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

Lahaina, Maui

2/29/2024 – 3/6/2024
[Report Updated: 4/4/2024]

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

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

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

Air quality monitoring for particulate matter was collected at all four community locations over a 24-hour period each day in accordance with the draft CAMSP. Additionally, daily air samples were collected at all community locations, as depicted in **Figure 1**. Summary analytical data is presented in **Tables 1 and 2**. **Appendix 1** provides detailed analytical results for all community locations where air sampling was performed. Analytical results were compared to site-specific screening levels for particulate matter, asbestos, and heavy metals as described in the draft CAMSP. A summary of meteorological data is presented in **Table 3.** Overall wind conditions show approximately 1.2 mph in a generally SSE direction.

Results for Community Locations:
Ambient air monitoring was performed to assess the presence of airborne particulates with a particle size diameter of 10 micrometers (µm), as this is the size that is recognized as being small enough to be inhaled into a person's lungs. This particle size diameter is recognized for health evaluations and is identified as "PM_{10}". Monitoring for PM_{10} was conducted 24 hours a day, 7 days a week at each of the following locations: Leialii Hawaiian Homelands (February 29-March 6), WW Pump Station #4 (February 29-March 6), Lahaina Intermediate School (February 29-March 6), Lahaina Boys & Girls Club (February 29-March 6).

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

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

There were 28 samples collected for asbestos fibers at community monitoring locations throughout this reporting period. All asbestos results were below the Site Screening Action Level (SSAL) of 0.003 fibers/cc and less than the lab's analytical sensitivity (see Table 1). Notably, the laboratory commented "Numerous gypsum fibers present" on samples collected at all monitoring stations from February 29-March 6. Gypsum is a common ingredient in drywall, plaster and cement so its presence in the sample filters is likely due to debris removal operations or other disturbances of built-environment fire debris. The presence of gypsum fibers found in the samples were not sufficient to obscure asbestos analysis;

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

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
2/29/2024-3/6/2024
[Report Updated: 4/4/2024]

Analyte		Asbestos	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Units		s/cc	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Screening Level*		0.003 [1]	0.7	0.05	1.2	0.05	0.02	12	0.01	240	1.5	0.12	4.8	0.02	48	24	0.24	1200
2/29/2024	Leialii Hawaiian Homelands (AM-01)	<0.0026	0.0000413	0.00119	0.00259	0.00000871	ND	0.00255	0.000292	0.0459	0.000464	0.00820	0.00259	0.000888	0.000102	0.00000119	0.000790	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.0000817	0.000348	0.00468	0.0000138	ND	0.00260	0.000446	0.0329	0.000892	0.0114	0.00175	0.00169	0.000134	0.00000115	0.00118	ND
	Lahaina Intermediate School (AM-03)	<0.0027	0.0000392	0.000319	0.00256	0.0000127	ND	0.00196	0.000238	0.0299	0.000431	0.00606	0.00143	0.000717	0.000106	0.00000101	0.000575	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000518	0.000173	0.00264	0.00000848	ND	0.00205	0.000227	0.0192	0.000720	0.00656	0.000973	0.000826	0.000122	0.000000889	0.000596	ND
3/1/2024	Leialii Hawaiian Homelands (AM-01)	<0.0028	0.0000342	0.000752	0.00244	0.00000695	ND	0.00223	0.000294	0.0548	0.000366	0.00733	0.00267	0.000844	0.000145	0.00000106	0.000736	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.000165	0.000476	0.00513	0.0000111	0.0000644	0.00261	0.000293	0.0428	0.00117	0.00940	0.00206	0.00120	0.000172	0.00000114	0.000897	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000493	0.000194	0.00293	0.0000226	ND	0.00230	0.000359	0.0325	0.000465	0.00843	0.00177	0.00104	0.000156	0.00000100	0.000855	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000478	0.000137	0.00244	0.00000623	ND	0.00199	0.000156	0.0194	0.000768	0.00477	0.00102	0.000709	0.000137	0.000000777	0.000450	ND
3/2/2024	Leialii Hawaiian Homelands (AM-01)	<0.0028	0.0000360	0.000551	0.00261	0.00000807	ND	0.00229	0.000291	0.0556	0.000440	0.00840	0.00278	0.000866	0.000134	0.00000127	0.000867	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.000104	0.000657	0.00443	0.0000114	ND	0.00213	0.000276	0.0371	0.000916	0.00982	0.00195	0.000954	0.000163	0.00000134	0.000925	ND
	Lahaina Intermediate School (AM-03)	<0.0026	0.0000363	0.000186	0.00261	0.0000170	ND	0.00217	0.000296	0.0298	0.000442	0.00779	0.00184	0.000942	0.000146	0.00000124	0.000815	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000440	0.000209	0.00311	0.0000105	ND	0.00224	0.000277	0.0233	0.000605	0.00846	0.00112	0.000952	0.000145	0.00000111	0.000819	ND
3/3/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.000109	0.00132	0.00344	0.00000762	ND	0.00249	0.000308	0.0623	0.000853	0.00845	0.00300	0.000897	0.000139	0.00000141	0.000795	ND
	WW Pump Station #4 (AM-02)	<0.0025	0.000193	0.000927	0.00699	0.0000228	ND	0.00338	0.000671	0.0636	0.00174	0.0208	0.00188	0.00194	0.000219	0.00000187	0.00198	ND
	Lahaina Intermediate School (AM-03)	<0.0026	0.0000299	0.000138	0.00149	0.00000670	ND	0.00172	0.000120	0.0330	0.000382	0.00335	0.00215	0.000606	0.000114	0.00000120	0.000307	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000405	0.000165	0.00203	0.00000500	0.000696	0.00201	0.000125	0.0256	0.000413	0.00361	0.00132	0.000716	0.000114	0.00000100	0.000313	ND
3/4/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000471	0.000567	0.00248	0.00000583	ND	0.133	0.00165	0.0919	0.000908	0.0124	0.00473	0.0544	0.000141	0.000000736	0.00127	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.000124	0.000481	0.00413	0.0000104	ND	0.00215	0.000294	0.0369	0.000931	0.00822	0.00195	0.00103	0.000155	0.000000912	0.000973	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000500	0.000158	0.00220	0.0000170	ND	0.00207	0.000303	0.0360	0.000347	0.00750	0.00247	0.00101	0.000156	0.000000664	0.000867	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000613	0.000240	0.00321	0.0000104	ND	0.00247	0.000270	0.0268	0.000719	0.00829	0.00134	0.000993	0.000152	0.000000924	0.000864	ND
3/5/2024	Leialii Hawaiian Homelands (AM-01)	<0.0027	0.0000718	0.00102	0.00385	0.0000128	ND	0.00642	0.000556	0.0621	0.000624	0.0134	0.00270	0.00260	0.000170	0.00000137	0.00133	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.000135	0.000900	0.00613	0.0000218	0.0000914	0.00386	0.000686	0.0463	0.00180	0.0197	0.00191	0.00225	0.000214	0.00000165	0.00193	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000502	0.000191	0.00293	0.0000206	ND	0.00276	0.000410	0.0366	0.000377	0.0101	0.00252	0.00115	0.000163	0.00000131	0.000985	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000537	0.000221	0.00255	0.00000787	ND	0.00224	0.000217	0.0199	0.000589	0.00650	0.00133	0.000758	0.000158	0.00000107	0.000583	ND
3/6/2024	Leialii Hawaiian Homelands (AM-01)	<0.0025	0.0000633	0.000906	0.00584	0.0000243	ND	0.00741	0.00111	0.0411	0.000744	0.0319	0.00152	0.00303	0.000217	0.00000234	0.00287	ND
	WW Pump Station #4 (AM-02)	<0.0026	0.000145	0.00104	0.00994	0.0000412	0.000154	0.00607	0.00158	0.0362	0.00250	0.0420	0.00121	0.00473	0.000273	0.00000272	0.00417	ND
	Lahaina Intermediate School (AM-03)	<0.0025	0.0000416	0.000393	0.00750	0.000158	0.0000189	0.00869	0.00196	0.0379	0.000649	0.0386	0.00187	0.00443	0.000345	0.00000254	0.00468	ND
	Lahaina Boys & Girls Club (AM-04)	<0.0025	0.0000837	0.000551	0.00462	0.0000210	0.000359	0.00362	0.000819	0.0240	0.00152	0.0186	0.00107	0.00175	0.000176	0.00000196	0.00148	ND
95% Upper Confidence Limit[2]		NA	0.0000900	0.000710	0.00450	0.0000230	0.000543	0.00653	0.000680	0.0453	0.00980	0.0157	0.00224	0.00318	0.000180	0.00000150	0.00158	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
2/29/2024 - 3/4/2024
[Report Updated: 4/4/2024]

Screening Level		**150 µg/m^3**
2/29/2024	Leialii Hawaiian Homelands (AM-01)	6.7
	WW Pump Station #4 (AM-02)	6.9
	Lahaina Intermediate School (AM-03)	8.1
	Lahaina Boys & Girls Club (AM-04)	5.5
3/1/2024	Leialii Hawaiian Homelands (AM-01)	7.6
	WW Pump Station #4 (AM-02)	9.5
	Lahaina Intermediate School (AM-03)	6.9
	Lahaina Boys & Girls Club (AM-04)	5.5
3/2/2024	Leialii Hawaiian Homelands (AM-01)	8.6
	WW Pump Station #4 (AM-02)	10
	Lahaina Intermediate School (AM-03)	7.3
	Lahaina Boys & Girls Club (AM-04)	6.6
3/3/2024	Leialii Hawaiian Homelands (AM-01)	6.1
	WW Pump Station #4 (AM-02)	7.8
	Lahaina Intermediate School (AM-03)	6.8
	Lahaina Boys & Girls Club (AM-04)	5.9
3/4/2024	Leialii Hawaiian Homelands (AM-01)	5.9
	WW Pump Station #4 (AM-02)	8.0
	Lahaina Intermediate School (AM-03)	6.7
	Lahaina Boys & Girls Club (AM-04)	7.0
3/5/2024	Leialii Hawaiian Homelands (AM-01)	7.6
	WW Pump Station #4 (AM-02)	13
	Lahaina Intermediate School (AM-03)	10
	Lahaina Boys & Girls Club (AM-04)	6.8
3/6/2024	Leialii Hawaiian Homelands (AM-01)	6.7
	WW Pump Station #4 (AM-02)	8.8
	Lahaina Intermediate School (AM-03)	7.6
	Lahaina Boys & Girls Club (AM-04)	5.9

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

Table 3
Maui Wildfire - Lahaina
Meteorological Data
2/29/2024-3/6/2024
[Report Updated: 4/4/2024]

Date	Station ID	Weather Station Name	Wind Speed (mph)	Wind Direction (angle)	Temperature (°F)	Rel Humidity (%)	Baro Pressure (mBar)
2/29/2024	AM-01	Leialii Hawaiian Homelands	1.0	SE	77	60	762.1
2/29/2024	AM-02	WW Pump Station #4	1.0	SSE	76	63	764.1
2/29/2024	AM-03	Lahaina Intermediate School	1.1	SE	76	67	754.7
2/29/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	77	64	763.9
3/1/2024	AM-01	Leialii Hawaiian Homelands	1.0	ESE	77	58	762.7
3/1/2024	AM-02	WW Pump Station #4	0.9	SE	74	66	764.9
3/1/2024	AM-03	Lahaina Intermediate School	1.1	SE	76	65	755.2
3/1/2024	AM-04	Lahaina Boys & Girls Club	1.1	S	76	65	764.5
3/2/2024	AM-01	Leialii Hawaiian Homelands	0.9	ESE	76	58	762.7
3/2/2024	AM-02	WW Pump Station #4	1.0	SSE	76	61	764.7
3/2/2024	AM-03	Lahaina Intermediate School	1.0	SE	76	63	755.3
3/2/2024	AM-04	Lahaina Boys & Girls Club	1.1	S	75	64	764.5
3/3/2024	AM-01	Leialii Hawaiian Homelands	1.0	SE	76	62	762.3
3/3/2024	AM-02	WW Pump Station #4	0.8	S	76	67	764.3
3/3/2024	AM-03	Lahaina Intermediate School	1.0	SE	76	67	754.8
3/3/2024	AM-04	Lahaina Boys & Girls Club	1.0	SSE	76	67	764.0
3/4/2024	AM-01	Leialii Hawaiian Homelands	0.8	SE	79	64	762.4
3/4/2024	AM-02	WW Pump Station #4	1.0	S	78	69	764.4
3/4/2024	AM-03	Lahaina Intermediate School	1.1	SSE	78	73	754.9
3/4/2024	AM-04	Lahaina Boys & Girls Club	1.2	S	78	70	764.1
3/5/2024	AM-01	Leialii Hawaiian Homelands	2.1	ESE	77	52	762.5
3/5/2024	AM-02	WW Pump Station #4	1.5	SE	78	54	764.4
3/5/2024	AM-03	Lahaina Intermediate School	1.5	SE	78	56	754.9
3/5/2024	AM-04	Lahaina Boys & Girls Club	1.4	SSE	78	55	764.1
3/6/2024	AM-01	Leialii Hawaiian Homelands	2.2	SSE	75	57	762.1
3/6/2024	AM-02	WW Pump Station #4	1.6	SE	77	55	764.1
3/6/2024	AM-03	Lahaina Intermediate School	1.7	SSE	76	59	754.5
3/6/2024	AM-04	Lahaina Boys & Girls Club	1.6	SSW	78	54	763.7

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

Appendix 1

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

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

EMSL Order:	042404634
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S864023206**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-022924-AB**		**Sample Description:**	
EMSL Sample Number:	042404634-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7040.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0001 **Customer Sample:** MFL-AM01-022924-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	J5	None Detected									
H5	F7	None Detected									
H5	B8	None Detected									
H6	B3	None Detected									
H6	I2	None Detected									

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

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EMSL Order:	042404634
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S864023206**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-022924-AB**		**Sample Description:**	
EMSL Sample Number:	042404634-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7259.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0002 **Customer Sample:** MFL-AM02-022924-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
I2	J9	None Detected									
I2	G7	None Detected									
I2	D8	None Detected									
I3	B3	None Detected									
I3	H2	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:	042404634
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S864023206**

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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-022924-AB**		**Sample Description:**	
EMSL Sample Number:	042404634-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6767.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0027**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 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) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

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EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0003 **Customer Sample:** MFL-AM03-022924-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	I10	None Detected									
I5	G8	None Detected									
I5	C7	None Detected									
I6	C4	None Detected									
I6	H3	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:	

Attn: **Chelsea Saber**
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Project: **Maui Fires - Lahaina / 103S864023206**

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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-022924-AB**		**Sample Description:**	
EMSL Sample Number:	042404634-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7087.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0004 **Customer Sample:** MFL-AM04-022924-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	B3	None Detected									
J1	F4	None Detected									
J1	I5	None Detected									
J2	I7	None Detected									
J2	D6	None Detected									

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

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EMSL Order:	042404634
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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Project: **Maui Fires - Lahaina / 103S864023206**

Phone:	(703) 489-2674
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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-022924-AB**		**Sample Description:**	
EMSL Sample Number:	042404634-0005		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment

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EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0005 **Customer Sample:** MFL-FB01-022924-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	J6	None Detected									
J5	H5	None Detected									
J5	F4	None Detected									
J5	D5	None Detected									
J5	B6	None Detected									
J6	A8	None Detected									
J6	C7	None Detected									
J6	E7	None Detected									
J6	G10	None Detected									
J7	J1	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:	042404634
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
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Project: **Maui Fires - Lahaina / 103S864023206**

Phone:	(703) 489-2674
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Analysis Date:	03/07/2024
Report Date:	03/08/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042404634-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment

Approved Signatory

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

EMSL Order ID:	**042404634**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S864023206**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404634-0006 **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					
H2	A5	None Detected									
H2	C6	None Detected									
H2	E7	None Detected									
H2	G8	None Detected									
H2	I6	None Detected									
H4	A7	None Detected									
H4	C7	None Detected									
H4	E8	None Detected									
H4	G7	None Detected									
H4	I6	None Detected									

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

OrderID: 042404634

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404634

200 Route 130 North
Cinnaminson, NJ 08077

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

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

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

Project Information

Project Name/No: Maui Fires - Lahaina / 103S864023206 — Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) — US State where samples collected: HI — State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Sampled By Name: Elia Kanyon Saldana — Sampled By Signature: [signature] — No. of Samples in Shipment: 5

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

RECEIVED CINNAMINSON NJ 2024 MAR -6 AM 11:14

*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-AM01-022924-AB		7,040.726	02/29/24 1101
MFL-AM02-022924-AB		7,259.467	02/29/24 1117
MFL-AM03-022924-AB		6,767.046	02/29/24 1315
MFL-AM04-022924-AB		7,087.220	02/29/24 1336
MFL-FB01-022924-AB		0	02/29/24 1200

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: [signature]	Date/Time: 03/04/24 1100	Received by: [signature] FX	Date/Time: 3/6/24 945Am
Relinquished by:	Date/Time:	Received by:	Date/Time:

5 AP

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.

1 of 1

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/13/2024 and Shanna Vasser 3/14/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 2/29/2024
Report No: 42404634

√	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030124-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6527.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0028**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total All Structures	**-**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total All Structures (PCMe)	**-**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0001 **Customer Sample:** MFL-AM01-030124-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	A4	None Detected									
A5	D5	None Detected									
A5	I6	None Detected									
A6	H4	None Detected									
A6	C5	None Detected									

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

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

EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030124-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7195.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0002 **Customer Sample:** MFL-AM02-030124-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B2	A6	None Detected									
B2	D7	None Detected									
B2	I5	None Detected									
B3	C5	None Detected									
B3	I6	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030124-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7255.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0003 **Customer Sample:** MFL-AM03-030124-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	A6	None Detected									
B5	E7	None Detected									
B5	H8	None Detected									
B6	C9	None Detected									
B6	I7	None Detected									

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

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EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030124-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7175.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0004 **Customer Sample:** MFL-AM04-030124-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C2	A5	None Detected									
C2	D4	None Detected									
C2	H5	None Detected									
C3	H6	None Detected									
C3	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
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Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-030124-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0005		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment

Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0005 **Customer Sample:** MFL-FB01-030124-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	J7	None Detected									
C5	H5	None Detected									
C5	F4	None Detected									
C5	D3	None Detected									
C5	B4	None Detected									
C6	J3	None Detected									
C6	H2	None Detected									
C6	F1	None Detected									
C6	D2	None Detected									
C6	B5	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
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Project: **Maui Fires - Lahaina / 103S9230**

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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030224-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6358.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0028**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole	**ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total All Structures	**-**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Actinolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Amosite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Anthophyllite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Crocidolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Tremolite	ADX	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**
Other Minerals	-	0	0	< 46.72	< 0.0028	Not Applicable	- 0.0028
Total All Structures (PCMe)	**-**	**0**	**0**	**< 46.72**	**< 0.0028**	**Not Applicable**	**- 0.0028**

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0006 **Customer Sample:** MFL-AM01-030224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D2	A6	None Detected									
D2	D8	None Detected									
D2	G7	None Detected									
D3	H4	None Detected									
D3	B5	None Detected									

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

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EMSL Order:	042404627
Customer ID:	TTDC42
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Project ID:	

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Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
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Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030224-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7221.9
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0007 **Customer Sample:** MFL-AM02-030224-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	B7	None Detected									
D5	D9	None Detected									
D5	J6	None Detected									
D6	J6	None Detected									
D6	B4	None Detected									

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

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EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
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Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030224-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6851.2
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0008 **Customer Sample:** MFL-AM03-030224-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E2	J4	None Detected									
E2	G3	None Detected									
E2	B5	None Detected									
E3	C7	None Detected									
E3	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030224-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7082.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0009 **Customer Sample:** MFL-AM04-030224-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	C5	None Detected									
E5	F7	None Detected									
E5	H4	None Detected									
E6	C3	None Detected									
E6	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

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Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-030224-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0010		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment


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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0010 **Customer Sample:** MFL-FB01-030224-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	J7	None Detected									
F2	H5	None Detected									
F2	F2	None Detected									
F2	D1	None Detected									
F2	B2	None Detected									
F3	A10	None Detected									
F3	C9	None Detected									
F3	E7	None Detected									
F3	G8	None Detected									
F3	I9	None Detected									

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

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EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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Project: **Maui Fires - Lahaina / 103S9230**

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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030324-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6546.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0027**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 46.72**	**< 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) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Actinolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Amosite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Anthophyllite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Crocidolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Tremolite	ADX	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**
Other Minerals	-	0	0	< 46.72	< 0.0027	Not Applicable	- 0.0027
Total All Structures (PCMe)	**-**	**0**	**0**	**< 46.72**	**< 0.0027**	**Not Applicable**	**- 0.0027**

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0011 **Customer Sample:** MFL-AM01-030324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
F5	J3	None Detected									
F5	G5	None Detected									
F5	D7	None Detected									
F6	B6	None Detected									
F6	H8	None Detected									

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

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Project ID:	

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Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030324-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7116.8
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0012 **Customer Sample:** MFL-AM02-030324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G2	A7	None Detected									
G2	D8	None Detected									
G2	J6	None Detected									
G3	H5	None Detected									
G3	B7	None Detected									

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

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1560 Broadway, Suite 1400
Denver, CO, 80202

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030324-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6934.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0013 **Customer Sample:** MFL-AM03-030324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
G5	J5	None Detected									
G5	G3	None Detected									
G5	D4	None Detected									
G6	C7	None Detected									
G6	I8	None Detected									

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

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

EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030324-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7146.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	5
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	3			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment
Numerous gypsum fibers present.


Approved Signatory

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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:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0014 **Customer Sample:** MFL-AM04-030324-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H2	J3	None Detected									
H2	G5	None Detected									
H2	C6	None Detected									
H3	C6	None Detected									
H3	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:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/08/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-030324-AB**		**Sample Description:**	
EMSL Sample Number:	042404627-0015		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment

Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0015 **Customer Sample:** MFL-FB01-030324-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	J3	None Detected									
H5	H2	None Detected									
H5	F1	None Detected									
H5	D3	None Detected									
H5	B4	None Detected									
H6	J4	None Detected									
H6	H3	None Detected									
H6	F4	None Detected									
H6	D3	None Detected									
H6	B4	None Detected									

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

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EMSL Order:	042404627
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/06/2024 09:45 AM
Analysis Date:	03/07/2024
Report Date:	03/12/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042404627-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0128
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

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

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

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

Comment

Approved Signatory

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

EMSL Order ID:	**042404627**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404627-0016 **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	A10	None Detected									
A2	C9	None Detected									
A2	E8	None Detected									
A2	G9	None Detected									
A2	I7	None Detected									
A3	J5	None Detected									
A3	H4	None Detected									
A3	F7	None Detected									
A3	D6	None Detected									
A3	B7	None Detected									

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

OrderID: 042404627

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404627

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

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

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

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Tetra Tech	Company Name:	
Contact Name:	Chelsea 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 / 10359230	Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		US State where samples collected:	HI
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)		
Sampled By Name:	Elia Vargas Saldaña	Sampled By Signature:	
No. of Samples in Shipment	15		

Turn-Around-Time (TAT)

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

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

Test Selection

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

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

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

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

Other Test (please specify)

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

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

RECEIVED 24 MAR -6 AM 11:14 CINNAMINSON, NJ

*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-AM01-030124-AB3		6,527.567	03/01/24 1104
MFL-AM02-030124-AB3		7,195.687	03/01/24 1124
MFL-AM03-030124-AB3		7,255.860	03/01/24 1315
MFL-AM04-030124-AB3		7,175.947	03/01/24 1336
MFL-FB01-030124-AB3		0	03/01/24 1200
MFL-AM01-030224-AB3		~~6,38~~ 6,358.562 (EKS)	03/02/24 1101
MFL-AM02-030224-AB3		7,221.925	03/02/24 1123
MFL-AM03-030224-AB3		6,851.176	03/02/24 1303

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

All samples received acceptable for analysis.

Method of Shipment:	Fed Ex		Sample Condition Upon Receipt:		
Relinquished by:		Date/Time: 03/04/24 1100	Received by: FX	Date/Time 3/6/24	945
Relinquished by:		Date/Time:	Received by:	Date/Time	

(13) P

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.

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

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

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

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404627

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-AM04-030224-AB		7,082.698	03/02/24 1322
MFL-FB01-030224-AB		0	03/02/24 1200
MFL-AM01-030324-AB		6,546.506	03/03/24 1100
MFL-AM02-030324-AB		7,116.800	03/03/24 1120
MFL-AM03-030324-AB		6,934.731	03/03/24 1303
MFL-AM04-030324-AB		7,145.997	03/03/24 1323
MFL-FB01-030324-AB		0	03/03/24 1200

RECEIVED
EMSL
CINNAMINSON, NJ
2024 MAR -6 A 11:14

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 03/04/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

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

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

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

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/13/2014 and Shanna Vasser 3/14/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 3/1/2024 - 3/3/2024
Report No: 42404627

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

Discrepancies: None.

Notes: None.

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

EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030424-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0001		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6835.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(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) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 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
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0001 **Customer Sample:** MFL-AM01-030424-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	G7	None Detected									
A5	D8	None Detected									
A6	G9	None Detected									
A6	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030424-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0002		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7077.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0002 **Customer Sample:** MFL-AM02-030424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
B2	A5	None Detected									
B2	D7	None Detected									
B2	I6	None Detected									
B3	H4	None Detected									
B3	A5	None Detected									

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

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

EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030424-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0003		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7281.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0003 **Customer Sample:** MFL-AM03-030424-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	I4	None Detected									
B5	F3	None Detected									
B5	D2	None Detected									
B6	A8	None Detected									
B6	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030424-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0004		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7208.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0004 **Customer Sample:** MFL-AM04-030424-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
C2	A5	None Detected									
C2	D4	None Detected									
C2	H3	None Detected									
C3	B3	None Detected									
C3	H2	None Detected									

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

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

EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-030424-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0005		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

Comment


Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0005 **Customer Sample:** MFL-FB01-030424-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	H5	None Detected									
C5	H7	None Detected									
C5	G9	None Detected									
C5	F7	None Detected									
C5	D5	None Detected									
C6	A4	None Detected									
C6	C5	None Detected									
C6	E7	None Detected									
C6	G8	None Detected									
C6	I6	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030524-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0006		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6781.7
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(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) STRUCTURES
(>5 microns in length with >3:1 Aspect Ratio)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 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
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0006 **Customer Sample:** MFL-AM01-030524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
D2	J1	None Detected									
D2	H4	None Detected									
D2	F8	None Detected									
D3	I9	None Detected									
D3	C7	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030524-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0007		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	6959.3
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID: 042404989
Client: Tetra Tech
Project ID: Maui Fires - Lahaina / 103S9230

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0007 **Customer Sample:** MFL-AM02-030524-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	G6	None Detected									
D5	C5	None Detected									
D6	C8	None Detected									
D6	H9	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

Attn: **Chelsea Saber**
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Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
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Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
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ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030524-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0008		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7286.8
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	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):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0008 **Customer Sample:** MFL-AM03-030524-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	F4	None Detected									
E1	D3	None Detected									
E1	B5	None Detected									
E2	B8	None Detected									
E2	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:	042404989
Customer ID:	TTDC42
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Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030524-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0009		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7204.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0009 **Customer Sample:** MFL-AM04-030524-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
E5	B7	None Detected									
E5	E4	None Detected									
E5	G2	None Detected									
E6	C2	None Detected									
E6	H4	None Detected									

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

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

EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB01-030524-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0010		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

Comment

Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0010 **Customer Sample:** MFL-FB01-030524-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	J6	None Detected									
F2	H5	None Detected									
F2	F4	None Detected									
F2	D2	None Detected									
F2	B4	None Detected									
F3	A5	None Detected									
F3	C7	None Detected									
F3	E8	None Detected									
F3	G9	None Detected									
F3	I7	None Detected									

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

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EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM01-030624-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0011		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7280.4
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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 %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0011 **Customer Sample:** MFL-AM01-030624-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	J7	None Detected									
F5	G9	None Detected									
F5	D10	None Detected									
F6	I6	None Detected									
F6	A7	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM02-030624-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0012		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7038.6
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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 %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0009**		**Limit of Detection (Structures/cc):**	**0.0026**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Actinolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Amosite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Anthophyllite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Crocidolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Tremolite	ADX	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**
Other Minerals	-	0	0	< 47.09	< 0.0026	Not Applicable	- 0.0026
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0026**	**Not Applicable**	**- 0.0026**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0012 **Customer Sample:** MFL-AM02-030624-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	F4	None Detected									
G1	H6	None Detected									
G1	J8	None Detected									
G2	H4	None Detected									
G2	B3	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:	042404989
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Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
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Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM03-030624-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0013		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7228.5
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0013 **Customer Sample:** MFL-AM03-030624-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	A9	None Detected									
G5	C7	None Detected									
G5	F4	None Detected									
G6	H7	None Detected									
G6	B4	None Detected									

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

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

EMSL Order:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-AM04-030624-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0014		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	7207.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
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 %:	5			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**0.0008**		**Limit of Detection (Structures/cc):**	**0.0025**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

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

	Minimum ID Level	Structures Detected		Density	Concentration	95 % Confidence Interval (S/cc)	
		Primary	Total	(S/mm²)	(S/cc)	Lower	Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Actinolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Amosite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Anthophyllite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Crocidolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Tremolite	ADX	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**
Other Minerals	-	0	0	< 47.09	< 0.0025	Not Applicable	- 0.0025
Total All Structures (PCMe)	**-**	**0**	**0**	**< 47.09**	**< 0.0025**	**Not Applicable**	**- 0.0025**

Comment
Numerous gypsum fibers present.


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0014 **Customer Sample:** MFL-AM04-030624-AB

Grid ID	Grid Opening	Structure Type	Structure Number		Dimensions (µm)		Level of ID	Mineral Type	Additional Mineral ID	Image Number	Structure Comments
			Primary	Total	Length	Width					
H2	A8	None Detected									
H2	D7	None Detected									
H2	H4	None Detected									
H3	C5	None Detected									
H3	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**MFL-FB04-030624-AB**		**Sample Description:**	
EMSL Sample Number:	042404989-0015		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

Comment


Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0015 **Customer Sample:** MFL-FB04-030624-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	J5	None Detected									
H5	H4	None Detected									
H5	F3	None Detected									
H5	D5	None Detected									
H5	B8	None Detected									
H6	A7	None Detected									
H6	C8	None Detected									
H6	E8	None Detected									
H6	G6	None Detected									
H6	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:	042404989
Customer ID:	TTDC42
Customer PO:	1207085
Project ID:	

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

Project: **Maui Fires - Lahaina / 103S9230**

Phone:	(703) 489-2674
Fax:	
Received Date:	03/11/2024 09:00 AM
Analysis Date:	03/12/2024
Report Date:	03/14/2024

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Customer Sample Number:	**Lab Blank**		**Sample Description:**	**Lab Blank**
EMSL Sample Number:	042404989-0016		Sample Matrix:	Air
Magnification used for fiber counting:	20,000		Volume (L) :	0.0
Aspect ratio for fiber definition:	3:1		Area of original collection filter (mm²):	385
Minimum Length (µm):	≥ 0.5		Grid Opening Area (mm²):	0.0127
Chi² Test for Random Distribution on Filter:	N/A	*(N/A)*	Grid Openings Analyzed:	10
Minimum Level of analysis (chrysotile):	CD		Analyst:	P. Harrison
Minimum Level of analysis (amphibole):	ADX			
Estimated Particulate Loading on Filter %:	1			
Target Analytical Sensitivity (Structures/cc):	0.001			
Analytical Sensitivity (Structures/cc):	**N/A**		**Limit of Detection (Structures/cc):**	**N/A**

TOTAL STRUCTURES (All Sizes)

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration (S/cc)	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

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

	Minimum ID Level	Structures Detected Primary	Structures Detected Total	Density (S/mm²)	Concentration S / mm²	95 % Confidence Interval (S/cc) Lower		Upper
Total Chrysotile (PCMe)	**CD**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Total Amphibole (PCMe)	**ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Actinolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Amosite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Anthophyllite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Crocidolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Tremolite	ADX	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total Asbestos Structures (PCMe)	**CD/ADX**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**
Other Minerals	-	0	0	< 23.54	< N/A	Not Applicable	-	Not Applicable
Total All Structures (PCMe)	**-**	**0**	**0**	**< 23.54**	**< N/A**	**Not Applicable**	**-**	**Not Applicable**

Comment

Approved Signatory

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

EMSL Order ID:	**042404989**
Client:	**Tetra Tech**
Project ID:	**Maui Fires - Lahaina / 103S9230**

ISO 10312 Determination of Asbestos Fibers
Direct Transfer Transmission Electron Microscopy

Analytical Bench Sheet Data

EMSL Sample ID: 042404989-0016 **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	J2	None Detected									
A2	H3	None Detected									
A2	F4	None Detected									
A2	D3	None Detected									
A2	A5	None Detected									
A3	J5	None Detected									
A3	H4	None Detected									
A3	F7	None Detected									
A3	D6	None Detected									
A3	B5	None Detected									

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

OrderID: 042404989

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404989

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

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

RECEIVED EMSL CINNAMINSON, NJ 24 MAR 11 AM 9:56

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

Customer Information

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

Billing Information

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

Project Information

Project Name/No:	Maui Fires - Lahaina / 10389230
Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)	
US State where samples collected:	HI
State of Connecticut (CT) must select project location:	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name:	Elia [illegible]
Sampled By Signature:	[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-AM01-030424-AB		6835.478	03/04/24 1058
MFL-AM02-030424-AB		7077.602	03/04/24 1118
MFL-AM03-030424-AB		7281.340	03/04/24 1306
MFL-AM04-030424-AB		7208.671	03/04/24 1325
MFL-FB01-030424-AB		0	03/04/24 1200
MFL-AM01-030524-AB		6781.665	03/05/24 1100
MFL-AM02-030524-AB		6959.333	03/05/24 1118
MFL-AM03-030524-AB		7286.832	03/05/24 1308

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

All samples received acceptable for analysis.

(15) [initials]

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by: [signature]	Date/Time: 03/07/24 1100	Received by: [signature] FedEx	Date/Time: 3/11/24 9A
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.)

OrderID: 042404989

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only

#042404989

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-AM04-030524-AB		7204.608	03/05/24 1328
MFL-FB01-030524-AB		0	03/05/24 1200
MFL-AM01-030624-AB		7280.352	03/06/24 1103
MFL-AM02-030624-AB		7038.640	03/06/24 1120
MFL-AM03-030624-AB		7228.450	03/06/24 1310
MFL-AM04-030624-AB		7207.019	~~03~~ 03/06/24 1328 (EKS)
MFL-FB01-030624-AB		0	03/06/24 1200

RECEIVED
EMSL
CINNAMINSON, NJ
24 MAR 11 AM 9:56

Method of Shipment: FedEx		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 03/07/24 1100	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

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

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

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

Stage 1 Data Verification Checklist – Asbestos

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/15/2024 and Shanna Vasser 3/18/2024
Laboratory: EMSL Analytical, Inc. – North Cinnaminson, NJ
Collection date(s): 3/4/2024-3/6/2024
Report No: 42404989

√	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

March 18, 2024

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

Dear Ms. Chelsea Saber,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 03/11/24 11:48.

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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
MFL-AM01-022924-HM	4031151-01	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM02-022924-HM	4031151-02	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM03-022924-HM	4031151-03	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM04-022924-HM	4031151-04	Air	02/29/24 23:59	03/11/24 11:48
MFL-FB01-022924-HM	4031151-05	Air	02/29/24 00:00	03/11/24 11:48
MFL-AM01-030124-HM	4031151-06	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM02-030124-HM	4031151-07	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM03-030124-HM	4031151-08	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM04-030124-HM	4031151-09	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM01-030224-HM	4031151-10	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM02-030224-HM	4031151-11	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM03-030224-HM	4031151-12	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM04-030224-HM	4031151-13	Air	03/02/24 23:59	03/11/24 11:48
MFL-FB01-030224-HM	4031151-14	Air	03/02/24 00:00	03/11/24 11:48
MFL-AM01-030324-HM	4031151-15	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM02-030324-HM	4031151-16	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM03-030324-HM/MS/I	4031151-17	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM04-030324-HM	4031151-18	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM01-030424-HM	4031151-19	Air	03/04/24 23:59	03/11/24 11:48
MFL-AM02-030424-HM	4031151-20	Air	03/04/24 23:59	03/11/24 11:48
MFL-AM03-030424-HM	4031151-21	Air	03/04/24 23:59	03/11/24 11:48

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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

MFL-AM04-030424-HM	4031151-22	Air	03/04/24 23:59	03/11/24 11:48
MFL-FB01-030424-HM	4031151-23	Air	03/04/24 00:00	03/11/24 11:48
MFL-AM01-030524-HM	4031151-24	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM02-030524-HM	4031151-25	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM03-030524-HM	4031151-26	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM04-030524-HM	4031151-27	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM01-030624-HM	4031151-28	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM02-030624-HM	4031151-29	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM03-030624-HM	4031151-30	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM04-030624-HM	4031151-31	Air	03/06/24 23:59	03/11/24 11:48
MFL-FB01-030624-HM	4031151-32	Air	03/06/24 00:00	03/11/24 11:48

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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022924-HM
Matrix: Air
Lab ID: 4031151-01
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 03:35

Comments: Q9554709 - 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**	**0.0413**	SL	**0.0319**
Arsenic	**7440-38-2**	**1.19**		**0.00773**
Barium	**7440-39-3**	**2.59**		**0.883**
Beryllium	**7440-41-7**	**0.00871**		**0.00264**
Cadmium	7440-43-9	0.0124	U	0.0611
Chromium	**7440-47-3**	**2.55**		**1.82**
Cobalt	**7440-48-4**	**0.292**		**0.0360**
Copper	**7440-50-8**	**45.9**		**2.17**
Lead	**7439-92-1**	**0.464**		**0.177**
Manganese	**7439-96-5**	**8.20**		**1.56**
Molybdenum	**7439-98-7**	**2.59**		**0.296**
Nickel	**7440-02-0**	**0.888**		**0.538**
Selenium	**7782-49-2**	**0.102**		**0.00739**
Thallium	**7440-28-0**	**0.00119**	B, LB, QB-04	**4.86E-4**
Vanadium	**7440-62-2**	**0.790**		**0.0437**
Zinc	7440-66-6	21.5	U	63.4

CERTIFICATE OF ANALYSIS

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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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022924-HM
Matrix: Air
Lab ID: 4031151-02
Sample Volume: 1888.258 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 03:49

Comments: Q9554705 - 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**	**0.0895**	SL	**0.0333**
Arsenic	**7440-38-2**	**0.381**		**0.00807**
Barium	**7440-39-3**	**5.12**		**0.922**
Beryllium	**7440-41-7**	**0.0151**		**0.00276**
Cadmium	7440-43-9	0.0157	U	0.0638
Chromium	**7440-47-3**	**2.85**		**1.90**
Cobalt	**7440-48-4**	**0.489**		**0.0376**
Copper	**7440-50-8**	**36.0**		**2.27**
Lead	**7439-92-1**	**0.977**		**0.184**
Manganese	**7439-96-5**	**12.5**		**1.63**
Molybdenum	**7439-98-7**	**1.92**		**0.309**
Nickel	**7440-02-0**	**1.85**		**0.562**
Selenium	**7782-49-2**	**0.147**		**0.00772**
Thallium	**7440-28-0**	**0.00126**	B, LB, QB-04	**5.08E-4**
Vanadium	**7440-62-2**	**1.29**		**0.0456**
Zinc	7440-66-6	29.9	U	66.2

CERTIFICATE OF ANALYSIS

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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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022924-HM
Matrix: Air
Lab ID: 4031151-03
Sample Volume: 2009.471 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:07

Comments: Q9554704 - 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**	**0.0427**	SL	**0.0313**
Arsenic	**7440-38-2**	**0.347**		**0.00759**
Barium	**7440-39-3**	**2.79**		**0.866**
Beryllium	**7440-41-7**	**0.0138**		**0.00259**
Cadmium	7440-43-9	0.00959	U	0.0600
Chromium	**7440-47-3**	**2.14**		**1.79**
Cobalt	**7440-48-4**	**0.259**		**0.0353**
Copper	**7440-50-8**	**32.6**		**2.13**
Lead	**7439-92-1**	**0.470**		**0.173**
Manganese	**7439-96-5**	**6.60**		**1.53**
Molybdenum	**7439-98-7**	**1.56**		**0.291**
Nickel	**7440-02-0**	**0.781**		**0.528**
Selenium	**7782-49-2**	**0.116**		**0.00725**
Thallium	**7440-28-0**	**0.00111**	B, LB, QB-04	**4.77E-4**
Vanadium	**7440-62-2**	**0.626**		**0.0428**
Zinc	7440-66-6	22.2	U	62.2

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022924-HM
Matrix: Air
Lab ID: 4031151-04
Sample Volume: 1970.434 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:23

Comments: Q9554732 - 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**	**0.0481**	SL	**0.0319**
Arsenic	**7440-38-2**	**0.161**		**0.00774**
Barium	**7440-39-3**	**2.45**		**0.884**
Beryllium	**7440-41-7**	**0.00787**		**0.00264**
Cadmium	7440-43-9	0.0113	U	0.0612
Chromium	**7440-47-3**	**1.90**		**1.82**
Cobalt	**7440-48-4**	**0.211**		**0.0360**
Copper	**7440-50-8**	**17.8**		**2.17**
Lead	**7439-92-1**	**0.669**		**0.177**
Manganese	**7439-96-5**	**6.09**		**1.56**
Molybdenum	**7439-98-7**	**0.903**		**0.296**
Nickel	**7440-02-0**	**0.767**		**0.538**
Selenium	**7782-49-2**	**0.113**		**0.00740**
Thallium	**7440-28-0**	**8.26E-4**	B, LB, QB-04	**4.86E-4**
Vanadium	**7440-62-2**	**0.553**		**0.0437**
Zinc	7440-66-6	20.1	U	63.4

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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-022924-HM
Matrix: Air
Lab ID: 4031151-05
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 02/29/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:38

Comments: Q9554728 - 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	0.00704	SL, U	0.0319
Arsenic	7440-38-2	0.00704	U	0.00773
Barium	7440-39-3	0.574	U	0.883
Beryllium	7440-41-7	0.00121	U	0.00264
Cadmium	7440-43-9	0.00143	U	0.0611
Chromium	7440-47-3	1.36	U	1.82
Cobalt	7440-48-4	0.0221	U	0.0360
Copper	7440-50-8	0.669	U	2.17
Lead	7439-92-1	0.0634	U	0.177
Manganese	7439-96-5	0.215	U	1.56
Molybdenum	7439-98-7	0.236	U	0.296
Nickel	7440-02-0	0.348	U	0.538
Selenium	7782-49-2	0.00223	U	0.00739
Thallium	7440-28-0	1.80E-4	B, LB, QB-04, U	4.86E-4
Vanadium	7440-62-2	0.0101	U	0.0437
Zinc	7440-66-6	12.7	U	63.4

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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030124-HM
Matrix: Air
Lab ID: 4031151-06
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:53

Comments: Q9554731 - 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**	**0.0342**	SL	**0.0319**
Arsenic	**7440-38-2**	**0.752**		**0.00773**
Barium	**7440-39-3**	**2.44**		**0.883**
Beryllium	**7440-41-7**	**0.00695**		**0.00264**
Cadmium	7440-43-9	0.0101	U	0.0611
Chromium	**7440-47-3**	**2.23**		**1.82**
Cobalt	**7440-48-4**	**0.294**		**0.0360**
Copper	**7440-50-8**	**54.8**		**2.17**
Lead	**7439-92-1**	**0.366**		**0.177**
Manganese	**7439-96-5**	**7.33**		**1.56**
Molybdenum	**7439-98-7**	**2.67**		**0.296**
Nickel	**7440-02-0**	**0.844**		**0.538**
Selenium	**7782-49-2**	**0.145**		**0.00739**
Thallium	**7440-28-0**	**0.00106**	B, LB, QB-04	**4.86E-4**
Vanadium	**7440-62-2**	**0.736**		**0.0437**
Zinc	7440-66-6	16.5	U	63.4

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030124-HM
Matrix: Air
Lab ID: 4031151-07
Sample Volume: 1871.098 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:23

Comments: Q9554730 - 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**	**0.181**	SL	**0.0336**
Arsenic	**7440-38-2**	**0.521**		**0.00815**
Barium	**7440-39-3**	**5.62**		**0.930**
Beryllium	**7440-41-7**	**0.0121**		**0.00278**
Cadmium	**7440-43-9**	**0.0706**		**0.0644**
Chromium	**7440-47-3**	**2.85**		**1.92**
Cobalt	**7440-48-4**	**0.321**		**0.0379**
Copper	**7440-50-8**	**46.9**		**2.29**
Lead	**7439-92-1**	**1.28**		**0.186**
Manganese	**7439-96-5**	**10.3**		**1.64**
Molybdenum	**7439-98-7**	**2.25**		**0.312**
Nickel	**7440-02-0**	**1.32**		**0.567**
Selenium	**7782-49-2**	**0.188**		**0.00779**
Thallium	**7440-28-0**	**0.00125**	B, LB, QB-04	**5.12E-4**
Vanadium	**7440-62-2**	**0.983**		**0.0460**
Zinc	7440-66-6	43.8	U	66.8

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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030124-HM
Matrix: Air
Lab ID: 4031151-08
Sample Volume: 2017.928 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:40

Comments: Q9554729 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0537**	SL	**0.0311**
Arsenic	**7440-38-2**	**0.212**		**0.00755**
Barium	**7440-39-3**	**3.20**		**0.863**
Beryllium	**7440-41-7**	**0.0246**		**0.00258**
Cadmium	7440-43-9	0.00958	U	0.0597
Chromium	**7440-47-3**	**2.50**		**1.78**
Cobalt	**7440-48-4**	**0.391**		**0.0352**
Copper	**7440-50-8**	**35.4**		**2.12**
Lead	**7439-92-1**	**0.506**		**0.173**
Manganese	**7439-96-5**	**9.18**		**1.52**
Molybdenum	**7439-98-7**	**1.93**		**0.289**
Nickel	**7440-02-0**	**1.14**		**0.526**
Selenium	**7782-49-2**	**0.170**		**0.00722**
Thallium	**7440-28-0**	**0.00109**	B, LB, QB-04	**4.75E-4**
Vanadium	**7440-62-2**	**0.931**		**0.0427**
Zinc	7440-66-6	18.1	U	61.9

CERTIFICATE OF ANALYSIS

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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030124-HM
Matrix: Air
Lab ID: 4031151-09
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:57

Comments: Q9554725 - 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**	**0.0444**	SL	**0.0317**
Arsenic	**7440-38-2**	**0.127**		**0.00769**
Barium	**7440-39-3**	**2.26**		**0.878**
Beryllium	**7440-41-7**	**0.00578**		**0.00263**
Cadmium	7440-43-9	0.0389	U	0.0608
Chromium	**7440-47-3**	**1.84**		**1.81**
Cobalt	**7440-48-4**	**0.145**		**0.0358**
Copper	**7440-50-8**	**18.0**		**2.16**
Lead	**7439-92-1**	**0.713**		**0.176**
Manganese	**7439-96-5**	**4.43**		**1.55**
Molybdenum	**7439-98-7**	**0.942**		**0.295**
Nickel	**7440-02-0**	**0.658**		**0.535**
Selenium	**7782-49-2**	**0.127**		**0.00735**
Thallium	**7440-28-0**	**7.21E-4**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**0.418**		**0.0434**
Zinc	7440-66-6	15.8	U	63.0

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030224-HM
Matrix: Air
Lab ID: 4031151-10
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 07:30

Comments: Q9554724 - 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**	**0.0360**	SL	**0.0317**
Arsenic	**7440-38-2**	**0.551**		**0.00769**
Barium	**7440-39-3**	**2.61**		**0.878**
Beryllium	**7440-41-7**	**0.00807**		**0.00263**
Cadmium	7440-43-9	0.0112	U	0.0608
Chromium	**7440-47-3**	**2.29**		**1.81**
Cobalt	**7440-48-4**	**0.291**		**0.0358**
Copper	**7440-50-8**	**55.6**		**2.16**
Lead	**7439-92-1**	**0.440**		**0.176**
Manganese	**7439-96-5**	**8.40**		**1.55**
Molybdenum	**7439-98-7**	**2.78**		**0.295**
Nickel	**7440-02-0**	**0.866**		**0.535**
Selenium	**7782-49-2**	**0.134**		**0.00735**
Thallium	**7440-28-0**	**0.00127**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**0.867**		**0.0434**
Zinc	7440-66-6	14.8	U	63.0

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030224-HM
Matrix: Air
Lab ID: 4031151-11
Sample Volume: 2040.994 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 07:46

Comments: Q9554723 - 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**	**0.104**	SL	**0.0308**
Arsenic	**7440-38-2**	**0.657**		**0.00747**
Barium	**7440-39-3**	**4.43**		**0.853**
Beryllium	**7440-41-7**	**0.0114**		**0.00255**
Cadmium	7440-43-9	0.0431	U	0.0591
Chromium	**7440-47-3**	**2.13**		**1.76**
Cobalt	**7440-48-4**	**0.276**		**0.0348**
Copper	**7440-50-8**	**37.1**		**2.10**
Lead	**7439-92-1**	**0.916**		**0.171**
Manganese	**7439-96-5**	**9.82**		**1.51**
Molybdenum	**7439-98-7**	**1.95**		**0.286**
Nickel	**7440-02-0**	**0.954**		**0.520**
Selenium	**7782-49-2**	**0.163**		**0.00714**
Thallium	**7440-28-0**	**0.00134**	B, LB, QB-04	**4.70E-4**
Vanadium	**7440-62-2**	**0.925**		**0.0422**
Zinc	7440-66-6	24.2	U	61.2

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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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030224-HM
Matrix: Air
Lab ID: 4031151-12
Sample Volume: 2157.347 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:03

Comments: Q9554722 - 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**	**0.0363**	SL	**0.0291**
Arsenic	**7440-38-2**	**0.186**		**0.00707**
Barium	**7440-39-3**	**2.61**		**0.807**
Beryllium	**7440-41-7**	**0.0170**		**0.00241**
Cadmium	7440-43-9	0.0109	U	0.0559
Chromium	**7440-47-3**	**2.17**		**1.67**
Cobalt	**7440-48-4**	**0.296**		**0.0329**
Copper	**7440-50-8**	**29.8**		**1.98**
Lead	**7439-92-1**	**0.442**		**0.161**
Manganese	**7439-96-5**	**7.79**		**1.43**
Molybdenum	**7439-98-7**	**1.84**		**0.271**
Nickel	**7440-02-0**	**0.942**		**0.492**
Selenium	**7782-49-2**	**0.146**		**0.00676**
Thallium	**7440-28-0**	**0.00124**	B, LB, QB-04	**4.44E-4**
Vanadium	**7440-62-2**	**0.815**		**0.0399**
Zinc	7440-66-6	15.3	U	57.9

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030224-HM
Matrix: Air
Lab ID: 4031151-13
Sample Volume: 1824.298 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:21

Comments: Q9554718 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0440**	SL	**0.0344**
Arsenic	**7440-38-2**	**0.209**		**0.00836**
Barium	**7440-39-3**	**3.11**		**0.954**
Beryllium	**7440-41-7**	**0.0105**		**0.00285**
Cadmium	7440-43-9	0.0102	U	0.0661
Chromium	**7440-47-3**	**2.24**		**1.97**
Cobalt	**7440-48-4**	**0.277**		**0.0389**
Copper	**7440-50-8**	**23.3**		**2.35**
Lead	**7439-92-1**	**0.605**		**0.191**
Manganese	**7439-96-5**	**8.46**		**1.69**
Molybdenum	**7439-98-7**	**1.12**		**0.320**
Nickel	**7440-02-0**	**0.952**		**0.581**
Selenium	**7782-49-2**	**0.145**		**0.00799**
Thallium	**7440-28-0**	**0.00111**	B, LB, QB-04	**5.25E-4**
Vanadium	**7440-62-2**	**0.819**		**0.0472**
Zinc	7440-66-6	20.8	U	68.5

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030224-HM
Matrix: Air
Lab ID: 4031151-14
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/02/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:36

Comments: Q9554743 - 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	0.00779	SL, U	0.0317
Arsenic	**7440-38-2**	**0.00808**	FB-01	**0.00769**
Barium	7440-39-3	0.576	U	0.878
Beryllium	7440-41-7	0.00120	U	0.00263
Cadmium	7440-43-9	0.00170	U	0.0608
Chromium	7440-47-3	1.20	U	1.81
Cobalt	7440-48-4	0.0194	U	0.0358
Copper	7440-50-8	0.601	U	2.16
Lead	7439-92-1	0.0548	U	0.176
Manganese	7439-96-5	0.184	U	1.55
Molybdenum	7439-98-7	0.221	U	0.295
Nickel	7440-02-0	0.247	U	0.535
Selenium	7782-49-2	0.00144	U	0.00735
Thallium	7440-28-0	1.62E-4	B, LB, QB-04, U	4.83E-4
Vanadium	7440-62-2	0.0136	U	0.0434
Zinc	7440-66-6	10.9	U	63.0

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030324-HM
Matrix: Air
Lab ID: 4031151-15
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:50

Comments: Q9554741 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.109**	SL	**0.0317**
Arsenic	**7440-38-2**	**1.32**		**0.00769**
Barium	**7440-39-3**	**3.44**		**0.878**
Beryllium	**7440-41-7**	**0.00762**		**0.00263**
Cadmium	7440-43-9	0.0171	U	0.0608
Chromium	**7440-47-3**	**2.49**		**1.81**
Cobalt	**7440-48-4**	**0.308**		**0.0358**
Copper	**7440-50-8**	**62.3**		**2.16**
Lead	**7439-92-1**	**0.853**		**0.176**
Manganese	**7439-96-5**	**8.45**		**1.55**
Molybdenum	**7439-98-7**	**3.00**		**0.295**
Nickel	**7440-02-0**	**0.897**		**0.535**
Selenium	**7782-49-2**	**0.139**		**0.00735**
Thallium	**7440-28-0**	**0.00141**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**0.795**		**0.0434**
Zinc	7440-66-6	18.4	U	63.0

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030324-HM
Matrix: Air
Lab ID: 4031151-16
Sample Volume: 1880.374 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:05

Comments: Q9554739 - 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**	**0.211**	SL	**0.0334**
Arsenic	**7440-38-2**	**1.01**		**0.00811**
Barium	**7440-39-3**	**7.65**		**0.926**
Beryllium	**7440-41-7**	**0.0250**		**0.00277**
Cadmium	7440-43-9	0.0284	U	0.0641
Chromium	**7440-47-3**	**3.70**		**1.91**
Cobalt	**7440-48-4**	**0.735**		**0.0377**
Copper	**7440-50-8**	**69.7**		**2.28**
Lead	**7439-92-1**	**1.90**		**0.185**
Manganese	**7439-96-5**	**22.8**		**1.64**
Molybdenum	**7439-98-7**	**2.06**		**0.311**
Nickel	**7440-02-0**	**2.13**		**0.564**
Selenium	**7782-49-2**	**0.240**		**0.00775**
Thallium	**7440-28-0**	**0.00205**	B, LB, QB-04	**5.10E-4**
Vanadium	**7440-62-2**	**2.16**		**0.0458**
Zinc	7440-66-6	36.8	U	66.5

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030324-HM/MS/MS **Lab ID:** 4031151-17 **Sampled:** 03/03/24 23:59
Matrix: Air **Sample Volume:** 2021.311 m³ **Received:** 03/11/24 11:48
Filter ID: **Analysis Date:** 03/14/24 20:59

Comments: Q9554737 - 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**	**0.0326**	SL	**0.0311**
Arsenic	**7440-38-2**	**0.150**		**0.00754**
Barium	**7440-39-3**	**1.63**		**0.861**
Beryllium	**7440-41-7**	**0.00730**		**0.00258**
Cadmium	7440-43-9	0.0106	U	0.0596
Chromium	**7440-47-3**	**1.87**		**1.78**
Cobalt	**7440-48-4**	**0.130**		**0.0351**
Copper	**7440-50-8**	**36.0**		**2.12**
Lead	**7439-92-1**	**0.416**		**0.172**
Manganese	**7439-96-5**	**3.65**		**1.52**
Molybdenum	**7439-98-7**	**2.35**		**0.289**
Nickel	**7440-02-0**	**0.660**		**0.525**
Selenium	**7782-49-2**	**0.124**		**0.00721**
Thallium	**7440-28-0**	**0.00130**	B, LB, QB-04	**4.74E-4**
Vanadium	**7440-62-2**	**0.335**		**0.0426**
Zinc	7440-66-6	12.2	U	61.8

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030324-HM
Matrix: Air
Lab ID: 4031151-18
Sample Volume: 1987.062 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:21

Comments: Q9554735 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0376**	SL	**0.0316**
Arsenic	**7440-38-2**	**0.153**		**0.00767**
Barium	**7440-39-3**	**1.88**		**0.876**
Beryllium	**7440-41-7**	**0.00464**		**0.00262**
Cadmium	**7440-43-9**	**0.646**		**0.0607**
Chromium	**7440-47-3**	**1.86**		**1.81**
Cobalt	**7440-48-4**	**0.116**		**0.0357**
Copper	**7440-50-8**	**23.8**		**2.15**
Lead	**7439-92-1**	**0.383**		**0.175**
Manganese	**7439-96-5**	**3.35**		**1.55**
Molybdenum	**7439-98-7**	**1.23**		**0.294**
Nickel	**7440-02-0**	**0.664**		**0.534**
Selenium	**7782-49-2**	**0.106**		**0.00734**
Thallium	**7440-28-0**	**9.28E-4**	B, LB, QB-04	**4.82E-4**
Vanadium	**7440-62-2**	**0.290**		**0.0433**
Zinc	7440-66-6	14.0	U	62.9

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030424-HM
Matrix: Air
Lab ID: 4031151-19
Sample Volume: 1964.168 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:37

Comments: Q9554734 - 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**	**0.0471**	SL	**0.0320**
Arsenic	**7440-38-2**	**0.567**		**0.00776**
Barium	**7440-39-3**	**2.48**		**0.886**
Beryllium	**7440-41-7**	**0.00583**		**0.00265**
Cadmium	7440-43-9	0.0114	U	0.0614
Chromium	**7440-47-3**	**125**	E	**1.83**
Cobalt	**7440-48-4**	**1.65**		**0.0361**
Copper	**7440-50-8**	**91.9**		**2.18**
Lead	**7439-92-1**	**0.908**		**0.177**
Manganese	**7439-96-5**	**12.4**		**1.57**
Molybdenum	**7439-98-7**	**4.73**		**0.297**
Nickel	**7440-02-0**	**55.9**	E	**0.540**
Selenium	**7782-49-2**	**0.141**		**0.00742**
Thallium	**7440-28-0**	**7.36E-4**	B, LB, QB-04	**4.88E-4**
Vanadium	**7440-62-2**	**1.27**		**0.0438**
Zinc	7440-66-6	27.2	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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030424-HM
Matrix: Air
Lab ID: 4031151-20
Sample Volume: 2061.439 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 00:51

Comments: Q9554733 - 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**	**0.124**	SL	**0.0305**
Arsenic	**7440-38-2**	**0.481**		**0.00740**
Barium	**7440-39-3**	**4.13**		**0.845**
Beryllium	**7440-41-7**	**0.0104**		**0.00253**
Cadmium	7440-43-9	0.0132	U	0.0585
Chromium	**7440-47-3**	**2.15**		**1.74**
Cobalt	**7440-48-4**	**0.294**		**0.0344**
Copper	**7440-50-8**	**36.9**		**2.08**
Lead	**7439-92-1**	**0.931**		**0.169**
Manganese	**7439-96-5**	**8.22**		**1.49**
Molybdenum	**7439-98-7**	**1.95**		**0.283**
Nickel	**7440-02-0**	**1.03**		**0.515**
Selenium	**7782-49-2**	**0.155**		**0.00707**
Thallium	**7440-28-0**	**9.12E-4**	B, LB, QB-04	**4.65E-4**
Vanadium	**7440-62-2**	**0.973**		**0.0418**
Zinc	7440-66-6	22.5	U	60.6

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030424-HM
Matrix: Air
Lab ID: 4031151-21
Sample Volume: 2252.38 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:57

Comments: Q9537219 - 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**	**0.0500**	SL	**0.0279**
Arsenic	**7440-38-2**	**0.158**		**0.00677**
Barium	**7440-39-3**	**2.20**		**0.773**
Beryllium	**7440-41-7**	**0.0170**		**0.00231**
Cadmium	7440-43-9	0.0335	U	0.0535
Chromium	**7440-47-3**	**2.07**		**1.60**
Cobalt	**7440-48-4**	**0.303**		**0.0315**
Copper	**7440-50-8**	**36.0**		**1.90**
Lead	**7439-92-1**	**0.347**		**0.155**
Manganese	**7439-96-5**	**7.50**		**1.37**
Molybdenum	**7439-98-7**	**2.47**		**0.259**
Nickel	**7440-02-0**	**1.01**		**0.471**
Selenium	**7782-49-2**	**0.156**		**0.00647**
Thallium	**7440-28-0**	**6.64E-4**	B, LB, QB-04	**4.25E-4**
Vanadium	**7440-62-2**	**0.867**		**0.0382**
Zinc	7440-66-6	12.3	U	55.5

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030424-HM
Matrix: Air
Lab ID: 4031151-22
Sample Volume: 1888.516 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:26

Comments: Q9537216 - 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**	**0.0613**	SL	**0.0333**
Arsenic	**7440-38-2**	**0.240**		**0.00807**
Barium	**7440-39-3**	**3.21**		**0.922**
Beryllium	**7440-41-7**	**0.0104**		**0.00276**
Cadmium	7440-43-9	0.0134	U	0.0638
Chromium	**7440-47-3**	**2.47**		**1.90**
Cobalt	**7440-48-4**	**0.270**		**0.0376**
Copper	**7440-50-8**	**26.8**		**2.27**
Lead	**7439-92-1**	**0.719**		**0.184**
Manganese	**7439-96-5**	**8.29**		**1.63**
Molybdenum	**7439-98-7**	**1.34**		**0.309**
Nickel	**7440-02-0**	**0.993**		**0.562**
Selenium	**7782-49-2**	**0.152**		**0.00772**
Thallium	**7440-28-0**	**9.24E-4**	B, LB, QB-04	**5.07E-4**
Vanadium	**7440-62-2**	**0.864**		**0.0456**
Zinc	7440-66-6	19.1	LJ, QX, U	66.2

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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030424-HM
Matrix: Air
Lab ID: 4031151-23
Sample Volume: 1964.168 m³
Filter ID:
Sampled: 03/04/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:44

Comments: Q9537232 - 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	0.00559	SL, U	0.0320
Arsenic	7440-38-2	0.00426	U	0.00776
Barium	7440-39-3	0.552	U	0.886
Beryllium	7440-41-7	9.62E-4	U	0.00265
Cadmium	7440-43-9	0.00246	U	0.0614
Chromium	7440-47-3	1.56	U	1.83
Cobalt	**7440-48-4**	**0.0361**		**0.0361**
Copper	7440-50-8	0.430	U	2.18
Lead	7439-92-1	0.0553	U	0.177
Manganese	7439-96-5	0.127	U	1.57
Molybdenum	7439-98-7	0.251	U	0.297
Nickel	7440-02-0	0.246	U	0.540
Selenium	7782-49-2	ND	U	0.00742
Thallium	7440-28-0	2.99E-4	B, LB, QB-04, U	4.88E-4
Vanadium	7440-62-2	ND	U	0.0438
Zinc	7440-66-6	22.5	LJ, QX, U	63.6

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030524-HM
Matrix: Air
Lab ID: 4031151-24
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:58

Comments: Q9537235 - 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**	**0.0718**	SL	**0.0313**
Arsenic	**7440-38-2**	**1.02**		**0.00760**
Barium	**7440-39-3**	**3.85**		**0.868**
Beryllium	**7440-41-7**	**0.0128**		**0.00260**
Cadmium	7440-43-9	0.0332	U	0.0601
Chromium	**7440-47-3**	**6.42**		**1.79**
Cobalt	**7440-48-4**	**0.556**		**0.0354**
Copper	**7440-50-8**	**62.1**		**2.13**
Lead	**7439-92-1**	**0.624**		**0.174**
Manganese	**7439-96-5**	**13.4**		**1.53**
Molybdenum	**7439-98-7**	**2.70**		**0.291**
Nickel	**7440-02-0**	**2.60**		**0.529**
Selenium	**7782-49-2**	**0.170**		**0.00727**
Thallium	**7440-28-0**	**0.00137**	B, LB, QB-04	**4.78E-4**
Vanadium	**7440-62-2**	**1.33**		**0.0429**
Zinc	7440-66-6	36.2	LJ, QX, U	62.3

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030524-HM
Matrix: Air
Lab ID: 4031151-25
Sample Volume: 1898.258 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:15

Comments: Q9537233 - 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**	**0.148**	SL	**0.0331**
Arsenic	**7440-38-2**	**0.986**		**0.00803**
Barium	**7440-39-3**	**6.72**		**0.917**
Beryllium	**7440-41-7**	**0.0239**		**0.00274**
Cadmium	**7440-43-9**	**0.100**		**0.0635**
Chromium	**7440-47-3**	**4.22**		**1.89**
Cobalt	**7440-48-4**	**0.751**		**0.0374**
Copper	**7440-50-8**	**50.7**		**2.25**
Lead	**7439-92-1**	**1.97**		**0.183**
Manganese	**7439-96-5**	**21.6**		**1.62**
Molybdenum	**7439-98-7**	**2.09**		**0.308**
Nickel	**7440-02-0**	**2.47**		**0.559**
Selenium	**7782-49-2**	**0.234**		**0.00768**
Thallium	**7440-28-0**	**0.00181**	B, LB, QB-04	**5.05E-4**
Vanadium	**7440-62-2**	**2.11**		**0.0453**
Zinc	7440-66-6	45.4	LJ, QX, U	65.8

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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: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030524-HM
Matrix: Air
Lab ID: 4031151-26
Sample Volume: 2015.088 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:32

Comments: Q9537231 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0545**	SL	**0.0312**
Arsenic	**7440-38-2**	**0.207**		**0.00757**
Barium	**7440-39-3**	**3.18**		**0.864**
Beryllium	**7440-41-7**	**0.0224**		**0.00258**
Cadmium	7440-43-9	0.0134	U	0.0598
Chromium	**7440-47-3**	**3.00**		**1.78**
Cobalt	**7440-48-4**	**0.446**		**0.0352**
Copper	**7440-50-8**	**39.7**		**2.12**
Lead	**7439-92-1**	**0.410**		**0.173**
Manganese	**7439-96-5**	**11.0**		**1.53**
Molybdenum	**7439-98-7**	**2.74**		**0.290**
Nickel	**7440-02-0**	**1.25**		**0.526**
Selenium	**7782-49-2**	**0.177**		**0.00723**
Thallium	**7440-28-0**	**0.00142**	B, LB, QB-04	**4.76E-4**
Vanadium	**7440-62-2**	**1.07**		**0.0427**
Zinc	7440-66-6	30.9	LJ, QX, U	62.0

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1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030524-HM
Matrix: Air
Lab ID: 4031151-27
Sample Volume: 2022.635 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:48

Comments: Q9537229 - 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**	**0.0500**	SL	**0.0310**
Arsenic	**7440-38-2**	**0.206**		**0.00754**
Barium	**7440-39-3**	**2.37**		**0.861**
Beryllium	**7440-41-7**	**0.00732**		**0.00257**
Cadmium	7440-43-9	0.0127	U	0.0596
Chromium	**7440-47-3**	**2.09**		**1.78**
Cobalt	**7440-48-4**	**0.202**		**0.0351**
Copper	**7440-50-8**	**18.5**		**2.12**
Lead	**7439-92-1**	**0.549**		**0.172**
Manganese	**7439-96-5**	**6.05**		**1.52**
Molybdenum	**7439-98-7**	**1.24**		**0.289**
Nickel	**7440-02-0**	**0.705**		**0.524**
Selenium	**7782-49-2**	**0.147**		**0.00721**
Thallium	**7440-28-0**	**9.93E-4**	B, LB, QB-04	**4.74E-4**
Vanadium	**7440-62-2**	**0.543**		**0.0426**
Zinc	7440-66-6	21.3	LJ, QX, U	61.8

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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030624-HM
Matrix: Air
Lab ID: 4031151-28
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:20

Comments: Q9537228 - 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**	**0.0633**	SL	**0.0313**
Arsenic	**7440-38-2**	**0.906**		**0.00760**
Barium	**7440-39-3**	**5.84**		**0.868**
Beryllium	**7440-41-7**	**0.0243**		**0.00260**
Cadmium	7440-43-9	0.0305	U	0.0601
Chromium	**7440-47-3**	**7.41**		**1.79**
Cobalt	**7440-48-4**	**1.11**		**0.0354**
Copper	**7440-50-8**	**41.1**		**2.13**
Lead	**7439-92-1**	**0.744**		**0.174**
Manganese	**7439-96-5**	**31.9**		**1.53**
Molybdenum	**7439-98-7**	**1.52**		**0.291**
Nickel	**7440-02-0**	**3.03**		**0.529**
Selenium	**7782-49-2**	**0.217**		**0.00727**
Thallium	**7440-28-0**	**0.00234**	B, LB, QB-04	**4.78E-4**
Vanadium	**7440-62-2**	**2.87**		**0.0429**
Zinc	7440-66-6	26.9	LJ, QX, U	62.3

CERTIFICATE OF ANALYSIS

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Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030624-HM
Matrix: Air
Lab ID: 4031151-29
Sample Volume: 1916.959 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:37

Comments: Q9537227 - 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	**0.0328**
Arsenic	**7440-38-2**	**1.14**		**0.00795**
Barium	**7440-39-3**	**10.9**		**0.908**
Beryllium	**7440-41-7**	**0.0451**		**0.00272**
Cadmium	**7440-43-9**	**0.169**		**0.0629**
Chromium	**7440-47-3**	**6.65**		**1.88**
Cobalt	**7440-48-4**	**1.73**		**0.0370**
Copper	**7440-50-8**	**39.6**		**2.23**
Lead	**7439-92-1**	**2.74**		**0.182**
Manganese	**7439-96-5**	**46.0**		**1.60**
Molybdenum	**7439-98-7**	**1.32**		**0.305**
Nickel	**7440-02-0**	**5.19**		**0.553**
Selenium	**7782-49-2**	**0.299**		**0.00760**
Thallium	**7440-28-0**	**0.00298**	B, LB, QB-04	**5.00E-4**
Vanadium	**7440-62-2**	**4.57**		**0.0449**
Zinc	7440-66-6	44.8	LJ, QX, U	65.2

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030624-HM
Matrix: Air
Lab ID: 4031151-30
Sample Volume: 2012.853 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:57

Comments: Q9537225 - 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**	**0.0453**	SL	**0.0312**
Arsenic	**7440-38-2**	**0.429**		**0.00757**
Barium	**7440-39-3**	**8.16**		**0.865**
Beryllium	**7440-41-7**	**0.172**		**0.00259**
Cadmium	7440-43-9	0.0206	U	0.0599
Chromium	**7440-47-3**	**9.47**		**1.79**
Cobalt	**7440-48-4**	**2.13**		**0.0352**
Copper	**7440-50-8**	**41.3**		**2.13**
Lead	**7439-92-1**	**0.707**		**0.173**
Manganese	**7439-96-5**	**42.1**		**1.53**
Molybdenum	**7439-98-7**	**2.04**		**0.290**
Nickel	**7440-02-0**	**4.83**		**0.527**
Selenium	**7782-49-2**	**0.376**		**0.00724**
Thallium	**7440-28-0**	**0.00276**	B, LB, QB-04	**4.76E-4**
Vanadium	**7440-62-2**	**5.09**		**0.0428**
Zinc	7440-66-6	23.0	LJ, QX, U	62.1

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030624-HM
Matrix: Air
Lab ID: 4031151-31
Sample Volume: 1984.061 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 15:35

Comments: Q9537224 - 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**	**0.0779**	SL	**0.0317**
Arsenic	**7440-38-2**	**0.512**		**0.00768**
Barium	**7440-39-3**	**4.30**		**0.877**
Beryllium	**7440-41-7**	**0.0195**		**0.00262**
Cadmium	**7440-43-9**	**0.334**		**0.0608**
Chromium	**7440-47-3**	**3.36**		**1.81**
Cobalt	**7440-48-4**	**0.762**		**0.0358**
Copper	**7440-50-8**	**22.4**		**2.16**
Lead	**7439-92-1**	**1.41**		**0.175**
Manganese	**7439-96-5**	**17.3**		**1.55**
Molybdenum	**7439-98-7**	**0.992**		**0.294**
Nickel	**7440-02-0**	**1.63**		**0.535**
Selenium	**7782-49-2**	**0.163**		**0.00735**
Thallium	**7440-28-0**	**0.00182**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**1.38**		**0.0434**
Zinc	7440-66-6	27.9	LJ, QX, U	63.0

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030624-HM
Matrix: Air
Lab ID: 4031151-32
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/06/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 15:55

Comments: Q9537245 - 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	0.00760	SL, U	0.0313
Arsenic	7440-38-2	0.00630	U	0.00760
Barium	7440-39-3	0.581	U	0.868
Beryllium	7440-41-7	0.00111	U	0.00260
Cadmium	7440-43-9	0.00259	U	0.0601
Chromium	7440-47-3	1.57	U	1.79
Cobalt	7440-48-4	0.0260	U	0.0354
Copper	7440-50-8	0.627	U	2.13
Lead	7439-92-1	0.0643	U	0.174
Manganese	7439-96-5	0.255	U	1.53
Molybdenum	7439-98-7	0.271	U	0.291
Nickel	7440-02-0	0.274	U	0.529
Selenium	7782-49-2	ND	U	0.00727
Thallium	7440-28-0	2.18E-4	B, LB, QB-04, U	4.78E-4
Vanadium	7440-62-2	0.00996	U	0.0429
Zinc	7440-66-6	10.3	LJ, QX, U	62.3

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Blank (2403035-CCB1)				Prepared & Analyzed: 03/14/24						
Antimony	0.719		ng/l							
Arsenic	7.98		ng/l							
Barium	-1.59		ng/l							U
Beryllium	0.162		ng/l							
Cadmium	0.0951		ng/l							
Chromium	4.64		ng/l							
Cobalt	0.544		ng/l							
Copper	50.4		ng/l							
Lead	3.93		ng/l							
Manganese	8.37		ng/l							
Molybdenum	22.0		ng/l							
Nickel	0.847		ng/l							
Selenium	-6.71		ng/l							U
Thallium	2.16		ng/l							LB, QB-04
Vanadium	-48.2		ng/l							U
Zinc	76.2		ng/l							
Calibration Blank (2403035-CCB2)				Prepared & Analyzed: 03/14/24						
Antimony	0.0937		ng/l							
Arsenic	5.14		ng/l							
Barium	-1.73		ng/l							U
Beryllium	0.0714		ng/l							
Cadmium	-0.0254		ng/l							U
Chromium	2.79		ng/l							
Cobalt	0.0977		ng/l							
Copper	11.0		ng/l							
Lead	1.42		ng/l							
Manganese	5.66		ng/l							
Molybdenum	4.28		ng/l							
Nickel	1.54		ng/l							
Selenium	-6.95		ng/l							U
Thallium	1.24		ng/l							LB
Vanadium	-52.4		ng/l							U
Zinc	37.6		ng/l							
Calibration Blank (2403035-CCB3)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	-0.0320		ng/l							U
Arsenic	6.72		ng/l							
Barium	-2.63		ng/l							U
Beryllium	0.248		ng/l							

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Blank (2403035-CCB3) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Cadmium	-0.0824		ng/l							U
Chromium	3.88		ng/l							
Cobalt	0.274		ng/l							
Copper	15.2		ng/l							
Lead	1.22		ng/l							
Manganese	5.41		ng/l							
Molybdenum	3.19		ng/l							
Nickel	1.65		ng/l							
Selenium	5.64		ng/l							
Thallium	1.41		ng/l							LB, QB-04
Vanadium	-54.6		ng/l							U
Zinc	50.3		ng/l							
Calibration Blank (2403035-CCB4)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.260		ng/l							
Arsenic	9.05		ng/l							
Barium	-2.25		ng/l							U
Beryllium	0.184		ng/l							
Cadmium	0.0427		ng/l							
Chromium	4.16		ng/l							
Cobalt	0.247		ng/l							
Copper	14.2		ng/l							
Lead	1.68		ng/l							
Manganese	6.22		ng/l							
Molybdenum	4.16		ng/l							
Nickel	0.221		ng/l							
Selenium	1.42		ng/l							
Thallium	1.80		ng/l							LB, QB-04
Vanadium	-59.3		ng/l							U
Zinc	264		ng/l							
Calibration Blank (2403035-CCB5)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.184		ng/l							
Arsenic	12.9		ng/l							
Barium	-2.76		ng/l							U
Beryllium	0.122		ng/l							
Cadmium	0.183		ng/l							
Chromium	3.71		ng/l							
Cobalt	0.252		ng/l							
Copper	17.2		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Calibration Blank (2403035-CCB5) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Lead	2.00		ng/l							
Manganese	4.88		ng/l							
Molybdenum	5.66		ng/l							
Nickel	1.88		ng/l							
Selenium	1.87		ng/l							
Thallium	1.88		ng/l							LB, QB-04
Vanadium	-62.8		ng/l							U
Zinc	44.8		ng/l							
Calibration Blank (2403035-CCB6)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.433		ng/l							
Arsenic	9.96		ng/l							
Barium	-1.90		ng/l							U
Beryllium	0.163		ng/l							
Cadmium	-0.0456		ng/l							U
Chromium	4.48		ng/l							
Cobalt	0.485		ng/l							
Copper	20.6		ng/l							
Lead	2.71		ng/l							
Manganese	5.78		ng/l							
Molybdenum	6.09		ng/l							
Nickel	2.14		ng/l							
Selenium	-8.47		ng/l							U
Thallium	1.69		ng/l							LB, QB-04
Vanadium	-67.6		ng/l							U
Zinc	53.8		ng/l							
Calibration Blank (2403035-CCB7)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.355		ng/l							
Arsenic	10.9		ng/l							
Barium	-2.54		ng/l							U
Beryllium	0.0106		ng/l							
Cadmium	-0.0225		ng/l							U
Chromium	2.87		ng/l							
Cobalt	0.246		ng/l							
Copper	16.5		ng/l							
Lead	2.48		ng/l							
Manganese	4.35		ng/l							
Molybdenum	5.18		ng/l							
Nickel	2.77		ng/l							

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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 2403035 - B4C1210										
Calibration Blank (2403035-CCB7) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Selenium	-4.94		ng/l							U
Thallium	1.70		ng/l							LB, QB-04
Vanadium	-67.6		ng/l							U
Zinc	42.2		ng/l							
Calibration Check (2403035-CCV1)				Prepared & Analyzed: 03/14/24						
Antimony	20100		ng/l	20000		100	90-110			
Arsenic	19900		ng/l	20000		99.4	90-110			
Barium	198000		ng/l	200000		99.1	90-110			
Beryllium	5080		ng/l	5000.0		102	90-110			
Cadmium	19500		ng/l	20000		97.7	90-110			
Chromium	229000		ng/l	240000		95.5	90-110			
Cobalt	49700		ng/l	50000		99.4	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.5	90-110			
Lead	195000		ng/l	200000		97.3	90-110			
Manganese	489000		ng/l	500000		97.7	90-110			
Molybdenum	48100		ng/l	50000		96.3	90-110			
Nickel	119000		ng/l	120000		99.2	90-110			
Selenium	19800		ng/l	20000		99.0	90-110			
Thallium	480		ng/l	500.00		96.0	90-110			LB
Vanadium	18900		ng/l	20000		94.3	90-110			
Zinc	515000		ng/l	500000		103	90-110			
Calibration Check (2403035-CCV2)				Prepared & Analyzed: 03/14/24						
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4960		ng/l	5000.0		99.3	90-110			
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	237000		ng/l	240000		98.8	90-110			
Cobalt	50100		ng/l	50000		100	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	201000		ng/l	200000		101	90-110			
Manganese	502000		ng/l	500000		100	90-110			
Molybdenum	49400		ng/l	50000		98.8	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Thallium	484		ng/l	500.00		96.8	90-110			LB
Vanadium	19600		ng/l	20000		98.1	90-110			
Zinc	531000		ng/l	500000		106	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Calibration Check (2403035-CCV3)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	199000		ng/l	200000		99.5	90-110			
Beryllium	5130		ng/l	5000.0		103	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	236000		ng/l	240000		98.4	90-110			
Cobalt	49800		ng/l	50000		99.6	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	496000		ng/l	500000		99.3	90-110			
Molybdenum	49500		ng/l	50000		98.9	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	483		ng/l	500.00		96.7	90-110			LB
Vanadium	19400		ng/l	20000		96.9	90-110			
Zinc	531000		ng/l	500000		106	90-110			
Calibration Check (2403035-CCV4)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21100		ng/l	20000		105	90-110			
Arsenic	20800		ng/l	20000		104	90-110			
Barium	205000		ng/l	200000		103	90-110			
Beryllium	5440		ng/l	5000.0		109	90-110			
Cadmium	20900		ng/l	20000		105	90-110			
Chromium	243000		ng/l	240000		101	90-110			
Cobalt	51700		ng/l	50000		103	90-110			
Copper	2.10E6		ng/l	2.0000E6		105	90-110			
Lead	205000		ng/l	200000		103	90-110			
Manganese	518000		ng/l	500000		104	90-110			
Molybdenum	50700		ng/l	50000		101	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Selenium	20700		ng/l	20000		104	90-110			
Thallium	489		ng/l	500.00		97.8	90-110			LB
Vanadium	20000		ng/l	20000		99.9	90-110			
Zinc	547000		ng/l	500000		109	90-110			
Calibration Check (2403035-CCV5)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	20800		ng/l	20000		104	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	204000		ng/l	200000		102	90-110			
Beryllium	5150		ng/l	5000.0		103	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Calibration Check (2403035-CCV5) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	235000		ng/l	240000		98.1	90-110			
Cobalt	50000		ng/l	50000		100	90-110			
Copper	2.03E6		ng/l	2.0000E6		102	90-110			
Lead	203000		ng/l	200000		101	90-110			
Manganese	502000		ng/l	500000		100	90-110			
Molybdenum	49900		ng/l	50000		99.8	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	484		ng/l	500.00		96.8	90-110			LB
Vanadium	19700		ng/l	20000		98.5	90-110			
Zinc	534000		ng/l	500000		107	90-110			
Calibration Check (2403035-CCV6)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21500		ng/l	20000		108	90-110			
Arsenic	21200		ng/l	20000		106	90-110			
Barium	207000		ng/l	200000		104	90-110			
Beryllium	5060		ng/l	5000.0		101	90-110			
Cadmium	21200		ng/l	20000		106	90-110			
Chromium	247000		ng/l	240000		103	90-110			
Cobalt	52300		ng/l	50000		105	90-110			
Copper	2.13E6		ng/l	2.0000E6		107	90-110			
Lead	210000		ng/l	200000		105	90-110			
Manganese	518000		ng/l	500000		104	90-110			
Molybdenum	52300		ng/l	50000		105	90-110			
Nickel	127000		ng/l	120000		106	90-110			
Selenium	20900		ng/l	20000		104	90-110			
Thallium	502		ng/l	500.00		100	90-110			LB
Vanadium	20600		ng/l	20000		103	90-110			
Zinc	554000		ng/l	500000		111	90-110			LJ, QX
Calibration Check (2403035-CCV7)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21300		ng/l	20000		107	90-110			
Arsenic	21000		ng/l	20000		105	90-110			
Barium	214000		ng/l	200000		107	90-110			
Beryllium	4930		ng/l	5000.0		98.5	90-110			
Cadmium	21300		ng/l	20000		107	90-110			
Chromium	246000		ng/l	240000		102	90-110			
Cobalt	52200		ng/l	50000		104	90-110			
Copper	2.12E6		ng/l	2.0000E6		106	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Calibration Check (2403035-CCV7) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Lead	209000		ng/l	200000		105	90-110			
Manganese	521000		ng/l	500000		104	90-110			
Molybdenum	53600		ng/l	50000		107	90-110			
Nickel	126000		ng/l	120000		105	90-110			
Selenium	20700		ng/l	20000		104	90-110			
Thallium	503		ng/l	500.00		101	90-110			LB
Vanadium	20600		ng/l	20000		103	90-110			
Zinc	552000		ng/l	500000		110	90-110			
High Cal Check (2403035-HCV1)				Prepared & Analyzed: 03/14/24						
Antimony	39900		ng/l	40000		99.7	95-105			
Arsenic	39500		ng/l	40000		98.8	95-105			
Barium	396000		ng/l	400000		99.1	95-105			
Beryllium	9510		ng/l	10000		95.1	95-105			
Cadmium	39500		ng/l	40000		98.7	95-105			
Chromium	472000		ng/l	480000		98.2	95-105			
Cobalt	98400		ng/l	100000		98.4	95-105			
Copper	3.93E6		ng/l	4.0000E6		98.4	95-105			
Lead	395000		ng/l	400000		98.9	95-105			
Manganese	983000		ng/l	1.0000E6		98.3	95-105			
Molybdenum	98300		ng/l	100000		98.3	95-105			
Nickel	236000		ng/l	240000		98.4	95-105			
Selenium	39400		ng/l	40000		98.5	95-105			
Thallium	994		ng/l	1000.0		99.4	95-105			LB
Vanadium	39300		ng/l	40000		98.3	95-105			
Zinc	960000		ng/l	1.0000E6		96.0	95-105			
Initial Cal Blank (2403035-ICB1)				Prepared & Analyzed: 03/14/24						
Antimony	1.01		ng/l							
Arsenic	1.62		ng/l							
Barium	0.233		ng/l							
Beryllium	0.325		ng/l							
Cadmium	0.242		ng/l							
Chromium	4.72		ng/l							
Cobalt	0.747		ng/l							
Copper	57.6		ng/l							
Lead	5.26		ng/l							
Manganese	11.9		ng/l							
Molybdenum	9.64		ng/l							
Nickel	9.85		ng/l							

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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 2403035 - B4C1210										
Initial Cal Blank (2403035-ICB1) Continu				Prepared & Analyzed: 03/14/24						
Selenium	-11.7		ng/l							U
Thallium	1.49		ng/l							LB
Vanadium	-50.6		ng/l							U
Zinc	21.8		ng/l							
Initial Cal Check (2403035-ICV1)				Prepared & Analyzed: 03/14/24						
Antimony	19900		ng/l	20000		99.5	90-110			
Arsenic	20100		ng/l	20000		100	90-110			
Barium	201000		ng/l	200000		100	90-110			
Beryllium	4840		ng/l	5000.0		96.7	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	238000		ng/l	240000		99.0	90-110			
Cobalt	50100		ng/l	50000		100	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	197000		ng/l	200000		98.5	90-110			
Manganese	491000		ng/l	500000		98.2	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20500		ng/l	20000		103	90-110			
Thallium	518		ng/l	500.00		104	90-110			LB
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	532000		ng/l	500000		106	90-110			
Interference Check A (2403035-IFA1)				Prepared & Analyzed: 03/14/24						
Antimony	0.00		ng/l				80-120			U
Arsenic	0.00		ng/l				80-120			U
Barium	0.00		ng/l				80-120			U
Beryllium	0.00		ng/l				80-120			U
Cadmium	0.00		ng/l				80-120			U
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U
Lead	0.00		ng/l				80-120			U
Manganese	0.00		ng/l				80-120			U
Molybdenum	296000		ng/l	300000		98.8	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			LB, U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U

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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 2403035 - B4C1210										
Interference Check B (2403035-IFB1)					Prepared & Analyzed: 03/14/24					
Antimony	20300		ng/l	20000		102	80-120			
Arsenic	20200		ng/l	20000		101	80-120			
Barium	202000		ng/l	200000		101	80-120			
Beryllium	4970		ng/l	5000.0		99.3	80-120			
Cadmium	19200		ng/l	20000		96.1	80-120			
Chromium	220000		ng/l	240000		91.7	80-120			
Cobalt	48600		ng/l	50000		97.3	80-120			
Copper	1.87E6		ng/l	2.0000E6		93.3	80-120			
Lead	201000		ng/l	200000		100	80-120			
Manganese	494000		ng/l	500000		98.8	80-120			
Molybdenum	346000		ng/l	350000		98.8	80-120			
Nickel	114000		ng/l	120000		95.0	80-120			
Selenium	19100		ng/l	20000		95.3	80-120			
Thallium	504		ng/l	500.00		101	80-120			LB
Vanadium	17600		ng/l	20000		88.1	80-120			
Zinc	473000		ng/l	500000		94.6	80-120			
Batch B4C1210 - ICP-MS Extraction										
Blank (B4C1210-BLK1)					Prepared: 03/12/24 Analyzed: 03/14/24					
Antimony	ND	0.0386	ng/m³ Air							SL, U
Arsenic	ND	0.00937	ng/m³ Air							U
Barium	ND	1.07	ng/m³ Air							U
Beryllium	ND	0.00320	ng/m³ Air							U
Cadmium	ND	0.0741	ng/m³ Air							U
Chromium	ND	2.21	ng/m³ Air							U
Cobalt	ND	0.0436	ng/m³ Air							U
Copper	ND	2.63	ng/m³ Air							U
Lead	ND	0.214	ng/m³ Air							U
Manganese	ND	1.89	ng/m³ Air							U
Molybdenum	ND	0.359	ng/m³ Air							U
Nickel	ND	0.652	ng/m³ Air							U
Selenium	ND	0.00896	ng/m³ Air							U
Thallium	ND	5.89E-4	ng/m³ Air							B, LB, QB-04, U
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4C1210-BS1)					Prepared: 03/12/24 Analyzed: 03/14/24					
Antimony	0.873	0.0386	ng/m³ Air	1.3829		63.1	80-120			SL
Arsenic	2.62	0.00937	ng/m³ Air	2.7658		94.6	80-120			

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
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 B4C1210 - ICP-MS Extraction										
LCS (B4C1210-BS1) Continued				Prepared: 03/12/24 Analyzed: 03/14/24						
Barium	27.1	1.07	ng/m³ Air	27.658		98.0	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.8	80-120			
Cadmium	1.34	0.0741	ng/m³ Air	1.3829		96.7	80-120			
Chromium	14.5	2.21	ng/m³ Air	13.829		105	80-120			
Cobalt	1.30	0.0436	ng/m³ Air	1.3829		94.3	80-120			
Copper	28.6	2.63	ng/m³ Air	27.658		103	80-120			
Lead	13.0	0.214	ng/m³ Air	13.829		94.2	80-120			
Manganese	8.25	1.89	ng/m³ Air	8.2975		99.4	80-120			
Molybdenum	1.37	0.359	ng/m³ Air	1.3829		99.3	80-120			
Nickel	2.80	0.652	ng/m³ Air	2.7658		101	80-120			
Selenium	2.64	0.00896	ng/m³ Air	2.7658		95.4	80-120			
Thallium	0.133	5.89E-4	ng/m³ Air	0.13829		95.9	80-120			B, LB, QB-04
Vanadium	2.60	0.0529	ng/m³ Air	2.7658		94.0	80-120			
Zinc	115	76.8	ng/m³ Air	82.975		139	80-120			
LCS (B4C1210-BS2)				Prepared: 03/12/24 Analyzed: 03/15/24						
Antimony	0.954	0.0386	ng/m³ Air	1.3829		69.0	80-120			SL
Arsenic	2.69	0.00937	ng/m³ Air	2.7658		97.3	80-120			
Barium	27.7	1.07	ng/m³ Air	27.658		100	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.4	80-120			
Cadmium	1.37	0.0741	ng/m³ Air	1.3829		99.4	80-120			
Chromium	14.9	2.21	ng/m³ Air	13.829		107	80-120			
Cobalt	1.34	0.0436	ng/m³ Air	1.3829		96.5	80-120			
Copper	29.6	2.63	ng/m³ Air	27.658		107	80-120			
Lead	13.5	0.214	ng/m³ Air	13.829		97.9	80-120			
Manganese	8.44	1.89	ng/m³ Air	8.2975		102	80-120			
Molybdenum	1.41	0.359	ng/m³ Air	1.3829		102	80-120			
Nickel	2.92	0.652	ng/m³ Air	2.7658		105	80-120			
Selenium	2.69	0.00896	ng/m³ Air	2.7658		97.3	80-120			
Thallium	0.137	5.89E-4	ng/m³ Air	0.13829		99.4	80-120			B, LB, QB-04
Vanadium	2.67	0.0529	ng/m³ Air	2.7658		96.5	80-120			
Zinc	117	76.8	ng/m³ Air	82.975		141	80-120			
Duplicate (B4C1210-DUP1)			**Source: 4031151-17**	Prepared: 03/12/24 Analyzed: 03/14/24						
Antimony	0.0345	0.0311	ng/m³ Air		0.0326			5.85	10	SL
Arsenic	0.147	0.00754	ng/m³ Air		0.150			1.71	10	
Barium	1.72	0.861	ng/m³ Air		1.63			5.43	10	
Beryllium	0.00736	0.00258	ng/m³ Air		0.00730			0.727	10	
Cadmium	ND	0.0596	ng/m³ Air		ND				10	U
Chromium	1.84	1.78	ng/m³ Air		1.87			1.37	10	

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REPORTED: 03/18/24 17:00
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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 B4C1210 - ICP-MS Extraction										
Duplicate (B4C1210-DUP1) Continued			**Source: 4031151-17**		Prepared: 03/12/24 Analyzed: 03/14/24					
Cobalt	0.139	0.0351	ng/m³ Air		0.130			6.32	10	
Copper	38.4	2.12	ng/m³ Air		36.0			6.47	10	
Lead	0.434	0.172	ng/m³ Air		0.416			4.21	10	
Manganese	3.82	1.52	ng/m³ Air		3.65			4.63	10	
Molybdenum	2.46	0.289	ng/m³ Air		2.35			4.84	10	
Nickel	0.685	0.525	ng/m³ Air		0.660			3.84	10	
Selenium	0.133	0.00721	ng/m³ Air		0.124			6.53	10	
Thallium	0.00129	4.74E-4	ng/m³ Air		0.00130			1.41	10	B, LB, QB-04
Vanadium	0.342	0.0426	ng/m³ Air		0.335			2.18	10	
Zinc	ND	61.8	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP2)			**Source: 4031151-20**		Prepared: 03/12/24 Analyzed: 03/15/24					
Antimony	0.131	0.0305	ng/m³ Air		0.124			5.49	10	SL
Arsenic	0.500	0.00740	ng/m³ Air		0.481			3.90	10	
Barium	4.30	0.845	ng/m³ Air		4.13			3.95	10	
Beryllium	0.00986	0.00253	ng/m³ Air		0.0104			5.70	10	
Cadmium	ND	0.0585	ng/m³ Air		ND				10	U
Chromium	2.19	1.74	ng/m³ Air		2.15			1.66	10	
Cobalt	0.323	0.0344	ng/m³ Air		0.294			9.40	10	
Copper	39.2	2.08	ng/m³ Air		36.9			6.06	10	
Lead	0.971	0.169	ng/m³ Air		0.931			4.21	10	
Manganese	8.77	1.49	ng/m³ Air		8.22			6.54	10	
Molybdenum	2.00	0.283	ng/m³ Air		1.95			2.58	10	
Nickel	1.09	0.515	ng/m³ Air		1.03			5.92	10	
Selenium	0.166	0.00707	ng/m³ Air		0.155			6.58	10	
Thallium	8.67E-4	4.65E-4	ng/m³ Air		9.12E-4			5.01	10	B, LB, QB-04
Vanadium	1.02	0.0418	ng/m³ Air		0.973			4.26	10	
Zinc	ND	60.6	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP3)			**Source: 4031151-06**		Prepared: 03/12/24 Analyzed: 03/15/24					
Antimony	0.0346	0.0319	ng/m³ Air		0.0342			1.20	10	SL
Arsenic	0.755	0.00773	ng/m³ Air		0.752			0.385	10	
Barium	2.48	0.883	ng/m³ Air		2.44			1.57	10	
Beryllium	0.00711	0.00264	ng/m³ Air		0.00695			2.34	10	
Cadmium	ND	0.0611	ng/m³ Air		ND				10	U
Chromium	2.25	1.82	ng/m³ Air		2.23			0.871	10	
Cobalt	0.298	0.0360	ng/m³ Air		0.294			1.39	10	
Copper	55.1	2.17	ng/m³ Air		54.8			0.445	10	
Lead	0.371	0.177	ng/m³ Air		0.366			1.39	10	
Manganese	7.46	1.56	ng/m³ Air		7.33			1.77	10	

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FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
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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 B4C1210 - ICP-MS Extraction										
Duplicate (B4C1210-DUP3) Continued		**Source: 4031151-06**		Prepared: 03/12/24 Analyzed: 03/15/24						
Molybdenum	2.72	0.296	ng/m³ Air		2.67			2.06	10	
Nickel	0.855	0.538	ng/m³ Air		0.844			1.31	10	
Selenium	0.137	0.00739	ng/m³ Air		0.145			5.93	10	
Thallium	0.00112	4.86E-4	ng/m³ Air		0.00106			5.31	10	B, LB, QB-04
Vanadium	0.752	0.0437	ng/m³ Air		0.736			2.15	10	
Zinc	ND	63.4	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP4)		**Source: 4031151-27**		Prepared: 03/12/24 Analyzed: 03/15/24						
Antimony	0.0526	0.0310	ng/m³ Air		0.0500			5.19	10	SL
Arsenic	0.207	0.00754	ng/m³ Air		0.206			0.670	10	
Barium	2.46	0.861	ng/m³ Air		2.37			3.56	10	
Beryllium	0.00690	0.00257	ng/m³ Air		0.00732			5.90	10	
Cadmium	ND	0.0596	ng/m³ Air		ND				10	U
Chromium	2.18	1.78	ng/m³ Air		2.09			4.47	10	
Cobalt	0.207	0.0351	ng/m³ Air		0.202			2.52	10	
Copper	19.1	2.12	ng/m³ Air		18.5			2.83	10	
Lead	0.563	0.172	ng/m³ Air		0.549			2.63	10	
Manganese	6.23	1.52	ng/m³ Air		6.05			3.03	10	
Molybdenum	1.28	0.289	ng/m³ Air		1.24			3.37	10	
Nickel	0.725	0.524	ng/m³ Air		0.705			2.83	10	
Selenium	0.145	0.00721	ng/m³ Air		0.147			1.01	10	
Thallium	0.00102	4.74E-4	ng/m³ Air		9.93E-4			2.57	10	B, LB, QB-04
Vanadium	0.560	0.0426	ng/m³ Air		0.543			3.16	10	
Zinc	ND	61.8	ng/m³ Air		ND				10	LJ, QX, U
Matrix Spike (B4C1210-MS1)		**Source: 4031151-17**		Prepared: 03/12/24 Analyzed: 03/14/24						
Antimony	0.447	0.0311	ng/m³ Air	1.1131	0.0326	37.3	80-120			SL
Arsenic	2.27	0.00754	ng/m³ Air	2.2263	0.150	95.1	80-120			
Barium	23.2	0.861	ng/m³ Air	22.263	1.63	96.9	80-120			
Beryllium	1.13	0.00258	ng/m³ Air	1.1131	0.00730	101	80-120			
Cadmium	1.09	0.0596	ng/m³ Air	1.1131	ND	98.1	80-120			
Chromium	13.4	1.78	ng/m³ Air	11.131	1.87	104	80-120			
Cobalt	1.20	0.0351	ng/m³ Air	1.1131	0.130	96.2	80-120			
Copper	59.3	2.12	ng/m³ Air	22.263	36.0	105	80-120			
Lead	11.2	0.172	ng/m³ Air	11.131	0.416	97.3	80-120			
Manganese	10.4	1.52	ng/m³ Air	6.6788	3.65	101	80-120			
Molybdenum	3.47	0.289	ng/m³ Air	1.1131	2.35	101	80-120			
Nickel	3.19	0.525	ng/m³ Air	2.2263	0.660	114	80-120			
Selenium	2.23	0.00721	ng/m³ Air	2.2263	0.124	94.5	80-120			
Thallium	0.109	4.74E-4	ng/m³ Air	0.11131	0.00130	97.0	80-120			B, LB, QB-04

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FILE #: 4205.00.003.001
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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 B4C1210 - ICP-MS Extraction										
Matrix Spike (B4C1210-MS1) Continued Source: 4031151-17 Prepared: 03/12/24 Analyzed: 03/14/24										
Vanadium	2.40	0.0426	ng/m³ Air	2.2263	0.335	93.0	80-120			
Zinc	81.3	61.8	ng/m³ Air	66.788	ND	122	80-120			
Matrix Spike (B4C1210-MS2) Source: 4031151-20 Prepared: 03/12/24 Analyzed: 03/15/24										
Antimony	0.576	0.0305	ng/m³ Air	1.0915	0.124	41.4	80-120			SL
Arsenic	2.58	0.00740	ng/m³ Air	2.1829	0.481	96.2	80-120			
Barium	25.8	0.845	ng/m³ Air	21.829	4.13	99.2	80-120			
Beryllium	1.10	0.00253	ng/m³ Air	1.0915	0.0104	99.8	80-120			
Cadmium	1.09	0.0585	ng/m³ Air	1.0915	ND	99.5	80-120			
Chromium	12.9	1.74	ng/m³ Air	10.915	2.15	98.5	80-120			
Cobalt	1.37	0.0344	ng/m³ Air	1.0915	0.294	98.3	80-120			
Copper	59.5	2.08	ng/m³ Air	21.829	36.9	104	80-120			
Lead	11.8	0.169	ng/m³ Air	10.915	0.931	99.3	80-120			
Manganese	15.1	1.49	ng/m³ Air	6.5488	8.22	105	80-120			
Molybdenum	3.03	0.283	ng/m³ Air	1.0915	1.95	99.0	80-120			
Nickel	3.22	0.515	ng/m³ Air	2.1829	1.03	100	80-120			
Selenium	2.26	0.00707	ng/m³ Air	2.1829	0.155	96.5	80-120			
Thallium	0.109	4.65E-4	ng/m³ Air	0.10915	9.12E-4	98.8	80-120			B, LB, QB-04
Vanadium	3.02	0.0418	ng/m³ Air	2.1829	0.973	94.0	80-120			
Zinc	92.7	60.6	ng/m³ Air	65.488	ND	142	80-120			
Matrix Spike Dup (B4C1210-MSD1) Source: 4031151-17 Prepared: 03/12/24 Analyzed: 03/14/24										
Antimony	0.433	0.0311	ng/m³ Air	1.1131	0.0326	36.0	80-120	3.24	20	SL
Arsenic	2.22	0.00754	ng/m³ Air	2.2263	0.150	93.0	80-120	2.08	20	
Barium	22.8	0.861	ng/m³ Air	22.263	1.63	95.0	80-120	1.80	20	
Beryllium	1.15	0.00258	ng/m³ Air	1.1131	0.00730	102	80-120	1.46	20	
Cadmium	1.08	0.0596	ng/m³ Air	1.1131	ND	97.1	80-120	0.995	20	
Chromium	12.5	1.78	ng/m³ Air	11.131	1.87	95.8	80-120	7.04	20	
Cobalt	1.18	0.0351	ng/m³ Air	1.1131	0.130	94.2	80-120	1.85	20	
Copper	56.8	2.12	ng/m³ Air	22.263	36.0	93.5	80-120	4.39	20	
Lead	11.1	0.172	ng/m³ Air	11.131	0.416	96.2	80-120	1.06	20	
Manganese	10.1	1.52	ng/m³ Air	6.6788	3.65	96.1	80-120	3.12	20	
Molybdenum	3.32	0.289	ng/m³ Air	1.1131	2.35	87.1	80-120	4.58	20	
Nickel	2.73	0.525	ng/m³ Air	2.2263	0.660	92.9	80-120	15.7	20	
Selenium	2.21	0.00721	ng/m³ Air	2.2263	0.124	93.9	80-120	0.664	20	
Thallium	0.106	4.74E-4	ng/m³ Air	0.11131	0.00130	94.4	80-120	2.65	20	B, LB, QB-04
Vanadium	2.36	0.0426	ng/m³ Air	2.2263	0.335	91.1	80-120	1.74	20	
Zinc	77.8	61.8	ng/m³ Air	66.788	ND	117	80-120	4.29	20	
Matrix Spike Dup (B4C1210-MSD2) Source: 4031151-20 Prepared: 03/12/24 Analyzed: 03/15/24										
Antimony	0.541	0.0305	ng/m³ Air	1.0915	0.124	38.2	80-120	6.34	20	SL

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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 B4C1210 - ICP-MS Extraction										
Matrix Spike Dup (B4C1210-MSD2) Conti			**Source: 4031151-20**			Prepared: 03/12/24		Analyzed: 03/15/24		
Arsenic	2.58	0.00740	ng/m³ Air	2.1829	0.481	96.0	80-120	0.163	20	
Barium	25.4	0.845	ng/m³ Air	21.829	4.13	97.6	80-120	1.37	20	
Beryllium	1.11	0.00253	ng/m³ Air	1.0915	0.0104	101	80-120	1.01	20	
Cadmium	1.08	0.0585	ng/m³ Air	1.0915	ND	99.1	80-120	0.384	20	
Chromium	12.9	1.74	ng/m³ Air	10.915	2.15	98.8	80-120	0.252	20	
Cobalt	1.36	0.0344	ng/m³ Air	1.0915	0.294	97.6	80-120	0.499	20	
Copper	60.0	2.08	ng/m³ Air	21.829	36.9	106	80-120	0.776	20	
Lead	11.7	0.169	ng/m³ Air	10.915	0.931	99.0	80-120	0.288	20	
Manganese	15.2	1.49	ng/m³ Air	6.5488	8.22	106	80-120	0.478	20	
Molybdenum	2.96	0.283	ng/m³ Air	1.0915	1.95	92.6	80-120	2.35	20	
Nickel	3.21	0.515	ng/m³ Air	2.1829	1.03	99.7	80-120	0.319	20	
Selenium	2.28	0.00707	ng/m³ Air	2.1829	0.155	97.4	80-120	0.890	20	
Thallium	0.109	4.65E-4	ng/m³ Air	0.10915	9.12E-4	99.0	80-120	0.246	20	B, LB, QB-04
Vanadium	3.04	0.0418	ng/m³ Air	2.1829	0.973	94.5	80-120	0.369	20	
Zinc	90.8	60.6	ng/m³ Air	65.488	ND	139	80-120	2.12	20	
Post Spike (B4C1210-PS1)			**Source: 4031151-17**			Prepared: 03/12/24		Analyzed: 03/14/24		
Antimony	0.252	0.0311	ng/m³ Air	0.22263	0.0326	98.4	75-125			SL
Arsenic	1.23	0.00754	ng/m³ Air	1.1131	0.150	97.4	75-125			
Barium	3.73	0.861	ng/m³ Air	2.2263	1.63	94.6	75-125			
Beryllium	0.233	0.00258	ng/m³ Air	0.22263	0.00730	102	75-125			
Cadmium	0.122	0.0596	ng/m³ Air	0.11131	ND	110	75-125			
Chromium	2.96	1.78	ng/m³ Air	1.1131	1.87	98.1	75-125			
Cobalt	0.348	0.0351	ng/m³ Air	0.22263	0.130	97.6	75-125			
Copper	48.0	2.12	ng/m³ Air	11.131	36.0	108	75-125			
Lead	22.3	0.172	ng/m³ Air	22.263	0.416	98.1	75-125			
Manganese	5.85	1.52	ng/m³ Air	2.2263	3.65	98.9	75-125			
Molybdenum	3.39	0.289	ng/m³ Air	1.1131	2.35	94.1	75-125			
Nickel	2.83	0.525	ng/m³ Air	2.2263	0.660	97.4	75-125			
Selenium	1.20	0.00721	ng/m³ Air	1.1131	0.124	96.7	75-125			
Thallium	0.0582	4.74E-4	ng/m³ Air	5.5657E-2	0.00130	102	75-125			B, LB, QB-04
Vanadium	1.37	0.0426	ng/m³ Air	1.1131	0.335	92.8	75-125			
Zinc	ND	61.8	ng/m³ Air	22.263	ND		75-125			U
Post Spike (B4C1210-PS2)			**Source: 4031151-20**			Prepared: 03/12/24		Analyzed: 03/15/24		
Antimony	0.346	0.0305	ng/m³ Air	0.21829	0.124	102	75-125			SL
Arsenic	1.56	0.00740	ng/m³ Air	1.0915	0.481	98.8	75-125			
Barium	6.21	0.845	ng/m³ Air	2.1829	4.13	95.2	75-125			
Beryllium	0.234	0.00253	ng/m³ Air	0.21829	0.0104	102	75-125			
Cadmium	0.124	0.0585	ng/m³ Air	0.10915	ND	114	75-125			

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
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 B4C1210 - ICP-MS Extraction										
Post Spike (B4C1210-PS2) Continued			**Source: 4031151-20**		Prepared: 03/12/24		Analyzed: 03/15/24			
Chromium	3.21	1.74	ng/m³ Air	1.0915	2.15	97.4	75-125			
Cobalt	0.514	0.0344	ng/m³ Air	0.21829	0.294	101	75-125			
Copper	48.9	2.08	ng/m³ Air	10.915	36.9	110	75-125			
Lead	22.6	0.169	ng/m³ Air	21.829	0.931	99.3	75-125			
Manganese	10.5	1.49	ng/m³ Air	2.1829	8.22	104	75-125			
Molybdenum	3.01	0.283	ng/m³ Air	1.0915	1.95	96.9	75-125			
Nickel	3.21	0.515	ng/m³ Air	2.1829	1.03	99.8	75-125			
Selenium	1.24	0.00707	ng/m³ Air	1.0915	0.155	99.8	75-125			
Thallium	0.0569	4.65E-4	ng/m³ Air	5.4574E-2	9.12E-4	103	75-125			B, LB, QB-04
Vanadium	1.97	0.0418	ng/m³ Air	1.0915	0.973	91.4	75-125			
Zinc	ND	60.6	ng/m³ Air	21.829	ND		75-125			U
Dilution Check (B4C1210-SRL1)			**Source: 4031151-17**		Prepared: 03/12/24		Analyzed: 03/14/24			
Antimony	ND	0.155	ng/m³ Air		ND				10	SL, U
Arsenic	0.161	0.0377	ng/m³ Air		0.150			7.05	10	
Barium	ND	4.31	ng/m³ Air		ND				10	U
Beryllium	ND	0.0129	ng/m³ Air		ND				10	U
Cadmium	ND	0.298	ng/m³ Air		ND				10	U
Chromium	ND	8.89	ng/m³ Air		ND				10	U
Cobalt	ND	0.175	ng/m³ Air		ND				10	U
Copper	36.4	10.6	ng/m³ Air		36.0			1.16	10	
Lead	ND	0.861	ng/m³ Air		ND				10	U
Manganese	ND	7.61	ng/m³ Air		ND				10	U
Molybdenum	2.30	1.44	ng/m³ Air		2.35			1.81	10	
Nickel	ND	2.62	ng/m³ Air		ND				10	U
Selenium	0.122	0.0361	ng/m³ Air		0.124			1.86	10	
Thallium	0.00252	0.00237	ng/m³ Air		ND			63.4	10	B, LB, QB-04
Vanadium	0.324	0.213	ng/m³ Air		0.335			3.29	10	
Zinc	ND	309	ng/m³ Air		ND				10	U
Dilution Check (B4C1210-SRL2)			**Source: 4031151-20**		Prepared: 03/12/24		Analyzed: 03/15/24			
Antimony	ND	0.152	ng/m³ Air		ND				10	SL, U
Arsenic	0.496	0.0370	ng/m³ Air		0.481			3.18	10	
Barium	4.25	4.22	ng/m³ Air		ND			2.82	10	
Beryllium	ND	0.0126	ng/m³ Air		ND				10	U
Cadmium	ND	0.292	ng/m³ Air		ND				10	U
Chromium	ND	8.72	ng/m³ Air		ND				10	U
Cobalt	0.304	0.172	ng/m³ Air		0.294			3.36	10	
Copper	38.2	10.4	ng/m³ Air		36.9			3.56	10	
Lead	0.915	0.845	ng/m³ Air		0.931			1.64	10	

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/18/24 17:00
SUBMITTED: 03/11/24
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 B4C1210 - ICP-MS Extraction										
Dilution Check (B4C1210-SRL2) Continue Source: 4031151-20 Prepared: 03/12/24 Analyzed: 03/15/24										
Manganese	8.57	7.46	ng/m³ Air		8.22			4.24	10	
Molybdenum	2.04	1.42	ng/m³ Air		1.95			4.50	10	
Nickel	ND	2.57	ng/m³ Air		ND				10	U
Selenium	0.164	0.0354	ng/m³ Air		0.155			5.54	10	
Thallium	ND	0.00232	ng/m³ Air		ND				10	B, LB, QB-04, U
Vanadium	0.953	0.209	ng/m³ Air		0.973			2.00	10	
Zinc	ND	303	ng/m³ Air		ND				10	LJ, QX, U

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REPORTED: 03/18/24 17:00
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AQS SITE CODE:
SITE CODE: Lahaina fires

Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
QB-04	Analyte exceeds continuing calibration blank criteria
LJ	Identification of analyte is acceptable; reported value is an estimate.
LB	Lab blank value above acceptable limit.
FB-01	Analyte exceeds Field Blank criteria.
E	The concentration for this analyte is an estimated value above the calibration range of the instrument.
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

Stage 1 Data Verification Checklist – Metals

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/20/2024 and Shanna Vasser 3/21/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 2/29/2024 and 3/1/2024 – 3/6/2024
Report No: 4301151

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

Discrepancies:

13. Field blank detections above the method detection limit were reported for arsenic in MFL-FB01-030224-HM and cobalt in MFL-FB01-030424-HM.

Notes:

2. The laboratory reported that MFL-AM03-030124-HM, MFL-AM04-030224-HM, MFL-AM04-030324-HM, and MFL-AM03-030524-HM were nonhomogeneous.

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

March 25, 2024

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

Dear Ms. Chelsea Saber,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 03/11/24 11:48.

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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
MFL-AM01-022924-HM	4031151-01	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM02-022924-HM	4031151-02	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM03-022924-HM	4031151-03	Air	02/29/24 23:59	03/11/24 11:48
MFL-AM04-022924-HM	4031151-04	Air	02/29/24 23:59	03/11/24 11:48
MFL-FB01-022924-HM	4031151-05	Air	02/29/24 00:00	03/11/24 11:48
MFL-AM01-030124-HM	4031151-06	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM02-030124-HM	4031151-07	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM03-030124-HM	4031151-08	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM04-030124-HM	4031151-09	Air	03/01/24 23:59	03/11/24 11:48
MFL-AM01-030224-HM	4031151-10	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM02-030224-HM	4031151-11	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM03-030224-HM	4031151-12	Air	03/02/24 23:59	03/11/24 11:48
MFL-AM04-030224-HM	4031151-13	Air	03/02/24 23:59	03/11/24 11:48
MFL-FB01-030224-HM	4031151-14	Air	03/02/24 00:00	03/11/24 11:48
MFL-AM01-030324-HM	4031151-15	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM02-030324-HM	4031151-16	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM03-030324-HM/MS/I	4031151-17	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM04-030324-HM	4031151-18	Air	03/03/24 23:59	03/11/24 11:48
MFL-AM01-030424-HM	4031151-19	Air	03/04/24 23:59	03/11/24 11:48
MFL-AM02-030424-HM	4031151-20	Air	03/04/24 23:59	03/11/24 11:48
MFL-AM03-030424-HM	4031151-21	Air	03/04/24 23:59	03/11/24 11:48

CERTIFICATE OF ANALYSIS

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

MFL-AM04-030424-HM	4031151-22	Air	03/04/24 23:59	03/11/24 11:48
MFL-FB01-030424-HM	4031151-23	Air	03/04/24 00:00	03/11/24 11:48
MFL-AM01-030524-HM	4031151-24	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM02-030524-HM	4031151-25	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM03-030524-HM	4031151-26	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM04-030524-HM	4031151-27	Air	03/05/24 23:59	03/11/24 11:48
MFL-AM01-030624-HM	4031151-28	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM02-030624-HM	4031151-29	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM03-030624-HM	4031151-30	Air	03/06/24 23:59	03/11/24 11:48
MFL-AM04-030624-HM	4031151-31	Air	03/06/24 23:59	03/11/24 11:48
MFL-FB01-030624-HM	4031151-32	Air	03/06/24 00:00	03/11/24 11:48

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-022924-HM
Matrix: Air
Lab ID: 4031151-01
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 03:35

Comments: Q9554709 - 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**	**0.0413**	SL	**0.0319**
Arsenic	**7440-38-2**	**1.19**		**0.00773**
Barium	**7440-39-3**	**2.59**		**0.883**
Beryllium	**7440-41-7**	**0.00871**		**0.00264**
Cadmium	7440-43-9	0.0124	U	0.0611
Chromium	**7440-47-3**	**2.55**		**1.82**
Cobalt	**7440-48-4**	**0.292**		**0.0360**
Copper	**7440-50-8**	**45.9**		**2.17**
Lead	**7439-92-1**	**0.464**		**0.177**
Manganese	**7439-96-5**	**8.20**		**1.56**
Molybdenum	**7439-98-7**	**2.59**		**0.296**
Nickel	**7440-02-0**	**0.888**		**0.538**
Selenium	**7782-49-2**	**0.102**		**0.00739**
Thallium	**7440-28-0**	**0.00119**	B, LB, QB-04	**4.86E-4**
Vanadium	**7440-62-2**	**0.790**		**0.0437**
Zinc	7440-66-6	21.5	U	63.4

CERTIFICATE OF ANALYSIS

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-022924-HM
Matrix: Air
Lab ID: 4031151-02
Sample Volume: 2068.348 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 03:49

Comments: Q9554705 - 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**	**0.0817**	SL	**0.0304**
Arsenic	**7440-38-2**	**0.348**		**0.00737**
Barium	**7440-39-3**	**4.68**		**0.842**
Beryllium	**7440-41-7**	**0.0138**		**0.00252**
Cadmium	7440-43-9	0.0144	U	0.0583
Chromium	**7440-47-3**	**2.60**		**1.74**
Cobalt	**7440-48-4**	**0.446**		**0.0343**
Copper	**7440-50-8**	**32.9**		**2.07**
Lead	**7439-92-1**	**0.892**		**0.168**
Manganese	**7439-96-5**	**11.4**		**1.49**
Molybdenum	**7439-98-7**	**1.75**		**0.282**
Nickel	**7440-02-0**	**1.69**		**0.513**
Selenium	**7782-49-2**	**0.134**		**0.00705**
Thallium	**7440-28-0**	**0.00115**	B, LB, QB-04	**4.63E-4**
Vanadium	**7440-62-2**	**1.18**		**0.0416**
Zinc	7440-66-6	27.3	U	60.4

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-022924-HM
Matrix: Air
Lab ID: 4031151-03
Sample Volume: 2188.862 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:07

Comments: Q9554704 - 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**	**0.0392**	SL	**0.0287**
Arsenic	**7440-38-2**	**0.319**		**0.00696**
Barium	**7440-39-3**	**2.56**		**0.795**
Beryllium	**7440-41-7**	**0.0127**		**0.00238**
Cadmium	7440-43-9	0.00880	U	0.0551
Chromium	**7440-47-3**	**1.96**		**1.64**
Cobalt	**7440-48-4**	**0.238**		**0.0324**
Copper	**7440-50-8**	**29.9**		**1.95**
Lead	**7439-92-1**	**0.431**		**0.159**
Manganese	**7439-96-5**	**6.06**		**1.40**
Molybdenum	**7439-98-7**	**1.43**		**0.267**
Nickel	**7440-02-0**	**0.717**		**0.485**
Selenium	**7782-49-2**	**0.106**		**0.00666**
Thallium	**7440-28-0**	**0.00101**	B, LB, QB-04	**4.38E-4**
Vanadium	**7440-62-2**	**0.575**		**0.0393**
Zinc	7440-66-6	20.4	U	57.1

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-022924-HM
Matrix: Air
Lab ID: 4031151-04
Sample Volume: 1828.928 m³
Filter ID:
Sampled: 02/29/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:23

Comments: Q9554732 - 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**	**0.0518**	SL	**0.0343**
Arsenic	**7440-38-2**	**0.173**		**0.00834**
Barium	**7440-39-3**	**2.64**		**0.952**
Beryllium	**7440-41-7**	**0.00848**		**0.00285**
Cadmium	7440-43-9	0.0122	U	0.0659
Chromium	**7440-47-3**	**2.05**		**1.97**
Cobalt	**7440-48-4**	**0.227**		**0.0388**
Copper	**7440-50-8**	**19.2**		**2.34**
Lead	**7439-92-1**	**0.720**		**0.190**
Manganese	**7439-96-5**	**6.56**		**1.68**
Molybdenum	**7439-98-7**	**0.973**		**0.319**
Nickel	**7440-02-0**	**0.826**		**0.580**
Selenium	**7782-49-2**	**0.122**		**0.00797**
Thallium	**7440-28-0**	**8.89E-4**	B, LB, QB-04	**5.24E-4**
Vanadium	**7440-62-2**	**0.596**		**0.0471**
Zinc	7440-66-6	21.6	U	68.3

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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-022924-HM
Matrix: Air
Lab ID: 4031151-05
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 02/29/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:38

Comments: Q9554728 - 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	0.00704	U, SL	0.0319
Arsenic	7440-38-2	0.00704	U	0.00773
Barium	7440-39-3	0.574	U	0.883
Beryllium	7440-41-7	0.00121	U	0.00264
Cadmium	7440-43-9	0.00143	U	0.0611
Chromium	7440-47-3	1.36	U	1.82
Cobalt	7440-48-4	0.0221	U	0.0360
Copper	7440-50-8	0.669	U	2.17
Lead	7439-92-1	0.0634	U	0.177
Manganese	7439-96-5	0.215	U	1.56
Molybdenum	7439-98-7	0.236	U	0.296
Nickel	7440-02-0	0.348	U	0.538
Selenium	7782-49-2	0.00223	U	0.00739
Thallium	7440-28-0	1.80E-4	U, B, LB, QB-04	4.86E-4
Vanadium	7440-62-2	0.0101	U	0.0437
Zinc	7440-66-6	12.7	U	63.4

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030124-HM
Matrix: Air
Lab ID: 4031151-06
Sample Volume: 1971.586 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 04:53

Comments: Q9554731 - 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**	**0.0342**	SL	**0.0319**
Arsenic	**7440-38-2**	**0.752**		**0.00773**
Barium	**7440-39-3**	**2.44**		**0.883**
Beryllium	**7440-41-7**	**0.00695**		**0.00264**
Cadmium	7440-43-9	0.0101	U	0.0611
Chromium	**7440-47-3**	**2.23**		**1.82**
Cobalt	**7440-48-4**	**0.294**		**0.0360**
Copper	**7440-50-8**	**54.8**		**2.17**
Lead	**7439-92-1**	**0.366**		**0.177**
Manganese	**7439-96-5**	**7.33**		**1.56**
Molybdenum	**7439-98-7**	**2.67**		**0.296**
Nickel	**7440-02-0**	**0.844**		**0.538**
Selenium	**7782-49-2**	**0.145**		**0.00739**
Thallium	**7440-28-0**	**0.00106**	B, LB, QB-04	**4.86E-4**
Vanadium	**7440-62-2**	**0.736**		**0.0437**
Zinc	7440-66-6	16.5	U	63.4

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030124-HM
Matrix: Air
Lab ID: 4031151-07
Sample Volume: 2049.552 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:23

Comments: Q9554730 - 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**	**0.165**	SL	**0.0306**
Arsenic	**7440-38-2**	**0.476**		**0.00744**
Barium	**7440-39-3**	**5.13**		**0.849**
Beryllium	**7440-41-7**	**0.0111**		**0.00254**
Cadmium	**7440-43-9**	**0.0644**		**0.0588**
Chromium	**7440-47-3**	**2.61**		**1.75**
Cobalt	**7440-48-4**	**0.293**		**0.0346**
Copper	**7440-50-8**	**42.8**		**2.09**
Lead	**7439-92-1**	**1.17**		**0.170**
Manganese	**7439-96-5**	**9.40**		**1.50**
Molybdenum	**7439-98-7**	**2.06**		**0.285**
Nickel	**7440-02-0**	**1.20**		**0.518**
Selenium	**7782-49-2**	**0.172**		**0.00711**
Thallium	**7440-28-0**	**0.00114**	B, LB, QB-04	**4.68E-4**
Vanadium	**7440-62-2**	**0.897**		**0.0420**
Zinc	7440-66-6	40.0	U	61.0

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030124-HM
Matrix: Air
Lab ID: 4031151-08
Sample Volume: 2198.074 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:40

Comments: Q9554729 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0493**	SL	**0.0286**
Arsenic	**7440-38-2**	**0.194**		**0.00694**
Barium	**7440-39-3**	**2.93**		**0.792**
Beryllium	**7440-41-7**	**0.0226**		**0.00237**
Cadmium	7440-43-9	0.00880	U	0.0548
Chromium	**7440-47-3**	**2.30**		**1.64**
Cobalt	**7440-48-4**	**0.359**		**0.0323**
Copper	**7440-50-8**	**32.5**		**1.95**
Lead	**7439-92-1**	**0.465**		**0.158**
Manganese	**7439-96-5**	**8.43**		**1.40**
Molybdenum	**7439-98-7**	**1.77**		**0.266**
Nickel	**7440-02-0**	**1.04**		**0.483**
Selenium	**7782-49-2**	**0.156**		**0.00663**
Thallium	**7440-28-0**	**0.00100**	B, LB, QB-04	**4.36E-4**
Vanadium	**7440-62-2**	**0.855**		**0.0392**
Zinc	7440-66-6	16.6	U	56.8

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030124-HM
Matrix: Air
Lab ID: 4031151-09
Sample Volume: 1839.732 m³
Filter ID:
Sampled: 03/01/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 05:57

Comments: Q9554725 - 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**	**0.0478**	SL	**0.0341**
Arsenic	**7440-38-2**	**0.137**		**0.00829**
Barium	**7440-39-3**	**2.44**		**0.946**
Beryllium	**7440-41-7**	**0.00623**		**0.00283**
Cadmium	7440-43-9	0.0419	U	0.0655
Chromium	**7440-47-3**	**1.99**		**1.95**
Cobalt	**7440-48-4**	**0.156**		**0.0386**
Copper	**7440-50-8**	**19.4**		**2.33**
Lead	**7439-92-1**	**0.768**		**0.189**
Manganese	**7439-96-5**	**4.77**		**1.67**
Molybdenum	**7439-98-7**	**1.02**		**0.317**
Nickel	**7440-02-0**	**0.709**		**0.577**
Selenium	**7782-49-2**	**0.137**		**0.00792**
Thallium	**7440-28-0**	**7.77E-4**	B, LB, QB-04	**5.21E-4**
Vanadium	**7440-62-2**	**0.450**		**0.0468**
Zinc	7440-66-6	17.0	U	67.9

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030224-HM
Matrix: Air
Lab ID: 4031151-10
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 07:30

Comments: Q9554724 - 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**	**0.0360**	SL	**0.0317**
Arsenic	**7440-38-2**	**0.551**		**0.00769**
Barium	**7440-39-3**	**2.61**		**0.878**
Beryllium	**7440-41-7**	**0.00807**		**0.00263**
Cadmium	7440-43-9	0.0112	U	0.0608
Chromium	**7440-47-3**	**2.29**		**1.81**
Cobalt	**7440-48-4**	**0.291**		**0.0358**
Copper	**7440-50-8**	**55.6**		**2.16**
Lead	**7439-92-1**	**0.440**		**0.176**
Manganese	**7439-96-5**	**8.40**		**1.55**
Molybdenum	**7439-98-7**	**2.78**		**0.295**
Nickel	**7440-02-0**	**0.866**		**0.535**
Selenium	**7782-49-2**	**0.134**		**0.00735**
Thallium	**7440-28-0**	**0.00127**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**0.867**		**0.0434**
Zinc	7440-66-6	14.8	U	63.0

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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030224-HM
Matrix: Air
Lab ID: 4031151-11
Sample Volume: 2040.994 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 07:46

Comments: Q9554723 - 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**	**0.104**	SL	**0.0308**
Arsenic	**7440-38-2**	**0.657**		**0.00747**
Barium	**7440-39-3**	**4.43**		**0.853**
Beryllium	**7440-41-7**	**0.0114**		**0.00255**
Cadmium	7440-43-9	0.0431	U	0.0591
Chromium	**7440-47-3**	**2.13**		**1.76**
Cobalt	**7440-48-4**	**0.276**		**0.0348**
Copper	**7440-50-8**	**37.1**		**2.10**
Lead	**7439-92-1**	**0.916**		**0.171**
Manganese	**7439-96-5**	**9.82**		**1.51**
Molybdenum	**7439-98-7**	**1.95**		**0.286**
Nickel	**7440-02-0**	**0.954**		**0.520**
Selenium	**7782-49-2**	**0.163**		**0.00714**
Thallium	**7440-28-0**	**0.00134**	B, LB, QB-04	**4.70E-4**
Vanadium	**7440-62-2**	**0.925**		**0.0422**
Zinc	7440-66-6	24.2	U	61.2

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Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030224-HM
Matrix: Air
Lab ID: 4031151-12
Sample Volume: 2157.347 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:03

Comments: Q9554722 - 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**	**0.0363**	SL	**0.0291**
Arsenic	**7440-38-2**	**0.186**		**0.00707**
Barium	**7440-39-3**	**2.61**		**0.807**
Beryllium	**7440-41-7**	**0.0170**		**0.00241**
Cadmium	7440-43-9	0.0109	U	0.0559
Chromium	**7440-47-3**	**2.17**		**1.67**
Cobalt	**7440-48-4**	**0.296**		**0.0329**
Copper	**7440-50-8**	**29.8**		**1.98**
Lead	**7439-92-1**	**0.442**		**0.161**
Manganese	**7439-96-5**	**7.79**		**1.43**
Molybdenum	**7439-98-7**	**1.84**		**0.271**
Nickel	**7440-02-0**	**0.942**		**0.492**
Selenium	**7782-49-2**	**0.146**		**0.00676**
Thallium	**7440-28-0**	**0.00124**	QB-04, B, LB	**4.44E-4**
Vanadium	**7440-62-2**	**0.815**		**0.0399**
Zinc	7440-66-6	15.3	U	57.9

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030224-HM
Matrix: Air
Lab ID: 4031151-13
Sample Volume: 1824.298 m³
Filter ID:
Sampled: 03/02/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:21

Comments: Q9554718 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0440**	SL	**0.0344**
Arsenic	**7440-38-2**	**0.209**		**0.00836**
Barium	**7440-39-3**	**3.11**		**0.954**
Beryllium	**7440-41-7**	**0.0105**		**0.00285**
Cadmium	7440-43-9	0.0102	U	0.0661
Chromium	**7440-47-3**	**2.24**		**1.97**
Cobalt	**7440-48-4**	**0.277**		**0.0389**
Copper	**7440-50-8**	**23.3**		**2.35**
Lead	**7439-92-1**	**0.605**		**0.191**
Manganese	**7439-96-5**	**8.46**		**1.69**
Molybdenum	**7439-98-7**	**1.12**		**0.320**
Nickel	**7440-02-0**	**0.952**		**0.581**
Selenium	**7782-49-2**	**0.145**		**0.00799**
Thallium	**7440-28-0**	**0.00111**	B, LB, QB-04	**5.25E-4**
Vanadium	**7440-62-2**	**0.819**		**0.0472**
Zinc	7440-66-6	20.8	U	68.5

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030224-HM
Matrix: Air
Lab ID: 4031151-14
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/02/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:36

Comments: Q9554743 - 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	0.00779	U, SL	0.0317
Arsenic	**7440-38-2**	**0.00808**	FB-01	**0.00769**
Barium	7440-39-3	0.576	U	0.878
Beryllium	7440-41-7	0.00120	U	0.00263
Cadmium	7440-43-9	0.00170	U	0.0608
Chromium	7440-47-3	1.20	U	1.81
Cobalt	7440-48-4	0.0194	U	0.0358
Copper	7440-50-8	0.601	U	2.16
Lead	7439-92-1	0.0548	U	0.176
Manganese	7439-96-5	0.184	U	1.55
Molybdenum	7439-98-7	0.221	U	0.295
Nickel	7440-02-0	0.247	U	0.535
Selenium	7782-49-2	0.00144	U	0.00735
Thallium	7440-28-0	1.62E-4	U, B, LB, QB-04	4.83E-4
Vanadium	7440-62-2	0.0136	U	0.0434
Zinc	7440-66-6	10.9	U	63.0

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030324-HM
Matrix: Air
Lab ID: 4031151-15
Sample Volume: 1982.074 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 08:50

Comments: Q9554741 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.109**	SL	**0.0317**
Arsenic	**7440-38-2**	**1.32**		**0.00769**
Barium	**7440-39-3**	**3.44**		**0.878**
Beryllium	**7440-41-7**	**0.00762**		**0.00263**
Cadmium	7440-43-9	0.0171	U	0.0608
Chromium	**7440-47-3**	**2.49**		**1.81**
Cobalt	**7440-48-4**	**0.308**		**0.0358**
Copper	**7440-50-8**	**62.3**		**2.16**
Lead	**7439-92-1**	**0.853**		**0.176**
Manganese	**7439-96-5**	**8.45**		**1.55**
Molybdenum	**7439-98-7**	**3.00**		**0.295**
Nickel	**7440-02-0**	**0.897**		**0.535**
Selenium	**7782-49-2**	**0.139**		**0.00735**
Thallium	**7440-28-0**	**0.00141**	B, LB, QB-04	**4.83E-4**
Vanadium	**7440-62-2**	**0.795**		**0.0434**
Zinc	7440-66-6	18.4	U	63.0

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030324-HM
Matrix: Air
Lab ID: 4031151-16
Sample Volume: 2059.712 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:05

Comments: Q9554739 - 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**	**0.193**	SL	**0.0305**
Arsenic	**7440-38-2**	**0.927**		**0.00740**
Barium	**7440-39-3**	**6.99**		**0.845**
Beryllium	**7440-41-7**	**0.0228**		**0.00253**
Cadmium	7440-43-9	0.0259	U	0.0585
Chromium	**7440-47-3**	**3.38**		**1.75**
Cobalt	**7440-48-4**	**0.671**		**0.0344**
Copper	**7440-50-8**	**63.6**		**2.08**
Lead	**7439-92-1**	**1.74**		**0.169**
Manganese	**7439-96-5**	**20.8**		**1.49**
Molybdenum	**7439-98-7**	**1.88**		**0.284**
Nickel	**7440-02-0**	**1.94**		**0.515**
Selenium	**7782-49-2**	**0.219**		**0.00708**
Thallium	**7440-28-0**	**0.00187**	B, LB, QB-04	**4.65E-4**
Vanadium	**7440-62-2**	**1.98**		**0.0418**
Zinc	7440-66-6	33.6	U	60.7

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030324-HM/MS/MS
Matrix: Air
Lab ID: 4031151-17
Sample Volume: 2201.759 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/14/24 20:59

Comments: Q9554737 - 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**	**0.0299**	SL	**0.0285**
Arsenic	**7440-38-2**	**0.138**		**0.00692**
Barium	**7440-39-3**	**1.49**		**0.791**
Beryllium	**7440-41-7**	**0.00670**		**0.00236**
Cadmium	7440-43-9	0.00974	U	0.0548
Chromium	**7440-47-3**	**1.72**		**1.63**
Cobalt	**7440-48-4**	**0.120**		**0.0322**
Copper	**7440-50-8**	**33.0**		**1.94**
Lead	**7439-92-1**	**0.382**		**0.158**
Manganese	**7439-96-5**	**3.35**		**1.40**
Molybdenum	**7439-98-7**	**2.15**		**0.265**
Nickel	**7440-02-0**	**0.606**		**0.482**
Selenium	**7782-49-2**	**0.114**		**0.00662**
Thallium	**7440-28-0**	**0.00120**	B, LB, QB-04	**4.35E-4**
Vanadium	**7440-62-2**	**0.307**		**0.0391**
Zinc	7440-66-6	11.2	U	56.8

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030324-HM
Matrix: Air
Lab ID: 4031151-18
Sample Volume: 1844.362 m³
Filter ID:
Sampled: 03/03/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:21

Comments: Q9554735 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0405**	SL	**0.0341**
Arsenic	**7440-38-2**	**0.165**		**0.00827**
Barium	**7440-39-3**	**2.03**		**0.944**
Beryllium	**7440-41-7**	**0.00500**		**0.00282**
Cadmium	**7440-43-9**	**0.696**		**0.0654**
Chromium	**7440-47-3**	**2.01**		**1.95**
Cobalt	**7440-48-4**	**0.125**		**0.0385**
Copper	**7440-50-8**	**25.6**		**2.32**
Lead	**7439-92-1**	**0.413**		**0.189**
Manganese	**7439-96-5**	**3.61**		**1.67**
Molybdenum	**7439-98-7**	**1.32**		**0.317**
Nickel	**7440-02-0**	**0.716**		**0.575**
Selenium	**7782-49-2**	**0.114**		**0.00790**
Thallium	**7440-28-0**	**0.00100**	B, LB, QB-04	**5.20E-4**
Vanadium	**7440-62-2**	**0.313**		**0.0467**
Zinc	7440-66-6	15.0	U	67.7

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030424-HM
Matrix: Air
Lab ID: 4031151-19
Sample Volume: 1964.168 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:37

Comments: Q9554734 - 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**	**0.0471**	SL	**0.0320**
Arsenic	**7440-38-2**	**0.567**		**0.00776**
Barium	**7440-39-3**	**2.48**		**0.886**
Beryllium	**7440-41-7**	**0.00583**		**0.00265**
Cadmium	7440-43-9	0.0114	U	0.0614
Cobalt	**7440-48-4**	**1.65**		**0.0361**
Copper	**7440-50-8**	**91.9**		**2.18**
Lead	**7439-92-1**	**0.908**		**0.177**
Manganese	**7439-96-5**	**12.4**		**1.57**
Molybdenum	**7439-98-7**	**4.73**		**0.297**
Selenium	**7782-49-2**	**0.141**		**0.00742**
Thallium	**7440-28-0**	**7.36E-4**	B, LB, QB-04	**4.88E-4**
Vanadium	**7440-62-2**	**1.27**		**0.0438**
Zinc	7440-66-6	27.2	U	63.6

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030424-HM
Matrix: Air
Lab ID: 4031151-19RE1
Sample Volume: 1964.168 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/19/24 18:58

Comments: Q9554734 - Received in good condition.

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Chromium	7440-47-3	133	D	3.66
Nickel	7440-02-0	54.4	D	1.08

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030424-HM
Matrix: Air
Lab ID: 4031151-20
Sample Volume: 2061.439 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 00:51

Comments: Q9554733 - 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**	**0.124**	SL	**0.0305**
Arsenic	**7440-38-2**	**0.481**		**0.00740**
Barium	**7440-39-3**	**4.13**		**0.845**
Beryllium	**7440-41-7**	**0.0104**		**0.00253**
Cadmium	7440-43-9	0.0132	U	0.0585
Chromium	**7440-47-3**	**2.15**		**1.74**
Cobalt	**7440-48-4**	**0.294**		**0.0344**
Copper	**7440-50-8**	**36.9**		**2.08**
Lead	**7439-92-1**	**0.931**		**0.169**
Manganese	**7439-96-5**	**8.22**		**1.49**
Molybdenum	**7439-98-7**	**1.95**		**0.283**
Nickel	**7440-02-0**	**1.03**		**0.515**
Selenium	**7782-49-2**	**0.155**		**0.00707**
Thallium	**7440-28-0**	**9.12E-4**	B, LB, QB-04	**4.65E-4**
Vanadium	**7440-62-2**	**0.973**		**0.0418**
Zinc	7440-66-6	22.5	U	60.6

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030424-HM
Matrix: Air
Lab ID: 4031151-21
Sample Volume: 2252.38 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 09:57

Comments: Q9537219 - 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**	**0.0500**	SL	**0.0279**
Arsenic	**7440-38-2**	**0.158**		**0.00677**
Barium	**7440-39-3**	**2.20**		**0.773**
Beryllium	**7440-41-7**	**0.0170**		**0.00231**
Cadmium	7440-43-9	0.0335	U	0.0535
Chromium	**7440-47-3**	**2.07**		**1.60**
Cobalt	**7440-48-4**	**0.303**		**0.0315**
Copper	**7440-50-8**	**36.0**		**1.90**
Lead	**7439-92-1**	**0.347**		**0.155**
Manganese	**7439-96-5**	**7.50**		**1.37**
Molybdenum	**7439-98-7**	**2.47**		**0.259**
Nickel	**7440-02-0**	**1.01**		**0.471**
Selenium	**7782-49-2**	**0.156**		**0.00647**
Thallium	**7440-28-0**	**6.64E-4**	B, LB, QB-04	**4.25E-4**
Vanadium	**7440-62-2**	**0.867**		**0.0382**
Zinc	7440-66-6	12.3	U	55.5

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030424-HM
Matrix: Air
Lab ID: 4031151-22
Sample Volume: 1888.516 m³
Filter ID:
Sampled: 03/04/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:26

Comments: Q9537216 - 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**	**0.0613**	SL	**0.0333**
Arsenic	**7440-38-2**	**0.240**		**0.00807**
Barium	**7440-39-3**	**3.21**		**0.922**
Beryllium	**7440-41-7**	**0.0104**		**0.00276**
Cadmium	7440-43-9	0.0134	U	0.0638
Chromium	**7440-47-3**	**2.47**		**1.90**
Cobalt	**7440-48-4**	**0.270**		**0.0376**
Copper	**7440-50-8**	**26.8**		**2.27**
Lead	**7439-92-1**	**0.719**		**0.184**
Manganese	**7439-96-5**	**8.29**		**1.63**
Molybdenum	**7439-98-7**	**1.34**		**0.309**
Nickel	**7440-02-0**	**0.993**		**0.562**
Selenium	**7782-49-2**	**0.152**		**0.00772**
Thallium	**7440-28-0**	**9.24E-4**	B, LB, QB-04	**5.07E-4**
Vanadium	**7440-62-2**	**0.864**		**0.0456**
Zinc	7440-66-6	19.1	U, LJ, QX	66.2

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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: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030424-HM
Matrix: Air
Lab ID: 4031151-23
Sample Volume: 1964.168 m³
Filter ID:
Sampled: 03/04/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:44

Comments: Q9537232 - 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	0.00559	U, SL	0.0320
Arsenic	7440-38-2	0.00426	U	0.00776
Barium	7440-39-3	0.552	U	0.886
Beryllium	7440-41-7	9.62E-4	U	0.00265
Cadmium	7440-43-9	0.00246	U	0.0614
Chromium	7440-47-3	1.56	U	1.83
Cobalt	**7440-48-4**	**0.0361**		**0.0361**
Copper	7440-50-8	0.430	U	2.18
Lead	7439-92-1	0.0553	U	0.177
Manganese	7439-96-5	0.127	U	1.57
Molybdenum	7439-98-7	0.251	U	0.297
Nickel	7440-02-0	0.246	U	0.540
Selenium	7782-49-2	ND	U	0.00742
Thallium	7440-28-0	2.99E-4	U, B, LB, QB-04	4.88E-4
Vanadium	7440-62-2	ND	U	0.0438
Zinc	7440-66-6	22.5	U, LJ, QX	63.6

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030524-HM
Matrix: Air
Lab ID: 4031151-24
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 11:58

Comments: Q9537235 - 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**	**0.0718**	SL	**0.0313**
Arsenic	**7440-38-2**	**1.02**		**0.00760**
Barium	**7440-39-3**	**3.85**		**0.868**
Beryllium	**7440-41-7**	**0.0128**		**0.00260**
Cadmium	7440-43-9	0.0332	U	0.0601
Chromium	**7440-47-3**	**6.42**		**1.79**
Cobalt	**7440-48-4**	**0.556**		**0.0354**
Copper	**7440-50-8**	**62.1**		**2.13**
Lead	**7439-92-1**	**0.624**		**0.174**
Manganese	**7439-96-5**	**13.4**		**1.53**
Molybdenum	**7439-98-7**	**2.70**		**0.291**
Nickel	**7440-02-0**	**2.60**		**0.529**
Selenium	**7782-49-2**	**0.170**		**0.00727**
Thallium	**7440-28-0**	**0.00137**	B, LB, QB-04	**4.78E-4**
Vanadium	**7440-62-2**	**1.33**		**0.0429**
Zinc	7440-66-6	36.2	U, LJ, QX	62.3

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030524-HM
Matrix: Air
Lab ID: 4031151-25
Sample Volume: 2079.301 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:15

Comments: Q9537233 - 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**	**0.135**	SL	**0.0302**
Arsenic	**7440-38-2**	**0.900**		**0.00733**
Barium	**7440-39-3**	**6.13**		**0.837**
Beryllium	**7440-41-7**	**0.0218**		**0.00250**
Cadmium	**7440-43-9**	**0.0914**		**0.0580**
Chromium	**7440-47-3**	**3.86**		**1.73**
Cobalt	**7440-48-4**	**0.686**		**0.0341**
Copper	**7440-50-8**	**46.3**		**2.06**
Lead	**7439-92-1**	**1.80**		**0.167**
Manganese	**7439-96-5**	**19.7**		**1.48**
Molybdenum	**7439-98-7**	**1.91**		**0.281**
Nickel	**7440-02-0**	**2.25**		**0.510**
Selenium	**7782-49-2**	**0.214**		**0.00701**
Thallium	**7440-28-0**	**0.00165**	B, LB, QB-04	**4.61E-4**
Vanadium	**7440-62-2**	**1.93**		**0.0414**
Zinc	7440-66-6	41.5	U, LJ, QX	60.1

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030524-HM
Matrix: Air
Lab ID: 4031151-26
Sample Volume: 2189.234 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:32

Comments: Q9537231 - Received in good condition. - Nonhomogenous Sample

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Antimony	**7440-36-0**	**0.0502**	SL	**0.0287**
Arsenic	**7440-38-2**	**0.191**		**0.00696**
Barium	**7440-39-3**	**2.93**		**0.795**
Beryllium	**7440-41-7**	**0.0206**		**0.00238**
Cadmium	7440-43-9	0.0124	U	0.0551
Chromium	**7440-47-3**	**2.76**		**1.64**
Cobalt	**7440-48-4**	**0.410**		**0.0324**
Copper	**7440-50-8**	**36.6**		**1.95**
Lead	**7439-92-1**	**0.377**		**0.159**
Manganese	**7439-96-5**	**10.1**		**1.40**
Molybdenum	**7439-98-7**	**2.52**		**0.267**
Nickel	**7440-02-0**	**1.15**		**0.485**
Selenium	**7782-49-2**	**0.163**		**0.00666**
Thallium	**7440-28-0**	**0.00131**	B, LB, QB-04	**4.38E-4**
Vanadium	**7440-62-2**	**0.985**		**0.0393**
Zinc	7440-66-6	28.4	U, LJ, QX	57.1

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030524-HM
Matrix: Air
Lab ID: 4031151-27
Sample Volume: 1882.425 m³
Filter ID:
Sampled: 03/05/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 12:48

Comments: Q9537229 - 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**	**0.0537**	SL	**0.0334**
Arsenic	**7440-38-2**	**0.221**		**0.00810**
Barium	**7440-39-3**	**2.55**		**0.925**
Beryllium	**7440-41-7**	**0.00787**		**0.00277**
Cadmium	7440-43-9	0.0137	U	0.0640
Chromium	**7440-47-3**	**2.24**		**1.91**
Cobalt	**7440-48-4**	**0.217**		**0.0377**
Copper	**7440-50-8**	**19.9**		**2.27**
Lead	**7439-92-1**	**0.589**		**0.185**
Manganese	**7439-96-5**	**6.50**		**1.63**
Molybdenum	**7439-98-7**	**1.33**		**0.310**
Nickel	**7440-02-0**	**0.758**		**0.564**
Selenium	**7782-49-2**	**0.158**		**0.00774**
Thallium	**7440-28-0**	**0.00107**	B, LB, QB-04	**5.09E-4**
Vanadium	**7440-62-2**	**0.583**		**0.0457**
Zinc	7440-66-6	22.9	U, LJ, QX	66.4

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM01-030624-HM
Matrix: Air
Lab ID: 4031151-28
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:20

Comments: Q9537228 - 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**	**0.0633**	SL	**0.0313**
Arsenic	**7440-38-2**	**0.906**		**0.00760**
Barium	**7440-39-3**	**5.84**		**0.868**
Beryllium	**7440-41-7**	**0.0243**		**0.00260**
Cadmium	7440-43-9	0.0305	U	0.0601
Chromium	**7440-47-3**	**7.41**		**1.79**
Cobalt	**7440-48-4**	**1.11**		**0.0354**
Copper	**7440-50-8**	**41.1**		**2.13**
Lead	**7439-92-1**	**0.744**		**0.174**
Manganese	**7439-96-5**	**31.9**		**1.53**
Molybdenum	**7439-98-7**	**1.52**		**0.291**
Nickel	**7440-02-0**	**3.03**		**0.529**
Selenium	**7782-49-2**	**0.217**		**0.00727**
Thallium	**7440-28-0**	**0.00234**	B, LB, QB-04	**4.78E-4**
Vanadium	**7440-62-2**	**2.87**		**0.0429**
Zinc	7440-66-6	26.9	U, LJ, QX	62.3

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM02-030624-HM
Matrix: Air
Lab ID: 4031151-29
Sample Volume: 2099.784 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:37

Comments: Q9537227 - 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**	**0.145**	SL	**0.0299**
Arsenic	**7440-38-2**	**1.04**		**0.00726**
Barium	**7440-39-3**	**9.94**		**0.829**
Beryllium	**7440-41-7**	**0.0412**		**0.00248**
Cadmium	**7440-43-9**	**0.154**		**0.0574**
Chromium	**7440-47-3**	**6.07**		**1.71**
Cobalt	**7440-48-4**	**1.58**		**0.0338**
Copper	**7440-50-8**	**36.2**		**2.04**
Lead	**7439-92-1**	**2.50**		**0.166**
Manganese	**7439-96-5**	**42.0**		**1.46**
Molybdenum	**7439-98-7**	**1.21**		**0.278**
Nickel	**7440-02-0**	**4.73**		**0.505**
Selenium	**7782-49-2**	**0.273**		**0.00694**
Thallium	**7440-28-0**	**0.00272**	B, LB, QB-04	**4.56E-4**
Vanadium	**7440-62-2**	**4.17**		**0.0410**
Zinc	7440-66-6	40.9	U, LJ, QX	59.5

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM03-030624-HM
Matrix: Air
Lab ID: 4031151-30
Sample Volume: 2192.547 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 13:57

Comments: Q9537225 - 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**	**0.0416**	SL	**0.0286**
Arsenic	**7440-38-2**	**0.393**		**0.00695**
Barium	**7440-39-3**	**7.50**		**0.794**
Beryllium	**7440-41-7**	**0.158**		**0.00237**
Cadmium	7440-43-9	0.0189	U	0.0550
Chromium	**7440-47-3**	**8.69**		**1.64**
Cobalt	**7440-48-4**	**1.96**		**0.0324**
Copper	**7440-50-8**	**37.9**		**1.95**
Lead	**7439-92-1**	**0.649**		**0.159**
Manganese	**7439-96-5**	**38.6**		**1.40**
Molybdenum	**7439-98-7**	**1.87**		**0.266**
Nickel	**7440-02-0**	**4.43**		**0.484**
Selenium	**7782-49-2**	**0.345**		**0.00665**
Thallium	**7440-28-0**	**0.00254**	QB-04, B, LB	**4.37E-4**
Vanadium	**7440-62-2**	**4.68**		**0.0393**
Zinc	7440-66-6	21.1	U, LJ, QX	57.0

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-AM04-030624-HM
Matrix: Air
Lab ID: 4031151-31
Sample Volume: 1846.525 m³
Filter ID:
Sampled: 03/06/24 23:59
Received: 03/11/24 11:48
Analysis Date: 03/15/24 15:35

Comments: Q9537224 - 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**	**0.0837**	SL	**0.0340**
Arsenic	**7440-38-2**	**0.551**		**0.00826**
Barium	**7440-39-3**	**4.62**		**0.943**
Beryllium	**7440-41-7**	**0.0210**		**0.00282**
Cadmium	**7440-43-9**	**0.359**		**0.0653**
Chromium	**7440-47-3**	**3.62**		**1.95**
Cobalt	**7440-48-4**	**0.819**		**0.0384**
Copper	**7440-50-8**	**24.0**		**2.32**
Lead	**7439-92-1**	**1.52**		**0.189**
Manganese	**7439-96-5**	**18.6**		**1.67**
Molybdenum	**7439-98-7**	**1.07**		**0.316**
Nickel	**7440-02-0**	**1.75**		**0.574**
Selenium	**7782-49-2**	**0.176**		**0.00789**
Thallium	**7440-28-0**	**0.00196**	B, LB, QB-04	**5.19E-4**
Vanadium	**7440-62-2**	**1.48**		**0.0466**
Zinc	7440-66-6	30.0	U, LJ, QX	67.7

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
AQS SITE CODE:
SITE CODE: Lahaina fires

Description: MFL-FB01-030624-HM
Matrix: Air
Lab ID: 4031151-32
Sample Volume: 2005.025 m³
Filter ID:
Sampled: 03/06/24 00:00
Received: 03/11/24 11:48
Analysis Date: 03/15/24 15:55

Comments: Q9537245 - 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	0.00760	U, SL	0.0313
Arsenic	7440-38-2	0.00630	U	0.00760
Barium	7440-39-3	0.581	U	0.868
Beryllium	7440-41-7	0.00111	U	0.00260
Cadmium	7440-43-9	0.00259	U	0.0601
Chromium	7440-47-3	1.57	U	1.79
Cobalt	7440-48-4	0.0260	U	0.0354
Copper	7440-50-8	0.627	U	2.13
Lead	7439-92-1	0.0643	U	0.174
Manganese	7439-96-5	0.255	U	1.53
Molybdenum	7439-98-7	0.271	U	0.291
Nickel	7440-02-0	0.274	U	0.529
Selenium	7782-49-2	ND	U	0.00727
Thallium	7440-28-0	2.18E-4	U, B, LB, QB-04	4.78E-4
Vanadium	7440-62-2	0.00996	U	0.0429
Zinc	7440-66-6	10.3	U, LJ, QX	62.3

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Blank (2403035-CCB1)				Prepared & Analyzed: 03/14/24						
Antimony	0.719		ng/l							
Arsenic	7.98		ng/l							
Barium	-1.59		ng/l							U
Beryllium	0.162		ng/l							
Cadmium	0.0951		ng/l							
Chromium	4.64		ng/l							
Cobalt	0.544		ng/l							
Copper	50.4		ng/l							
Lead	3.93		ng/l							
Manganese	8.37		ng/l							
Molybdenum	22.0		ng/l							
Nickel	0.847		ng/l							
Selenium	-6.71		ng/l							U
Thallium	2.16		ng/l							LB, QB-04
Vanadium	-48.2		ng/l							U
Zinc	76.2		ng/l							
Calibration Blank (2403035-CCB2)				Prepared & Analyzed: 03/14/24						
Antimony	0.0937		ng/l							
Arsenic	5.14		ng/l							
Barium	-1.73		ng/l							U
Beryllium	0.0714		ng/l							
Cadmium	-0.0254		ng/l							U
Chromium	2.79		ng/l							
Cobalt	0.0977		ng/l							
Copper	11.0		ng/l							
Lead	1.42		ng/l							
Manganese	5.66		ng/l							
Molybdenum	4.28		ng/l							
Nickel	1.54		ng/l							
Selenium	-6.95		ng/l							U
Thallium	1.24		ng/l							LB
Vanadium	-52.4		ng/l							U
Zinc	37.6		ng/l							
Calibration Blank (2403035-CCB3)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	-0.0320		ng/l							U
Arsenic	6.72		ng/l							
Barium	-2.63		ng/l							U
Beryllium	0.248		ng/l							

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Blank (2403035-CCB3) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Cadmium	-0.0824		ng/l							U
Chromium	3.88		ng/l							
Cobalt	0.274		ng/l							
Copper	15.2		ng/l							
Lead	1.22		ng/l							
Manganese	5.41		ng/l							
Molybdenum	3.19		ng/l							
Nickel	1.65		ng/l							
Selenium	5.64		ng/l							
Thallium	1.41		ng/l							LB, QB-04
Vanadium	-54.6		ng/l							U
Zinc	50.3		ng/l							
Calibration Blank (2403035-CCB4)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.260		ng/l							
Arsenic	9.05		ng/l							
Barium	-2.25		ng/l							U
Beryllium	0.184		ng/l							
Cadmium	0.0427		ng/l							
Chromium	4.16		ng/l							
Cobalt	0.247		ng/l							
Copper	14.2		ng/l							
Lead	1.68		ng/l							
Manganese	6.22		ng/l							
Molybdenum	4.16		ng/l							
Nickel	0.221		ng/l							
Selenium	1.42		ng/l							
Thallium	1.80		ng/l							LB, QB-04
Vanadium	-59.3		ng/l							U
Zinc	264		ng/l							
Calibration Blank (2403035-CCB5)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.184		ng/l							
Arsenic	12.9		ng/l							
Barium	-2.76		ng/l							U
Beryllium	0.122		ng/l							
Cadmium	0.183		ng/l							
Chromium	3.71		ng/l							
Cobalt	0.252		ng/l							
Copper	17.2		ng/l							

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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 2403035 - B4C1210										
Calibration Blank (2403035-CCB5) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Lead	2.00		ng/l							
Manganese	4.88		ng/l							
Molybdenum	5.66		ng/l							
Nickel	1.88		ng/l							
Selenium	1.87		ng/l							
Thallium	1.88		ng/l							LB, QB-04
Vanadium	-62.8		ng/l							U
Zinc	44.8		ng/l							
Calibration Blank (2403035-CCB6)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.433		ng/l							
Arsenic	9.96		ng/l							
Barium	-1.90		ng/l							U
Beryllium	0.163		ng/l							
Cadmium	-0.0456		ng/l							U
Chromium	4.48		ng/l							
Cobalt	0.485		ng/l							
Copper	20.6		ng/l							
Lead	2.71		ng/l							
Manganese	5.78		ng/l							
Molybdenum	6.09		ng/l							
Nickel	2.14		ng/l							
Selenium	-8.47		ng/l							U
Thallium	1.69		ng/l							LB, QB-04
Vanadium	-67.6		ng/l							U
Zinc	53.8		ng/l							
Calibration Blank (2403035-CCB7)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	0.355		ng/l							
Arsenic	10.9		ng/l							
Barium	-2.54		ng/l							U
Beryllium	0.0106		ng/l							
Cadmium	-0.0225		ng/l							U
Chromium	2.87		ng/l							
Cobalt	0.246		ng/l							
Copper	16.5		ng/l							
Lead	2.48		ng/l							
Manganese	4.35		ng/l							
Molybdenum	5.18		ng/l							
Nickel	2.77		ng/l							

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AQS SITE CODE:
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2403035 - B4C1210

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Calibration Blank (2403035-CCB7) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Selenium	-4.94		ng/l							U
Thallium	1.70		ng/l							LB, QB-04
Vanadium	-67.6		ng/l							U
Zinc	42.2		ng/l							
Calibration Check (2403035-CCV1)				Prepared & Analyzed: 03/14/24						
Antimony	20100		ng/l	20000		100	90-110			
Arsenic	19900		ng/l	20000		99.4	90-110			
Barium	198000		ng/l	200000		99.1	90-110			
Beryllium	5080		ng/l	5000.0		102	90-110			
Cadmium	19500		ng/l	20000		97.7	90-110			
Chromium	229000		ng/l	240000		95.5	90-110			
Cobalt	49700		ng/l	50000		99.4	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.5	90-110			
Lead	195000		ng/l	200000		97.3	90-110			
Manganese	489000		ng/l	500000		97.7	90-110			
Molybdenum	48100		ng/l	50000		96.3	90-110			
Nickel	119000		ng/l	120000		99.2	90-110			
Selenium	19800		ng/l	20000		99.0	90-110			
Thallium	480		ng/l	500.00		96.0	90-110			LB
Vanadium	18900		ng/l	20000		94.3	90-110			
Zinc	515000		ng/l	500000		103	90-110			
Calibration Check (2403035-CCV2)				Prepared & Analyzed: 03/14/24						
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4960		ng/l	5000.0		99.3	90-110			
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	237000		ng/l	240000		98.8	90-110			
Cobalt	50100		ng/l	50000		100	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	201000		ng/l	200000		101	90-110			
Manganese	502000		ng/l	500000		100	90-110			
Molybdenum	49400		ng/l	50000		98.8	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Thallium	484		ng/l	500.00		96.8	90-110			LB
Vanadium	19600		ng/l	20000		98.1	90-110			
Zinc	531000		ng/l	500000		106	90-110			

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FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Check (2403035-CCV3)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	199000		ng/l	200000		99.5	90-110			
Beryllium	5130		ng/l	5000.0		103	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	236000		ng/l	240000		98.4	90-110			
Cobalt	49800		ng/l	50000		99.6	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	496000		ng/l	500000		99.3	90-110			
Molybdenum	49500		ng/l	50000		98.9	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	483		ng/l	500.00		96.7	90-110			LB
Vanadium	19400		ng/l	20000		96.9	90-110			
Zinc	531000		ng/l	500000		106	90-110			
Calibration Check (2403035-CCV4)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21100		ng/l	20000		105	90-110			
Arsenic	20800		ng/l	20000		104	90-110			
Barium	205000		ng/l	200000		103	90-110			
Beryllium	5440		ng/l	5000.0		109	90-110			
Cadmium	20900		ng/l	20000		105	90-110			
Chromium	243000		ng/l	240000		101	90-110			
Cobalt	51700		ng/l	50000		103	90-110			
Copper	2.10E6		ng/l	2.0000E6		105	90-110			
Lead	205000		ng/l	200000		103	90-110			
Manganese	518000		ng/l	500000		104	90-110			
Molybdenum	50700		ng/l	50000		101	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Selenium	20700		ng/l	20000		104	90-110			
Thallium	489		ng/l	500.00		97.8	90-110			LB
Vanadium	20000		ng/l	20000		99.9	90-110			
Zinc	547000		ng/l	500000		109	90-110			
Calibration Check (2403035-CCV5)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	20800		ng/l	20000		104	90-110			
Arsenic	20400		ng/l	20000		102	90-110			
Barium	204000		ng/l	200000		102	90-110			
Beryllium	5150		ng/l	5000.0		103	90-110			

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
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 2403035 - B4C1210										
Calibration Check (2403035-CCV5) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Cadmium	20400		ng/l	20000		102	90-110			
Chromium	235000		ng/l	240000		98.1	90-110			
Cobalt	50000		ng/l	50000		100	90-110			
Copper	2.03E6		ng/l	2.0000E6		102	90-110			
Lead	203000		ng/l	200000		101	90-110			
Manganese	502000		ng/l	500000		100	90-110			
Molybdenum	49900		ng/l	50000		99.8	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20600		ng/l	20000		103	90-110			
Thallium	484		ng/l	500.00		96.8	90-110			LB
Vanadium	19700		ng/l	20000		98.5	90-110			
Zinc	534000		ng/l	500000		107	90-110			
Calibration Check (2403035-CCV6)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21500		ng/l	20000		108	90-110			
Arsenic	21200		ng/l	20000		106	90-110			
Barium	207000		ng/l	200000		104	90-110			
Beryllium	5060		ng/l	5000.0		101	90-110			
Cadmium	21200		ng/l	20000		106	90-110			
Chromium	247000		ng/l	240000		103	90-110			
Cobalt	52300		ng/l	50000		105	90-110			
Copper	2.13E6		ng/l	2.0000E6		107	90-110			
Lead	210000		ng/l	200000		105	90-110			
Manganese	518000		ng/l	500000		104	90-110			
Molybdenum	52300		ng/l	50000		105	90-110			
Nickel	127000		ng/l	120000		106	90-110			
Selenium	20900		ng/l	20000		104	90-110			
Thallium	502		ng/l	500.00		100	90-110			LB
Vanadium	20600		ng/l	20000		103	90-110			
Zinc	554000		ng/l	500000		111	90-110			LJ, QX
Calibration Check (2403035-CCV7)				Prepared: 03/14/24 Analyzed: 03/15/24						
Antimony	21300		ng/l	20000		107	90-110			
Arsenic	21000		ng/l	20000		105	90-110			
Barium	214000		ng/l	200000		107	90-110			
Beryllium	4930		ng/l	5000.0		98.5	90-110			
Cadmium	21300		ng/l	20000		107	90-110			
Chromium	246000		ng/l	240000		102	90-110			
Cobalt	52200		ng/l	50000		104	90-110			
Copper	2.12E6		ng/l	2.0000E6		106	90-110			

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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 2403035 - B4C1210										
Calibration Check (2403035-CCV7) Contin				Prepared: 03/14/24 Analyzed: 03/15/24						
Lead	209000		ng/l	200000		105	90-110			
Manganese	521000		ng/l	500000		104	90-110			
Molybdenum	53600		ng/l	50000		107	90-110			
Nickel	126000		ng/l	120000		105	90-110			
Selenium	20700		ng/l	20000		104	90-110			
Thallium	503		ng/l	500.00		101	90-110			LB
Vanadium	20600		ng/l	20000		103	90-110			
Zinc	552000		ng/l	500000		110	90-110			
High Cal Check (2403035-HCV1)				Prepared & Analyzed: 03/14/24						
Antimony	39900		ng/l	40000		99.7	95-105			
Arsenic	39500		ng/l	40000		98.8	95-105			
Barium	396000		ng/l	400000		99.1	95-105			
Beryllium	9510		ng/l	10000		95.1	95-105			
Cadmium	39500		ng/l	40000		98.7	95-105			
Chromium	472000		ng/l	480000		98.2	95-105			
Cobalt	98400		ng/l	100000		98.4	95-105			
Copper	3.93E6		ng/l	4.0000E6		98.4	95-105			
Lead	395000		ng/l	400000		98.9	95-105			
Manganese	983000		ng/l	1.0000E6		98.3	95-105			
Molybdenum	98300		ng/l	100000		98.3	95-105			
Nickel	236000		ng/l	240000		98.4	95-105			
Selenium	39400		ng/l	40000		98.5	95-105			
Thallium	994		ng/l	1000.0		99.4	95-105			LB
Vanadium	39300		ng/l	40000		98.3	95-105			
Zinc	960000		ng/l	1.0000E6		96.0	95-105			
Initial Cal Blank (2403035-ICB1)				Prepared & Analyzed: 03/14/24						
Antimony	1.01		ng/l							
Arsenic	1.62		ng/l							
Barium	0.233		ng/l							
Beryllium	0.325		ng/l							
Cadmium	0.242		ng/l							
Chromium	4.72		ng/l							
Cobalt	0.747		ng/l							
Copper	57.6		ng/l							
Lead	5.26		ng/l							
Manganese	11.9		ng/l							
Molybdenum	9.64		ng/l							
Nickel	9.85		ng/l							

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AQS SITE CODE:
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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Initial Cal Blank (2403035-ICB1) Continu				Prepared & Analyzed: 03/14/24						
Selenium	-11.7		ng/l							U
Thallium	1.49		ng/l							LB
Vanadium	-50.6		ng/l							U
Zinc	21.8		ng/l							
Initial Cal Check (2403035-ICV1)				Prepared & Analyzed: 03/14/24						
Antimony	19900		ng/l	20000		99.5	90-110			
Arsenic	20100		ng/l	20000		100	90-110			
Barium	201000		ng/l	200000		100	90-110			
Beryllium	4840		ng/l	5000.0		96.7	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Chromium	238000		ng/l	240000		99.0	90-110			
Cobalt	50100		ng/l	50000		100	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Lead	197000		ng/l	200000		98.5	90-110			
Manganese	491000		ng/l	500000		98.2	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Selenium	20500		ng/l	20000		103	90-110			
Thallium	518		ng/l	500.00		104	90-110			LB
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	532000		ng/l	500000		106	90-110			
Interference Check A (2403035-IFA1)				Prepared & Analyzed: 03/14/24						
Antimony	0.00		ng/l				80-120			U
Arsenic	0.00		ng/l				80-120			U
Barium	0.00		ng/l				80-120			U
Beryllium	0.00		ng/l				80-120			U
Cadmium	0.00		ng/l				80-120			U
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U
Lead	0.00		ng/l				80-120			U
Manganese	0.00		ng/l				80-120			U
Molybdenum	296000		ng/l	300000		98.8	80-120			
Nickel	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			LB, U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U

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REPORTED: 03/25/24 11:40
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AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2403035 - B4C1210										
Interference Check B (2403035-IFB1)				Prepared & Analyzed: 03/14/24						
Antimony	20300		ng/l	20000		102	80-120			
Arsenic	20200		ng/l	20000		101	80-120			
Barium	202000		ng/l	200000		101	80-120			
Beryllium	4970		ng/l	5000.0		99.3	80-120			
Cadmium	19200		ng/l	20000		96.1	80-120			
Chromium	220000		ng/l	240000		91.7	80-120			
Cobalt	48600		ng/l	50000		97.3	80-120			
Copper	1.87E6		ng/l	2.0000E6		93.3	80-120			
Lead	201000		ng/l	200000		100	80-120			
Manganese	494000		ng/l	500000		98.8	80-120			
Molybdenum	346000		ng/l	350000		98.8	80-120			
Nickel	114000		ng/l	120000		95.0	80-120			
Selenium	19100		ng/l	20000		95.3	80-120			
Thallium	504		ng/l	500.00		101	80-120			LB
Vanadium	17600		ng/l	20000		88.1	80-120			
Zinc	473000		ng/l	500000		94.6	80-120			
Batch 2403053 - B4C1210										
Calibration Blank (2403053-CCB1)				Prepared & Analyzed: 03/19/24						
Antimony	0.410		ng/l							LJ, QX
Arsenic	2.88		ng/l							
Barium	-6.54E-4		ng/l							U
Beryllium	0.109		ng/l							LJ, QX
Cadmium	0.317		ng/l							
Chromium	-0.401		ng/l							U
Cobalt	0.641		ng/l							
Copper	35.0		ng/l							
Lead	7.23		ng/l							
Manganese	9.12		ng/l							
Molybdenum	7.90		ng/l							
Nickel	-7.37		ng/l							U
Selenium	5.94		ng/l							LJ, QX
Thallium	1.68		ng/l							QB-04
Vanadium	-27.2		ng/l							U
Zinc	-114		ng/l							U
Calibration Blank (2403053-CCB2)				Prepared & Analyzed: 03/19/24						
Antimony	0.440		ng/l							LJ, QX
Arsenic	2.95		ng/l							
Barium	1.55		ng/l							

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FILE #: 4205.00.003.001
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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 2403053 - B4C1210										
Calibration Blank (2403053-CCB2) Contin				Prepared & Analyzed: 03/19/24						
Beryllium	-0.0715		ng/l							LJ, QX, U
Cadmium	0.216		ng/l							
Chromium	1.03		ng/l							
Cobalt	0.507		ng/l							
Copper	-8.01		ng/l							U
Lead	3.65		ng/l							
Manganese	6.39		ng/l							
Molybdenum	4.10		ng/l							
Nickel	-7.17		ng/l							U
Selenium	2.67		ng/l							LJ, QX
Thallium	1.23		ng/l							
Vanadium	-21.0		ng/l							U
Zinc	-124		ng/l							U
Calibration Check (2403053-CCV1)				Prepared & Analyzed: 03/19/24						
Antimony	20300		ng/l	20000		102	90-110			LJ, QX
Arsenic	20400		ng/l	20000		102	90-110			
Barium	206000		ng/l	200000		103	90-110			
Beryllium	5000		ng/l	5000.0		100	90-110			LJ, QX
Cadmium	20100		ng/l	20000		100	90-110			
Chromium	251000		ng/l	240000		105	90-110			
Cobalt	50000		ng/l	50000		99.9	90-110			
Copper	2.02E6		ng/l	2.0000E6		101	90-110			
Lead	200000		ng/l	200000		100	90-110			
Manganese	492000		ng/l	500000		98.5	90-110			
Molybdenum	49700		ng/l	50000		99.4	90-110			
Nickel	120000		ng/l	120000		100	90-110			
Selenium	20300		ng/l	20000		102	90-110			LJ, QX
Thallium	497		ng/l	500.00		99.4	90-110			
Vanadium	19700		ng/l	20000		98.5	90-110			
Zinc	507000		ng/l	500000		101	90-110			
Calibration Check (2403053-CCV2)				Prepared & Analyzed: 03/19/24						
Antimony	20500		ng/l	20000		103	90-110			LJ, QX
Arsenic	20400		ng/l	20000		102	90-110			
Barium	211000		ng/l	200000		105	90-110			
Beryllium	4510		ng/l	5000.0		90.1	90-110			LJ, QX
Cadmium	20300		ng/l	20000		102	90-110			
Chromium	257000		ng/l	240000		107	90-110			
Cobalt	50500		ng/l	50000		101	90-110			

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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 2403053 - B4C1210										
Calibration Check (2403053-CCV2) Contin				Prepared & Analyzed: 03/19/24						
Copper	2.06E6		ng/l	2.0000E6		103	90-110			
Lead	203000		ng/l	200000		102	90-110			
Manganese	505000		ng/l	500000		101	90-110			
Molybdenum	51100		ng/l	50000		102	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Selenium	20800		ng/l	20000		104	90-110			LJ, QX
Thallium	495		ng/l	500.00		98.9	90-110			
Vanadium	20300		ng/l	20000		101	90-110			
Zinc	512000		ng/l	500000		102	90-110			
High Cal Check (2403053-HCV1)				Prepared & Analyzed: 03/19/24						
Antimony	42300		ng/l	40000		106	95-105			LJ, QX
Arsenic	41800		ng/l	40000		104	95-105			
Barium	416000		ng/l	400000		104	95-105			
Beryllium	8080		ng/l	10000		80.8	95-105			LJ, QX
Cadmium	41800		ng/l	40000		104	95-105			
Chromium	490000		ng/l	480000		102	95-105			
Cobalt	103000		ng/l	100000		103	95-105			
Copper	4.10E6		ng/l	4.0000E6		103	95-105			
Lead	419000		ng/l	400000		105	95-105			
Manganese	1.05E6		ng/l	1.0000E6		105	95-105			
Molybdenum	105000		ng/l	100000		105	95-105			
Nickel	246000		ng/l	240000		102	95-105			
Selenium	42200		ng/l	40000		105	95-105			LJ, QX
Thallium	1030		ng/l	1000.0		103	95-105			
Vanadium	41900		ng/l	40000		105	95-105			
Zinc	1.04E6		ng/l	1.0000E6		104	95-105			
Initial Cal Blank (2403053-ICB1)				Prepared & Analyzed: 03/19/24						
Antimony	0.795		ng/l							LJ, QX
Arsenic	-0.0306		ng/l							U
Barium	0.810		ng/l							
Beryllium	-0.00848		ng/l							LJ, QX, U
Cadmium	0.0940		ng/l							
Chromium	0.954		ng/l							
Cobalt	0.520		ng/l							
Copper	38.6		ng/l							
Lead	5.67		ng/l							
Manganese	6.96		ng/l							
Molybdenum	2.78		ng/l							

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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 2403053 - B4C1210										
Initial Cal Blank (2403053-ICB1) Continu				Prepared & Analyzed: 03/19/24						
Nickel	-5.30		ng/l							U
Selenium	5.57		ng/l							LJ, QX
Thallium	0.906		ng/l							
Vanadium	-27.8		ng/l							U
Zinc	-109		ng/l							U
Initial Cal Check (2403053-ICV1)				Prepared & Analyzed: 03/19/24						
Antimony	20000		ng/l	20000		100	90-110			LJ, QX
Arsenic	20200		ng/l	20000		101	90-110			
Barium	199000		ng/l	200000		99.6	90-110			
Beryllium	4150		ng/l	5000.0		83.0	90-110			LJ, QX
Cadmium	20900		ng/l	20000		104	90-110			
Chromium	255000		ng/l	240000		106	90-110			
Cobalt	49900		ng/l	50000		99.7	90-110			
Copper	2.03E6		ng/l	2.0000E6		102	90-110			
Lead	199000		ng/l	200000		99.3	90-110			
Manganese	493000		ng/l	500000		98.6	90-110			
Molybdenum	50600		ng/l	50000		101	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Selenium	20500		ng/l	20000		103	90-110			LJ, QX
Thallium	504		ng/l	500.00		101	90-110			
Vanadium	20400		ng/l	20000		102	90-110			
Zinc	515000		ng/l	500000		103	90-110			
Interference Check A (2403053-IFA1)				Prepared & Analyzed: 03/19/24						
Antimony	0.00		ng/l				80-120			LJ, QX, U
Arsenic	0.00		ng/l				80-120			U
Barium	0.00		ng/l				80-120			U
Beryllium	0.00		ng/l				80-120			LJ, QX, 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	300000		ng/l	300000		100	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

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
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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 2403053 - B4C1210										
Interference Check A (2403053-IFA1) Co				Prepared & Analyzed: 03/19/24						
Zinc	0.00		ng/l				80-120			U
Interference Check B (2403053-IFB1)				Prepared & Analyzed: 03/19/24						
Antimony	20900		ng/l	20000		105	80-120			LJ, QX
Arsenic	20800		ng/l	20000		104	80-120			
Barium	210000		ng/l	200000		105	80-120			
Beryllium	4410		ng/l	5000.0		88.1	80-120			LJ, QX
Cadmium	19700		ng/l	20000		98.7	80-120			
Chromium	242000		ng/l	240000		101	80-120			
Cobalt	49400		ng/l	50000		98.7	80-120			
Copper	1.90E6		ng/l	2.0000E6		95.1	80-120			
Lead	208000		ng/l	200000		104	80-120			
Manganese	516000		ng/l	500000		103	80-120			
Molybdenum	352000		ng/l	350000		101	80-120			
Nickel	116000		ng/l	120000		96.5	80-120			
Selenium	20000		ng/l	20000		99.9	80-120			LJ, QX
Thallium	517		ng/l	500.00		103	80-120			
Vanadium	18600		ng/l	20000		92.8	80-120			
Zinc	469000		ng/l	500000		93.7	80-120			
Batch B4C1210 - ICP-MS Extraction										
Blank (B4C1210-BLK1)				Prepared: 03/12/24 Analyzed: 03/14/24						
Antimony	ND	0.0386	ng/m³ Air							U, SL
Arsenic	ND	0.00937	ng/m³ Air							U
Barium	ND	1.07	ng/m³ Air							U
Beryllium	ND	0.00320	ng/m³ Air							U
Cadmium	ND	0.0741	ng/m³ Air							U
Chromium	ND	2.21	ng/m³ Air							U
Cobalt	ND	0.0436	ng/m³ Air							U
Copper	ND	2.63	ng/m³ Air							U
Lead	ND	0.214	ng/m³ Air							U
Manganese	ND	1.89	ng/m³ Air							U
Molybdenum	ND	0.359	ng/m³ Air							U
Nickel	ND	0.652	ng/m³ Air							U
Selenium	ND	0.00896	ng/m³ Air							U
Thallium	ND	5.89E-4	ng/m³ Air							U, B, LB, QB-04
Vanadium	ND	0.0529	ng/m³ Air							U
Zinc	ND	76.8	ng/m³ Air							U
LCS (B4C1210-BS1)				Prepared: 03/12/24 Analyzed: 03/14/24						

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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 B4C1210 - ICP-MS Extraction										
LCS (B4C1210-BS1) Continued					Prepared: 03/12/24 Analyzed: 03/14/24					
Antimony	0.873	0.0386	ng/m³ Air	1.3829		63.1	80-120			SL
Arsenic	2.62	0.00937	ng/m³ Air	2.7658		94.6	80-120			
Barium	27.1	1.07	ng/m³ Air	27.658		98.0	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.8	80-120			
Cadmium	1.34	0.0741	ng/m³ Air	1.3829		96.7	80-120			
Chromium	14.5	2.21	ng/m³ Air	13.829		105	80-120			
Cobalt	1.30	0.0436	ng/m³ Air	1.3829		94.3	80-120			
Copper	28.6	2.63	ng/m³ Air	27.658		103	80-120			
Lead	13.0	0.214	ng/m³ Air	13.829		94.2	80-120			
Manganese	8.25	1.89	ng/m³ Air	8.2975		99.4	80-120			
Molybdenum	1.37	0.359	ng/m³ Air	1.3829		99.3	80-120			
Nickel	2.80	0.652	ng/m³ Air	2.7658		101	80-120			
Selenium	2.64	0.00896	ng/m³ Air	2.7658		95.4	80-120			
Thallium	0.133	5.89E-4	ng/m³ Air	0.13829		95.9	80-120			B, LB, QB-04
Vanadium	2.60	0.0529	ng/m³ Air	2.7658		94.0	80-120			
Zinc	115	76.8	ng/m³ Air	82.975		139	80-120			
LCS (B4C1210-BS2)					Prepared: 03/12/24 Analyzed: 03/15/24					
Antimony	0.954	0.0386	ng/m³ Air	1.3829		69.0	80-120			SL
Arsenic	2.69	0.00937	ng/m³ Air	2.7658		97.3	80-120			
Barium	27.7	1.07	ng/m³ Air	27.658		100	80-120			
Beryllium	1.32	0.00320	ng/m³ Air	1.3829		95.4	80-120			
Cadmium	1.37	0.0741	ng/m³ Air	1.3829		99.4	80-120			
Chromium	14.9	2.21	ng/m³ Air	13.829		107	80-120			
Cobalt	1.34	0.0436	ng/m³ Air	1.3829		96.5	80-120			
Copper	29.6	2.63	ng/m³ Air	27.658		107	80-120			
Lead	13.5	0.214	ng/m³ Air	13.829		97.9	80-120			
Manganese	8.44	1.89	ng/m³ Air	8.2975		102	80-120			
Molybdenum	1.41	0.359	ng/m³ Air	1.3829		102	80-120			
Nickel	2.92	0.652	ng/m³ Air	2.7658		105	80-120			
Selenium	2.69	0.00896	ng/m³ Air	2.7658		97.3	80-120			
Thallium	0.137	5.89E-4	ng/m³ Air	0.13829		99.4	80-120			B, LB, QB-04
Vanadium	2.67	0.0529	ng/m³ Air	2.7658		96.5	80-120			
Zinc	117	76.8	ng/m³ Air	82.975		141	80-120			
Duplicate (B4C1210-DUP1)		**Source: 4031151-17**			Prepared: 03/12/24 Analyzed: 03/14/24					
Antimony	0.0317	0.0285	ng/m³ Air		0.0299			5.85	10	SL
Arsenic	0.135	0.00692	ng/m³ Air		0.138			1.71	10	
Barium	1.58	0.791	ng/m³ Air		1.49			5.43	10	
Beryllium	0.00675	0.00236	ng/m³ Air		0.00670			0.727	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 B4C1210 - ICP-MS Extraction										
Duplicate (B4C1210-DUP1) Continued			**Source: 4031151-17**		Prepared: 03/12/24 Analyzed: 03/14/24					
Cadmium	ND	0.0548	ng/m³ Air		ND				10	U
Chromium	1.69	1.63	ng/m³ Air		1.72			1.37	10	
Cobalt	0.128	0.0322	ng/m³ Air		0.120			6.32	10	
Copper	35.2	1.94	ng/m³ Air		33.0			6.47	10	
Lead	0.398	0.158	ng/m³ Air		0.382			4.21	10	
Manganese	3.51	1.40	ng/m³ Air		3.35			4.63	10	
Molybdenum	2.26	0.265	ng/m³ Air		2.15			4.84	10	
Nickel	0.629	0.482	ng/m³ Air		0.606			3.84	10	
Selenium	0.122	0.00662	ng/m³ Air		0.114			6.53	10	
Thallium	0.00118	4.35E-4	ng/m³ Air		0.00120			1.41	10	B, LB, QB-04
Vanadium	0.314	0.0391	ng/m³ Air		0.307			2.18	10	
Zinc	ND	56.8	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP2)			**Source: 4031151-20**		Prepared: 03/12/24 Analyzed: 03/15/24					
Antimony	0.131	0.0305	ng/m³ Air		0.124			5.49	10	SL
Arsenic	0.500	0.00740	ng/m³ Air		0.481			3.90	10	
Barium	4.30	0.845	ng/m³ Air		4.13			3.95	10	
Beryllium	0.00986	0.00253	ng/m³ Air		0.0104			5.70	10	
Cadmium	ND	0.0585	ng/m³ Air		ND				10	U
Chromium	2.19	1.74	ng/m³ Air		2.15			1.66	10	
Cobalt	0.323	0.0344	ng/m³ Air		0.294			9.40	10	
Copper	39.2	2.08	ng/m³ Air		36.9			6.06	10	
Lead	0.971	0.169	ng/m³ Air		0.931			4.21	10	
Manganese	8.77	1.49	ng/m³ Air		8.22			6.54	10	
Molybdenum	2.00	0.283	ng/m³ Air		1.95			2.58	10	
Nickel	1.09	0.515	ng/m³ Air		1.03			5.92	10	
Selenium	0.166	0.00707	ng/m³ Air		0.155			6.58	10	
Thallium	8.67E-4	4.65E-4	ng/m³ Air		9.12E-4			5.01	10	B, LB, QB-04
Vanadium	1.02	0.0418	ng/m³ Air		0.973			4.26	10	
Zinc	ND	60.6	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP3)			**Source: 4031151-06**		Prepared: 03/12/24 Analyzed: 03/15/24					
Antimony	0.0346	0.0319	ng/m³ Air		0.0342			1.20	10	SL
Arsenic	0.755	0.00773	ng/m³ Air		0.752			0.385	10	
Barium	2.48	0.883	ng/m³ Air		2.44			1.57	10	
Beryllium	0.00711	0.00264	ng/m³ Air		0.00695			2.34	10	
Cadmium	ND	0.0611	ng/m³ Air		ND				10	U
Chromium	2.25	1.82	ng/m³ Air		2.23			0.871	10	
Cobalt	0.298	0.0360	ng/m³ Air		0.294			1.39	10	
Copper	55.1	2.17	ng/m³ Air		54.8			0.445	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 B4C1210 - ICP-MS Extraction										
Duplicate (B4C1210-DUP3) Continued		**Source: 4031151-06**		Prepared: 03/12/24 Analyzed: 03/15/24						
Lead	0.371	0.177	ng/m³ Air		0.366			1.39	10	
Manganese	7.46	1.56	ng/m³ Air		7.33			1.77	10	
Molybdenum	2.72	0.296	ng/m³ Air		2.67			2.06	10	
Nickel	0.855	0.538	ng/m³ Air		0.844			1.31	10	
Selenium	0.137	0.00739	ng/m³ Air		0.145			5.93	10	
Thallium	0.00112	4.86E-4	ng/m³ Air		0.00106			5.31	10	B, LB, QB-04
Vanadium	0.752	0.0437	ng/m³ Air		0.736			2.15	10	
Zinc	ND	63.4	ng/m³ Air		ND				10	U
Duplicate (B4C1210-DUP4)		**Source: 4031151-27**		Prepared: 03/12/24 Analyzed: 03/15/24						
Antimony	0.0565	0.0334	ng/m³ Air		0.0537			5.19	10	SL
Arsenic	0.222	0.00810	ng/m³ Air		0.221			0.670	10	
Barium	2.64	0.925	ng/m³ Air		2.55			3.56	10	
Beryllium	0.00742	0.00277	ng/m³ Air		0.00787			5.90	10	
Cadmium	ND	0.0640	ng/m³ Air		ND				10	U
Chromium	2.35	1.91	ng/m³ Air		2.24			4.47	10	
Cobalt	0.222	0.0377	ng/m³ Air		0.217			2.52	10	
Copper	20.5	2.27	ng/m³ Air		19.9			2.83	10	
Lead	0.605	0.185	ng/m³ Air		0.589			2.63	10	
Manganese	6.70	1.63	ng/m³ Air		6.50			3.03	10	
Molybdenum	1.37	0.310	ng/m³ Air		1.33			3.37	10	
Nickel	0.779	0.564	ng/m³ Air		0.758			2.83	10	
Selenium	0.156	0.00774	ng/m³ Air		0.158			1.01	10	
Thallium	0.00109	5.09E-4	ng/m³ Air		0.00107			2.57	10	B, LB, QB-04
Vanadium	0.602	0.0457	ng/m³ Air		0.583			3.16	10	
Zinc	ND	66.4	ng/m³ Air		ND				10	U, LJ, QX
Matrix Spike (B4C1210-MS1)		**Source: 4031151-17**		Prepared: 03/12/24 Analyzed: 03/14/24						
Antimony	0.411	0.0285	ng/m³ Air	1.0219	0.0299	37.3	80-120			SL
Arsenic	2.08	0.00692	ng/m³ Air	2.0438	0.138	95.1	80-120			
Barium	21.3	0.791	ng/m³ Air	20.438	1.49	96.9	80-120			
Beryllium	1.04	0.00236	ng/m³ Air	1.0219	0.00670	101	80-120			
Cadmium	1.00	0.0548	ng/m³ Air	1.0219	ND	98.1	80-120			
Chromium	12.3	1.63	ng/m³ Air	10.219	1.72	104	80-120			
Cobalt	1.10	0.0322	ng/m³ Air	1.0219	0.120	96.2	80-120			
Copper	54.5	1.94	ng/m³ Air	20.438	33.0	105	80-120			
Lead	10.3	0.158	ng/m³ Air	10.219	0.382	97.3	80-120			
Manganese	9.54	1.40	ng/m³ Air	6.1315	3.35	101	80-120			
Molybdenum	3.19	0.265	ng/m³ Air	1.0219	2.15	101	80-120			
Nickel	2.93	0.482	ng/m³ Air	2.0438	0.606	114	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4C1210 - ICP-MS Extraction										
Matrix Spike (B4C1210-MS1) Continued Source: 4031151-17 Prepared: 03/12/24 Analyzed: 03/14/24										
Selenium	2.05	0.00662	ng/m³ Air	2.0438	0.114	94.5	80-120			
Thallium	0.100	4.35E-4	ng/m³ Air	0.10219	0.00120	97.0	80-120			B, LB, QB-04
Vanadium	2.21	0.0391	ng/m³ Air	2.0438	0.307	93.0	80-120			
Zinc	74.6	56.8	ng/m³ Air	61.315	ND	122	80-120			
Matrix Spike (B4C1210-MS2) Source: 4031151-20 Prepared: 03/12/24 Analyzed: 03/15/24										
Antimony	0.576	0.0305	ng/m³ Air	1.0915	0.124	41.4	80-120			SL
Arsenic	2.58	0.00740	ng/m³ Air	2.1829	0.481	96.2	80-120			
Barium	25.8	0.845	ng/m³ Air	21.829	4.13	99.2	80-120			
Beryllium	1.10	0.00253	ng/m³ Air	1.0915	0.0104	99.8	80-120			
Cadmium	1.09	0.0585	ng/m³ Air	1.0915	ND	99.5	80-120			
Chromium	12.9	1.74	ng/m³ Air	10.915	2.15	98.5	80-120			
Cobalt	1.37	0.0344	ng/m³ Air	1.0915	0.294	98.3	80-120			
Copper	59.5	2.08	ng/m³ Air	21.829	36.9	104	80-120			
Lead	11.8	0.169	ng/m³ Air	10.915	0.931	99.3	80-120			
Manganese	15.1	1.49	ng/m³ Air	6.5488	8.22	105	80-120			
Molybdenum	3.03	0.283	ng/m³ Air	1.0915	1.95	99.0	80-120			
Nickel	3.22	0.515	ng/m³ Air	2.1829	1.03	100	80-120			
Selenium	2.26	0.00707	ng/m³ Air	2.1829	0.155	96.5	80-120			
Thallium	0.109	4.65E-4	ng/m³ Air	0.10915	9.12E-4	98.8	80-120			B, LB, QB-04
Vanadium	3.02	0.0418	ng/m³ Air	2.1829	0.973	94.0	80-120			
Zinc	92.7	60.6	ng/m³ Air	65.488	ND	142	80-120			
Matrix Spike Dup (B4C1210-MSD1) Source: 4031151-17 Prepared: 03/12/24 Analyzed: 03/14/24										
Antimony	0.398	0.0285	ng/m³ Air	1.0219	0.0299	36.0	80-120	3.24	20	SL
Arsenic	2.04	0.00692	ng/m³ Air	2.0438	0.138	93.0	80-120	2.08	20	
Barium	20.9	0.791	ng/m³ Air	20.438	1.49	95.0	80-120	1.80	20	
Beryllium	1.05	0.00236	ng/m³ Air	1.0219	0.00670	102	80-120	1.46	20	
Cadmium	0.993	0.0548	ng/m³ Air	1.0219	ND	97.1	80-120	0.995	20	
Chromium	11.5	1.63	ng/m³ Air	10.219	1.72	95.8	80-120	7.04	20	
Cobalt	1.08	0.0322	ng/m³ Air	1.0219	0.120	94.2	80-120	1.85	20	
Copper	52.1	1.94	ng/m³ Air	20.438	33.0	93.5	80-120	4.39	20	
Lead	10.2	0.158	ng/m³ Air	10.219	0.382	96.2	80-120	1.06	20	
Manganese	9.24	1.40	ng/m³ Air	6.1315	3.35	96.1	80-120	3.12	20	
Molybdenum	3.04	0.265	ng/m³ Air	1.0219	2.15	87.1	80-120	4.58	20	
Nickel	2.50	0.482	ng/m³ Air	2.0438	0.606	92.9	80-120	15.7	20	
Selenium	2.03	0.00662	ng/m³ Air	2.0438	0.114	93.9	80-120	0.664	20	
Thallium	0.0977	4.35E-4	ng/m³ Air	0.10219	0.00120	94.4	80-120	2.65	20	B, LB, QB-04
Vanadium	2.17	0.0391	ng/m³ Air	2.0438	0.307	91.1	80-120	1.74	20	
Zinc	71.5	56.8	ng/m³ Air	61.315	ND	117	80-120	4.29	20	

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4C1210 - ICP-MS Extraction										
Matrix Spike Dup (B4C1210-MSD2)		**Source: 4031151-20**		Prepared: 03/12/24		Analyzed: 03/15/24				
Antimony	0.541	0.0305	ng/m³ Air	1.0915	0.124	38.2	80-120	6.34	20	SL
Arsenic	2.58	0.00740	ng/m³ Air	2.1829	0.481	96.0	80-120	0.163	20	
Barium	25.4	0.845	ng/m³ Air	21.829	4.13	97.6	80-120	1.37	20	
Beryllium	1.11	0.00253	ng/m³ Air	1.0915	0.0104	101	80-120	1.01	20	
Cadmium	1.08	0.0585	ng/m³ Air	1.0915	ND	99.1	80-120	0.384	20	
Chromium	12.9	1.74	ng/m³ Air	10.915	2.15	98.8	80-120	0.252	20	
Cobalt	1.36	0.0344	ng/m³ Air	1.0915	0.294	97.6	80-120	0.499	20	
Copper	60.0	2.08	ng/m³ Air	21.829	36.9	106	80-120	0.776	20	
Lead	11.7	0.169	ng/m³ Air	10.915	0.931	99.0	80-120	0.288	20	
Manganese	15.2	1.49	ng/m³ Air	6.5488	8.22	106	80-120	0.478	20	
Molybdenum	2.96	0.283	ng/m³ Air	1.0915	1.95	92.6	80-120	2.35	20	
Nickel	3.21	0.515	ng/m³ Air	2.1829	1.03	99.7	80-120	0.319	20	
Selenium	2.28	0.00707	ng/m³ Air	2.1829	0.155	97.4	80-120	0.890	20	
Thallium	0.109	4.65E-4	ng/m³ Air	0.10915	9.12E-4	99.0	80-120	0.246	20	B, LB, QB-04
Vanadium	3.04	0.0418	ng/m³ Air	2.1829	0.973	94.5	80-120	0.369	20	
Zinc	90.8	60.6	ng/m³ Air	65.488	ND	139	80-120	2.12	20	
Post Spike (B4C1210-PS1)		**Source: 4031151-17**		Prepared: 03/12/24		Analyzed: 03/14/24				
Antimony	0.231	0.0285	ng/m³ Air	0.20438	0.0299	98.4	75-125			SL
Arsenic	1.13	0.00692	ng/m³ Air	1.0219	0.138	97.4	75-125			
Barium	3.43	0.791	ng/m³ Air	2.0438	1.49	94.6	75-125			
Beryllium	0.214	0.00236	ng/m³ Air	0.20438	0.00670	102	75-125			
Cadmium	0.112	0.0548	ng/m³ Air	0.10219	ND	110	75-125			
Chromium	2.72	1.63	ng/m³ Air	1.0219	1.72	98.1	75-125			
Cobalt	0.319	0.0322	ng/m³ Air	0.20438	0.120	97.6	75-125			
Copper	44.1	1.94	ng/m³ Air	10.219	33.0	108	75-125			
Lead	20.4	0.158	ng/m³ Air	20.438	0.382	98.1	75-125			
Manganese	5.37	1.40	ng/m³ Air	2.0438	3.35	98.9	75-125			
Molybdenum	3.12	0.265	ng/m³ Air	1.0219	2.15	94.1	75-125			
Nickel	2.60	0.482	ng/m³ Air	2.0438	0.606	97.4	75-125			
Selenium	1.10	0.00662	ng/m³ Air	1.0219	0.114	96.7	75-125			
Thallium	0.0534	4.35E-4	ng/m³ Air	5.1096E-2	0.00120	102	75-125			B, LB, QB-04
Vanadium	1.26	0.0391	ng/m³ Air	1.0219	0.307	92.8	75-125			
Zinc	ND	56.8	ng/m³ Air	20.438	ND		75-125			U
Post Spike (B4C1210-PS2)		**Source: 4031151-20**		Prepared: 03/12/24		Analyzed: 03/15/24				
Antimony	0.346	0.0305	ng/m³ Air	0.21829	0.124	102	75-125			SL
Arsenic	1.56	0.00740	ng/m³ Air	1.0915	0.481	98.8	75-125			
Barium	6.21	0.845	ng/m³ Air	2.1829	4.13	95.2	75-125			
Beryllium	0.234	0.00253	ng/m³ Air	0.21829	0.0104	102	75-125			

CERTIFICATE OF ANALYSIS

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

FILE #: 4205.00.003.001
REPORTED: 03/25/24 11:40
SUBMITTED: 03/11/24
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 B4C1210 - ICP-MS Extraction										
Post Spike (B4C1210-PS2) Continued		**Source: 4031151-20**		Prepared: 03/12/24 Analyzed: 03/15/24						
Cadmium	0.124	0.0585	ng/m³ Air	0.10915	ND	114	75-125			
Chromium	3.21	1.74	ng/m³ Air	1.0915	2.15	97.4	75-125			
Cobalt	0.514	0.0344	ng/m³ Air	0.21829	0.294	101	75-125			
Copper	48.9	2.08	ng/m³ Air	10.915	36.9	110	75-125			
Lead	22.6	0.169	ng/m³ Air	21.829	0.931	99.3	75-125			
Manganese	10.5	1.49	ng/m³ Air	2.1829	8.22	104	75-125			
Molybdenum	3.01	0.283	ng/m³ Air	1.0915	1.95	96.9	75-125			
Nickel	3.21	0.515	ng/m³ Air	2.1829	1.03	99.8	75-125			
Selenium	1.24	0.00707	ng/m³ Air	1.0915	0.155	99.8	75-125			
Thallium	0.0569	4.65E-4	ng/m³ Air	5.4574E-2	9.12E-4	103	75-125			B, LB, QB-04
Vanadium	1.97	0.0418	ng/m³ Air	1.0915	0.973	91.4	75-125			
Zinc	ND	60.6	ng/m³ Air	21.829	ND		75-125			U
Dilution Check (B4C1210-SRL1)		**Source: 4031151-17**		Prepared: 03/12/24 Analyzed: 03/14/24						
Antimony	ND	0.143	ng/m³ Air		ND				10	U, SL
Arsenic	0.148	0.0346	ng/m³ Air		0.138			7.05	10	
Barium	ND	3.95	ng/m³ Air		ND				10	U
Beryllium	ND	0.0118	ng/m³ Air		ND				10	U
Cadmium	ND	0.274	ng/m³ Air		ND				10	U
Chromium	ND	8.17	ng/m³ Air		ND				10	U
Cobalt	ND	0.161	ng/m³ Air		ND				10	U
Copper	33.4	9.72	ng/m³ Air		33.0			1.16	10	
Lead	ND	0.791	ng/m³ Air		ND				10	U
Manganese	ND	6.98	ng/m³ Air		ND				10	U
Molybdenum	2.12	1.33	ng/m³ Air		2.15			1.81	10	
Nickel	ND	2.41	ng/m³ Air		ND				10	U
Selenium	0.112	0.0331	ng/m³ Air		0.114			1.86	10	
Thallium	0.00231	0.00218	ng/m³ Air		ND			63.4	10	B, LB, QB-04
Vanadium	0.297	0.195	ng/m³ Air		0.307			3.29	10	
Zinc	ND	284	ng/m³ Air		ND				10	U
Dilution Check (B4C1210-SRL2)		**Source: 4031151-20**		Prepared: 03/12/24 Analyzed: 03/15/24						
Antimony	ND	0.152	ng/m³ Air		ND				10	U, SL
Arsenic	0.496	0.0370	ng/m³ Air		0.481			3.18	10	
Barium	4.25	4.22	ng/m³ Air		ND			2.82	10	
Beryllium	ND	0.0126	ng/m³ Air		ND				10	U
Cadmium	ND	0.292	ng/m³ Air		ND				10	U
Chromium	ND	8.72	ng/m³ Air		ND				10	U
Cobalt	0.304	0.172	ng/m³ Air		0.294			3.36	10	
Copper	38.2	10.4	ng/m³ Air		36.9			3.56	10	

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AQS SITE CODE:
SITE CODE: Lahaina fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B4C1210 - ICP-MS Extraction										
Dilution Check (B4C1210-SRL2) Continue				**Source: 4031151-20**		Prepared: 03/12/24		Analyzed: 03/15/24		
Lead	0.915	0.845	ng/m³ Air		0.931			1.64	10	
Manganese	8.57	7.46	ng/m³ Air		8.22			4.24	10	
Molybdenum	2.04	1.42	ng/m³ Air		1.95			4.50	10	
Nickel	ND	2.57	ng/m³ Air		ND				10	U
Selenium	0.164	0.0354	ng/m³ Air		0.155			5.54	10	
Thallium	ND	0.00232	ng/m³ Air		ND				10	U, B, LB, QB-04
Vanadium	0.953	0.209	ng/m³ Air		0.973			2.00	10	
Zinc	ND	303	ng/m³ Air		ND				10	U, LJ, QX
Dilution Check (B4C1210-SRL3)				**Source: 4031151-19R**		Prepared: 03/12/24		Analyzed: 03/19/24		
Antimony	ND	0.160	ng/m³ Air		ND				10	U, LJ, QX
Arsenic	0.559	0.0388	ng/m³ Air		0.563			0.726	10	
Barium	ND	4.43	ng/m³ Air		ND				10	U
Beryllium	ND	0.0133	ng/m³ Air		ND				10	U, LJ, QX
Cadmium	ND	0.307	ng/m³ Air		ND				10	U
Chromium	131	9.15	ng/m³ Air		133			1.60	10	
Cobalt	1.62	0.181	ng/m³ Air		1.63			0.395	10	
Copper	95.4	10.9	ng/m³ Air		95.6			0.286	10	
Lead	0.907	0.886	ng/m³ Air		0.915			0.825	10	
Manganese	12.4	7.83	ng/m³ Air		12.5			0.499	10	
Molybdenum	4.71	1.49	ng/m³ Air		4.72			0.190	10	
Nickel	53.8	2.70	ng/m³ Air		54.4			1.20	10	
Selenium	0.160	0.0371	ng/m³ Air		0.143			11.8	10	LJ, QX
Thallium	ND	0.00244	ng/m³ Air		ND				10	U, QB-04
Vanadium	1.24	0.219	ng/m³ Air		1.29			4.30	10	
Zinc	ND	318	ng/m³ Air		ND				10	U

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REPORTED: 03/25/24 11:40
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AQS SITE CODE:
SITE CODE: Lahaina fires

Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
QB-04	Analyte exceeds continuing calibration blank criteria
LJ	Identification of analyte is acceptable; reported value is an estimate.
LB	Lab blank value above acceptable limit.
FB-01	Analyte exceeds Field Blank criteria.
D	This result obtained by dilution.
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

Stage 1 Data Verification Checklist – Metals

HDOH CAB – Ambient Community Air Sampling – Lahaina

Task Order No. 23141

Reviewed by:
Kierra Johnson 3/26/2024 and Shanna Vasser 3/26/2024
Laboratory: Eastern Research Group – Morrisville, NC
Collection date(s): 2/29/2024 – 3/6/2024
Report No: 4301151

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

Discrepancies:

13. Field blank detections above the method detection limit were reported for arsenic in MFL-FB01-030224-HM and cobalt in MFL-FB01-030424-HM.

Notes:

2. The laboratory reported that MFL-AM03-030124-HM, MFL-AM04-030224-HM, MFL-AM04-030324-HM, MFL-AM03-030524-HM were nonhomogeneous.

7. MFL-AM01-030424-HM was analyzed at a two-fold dilution for chromium and nickel.

   Report was revised on March 21, 2024 to add the dilution check results. A five-fold dilution check was performed on MFL-AM03-030324-HM/MS/MSD, MFL-AM01-030424-HM, and MFL-AM02-030424-HM two-fold dilution for all analytes.

   Report was revised on March 25, 2024 to match the updated volumes on the revised CoC.