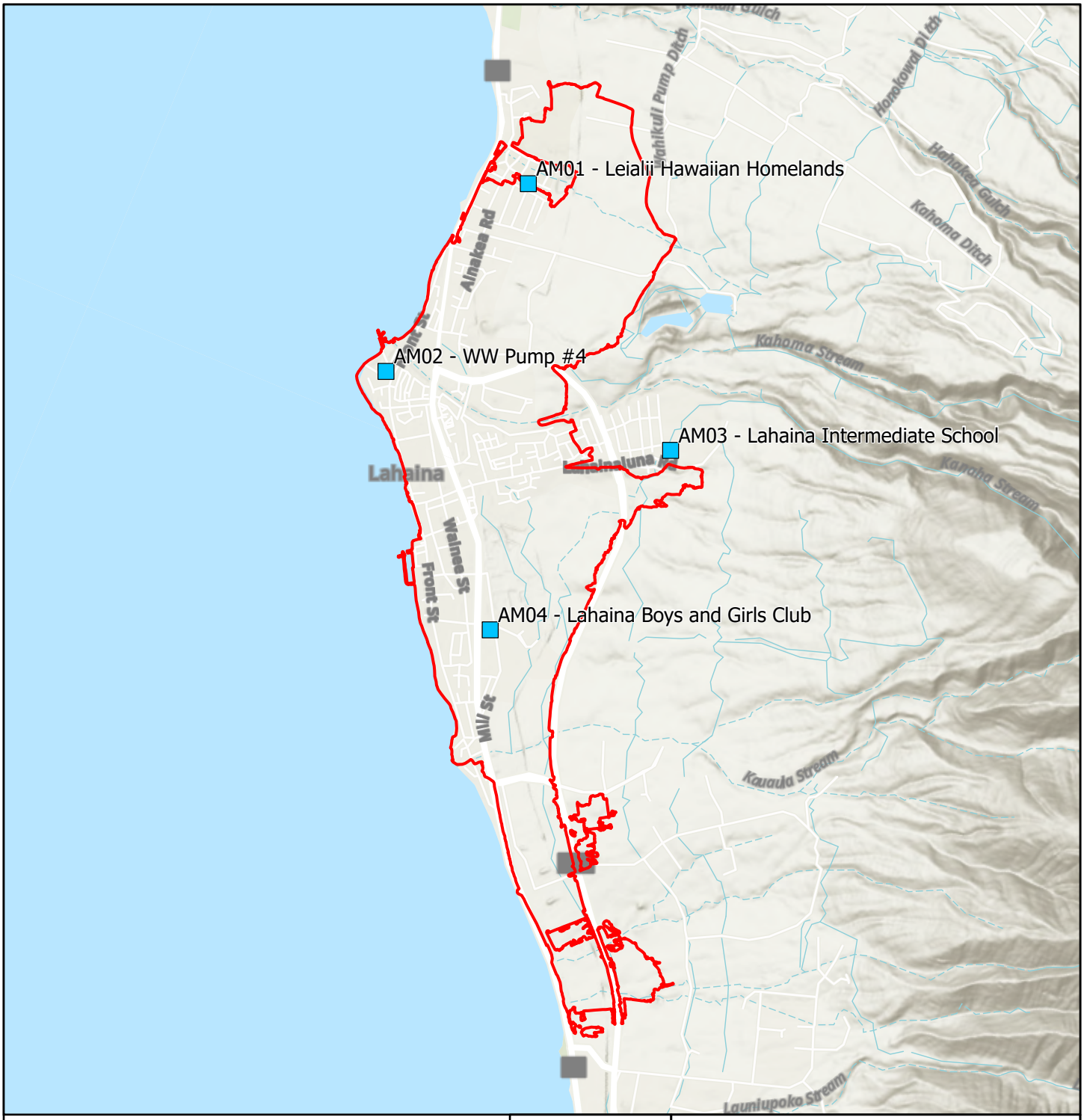
Tetra Tech is using Tisch Environmental High Volume Air Samplers, or equivalent, collocated with the real-time particulate monitors and asbestos samplers described above. Air samples for elemental metals at community locations are collected and analyzed in accordance with the following methods:

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

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

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

Attachments



Basemap: ESRI ArcGIS World Street Map

Table 1
HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results by Date
Maui Wildfire, Lahaina
3/28/2024-4/3/2024

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
3/28/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.0000622	0.000356	0.00403	0.00000918	ND	0.00198	0.000308	0.0312	0.000409	0.00980	0.00177	0.000968	0.000140	0.00000126	0.00107	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000173	0.000289	0.00584	0.0000122	ND	0.00198	0.000330	0.0307	0.000953	0.0107	0.00169	0.00137	0.000171	0.00000118	0.00128	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000885	0.000232	0.00442	0.0000409	ND	0.00278	0.000564	0.0332	0.000399	0.0147	0.00124	0.00163	0.000192	0.00000138	0.00165	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000108	0.000421	0.00357	0.00000786	ND	ND	0.000239	0.0251	0.000792	0.00761	0.00144	0.00102	0.000141	0.00000115	0.000857	ND
3/29/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000672	0.000895	0.00404	0.0000112	ND	0.00223	0.000291	0.0321	0.000574	0.0101	0.00191	0.00100	0.000198	0.00000244	0.000935	ND
	WW Pump Station #4 (AM-02)	<0.0027	0.000136	0.000395	0.00735	0.0000137	ND	0.00212	0.000355	0.0331	0.000873	0.0122	0.00200	0.00126	0.000247	0.00000264	0.00116	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000722	0.000277	0.00408	0.0000219	ND	0.00220	0.000397	0.0342	0.000571	0.0115	0.00126	0.00133	0.000230	0.00000250	0.00106	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000112	0.000372	0.00508	0.0000152	ND	ND	0.000393	0.0341	0.00111	0.0136	0.00214	0.00135	0.000224	0.00000269	0.00114	ND
3/30/2024	Leialii Hawaiian Homelands (AM-01)	<0.0024	0.0000687	0.000877	0.00381	0.0000131	ND	0.00267	0.000370	0.0320	0.000611	0.0126	0.00181	0.00108	0.000192	0.00000253	0.00122	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000248	0.00128	0.00695	0.0000125	ND	0.00249	0.000435	0.0379	0.00107	0.0135	0.00163	0.00159	0.000227	0.00000233	0.00137	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000621	0.000267	0.00396	0.0000181	ND	0.00206	0.000340	0.0382	0.000764	0.00966	0.00129	0.00108	0.000205	0.00000237	0.00103	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000119	0.000488	0.00545	0.0000123	ND	0.00247	0.000360	0.0332	0.00109	0.0126	0.00191	0.00137	0.000178	0.00000212	0.00111	ND
3/31/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000625	0.000450	0.00264	0.00000562	ND	ND	0.000184	0.0343	0.000295	0.00640	0.00207	0.000814	0.000133	0.00000105	0.000740	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000343	0.00395	0.00690	0.00000951	0.0000871	0.00324	0.000362	0.0424	0.00146	0.00991	0.00150	0.00125	0.000159	0.00000127	0.00115	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000511	0.000191	0.00176	0.00000715	ND	ND	0.000159	0.0324	0.000216	0.00452	0.00123	0.000833	0.000130	0.000000955	0.000609	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.0000815	0.000279	0.00262	0.00000430	ND	ND	0.000138	0.0279	0.000335	0.00451	0.00164	0.000753	0.000131	0.000000853	0.000578	ND
4/1/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000754	0.000642	0.00293	0.00000794	ND	0.00227	0.000329	0.0356	0.000393	0.00948	0.00219	0.00121	0.000135	0.000000848	0.00117	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000153	0.000938	0.00471	0.00000867	ND	0.00193	0.000319	0.0260	0.000957	0.00854	0.00156	0.00113	0.000145	0.000000832	0.00105	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000649	0.000173	0.00276	0.0000152	ND	0.00192	0.000325	0.0242	0.000228	0.00794	0.00149	0.00111	0.000146	0.000000795	0.000945	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000122	0.000421	0.00369	0.00000774	ND	0.00205	0.000299	0.0308	0.000681	0.00972	0.00186	0.00119	0.000131	0.000000919	0.000923	ND
4/2/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000767	0.000458	0.00329	0.00000748	ND	0.00209	0.000283	0.0443	0.000439	0.00834	0.00231	0.00121	0.000112	0.000000797	0.000806	ND
	WW Pump Station #4 (AM-02)	<0.0024	0.000159	0.00102	0.00659	0.0000134	ND	0.00273	0.000489	0.0360	0.00136	0.0139	0.00160	0.00177	0.000163	0.000000968	0.00141	ND
	Lahaina Intermediate School (AM-03)	<0.0024	0.0000893	0.000253	0.00362	0.0000214	ND	0.00240	0.000442	0.0316	0.000457	0.0102	0.00190	0.00140	0.000153	0.000000816	0.00109	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0024	0.000128	0.000410	0.00382	0.0000116	ND	0.00212	0.000321	0.0262	0.00133	0.00963	0.00152	0.00126	0.000137	0.000000766	0.000866	ND
4/3/2024	Leialii Hawaiian Homelands (AM-01)	<0.0030	0.0000808	0.000671	0.00375	0.00000682	ND	0.00218	0.000302	0.0580	0.000409	0.00995	0.00295	0.00114	0.000169	0.000000906	0.00112	ND
	WW Pump Station #4 (AM-02)	<0.0027	0.000169	0.000795	0.00604	0.0000133	ND	0.00236	0.000432	0.0358	0.00124	0.0140	0.00163	0.00140	0.000229	0.00000113	0.00157	ND
	Lahaina Intermediate School (AM-03)	<0.0027	0.0000775	0.000261	0.00499	0.0000322	ND	0.00314	0.000621	0.0380	0.000581	0.0151	0.00170	0.00179	0.000209	0.00000114	0.00174	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0027	0.000105	0.000388	0.00383	0.00000734	ND	0.00210	0.000325	0.0307	0.000937	0.0113	0.00214	0.00115	0.000176	0.00000111	0.00118	ND
95% Upper Confidence Limit[2]		NA	0.000130	0.000770	0.00494	0.0000160	NA	0.00246	0.000390	0.0360	0.000920	0.0113	0.00189	0.00132	0.000190	0.00000170	0.00121	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
3/28/2024 - 4/3/2024

Screening Level		**150 µg/m^3**
3/28/2024	Leialii Hawaiian Homelands (AM-01)	7.7
	WW Pump Station #4 (AM-02)	11
	Lahaina Intermediate School (AM-03)	10
	Lahaina Boys & Girls Club (AM-04)	9.2
3/29/2024	Leialii Hawaiian Homelands (AM-01)	8.5
	WW Pump Station #4 (AM-02)	10
	Lahaina Intermediate School (AM-03)	10
	Lahaina Boys & Girls Club (AM-04)	6.1
3/30/2024	Leialii Hawaiian Homelands (AM-01)	11
	WW Pump Station #4 (AM-02)	8.8
	Lahaina Intermediate School (AM-03)	7.3
	Lahaina Boys & Girls Club (AM-04)	6.7
3/31/2024	Leialii Hawaiian Homelands (AM-01)	6.5
	WW Pump Station #4 (AM-02)	5.7
	Lahaina Intermediate School (AM-03)	5.5
	Lahaina Boys & Girls Club (AM-04)	5.0
4/1/2024	Leialii Hawaiian Homelands (AM-01)	5.9
	WW Pump Station #4 (AM-02)	6.0
	Lahaina Intermediate School (AM-03)	5.8
	Lahaina Boys & Girls Club (AM-04)	4.7
4/2/2024	Leialii Hawaiian Homelands (AM-01)	6.7
	WW Pump Station #4 (AM-02)	7.2
	Lahaina Intermediate School (AM-03)	7.7
	Lahaina Boys & Girls Club (AM-04)	7.4
4/3/2024	Leialii Hawaiian Homelands (AM-01)	7.7
	WW Pump Station #4 (AM-02)	8.5
	Lahaina Intermediate School (AM-03)	7.6
	Lahaina Boys & Girls Club (AM-04)	8.8

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
Results for Lahaina Boys & Girls Club (AM-04) on 3/29 are based on a 14 hr TWA because of a power outage.
Results for Lahaina Boys & Girls Club (AM-04) on 3/30 are based on a 10 hr TWA because of a power outage.

Table 3
Maui Wildfire - Lahaina
Meteorological Data
3/28/2024-4/3/2024

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
3/28/2024	AM-01	Leialii Hawaiian Homelands	0.8	SE	80	55	763.1
3/28/2024	AM-02	WW Pump Station #4	0.9	S	78	62	765.4
3/28/2024	AM-03	Lahaina Intermediate School	1.1	SE	75	63	755.9
3/28/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	76	62	765.0
3/29/2024	AM-01	Leialii Hawaiian Homelands	1.0	ESE	79	55	763.0
3/29/2024	AM-02	WW Pump Station #4	1.0	SSE	78	60	765.3
3/29/2024	AM-03	Lahaina Intermediate School	1.1	SE	74	63	755.8
3/29/2024	AM-04	Lahaina Boys & Girls Club	0.5	SE	72	66	765.1
3/30/2024	AM-01	Leialii Hawaiian Homelands	0.9	SE	78	57	762.2
3/30/2024	AM-02	WW Pump Station #4	1.0	SSE	77	62	764.4
3/30/2024	AM-03	Lahaina Intermediate School	1.1	SE	73	65	754.9
3/30/2024	AM-04	Lahaina Boys & Girls Club	1.0	S	74	63	764.2
3/31/2024	AM-01	Leialii Hawaiian Homelands	0.9	ESE	79	59	761.4
3/31/2024	AM-02	WW Pump Station #4	1.0	SSE	77	65	763.7
3/31/2024	AM-03	Lahaina Intermediate School	1.1	SE	74	68	754.2
3/31/2024	AM-04	Lahaina Boys & Girls Club	1.1	S	75	66	763.5
4/1/2024	AM-01	Leialii Hawaiian Homelands	1.1	SE	77	65	761.2
4/1/2024	AM-02	WW Pump Station #4	1.0	SSE	77	67	763.5
4/1/2024	AM-03	Lahaina Intermediate School	1.0	SE	74	70	754.0
4/1/2024	AM-04	Lahaina Boys & Girls Club	1.1	S	75	67	763.2
4/2/2024	AM-01	Leialii Hawaiian Homelands	0.9	SSE	80	58	761.5
4/2/2024	AM-02	WW Pump Station #4	1.1	S	78	64	763.8
4/2/2024	AM-03	Lahaina Intermediate School	1.1	SSE	75	67	754.3
4/2/2024	AM-04	Lahaina Boys & Girls Club	1.3	S	76	64	763.5
4/3/2024	AM-01	Leialii Hawaiian Homelands	1.2	ESE	79	58	762.5
4/3/2024	AM-02	WW Pump Station #4	1.1	SSE	78	63	764.7
4/3/2024	AM-03	Lahaina Intermediate School	1.3	SE	75	65	755.2
4/3/2024	AM-04	Lahaina Boys & Girls Club	1.4	S	76	63	764.4

Notes:
°F - Fahrenheit
mBar - millibar

Table 3
Maui Wildfire - Lahaina
Meteorological Data
3/28/2024-4/3/2024

mph - miles per hour

Appendix 1

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

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

EMSL Order:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-032824-AB**

EMSL Sample Number:	042406809-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7383.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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
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EMSL Analytical, Inc.
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EMSL Order ID: 042406809
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: 042406809-0001 **Customer Sample:** MFL-AM01-032824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A1	J8	None Detected									
A1	I5	None Detected									
A2	H6	None Detected									
A2	G4	None Detected									
A3	B9	None Detected									

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

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EMSL Order:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-032824-AB**

EMSL Sample Number:	042406809-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7203.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0002 **Customer Sample:** MFL-AM02-032824-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A5	J5	None Detected									
A5	I4	None Detected									
A6	C6	None Detected									
A6	D7	None Detected									
A7	G2	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:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-032824-AB**

EMSL Sample Number:	042406809-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7243.6
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
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0003 **Customer Sample:** MFL-AM03-032824-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	A8	None Detected									
B1	C9	None Detected									
B2	I3	None Detected									
B2	H4	None Detected									
B3	D7	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**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-032824-AB**

EMSL Sample Number:	042406809-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7233.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0004 **Customer Sample:** MFL-AM04-032824-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	E7	None Detected									
B5	F9	None Detected									
B6	J8	None Detected									
B6	G7	None Detected									
B7	I5	None Detected									

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

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EMSL Order:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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1560 Broadway, Suite 1400
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Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
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Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024 & 04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-032824-AB**

EMSL Sample Number:	042406809-0005		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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	4			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**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: 042406809
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: 042406809-0005 **Customer Sample:** MFL-FB01-032824-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	B7	None Detected									
C5	D6	None Detected									
C6	A4	None Detected									
C6	C3	None Detected									
C7	J9	None Detected									
C7	J7	None Detected									
C7	H8	None Detected									
C7	H6	None Detected									
C8	B3	None Detected									
C8	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:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-032924-AB**

EMSL Sample Number:	042406809-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6534.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	10			
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

Robyn Ray
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EMSL Order ID: 042406809
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: 042406809-0006 **Customer Sample:** MFL-AM01-032924-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	B4	None Detected									
D1	C6	None Detected									
D2	J9	None Detected									
D2	H10	None Detected									
D3	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:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/05/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-032924-AB**

EMSL Sample Number:	042406809-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7018.2
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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	10			
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: 042406809
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: 042406809-0007 **Customer Sample:** MFL-AM02-032924-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	J7	None Detected									
D5	H6	None Detected									
D6	A5	None Detected									
D6	B4	None Detected									
D7	F2	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:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-032924-AB**

EMSL Sample Number:	042406809-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7197.8
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	10			
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: 042406809
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: 042406809-0008 **Customer Sample:** MFL-AM03-032924-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	H8	None Detected									
C1	H6	None Detected									
C2	B5	None Detected									
C2	C7	None Detected									
C3	A6	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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Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-032924-AB**

EMSL Sample Number:	042406809-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7146.7
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
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	15			
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: 042406809
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: 042406809-0009 **Customer Sample:** MFL-AM04-032924-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	B8	None Detected									
C5	E4	None Detected									
C5	H3	None Detected									
C6	J7	None Detected									
C6	I8	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:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-032924-AB**

EMSL Sample Number:	042406809-0010		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	4			
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: 042406809
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: 042406809-0010 **Customer Sample:** MFL-FB01-032924-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	B4	None Detected									
D1	B6	None Detected									
D1	C5	None Detected									
D1	C7	None Detected									
D2	J4	None Detected									
D2	J2	None Detected									
D2	H3	None Detected									
D3	A7	None Detected									
D3	A9	None Detected									
D3	B8	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:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-033024-AB**

EMSL Sample Number:	042406809-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7189.4
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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	10			
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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http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	**042406809**
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: 042406809-0011 **Customer Sample:** MFL-AM01-033024-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	I4	None Detected									
D5	H3	None Detected									
D6	J8	None Detected									
D6	G10	None Detected									
D7	F7	None Detected									

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

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EMSL Order:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-033024-AB**

EMSL Sample Number:	042406809-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7245.8
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	4			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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: 042406809
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: 042406809-0012 **Customer Sample:** MFL-AM02-033024-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	F9	None Detected									
E1	D8	None Detected									
E2	A5	None Detected									
E2	B6	None Detected									
E3	I5	None Detected									

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

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EMSL Order:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-033024-AB**

EMSL Sample Number:	042406809-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7096.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0013 **Customer Sample:** MFL-AM03-033024-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	A4	None Detected									
G5	A6	None Detected									
G6	B9	None Detected									
G6	D8	None Detected									
G7	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:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-033024-AB**

EMSL Sample Number:	042406809-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7197.4
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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	10			
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: 042406809
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: 042406809-0014 **Customer Sample:** MFL-AM04-033024-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	C2	None Detected									
H1	D3	None Detected									
H2	J9	None Detected									
H2	H8	None Detected									
H3	I10	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:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-033024-AB**

EMSL Sample Number:	042406809-0015		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
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: 042406809
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: 042406809-0015 **Customer Sample:** MFL-FB01-033024-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H5	J7	None Detected									
H5	J5	None Detected									
H5	I6	None Detected									
H5	I4	None Detected									
H6	G9	None Detected									
H6	G7	None Detected									
H6	F8	None Detected									
H7	A6	None Detected									
H7	A8	None Detected									
H7	B7	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:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Phone:	(703) 489-2674
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Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-033124-AB**

EMSL Sample Number:	042406809-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6641.4
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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0027**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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

Robyn Ray
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EMSL Order ID: 042406809
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: 042406809-0016 **Customer Sample:** MFL-AM01-033124-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	J6	None Detected									
I1	H4	None Detected									
I2	F6	None Detected									
I2	B5	None Detected									
I3	H7	None Detected									

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

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EMSL Order:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-033124-AB**

EMSL Sample Number:	042406809-0017		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7185.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0017 **Customer Sample:** MFL-AM02-033124-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	J4	None Detected									
I5	J2	None Detected									
I5	H3	None Detected									
I5	H1	None Detected									
I6	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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Project: **Maui Fires - Lahaina**

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Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-033124-AB**

EMSL Sample Number:	042406809-0018		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7122.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0018 **Customer Sample:** MFL-AM03-033124-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	I7	None Detected									
J1	H6	None Detected									
J2	A4	None Detected									
J2	C5	None Detected									
J3	G6	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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Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-033124-AB**

EMSL Sample Number:	042406809-0019		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7083.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm^2):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm^2):	0.0128
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	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: 042406809
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: 042406809-0019 **Customer Sample:** MFL-AM04-033124-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	I3	None Detected									
J5	H2	None Detected									
J6	F4	None Detected									
J6	D5	None Detected									
J7	H8	None Detected									

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

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EMSL Order:	042406809
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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1560 Broadway, Suite 1400
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Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/03/2024 09:30 AM
Analysis Date:	04/08/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-033124-AB**

EMSL Sample Number:	042406809-0020		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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
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: 042406809
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: 042406809-0020 **Customer Sample:** MFL-FB01-033124-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	J6	None Detected									
E5	J4	None Detected									
E5	H5	None Detected									
E5	H3	None Detected									
E6	I4	None Detected									
E6	I2	None Detected									
E6	G3	None Detected									
E7	F9	None Detected									
E7	F7	None Detected									
E7	D8	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:	042406809
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:	04/03/2024 09:30 AM
Analysis Date:	04/04/2024
Report Date:	04/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042406809-0021		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:	S. Richey
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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: 042406809
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: 042406809-0021 **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	C5	None Detected									
A1	C7	None Detected									
A1	D4	None Detected									
A1	D6	None Detected									
A2	B6	None Detected									
A2	B8	None Detected									
A2	E10	None Detected									
A3	J9	None Detected									
A3	J7	None Detected									
A3	H5	None Detected									

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

OrderID: 042406809

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042406809

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

RECEIVED EMSL CINNAMINSON, NJ 24 APR -3 AM 10:08

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:	TetraTech	Company Name:	
Contact Name:	Chelsea Suber	Billing Contact:	
Street Address:	1560 Broadway Ste 1400	Street Address:	
City, State, Zip:	Denver, CO 80202	City, State, Zip:	
Country:	USA	Country:	
Phone:	703-489-2674	Phone:	
Email(s) for Report:	chelsea.suber@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:	Elsa Kenyon Saldana	Sampled By Signature:	
No. of Samples in Shipment	20		

Turn-Around-Time (TAT)

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

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

Test Selection

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

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

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

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

Other Test (please specify)

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

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

*Please call with your project-specific requirements.

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

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
MFL-AM01-032824-AB		7,383.881	03/28/24 1101
MFL-AM02-032824-AB		7,203.875	03/28/24 1122
MFL-AM03-032824-AB		7,243.629	03/28/24 1309
MFL-AM04-032824-AB		7,233.633	03/28/24 1331
MFL-FB01-032824-AB		0	03/28/24 1200
MFL-AM01-032924-AB		6,533.957	03/29/24 1059
MFL-AM02-032924-AB		7,018.249	03/29/24 1120
MFL-AM03-032924-AB		7,197.789	03/29/24 1313

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

All samples received acceptable for analysis.

20

Method of Shipment:	FedEx		Sample Condition Upon Receipt:		
Relinquished by:		Date/Time: 04/01/24 1100	Received by:	Date/Time	4/3/24 9:30A
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.

OrderID: 042406809

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042406809

RECEIVED EMSL CINNAMINSON, NJ 24 APR -3 AM 10:36

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-AM04-032924-AB		7,146.720	03/29/24 1335
MFL-FB01-032924-AB		0	03/29/24 1200
MFL-AM01-033024-AB		7,189.356	03/30/24 1059
MFL-AM02-033024-AB		7,245.792	03/30/24 1131
MFL-AM03-033024-AB		7,096.489	03/30/24 1304
MFL-AM04-033024-AB		7,197.406	03/30/24 1339
MFL-FB01-033024-AB		0	03/30/24 1200
MFL-AM01-033124-AB		6,641.449	03/31/24 1101
MFL-AM02-033124-AB		7,185.674	03/31/24 1119
MFL-AM03-033124-AB		7,122.678	03/31/24 1303
MFL-AM04-033124-AB		7,083.619	03/31/24 1325
MFL-FB01-033124-AB		0	03/31/24 1200

Method of Shipment: FedEx			Sample Condition Upon Receipt:		
Relinquished by:	Date/Time: 04/01/24 1100		Received by: FedEx	Date/Time 4/3/24 9:30A	
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 4/9/2024 and Shanna Vasser 4/9/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 3/28/2024 – 3/31/2024
Report No: 42406809

√	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:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-040124-AB**

EMSL Sample Number:	042407088-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6758.6
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**

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: 042407088
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: 042407088-0001 **Customer Sample:** MFL-AM01-040124-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A5	A8	None Detected									
A5	C8	None Detected									
A5	E4	None Detected									
A6	I6	None Detected									
A6	C9	None Detected									

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

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

EMSL Order:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-040124-AB**

EMSL Sample Number:	042407088-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7157.8
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 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: 042407088
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: 042407088-0002 **Customer Sample:** MFL-AM02-040124-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	B6	None Detected									
B1	E9	None Detected									
B1	H5	None Detected									
B2	C4	None Detected									
B2	G5	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:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-040124-AB**

EMSL Sample Number:	042407088-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7219.0
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**

Comment

Numerous gypsum fibers present.

Robyn Ray
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EMSL Order ID: 042407088
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: 042407088-0003 **Customer Sample:** MFL-AM03-040124-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	J6	None Detected									
B5	G3	None Detected									
B5	D4	None Detected									
B6	J2	None Detected									
B6	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:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-040124-AB**

EMSL Sample Number:	042407088-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7256.7
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**

Comment

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Client: Tetra Tech
Project ID: Maui Fires - Lahaina

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042407088-0004 **Customer Sample:** MFL-AM04-040124-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	A7	None Detected									
C1	D9	None Detected									
C1	F7	None Detected									
C2	H2	None Detected									
C2	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

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Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-040124-AB**

EMSL Sample Number:	042407088-0005		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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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**	**< 23.54**			
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures	**-**	**0**	**0**	**< 23.54**			

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**	**< 23.54**			
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**			

Comment

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EMSL Order ID: 042407088
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: 042407088-0005 **Customer Sample:** MFL-FB01-040124-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	J4	None Detected									
C5	H2	None Detected									
C5	F7	None Detected									
C5	D8	None Detected									
C5	B6	None Detected									
C6	A3	None Detected									
C6	C5	None Detected									
C6	E7	None Detected									
C6	G9	None Detected									
C6	I10	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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EMSL Order:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Project: **Maui Fires - Lahaina**

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Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-040224-AB**

EMSL Sample Number:	042407088-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6748.9
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**

Comment

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EMSL Order ID: 042407088
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: 042407088-0006 **Customer Sample:** MFL-AM01-040224-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	H3	None Detected									
D1	F7	None Detected									
D1	D5	None Detected									
D2	B7	None Detected									
D2	H6	None Detected									

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

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EMSL Order:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-040224-AB**

EMSL Sample Number:	042407088-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7265.4
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**

Comment

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EMSL Order ID: 042407088
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: 042407088-0007 **Customer Sample:** MFL-AM02-040224-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	A6	None Detected									
D5	D8	None Detected									
D5	G10	None Detected									
D6	D10	None Detected									
D6	H6	None Detected									

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

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EMSL Order:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-040224-AB**

EMSL Sample Number:	042407088-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7304.9
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**

Comment

Robyn Ray
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EMSL Order ID: 042407088
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: 042407088-0008 **Customer Sample:** MFL-AM03-040224-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	A6	None Detected									
E1	D5	None Detected									
E1	G7	None Detected									
E2	B7	None Detected									
E2	I5	None Detected									

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

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EMSL Order:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-040224-AB**

EMSL Sample Number:	042407088-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7181.9
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0024**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Actinolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Amosite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Anthophyllite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Crocidolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Tremolite	ADX	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**
Other Minerals	-	0	0	< 47.09	< 0.0024	Not Applicable	0.0024
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0024**	**Not Applicable**	**0.0024**

Comment

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EMSL Order ID: 042407088
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: 042407088-0009 **Customer Sample:** MFL-AM04-040224-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					
E6	I6	None Detected									
E6	G5	None Detected									
E6	C2	None Detected									
E8	B8	None Detected									
E8	G6	None Detected									

Abbreviations used:
XNCGBLD - Crosses Non-Countable Grid Bar Length Doubled
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EMSL Order:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-040224-AB**

EMSL Sample Number:	042407088-0010		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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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**	**< 23.54**			
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures	**-**	**0**	**0**	**< 23.54**			

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**	**< 23.54**			
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**			

Comment

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EMSL Order ID: 042407088
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: 042407088-0010 **Customer Sample:** MFL-FB01-040224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F2	J4	None Detected									
F2	H3	None Detected									
F2	F1	None Detected									
F2	D4	None Detected									
F2	B2	None Detected									
F3	J4	None Detected									
F3	H7	None Detected									
F3	F9	None Detected									
F3	D7	None Detected									
F3	B6	None Detected									

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

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EMSL Order:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

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Denver, CO, 80202

Project: **Maui Fires - Lahaina**

Phone:	(703) 489-2674
Fax:	N/A
Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM01-040324-AB**

EMSL Sample Number:	042407088-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6113.9
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0010**		**Limit of Detection (Structures/cc):**	**0.0030**

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**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Actinolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Amosite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Anthophyllite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Crocidolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Tremolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Other Minerals	-	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**

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**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Actinolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Amosite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Anthophyllite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Crocidolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Tremolite	ADX	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**
Other Minerals	-	0	0	< 47.09	< 0.0030	Not Applicable	0.0030
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0030**	**Not Applicable**	**0.0030**

Comment

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EMSL Order ID: 042407088
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: 042407088-0011 **Customer Sample:** MFL-AM01-040324-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	I5	None Detected									
F5	G3	None Detected									
F5	D7	None Detected									
F6	I8	None Detected									
F6	D8	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:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM02-040324-AB**

EMSL Sample Number:	042407088-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6942.4
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0027**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm^2)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**

Comment

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EMSL Order ID: 042407088
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: 042407088-0012 **Customer Sample:** MFL-AM02-040324-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	H1	None Detected									
G1	F7	None Detected									
G1	C10	None Detected									
G2	C4	None Detected									
G2	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:	042407088
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	N/A

Attn: **Chelsea Saber**
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Phone:	(703) 489-2674
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Received Date:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM03-040324-AB**

EMSL Sample Number:	042407088-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7091.7
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):	0.0127
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0027**

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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**

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: 042407088
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: 042407088-0013 **Customer Sample:** MFL-AM03-040324-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	J6	None Detected									
G5	G7	None Detected									
G5	C9	None Detected									
G6	H9	None Detected									
G6	C7	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:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-AM04-040324-AB**

EMSL Sample Number:	042407088-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7078.3
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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	2			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 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**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Actinolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Amosite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Anthophyllite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Crocidolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Tremolite	ADX	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**
Other Minerals	-	0	0	< 47.09	< 0.0027	Not Applicable	0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0027**	**Not Applicable**	**0.0027**

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: 042407088
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: 042407088-0014 **Customer Sample:** MFL-AM04-040324-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	G7	None Detected									
H1	C5	None Detected									
H2	G6	None Detected									
H2	A7	None Detected									

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

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

EMSL Order:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **MFL-FB01-040324-AB**

EMSL Sample Number:	042407088-0015		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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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**	**< 23.54**			
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures	**-**	**0**	**0**	**< 23.54**			

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**	**< 23.54**			
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**			

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: 042407088
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: 042407088-0015 **Customer Sample:** MFL-FB01-040324-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	A5	None Detected									
H5	C3	None Detected									
H5	E4	None Detected									
H5	G6	None Detected									
H5	I1	None Detected									
H6	J1	None Detected									
H6	H2	None Detected									
H6	F3	None Detected									
H6	D4	None Detected									
H6	B3	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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http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042407088
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:	04/08/2024 09:00 AM
Analysis Date:	04/11/2024
Report Date:	04/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number: **Lab Blank** **Sample Description:** **Lab Blank**

EMSL Sample Number:	042407088-0016		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):	0.0127
Chi^2 Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			

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

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected 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**	**< 23.54**			
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures	**-**	**0**	**0**	**< 23.54**			

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**	**< 23.54**			
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**			
Actinolite	ADX	0	0	< 23.54			
Amosite	ADX	0	0	< 23.54			
Anthophyllite	ADX	0	0	< 23.54			
Crocidolite	ADX	0	0	< 23.54			
Tremolite	ADX	0	0	< 23.54			
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**			
Other Minerals	-	0	0	< 23.54			
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**			

Comment

Approved Signatory

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

EMSL Order ID: 042407088
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: 042407088-0016 **Customer Sample:** Lab Blank

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
A2	A9	None Detected									
A2	C8	None Detected									
A2	E7	None Detected									
A2	G5	None Detected									
A2	I6	None Detected									
A3	J5	None Detected									
A3	H3	None Detected									
A3	F2	None Detected									
A3	D4	None Detected									
A3	B2	None Detected									

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

OrderID: 042407088

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

EMSL Order Number / Lab Use Only

#042407088

RECEIVED EMSL CINNAMINSON, NJ 2024 APR -8 A 9:05

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

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

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

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 (EK3)
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	Elia Georgia Saliba	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-AM01-040124-AB		6,758.567	04/01/24 1109
MFL-AM02-040124-AB		7,157.808	04/01/24 1121
MFL-AM03-040124-AB		7,219.008	04/01/24 1306
MFL-AM04-040124-AB		7,256.736	04/01/24 1328
MFL-FB01-040124-AB		0	04/01/24 1200
MFL-AM01-040224-AB		6,748.911	04/02/24 1105
MFL-AM02-040224-AB		7,265.395	04/02/24 1138
MFL-AM03-040224-AB		7,304.860	04/02/24 1319

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:		Received by: FX	Date/Time: 4/8/24 9:00am
Date/Time:	04/04/24 1100		
Relinquished by:		Received by:	
Date/Time:		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.

15

OrderID: 042407088

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042407088

RECEIVED EMSL CINNAMINSON, N.J. 2024 APR -8 A 9:05

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-AM04-040224-AB		7,181.888	04/02/24 1344
MFL-FB01-040224-AB		0	~~04/02/24 04/03~~ (EH) 1200
MFL-AM01-040324-AB		6,113.855	04/03/24 1100
MFL-AM02-040324-AB		6,942.361	04/03/24 1123
MFL-AM03-040324-AB		7,091.655	04/03/24 1311
MFL-AM04-040324-AB		7,078.285	04/03/24 1330
MFL-FB01-040324-AB		0	04/03/24 1200

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 04/04/24 1100	Received by: FX	Date/Time: 4/8/24 9:00
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 4/15/2024 and Shanna Vasser 4/16/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 4/1/2024 – 4/3/2024
Report No: 42407088

√	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

April 16, 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 04/08/24 15:38.

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: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
MFL-AM01-032824-HM	4040832-01	Air	03/28/24 23:59	04/08/24 15:38
MFL-AM02-032824-HM	4040832-02	Air	03/28/24 23:59	04/08/24 15:38
MFL-AM03-032824-HM	4040832-03	Air	03/28/24 23:59	04/08/24 15:38
MFL-AM04-032824-HM	4040832-04	Air	03/28/24 23:59	04/08/24 15:38
MFL-FB01-032824-HM	4040832-05	Air	03/28/24 00:00	04/08/24 15:38
MFL-AM01-032924-HM	4040832-06	Air	03/29/24 23:59	04/08/24 15:38
MFL-AM02-032924-HM	4040832-07	Air	03/29/24 23:59	04/08/24 15:38
MFL-AM03-032924-HM	4040832-08	Air	03/29/24 23:59	04/08/24 15:38
MFL-AM04-032924-HM	4040832-09	Air	03/29/24 23:59	04/08/24 15:38
MFL-AM01-033024-HM	4040832-10	Air	03/30/24 23:59	04/08/24 15:38
MFL-AM02-033024-HM	4040832-11	Air	03/30/24 23:59	04/08/24 15:38
MFL-AM03-033024-HM/MS/I	4040832-12	Air	03/30/24 23:59	04/08/24 15:38
MFL-AM04-033024-HM	4040832-13	Air	03/30/24 23:59	04/08/24 15:38
MFL-FB01-033024-HM	4040832-14	Air	03/30/24 00:00	04/08/24 15:38
MFL-AM01-033124-HM	4040832-15	Air	03/31/24 23:59	04/08/24 15:38
MFL-AM02-033124-HM	4040832-16	Air	03/31/24 23:59	04/08/24 15:38
MFL-AM03-033124-HM	4040832-17	Air	03/31/24 23:59	04/08/24 15:38
MFL-AM04-033124-HM	4040832-18	Air	03/31/24 23:59	04/08/24 15:38
MFL-AM01-040124-HM	4040832-19	Air	04/01/24 23:59	04/08/24 15:38
MFL-AM02-040124-HM	4040832-20	Air	04/01/24 23:59	04/08/24 15:38
MFL-AM03-040124-HM	4040832-21	Air	04/01/24 23:59	04/08/24 15:38

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

MFL-AM04-040124-HM	4040832-22	Air	04/01/24 23:59	04/08/24 15:38
MFL-FB01-040124-HM	4040832-23	Air	04/01/24 00:00	04/08/24 15:38
MFL-AM01-040224-HM	4040832-24	Air	04/02/24 23:59	04/08/24 15:38
MFL-AM02-040224-HM	4040832-25	Air	04/02/24 23:59	04/08/24 15:38
MFL-AM03-040224-HM	4040832-26	Air	04/02/24 23:59	04/08/24 15:38
MFL-AM04-040224-HM	4040832-27	Air	04/02/24 23:59	04/08/24 15:38
MFL-AM01-040324-HM	4040832-28	Air	04/03/24 23:59	04/08/24 15:38
MFL-AM02-040324-HM	4040832-29	Air	04/03/24 23:59	04/08/24 15:38
MFL-AM03-040324-HM	4040832-30	Air	04/03/24 23:59	04/08/24 15:38
MFL-AM04-040324-HM	4040832-31	Air	04/03/24 23:59	04/08/24 15:38
MFL-FB01-040324-HM	4040832-32	Air	04/03/24 00:00	04/08/24 15:38

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-032824-HM
Matrix: Air
Lab ID: 4040832-01
Sample Volume: 2022.854 m³
Filter ID:
Sampled: 03/28/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 00:59

Comments: Q8507577 - 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**	**0.0622**	SL	**0.0310**
Arsenic	**7440-38-2**	**0.356**		**0.00754**
Barium	**7440-39-3**	**4.03**		**0.861**
Beryllium	**7440-41-7**	**0.00918**		**0.00257**
Cadmium	7440-43-9	0.00937	U	0.0596
Chromium	**7440-47-3**	**1.98**		**1.78**
Cobalt	**7440-48-4**	**0.308**		**0.0351**
Copper	**7440-50-8**	**31.2**		**2.12**
Lead	**7439-92-1**	**0.409**		**0.172**
Manganese	**7439-96-5**	**9.80**		**1.52**
Molybdenum	**7439-98-7**	**1.77**		**0.289**
Nickel	**7440-02-0**	**0.968**		**0.524**
Selenium	**7782-49-2**	**0.140**	LJ, QX	**0.00721**
Thallium	**7440-28-0**	**0.00126**		**4.74E-4**
Vanadium	**7440-62-2**	**1.07**		**0.0425**
Zinc	7440-66-6	11.6	U	61.8

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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: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-032824-HM
Matrix: Air
Lab ID: 4040832-02
Sample Volume: 2007.773 m³
Filter ID:
Sampled: 03/28/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/09/24 22:00

Comments: Q8507575 - 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**	**0.173**	SL	**0.0313**
Arsenic	**7440-38-2**	**0.289**		**0.00759**
Barium	**7440-39-3**	**5.84**		**0.867**
Beryllium	**7440-41-7**	**0.0122**		**0.00259**
Cadmium	7440-43-9	0.0119	U	0.0600
Chromium	**7440-47-3**	**1.98**		**1.79**
Cobalt	**7440-48-4**	**0.330**		**0.0353**
Copper	**7440-50-8**	**30.7**		**2.13**
Lead	**7439-92-1**	**0.953**		**0.173**
Manganese	**7439-96-5**	**10.7**		**1.53**
Molybdenum	**7439-98-7**	**1.69**		**0.291**
Nickel	**7440-02-0**	**1.37**		**0.528**
Selenium	**7782-49-2**	**0.171**	LJ, QX	**0.00726**
Thallium	**7440-28-0**	**0.00118**		**4.77E-4**
Vanadium	**7440-62-2**	**1.28**		**0.0429**
Zinc	7440-66-6	16.9	U	62.2

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: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-032824-HM
Matrix: Air
Lab ID: 4040832-03
Sample Volume: 2036.752 m³
Filter ID:
Sampled: 03/28/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 01:19

Comments: Q8507574 - 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**	**0.0885**	SL	**0.0308**
Arsenic	**7440-38-2**	**0.232**		**0.00748**
Barium	**7440-39-3**	**4.42**		**0.855**
Beryllium	**7440-41-7**	**0.0409**		**0.00256**
Cadmium	7440-43-9	0.00852	U	0.0592
Chromium	**7440-47-3**	**2.78**		**1.77**
Cobalt	**7440-48-4**	**0.564**		**0.0348**
Copper	**7440-50-8**	**33.2**		**2.10**
Lead	**7439-92-1**	**0.399**		**0.171**
Manganese	**7439-96-5**	**14.7**		**1.51**
Molybdenum	**7439-98-7**	**1.24**		**0.287**
Nickel	**7440-02-0**	**1.63**		**0.521**
Selenium	**7782-49-2**	**0.192**	LJ, QX	**0.00716**
Thallium	**7440-28-0**	**0.00138**		**4.71E-4**
Vanadium	**7440-62-2**	**1.65**		**0.0423**
Zinc	7440-66-6	10.4	U	61.3

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-032824-HM
Matrix: Air
Lab ID: 4040832-04
Sample Volume: 1897.368 m³
Filter ID:
Sampled: 03/28/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 01:37

Comments: Q8507573 - 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	**0.0331**
Arsenic	**7440-38-2**	**0.421**		**0.00803**
Barium	**7440-39-3**	**3.57**		**0.918**
Beryllium	**7440-41-7**	**0.00786**		**0.00274**
Cadmium	7440-43-9	0.0128	U	0.0635
Chromium	7440-47-3	1.76	U	1.90
Cobalt	**7440-48-4**	**0.239**		**0.0374**
Copper	**7440-50-8**	**25.1**		**2.26**
Lead	**7439-92-1**	**0.792**		**0.184**
Manganese	**7439-96-5**	**7.61**		**1.62**
Molybdenum	**7439-98-7**	**1.44**		**0.308**
Nickel	**7440-02-0**	**1.02**		**0.559**
Selenium	**7782-49-2**	**0.141**	LJ, QX	**0.00768**
Thallium	**7440-28-0**	**0.00115**		**5.05E-4**
Vanadium	**7440-62-2**	**0.857**		**0.0454**
Zinc	7440-66-6	13.4	U	65.9

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-032824-HM
Matrix: Air
Lab ID: 4040832-05
Sample Volume: 2022.854 m³
Filter ID:
Sampled: 03/28/24 00:00
Received: 04/08/24 15:38
Analysis Date: 04/10/24 01:57

Comments: Q8507565 - 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	0.0181	U, SL	0.0310
Arsenic	7440-38-2	0.00601	U	0.00754
Barium	7440-39-3	0.792	U	0.861
Beryllium	7440-41-7	7.06E-4	U	0.00257
Cadmium	7440-43-9	0.00420	U	0.0596
Chromium	7440-47-3	0.975	U	1.78
Cobalt	7440-48-4	0.0108	U	0.0351
Copper	7440-50-8	1.14	U	2.12
Lead	7439-92-1	0.0388	U	0.172
Manganese	7439-96-5	0.161	U	1.52
Molybdenum	7439-98-7	0.159	U	0.289
Nickel	7440-02-0	0.446	U	0.524
Selenium	7782-49-2	ND	LJ, QX, U	0.00721
Thallium	7440-28-0	1.08E-4	U	4.74E-4
Vanadium	7440-62-2	0.0252	U	0.0425
Zinc	7440-66-6	4.66	U	61.8

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: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-032924-HM
Matrix: Air
Lab ID: 4040832-06
Sample Volume: 1999.466 m³
Filter ID:
Sampled: 03/29/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 02:13

Comments: Q8507548 - 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**	**0.0672**	SL	**0.0314**
Arsenic	**7440-38-2**	**0.895**		**0.00762**
Barium	**7440-39-3**	**4.04**		**0.871**
Beryllium	**7440-41-7**	**0.0112**		**0.00260**
Cadmium	7440-43-9	0.0154	U	0.0603
Chromium	**7440-47-3**	**2.23**		**1.80**
Cobalt	**7440-48-4**	**0.291**		**0.0355**
Copper	**7440-50-8**	**32.1**		**2.14**
Lead	**7439-92-1**	**0.574**		**0.174**
Manganese	**7439-96-5**	**10.1**		**1.54**
Molybdenum	**7439-98-7**	**1.91**		**0.292**
Nickel	**7440-02-0**	**1.00**		**0.531**
Selenium	**7782-49-2**	**0.198**	LJ, QX	**0.00729**
Thallium	**7440-28-0**	**0.00244**		**4.79E-4**
Vanadium	**7440-62-2**	**0.935**		**0.0430**
Zinc	7440-66-6	10.8	U	62.5

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-032924-HM
Matrix: Air
Lab ID: 4040832-07
Sample Volume: 2010.301 m³
Filter ID:
Sampled: 03/29/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 02:32

Comments: Q8507547 - 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**	**0.136**	SL	**0.0312**
Arsenic	**7440-38-2**	**0.395**		**0.00758**
Barium	**7440-39-3**	**7.35**		**0.866**
Beryllium	**7440-41-7**	**0.0137**		**0.00259**
Cadmium	7440-43-9	0.0161	U	0.0600
Chromium	**7440-47-3**	**2.12**		**1.79**
Cobalt	**7440-48-4**	**0.355**		**0.0353**
Copper	**7440-50-8**	**33.1**		**2.13**
Lead	**7439-92-1**	**0.873**		**0.173**
Manganese	**7439-96-5**	**12.2**		**1.53**
Molybdenum	**7439-98-7**	**2.00**		**0.291**
Nickel	**7440-02-0**	**1.26**		**0.528**
Selenium	**7782-49-2**	**0.247**	LJ, QX	**0.00725**
Thallium	**7440-28-0**	**0.00264**		**4.77E-4**
Vanadium	**7440-62-2**	**1.16**		**0.0428**
Zinc	7440-66-6	14.8	U	62.2

CERTIFICATE OF ANALYSIS

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Blue Bell, PA 19422
ATTN: Ms. Chelsea Saber
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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-032924-HM
Matrix: Air
Lab ID: 4040832-08
Sample Volume: 2066.643 m³
Filter ID:
Sampled: 03/29/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 02:48

Comments: Q8507563 - 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**	**0.0722**	SL	**0.0304**
Arsenic	**7440-38-2**	**0.277**		**0.00738**
Barium	**7440-39-3**	**4.08**		**0.842**
Beryllium	**7440-41-7**	**0.0219**		**0.00252**
Cadmium	7440-43-9	0.0137	U	0.0583
Chromium	**7440-47-3**	**2.20**		**1.74**
Cobalt	**7440-48-4**	**0.397**		**0.0343**
Copper	**7440-50-8**	**34.2**		**2.07**
Lead	**7439-92-1**	**0.571**		**0.168**
Manganese	**7439-96-5**	**11.5**		**1.49**
Molybdenum	**7439-98-7**	**1.26**		**0.283**
Nickel	**7440-02-0**	**1.33**		**0.513**
Selenium	**7782-49-2**	**0.230**	LJ, QX	**0.00705**
Thallium	**7440-28-0**	**0.00250**		**4.64E-4**
Vanadium	**7440-62-2**	**1.06**		**0.0416**
Zinc	7440-66-6	9.69	U	60.5

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-032924-HM
Matrix: Air
Lab ID: 4040832-09
Sample Volume: 1414.364 m³
Filter ID:
Sampled: 03/29/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 03:03

Comments: Q8507562 - 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**	**0.112**	SL	**0.0444**
Arsenic	**7440-38-2**	**0.372**		**0.0108**
Barium	**7440-39-3**	**5.08**		**1.23**
Beryllium	**7440-41-7**	**0.0152**		**0.00368**
Cadmium	7440-43-9	0.0218	U	0.0852
Chromium	7440-47-3	2.50	U	2.54
Cobalt	**7440-48-4**	**0.393**		**0.0502**
Copper	**7440-50-8**	**34.1**		**3.03**
Lead	**7439-92-1**	**1.11**		**0.246**
Manganese	**7439-96-5**	**13.6**		**2.17**
Molybdenum	**7439-98-7**	**2.14**		**0.413**
Nickel	**7440-02-0**	**1.35**		**0.750**
Selenium	**7782-49-2**	**0.224**	LJ, QX	**0.0103**
Thallium	**7440-28-0**	**0.00269**		**6.78E-4**
Vanadium	**7440-62-2**	**1.14**		**0.0609**
Zinc	7440-66-6	14.9	U	88.3

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: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-033024-HM
Matrix: Air
Lab ID: 4040832-10
Sample Volume: 2001.147 m³
Filter ID:
Sampled: 03/30/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 03:20

Comments: Q8507561 - 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**	**0.0687**	SL	**0.0314**
Arsenic	**7440-38-2**	**0.877**		**0.00762**
Barium	**7440-39-3**	**3.81**		**0.870**
Beryllium	**7440-41-7**	**0.0131**		**0.00260**
Cadmium	7440-43-9	0.0165	U	0.0602
Chromium	**7440-47-3**	**2.67**		**1.80**
Cobalt	**7440-48-4**	**0.370**		**0.0354**
Copper	**7440-50-8**	**32.0**		**2.14**
Lead	**7439-92-1**	**0.611**		**0.174**
Manganese	**7439-96-5**	**12.6**		**1.54**
Molybdenum	**7439-98-7**	**1.81**		**0.292**
Nickel	**7440-02-0**	**1.08**		**0.530**
Selenium	**7782-49-2**	**0.192**	LJ, QX	**0.00728**
Thallium	**7440-28-0**	**0.00253**		**4.79E-4**
Vanadium	**7440-62-2**	**1.22**		**0.0430**
Zinc	7440-66-6	9.40	U	62.4

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-033024-HM
Matrix: Air
Lab ID: 4040832-11
Sample Volume: 2032.216 m³
Filter ID:
Sampled: 03/30/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 03:37

Comments: Q8507560 - 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**	**0.248**	SL	**0.0309**
Arsenic	**7440-38-2**	**1.28**		**0.00750**
Barium	**7440-39-3**	**6.95**		**0.857**
Beryllium	**7440-41-7**	**0.0125**		**0.00256**
Cadmium	7440-43-9	0.0253	U	0.0593
Chromium	**7440-47-3**	**2.49**		**1.77**
Cobalt	**7440-48-4**	**0.435**		**0.0349**
Copper	**7440-50-8**	**37.9**		**2.11**
Lead	**7439-92-1**	**1.07**		**0.171**
Manganese	**7439-96-5**	**13.5**		**1.51**
Molybdenum	**7439-98-7**	**1.63**		**0.287**
Nickel	**7440-02-0**	**1.59**		**0.522**
Selenium	**7782-49-2**	**0.227**	LJ, QX	**0.00717**
Thallium	**7440-28-0**	**0.00233**		**4.72E-4**
Vanadium	**7440-62-2**	**1.37**		**0.0424**
Zinc	7440-66-6	20.4	U	61.5

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-033024-HM/MS/MS
Matrix: Air
Lab ID: 4040832-12
Sample Volume: 2027.346 m³
Filter ID:
Sampled: 03/30/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/09/24 17:47

Comments: Q8507558 - 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**	**0.0621**	SL	**0.0310**
Arsenic	**7440-38-2**	**0.267**		**0.00752**
Barium	**7440-39-3**	**3.96**		**0.859**
Beryllium	**7440-41-7**	**0.0181**		**0.00257**
Cadmium	7440-43-9	0.0140	U	0.0595
Chromium	**7440-47-3**	**2.06**		**1.77**
Cobalt	**7440-48-4**	**0.340**		**0.0350**
Copper	**7440-50-8**	**38.2**		**2.11**
Lead	**7439-92-1**	**0.764**		**0.172**
Manganese	**7439-96-5**	**9.66**		**1.52**
Molybdenum	**7439-98-7**	**1.29**		**0.288**
Nickel	**7440-02-0**	**1.08**		**0.523**
Selenium	**7782-49-2**	**0.205**	LJ, QX	**0.00719**
Thallium	**7440-28-0**	**0.00237**		**4.73E-4**
Vanadium	**7440-62-2**	**1.03**		**0.0425**
Zinc	7440-66-6	10.9	U	61.6

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-033024-HM
Matrix: Air
Lab ID: 4040832-13
Sample Volume: 1524.599 m³
Filter ID:
Sampled: 03/30/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 04:54

Comments: Q8507557 - 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**	**0.119**	SL	**0.0412**
Arsenic	**7440-38-2**	**0.488**		**0.0100**
Barium	**7440-39-3**	**5.45**		**1.14**
Beryllium	**7440-41-7**	**0.0123**		**0.00341**
Cadmium	7440-43-9	0.0258	U	0.0791
Chromium	**7440-47-3**	**2.47**		**2.36**
Cobalt	**7440-48-4**	**0.360**		**0.0465**
Copper	**7440-50-8**	**33.2**		**2.81**
Lead	**7439-92-1**	**1.09**		**0.228**
Manganese	**7439-96-5**	**12.6**		**2.02**
Molybdenum	**7439-98-7**	**1.91**		**0.383**
Nickel	**7440-02-0**	**1.37**		**0.696**
Selenium	**7782-49-2**	**0.178**	LJ, QX	**0.00956**
Thallium	**7440-28-0**	**0.00212**	QB-04	**6.29E-4**
Vanadium	**7440-62-2**	**1.11**		**0.0565**
Zinc	7440-66-6	16.9	U	82.0

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-033024-HM
Matrix: Air
Lab ID: 4040832-14
Sample Volume: 2001.147 m³
Filter ID:
Sampled: 03/30/24 00:00
Received: 04/08/24 15:38
Analysis Date: 04/10/24 05:14

Comments: Q8508564 - 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	0.0168	SL, U	0.0314
Arsenic	7440-38-2	0.00497	U	0.00762
Barium	7440-39-3	0.653	U	0.870
Beryllium	7440-41-7	6.73E-4	U	0.00260
Cadmium	7440-43-9	5.38E-4	U	0.0602
Chromium	7440-47-3	0.910	U	1.80
Cobalt	7440-48-4	0.0105	U	0.0354
Copper	7440-50-8	1.01	U	2.14
Lead	7439-92-1	0.0426	U	0.174
Manganese	7439-96-5	0.175	U	1.54
Molybdenum	7439-98-7	0.124	U	0.292
Nickel	7440-02-0	0.371	U	0.530
Selenium	7782-49-2	0.00106	LJ, QX, U	0.00728
Thallium	7440-28-0	1.39E-4	QB-04, U	4.79E-4
Vanadium	7440-62-2	0.0252	U	0.0430
Zinc	7440-66-6	5.40	U	62.4

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-033124-HM
Matrix: Air
Lab ID: 4040832-15
Sample Volume: 1965.201 m³
Filter ID:
Sampled: 03/31/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 05:34

Comments: Q8507556 - 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**	**0.0625**	SL	**0.0320**
Arsenic	**7440-38-2**	**0.450**		**0.00776**
Barium	**7440-39-3**	**2.64**		**0.886**
Beryllium	**7440-41-7**	**0.00562**		**0.00265**
Cadmium	7440-43-9	0.00800	U	0.0613
Chromium	7440-47-3	1.71	U	1.83
Cobalt	**7440-48-4**	**0.184**		**0.0361**
Copper	**7440-50-8**	**34.3**		**2.18**
Lead	**7439-92-1**	**0.295**		**0.177**
Manganese	**7439-96-5**	**6.40**		**1.56**
Molybdenum	**7439-98-7**	**2.07**		**0.297**
Nickel	**7440-02-0**	**0.814**		**0.540**
Selenium	**7782-49-2**	**0.133**	LJ, QX	**0.00742**
Thallium	**7440-28-0**	**0.00105**	QB-04	**4.88E-4**
Vanadium	**7440-62-2**	**0.740**		**0.0438**
Zinc	7440-66-6	7.80	U	63.6

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1777 Sentry Pkwy, Bldg 12
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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-033124-HM
Matrix: Air
Lab ID: 4040832-16
Sample Volume: 1964.833 m³
Filter ID:
Sampled: 03/31/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 05:54

Comments: Q8508566 - 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**	**0.343**	SL	**0.0320**
Arsenic	**7440-38-2**	**3.95**		**0.00776**
Barium	**7440-39-3**	**6.90**		**0.886**
Beryllium	**7440-41-7**	**0.00951**		**0.00265**
Cadmium	**7440-43-9**	**0.0871**		**0.0614**
Chromium	**7440-47-3**	**3.24**		**1.83**
Cobalt	**7440-48-4**	**0.362**		**0.0361**
Copper	**7440-50-8**	**42.4**		**2.18**
Lead	**7439-92-1**	**1.46**		**0.177**
Manganese	**7439-96-5**	**9.91**		**1.57**
Molybdenum	**7439-98-7**	**1.50**		**0.297**
Nickel	**7440-02-0**	**1.25**		**0.540**
Selenium	**7782-49-2**	**0.159**	LJ, QX	**0.00742**
Thallium	**7440-28-0**	**0.00127**	QB-04	**4.88E-4**
Vanadium	**7440-62-2**	**1.15**		**0.0438**
Zinc	7440-66-6	21.5	U	63.6

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-033124-HM
Matrix: Air
Lab ID: 4040832-17
Sample Volume: 2016.442 m³
Filter ID:
Sampled: 03/31/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 06:13

Comments: Q8508563 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0511**	SL	**0.0311**
Arsenic	**7440-38-2**	**0.191**		**0.00756**
Barium	**7440-39-3**	**1.76**		**0.863**
Beryllium	**7440-41-7**	**0.00715**		**0.00258**
Cadmium	7440-43-9	0.00562	U	0.0598
Chromium	7440-47-3	1.44	U	1.78
Cobalt	**7440-48-4**	**0.159**		**0.0352**
Copper	**7440-50-8**	**32.4**		**2.12**
Lead	**7439-92-1**	**0.216**		**0.173**
Manganese	**7439-96-5**	**4.52**		**1.52**
Molybdenum	**7439-98-7**	**1.23**		**0.290**
Nickel	**7440-02-0**	**0.833**		**0.526**
Selenium	**7782-49-2**	**0.130**	LJ, QX	**0.00723**
Thallium	**7440-28-0**	**9.55E-4**	QB-04	**4.75E-4**
Vanadium	**7440-62-2**	**0.609**		**0.0427**
Zinc	7440-66-6	6.82	U	62.0

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-033124-HM
Matrix: Air
Lab ID: 4040832-18
Sample Volume: 1845.379 m³
Filter ID:
Sampled: 03/31/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 06:29

Comments: Q8508561 - 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**	**0.0815**	SL	**0.0340**
Arsenic	**7440-38-2**	**0.279**		**0.00826**
Barium	**7440-39-3**	**2.62**		**0.943**
Beryllium	**7440-41-7**	**0.00430**		**0.00282**
Cadmium	7440-43-9	0.00787	U	0.0653
Chromium	7440-47-3	1.69	U	1.95
Cobalt	**7440-48-4**	**0.138**		**0.0384**
Copper	**7440-50-8**	**27.9**		**2.32**
Lead	**7439-92-1**	**0.335**		**0.189**
Manganese	**7439-96-5**	**4.51**		**1.67**
Molybdenum	**7439-98-7**	**1.64**		**0.317**
Nickel	**7440-02-0**	**0.753**		**0.575**
Selenium	**7782-49-2**	**0.131**	LJ, QX	**0.00790**
Thallium	**7440-28-0**	**8.53E-4**	QB-04	**5.19E-4**
Vanadium	**7440-62-2**	**0.578**		**0.0466**
Zinc	7440-66-6	9.34	U	67.7

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-040124-HM
Matrix: Air
Lab ID: 4040832-19
Sample Volume: 1919.709 m³
Filter ID:
Sampled: 04/01/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 06:44

Comments: Q8508559 - 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**	**0.0754**	SL	**0.0327**
Arsenic	**7440-38-2**	**0.642**		**0.00794**
Barium	**7440-39-3**	**2.93**		**0.907**
Beryllium	**7440-41-7**	**0.00794**		**0.00271**
Cadmium	7440-43-9	0.0138	U	0.0628
Chromium	**7440-47-3**	**2.27**		**1.87**
Cobalt	**7440-48-4**	**0.329**		**0.0370**
Copper	**7440-50-8**	**35.6**		**2.23**
Lead	**7439-92-1**	**0.393**		**0.181**
Manganese	**7439-96-5**	**9.48**		**1.60**
Molybdenum	**7439-98-7**	**2.19**		**0.304**
Nickel	**7440-02-0**	**1.21**		**0.553**
Selenium	**7782-49-2**	**0.135**	LJ, QX	**0.00759**
Thallium	**7440-28-0**	**8.48E-4**	QB-04	**4.99E-4**
Vanadium	**7440-62-2**	**1.17**		**0.0448**
Zinc	7440-66-6	8.09	U	65.1

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-040124-HM
Matrix: Air
Lab ID: 4040832-20
Sample Volume: 2101.965 m³
Filter ID:
Sampled: 04/01/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 07:21

Comments: Q8508556 - 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**	**0.153**	SL	**0.0299**
Arsenic	**7440-38-2**	**0.938**		**0.00725**
Barium	**7440-39-3**	**4.71**		**0.828**
Beryllium	**7440-41-7**	**0.00867**		**0.00248**
Cadmium	7440-43-9	0.0400	U	0.0574
Chromium	**7440-47-3**	**1.93**		**1.71**
Cobalt	**7440-48-4**	**0.319**		**0.0337**
Copper	**7440-50-8**	**26.0**		**2.04**
Lead	**7439-92-1**	**0.957**		**0.166**
Manganese	**7439-96-5**	**8.54**		**1.46**
Molybdenum	**7439-98-7**	**1.56**		**0.278**
Nickel	**7440-02-0**	**1.13**		**0.505**
Selenium	**7782-49-2**	**0.145**	LJ, QX	**0.00694**
Thallium	**7440-28-0**	**8.32E-4**	QB-04	**4.56E-4**
Vanadium	**7440-62-2**	**1.05**		**0.0409**
Zinc	7440-66-6	18.6	U	59.4

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-040124-HM
Matrix: Air
Lab ID: 4040832-21
Sample Volume: 2034.459 m³
Filter ID:
Sampled: 04/01/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 07:39

Comments: Q8508554 - 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**	**0.0649**	SL	**0.0309**
Arsenic	**7440-38-2**	**0.173**		**0.00749**
Barium	**7440-39-3**	**2.76**		**0.856**
Beryllium	**7440-41-7**	**0.0152**		**0.00256**
Cadmium	7440-43-9	0.00606	U	0.0593
Chromium	**7440-47-3**	**1.92**		**1.77**
Cobalt	**7440-48-4**	**0.325**		**0.0349**
Copper	**7440-50-8**	**24.2**		**2.10**
Lead	**7439-92-1**	**0.228**		**0.171**
Manganese	**7439-96-5**	**7.94**		**1.51**
Molybdenum	**7439-98-7**	**1.49**		**0.287**
Nickel	**7440-02-0**	**1.11**		**0.521**
Selenium	**7782-49-2**	**0.146**	LJ, QX	**0.00717**
Thallium	**7440-28-0**	**7.95E-4**	QB-04	**4.71E-4**
Vanadium	**7440-62-2**	**0.945**		**0.0423**
Zinc	7440-66-6	7.42	U	61.4

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-040124-HM
Matrix: Air
Lab ID: 4040832-22
Sample Volume: 1862.059 m³
Filter ID:
Sampled: 04/01/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 09:19

Comments: Q8508553 - 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**	**0.122**	SL	**0.0337**
Arsenic	**7440-38-2**	**0.421**		**0.00819**
Barium	**7440-39-3**	**3.69**		**0.935**
Beryllium	**7440-41-7**	**0.00774**		**0.00280**
Cadmium	7440-43-9	0.00988	U	0.0647
Chromium	**7440-47-3**	**2.05**		**1.93**
Cobalt	**7440-48-4**	**0.299**		**0.0381**
Copper	**7440-50-8**	**30.8**		**2.30**
Lead	**7439-92-1**	**0.681**		**0.187**
Manganese	**7439-96-5**	**9.72**		**1.65**
Molybdenum	**7439-98-7**	**1.86**		**0.314**
Nickel	**7440-02-0**	**1.19**		**0.570**
Selenium	**7782-49-2**	**0.131**	LJ, QX	**0.00783**
Thallium	**7440-28-0**	**9.19E-4**	QB-04	**5.15E-4**
Vanadium	**7440-62-2**	**0.923**		**0.0462**
Zinc	7440-66-6	13.2	U	67.1

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-040124-HM
Matrix: Air
Lab ID: 4040832-23
Sample Volume: 1919.709 m³
Filter ID:
Sampled: 04/01/24 00:00
Received: 04/08/24 15:38
Analysis Date: 04/10/24 09:39

Comments: Q8508578 - 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	0.0190	SL, U	0.0327
Arsenic	**7440-38-2**	**0.00804**	FB-01	**0.00794**
Barium	7440-39-3	0.705	U	0.907
Beryllium	7440-41-7	9.57E-4	U	0.00271
Cadmium	7440-43-9	7.51E-4	U	0.0628
Chromium	7440-47-3	0.981	U	1.87
Cobalt	7440-48-4	0.0129	U	0.0370
Copper	7440-50-8	0.441	U	2.23
Lead	7439-92-1	0.0290	U	0.181
Manganese	7439-96-5	0.217	U	1.60
Molybdenum	7439-98-7	0.173	U	0.304
Nickel	7440-02-0	0.420	U	0.553
Selenium	7782-49-2	0.00325	LJ, QX, U	0.00759
Thallium	7440-28-0	1.71E-4	QB-04, U	4.99E-4
Vanadium	7440-62-2	0.0230	U	0.0448
Zinc	7440-66-6	3.82	U	65.1

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-040224-HM
Matrix: Air
Lab ID: 4040832-24
Sample Volume: 1890.113 m³
Filter ID:
Sampled: 04/02/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 09:58

Comments: Q8508551 - 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**	**0.0767**	SL	**0.0332**
Arsenic	**7440-38-2**	**0.458**		**0.00807**
Barium	**7440-39-3**	**3.29**		**0.921**
Beryllium	**7440-41-7**	**0.00748**		**0.00275**
Cadmium	7440-43-9	0.00691	U	0.0638
Chromium	**7440-47-3**	**2.09**		**1.90**
Cobalt	**7440-48-4**	**0.283**		**0.0375**
Copper	**7440-50-8**	**44.3**		**2.26**
Lead	**7439-92-1**	**0.439**		**0.184**
Manganese	**7439-96-5**	**8.34**		**1.63**
Molybdenum	**7439-98-7**	**2.31**		**0.309**
Nickel	**7440-02-0**	**1.21**		**0.561**
Selenium	**7782-49-2**	**0.112**	LJ, QX	**0.00771**
Thallium	**7440-28-0**	**7.97E-4**	QB-04	**5.07E-4**
Vanadium	**7440-62-2**	**0.806**		**0.0455**
Zinc	7440-66-6	9.26	U	66.1

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-040224-HM
Matrix: Air
Lab ID: 4040832-25
Sample Volume: 2019.438 m³
Filter ID:
Sampled: 04/02/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 10:18

Comments: Q8508550 - 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**	**0.159**	SL	**0.0311**
Arsenic	**7440-38-2**	**1.02**		**0.00755**
Barium	**7440-39-3**	**6.59**		**0.862**
Beryllium	**7440-41-7**	**0.0134**		**0.00258**
Cadmium	7440-43-9	0.0497	U	0.0597
Chromium	**7440-47-3**	**2.73**		**1.78**
Cobalt	**7440-48-4**	**0.489**		**0.0351**
Copper	**7440-50-8**	**36.0**		**2.12**
Lead	**7439-92-1**	**1.36**		**0.172**
Manganese	**7439-96-5**	**13.9**		**1.52**
Molybdenum	**7439-98-7**	**1.60**		**0.289**
Nickel	**7440-02-0**	**1.77**		**0.525**
Selenium	**7782-49-2**	**0.163**	LJ, QX	**0.00722**
Thallium	**7440-28-0**	**9.68E-4**	QB-04	**4.75E-4**
Vanadium	**7440-62-2**	**1.41**		**0.0426**
Zinc	7440-66-6	18.4	U	61.9

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-040224-HM
Matrix: Air
Lab ID: 4040832-26
Sample Volume: 2030.055 m³
Filter ID:
Sampled: 04/02/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 10:38

Comments: Q8508579 - 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**	**0.0893**	SL	**0.0309**
Arsenic	**7440-38-2**	**0.253**		**0.00751**
Barium	**7440-39-3**	**3.62**		**0.858**
Beryllium	**7440-41-7**	**0.0214**		**0.00256**
Cadmium	7440-43-9	0.00727	U	0.0594
Chromium	**7440-47-3**	**2.40**		**1.77**
Cobalt	**7440-48-4**	**0.442**		**0.0349**
Copper	**7440-50-8**	**31.6**		**2.11**
Lead	**7439-92-1**	**0.457**		**0.172**
Manganese	**7439-96-5**	**10.2**		**1.51**
Molybdenum	**7439-98-7**	**1.90**		**0.288**
Nickel	**7440-02-0**	**1.40**		**0.523**
Selenium	**7782-49-2**	**0.153**	LJ, QX	**0.00718**
Thallium	**7440-28-0**	**8.16E-4**	QB-04	**4.72E-4**
Vanadium	**7440-62-2**	**1.09**		**0.0424**
Zinc	7440-66-6	8.60	U	61.6

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-040224-HM
Matrix: Air
Lab ID: 4040832-27
Sample Volume: 1850.569 m³
Filter ID:
Sampled: 04/02/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 10:57

Comments: Q8508577 - 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**	**0.128**	SL	**0.0339**
Arsenic	**7440-38-2**	**0.410**		**0.00824**
Barium	**7440-39-3**	**3.82**		**0.941**
Beryllium	**7440-41-7**	**0.0116**		**0.00281**
Cadmium	7440-43-9	0.0140	U	0.0651
Chromium	**7440-47-3**	**2.12**		**1.94**
Cobalt	**7440-48-4**	**0.321**		**0.0383**
Copper	**7440-50-8**	**26.2**		**2.31**
Lead	**7439-92-1**	**1.33**		**0.188**
Manganese	**7439-96-5**	**9.63**		**1.66**
Molybdenum	**7439-98-7**	**1.52**		**0.316**
Nickel	**7440-02-0**	**1.26**		**0.573**
Selenium	**7782-49-2**	**0.137**	LJ, QX	**0.00788**
Thallium	**7440-28-0**	**7.66E-4**	QB-04	**5.18E-4**
Vanadium	**7440-62-2**	**0.866**		**0.0465**
Zinc	7440-66-6	15.9	U	67.5

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-040324-HM
Matrix: Air
Lab ID: 4040832-28
Sample Volume: 1898.912 m³
Filter ID:
Sampled: 04/03/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 11:17

Comments: Q8508576 - 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	**0.0331**
Arsenic	**7440-38-2**	**0.671**		**0.00803**
Barium	**7440-39-3**	**3.75**		**0.917**
Beryllium	**7440-41-7**	**0.00682**		**0.00274**
Cadmium	7440-43-9	0.00773	U	0.0635
Chromium	**7440-47-3**	**2.18**		**1.89**
Cobalt	**7440-48-4**	**0.302**		**0.0374**
Copper	**7440-50-8**	**58.0**		**2.25**
Lead	**7439-92-1**	**0.409**		**0.183**
Manganese	**7439-96-5**	**9.95**		**1.62**
Molybdenum	**7439-98-7**	**2.95**		**0.308**
Nickel	**7440-02-0**	**1.14**		**0.559**
Selenium	**7782-49-2**	**0.169**	LJ, QX	**0.00768**
Thallium	**7440-28-0**	**9.06E-4**	QB-04	**5.05E-4**
Vanadium	**7440-62-2**	**1.12**		**0.0453**
Zinc	7440-66-6	9.92	U	65.8

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-040324-HM
Matrix: Air
Lab ID: 4040832-29
Sample Volume: 1968.153 m³
Filter ID:
Sampled: 04/03/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 11:35

Comments: Q8508573 - 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**	**0.169**	SL	**0.0319**
Arsenic	**7440-38-2**	**0.795**		**0.00775**
Barium	**7440-39-3**	**6.04**		**0.885**
Beryllium	**7440-41-7**	**0.0133**		**0.00265**
Cadmium	7440-43-9	0.0313	U	0.0613
Chromium	**7440-47-3**	**2.36**		**1.83**
Cobalt	**7440-48-4**	**0.432**		**0.0360**
Copper	**7440-50-8**	**35.8**		**2.17**
Lead	**7439-92-1**	**1.24**		**0.177**
Manganese	**7439-96-5**	**14.0**		**1.56**
Molybdenum	**7439-98-7**	**1.63**		**0.297**
Nickel	**7440-02-0**	**1.40**		**0.539**
Selenium	**7782-49-2**	**0.229**	LJ, QX	**0.00741**
Thallium	**7440-28-0**	**0.00113**	QB-04	**4.87E-4**
Vanadium	**7440-62-2**	**1.57**		**0.0437**
Zinc	7440-66-6	15.3	U	63.5

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-040324-HM
Matrix: Air
Lab ID: 4040832-30
Sample Volume: 2021.546 m³
Filter ID:
Sampled: 04/03/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 11:54

Comments: Q8508571 - 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**	**0.0775**	SL	**0.0311**
Arsenic	**7440-38-2**	**0.261**		**0.00754**
Barium	**7440-39-3**	**4.99**		**0.861**
Beryllium	**7440-41-7**	**0.0322**		**0.00258**
Cadmium	7440-43-9	0.00935	U	0.0596
Chromium	**7440-47-3**	**3.14**		**1.78**
Cobalt	**7440-48-4**	**0.621**		**0.0351**
Copper	**7440-50-8**	**38.0**		**2.12**
Lead	**7439-92-1**	**0.581**		**0.172**
Manganese	**7439-96-5**	**15.1**		**1.52**
Molybdenum	**7439-98-7**	**1.70**		**0.289**
Nickel	**7440-02-0**	**1.79**		**0.525**
Selenium	**7782-49-2**	**0.209**	LJ, QX	**0.00721**
Thallium	**7440-28-0**	**0.00114**	QB-04	**4.74E-4**
Vanadium	**7440-62-2**	**1.74**		**0.0426**
Zinc	7440-66-6	10.3	U	61.8

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-040324-HM
Matrix: Air
Lab ID: 4040832-31
Sample Volume: 1839.683 m³
Filter ID:
Sampled: 04/03/24 23:59
Received: 04/08/24 15:38
Analysis Date: 04/10/24 14:24

Comments: Q8508570 - 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**	**0.105**	SL	**0.0341**
Arsenic	**7440-38-2**	**0.388**		**0.00829**
Barium	**7440-39-3**	**3.83**		**0.946**
Beryllium	**7440-41-7**	**0.00734**		**0.00283**
Cadmium	7440-43-9	0.0148	U	0.0655
Chromium	**7440-47-3**	**2.10**		**1.95**
Cobalt	**7440-48-4**	**0.325**		**0.0386**
Copper	**7440-50-8**	**30.7**		**2.33**
Lead	**7439-92-1**	**0.937**		**0.189**
Manganese	**7439-96-5**	**11.3**		**1.67**
Molybdenum	**7439-98-7**	**2.14**		**0.317**
Nickel	**7440-02-0**	**1.15**		**0.577**
Selenium	**7782-49-2**	**0.176**	LJ, QX	**0.00792**
Thallium	**7440-28-0**	**0.00111**		**5.21E-4**
Vanadium	**7440-62-2**	**1.18**		**0.0468**
Zinc	7440-66-6	13.5	U	67.9

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FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-040324-HM
Matrix: Air
Lab ID: 4040832-32
Sample Volume: 1898.912 m³
Filter ID:
Sampled: 04/03/24 00:00
Received: 04/08/24 15:38
Analysis Date: 04/10/24 15:04

Comments: Q8508569 - 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	0.0194	SL, U	0.0331
Arsenic	7440-38-2	0.00782	U	0.00803
Barium	7440-39-3	0.747	U	0.917
Beryllium	7440-41-7	7.48E-4	U	0.00274
Cadmium	7440-43-9	9.59E-4	U	0.0635
Chromium	7440-47-3	1.01	U	1.89
Cobalt	7440-48-4	0.0140	U	0.0374
Copper	7440-50-8	1.86	U	2.25
Lead	7439-92-1	0.0845	U	0.183
Manganese	7439-96-5	0.234	U	1.62
Molybdenum	7439-98-7	0.159	U	0.308
Nickel	**7440-02-0**	**1.61**	FB-01	**0.559**
Selenium	7782-49-2	0.00389	LJ, QX, U	0.00768
Thallium	7440-28-0	1.39E-4	U	5.05E-4
Vanadium	7440-62-2	0.0264	U	0.0453
Zinc	7440-66-6	3.53	U	65.8

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
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 2404027 - B4D0902										
Calibration Blank (2404027-CCB1)				Prepared & Analyzed: 04/09/24						
Antimony	0.673		ng/l							
Arsenic	8.42		ng/l							
Barium	0.405		ng/l							
Beryllium	0.371		ng/l							
Cadmium	0.116		ng/l							
Chromium	-0.117		ng/l							U
Cobalt	0.557		ng/l							
Copper	183		ng/l							
Lead	3.75		ng/l							
Manganese	8.01		ng/l							
Molybdenum	20.1		ng/l							
Nickel	1.25		ng/l							
Selenium	-11.6		ng/l							LJ, QX, U
Thallium	1.13		ng/l							
Vanadium	33.9		ng/l							
Zinc	-34.9		ng/l							U
Calibration Blank (2404027-CCB2)				Prepared & Analyzed: 04/09/24						
Antimony	0.442		ng/l							
Arsenic	7.83		ng/l							
Barium	7.42		ng/l							
Beryllium	0.484		ng/l							
Cadmium	0.564		ng/l							
Chromium	6.20		ng/l							
Cobalt	1.13		ng/l							
Copper	148		ng/l							
Lead	4.86		ng/l							
Manganese	12.6		ng/l							
Molybdenum	7.02		ng/l							
Nickel	3.43		ng/l							
Selenium	3.70		ng/l							LJ, QX
Thallium	1.01		ng/l							
Vanadium	35.6		ng/l							
Zinc	-1.83		ng/l							U
Calibration Blank (2404027-CCB3)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	0.724		ng/l							
Arsenic	10.5		ng/l							
Barium	9.00		ng/l							
Beryllium	0.421		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Blank (2404027-CCB3) Contin				Prepared: 04/09/24 Analyzed: 04/10/24						
Cadmium	0.595		ng/l							
Chromium	6.59		ng/l							
Cobalt	1.26		ng/l							
Copper	125		ng/l							
Lead	6.17		ng/l							
Manganese	13.2		ng/l							
Molybdenum	5.92		ng/l							
Nickel	3.27		ng/l							
Selenium	3.07		ng/l							LJ, QX
Thallium	1.09		ng/l							
Vanadium	16.8		ng/l							
Zinc	-51.1		ng/l							U
Calibration Blank (2404027-CCB4)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	0.798		ng/l							
Arsenic	14.2		ng/l							
Barium	10.7		ng/l							
Beryllium	0.403		ng/l							
Cadmium	0.506		ng/l							
Chromium	7.31		ng/l							
Cobalt	1.64		ng/l							
Copper	133		ng/l							
Lead	6.36		ng/l							
Manganese	19.5		ng/l							
Molybdenum	6.77		ng/l							
Nickel	4.14		ng/l							
Selenium	11.5		ng/l							LJ, QX
Thallium	0.938		ng/l							
Vanadium	9.46		ng/l							
Zinc	-37.7		ng/l							U
Calibration Blank (2404027-CCB5)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	0.0864		ng/l							
Arsenic	9.47		ng/l							
Barium	3.57		ng/l							
Beryllium	0.148		ng/l							
Cadmium	0.234		ng/l							
Chromium	3.93		ng/l							
Cobalt	0.797		ng/l							
Copper	122		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Blank (2404027-CCB5) Contin				Prepared: 04/09/24 Analyzed: 04/10/24						
Lead	3.39		ng/l							
Manganese	12.0		ng/l							
Molybdenum	7.25		ng/l							
Nickel	2.10		ng/l							
Selenium	14.2		ng/l							LJ, QX
Thallium	1.37		ng/l							QB-04
Vanadium	-0.886		ng/l							U
Zinc	-74.8		ng/l							U
Calibration Blank (2404027-CCB6)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	0.932		ng/l							
Arsenic	10.7		ng/l							
Barium	18.6		ng/l							
Beryllium	0.513		ng/l							
Cadmium	1.43		ng/l							
Chromium	13.9		ng/l							
Cobalt	2.95		ng/l							
Copper	218		ng/l							
Lead	12.1		ng/l							
Manganese	36.2		ng/l							
Molybdenum	9.77		ng/l							
Nickel	6.73		ng/l							
Selenium	-2.01		ng/l							LJ, QX, U
Thallium	1.08		ng/l							
Vanadium	-1.52		ng/l							U
Zinc	-5.87		ng/l							U
Calibration Blank (2404027-CCB7)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	1.42		ng/l							
Arsenic	12.6		ng/l							
Barium	27.2		ng/l							
Beryllium	0.622		ng/l							
Cadmium	2.14		ng/l							
Chromium	21.7		ng/l							
Cobalt	4.11		ng/l							
Copper	265		ng/l							
Lead	18.4		ng/l							
Manganese	52.3		ng/l							
Molybdenum	12.9		ng/l							
Nickel	11.1		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Blank (2404027-CCB7) Contin				Prepared: 04/09/24 Analyzed: 04/10/24						
Selenium	-2.88		ng/l							LJ, QX, U
Thallium	0.757		ng/l							
Vanadium	1.77		ng/l							
Zinc	-12.0		ng/l							U
Calibration Check (2404027-CCV1)				Prepared & Analyzed: 04/09/24						
Antimony	20100		ng/l	20000		100	90-110			
Arsenic	20100		ng/l	20000		100	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	5350		ng/l	5000.0		107	90-110			
Cadmium	20200		ng/l	20000		101	90-110			
Chromium	252000		ng/l	240000		105	90-110			
Cobalt	50700		ng/l	50000		101	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	199000		ng/l	200000		99.4	90-110			
Manganese	490000		ng/l	500000		98.1	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	19600		ng/l	20000		97.9	90-110			LJ, QX
Thallium	494		ng/l	500.00		98.7	90-110			
Vanadium	19800		ng/l	20000		99.0	90-110			
Zinc	510000		ng/l	500000		102	90-110			
Calibration Check (2404027-CCV2)				Prepared & Analyzed: 04/09/24						
Antimony	19800		ng/l	20000		99.2	90-110			
Arsenic	19700		ng/l	20000		98.6	90-110			
Barium	198000		ng/l	200000		99.0	90-110			
Beryllium	4890		ng/l	5000.0		97.9	90-110			
Cadmium	19900		ng/l	20000		99.3	90-110			
Chromium	249000		ng/l	240000		104	90-110			
Cobalt	49300		ng/l	50000		98.6	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Lead	196000		ng/l	200000		98.0	90-110			
Manganese	483000		ng/l	500000		96.6	90-110			
Molybdenum	48900		ng/l	50000		97.7	90-110			
Nickel	118000		ng/l	120000		98.7	90-110			
Selenium	19900		ng/l	20000		99.5	90-110			LJ, QX
Thallium	476		ng/l	500.00		95.2	90-110			
Vanadium	19600		ng/l	20000		98.1	90-110			
Zinc	505000		ng/l	500000		101	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Check (2404027-CCV3)				Prepared & Analyzed: 04/09/24						
Antimony	19900		ng/l	20000		99.4	90-110			
Arsenic	19700		ng/l	20000		98.3	90-110			
Barium	199000		ng/l	200000		99.3	90-110			
Beryllium	4750		ng/l	5000.0		95.0	90-110			
Cadmium	19800		ng/l	20000		99.0	90-110			
Chromium	245000		ng/l	240000		102	90-110			
Cobalt	48700		ng/l	50000		97.3	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.3	90-110			
Lead	195000		ng/l	200000		97.3	90-110			
Manganese	478000		ng/l	500000		95.5	90-110			
Molybdenum	48800		ng/l	50000		97.5	90-110			
Nickel	117000		ng/l	120000		97.7	90-110			
Selenium	19600		ng/l	20000		98.1	90-110			LJ, QX
Thallium	468		ng/l	500.00		93.7	90-110			
Vanadium	19400		ng/l	20000		97.1	90-110			
Zinc	499000		ng/l	500000		99.9	90-110			
Calibration Check (2404027-CCV4)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	20000		ng/l	20000		99.8	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	202000		ng/l	200000		101	90-110			
Beryllium	4660		ng/l	5000.0		93.1	90-110			
Cadmium	19900		ng/l	20000		99.4	90-110			
Chromium	248000		ng/l	240000		103	90-110			
Cobalt	49900		ng/l	50000		99.8	90-110			
Copper	2.03E6		ng/l	2.0000E6		102	90-110			
Lead	197000		ng/l	200000		98.7	90-110			
Manganese	486000		ng/l	500000		97.3	90-110			
Molybdenum	49700		ng/l	50000		99.5	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20000		ng/l	20000		100	90-110			LJ, QX
Thallium	468		ng/l	500.00		93.7	90-110			
Vanadium	19500		ng/l	20000		97.6	90-110			
Zinc	498000		ng/l	500000		99.7	90-110			
Calibration Check (2404027-CCV5)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	19900		ng/l	20000		99.3	90-110			
Arsenic	19700		ng/l	20000		98.5	90-110			
Barium	208000		ng/l	200000		104	90-110			
Beryllium	4500		ng/l	5000.0		90.0	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Check (2404027-CCV5) Contin				Prepared: 04/09/24 Analyzed: 04/10/24						
Cadmium	19700		ng/l	20000		98.7	90-110			
Chromium	246000		ng/l	240000		103	90-110			
Cobalt	49300		ng/l	50000		98.5	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.5	90-110			
Lead	195000		ng/l	200000		97.4	90-110			
Manganese	480000		ng/l	500000		96.0	90-110			
Molybdenum	50600		ng/l	50000		101	90-110			
Nickel	118000		ng/l	120000		98.7	90-110			
Selenium	19600		ng/l	20000		97.9	90-110			LJ, QX
Thallium	468		ng/l	500.00		93.6	90-110			
Vanadium	19500		ng/l	20000		97.5	90-110			
Zinc	494000		ng/l	500000		98.8	90-110			
Calibration Check (2404027-CCV6)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	19100		ng/l	20000		95.7	90-110			
Arsenic	19200		ng/l	20000		95.9	90-110			
Barium	203000		ng/l	200000		101	90-110			
Beryllium	5040		ng/l	5000.0		101	90-110			
Cadmium	19300		ng/l	20000		96.7	90-110			
Chromium	243000		ng/l	240000		101	90-110			
Cobalt	48300		ng/l	50000		96.7	90-110			
Copper	1.97E6		ng/l	2.0000E6		98.5	90-110			
Lead	188000		ng/l	200000		93.8	90-110			
Manganese	464000		ng/l	500000		92.7	90-110			
Molybdenum	50200		ng/l	50000		100	90-110			
Nickel	116000		ng/l	120000		96.9	90-110			
Selenium	18700		ng/l	20000		93.4	90-110			LJ, QX
Thallium	459		ng/l	500.00		91.8	90-110			
Vanadium	19100		ng/l	20000		95.3	90-110			
Zinc	482000		ng/l	500000		96.4	90-110			
Calibration Check (2404027-CCV7)				Prepared: 04/09/24 Analyzed: 04/10/24						
Antimony	18800		ng/l	20000		94.2	90-110			
Arsenic	19200		ng/l	20000		95.8	90-110			
Barium	197000		ng/l	200000		98.7	90-110			
Beryllium	4770		ng/l	5000.0		95.3	90-110			
Cadmium	19200		ng/l	20000		96.0	90-110			
Chromium	243000		ng/l	240000		101	90-110			
Cobalt	48400		ng/l	50000		96.9	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.3	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Calibration Check (2404027-CCV7) Contin				Prepared: 04/09/24 Analyzed: 04/10/24						
Lead	188000		ng/l	200000		94.1	90-110			
Manganese	470000		ng/l	500000		94.1	90-110			
Molybdenum	49700		ng/l	50000		99.4	90-110			
Nickel	116000		ng/l	120000		96.7	90-110			
Selenium	18600		ng/l	20000		93.0	90-110			LJ, QX
Thallium	463		ng/l	500.00		92.5	90-110			
Vanadium	19100		ng/l	20000		95.3	90-110			
Zinc	481000		ng/l	500000		96.2	90-110			
High Cal Check (2404027-HCV1)				Prepared & Analyzed: 04/09/24						
Antimony	39700		ng/l	40000		99.2	95-105			
Arsenic	39800		ng/l	40000		99.4	95-105			
Barium	400000		ng/l	400000		100	95-105			
Beryllium	10300		ng/l	10000		103	95-105			
Cadmium	39500		ng/l	40000		98.8	95-105			
Chromium	465000		ng/l	480000		96.9	95-105			
Cobalt	99100		ng/l	100000		99.1	95-105			
Copper	3.92E6		ng/l	4.0000E6		98.0	95-105			
Lead	396000		ng/l	400000		99.0	95-105			
Manganese	979000		ng/l	1.0000E6		97.9	95-105			
Molybdenum	99800		ng/l	100000		99.8	95-105			
Nickel	237000		ng/l	240000		98.6	95-105			
Selenium	39200		ng/l	40000		98.0	95-105			LJ, QX
Thallium	986		ng/l	1000.0		98.6	95-105			
Vanadium	39700		ng/l	40000		99.3	95-105			
Zinc	983000		ng/l	1.0000E6		98.3	95-105			
Initial Cal Blank (2404027-ICB1)				Prepared & Analyzed: 04/09/24						
Antimony	0.657		ng/l							
Arsenic	8.75		ng/l							
Barium	0.0995		ng/l							
Beryllium	0.328		ng/l							
Cadmium	0.158		ng/l							
Chromium	1.15		ng/l							
Cobalt	0.610		ng/l							
Copper	218		ng/l							
Lead	4.07		ng/l							
Manganese	10.6		ng/l							
Molybdenum	8.25		ng/l							
Nickel	1.50		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Initial Cal Blank (2404027-ICB1) Continu				Prepared & Analyzed: 04/09/24						
Selenium	-20.3		ng/l							LJ, QX, U
Thallium	0.777		ng/l							
Vanadium	56.1		ng/l							
Zinc	-48.8		ng/l							U
Initial Cal Check (2404027-ICV1)				Prepared & Analyzed: 04/09/24						
Antimony	19700		ng/l	20000		98.4	90-110			
Arsenic	19900		ng/l	20000		99.6	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4590		ng/l	5000.0		91.8	90-110			
Cadmium	20800		ng/l	20000		104	90-110			
Chromium	248000		ng/l	240000		104	90-110			
Cobalt	49400		ng/l	50000		98.8	90-110			
Copper	2.00E6		ng/l	2.0000E6		99.8	90-110			
Lead	195000		ng/l	200000		97.3	90-110			
Manganese	483000		ng/l	500000		96.7	90-110			
Molybdenum	49800		ng/l	50000		99.5	90-110			
Nickel	119000		ng/l	120000		99.4	90-110			
Selenium	20200		ng/l	20000		101	90-110			LJ, QX
Thallium	506		ng/l	500.00		101	90-110			
Vanadium	20000		ng/l	20000		100	90-110			
Zinc	503000		ng/l	500000		101	90-110			
Interference Check A (2404027-IFA1)				Prepared & Analyzed: 04/09/24						
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	306000		ng/l	300000		102	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			LJ, QX, U
Thallium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
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AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2404027 - B4D0902										
Interference Check B (2404027-IFB1)				Prepared & Analyzed: 04/09/24						
Antimony	20500		ng/l	20000		102	80-120			
Arsenic	20700		ng/l	20000		103	80-120			
Barium	204000		ng/l	200000		102	80-120			
Beryllium	5020		ng/l	5000.0		100	80-120			
Cadmium	19800		ng/l	20000		98.8	80-120			
Chromium	248000		ng/l	240000		103	80-120			
Cobalt	49900		ng/l	50000		99.8	80-120			
Copper	1.92E6		ng/l	2.0000E6		95.8	80-120			
Lead	210000		ng/l	200000		105	80-120			
Manganese	505000		ng/l	500000		101	80-120			
Molybdenum	365000		ng/l	350000		104	80-120			
Nickel	116000		ng/l	120000		96.8	80-120			
Selenium	18800		ng/l	20000		94.1	80-120			LJ, QX
Thallium	516		ng/l	500.00		103	80-120			
Vanadium	19500		ng/l	20000		97.5	80-120			
Zinc	462000		ng/l	500000		92.5	80-120			
Batch B4D0902 - ICP-MS Extraction										
Blank (B4D0902-BLK1)				Prepared & Analyzed: 04/09/24						
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							LJ, QX, U
Thallium	ND	5.89E-4	ng/m³ Air							U
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4D0902-BS1)				Prepared & Analyzed: 04/09/24						
Antimony	0.943	0.0386	ng/m³ Air	1.3829		68.2	80-120			SL
Arsenic	2.70	0.00937	ng/m³ Air	2.7658		97.6	80-120			
Barium	28.0	1.07	ng/m³ Air	27.658		101	80-120			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4D0902 - ICP-MS Extraction										
LCS (B4D0902-BS1) Continued				Prepared & Analyzed: 04/09/24						
Beryllium	1.43	0.00320	ng/m³ Air	1.3829		104	80-120			
Cadmium	1.39	0.0741	ng/m³ Air	1.3829		101	80-120			
Chromium	15.2	2.21	ng/m³ Air	13.829		110	80-120			
Cobalt	1.38	0.0436	ng/m³ Air	1.3829		99.7	80-120			
Copper	29.9	2.63	ng/m³ Air	27.658		108	80-120			
Lead	13.5	0.214	ng/m³ Air	13.829		97.8	80-120			
Manganese	8.17	1.89	ng/m³ Air	8.2975		98.5	80-120			
Molybdenum	1.42	0.359	ng/m³ Air	1.3829		103	80-120			
Nickel	2.97	0.652	ng/m³ Air	2.7658		107	80-120			
Selenium	2.75	0.00896	ng/m³ Air	2.7658		99.4	80-120			LJ, QX
Thallium	0.135	5.89E-4	ng/m³ Air	0.13829		97.9	80-120			
Vanadium	2.73	0.0529	ng/m³ Air	2.7658		98.8	80-120			
Zinc	100	76.8	ng/m³ Air	82.975		121	80-120			
Duplicate (B4D0902-DUP1)		**Source: 4040832-12**		Prepared & Analyzed: 04/09/24						
Antimony	0.0587	0.0310	ng/m³ Air		0.0621			5.63	10	SL
Arsenic	0.253	0.00752	ng/m³ Air		0.267			5.47	10	
Barium	3.03	0.859	ng/m³ Air		3.96			26.6	10	
Beryllium	0.0188	0.00257	ng/m³ Air		0.0181			3.78	10	
Cadmium	ND	0.0595	ng/m³ Air		ND				10	U
Chromium	1.96	1.77	ng/m³ Air		2.06			5.10	10	
Cobalt	0.337	0.0350	ng/m³ Air		0.340			0.703	10	
Copper	36.9	2.11	ng/m³ Air		38.2			3.67	10	
Lead	0.630	0.172	ng/m³ Air		0.764			19.1	10	
Manganese	9.55	1.52	ng/m³ Air		9.66			1.15	10	
Molybdenum	1.25	0.288	ng/m³ Air		1.29			3.78	10	
Nickel	1.11	0.523	ng/m³ Air		1.08			2.71	10	
Selenium	0.207	0.00719	ng/m³ Air		0.205			0.762	10	LJ, QX
Thallium	0.00225	4.73E-4	ng/m³ Air		0.00237			5.35	10	
Vanadium	1.01	0.0425	ng/m³ Air		1.03			1.99	10	
Zinc	ND	61.6	ng/m³ Air		ND				10	U
Duplicate (B4D0902-DUP2)		**Source: 4040832-02**		Prepared & Analyzed: 04/09/24						
Antimony	0.188	0.0313	ng/m³ Air		0.173			8.62	10	SL
Arsenic	0.272	0.00759	ng/m³ Air		0.289			6.13	10	
Barium	5.84	0.867	ng/m³ Air		5.84			0.120	10	
Beryllium	0.0130	0.00259	ng/m³ Air		0.0122			6.46	10	
Cadmium	ND	0.0600	ng/m³ Air		ND				10	U
Chromium	2.01	1.79	ng/m³ Air		1.98			1.34	10	
Cobalt	0.329	0.0353	ng/m³ Air		0.330			0.304	10	

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AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4D0902 - ICP-MS Extraction										
Duplicate (B4D0902-DUP2) Continued			**Source: 4040832-02**		Prepared & Analyzed: 04/09/24					
Copper	32.1	2.13	ng/m³ Air		30.7			4.36	10	
Lead	0.902	0.173	ng/m³ Air		0.953			5.48	10	
Manganese	10.5	1.53	ng/m³ Air		10.7			1.42	10	
Molybdenum	1.67	0.291	ng/m³ Air		1.69			1.23	10	
Nickel	1.29	0.528	ng/m³ Air		1.37			6.17	10	
Selenium	0.164	0.00726	ng/m³ Air		0.171			4.09	10	LJ, QX
Thallium	0.00118	4.77E-4	ng/m³ Air		0.00118			0.180	10	
Vanadium	1.26	0.0429	ng/m³ Air		1.28			1.63	10	
Zinc	ND	62.2	ng/m³ Air		ND				10	U
Duplicate (B4D0902-DUP3)			**Source: 4040832-19**		Prepared: 04/09/24 Analyzed: 04/10/24					
Antimony	0.0759	0.0327	ng/m³ Air		0.0754			0.730	10	SL
Arsenic	0.644	0.00794	ng/m³ Air		0.642			0.191	10	
Barium	2.92	0.907	ng/m³ Air		2.93			0.411	10	
Beryllium	0.00678	0.00271	ng/m³ Air		0.00794			15.7	10	
Cadmium	ND	0.0628	ng/m³ Air		ND				10	U
Chromium	2.28	1.87	ng/m³ Air		2.27			0.380	10	
Cobalt	0.330	0.0370	ng/m³ Air		0.329			0.372	10	
Copper	36.4	2.23	ng/m³ Air		35.6			2.24	10	
Lead	0.395	0.181	ng/m³ Air		0.393			0.695	10	
Manganese	9.47	1.60	ng/m³ Air		9.48			0.0857	10	
Molybdenum	2.18	0.304	ng/m³ Air		2.19			0.535	10	
Nickel	1.21	0.553	ng/m³ Air		1.21			0.156	10	
Selenium	0.136	0.00759	ng/m³ Air		0.135			1.05	10	LJ, QX
Thallium	8.72E-4	4.99E-4	ng/m³ Air		8.48E-4			2.77	10	QB-04
Vanadium	1.16	0.0448	ng/m³ Air		1.17			0.571	10	
Zinc	ND	65.1	ng/m³ Air		ND				10	U
Duplicate (B4D0902-DUP4)			**Source: 4040832-31**		Prepared: 04/09/24 Analyzed: 04/10/24					
Antimony	0.105	0.0341	ng/m³ Air		0.105			0.574	10	SL
Arsenic	0.383	0.00829	ng/m³ Air		0.388			1.32	10	
Barium	3.86	0.946	ng/m³ Air		3.83			0.727	10	
Beryllium	0.00913	0.00283	ng/m³ Air		0.00734			21.8	10	
Cadmium	ND	0.0655	ng/m³ Air		ND				10	U
Chromium	2.11	1.95	ng/m³ Air		2.10			0.553	10	
Cobalt	0.328	0.0386	ng/m³ Air		0.325			0.731	10	
Copper	30.9	2.33	ng/m³ Air		30.7			0.935	10	
Lead	0.944	0.189	ng/m³ Air		0.937			0.790	10	
Manganese	11.4	1.67	ng/m³ Air		11.3			0.915	10	
Molybdenum	2.14	0.317	ng/m³ Air		2.14			0.0215	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 B4D0902 - ICP-MS Extraction										
Duplicate (B4D0902-DUP4) Continued	**Source: 4040832-31**			Prepared: 04/09/24 Analyzed: 04/10/24						
Nickel	1.17	0.577	ng/m³ Air		1.15			1.68	10	
Selenium	0.190	0.00792	ng/m³ Air		0.176			7.94	10	LJ, QX
Thallium	0.00101	5.21E-4	ng/m³ Air		0.00111			9.70	10	
Vanadium	1.19	0.0468	ng/m³ Air		1.18			0.487	10	
Zinc	ND	67.9	ng/m³ Air		ND				10	U
Matrix Spike (B4D0902-MS1)	**Source: 4040832-12**			Prepared & Analyzed: 04/09/24						
Antimony	0.654	0.0310	ng/m³ Air	1.1098	0.0621	53.3	80-120			SL
Arsenic	2.35	0.00752	ng/m³ Air	2.2197	0.267	93.8	80-120			
Barium	24.9	0.859	ng/m³ Air	22.197	3.96	94.3	80-120			
Beryllium	1.10	0.00257	ng/m³ Air	1.1098	0.0181	97.2	80-120			
Cadmium	1.10	0.0595	ng/m³ Air	1.1098	ND	99.5	80-120			
Chromium	13.3	1.77	ng/m³ Air	11.098	2.06	102	80-120			
Cobalt	1.43	0.0350	ng/m³ Air	1.1098	0.340	98.2	80-120			
Copper	62.5	2.11	ng/m³ Air	22.197	38.2	109	80-120			
Lead	11.6	0.172	ng/m³ Air	11.098	0.764	97.8	80-120			
Manganese	16.0	1.52	ng/m³ Air	6.6590	9.66	94.6	80-120			
Molybdenum	2.31	0.288	ng/m³ Air	1.1098	1.29	91.4	80-120			
Nickel	3.30	0.523	ng/m³ Air	2.2197	1.08	100	80-120			
Selenium	2.34	0.00719	ng/m³ Air	2.2197	0.205	96.3	80-120			LJ, QX
Thallium	0.108	4.73E-4	ng/m³ Air	0.11098	0.00237	95.2	80-120			
Vanadium	3.15	0.0425	ng/m³ Air	2.2197	1.03	95.4	80-120			
Zinc	77.1	61.6	ng/m³ Air	66.590	ND	116	80-120			
Matrix Spike (B4D0902-MS2)	**Source: 4040832-02**			Prepared & Analyzed: 04/09/24						
Antimony	0.806	0.0313	ng/m³ Air	1.1206	0.173	56.6	80-120			SL
Arsenic	2.39	0.00759	ng/m³ Air	2.2413	0.289	94.0	80-120			
Barium	27.6	0.867	ng/m³ Air	22.413	5.84	97.1	80-120			
Beryllium	1.09	0.00259	ng/m³ Air	1.1206	0.0122	96.3	80-120			
Cadmium	1.11	0.0600	ng/m³ Air	1.1206	ND	99.1	80-120			
Chromium	13.1	1.79	ng/m³ Air	11.206	1.98	99.4	80-120			
Cobalt	1.41	0.0353	ng/m³ Air	1.1206	0.330	96.4	80-120			
Copper	54.9	2.13	ng/m³ Air	22.413	30.7	108	80-120			
Lead	11.8	0.173	ng/m³ Air	11.206	0.953	96.7	80-120			
Manganese	16.8	1.53	ng/m³ Air	6.7239	10.7	90.4	80-120			
Molybdenum	2.81	0.291	ng/m³ Air	1.1206	1.69	100	80-120			
Nickel	3.37	0.528	ng/m³ Air	2.2413	1.37	89.4	80-120			
Selenium	2.32	0.00726	ng/m³ Air	2.2413	0.171	95.9	80-120			LJ, QX
Thallium	0.107	4.77E-4	ng/m³ Air	0.11206	0.00118	94.2	80-120			
Vanadium	3.34	0.0429	ng/m³ Air	2.2413	1.28	92.1	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4D0902 - ICP-MS Extraction										
Matrix Spike (B4D0902-MS2) Continued Source: 4040832-02 Prepared & Analyzed: 04/09/24										
Zinc	83.1	62.2	ng/m³ Air	67.239	ND	124	80-120			
Matrix Spike Dup (B4D0902-MSD1) Source: 4040832-12 Prepared & Analyzed: 04/09/24										
Antimony	0.646	0.0310	ng/m³ Air	1.1098	0.0621	52.6	80-120	1.29	20	SL
Arsenic	2.34	0.00752	ng/m³ Air	2.2197	0.267	93.4	80-120	0.347	20	
Barium	24.7	0.859	ng/m³ Air	22.197	3.96	93.5	80-120	0.723	20	
Beryllium	1.19	0.00257	ng/m³ Air	1.1098	0.0181	106	80-120	8.27	20	
Cadmium	1.10	0.0595	ng/m³ Air	1.1098	ND	99.4	80-120	0.0982	20	
Chromium	13.1	1.77	ng/m³ Air	11.098	2.06	99.4	80-120	1.77	20	
Cobalt	1.40	0.0350	ng/m³ Air	1.1098	0.340	95.2	80-120	2.35	20	
Copper	59.9	2.11	ng/m³ Air	22.197	38.2	97.4	80-120	4.27	20	
Lead	11.4	0.172	ng/m³ Air	11.098	0.764	96.3	80-120	1.43	20	
Manganese	15.4	1.52	ng/m³ Air	6.6590	9.66	85.8	80-120	3.73	20	
Molybdenum	2.31	0.288	ng/m³ Air	1.1098	1.29	91.4	80-120	0.0109	20	
Nickel	3.21	0.523	ng/m³ Air	2.2197	1.08	96.0	80-120	2.75	20	
Selenium	2.29	0.00719	ng/m³ Air	2.2197	0.205	94.1	80-120	2.05	20	LJ, QX
Thallium	0.107	4.73E-4	ng/m³ Air	0.11098	0.00237	94.5	80-120	0.702	20	
Vanadium	3.10	0.0425	ng/m³ Air	2.2197	1.03	93.2	80-120	1.59	20	
Zinc	75.2	61.6	ng/m³ Air	66.590	ND	113	80-120	2.53	20	
Matrix Spike Dup (B4D0902-MSD2) Source: 4040832-02 Prepared & Analyzed: 04/09/24										
Antimony	0.786	0.0313	ng/m³ Air	1.1206	0.173	54.8	80-120	2.51	20	SL
Arsenic	2.39	0.00759	ng/m³ Air	2.2413	0.289	93.8	80-120	0.122	20	
Barium	27.7	0.867	ng/m³ Air	22.413	5.84	97.5	80-120	0.316	20	
Beryllium	0.944	0.00259	ng/m³ Air	1.1206	0.0122	83.1	80-120	14.5	20	
Cadmium	1.11	0.0600	ng/m³ Air	1.1206	ND	99.2	80-120	0.0186	20	
Chromium	13.2	1.79	ng/m³ Air	11.206	1.98	100	80-120	0.880	20	
Cobalt	1.41	0.0353	ng/m³ Air	1.1206	0.330	96.8	80-120	0.325	20	
Copper	57.2	2.13	ng/m³ Air	22.413	30.7	118	80-120	4.15	20	
Lead	11.8	0.173	ng/m³ Air	11.206	0.953	96.8	80-120	0.0927	20	
Manganese	16.6	1.53	ng/m³ Air	6.7239	10.7	88.0	80-120	0.946	20	
Molybdenum	2.82	0.291	ng/m³ Air	1.1206	1.69	101	80-120	0.447	20	
Nickel	3.37	0.528	ng/m³ Air	2.2413	1.37	89.0	80-120	0.247	20	
Selenium	2.30	0.00726	ng/m³ Air	2.2413	0.171	95.1	80-120	0.811	20	LJ, QX
Thallium	0.107	4.77E-4	ng/m³ Air	0.11206	0.00118	94.8	80-120	0.655	20	
Vanadium	3.35	0.0429	ng/m³ Air	2.2413	1.28	92.3	80-120	0.163	20	
Zinc	81.4	62.2	ng/m³ Air	67.239	ND	121	80-120	1.95	20	
Post Spike (B4D0902-PS1) Source: 4040832-12 Prepared & Analyzed: 04/09/24										
Antimony	0.272	0.0310	ng/m³ Air	0.22197	0.0621	94.8	75-125			SL
Arsenic	1.30	0.00752	ng/m³ Air	1.1098	0.267	92.9	75-125			

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

FILE #: 4205.00.003.001
REPORTED: 04/16/24 10:24
SUBMITTED: 04/08/24
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 B4D0902 - ICP-MS Extraction										
Post Spike (B4D0902-PS1) Continued		**Source: 4040832-12**		Prepared & Analyzed: 04/09/24						
Barium	6.09	0.859	ng/m³ Air	2.2197	3.96	95.9	75-125			
Beryllium	0.236	0.00257	ng/m³ Air	0.22197	0.0181	98.3	75-125			
Cadmium	0.122	0.0595	ng/m³ Air	0.11098	ND	110	75-125			
Chromium	3.09	1.77	ng/m³ Air	1.1098	2.06	93.0	75-125			
Cobalt	0.548	0.0350	ng/m³ Air	0.22197	0.340	93.7	75-125			
Copper	49.7	2.11	ng/m³ Air	11.098	38.2	103	75-125			
Lead	22.1	0.172	ng/m³ Air	22.197	0.764	96.1	75-125			
Manganese	11.7	1.52	ng/m³ Air	2.2197	9.66	90.1	75-125			
Molybdenum	2.32	0.288	ng/m³ Air	1.1098	1.29	92.3	75-125			
Nickel	3.18	0.523	ng/m³ Air	2.2197	1.08	94.9	75-125			
Selenium	1.26	0.00719	ng/m³ Air	1.1098	0.205	95.2	75-125			LJ, QX
Thallium	0.0550	4.73E-4	ng/m³ Air	5.5491E-2	0.00237	94.9	75-125			
Vanadium	2.04	0.0425	ng/m³ Air	1.1098	1.03	91.7	75-125			
Zinc	ND	61.6	ng/m³ Air	22.197	ND		75-125			U
Post Spike (B4D0902-PS2)		**Source: 4040832-02**		Prepared & Analyzed: 04/09/24						
Antimony	0.385	0.0313	ng/m³ Air	0.22413	0.173	94.7	75-125			SL
Arsenic	1.34	0.00759	ng/m³ Air	1.1206	0.289	94.2	75-125			
Barium	8.04	0.867	ng/m³ Air	2.2413	5.84	98.3	75-125			
Beryllium	0.217	0.00259	ng/m³ Air	0.22413	0.0122	91.4	75-125			
Cadmium	0.120	0.0600	ng/m³ Air	0.11206	ND	107	75-125			
Chromium	3.04	1.79	ng/m³ Air	1.1206	1.98	94.5	75-125			
Cobalt	0.545	0.0353	ng/m³ Air	0.22413	0.330	95.9	75-125			
Copper	42.5	2.13	ng/m³ Air	11.206	30.7	105	75-125			
Lead	22.4	0.173	ng/m³ Air	22.413	0.953	95.8	75-125			
Manganese	12.8	1.53	ng/m³ Air	2.2413	10.7	94.5	75-125			
Molybdenum	2.71	0.291	ng/m³ Air	1.1206	1.69	91.3	75-125			
Nickel	3.47	0.528	ng/m³ Air	2.2413	1.37	93.5	75-125			
Selenium	1.24	0.00726	ng/m³ Air	1.1206	0.171	95.3	75-125			LJ, QX
Thallium	0.0546	4.77E-4	ng/m³ Air	5.6032E-2	0.00118	95.4	75-125			
Vanadium	2.30	0.0429	ng/m³ Air	1.1206	1.28	91.3	75-125			
Zinc	ND	62.2	ng/m³ Air	22.413	ND		75-125			U
Dilution Check (B4D0902-SRL1)		**Source: 4040832-12**		Prepared & Analyzed: 04/09/24						
Antimony	ND	0.155	ng/m³ Air		ND				10	SL, U
Arsenic	0.279	0.0376	ng/m³ Air		0.267			4.08	10	
Barium	ND	4.29	ng/m³ Air		ND				10	U
Beryllium	0.0229	0.0128	ng/m³ Air		0.0181			23.2	10	
Cadmium	ND	0.297	ng/m³ Air		ND				10	U
Chromium	ND	8.87	ng/m³ Air		ND				10	U

CERTIFICATE OF ANALYSIS

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

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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 B4D0902 - ICP-MS Extraction										
Dilution Check (B4D0902-SRL1) ContinueSource: 4040832-12 Prepared & Analyzed: 04/09/24										
Cobalt	0.346	0.175	ng/m³ Air		0.340			1.78	10	
Copper	38.7	10.6	ng/m³ Air		38.2			1.31	10	
Lead	ND	0.859	ng/m³ Air		ND				10	U
Manganese	9.71	7.58	ng/m³ Air		9.66			0.552	10	
Molybdenum	ND	1.44	ng/m³ Air		ND				10	U
Nickel	ND	2.62	ng/m³ Air		ND				10	U
Selenium	0.204	0.0360	ng/m³ Air		0.205			0.343	10	LJ, QX
Thallium	0.00377	0.00236	ng/m³ Air		0.00237			45.5	10	
Vanadium	1.07	0.212	ng/m³ Air		1.03			3.94	10	
Zinc	ND	308	ng/m³ Air		ND				10	U
Dilution Check (B4D0902-SRL2) Source: 4040832-02 Prepared & Analyzed: 04/09/24										
Antimony	0.170	0.156	ng/m³ Air		0.173			1.70	10	SL
Arsenic	0.297	0.0380	ng/m³ Air		0.289			2.91	10	
Barium	5.94	4.34	ng/m³ Air		5.84			1.72	10	
Beryllium	0.0133	0.0130	ng/m³ Air		ND			8.49	10	
Cadmium	ND	0.300	ng/m³ Air		ND				10	U
Chromium	ND	8.95	ng/m³ Air		ND				10	U
Cobalt	0.337	0.177	ng/m³ Air		0.330			1.95	10	
Copper	31.6	10.7	ng/m³ Air		30.7			2.72	10	
Lead	0.942	0.867	ng/m³ Air		0.953			1.07	10	
Manganese	10.8	7.66	ng/m³ Air		10.7			1.21	10	
Molybdenum	1.71	1.45	ng/m³ Air		1.69			1.37	10	
Nickel	ND	2.64	ng/m³ Air		ND				10	U
Selenium	0.173	0.0363	ng/m³ Air		0.171			1.10	10	LJ, QX
Thallium	0.00261	0.00239	ng/m³ Air		ND			75.7	10	
Vanadium	1.35	0.214	ng/m³ Air		1.28			4.96	10	
Zinc	ND	311	ng/m³ Air		ND				10	U

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Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
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 4/16/2024 and Shanna Vasser 4/17/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 3/28/2024 – 4/3/2024
Report No: 4040832

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

Discrepancies:

13. Field blank detections above the method detection limit were reported for arsenic in MFL-FB01-040124-HM and for nickel in MFL-FB01-040324-HM.

Notes: None.