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

Kula, Maui

11/16/2023-11/22/2023

As a result of ongoing debris removal operations in response to the Maui Wildfires, a community air monitoring and sampling plan (CAMSP, 2023) has been developed and sampling is being performed at three community locations across the area of Kula.

This approach includes ambient community air monitoring and sampling to monitor conditions and ensure debris removal activities, taking place under the U.S. Army Corps of Engineers (USACE), does not significantly impact air quality in the area of Kula. 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 three community locations over a 24-hour period each day in accordance with the CAMSP. Additionally, daily air samples were collected at all community locations for asbestos and heavy metals. Summary analytical data is presented in **Tables 1 and 2**. **Figure 1** depicts the community air monitoring and sampling locations. **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 published in the CAMSP (Tetra Tech 2023; see Table 2).

Results for Community Locations:
Ambient particulate air monitoring was performed to assess for the presence and concentrations of airborne particulates with a particle size aerodynamic diameter of 2.5 micrometers (µm) and less ($PM_{2.5}$), as well as 10 micrometers (µm) and less (PM_{10}). This particle size diameter is recognized for health evaluations and is identified as "$PM_{2.5}$" and "PM_{10}". The particle size diameters of 2.5 micrometers (µm) and 10 micrometers (µm) are small enough to be inhaled into a person's lungs. Monitoring for $PM_{2.5}$ and PM_{10} was conducted 7 days a week at each of the following locations: Top Property (AM-01) (November 16 – 22), Middle Property (AM-02) 2 (November 16 – 22), Lower Property (AM-03) (November 16 – 22).

The results of $PM_{2.5}$ monitoring found that screening levels were exceeded at the Top Property air monitoring station on November 17-21. High winds were recorded on these days. It was also recorded that the property owners were spreading woodchips around the property as well as operating a woodchipper at the adjacent property on all these days.

None of these exceedances of particulate screening levels are likely to be attributable to USACE debris removal operations.

We are investigating a technical malfunction at the Lower Property (AM-03) PM2.5 station in which a date error resulted in the loss of data for a 12-hour period between 11/17 at 20:20 and 11/18 at 08:20. The error was corrected on the EBAM on 11/29. Data presented in this report was adjusted to the assumed time of collection tracking backward from the moment of the correction. After the investigation is complete this report will be revised as needed.

There were twenty-one samples collected for asbestos fibers at community monitoring locations throughout this time frame. The asbestos sample collected on November 22, 2023, was previously voided

from the Top Property (AM-01) because of low sample volume due to the QuickTake pump stopping in the middle of the night. After confirming the low volume threshold of 1000 liters with the lab, the sample has been resubmitted to the lab for analysis. This report will be revised after lab results have been received and validated. No asbestos samples returned a value above the laboratory's detection limit, indicating fibers were not present in air sampled. All asbestos results were below the public health screening level of 0.0034 fibers/cc (and the laboratory's detection limits).

Some extremely low levels of heavy metals were detected in ambient air samples at community locations. Although detected, all detections were below the public health screening levels for heavy metals. Details for particulates, heavy metal and asbestos sampling data for community locations are found in Attachment 1.

Attachments:

Analytical Sampling Results and Particulate Monitoring Results

Air Monitoring and Sampling Locations

Appendix:

Analytical Reports

Attachments

Table 1: HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results
Maui Wildfire, Kula
11/16/2023-11/22/2023

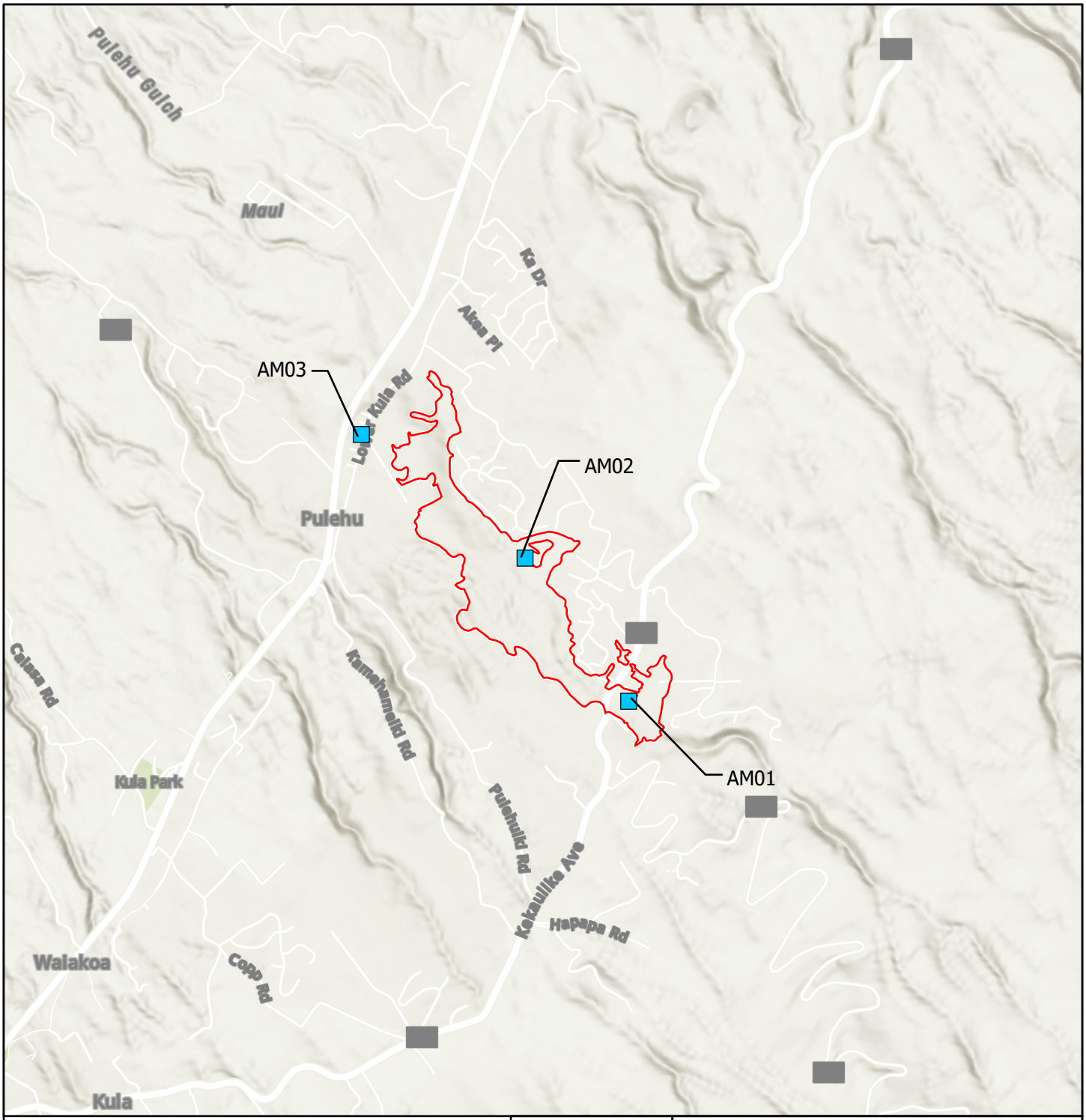
Analyte		Asbestos		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Units		f/cc	Y/N	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
Screening Level	Location / ID	0.0034 [1]	Confirmed Asbestos [2]	1.4	0.18	2.4	0.1	0.048	24	0.029	480	1.5	0.24	9.6	0.048	96	48	0.48	2400
11/16/2023	Top Property (AM-01)	<0.00038	N	0.0000768	0.000176	0.00789	0.0000289	0.0000107	0.00171	0.000453	0.0128	0.000353	0.0243	0.00071	0.000661	0.000302	0.0000017	0.00205	0.0169
	Middle Property (AM-02)	<0.00059	N	0.0000617	0.000249	0.00797	0.0000318	0.0000127	0.00169	0.000442	0.0121	0.000312	0.0238	0.00066	0.000668	0.000277	0.00000173	0.00208	0.0178
	Lower Property (AM-03)	<0.00046	N	0.000109	0.000129	0.00756	0.0000253	0.0000103	0.00172	0.000451	0.0159	0.000302	0.0201	0.000787	0.000674	0.000235	0.00000148	0.00165	0.0207
11/17/2023	Top Property (AM-01)	<0.00037	N	0.0000747	0.000165	0.0059	0.0000193	0.0000106	0.00152	0.000312	0.017	0.000518	0.0169	0.000722	0.000562	0.000214	0.00000147	0.00144	0.0189
	Middle Property (AM-02)	<0.00058	N	0.0000673	0.000842	0.0113	0.0000332	0.0000199	0.00199	0.000466	0.0138	0.000565	0.0286	0.000685	0.000762	0.000318	0.00000224	0.00253	0.0157
	Lower Property (AM-03)	<0.00041	N	0.0000994	0.00014	0.00694	0.0000212	0.0000104	0.00158	0.000319	0.0159	0.000358	0.0171	0.000918	0.000647	0.000223	0.00000172	0.00139	0.0152
11/18/2003	Top Property (AM-01)	<0.00037	N	0.000099	0.000352	0.00625	0.0000195	0.0000164	0.00181	0.00032	0.0177	0.000883	0.0171	0.000603	0.000691	0.000253	0.00000336	0.00154	0.0154
	Middle Property (AM-02)	<0.00040	N	0.0000846	0.000354	0.00844	0.000027	0.0000189	0.00166	0.000388	0.00995	0.000434	0.0219	0.000547	0.000696	0.000299	0.00000393	0.00205	0.0172
	Lower Property (AM-03)	<0.00041	N	0.000129	0.000171	0.00659	0.0000194	0.0000157	0.00238	0.000303	0.0145	0.000468	0.0159	0.000972	0.001	0.000224	0.00000393	0.00137	0.0218
11/19/2023	Top Property (AM-01)	<0.00038	N	0.0000678	0.000177	0.00459	0.0000138	0.0000124	0.00152	0.000217	0.0131	0.000374	0.0131	0.000649	0.000552	0.000191	0.00000321	0.00122	0.0105
	Middle Property (AM-02)	<0.00038	N	0.0000678	0.000874	0.0214	0.0000845	0.0000666	0.00309	0.000927	0.0137	0.000932	0.0598	0.000798	0.00169	0.000637	0.00000613	0.00628	0.0155
	Lower Property (AM-03)	<0.00038	N	0.000113	0.00062	0.00872	0.0000141	0.0000159	0.00197	0.000228	0.0194	0.000376	0.0113	0.0013	0.000633	0.000199	0.00000371	0.00105	0.0153
11/20/2023	Top Property (AM-01)	<0.00038	N	0.000101	0.000156	0.00478	0.0000126	0.00000937	0.00161	0.00022	0.0223	0.000469	0.0106	0.000893	0.000575	0.000175	0.0000014	0.000993	0.0152
	Middle Property (AM-02)	<0.00040	N	0.000138	0.000319	0.0076	0.0000263	0.000103	0.00198	0.000314	0.0161	0.000532	0.0187	0.000954	0.000716	0.000257	0.00000192	0.00191	0.0121
	Lower Property (AM-03)	<0.00039	N	0.000132	0.0000874	0.00518	0.000013	0.000013	0.00166	0.000236	0.0276	0.000241	0.0094	0.000945	0.000534	0.000152	0.00000141	0.000761	0.0141
11/21/2023	Top Property (AM-01)	<0.00042	N	0.0000665	0.00013	0.00243	0.00000442	0.00000545	0.00139	0.0000827	0.0189	0.000171	0.00337	0.00109	0.000482	0.0000788	0.000000422	0.000336	0.01
	Middle Property (AM-02)	<0.00043	N	0.0000734	0.000156	0.00339	0.00000687	0.00000686	0.00135	0.000107	0.0179	0.000151	0.00455	0.00106	0.000484	0.0001	0.000000533	0.000473	0.0114
	Lower Property (AM-03)	<0.00040	N	0.0000652	0.0000869	0.00296	0.00000579	0.00000886	0.00177	0.0000968	0.0388	0.000236	0.00365	0.0013	0.000494	0.000103	0.000000415	0.000334	0.00977
11/22/2023	Top Property (AM-01)	NA	N/A	0.0000846	0.000308	0.00623	0.0000179	0.00000877	0.00192	0.000314	0.0238	0.000443	0.0138	0.00139	0.000985	0.000217	0.000000925	0.002	0.0122
	Middle Property (AM-02)	<0.00044	N	0.0000637	0.000239	0.00487	0.0000149	0.00000779	0.00189	0.00028	0.0171	0.000335	0.0121	0.00109	0.00102	0.000197	0.000000838	0.00216	0.00901
	Lower Property (AM-03)	<0.00055	N	0.0000998	0.000148	0.00465	0.0000131	0.00000705	0.00161	0.000275	0.028	0.000257	0.011	0.000934	0.00117	0.000171	0.0000008	0.00223	0.00898
95% Upper Confidence Limit [3]		0.00045		0.0001	0.00038	0.00849	0.00003	0.000024	0.00193	0.00042	0.0209	0.00051	0.024	0.00101	0.00085	0.00028	0.0000031	0.00245	0.016

Notes:
Asbestos sampling at Top Property (AM-01) on 11/22 was voided due to insufficuant sample volume (L). After discussion from the lab, that sample has been resubmitted for anaylisis. Results will be revised after validation.
NA = Not Available
f/cc = fibers per cubic centimeter
µg/m3= micrograms per cubic meter
ND = Not detected at or above the laboratory reporting limit
1 Fiber count sample result via Phase Contrast Microscopy
2 Confirmed asbestos sample result via Transmission Electron Microscopy
3 95% UCL determined through 'best fit' lognormal or normal parametric statistics via W test

Table 2: HDOH CAB Ambient Community Monitoring and Sampling
Particulate Monitoring Results
Maui Wildfire, Kula
11/16/2023-11/22/2023

Particulate Size		PM 2.5	PM 10
Screening Level	Location / ID	35 µg/m^3	150 µg/m^3
11/16/2023	Top Property (AM-01)	32.9	32.4
	Middle Property (AM-02)	11.2	8.3
	Lower Property (AM-03)	5.0	7.9
11/17/2023	Top Property (AM-01)	37.7	32.1
	Middle Property (AM-02)	15.2	11.6
	Lower Property (AM-03)	6.1	10.7
11/18/2023	Top Property (AM-01)	41.5	33.0
	Middle Property (AM-02)	13.5	7.8
	Lower Property (AM-03)	7.4	10.8
11/19/2023	Top Property (AM-01)	71.6	106.6
	Middle Property (AM-02)	18.3	15.0
	Lower Property (AM-03)	6.5	9.2
11/20/2023	Top Property (AM-01)	45.9	27.4
	Middle Property (AM-02)	15.6	6.7
	Lower Property (AM-03)	9.2	6.0
11/21/2023	Top Property (AM-01)	57.7	129.5
	Middle Property (AM-02)	17.6	5.5
	Lower Property (AM-03)	6.3	7.0
11/22/2023	Top Property (AM-01)	30.3	73.4
	Middle Property (AM-02)	9.2	6.0
	Lower Property (AM-03)	6.7	7.0

Notes:
The exceedances on 11/17, 11/18, 11/19, 11/20, and 11/21 are a result of woodchips spread and private operations on the property and high winds
Lower Property (AM-03) PM2.5 EBAM had a technical malfunction on 11/17 that created a date and time error. Missing 12 hr of data between 11/17-11/18
Results are based on 24 hour TWA calculation
Results for Lower Property (AM-03) PM2.5 on 11/17 are based on 20 hour TWA calculation.
Results for Lower Property (AM-03) PM2.5 on 11/18 are based on 16 hour TWA calculation.
µg/m3 = micrograms per cubic meter
ND = Not detected at or above the laboratory reporting limit
NA = Not Available



Air Monitoring Locations

Kula Fire Perimeter

N

0 0.25 0.5
Miles

TETRA TECH

Figure 1
Ambient Community
Air Monitoring Locations

Hawaii DOH
2023 Kula Wildfire

Basemap: ESRI ArcGIS World Street Map

Appendix 1

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

December 01, 2023

Ms. Chelsea Saber
Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
Project Name: Maui 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 11/24/23 10:33.

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
TetraTech Q9541238	3112732-01	Air	11/16/23 23:59	11/24/23 10:33
TetraTech Q9541237	3112732-02	Air	11/16/23 23:59	11/24/23 10:33
TetraTech Q9541233	3112732-03	Air	11/16/23 23:59	11/24/23 10:33
TetraTech Q9541264 FB	3112732-04	Air	11/16/23 00:00	11/24/23 10:33
TetraTech Q9541263 LB	3112732-05	Air	11/16/23 00:00	11/24/23 10:33
TetraTech Q9541232	3112732-06	Air	11/17/23 23:59	11/24/23 10:33
TetraTech Q9541231	3112732-07	Air	11/17/23 23:59	11/24/23 10:33
TetraTech Q9541265	3112732-08	Air	11/17/23 23:59	11/24/23 10:33
TetraTech Q9541257 FB	3112732-09	Air	11/17/23 00:00	11/24/23 10:33
TetraTech Q9541260	3112732-10	Air	11/18/23 23:59	11/24/23 10:33
TetraTech Q9541259	3112732-11	Air	11/18/23 23:59	11/24/23 10:33
TetraTech Q9541258	3112732-12	Air	11/18/23 23:59	11/24/23 10:33
TetraTech Q9541272 FB	3112732-13	Air	11/18/23 00:00	11/24/23 10:33
TetraTech Q9541254	3112732-14	Air	11/19/23 23:59	11/24/23 10:33
TetraTech Q9541283	3112732-15	Air	11/19/23 23:59	11/24/23 10:33
TetraTech Q9541282	3112732-16	Air	11/19/23 23:59	11/24/23 10:33
TetraTech Q9541269 - FB	3112732-17	Air	11/19/23 00:00	11/24/23 10:33

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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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541238
Matrix: Air
Comments: MFK-AM01-111623-HM

Lab ID: 3112732-01
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/16/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 21:14

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**847**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.0768**	GC-BS, SL	**0.0352**
Arsenic	**7440-38-2**	**0.176**		**0.00762**
Barium	**7440-39-3**	**7.89**		**0.757**
Beryllium	**7440-41-7**	**0.0289**		**0.00265**
Cadmium	7440-43-9	0.0107	U	0.0870
Calcium	**7440-70-2**	**623**	GC-BS, LJ, QB-01	**233**
Chromium	**7440-47-3**	**1.71**		**1.62**
Cobalt	**7440-48-4**	**0.453**	QB-01	**0.0124**
Copper	**7440-50-8**	**12.8**		**2.39**
Iron	**7439-89-6**	**935**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.353**		**0.220**
Magnesium	**7439-95-4**	**417**	ICS-01, LK	**76.9**
Manganese	**7439-96-5**	**24.3**		**0.950**
Molybdenum	**7439-98-7**	**0.710**	QB-01	**0.170**
Nickel	**7440-02-0**	**0.661**		**0.639**
Phosphorus	7723-14-0	380	GC-BS, ICS-01, LK, U	998
Potassium	**7440-09-7**	**164**		**30.3**
Rubidium		**0.280**	QB-01	**0.0146**
Selenium	**7782-49-2**	**0.302**		**0.00878**
Sodium	**7440-23-5**	**3130**	ICS-01, LK	**1600**
Strontium	**7440-24-6**	**6.57**	QB-01	**0.520**
Thallium	**7440-28-0**	**0.00170**		**4.01E-4**
Thorium	**7440-29-01**	**0.0303**		**0.00239**
Uranium	**NA**	**0.0175**		**0.0136**
Vanadium	**7440-62-2**	**2.05**		**0.0393**
Zinc	7440-66-6	16.9	U	78.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541237
Matrix: Air
Comments: MFK-AM02-111623-HM

Lab ID: 3112732-02
Sample Volume: 2026.064 m³
Filter ID:

Sampled: 11/16/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 21:29

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**891**	ICS-01, LK	**25.8**
Antimony	**7440-36-0**	**0.0617**	GC-BS, SL	**0.0354**
Arsenic	**7440-38-2**	**0.249**		**0.00767**
Barium	**7440-39-3**	**7.97**		**0.761**
Beryllium	**7440-41-7**	**0.0318**		**0.00267**
Cadmium	7440-43-9	0.0127	U	0.0875
Calcium	**7440-70-2**	**604**	GC-BS, LJ, QB-01	**234**
Chromium	**7440-47-3**	**1.69**		**1.63**
Cobalt	**7440-48-4**	**0.442**	QB-01	**0.0125**
Copper	**7440-50-8**	**12.1**		**2.41**
Iron	**7439-89-6**	**957**	GC-BS	**19.4**
Lead	**7439-92-1**	**0.312**		**0.222**
Magnesium	**7439-95-4**	**376**	ICS-01, LK	**77.4**
Manganese	**7439-96-5**	**23.8**		**0.956**
Molybdenum	**7439-98-7**	**0.660**	QB-01	**0.171**
Nickel	**7440-02-0**	**0.668**		**0.643**
Phosphorus	7723-14-0	375	GC-BS, ICS-01, LK, U	1000
Potassium	**7440-09-7**	**145**		**30.5**
Rubidium		**0.290**	QB-01	**0.0147**
Selenium	**7782-49-2**	**0.277**		**0.00883**
Sodium	**7440-23-5**	**2870**	ICS-01, LK	**1610**
Strontium	**7440-24-6**	**6.58**	QB-01	**0.524**
Thallium	**7440-28-0**	**0.00173**		**4.04E-4**
Thorium	**7440-29-01**	**0.0358**		**0.00241**
Uranium	**NA**	**0.0180**		**0.0137**
Vanadium	**7440-62-2**	**2.08**		**0.0395**
Zinc	7440-66-6	17.8	U	78.5

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541233
Matrix: Air
Lab ID: 3112732-03
Sample Volume: 2012.196 m³
Filter ID:
Sampled: 11/16/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 18:57
Comments: MFK-AM03-111623-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**613**	ICS-01, LK, QM-4X	**26.0**
Antimony	**7440-36-0**	**0.109**	GC-BS, QM-07, SL	**0.0357**
Arsenic	**7440-38-2**	**0.129**		**0.00772**
Barium	**7440-39-3**	**7.56**		**0.767**
Beryllium	**7440-41-7**	**0.0253**		**0.00268**
Cadmium	7440-43-9	0.0103	U	0.0881
Calcium	**7440-70-2**	**544**	GC-BS, LJ, QB-01, QM-4X	**236**
Chromium	**7440-47-3**	**1.72**		**1.64**
Cobalt	**7440-48-4**	**0.451**	QB-01	**0.0126**
Copper	**7440-50-8**	**15.9**	QM-07	**2.43**
Iron	**7439-89-6**	**750**	GC-BS, QM-4X	**19.6**
Lead	**7439-92-1**	**0.302**		**0.223**
Magnesium	**7439-95-4**	**401**	ICS-01, LK, QM-4X, QX	**77.9**
Manganese	**7439-96-5**	**20.1**	QM-07	**0.962**
Molybdenum	**7439-98-7**	**0.787**	QB-01	**0.172**
Nickel	**7440-02-0**	**0.674**		**0.648**
Phosphorus	7723-14-0	366	U, GC-BS, ICS-01, LK, QM-4X	1010
Potassium	**7440-09-7**	**147**	QM-4X	**30.7**
Rubidium		**0.258**	QB-01, QM-07	**0.0148**
Selenium	**7782-49-2**	**0.235**		**0.00889**
Sodium	**7440-23-5**	**3150**	ICS-01, LK, QM-4X, QX	**1620**
Strontium	**7440-24-6**	**5.62**	QB-01, QM-4X	**0.527**
Thallium	**7440-28-0**	**0.00148**	QM-4X	**4.07E-4**
Thorium	**7440-29-01**	**0.0274**	QM-07	**0.00243**
Uranium	**NA**	**0.0147**		**0.0137**
Vanadium	**7440-62-2**	**1.65**		**0.0398**
Zinc	7440-66-6	20.7	U	79.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541264 FB
Matrix: Air
Lab ID: 3112732-04
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/16/23 00:00
Received: 11/24/23 10:33
Analysis Date: 11/29/23 21:44

Comments: Field Blank - MFK-FB01-111623-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	16.2	U, ICS-01, LK	25.6
Antimony	7440-36-0	0.0115	U, GC-BS, SL	0.0352
Arsenic	7440-38-2	0.00567	U	0.00762
Barium	7440-39-3	0.472	U	0.757
Beryllium	7440-41-7	0.00109	U	0.00265
Cadmium	7440-43-9	0.00132	U	0.0870
Calcium	7440-70-2	159	U, GC-BS, LJ, QB-01	233
Chromium	7440-47-3	1.12	U	1.62
Cobalt	**7440-48-4**	**0.0257**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.286	U	2.39
Iron	7439-89-6	12.7	U, GC-BS	19.3
Lead	7439-92-1	0.0336	U	0.220
Magnesium	7439-95-4	43.7	U, ICS-01, LK	76.9
Manganese	7439-96-5	0.183	U	0.950
Molybdenum	**7439-98-7**	**0.178**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.269	U	0.639
Phosphorus	7723-14-0	329	GC-BS, ICS-01, LK, U	998
Potassium	7440-09-7	8.25	U	30.3
Rubidium		0.0104	QB-01, U	0.0146
Selenium	7782-49-2	0.00242	U	0.00878
Sodium	7440-23-5	820	ICS-01, LK, U	1600
Strontium	7440-24-6	0.372	QB-01, U	0.520
Thallium	7440-28-0	9.35E-5	U	4.01E-4
Thorium	7440-29-01	0.00238	U	0.00239
Uranium	NA	0.00127	U	0.0136
Vanadium	7440-62-2	0.0144	U	0.0393
Zinc	7440-66-6	10.4	U	78.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541263 LB
Matrix: Air
Lab ID: 3112732-05
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/16/23 00:00
Received: 11/24/23 10:33
Analysis Date: 11/29/23 21:58

Comments: Lot Blank - MFK-LB01-111623-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	17.5	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.0122	GC-BS, SL, U	0.0352
Arsenic	7440-38-2	0.00488	U	0.00762
Barium	7440-39-3	0.481	U	0.757
Beryllium	7440-41-7	0.00121	U	0.00265
Cadmium	7440-43-9	0.00141	U	0.0870
Calcium	7440-70-2	157	GC-BS, LJ, QB-01, U	233
Chromium	7440-47-3	1.10	U	1.62
Cobalt	**7440-48-4**	**0.0223**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.356	U	2.39
Iron	7439-89-6	13.6	GC-BS, U	19.3
Lead	7439-92-1	0.0342	U	0.220
Magnesium	7439-95-4	41.7	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.194	U	0.950
Molybdenum	**7439-98-7**	**0.177**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.265	U	0.639
Phosphorus	7723-14-0	317	GC-BS, ICS-01, LK, U	998
Potassium	7440-09-7	8.39	U	30.3
Rubidium		0.0111	QB-01, U	0.0146
Selenium	7782-49-2	0.00227	U	0.00878
Sodium	7440-23-5	782	ICS-01, LK, U	1600
Strontium	7440-24-6	0.379	QB-01, U	0.520
Thallium	7440-28-0	1.21E-4	U	4.01E-4
Thorium	7440-29-01	0.00235	U	0.00239
Uranium	NA	0.00127	U	0.0136
Vanadium	7440-62-2	0.0161	U	0.0393
Zinc	7440-66-6	10.9	U	78.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541232
Matrix: Air
Comments: MFK-AM01-111723-HM

Lab ID: 3112732-06
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/17/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 22:12

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**542**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.0747**	GC-BS, SL	**0.0352**
Arsenic	**7440-38-2**	**0.165**		**0.00762**
Barium	**7440-39-3**	**5.90**		**0.757**
Beryllium	**7440-41-7**	**0.0193**		**0.00265**
Cadmium	7440-43-9	0.0106	U	0.0870
Calcium	**7440-70-2**	**443**	GC-BS, LJ, QB-01	**233**
Chromium	7440-47-3	1.52	U	1.62
Cobalt	**7440-48-4**	**0.312**	QB-01	**0.0124**
Copper	**7440-50-8**	**17.0**		**2.39**
Iron	**7439-89-6**	**628**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.518**		**0.220**
Magnesium	**7439-95-4**	**281**	ICS-01, LK	**76.9**
Manganese	**7439-96-5**	**16.9**		**0.950**
Molybdenum	**7439-98-7**	**0.722**	QB-01	**0.170**
Nickel	7440-02-0	0.562	U	0.639
Phosphorus	7723-14-0	357	GC-BS, ICS-01, LK, U	998
Potassium	**7440-09-7**	**117**		**30.3**
Rubidium		**0.210**	QB-01	**0.0146**
Selenium	**7782-49-2**	**0.214**		**0.00878**
Sodium	**7440-23-5**	**2350**	ICS-01, LK	**1600**
Strontium	**7440-24-6**	**4.42**	QB-01	**0.520**
Thallium	**7440-28-0**	**0.00147**		**4.01E-4**
Thorium	**7440-29-01**	**0.0178**		**0.00239**
Uranium	NA	0.0127	U	0.0136
Vanadium	**7440-62-2**	**1.44**		**0.0393**
Zinc	7440-66-6	18.9	U	78.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541231
Matrix: Air
Comments: MFK-AM02-111723-HM

Lab ID: 3112732-07
Sample Volume: 2110.483 m³
Filter ID:

Sampled: 11/17/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 22:26

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**1110**	ICS-01, LK	**24.7**
Antimony	**7440-36-0**	**0.0673**	GC-BS, SL	**0.0340**
Arsenic	**7440-38-2**	**0.842**		**0.00736**
Barium	**7440-39-3**	**11.3**		**0.731**
Beryllium	**7440-41-7**	**0.0332**		**0.00256**
Cadmium	7440-43-9	0.0199	U	0.0840
Calcium	**7440-70-2**	**766**	QB-01, GC-BS, LJ	**225**
Chromium	**7440-47-3**	**1.99**		**1.56**
Cobalt	**7440-48-4**	**0.466**	QB-01	**0.0120**
Copper	**7440-50-8**	**13.8**		**2.31**
Lead	**7439-92-1**	**0.565**		**0.213**
Magnesium	**7439-95-4**	**332**	ICS-01, LK	**74.3**
Manganese	**7439-96-5**	**28.6**		**0.917**
Molybdenum	**7439-98-7**	**0.685**	QB-01	**0.164**
Nickel	**7440-02-0**	**0.762**		**0.618**
Phosphorus	7723-14-0	390	GC-BS, ICS-01, LK, U	964
Potassium	**7440-09-7**	**177**		**29.3**
Rubidium		**0.378**	QB-01	**0.0141**
Selenium	**7782-49-2**	**0.318**		**0.00848**
Sodium	**7440-23-5**	**2340**	ICS-01, LK	**1540**
Strontium	**7440-24-6**	**9.66**	QB-01	**0.503**
Thallium	**7440-28-0**	**0.00224**		**3.88E-4**
Thorium	**7440-29-01**	**0.0404**		**0.00231**
Uranium	**NA**	**0.0246**		**0.0131**
Vanadium	**7440-62-2**	**2.53**		**0.0379**
Zinc	7440-66-6	15.7	U	75.3

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541231
Matrix: Air
Comments: MFK-AM02-111723-HM

Lab ID: 3112732-07RE1
Sample Volume: 2110.483 m³
Filter ID:

Sampled: 11/17/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 03:50

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Iron	**7439-89-6**	**1060**	D, GC-BS	**187**

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541265
Matrix: Air
Comments: MFK-AM03-111723-HM

Lab ID: 3112732-08
Sample Volume: 2059.148 m³
Filter ID:

Sampled: 11/17/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 22:41

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**504**	ICS-01, LK	**25.4**
Antimony	**7440-36-0**	**0.0994**	SL, GC-BS	**0.0348**
Arsenic	**7440-38-2**	**0.140**		**0.00755**
Barium	**7440-39-3**	**6.94**		**0.749**
Beryllium	**7440-41-7**	**0.0212**		**0.00262**
Cadmium	7440-43-9	0.0104	U	0.0861
Calcium	**7440-70-2**	**471**	GC-BS, LJ, QB-01	**231**
Chromium	7440-47-3	1.58	U	1.60
Cobalt	**7440-48-4**	**0.319**	QB-01	**0.0123**
Copper	**7440-50-8**	**15.9**		**2.37**
Iron	**7439-89-6**	**638**	GC-BS	**19.1**
Lead	**7439-92-1**	**0.358**		**0.218**
Magnesium	**7439-95-4**	**345**	ICS-01, LK	**76.2**
Manganese	**7439-96-5**	**17.1**		**0.940**
Molybdenum	**7439-98-7**	**0.918**	QB-01	**0.168**
Nickel	**7440-02-0**	**0.647**		**0.633**
Phosphorus	7723-14-0	369	GC-BS, ICS-01, LK, U	988
Potassium	**7440-09-7**	**129**		**30.0**
Rubidium		**0.238**	QB-01	**0.0145**
Selenium	**7782-49-2**	**0.223**		**0.00869**
Sodium	**7440-23-5**	**2850**	ICS-01, LK	**1580**
Strontium	**7440-24-6**	**4.58**	QB-01	**0.515**
Thallium	**7440-28-0**	**0.00172**		**3.97E-4**
Thorium	**7440-29-01**	**0.0219**		**0.00237**
Uranium	NA	0.0126	U	0.0134
Vanadium	**7440-62-2**	**1.39**		**0.0389**
Zinc	7440-66-6	15.2	U	77.2

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541257 FB
Matrix: Air
Lab ID: 3112732-09
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/17/23 00:00
Received: 11/24/23 10:33
Analysis Date: 11/29/23 22:55

Comments: Field Blank - MFK-FB01-111723-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	17.2	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.0113	GC-BS, SL, U	0.0352
Arsenic	7440-38-2	0.00458	U	0.00762
Barium	7440-39-3	0.490	U	0.757
Beryllium	7440-41-7	0.00108	U	0.00265
Cadmium	7440-43-9	0.00131	U	0.0870
Calcium	7440-70-2	155	GC-BS, LJ, QB-01, U	233
Chromium	7440-47-3	1.10	U	1.62
Cobalt	**7440-48-4**	**0.0219**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.337	U	2.39
Iron	7439-89-6	13.8	GC-BS, U	19.3
Lead	7439-92-1	0.0336	U	0.220
Magnesium	7439-95-4	41.1	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.192	U	0.950
Molybdenum	**7439-98-7**	**0.179**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.272	U	0.639
Phosphorus	7723-14-0	309	GC-BS, ICS-01, LK, U	998
Potassium	7440-09-7	9.23	U	30.3
Rubidium		0.0107	QB-01, U	0.0146
Selenium	7782-49-2	0.00322	U	0.00878
Sodium	7440-23-5	781	ICS-01, LK, U	1600
Strontium	7440-24-6	0.371	QB-01, U	0.520
Thallium	7440-28-0	7.57E-5	U	4.01E-4
Thorium	7440-29-01	0.00234	U	0.00239
Uranium	NA	0.00127	U	0.0136
Vanadium	7440-62-2	0.0167	U	0.0393
Zinc	7440-66-6	8.98	U	78.0

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541260
Matrix: Air
Comments: MFK-AM01-111823-HM

Lab ID: 3112732-10
Sample Volume: 2128.508 m³
Filter ID:

Sampled: 11/18/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/29/23 23:09

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**578**	ICS-01, LK	**24.5**
Antimony	**7440-36-0**	**0.0990**	GC-BS, SL	**0.0337**
Arsenic	**7440-38-2**	**0.352**		**0.00730**
Barium	**7440-39-3**	**6.25**		**0.725**
Beryllium	**7440-41-7**	**0.0195**		**0.00254**
Cadmium	7440-43-9	0.0164	U	0.0833
Calcium	**7440-70-2**	**473**	GC-BS, LJ, QB-01	**223**
Chromium	**7440-47-3**	**1.81**		**1.55**
Cobalt	**7440-48-4**	**0.320**	QB-01	**0.0119**
Copper	**7440-50-8**	**17.7**		**2.29**
Iron	**7439-89-6**	**652**	GC-BS	**18.5**
Lead	**7439-92-1**	**0.883**		**0.211**
Magnesium	**7439-95-4**	**345**	ICS-01, LK	**73.7**
Manganese	**7439-96-5**	**17.1**		**0.910**
Molybdenum	**7439-98-7**	**0.603**	QB-01	**0.163**
Nickel	**7440-02-0**	**0.691**		**0.612**
Phosphorus	7723-14-0	337	LK, GC-BS, ICS-01, U	955
Potassium	**7440-09-7**	**120**		**29.0**
Rubidium		**0.214**	QB-01	**0.0140**
Selenium	**7782-49-2**	**0.253**		**0.00841**
Sodium	**7440-23-5**	**2840**	ICS-01, LK	**1530**
Strontium	**7440-24-6**	**4.75**	QB-01	**0.498**
Thallium	**7440-28-0**	**0.00336**		**3.84E-4**
Thorium	**7440-29-01**	**0.0198**		**0.00229**
Uranium	**NA**	**0.0140**		**0.0130**
Vanadium	**7440-62-2**	**1.54**		**0.0376**
Zinc	7440-66-6	15.4	U	74.7

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541259
Matrix: Air
Comments: MFK-AM02-111823-HM

Lab ID: 3112732-11
Sample Volume: 2044.401 m³
Filter ID:

Sampled: 11/18/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 00:13

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**788**	ICS-01, LK	**25.5**
Antimony	**7440-36-0**	**0.0846**	GC-BS, SL	**0.0351**
Arsenic	**7440-38-2**	**0.354**		**0.00760**
Barium	**7440-39-3**	**8.44**		**0.754**
Beryllium	**7440-41-7**	**0.0270**		**0.00264**
Cadmium	7440-43-9	0.0189	U	0.0867
Calcium	**7440-70-2**	**544**	GC-BS, LJ, QB-01	**232**
Chromium	**7440-47-3**	**1.66**		**1.62**
Cobalt	**7440-48-4**	**0.388**	QB-01	**0.0124**
Copper	**7440-50-8**	**9.95**		**2.39**
Iron	**7439-89-6**	**846**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.434**		**0.220**
Magnesium	**7439-95-4**	**364**	LK, ICS-01	**76.7**
Manganese	**7439-96-5**	**21.9**		**0.947**
Molybdenum	**7439-98-7**	**0.547**	QB-01	**0.170**
Nickel	**7440-02-0**	**0.696**		**0.637**
Phosphorus	7723-14-0	362	GC-BS, ICS-01, LK, U	995
Potassium	**7440-09-7**	**173**		**30.2**
Rubidium		**0.340**	QB-01	**0.0146**
Selenium	**7782-49-2**	**0.299**		**0.00875**
Sodium	**7440-23-5**	**2890**	ICS-01, LK	**1590**
Strontium	**7440-24-6**	**6.14**	QB-01	**0.519**
Thallium	**7440-28-0**	**0.00393**		**4.00E-4**
Thorium	**7440-29-01**	**0.0277**		**0.00239**
Uranium	**NA**	**0.0197**		**0.0135**
Vanadium	**7440-62-2**	**2.05**		**0.0392**
Zinc	7440-66-6	17.2	U	77.8

CERTIFICATE OF ANALYSIS

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

FILE #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541258
Matrix: Air
Comments: MFK-AM03-111823-HM

Lab ID: 3112732-12
Sample Volume: 1231.803 m³
Filter ID:

Sampled: 11/18/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 00:28

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**428**	ICS-01, LK	**42.4**
Antimony	**7440-36-0**	**0.129**	GC-BS, SL	**0.0582**
Arsenic	**7440-38-2**	**0.171**		**0.0126**
Barium	**7440-39-3**	**6.59**		**1.25**
Beryllium	**7440-41-7**	**0.0194**		**0.00439**
Cadmium	7440-43-9	0.0157	U	0.144
Calcium	**7440-70-2**	**544**	QB-01, GC-BS, LJ	**386**
Chromium	7440-47-3	2.38	U	2.68
Cobalt	**7440-48-4**	**0.303**	QB-01	**0.0206**
Copper	**7440-50-8**	**14.5**		**3.96**
Iron	**7439-89-6**	**569**	GC-BS	**32.0**
Lead	**7439-92-1**	**0.468**		**0.365**
Magnesium	**7439-95-4**	**392**	ICS-01, LK	**127**
Manganese	**7439-96-5**	**15.9**		**1.57**
Molybdenum	**7439-98-7**	**0.972**	QB-01	**0.281**
Nickel	7440-02-0	1.00	U	1.06
Phosphorus	7723-14-0	562	GC-BS, ICS-01, LK, U	1650
Potassium	**7440-09-7**	**139**		**50.2**
Rubidium		**0.245**	QB-01	**0.0242**
Selenium	**7782-49-2**	**0.224**		**0.0145**
Sodium	**7440-23-5**	**3540**	ICS-01, LK	**2640**
Strontium	**7440-24-6**	**4.77**	QB-01	**0.861**
Thallium	**7440-28-0**	**0.00393**		**6.64E-4**
Thorium	**7440-29-01**	**0.0181**		**0.00396**
Uranium	NA	0.0132	U	0.0225
Vanadium	**7440-62-2**	**1.37**		**0.0650**
Zinc	7440-66-6	21.8	U	129

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541272 FB
Matrix: Air
Lab ID: 3112732-13
Sample Volume: 2128.508 m³
Filter ID:
Sampled: 11/18/23 00:00
Received: 11/24/23 10:33
Analysis Date: 11/30/23 00:43

Comments: Field Blank - MFK-FB01-111823-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	15.0	ICS-01, LK, U	24.5
Antimony	7440-36-0	0.0106	GC-BS, SL, U	0.0337
Arsenic	7440-38-2	0.00362	U	0.00730
Barium	7440-39-3	0.465	U	0.725
Beryllium	7440-41-7	8.20E-4	U	0.00254
Cadmium	7440-43-9	0.00117	U	0.0833
Calcium	7440-70-2	146	GC-BS, LJ, QB-01, U	223
Chromium	7440-47-3	1.25	U	1.55
Cobalt	**7440-48-4**	**0.0251**	FB-01, QB-01	**0.0119**
Copper	7440-50-8	0.296	U	2.29
Iron	7439-89-6	13.5	GC-BS, U	18.5
Lead	7439-92-1	0.0348	U	0.211
Magnesium	7439-95-4	39.2	ICS-01, LK, U	73.7
Manganese	7439-96-5	0.200	U	0.910
Molybdenum	**7439-98-7**	**0.201**	FB-01, QB-01	**0.163**
Nickel	7440-02-0	0.385	U	0.612
Phosphorus	7723-14-0	303	ICS-01, LK, GC-BS, U	955
Potassium	7440-09-7	6.87	U	29.0
Rubidium		0.0103	QB-01, U	0.0140
Selenium	7782-49-2	0.00252	U	0.00841
Sodium	7440-23-5	729	ICS-01, LK, U	1530
Strontium	7440-24-6	0.354	QB-01, U	0.498
Thallium	7440-28-0	7.25E-5	U	3.84E-4
Thorium	7440-29-01	0.00222	U	0.00229
Uranium	NA	0.00126	U	0.0130
Vanadium	7440-62-2	0.0153	U	0.0376
Zinc	7440-66-6	8.88	U	74.7

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541254
Matrix: Air
Comments: MFK-AM01-111923-HM

Lab ID: 3112732-14
Sample Volume: 2173.355 m³
Filter ID:

Sampled: 11/19/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 00:56

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**490**	ICS-01, LK	**24.0**
Antimony	**7440-36-0**	**0.0678**	GC-BS, SL	**0.0330**
Arsenic	**7440-38-2**	**0.177**		**0.00715**
Barium	**7440-39-3**	**4.59**		**0.710**
Beryllium	**7440-41-7**	**0.0138**		**0.00249**
Cadmium	7440-43-9	0.0124	U	0.0816
Calcium	**7440-70-2**	**361**	GC-BS, LJ, QB-01	**219**
Chromium	**7440-47-3**	**1.52**		**1.52**
Cobalt	**7440-48-4**	**0.217**	QB-01	**0.0117**
Copper	**7440-50-8**	**13.1**		**2.25**
Iron	**7439-89-6**	**507**	GC-BS	**18.1**
Lead	**7439-92-1**	**0.374**		**0.207**
Magnesium	**7439-95-4**	**222**	ICS-01, LK	**72.2**
Manganese	**7439-96-5**	**13.1**		**0.891**
Molybdenum	**7439-98-7**	**0.649**	QB-01	**0.159**
Nickel	7440-02-0	0.552	U	0.600
Phosphorus	7723-14-0	320	GC-BS, ICS-01, LK, U	936
Potassium	**7440-09-7**	**88.3**		**28.4**
Rubidium		**0.172**	QB-01	**0.0137**
Selenium	**7782-49-2**	**0.191**		**0.00823**
Sodium	**7440-23-5**	**1940**	ICS-01, LK	**1500**
Strontium	**7440-24-6**	**3.63**	QB-01	**0.488**
Thallium	**7440-28-0**	**0.00321**		**3.77E-4**
Thorium	**7440-29-01**	**0.0142**		**0.00225**
Uranium	NA	0.0109	U	0.0127
Vanadium	**7440-62-2**	**1.22**		**0.0368**
Zinc	7440-66-6	10.5	U	73.1

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541283
Matrix: Air
Comments: MFK-AM02-111923-HM

Lab ID: 3112732-15
Sample Volume: 2059.832 m³
Filter ID:

Sampled: 11/19/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 01:11

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**3040**	ICS-01, LK	**25.4**
Antimony	**7440-36-0**	**0.0678**	SL, GC-BS	**0.0348**
Arsenic	**7440-38-2**	**0.874**		**0.00754**
Barium	**7440-39-3**	**21.4**		**0.749**
Beryllium	**7440-41-7**	**0.0845**		**0.00262**
Cadmium	7440-43-9	0.0666	U	0.0861
Calcium	**7440-70-2**	**1070**	GC-BS, LJ, QB-01	**231**
Chromium	**7440-47-3**	**3.09**		**1.60**
Cobalt	**7440-48-4**	**0.927**	QB-01	**0.0123**
Copper	**7440-50-8**	**13.7**		**2.37**
Lead	**7439-92-1**	**0.932**		**0.218**
Magnesium	**7439-95-4**	**385**	ICS-01, LK	**76.1**
Manganese	**7439-96-5**	**59.8**		**0.940**
Molybdenum	**7439-98-7**	**0.798**	QB-01	**0.168**
Nickel	**7440-02-0**	**1.69**		**0.633**
Phosphorus	7723-14-0	505	GC-BS, ICS-01, LK, U	987
Potassium	**7440-09-7**	**183**		**30.0**
Rubidium		**0.562**	QB-01	**0.0145**
Selenium	**7782-49-2**	**0.637**		**0.00869**
Sodium	**7440-23-5**	**2120**	ICS-01, LK	**1580**
Strontium	**7440-24-6**	**15.2**	QB-01	**0.515**
Thallium	**7440-28-0**	**0.00613**		**3.97E-4**
Thorium	**7440-29-01**	**0.117**		**0.00237**
Uranium	**NA**	**0.0624**		**0.0134**
Vanadium	**7440-62-2**	**6.28**		**0.0389**
Zinc	7440-66-6	15.5	U	77.2

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541283
Matrix: Air
Comments: MFK-AM02-111923-HM

Lab ID: 3112732-15RE1
Sample Volume: 2059.832 m³
Filter ID:

Sampled: 11/19/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 06:00

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Iron	**7439-89-6**	**2610**	D, GC-BS	**191**

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541282
Matrix: Air
Lab ID: 3112732-16
Sample Volume: 1405.224 m³
Filter ID:
Sampled: 11/19/23 23:59
Received: 11/24/23 10:33
Analysis Date: 11/30/23 01:26

Comments: MFK-AM03-111923-HM - Requested to use for MS/MSD

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**362**	ICS-01, LK	**37.2**
Antimony	**7440-36-0**	**0.113**	GC-BS, SL	**0.0511**
Arsenic	**7440-38-2**	**0.620**		**0.0111**
Barium	**7440-39-3**	**8.72**		**1.10**
Beryllium	**7440-41-7**	**0.0141**		**0.00384**
Cadmium	7440-43-9	0.0159	U	0.126
Calcium	**7440-70-2**	**418**	GC-BS, LJ, QB-01	**338**
Chromium	7440-47-3	1.97	U	2.35
Cobalt	**7440-48-4**	**0.228**	QB-01	**0.0181**
Copper	**7440-50-8**	**19.4**		**3.47**
Iron	**7439-89-6**	**452**	GC-BS	**28.0**
Lead	**7439-92-1**	**0.376**		**0.320**
Magnesium	**7439-95-4**	**296**	ICS-01, LK	**112**
Manganese	**7439-96-5**	**11.3**		**1.38**
Molybdenum	**7439-98-7**	**1.30**	QB-01	**0.247**
Nickel	7440-02-0	0.633	U	0.927
Phosphorus	7723-14-0	476	GC-BS, ICS-01, LK, U	1450
Potassium	**7440-09-7**	**108**		**44.0**
Rubidium		**0.201**	QB-01	**0.0212**
Selenium	**7782-49-2**	**0.199**		**0.0127**
Sodium	**7440-23-5**	**2800**	ICS-01, LK	**2320**
Strontium	**7440-24-6**	**3.61**	QB-01	**0.755**
Thallium	**7440-28-0**	**0.00371**		**5.82E-4**
Thorium	**7440-29-01**	**0.0143**		**0.00347**
Uranium	NA	0.0107	U	0.0197
Vanadium	**7440-62-2**	**1.05**		**0.0570**
Zinc	7440-66-6	15.3	U	113

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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541269 - FB
Matrix: Air
Lab ID: 3112732-17
Sample Volume: 2173.355 m³
Filter ID:
Sampled: 11/19/23 00:00
Received: 11/24/23 10:33
Analysis Date: 11/30/23 01:39

Comments: Field Blank - MFK-FB01-111923-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	22.2	ICS-01, LK, U	24.0
Antimony	7440-36-0	0.0108	GC-BS, SL, U	0.0330
Arsenic	7440-38-2	0.00575	U	0.00715
Barium	7440-39-3	0.599	U	0.710
Beryllium	7440-41-7	0.00100	U	0.00249
Cadmium	7440-43-9	0.00118	U	0.0816
Calcium	7440-70-2	139	GC-BS, LJ, QB-01, U	219
Chromium	7440-47-3	1.03	U	1.52
Cobalt	**7440-48-4**	**0.0228**	FB-01, QB-01	**0.0117**
Copper	7440-50-8	0.255	U	2.25
Iron	**7439-89-6**	**18.4**	FB-01, GC-BS	**18.1**
Lead	7439-92-1	0.0362	U	0.207
Magnesium	7439-95-4	38.8	ICS-01, LK, U	72.2
Manganese	7439-96-5	0.315	U	0.891
Molybdenum	**7439-98-7**	**0.165**	FB-01, QB-01	**0.159**
Nickel	7440-02-0	0.306	U	0.600
Phosphorus	7723-14-0	292	GC-BS, ICS-01, LK, U	936
Potassium	7440-09-7	7.46	U	28.4
Rubidium		0.0125	QB-01, U	0.0137
Selenium	7782-49-2	0.00457	U	0.00823
Sodium	7440-23-5	717	ICS-01, LK, U	1500
Strontium	7440-24-6	0.381	QB-01, U	0.488
Thallium	7440-28-0	6.48E-5	U	3.77E-4
Thorium	**7440-29-01**	**0.00249**	FB-01	**0.00225**
Uranium	NA	0.00135	U	0.0127
Vanadium	7440-62-2	0.0287	U	0.0368
Zinc	7440-66-6	6.44	U	73.1

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

FILE #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 2311066 - B3K2802										
Calibration Blank (2311066-CCB1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	114		ng/l							
Antimony	1.04		ng/l							
Arsenic	8.21		ng/l							
Barium	3.04		ng/l							
Beryllium	1.29		ng/l							
Cadmium	0.620		ng/l							
Calcium	1270		ng/l							
Chromium	8.37		ng/l							
Cobalt	0.722		ng/l							
Copper	54.4		ng/l							
Iron	59.1		ng/l							
Lead	11.6		ng/l							
Magnesium	48.3		ng/l							
Manganese	1.93		ng/l							
Molybdenum	23.7		ng/l							
Nickel	-0.741		ng/l							U
Phosphorus	-11.5		ng/l							U
Potassium	2650		ng/l							
Rubidium	1.04		ng/l							
Selenium	-0.114		ng/l							U
Sodium	3500		ng/l							
Strontium	1.66		ng/l							
Thallium	0.499		ng/l							
Thorium	0.555		ng/l							
Uranium	0.00786		ng/l							
Vanadium	0.872		ng/l							
Zinc	11.6		ng/l							
Calibration Blank (2311066-CCB2)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	24.2		ng/l							
Antimony	0.684		ng/l							
Arsenic	3.51		ng/l							
Barium	0.472		ng/l							
Beryllium	0.513		ng/l							
Cadmium	0.151		ng/l							
Calcium	400		ng/l							
Chromium	1.86		ng/l							
Cobalt	-0.136		ng/l							U
Copper	21.1		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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 2311066 - B3K2802										
Calibration Blank (2311066-CCB2) Contin				Prepared: 11/28/23 Analyzed: 11/29/23						
Iron	-31.2		ng/l							U
Lead	7.94		ng/l							
Magnesium	18.5		ng/l							
Manganese	-7.27		ng/l							U
Molybdenum	9.11		ng/l							
Nickel	-5.15		ng/l							U
Phosphorus	-593		ng/l							U
Potassium	1480		ng/l							
Rubidium	0.807		ng/l							
Selenium	1.62		ng/l							
Sodium	4600		ng/l							
Strontium	-1.17		ng/l							U
Thallium	0.325		ng/l							
Thorium	0.645		ng/l							
Uranium	0.00972		ng/l							
Vanadium	-11.1		ng/l							U
Zinc	-15.3		ng/l							U
Calibration Blank (2311066-CCB3)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	53.4		ng/l							
Antimony	0.585		ng/l							
Arsenic	3.21		ng/l							
Barium	0.346		ng/l							
Beryllium	-0.362		ng/l							U
Cadmium	0.185		ng/l							
Calcium	-1180		ng/l							U
Chromium	1.26		ng/l							
Cobalt	-0.269		ng/l							U
Copper	15.7		ng/l							
Iron	-43.9		ng/l							U
Lead	6.34		ng/l							
Magnesium	1.74		ng/l							
Manganese	-8.49		ng/l							U
Molybdenum	8.54		ng/l							
Nickel	-5.45		ng/l							U
Phosphorus	-317		ng/l							U
Potassium	383		ng/l							
Rubidium	1.36		ng/l							
Selenium	5.79		ng/l							

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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 #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 2311066 - B3K2802										
Calibration Blank (2311066-CCB3) Contin				Prepared: 11/28/23 Analyzed: 11/29/23						
Sodium	6050		ng/l							
Strontium	-2.56		ng/l							U
Thallium	0.342		ng/l							
Thorium	0.518		ng/l							
Uranium	-8.69E-4		ng/l							U
Vanadium	-17.9		ng/l							U
Zinc	-8.57		ng/l							U
Calibration Blank (2311066-CCB4)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aluminum	21.9		ng/l							
Antimony	0.791		ng/l							
Arsenic	1.89		ng/l							
Barium	-0.281		ng/l							U
Beryllium	-0.121		ng/l							U
Cadmium	0.327		ng/l							
Calcium	-212		ng/l							U
Chromium	0.942		ng/l							
Cobalt	-0.197		ng/l							U
Copper	22.4		ng/l							
Iron	-68.7		ng/l							U
Lead	7.10		ng/l							
Magnesium	27.7		ng/l							
Manganese	-7.80		ng/l							U
Molybdenum	11.0		ng/l							
Nickel	-3.84		ng/l							U
Phosphorus	-468		ng/l							U
Potassium	430		ng/l							
Rubidium	0.118		ng/l							
Selenium	-0.676		ng/l							U
Sodium	5630		ng/l							
Strontium	-1.61		ng/l							U
Thallium	0.344		ng/l							
Thorium	0.730		ng/l							
Uranium	-0.00892		ng/l							U
Vanadium	-20.4		ng/l							U
Zinc	-3.40		ng/l							U
Calibration Blank (2311066-CCB5)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aluminum	-13.1		ng/l							U
Antimony	0.431		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311066 - B3K2802										
Calibration Blank (2311066-CCB5) Contin				Prepared: 11/28/23 Analyzed: 11/30/23						
Arsenic	-0.418		ng/l							U
Barium	1.08		ng/l							
Beryllium	0.100		ng/l							
Cadmium	0.230		ng/l							
Calcium	-1130		ng/l							U
Chromium	-0.343		ng/l							U
Cobalt	-0.400		ng/l							U
Copper	18.9		ng/l							
Iron	-123		ng/l							U
Lead	7.10		ng/l							
Magnesium	-12.7		ng/l							U
Manganese	-10.2		ng/l							U
Molybdenum	8.84		ng/l							
Nickel	-6.23		ng/l							U
Phosphorus	-1300		ng/l							U
Potassium	-567		ng/l							U
Rubidium	0.682		ng/l							
Selenium	-0.105		ng/l							U
Sodium	3700		ng/l							
Strontium	-1.30		ng/l							U
Thallium	0.376		ng/l							
Thorium	0.670		ng/l							
Uranium	0.0108		ng/l							
Vanadium	-23.0		ng/l							U
Zinc	-12.5		ng/l							U
Calibration Blank (2311066-CCB6)				Prepared: 11/28/23 Analyzed: 11/30/23						
Aluminum	-33.0		ng/l							U
Antimony	0.593		ng/l							
Arsenic	0.549		ng/l							
Barium	0.534		ng/l							
Beryllium	-0.310		ng/l							U
Cadmium	0.225		ng/l							
Calcium	-1410		ng/l							U
Chromium	1.31		ng/l							
Cobalt	-0.407		ng/l							U
Copper	19.3		ng/l							
Iron	-92.4		ng/l							U
Lead	7.53		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 2311066 - B3K2802										
Calibration Blank (2311066-CCB6) Contin				Prepared: 11/28/23 Analyzed: 11/30/23						
Magnesium	25.7		ng/l							
Manganese	-9.27		ng/l							U
Molybdenum	9.37		ng/l							
Nickel	-6.94		ng/l							U
Phosphorus	-1470		ng/l							U
Potassium	-533		ng/l							U
Rubidium	0.299		ng/l							
Selenium	4.71		ng/l							
Sodium	3540		ng/l							
Strontium	-2.24		ng/l							U
Thallium	0.306		ng/l							
Thorium	0.576		ng/l							
Uranium	0.00541		ng/l							
Vanadium	-24.8		ng/l							U
Zinc	-1.17		ng/l							U
Calibration Check (2311066-CCV1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	1.63E6		ng/l	1.5000E6		109	90-110			
Antimony	20300		ng/l	20000		102	90-110			
Arsenic	20100		ng/l	20000		101	90-110			
Barium	204000		ng/l	200000		102	90-110			
Beryllium	4960		ng/l	5000.0		99.3	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Calcium	2.58E7		ng/l	2.5000E7		103	90-110			
Chromium	231000		ng/l	240000		96.1	90-110			
Cobalt	52800		ng/l	50000		106	90-110			
Copper	2.08E6		ng/l	2.0000E6		104	90-110			
Iron	2.62E6		ng/l	2.5000E6		105	90-110			
Lead	201000		ng/l	200000		101	90-110			
Magnesium	1.11E6		ng/l	1.0000E6		111	90-110			QX
Manganese	525000		ng/l	500000		105	90-110			
Molybdenum	50300		ng/l	50000		101	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Phosphorus	211000		ng/l	200000		105	90-110			
Potassium	2.59E6		ng/l	2.5000E6		103	90-110			
Rubidium	9930		ng/l	10000		99.3	90-110			
Selenium	19700		ng/l	20000		98.6	90-110			
Sodium	2.79E6		ng/l	2.5000E6		111	90-110			QX
Strontium	49900		ng/l	50000		99.8	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 2311066 - B3K2802										
Calibration Check (2311066-CCV1) Contin					Prepared: 11/28/23 Analyzed: 11/29/23					
Thallium	507		ng/l	500.00		101	90-110			
Thorium	509		ng/l	500.00		102	90-110			
Uranium	509		ng/l	500.00		102	90-110			
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	525000		ng/l	500000		105	90-110			
Calibration Check (2311066-CCV2)					Prepared: 11/28/23 Analyzed: 11/29/23					
Aluminum	1.52E6		ng/l	1.5000E6		102	90-110			
Antimony	20300		ng/l	20000		101	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	203000		ng/l	200000		102	90-110			
Beryllium	4730		ng/l	5000.0		94.5	90-110			
Cadmium	20500		ng/l	20000		102	90-110			
Calcium	2.52E7		ng/l	2.5000E7		101	90-110			
Chromium	232000		ng/l	240000		96.9	90-110			
Cobalt	51200		ng/l	50000		102	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Iron	2.54E6		ng/l	2.5000E6		101	90-110			
Lead	200000		ng/l	200000		100	90-110			
Magnesium	1.05E6		ng/l	1.0000E6		105	90-110			
Manganese	508000		ng/l	500000		102	90-110			
Molybdenum	50000		ng/l	50000		100	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Phosphorus	205000		ng/l	200000		103	90-110			
Potassium	2.51E6		ng/l	2.5000E6		101	90-110			
Rubidium	9940		ng/l	10000		99.4	90-110			
Selenium	19900		ng/l	20000		99.7	90-110			
Sodium	2.65E6		ng/l	2.5000E6		106	90-110			
Strontium	49700		ng/l	50000		99.3	90-110			
Thallium	500		ng/l	500.00		100	90-110			
Thorium	506		ng/l	500.00		101	90-110			
Uranium	503		ng/l	500.00		101	90-110			
Vanadium	19800		ng/l	20000		99.1	90-110			
Zinc	518000		ng/l	500000		104	90-110			
Calibration Check (2311066-CCV3)					Prepared: 11/28/23 Analyzed: 11/29/23					
Aluminum	1.49E6		ng/l	1.5000E6		99.0	90-110			
Antimony	20300		ng/l	20000		102	90-110			
Arsenic	20100		ng/l	20000		101	90-110			
Barium	202000		ng/l	200000		101	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311066 - B3K2802										
Calibration Check (2311066-CCV3) Contin					Prepared: 11/28/23 Analyzed: 11/29/23					
Beryllium	4980		ng/l	5000.0		99.6	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Calcium	2.50E7		ng/l	2.5000E7		99.8	90-110			
Chromium	231000		ng/l	240000		96.4	90-110			
Cobalt	50800		ng/l	50000		102	90-110			
Copper	2.04E6		ng/l	2.0000E6		102	90-110			
Iron	2.51E6		ng/l	2.5000E6		100	90-110			
Lead	201000		ng/l	200000		101	90-110			
Magnesium	1.03E6		ng/l	1.0000E6		103	90-110			
Manganese	505000		ng/l	500000		101	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Phosphorus	203000		ng/l	200000		101	90-110			
Potassium	2.48E6		ng/l	2.5000E6		99.1	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	19700		ng/l	20000		98.6	90-110			
Sodium	2.65E6		ng/l	2.5000E6		106	90-110			
Strontium	50200		ng/l	50000		100	90-110			
Thallium	499		ng/l	500.00		99.8	90-110			
Thorium	506		ng/l	500.00		101	90-110			
Uranium	507		ng/l	500.00		101	90-110			
Vanadium	19700		ng/l	20000		98.6	90-110			
Zinc	516000		ng/l	500000		103	90-110			
Calibration Check (2311066-CCV4)					Prepared: 11/28/23 Analyzed: 11/30/23					
Aluminum	1.43E6		ng/l	1.5000E6		95.0	90-110			
Antimony	20400		ng/l	20000		102	90-110			
Arsenic	19800		ng/l	20000		99.1	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4870		ng/l	5000.0		97.4	90-110			
Cadmium	20500		ng/l	20000		103	90-110			
Calcium	2.47E7		ng/l	2.5000E7		98.6	90-110			
Chromium	233000		ng/l	240000		96.9	90-110			
Cobalt	49700		ng/l	50000		99.3	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.7	90-110			
Iron	2.46E6		ng/l	2.5000E6		98.4	90-110			
Lead	201000		ng/l	200000		100	90-110			
Magnesium	984000		ng/l	1.0000E6		98.4	90-110			
Manganese	497000		ng/l	500000		99.3	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 2311066 - B3K2802										
Calibration Check (2311066-CCV4) Contin					Prepared: 11/28/23 Analyzed: 11/30/23					
Molybdenum	49900		ng/l	50000		99.8	90-110			
Nickel	118000		ng/l	120000		98.3	90-110			
Phosphorus	186000		ng/l	200000		93.0	90-110			
Potassium	2.41E6		ng/l	2.5000E6		96.5	90-110			
Rubidium	9880		ng/l	10000		98.8	90-110			
Selenium	19800		ng/l	20000		98.8	90-110			
Sodium	2.46E6		ng/l	2.5000E6		98.4	90-110			
Strontium	49900		ng/l	50000		99.8	90-110			
Thallium	496		ng/l	500.00		99.2	90-110			
Thorium	508		ng/l	500.00		102	90-110			
Uranium	509		ng/l	500.00		102	90-110			
Vanadium	19900		ng/l	20000		99.6	90-110			
Zinc	512000		ng/l	500000		102	90-110			
Calibration Check (2311066-CCV5)					Prepared: 11/28/23 Analyzed: 11/30/23					
Aluminum	1.38E6		ng/l	1.5000E6		92.1	90-110			
Antimony	20500		ng/l	20000		102	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	203000		ng/l	200000		101	90-110			
Beryllium	4980		ng/l	5000.0		99.6	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Calcium	2.46E7		ng/l	2.5000E7		98.2	90-110			
Chromium	236000		ng/l	240000		98.4	90-110			
Cobalt	49500		ng/l	50000		99.0	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Iron	2.45E6		ng/l	2.5000E6		98.0	90-110			
Lead	202000		ng/l	200000		101	90-110			
Magnesium	957000		ng/l	1.0000E6		95.7	90-110			
Manganese	491000		ng/l	500000		98.1	90-110			
Molybdenum	50200		ng/l	50000		100	90-110			
Nickel	118000		ng/l	120000		98.1	90-110			
Phosphorus	183000		ng/l	200000		91.3	90-110			
Potassium	2.35E6		ng/l	2.5000E6		94.2	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	19600		ng/l	20000		98.1	90-110			
Sodium	2.43E6		ng/l	2.5000E6		97.3	90-110			
Strontium	50400		ng/l	50000		101	90-110			
Thallium	500		ng/l	500.00		100	90-110			
Thorium	516		ng/l	500.00		103	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311066 - B3K2802										
Calibration Check (2311066-CCV5) Contin					Prepared: 11/28/23 Analyzed: 11/30/23					
Uranium	515		ng/l	500.00		103	90-110			
Vanadium	20200		ng/l	20000		101	90-110			
Zinc	516000		ng/l	500000		103	90-110			
Calibration Check (2311066-CCV6)					Prepared: 11/28/23 Analyzed: 11/30/23					
Aluminum	1.39E6		ng/l	1.5000E6		92.6	90-110			
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20200		ng/l	20000		101	90-110			
Barium	204000		ng/l	200000		102	90-110			
Beryllium	4780		ng/l	5000.0		95.5	90-110			
Cadmium	20700		ng/l	20000		103	90-110			
Calcium	2.48E7		ng/l	2.5000E7		99.0	90-110			
Chromium	237000		ng/l	240000		98.7	90-110			
Cobalt	49600		ng/l	50000		99.3	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Iron	2.46E6		ng/l	2.5000E6		98.3	90-110			
Lead	202000		ng/l	200000		101	90-110			
Magnesium	958000		ng/l	1.0000E6		95.8	90-110			
Manganese	490000		ng/l	500000		98.1	90-110			
Molybdenum	50200		ng/l	50000		100	90-110			
Nickel	119000		ng/l	120000		98.8	90-110			
Phosphorus	188000		ng/l	200000		94.1	90-110			
Potassium	2.36E6		ng/l	2.5000E6		94.2	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	20300		ng/l	20000		102	90-110			
Sodium	2.42E6		ng/l	2.5000E6		96.9	90-110			
Strontium	50300		ng/l	50000		101	90-110			
Thallium	504		ng/l	500.00		101	90-110			
Thorium	520		ng/l	500.00		104	90-110			
Uranium	517		ng/l	500.00		103	90-110			
Vanadium	20200		ng/l	20000		101	90-110			
Zinc	516000		ng/l	500000		103	90-110			
High Cal Check (2311066-HCV1)					Prepared: 11/28/23 Analyzed: 11/29/23					
Aluminum	3.04E6		ng/l	3.0000E6		101	95-105			
Antimony	40300		ng/l	40000		101	95-105			
Arsenic	40300		ng/l	40000		101	95-105			
Barium	405000		ng/l	400000		101	95-105			
Beryllium	10200		ng/l	10000		102	95-105			
Cadmium	40000		ng/l	40000		100	95-105			

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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 2311066 - B3K2802										
High Cal Check (2311066-HCV1) Continue				Prepared: 11/28/23 Analyzed: 11/29/23						
Calcium	5.04E7		ng/l	5.0000E7		101	95-105			
Chromium	477000		ng/l	480000		99.4	95-105			
Cobalt	100000		ng/l	100000		100	95-105			
Copper	3.99E6		ng/l	4.0000E6		99.9	95-105			
Iron	5.07E6		ng/l	5.0000E6		101	95-105			
Lead	400000		ng/l	400000		100	95-105			
Magnesium	2.04E6		ng/l	2.0000E6		102	95-105			
Manganese	1.01E6		ng/l	1.0000E6		101	95-105			
Molybdenum	100000		ng/l	100000		100	95-105			
Nickel	240000		ng/l	240000		99.8	95-105			
Phosphorus	409000		ng/l	400000		102	95-105			
Potassium	5.05E6		ng/l	5.0000E6		101	95-105			
Rubidium	20000		ng/l	20000		100	95-105			
Selenium	40500		ng/l	40000		101	95-105			
Sodium	5.11E6		ng/l	5.0000E6		102	95-105			
Strontium	101000		ng/l	100000		101	95-105			
Thallium	1000		ng/l	1000.0		100	95-105			
Thorium	1020		ng/l	1000.0		102	95-105			
Uranium	1020		ng/l	1000.0		102	95-105			
Vanadium	40300		ng/l	40000		101	95-105			
Zinc	998000		ng/l	1.0000E6		99.8	95-105			
Initial Cal Blank (2311066-ICB1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	-12.8		ng/l							U
Antimony	1.66		ng/l							
Arsenic	2.01		ng/l							
Barium	2.28		ng/l							
Beryllium	0.610		ng/l							
Cadmium	0.629		ng/l							
Calcium	916		ng/l							
Chromium	4.95		ng/l							
Cobalt	0.403		ng/l							
Copper	50.0		ng/l							
Iron	79.0		ng/l							
Lead	12.3		ng/l							
Magnesium	57.3		ng/l							
Manganese	5.65		ng/l							
Molybdenum	16.7		ng/l							
Nickel	-4.92		ng/l							U

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

FILE #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 2311066 - B3K2802										
Initial Cal Blank (2311066-ICB1) Continu				Prepared: 11/28/23 Analyzed: 11/29/23						
Phosphorus	740		ng/l							
Potassium	975		ng/l							
Rubidium	1.12		ng/l							
Selenium	7.68		ng/l							
Sodium	690		ng/l							
Strontium	0.925		ng/l							
Thallium	0.447		ng/l							
Thorium	0.475		ng/l							
Uranium	0.0187		ng/l							
Vanadium	12.2		ng/l							
Zinc	-1.42		ng/l							U
Initial Cal Check (2311066-ICV1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	1.51E6		ng/l	1.5000E6		101	90-110			
Antimony	20000		ng/l	20000		99.8	90-110			
Arsenic	20100		ng/l	20000		100	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	5130		ng/l	5000.0		103	90-110			
Cadmium	21000		ng/l	20000		105	90-110			
Calcium	2.52E7		ng/l	2.5000E7		101	90-110			
Chromium	236000		ng/l	240000		98.3	90-110			
Cobalt	51400		ng/l	50000		103	90-110			
Copper	2.03E6		ng/l	2.0000E6		102	90-110			
Iron	2.56E6		ng/l	2.5000E6		102	90-110			
Lead	198000		ng/l	200000		99.0	90-110			
Magnesium	1.03E6		ng/l	1.0000E6		103	90-110			
Manganese	503000		ng/l	500000		101	90-110			
Molybdenum	50100		ng/l	50000		100	90-110			
Nickel	122000		ng/l	120000		101	90-110			
Phosphorus	203000		ng/l	200000		101	90-110			
Potassium	2.54E6		ng/l	2.5000E6		101	90-110			
Rubidium	9740		ng/l	10000		97.4	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Sodium	2.54E6		ng/l	2.5000E6		101	90-110			
Strontium	50400		ng/l	50000		101	90-110			
Thallium	483		ng/l	500.00		96.6	90-110			
Thorium	495		ng/l	500.00		99.0	90-110			
Uranium	496		ng/l	500.00		99.1	90-110			
Vanadium	20500		ng/l	20000		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 2311066 - B3K2802										
Initial Cal Check (2311066-ICV1) Continu				Prepared: 11/28/23 Analyzed: 11/29/23						
Zinc	523000		ng/l	500000		105	90-110			
Interference Check A (2311066-IFA1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	1.72E7		ng/l	1.5000E7		114	80-120			ICS-01, LK
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
Calcium	9.98E7		ng/l	1.0040E8		99.4	80-120			
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U
Iron	1.57E7		ng/l	1.5000E7		105	80-120			
Lead	0.00		ng/l				80-120			U
Magnesium	1.72E7		ng/l	1.5000E7		115	80-120			ICS-01, LK
Manganese	0.00		ng/l				80-120			U
Molybdenum	303000		ng/l	300000		101	80-120			
Nickel	0.00		ng/l				80-120			U
Phosphorus	1.81E7		ng/l	1.5000E7		121	80-120			ICS-01, LK
Potassium	1.63E7		ng/l	1.5000E7		108	80-120			
Rubidium	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Sodium	1.73E7		ng/l	1.5000E7		115	80-120			ICS-01, LK
Strontium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			U
Thorium	0.00		ng/l				80-120			U
Uranium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U
Interference Check B (2311066-IFB1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	2.06E7		ng/l	1.6500E7		125	80-120			ICS-01, LK
Antimony	20600		ng/l	20000		103	80-120			
Arsenic	20400		ng/l	20000		102	80-120			
Barium	206000		ng/l	200000		103	80-120			
Beryllium	5400		ng/l	5000.0		108	80-120			
Cadmium	19800		ng/l	20000		98.8	80-120			
Calcium	1.29E8		ng/l	1.2540E8		103	80-120			
Chromium	231000		ng/l	240000		96.2	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311066 - B3K2802										
Interference Check B (2311066-IFB1) Co					Prepared: 11/28/23 Analyzed: 11/29/23					
Cobalt	52100		ng/l	50000		104	80-120			
Copper	1.92E6		ng/l	2.0000E6		96.0	80-120			
Iron	1.90E7		ng/l	1.7500E7		109	80-120			
Lead	206000		ng/l	200000		103	80-120			
Magnesium	1.98E7		ng/l	1.6000E7		124	80-120			ICS-01, LK
Manganese	564000		ng/l	500000		113	80-120			
Molybdenum	352000		ng/l	350000		101	80-120			
Nickel	119000		ng/l	120000		99.2	80-120			
Phosphorus	1.96E7		ng/l	1.5200E7		129	80-120			ICS-01, LK
Potassium	2.02E7		ng/l	1.7500E7		115	80-120			
Rubidium	10300		ng/l	10000		103	80-120			
Selenium	19400		ng/l	20000		97.1	80-120			
Sodium	2.21E7		ng/l	1.7500E7		126	80-120			ICS-01, LK
Strontium	51000		ng/l	50000		102	80-120			
Thallium	522		ng/l	500.00		104	80-120			
Thorium	550		ng/l	500.00		110	80-120			
Uranium	551		ng/l	500.00		110	80-120			
Vanadium	19300		ng/l	20000		96.7	80-120			
Zinc	478000		ng/l	500000		95.6	80-120			
Batch B3K2802 - ICP-MS Extraction										
Blank (B3K2802-BLK1)					Prepared: 11/28/23 Analyzed: 11/29/23					
Aluminum	ND	32.1	ng/m³ Air							ICS-01, LK, U
Antimony	ND	0.0441	ng/m³ Air							GC-BS, SL, U
Arsenic	ND	0.00955	ng/m³ Air							U
Barium	ND	0.948	ng/m³ Air							U
Beryllium	ND	0.00332	ng/m³ Air							U
Cadmium	ND	0.109	ng/m³ Air							U
Calcium	ND	292	ng/m³ Air							GC-BS, LJ, QB-01, U
Chromium	ND	2.03	ng/m³ Air							U
Cobalt	ND	0.0156	ng/m³ Air							QB-01, U
Copper	ND	3.00	ng/m³ Air							U
Iron	ND	24.2	ng/m³ Air							GC-BS, U
Lead	ND	0.276	ng/m³ Air							U
Magnesium	ND	96.4	ng/m³ Air							ICS-01, LK, QX, U
Manganese	ND	1.19	ng/m³ Air							U
Molybdenum	ND	0.213	ng/m³ Air							QB-01, U
Nickel	ND	0.801	ng/m³ Air							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 B3K2802 - ICP-MS Extraction										
Blank (B3K2802-BLK1) Continued				Prepared: 11/28/23 Analyzed: 11/29/23						
Phosphorus	ND	1250	ng/m³ Air							GC-BS, ICS-01, LK, U
Potassium	ND	38.0	ng/m³ Air							U
Rubidium	ND	0.0183	ng/m³ Air							QB-01, U
Selenium	ND	0.0110	ng/m³ Air							U
Sodium	ND	2000	ng/m³ Air							ICS-01, LK, QX, U
Strontium	ND	0.652	ng/m³ Air							QB-01, U
Thallium	ND	5.03E-4	ng/m³ Air							U
Thorium	ND	0.00300	ng/m³ Air							U
Uranium	ND	0.0170	ng/m³ Air							U
Vanadium	ND	0.0492	ng/m³ Air							U
Zinc	ND	97.7	ng/m³ Air							U
LCS (B3K2802-BS1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	95.5	32.1	ng/m³ Air	82.975		115	80-120			ICS-01, LK
Antimony	0.540	0.0441	ng/m³ Air	1.3829		39.1	80-120			GC-BS, SL
Arsenic	2.79	0.00955	ng/m³ Air	2.7658		101	80-120			
Barium	29.0	0.948	ng/m³ Air	27.658		105	80-120			
Beryllium	1.31	0.00332	ng/m³ Air	1.3829		95.0	80-120			
Cadmium	1.45	0.109	ng/m³ Air	1.3829		105	80-120			
Calcium	585	292	ng/m³ Air	69.146		846	80-120			GC-BS, LJ, QB-01
Chromium	15.5	2.03	ng/m³ Air	13.829		112	80-120			
Cobalt	1.49	0.0156	ng/m³ Air	1.3829		107	80-120			QB-01
Copper	30.8	3.00	ng/m³ Air	27.658		111	80-120			
Iron	49.4	24.2	ng/m³ Air	27.658		178	80-120			GC-BS
Lead	14.1	0.276	ng/m³ Air	13.829		102	80-120			
Magnesium	ND	96.4	ng/m³ Air	27.658			80-120			ICS-01, LK, QX, U
Manganese	8.86	1.19	ng/m³ Air	8.2975		107	80-120			
Molybdenum	1.70	0.213	ng/m³ Air	1.3829		123	80-120			QB-01
Nickel	3.16	0.801	ng/m³ Air	2.7658		114	80-120			
Phosphorus	ND	1250	ng/m³ Air	13.829			80-120			GC-BS, ICS-01, LK, U
Potassium	73.4	38.0	ng/m³ Air	55.317		133	80-120			
Rubidium	1.37	0.0183	ng/m³ Air	1.3829		99.1	80-120			QB-01
Selenium	2.71	0.0110	ng/m³ Air	2.7658		98.0	80-120			
Sodium	ND	2000	ng/m³ Air	55.317			80-120			ICS-01, LK, QX, U
Strontium	2.30	0.652	ng/m³ Air	1.3829		166	80-120			QB-01

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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 B3K2802 - ICP-MS Extraction										
LCS (B3K2802-BS1) Continued				Prepared: 11/28/23 Analyzed: 11/29/23						
Thallium	0.136	5.03E-4	ng/m³ Air	0.13829		98.1	80-120			
Thorium	0.139	0.00300	ng/m³ Air	0.13829		101	80-120			
Uranium	0.136	0.0170	ng/m³ Air	0.13829		98.2	80-120			
Vanadium	2.84	0.0492	ng/m³ Air	2.7658		103	80-120			
Zinc	111	97.7	ng/m³ Air	82.975		134	80-120			
Duplicate (B3K2802-DUP2)				**Source: 3112732-10** Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	594	24.5	ng/m³ Air		578			2.80	10	ICS-01, LK
Antimony	0.101	0.0337	ng/m³ Air		0.0990			1.91	10	GC-BS, SL
Arsenic	0.356	0.00730	ng/m³ Air		0.352			1.17	10	
Barium	6.33	0.725	ng/m³ Air		6.25			1.21	10	
Beryllium	0.0195	0.00254	ng/m³ Air		0.0195			0.0449	10	
Cadmium	ND	0.0833	ng/m³ Air		ND				10	U
Calcium	475	223	ng/m³ Air		473			0.549	10	GC-BS, LJ, QB-01
Chromium	1.85	1.55	ng/m³ Air		1.81			2.04	10	
Cobalt	0.327	0.0119	ng/m³ Air		0.320			2.14	10	QB-01
Copper	17.9	2.29	ng/m³ Air		17.7			1.53	10	
Iron	666	18.5	ng/m³ Air		652			2.16	10	GC-BS
Lead	0.890	0.211	ng/m³ Air		0.883			0.834	10	
Magnesium	353	73.7	ng/m³ Air		345			2.31	10	ICS-01, LK
Manganese	17.3	0.910	ng/m³ Air		17.1			1.42	10	
Molybdenum	0.611	0.163	ng/m³ Air		0.603			1.27	10	QB-01
Nickel	0.700	0.612	ng/m³ Air		0.691			1.32	10	
Phosphorus	ND	955	ng/m³ Air		ND				10	GC-BS, ICS-01, LK, U
Potassium	121	29.0	ng/m³ Air		120			1.01	10	
Rubidium	0.220	0.0140	ng/m³ Air		0.214			2.80	10	QB-01
Selenium	0.239	0.00841	ng/m³ Air		0.253			5.41	10	
Sodium	2920	1530	ng/m³ Air		2840			3.02	10	ICS-01, LK
Strontium	4.82	0.498	ng/m³ Air		4.75			1.39	10	QB-01
Thallium	0.00329	3.84E-4	ng/m³ Air		0.00336			2.35	10	
Thorium	0.0201	0.00229	ng/m³ Air		0.0198			1.19	10	
Uranium	0.0143	0.0130	ng/m³ Air		0.0140			1.45	10	
Vanadium	1.56	0.0376	ng/m³ Air		1.54			1.43	10	
Zinc	ND	74.7	ng/m³ Air		ND				10	U
Duplicate (B3K2802-DUP3)				**Source: 3112732-03R** Prepared: 11/28/23 Analyzed: 11/30/23						
Aluminum	560	260	ng/m³ Air		613			9.01	10	D, ICS-01, LK
Antimony	ND	0.357	ng/m³ Air		ND				10	D, GC-BS, SL, 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 B3K2802 - ICP-MS Extraction										
Duplicate (B3K2802-DUP3) Continued			**Source: 3112732-03R**		Prepared: 11/28/23 Analyzed: 11/30/23					
Arsenic	0.131	0.0772	ng/m³ Air		0.129			1.27	10	D
Barium	7.69	7.67	ng/m³ Air		ND			1.65	10	D
Beryllium	ND	0.0268	ng/m³ Air		ND				10	D, U
Cadmium	ND	0.881	ng/m³ Air		ND				10	D, U
Calcium	ND	2360	ng/m³ Air		ND				10	D, GC-BS, LJ, QB-01, U
Chromium	ND	16.4	ng/m³ Air		ND				10	D, U
Cobalt	0.379	0.126	ng/m³ Air		0.451			17.5	10	QB-01, D
Copper	ND	24.3	ng/m³ Air		ND				10	D, U
Iron	738	196	ng/m³ Air		750			1.67	10	D, GC-BS
Lead	ND	2.23	ng/m³ Air		ND				10	D, U
Magnesium	ND	779	ng/m³ Air		ND				10	D, ICS-01, LK, U
Manganese	19.3	9.62	ng/m³ Air		20.1			3.69	10	D
Molybdenum	ND	1.72	ng/m³ Air		ND				10	D, QB-01, U
Nickel	ND	6.48	ng/m³ Air		ND				10	D, U
Phosphorus	ND	10100	ng/m³ Air		ND				10	D, GC-BS, ICS-01, LK, U
Potassium	ND	307	ng/m³ Air		ND				10	D, U
Rubidium	0.280	0.148	ng/m³ Air		0.258			8.14	10	D, QB-01
Selenium	0.228	0.0889	ng/m³ Air		0.235			3.15	10	D
Sodium	ND	16200	ng/m³ Air		ND				10	D, ICS-01, LK, U
Strontium	5.91	5.27	ng/m³ Air		5.62			5.10	10	D, QB-01
Thallium	ND	0.00407	ng/m³ Air		ND				10	D, U
Thorium	0.0266	0.0243	ng/m³ Air		0.0274			2.93	10	D
Uranium	ND	0.137	ng/m³ Air		ND				10	D, U
Vanadium	1.71	0.398	ng/m³ Air		1.65			3.50	10	D
Zinc	ND	790	ng/m³ Air		ND				10	D, U
Duplicate (B3K2802-DUP4)			**Source: 3112732-10R**		Prepared: 11/28/23 Analyzed: 11/30/23					
Aluminum	521	245	ng/m³ Air		578			10.4	10	D, ICS-01, LK
Antimony	ND	0.337	ng/m³ Air		ND				10	D, GC-BS, SL, U
Arsenic	0.336	0.0730	ng/m³ Air		0.352			4.60	10	D
Barium	ND	7.25	ng/m³ Air		ND				10	D, U
Beryllium	ND	0.0254	ng/m³ Air		ND				10	D, U
Cadmium	ND	0.833	ng/m³ Air		ND				10	D, U
Calcium	ND	2230	ng/m³ Air		ND				10	D, GC-BS, LJ, QB-01, U
Chromium	ND	15.5	ng/m³ Air		ND				10	D, U

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

FILE #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 B3K2802 - ICP-MS Extraction										
Duplicate (B3K2802-DUP4) Continued			**Source: 3112732-10R**		Prepared: 11/28/23		Analyzed: 11/30/23			
Cobalt	0.308	0.119	ng/m³ Air		0.320			3.82	10	D, QB-01
Copper	ND	22.9	ng/m³ Air		ND				10	D, U
Iron	626	185	ng/m³ Air		652			4.18	10	D, GC-BS
Lead	ND	2.11	ng/m³ Air		ND				10	D, U
Magnesium	ND	737	ng/m³ Air		ND				10	D, ICS-01, LK, U
Manganese	16.2	9.10	ng/m³ Air		17.1			5.43	10	D
Molybdenum	ND	1.63	ng/m³ Air		ND				10	D, QB-01, U
Nickel	ND	6.12	ng/m³ Air		ND				10	D, U
Phosphorus	ND	9550	ng/m³ Air		ND				10	D, GC-BS, ICS-01, LK, U
Potassium	ND	290	ng/m³ Air		ND				10	D, U
Rubidium	0.209	0.140	ng/m³ Air		0.214			2.23	10	D, QB-01
Selenium	0.247	0.0841	ng/m³ Air		0.253			2.21	10	D
Sodium	ND	15300	ng/m³ Air		ND				10	D, ICS-01, LK, U
Strontium	ND	4.98	ng/m³ Air		ND				10	D, QB-01, U
Thallium	ND	0.00384	ng/m³ Air		ND				10	D, U
Thorium	ND	0.0229	ng/m³ Air		ND				10	D, U
Uranium	ND	0.130	ng/m³ Air		ND				10	D, U
Vanadium	1.57	0.376	ng/m³ Air		1.54			2.34	10	D
Zinc	ND	747	ng/m³ Air		ND				10	D, U
Matrix Spike (B3K2802-MS1)			**Source: 3112732-03**		Prepared: 11/28/23		Analyzed: 11/29/23			
Aluminum	727	26.0	ng/m³ Air	67.091	613	169	80-120			ICS-01, LK, QM-4X
Antimony	0.637	0.0357	ng/m³ Air	1.1182	0.109	47.2	80-120			GC-BS, QM-07, SL
Arsenic	2.36	0.00772	ng/m³ Air	2.2364	0.129	99.8	80-120			
Barium	31.6	0.767	ng/m³ Air	22.364	7.56	107	80-120			
Beryllium	1.12	0.00268	ng/m³ Air	1.1182	0.0253	98.0	80-120			
Cadmium	1.21	0.0881	ng/m³ Air	1.1182	ND	108	80-120			
Calcium	657	236	ng/m³ Air	55.909	544	203	80-120			GC-BS, LJ, QB-01, QM-4X
Chromium	12.8	1.64	ng/m³ Air	11.182	1.72	99.1	80-120			
Cobalt	1.60	0.0126	ng/m³ Air	1.1182	0.451	103	80-120			QB-01
Copper	41.8	2.43	ng/m³ Air	22.364	15.9	116	80-120			
Iron	826	19.6	ng/m³ Air	22.364	750	338	80-120			GC-BS, QM-4X
Lead	11.8	0.223	ng/m³ Air	11.182	0.302	103	80-120			
Magnesium	455	77.9	ng/m³ Air	22.364	401	244	80-120			ICS-01, LK, QM-4X, QX

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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 B3K2802 - ICP-MS Extraction										
Matrix Spike (B3K2802-MS1) Continued Source: 3112732-03 Prepared: 11/28/23 Analyzed: 11/29/23										
Manganese	28.8	0.962	ng/m³ Air	6.7091	20.1	131	80-120			QM-07
Molybdenum	1.94	0.172	ng/m³ Air	1.1182	0.787	103	80-120			QB-01
Nickel	2.96	0.648	ng/m³ Air	2.2364	0.674	102	80-120			
Phosphorus	ND	1010	ng/m³ Air	11.182	ND		80-120			GC-BS, ICS-01, LK,
Potassium	208	30.7	ng/m³ Air	44.727	147	136	80-120			QM-07
Rubidium	1.33	0.0148	ng/m³ Air	1.1182	0.258	96.2	80-120			QB-01
Selenium	2.47	0.00889	ng/m³ Air	2.2364	0.235	99.8	80-120			
Sodium	3400	1620	ng/m³ Air	44.727	3150	551	80-120			ICS-01, LK, QM-4X, QX
Strontium	6.92	0.527	ng/m³ Air	1.1182	5.62	116	80-120			QB-01, QM-4)
Thallium	0.111	4.07E-4	ng/m³ Air	0.11182	0.00148	98.0	80-120			
Thorium	0.0900	0.00243	ng/m³ Air	0.11182	0.0274	56.0	80-120			QM-07
Uranium	0.127	0.0137	ng/m³ Air	0.11182	0.0147	101	80-120			
Vanadium	4.03	0.0398	ng/m³ Air	2.2364	1.65	106	80-120			
Zinc	91.0	79.0	ng/m³ Air	67.091	ND	136	80-120			
Matrix Spike Dup (B3K2802-MSD1) Source: 3112732-03 Prepared: 11/28/23 Analyzed: 11/29/23										
Aluminum	681	26.0	ng/m³ Air	67.091	613	101	80-120	6.50	20	ICS-01, LK, QM-4X
Antimony	0.656	0.0357	ng/m³ Air	1.1182	0.109	48.9	80-120	2.92	20	SL, GC-BS, QM-07
Arsenic	2.29	0.00772	ng/m³ Air	2.2364	0.129	96.8	80-120	2.85	20	
Barium	30.1	0.767	ng/m³ Air	22.364	7.56	101	80-120	4.65	20	
Beryllium	1.07	0.00268	ng/m³ Air	1.1182	0.0253	93.3	80-120	4.82	20	
Cadmium	1.16	0.0881	ng/m³ Air	1.1182	ND	103	80-120	4.28	20	
Calcium	599	236	ng/m³ Air	55.909	544	98.3	80-120	9.30	20	GC-BS, LJ, QB-01
Chromium	12.3	1.64	ng/m³ Air	11.182	1.72	95.1	80-120	3.56	20	
Cobalt	1.55	0.0126	ng/m³ Air	1.1182	0.451	98.4	80-120	3.33	20	QB-01
Copper	43.7	2.43	ng/m³ Air	22.364	15.9	124	80-120	4.37	20	QM-07
Iron	760	19.6	ng/m³ Air	22.364	750	45.3	80-120	8.24	20	GC-BS, QM-4)
Lead	11.6	0.223	ng/m³ Air	11.182	0.302	101	80-120	1.42	20	
Magnesium	427	77.9	ng/m³ Air	22.364	401	117	80-120	6.41	20	ICS-01, LK, QX
Manganese	27.2	0.962	ng/m³ Air	6.7091	20.1	107	80-120	5.77	20	
Molybdenum	1.88	0.172	ng/m³ Air	1.1182	0.787	97.7	80-120	3.32	20	QB-01
Nickel	2.85	0.648	ng/m³ Air	2.2364	0.674	97.2	80-120	3.73	20	
Phosphorus	ND	1010	ng/m³ Air	11.182	ND		80-120		20	GC-BS, ICS-01, LK,
Potassium	192	30.7	ng/m³ Air	44.727	147	99.3	80-120	8.20	20	

CERTIFICATE OF ANALYSIS

Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
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FILE #: 0000.00
REPORTED: 12/01/23 13:09
SUBMITTED: 11/24/23
AQS SITE CODE:
SITE CODE: Maui 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 B3K2802 - ICP-MS Extraction										
Matrix Spike Dup (B3K2802-MSD1) Conti		**Source: 3112732-03**			Prepared: 11/28/23		Analyzed: 11/29/23			
Rubidium	1.30	0.0148	ng/m³ Air	1.1182	0.258	92.8	80-120	2.87	20	QB-01
Selenium	2.39	0.00889	ng/m³ Air	2.2364	0.235	96.4	80-120	3.13	20	
Sodium	3230	1620	ng/m³ Air	44.727	3150	167	80-120	5.20	20	ICS-01, LK, QX
Strontium	6.58	0.527	ng/m³ Air	1.1182	5.62	86.2	80-120	5.00	20	QB-01
Thallium	0.107	4.07E-4	ng/m³ Air	0.11182	0.00148	94.6	80-120	3.53	20	QM-4X
Thorium	0.0818	0.00243	ng/m³ Air	0.11182	0.0274	48.7	80-120	9.54	20	QM-07
Uranium	0.122	0.0137	ng/m³ Air	0.11182	0.0147	95.9	80-120	4.30	20	
Vanadium	3.79	0.0398	ng/m³ Air	2.2364	1.65	96.0	80-120	5.93	20	
Zinc	89.0	79.0	ng/m³ Air	67.091	ND	133	80-120	2.19	20	
Post Spike (B3K2802-PS1)		**Source: 3112732-03**			Prepared: 11/28/23		Analyzed: 11/29/23			
Aluminum	646	26.0	ng/m³ Air	22.364	613	149	75-125			A-01, ICS-01, LK
Antimony	0.326	0.0357	ng/m³ Air	0.22364	0.109	96.8	75-125			GC-BS, SL
Arsenic	1.19	0.00772	ng/m³ Air	1.1182	0.129	94.4	75-125			
Barium	9.61	0.767	ng/m³ Air	2.2364	7.56	91.8	75-125			
Beryllium	0.237	0.00268	ng/m³ Air	0.22364	0.0253	94.8	75-125			
Cadmium	0.121	0.0881	ng/m³ Air	0.11182	ND	108	75-125			
Calcium	578	236	ng/m³ Air	22.364	544	154	75-125			GC-BS, LJ, QB-01
Chromium	2.71	1.64	ng/m³ Air	1.1182	1.72	89.0	75-125			
Cobalt	0.678	0.0126	ng/m³ Air	0.22364	0.451	101	75-125			QB-01
Copper	27.5	2.43	ng/m³ Air	11.182	15.9	103	75-125			
Iron	775	19.6	ng/m³ Air	22.364	750	111	75-125			GC-BS
Lead	22.2	0.223	ng/m³ Air	22.364	0.302	98.1	75-125			
Magnesium	430	77.9	ng/m³ Air	22.364	401	132	75-125			A-01, ICS-01, LK, QX
Manganese	22.4	0.962	ng/m³ Air	2.2364	20.1	106	75-125			
Molybdenum	1.81	0.172	ng/m³ Air	1.1182	0.787	91.8	75-125			QB-01
Nickel	2.88	0.648	ng/m³ Air	2.2364	0.674	98.5	75-125			
Phosphorus	ND	1010	ng/m³ Air	4.4727	ND		75-125			A-01, GC-BS, ICS-01, LK, U
Potassium	171	30.7	ng/m³ Air	22.364	147	106	75-125			
Rubidium	0.358	0.0148	ng/m³ Air	0.11182	0.258	88.9	75-125			QB-01
Selenium	1.30	0.00889	ng/m³ Air	1.1182	0.235	95.1	75-125			
Sodium	3220	1620	ng/m³ Air	22.364	3150	298	75-125			A-01, ICS-01, LK, QX
Strontium	6.54	0.527	ng/m³ Air	1.1182	5.62	82.4	75-125			QB-01
Thallium	0.0536	4.07E-4	ng/m³ Air	5.5909E-2	0.00148	93.2	75-125			
Thorium	0.0801	0.00243	ng/m³ Air	5.5909E-2	0.0274	94.2	75-125			

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REPORTED: 12/01/23 13:09
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AQS SITE CODE:
SITE CODE: Maui 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 B3K2802 - ICP-MS Extraction										
Post Spike (B3K2802-PS1) Continued		**Source: 3112732-03**		Prepared: 11/28/23 Analyzed: 11/29/23						
Uranium	0.0676	0.0137	ng/m³ Air	5.5909E-2	0.0147	94.6	75-125			
Vanadium	2.71	0.0398	ng/m³ Air	1.1182	1.65	95.3	75-125			
Zinc	ND	79.0	ng/m³ Air	22.364	ND		75-125			U
Dilution Check (B3K2802-SRL1)		**Source: 3112732-03**		Prepared: 11/28/23 Analyzed: 11/29/23						
Aluminum	622	130	ng/m³ Air		613			1.37	10	ICS-01, LK
Antimony	ND	0.178	ng/m³ Air		ND				10	GC-BS, SL, U
Arsenic	0.139	0.0386	ng/m³ Air		0.129			7.59	10	
Barium	7.59	3.83	ng/m³ Air		7.56			0.399	10	
Beryllium	0.0245	0.0134	ng/m³ Air		0.0253			3.27	10	
Cadmium	ND	0.441	ng/m³ Air		ND				10	U
Calcium	ND	1180	ng/m³ Air		ND				10	GC-BS, LJ, QB-01, U
Chromium	ND	8.21	ng/m³ Air		ND				10	U
Cobalt	0.467	0.0631	ng/m³ Air		0.451			3.55	10	QB-01
Copper	16.5	12.1	ng/m³ Air		15.9			3.77	10	
Iron	772	97.8	ng/m³ Air		750			2.90	10	GC-BS
Lead	ND	1.12	ng/m³ Air		ND				10	U
Magnesium	408	390	ng/m³ Air		401			1.82	10	ICS-01, LK, QX
Manganese	20.7	4.81	ng/m³ Air		20.1			3.19	10	
Molybdenum	ND	0.861	ng/m³ Air		ND				10	QB-01, U
Nickel	ND	3.24	ng/m³ Air		ND				10	U
Phosphorus	ND	5050	ng/m³ Air		ND				10	GC-BS, ICS-01, LK, U
Potassium	155	154	ng/m³ Air		ND			4.86	10	
Rubidium	0.269	0.0740	ng/m³ Air		0.258			4.20	10	QB-01
Selenium	0.249	0.0445	ng/m³ Air		0.235			5.88	10	
Sodium	ND	8090	ng/m³ Air		ND				10	QX, ICS-01, LK, U
Strontium	5.81	2.64	ng/m³ Air		5.62			3.33	10	QB-01
Thallium	ND	0.00203	ng/m³ Air		ND				10	U
Thorium	0.0264	0.0121	ng/m³ Air		0.0274			3.70	10	
Uranium	ND	0.0687	ng/m³ Air		ND				10	U
Vanadium	1.68	0.199	ng/m³ Air		1.65			1.74	10	
Zinc	ND	395	ng/m³ Air		ND				10	U
Dilution Check (B3K2802-SRL2)		**Source: 3112732-03R**		Prepared: 11/28/23 Analyzed: 11/30/23						
Aluminum	534	260	ng/m³ Air		613			13.8	10	D, ICS-01, LK
Antimony	ND	0.357	ng/m³ Air		ND				10	D, GC-BS, SL, U

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REPORTED: 12/01/23 13:09
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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 B3K2802 - ICP-MS Extraction										
Dilution Check (B3K2802-SRL2) ContinueSource: 3112732-03R Prepared: 11/28/23 Analyzed: 11/30/23										
Arsenic	0.114	0.0772	ng/m³ Air		0.129			12.3	10	D
Barium	ND	7.67	ng/m³ Air		ND				10	D, U
Beryllium	ND	0.0268	ng/m³ Air		ND				10	D, U
Cadmium	ND	0.881	ng/m³ Air		ND				10	D, U
Calcium	ND	2360	ng/m³ Air		ND				10	D, GC-BS, LJ, QB-01, U
Chromium	ND	16.4	ng/m³ Air		ND				10	D, U
Cobalt	0.424	0.126	ng/m³ Air		0.451			6.29	10	D, QB-01
Copper	ND	24.3	ng/m³ Air		ND				10	D, U
Iron	694	196	ng/m³ Air		750			7.79	10	D, GC-BS
Lead	ND	2.23	ng/m³ Air		ND				10	D, U
Magnesium	ND	779	ng/m³ Air		ND				10	LK, D, ICS-01, U
Manganese	18.5	9.62	ng/m³ Air		20.1			8.26	10	D
Molybdenum	ND	1.72	ng/m³ Air		ND				10	D, QB-01, U
Nickel	ND	6.48	ng/m³ Air		ND				10	D, U
Phosphorus	ND	10100	ng/m³ Air		ND				10	D, GC-BS, ICS-01, LK, U
Potassium	ND	307	ng/m³ Air		ND				10	D, U
Rubidium	0.258	0.148	ng/m³ Air		0.258			0.107	10	D, QB-01
Selenium	0.197	0.0889	ng/m³ Air		0.235			17.5	10	D
Sodium	ND	16200	ng/m³ Air		ND				10	D, ICS-01, LK, U
Strontium	5.70	5.27	ng/m³ Air		5.62			1.44	10	D, QB-01
Thallium	ND	0.00407	ng/m³ Air		ND				10	D, U
Thorium	0.0258	0.0243	ng/m³ Air		0.0274			6.24	10	D
Uranium	ND	0.137	ng/m³ Air		ND				10	D, U
Vanadium	1.63	0.398	ng/m³ Air		1.65			0.856	10	D
Zinc	ND	790	ng/m³ Air		ND				10	D, U

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FILE #: 0000.00
REPORTED: 12/01/23 13:09
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AQS SITE CODE:
SITE CODE: Maui fires

Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
QM-4X	The MS/MSD recovery exceeds criteria because the parent sample concentration is greater than 4x the spike concentration. Sample results for the QC batch were accepted based on acceptable BS/BSD recoveries.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QB-01	Analyte exceeds method blank criteria
LK	Analyte identified; Reported value may be biased high.
LJ	Identification of analyte is acceptable; reported value is an estimate.
ICS-01	Interference check exceeds criteria.
GC-BS	Compound exceeds Blank Spike Criteria
FB-01	Analyte exceeds Field Blank criteria.
D	This result obtained by dilution.
A-01	parent sample >4x spike amount
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

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

December 04, 2023

Ms. Chelsea Saber
Tetra Tech, Inc.
1777 Sentry Pkwy, Bldg 12
Blue Bell, PA 19422
Project Name: Maui 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 11/27/23 11:25.

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

ANALYTICAL REPORT FOR SAMPLES

SampleName	LabNumber	Matrix	Sampled	Received
TetraTech Q9541277	3112737-01	Air	11/20/23 23:59	11/27/23 11:25
TetraTech Q9541276	3112737-02	Air	11/20/23 23:59	11/27/23 11:25
TetraTech Q9541275	3112737-03	Air	11/20/23 23:59	11/27/23 11:25
TetraTech Q9541930 FB	3112737-04	Air	11/20/23 00:00	11/27/23 11:25
TetraTech Q9541268	3112737-05	Air	11/21/23 23:59	11/27/23 11:25
TetraTech Q9541266	3112737-06	Air	11/21/23 23:59	11/27/23 11:25
TetraTech Q9541932	3112737-07	Air	11/21/23 23:59	11/27/23 11:25
TetraTech Q9541926 - FB	3112737-08	Air	11/21/23 00:00	11/27/23 11:25
TetraTech Q9541929	3112737-09	Air	11/22/23 23:59	11/27/23 11:25
TetraTech Q9541928	3112737-10	Air	11/22/23 23:59	11/27/23 11:25
TetraTech Q9541290	3112737-11	Air	11/22/23 23:59	11/27/23 11:25
TetraTech Q9541285 - FB	3112737-12	Air	11/22/23 00:00	11/27/23 11:25
TetraTech Q9541288	3112737-13	Air	11/23/23 23:59	11/27/23 11:25
TetraTech Q9541287	3112737-14	Air	11/23/23 23:59	11/27/23 11:25
TetraTech Q9541284	3112737-15	Air	11/23/23 23:59	11/27/23 11:25
TetraTech Q9541913 FB	3112737-16	Air	11/23/23 00:00	11/27/23 11:25

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541277
Matrix: Air
Comments: MFK-AM01-112023-HM

Lab ID: 3112737-01
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/20/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 21:47

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**404**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.101**	SL	**0.0352**
Arsenic	**7440-38-2**	**0.156**		**0.00762**
Barium	**7440-39-3**	**4.78**		**0.757**
Beryllium	**7440-41-7**	**0.0126**		**0.00265**
Cadmium	7440-43-9	0.00937	U	0.0870
Calcium	**7440-70-2**	**328**	LJ, QB-01	**233**
Chromium	7440-47-3	1.61	U	1.62
Cobalt	**7440-48-4**	**0.220**	QB-01	**0.0124**
Copper	**7440-50-8**	**22.3**		**2.39**
Iron	**7439-89-6**	**410**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.469**		**0.220**
Magnesium	**7439-95-4**	**150**	ICS-01, LK	**76.9**
Manganese	**7439-96-5**	**10.6**		**0.950**
Molybdenum	**7439-98-7**	**0.893**	QB-01	**0.170**
Nickel	7440-02-0	0.575	U	0.639
Phosphorus	7723-14-0	309	U, GC-BS, ICS-01, LK, QX	998
Potassium	**7440-09-7**	**63.1**	ICS-01, LK	**30.3**
Rubidium		**0.138**		**0.0146**
Selenium	**7782-49-2**	**0.175**	LJ, QX	**0.00878**
Sodium	7440-23-5	1350	U, ICS-01, LK	1600
Strontium	**7440-24-6**	**3.07**	QB-01	**0.520**
Thallium	**7440-28-0**	**0.00140**		**4.01E-4**
Thorium	**7440-29-01**	**0.0100**		**0.00239**
Uranium	NA	0.00929	U	0.0136
Vanadium	**7440-62-2**	**0.993**		**0.0393**
Zinc	7440-66-6	15.2	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541276
Matrix: Air
Comments: MFK-AM02-112023-HM

Lab ID: 3112737-02
Sample Volume: 2026.064 m³
Filter ID:

Sampled: 11/20/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 22:02

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**862**	E, ICS-01, LK	**25.8**
Antimony	**7440-36-0**	**0.138**	SL	**0.0354**
Arsenic	**7440-38-2**	**0.319**		**0.00767**
Barium	**7440-39-3**	**7.60**		**0.761**
Beryllium	**7440-41-7**	**0.0263**		**0.00267**
Cadmium	**7440-43-9**	**0.103**		**0.0875**
Calcium	**7440-70-2**	**429**	LJ, QB-01	**234**
Chromium	**7440-47-3**	**1.98**		**1.63**
Cobalt	**7440-48-4**	**0.314**	QB-01	**0.0125**
Copper	**7440-50-8**	**16.1**		**2.41**
Iron	**7439-89-6**	**786**	GC-BS	**19.4**
Lead	**7439-92-1**	**0.532**		**0.222**
Magnesium	**7439-95-4**	**174**	ICS-01, LK	**77.4**
Manganese	**7439-96-5**	**18.7**		**0.956**
Molybdenum	**7439-98-7**	**0.954**	QB-01	**0.171**
Nickel	**7440-02-0**	**0.716**		**0.643**
Phosphorus	7723-14-0	352	U, GC-BS, ICS-01, LK, QX	1000
Potassium	**7440-09-7**	**79.0**	ICS-01, LK	**30.5**
Rubidium		**0.211**		**0.0147**
Selenium	**7782-49-2**	**0.257**	LJ, QX	**0.00883**
Sodium	7440-23-5	1370	U, ICS-01, LK	1610
Strontium	**7440-24-6**	**4.83**	QB-01	**0.524**
Thallium	**7440-28-0**	**0.00192**		**4.04E-4**
Thorium	**7440-29-01**	**0.0243**		**0.00241**
Uranium	**NA**	**0.0195**		**0.0137**
Vanadium	**7440-62-2**	**1.91**		**0.0395**
Zinc	7440-66-6	12.1	U	78.5

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541275
Matrix: Air
Comments: MFK-AM03-112023-HM

Lab ID: 3112737-03
Sample Volume: 1752.065 m³
Filter ID:

Sampled: 11/20/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 18:50

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**289**	D-F, ICS-01, LK	**29.8**
Antimony	**7440-36-0**	**0.132**	SL	**0.0410**
Arsenic	**7440-38-2**	**0.0874**		**0.00887**
Barium	**7440-39-3**	**5.18**		**0.880**
Beryllium	**7440-41-7**	**0.0130**		**0.00308**
Cadmium	7440-43-9	0.0130	U	0.101
Calcium	**7440-70-2**	**306**	LJ, QB-01, QM-4X	**271**
Chromium	7440-47-3	1.66	U	1.89
Cobalt	**7440-48-4**	**0.236**	D-F, QB-01	**0.0145**
Copper	**7440-50-8**	**27.6**		**2.79**
Iron	**7439-89-6**	**331**	GC-BS, QM-4X	**22.5**
Lead	7439-92-1	0.241	U	0.256
Magnesium	**7439-95-4**	**164**	ICS-01, LK, QM-4X	**89.5**
Manganese	**7439-96-5**	**9.40**		**1.11**
Molybdenum	**7439-98-7**	**0.945**	QB-01	**0.198**
Nickel	7440-02-0	0.534	U	0.744
Phosphorus	7723-14-0	354	U, GC-BS, ICS-01, LK, QM-4X, QX	1160
Potassium	**7440-09-7**	**76.1**	ICS-01, LK	**35.3**
Rubidium		**0.139**		**0.0170**
Selenium	**7782-49-2**	**0.152**	LJ, QX	**0.0102**
Sodium	7440-23-5	1550	ICS-01, LK, QM-4X, U	1860
Strontium	**7440-24-6**	**2.80**	QB-01	**0.605**
Thallium	**7440-28-0**	**0.00141**		**4.67E-4**
Thorium	**7440-29-01**	**0.00854**	QM-07	**0.00279**
Uranium	NA	0.00893	U	0.0158
Vanadium	**7440-62-2**	**0.761**		**0.0457**
Zinc	7440-66-6	14.1	U	90.7

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541930 FB
Matrix: Air
Lab ID: 3112737-04
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/20/23 00:00
Received: 11/27/23 11:25
Analysis Date: 11/30/23 22:17

Comments: Field Blank - MFK-FB01-112023-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	10.1	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.00792	SL, U	0.0352
Arsenic	7440-38-2	0.00403	U	0.00762
Barium	7440-39-3	0.542	U	0.757
Beryllium	7440-41-7	0.00110	U	0.00265
Cadmium	7440-43-9	0.00234	U	0.0870
Calcium	**7440-70-2**	**380**	FB-01, LJ, QB-01	**233**
Chromium	7440-47-3	1.48	U	1.62
Cobalt	**7440-48-4**	**0.0221**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.331	U	2.39
Iron	7439-89-6	12.5	GC-BS, U	19.3
Lead	7439-92-1	0.0582	U	0.220
Magnesium	7439-95-4	42.2	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.175	U	0.950
Molybdenum	**7439-98-7**	**0.251**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.304	U	0.639
Phosphorus	7723-14-0	337	GC-BS, ICS-01, LK, QX, U	998
Potassium	7440-09-7	12.1	ICS-01, LK, U	30.3
Rubidium		0.0136	U	0.0146
Selenium	7782-49-2	0.00208	LJ, QX, U	0.00878
Sodium	7440-23-5	693	ICS-01, LK, U	1600
Strontium	**7440-24-6**	**0.720**	FB-01, QB-01	**0.520**
Thallium	7440-28-0	6.72E-5	U	4.01E-4
Thorium	7440-29-01	0.00220	U	0.00239
Uranium	NA	0.00175	U	0.0136
Vanadium	7440-62-2	0.0170	U	0.0393
Zinc	7440-66-6	5.18	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541268
Matrix: Air
Comments: MFK-AM01-112123-HM

Lab ID: 3112737-05
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/21/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 22:31

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**122**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.0665**	SL	**0.0352**
Arsenic	**7440-38-2**	**0.130**		**0.00762**
Barium	**7440-39-3**	**2.43**		**0.757**
Beryllium	**7440-41-7**	**0.00442**		**0.00265**
Cadmium	7440-43-9	0.00545	U	0.0870
Calcium	7440-70-2	207	LJ, QB-01, U	233
Chromium	7440-47-3	1.39	U	1.62
Cobalt	**7440-48-4**	**0.0827**	QB-01	**0.0124**
Copper	**7440-50-8**	**18.9**		**2.39**
Iron	**7439-89-6**	**128**	GC-BS	**19.3**
Lead	7439-92-1	0.171	U	0.220
Magnesium	7439-95-4	72.1	ICS-01, LK, U	76.9
Manganese	**7439-96-5**	**3.37**		**0.950**
Molybdenum	**7439-98-7**	**1.09**	QB-01	**0.170**
Nickel	7440-02-0	0.482	U	0.639
Phosphorus	7723-14-0	310	GC-BS, ICS-01, LK, QX, U	998
Potassium	**7440-09-7**	**60.3**	ICS-01, LK	**30.3**
Rubidium		**0.0845**		**0.0146**
Selenium	**7782-49-2**	**0.0788**	LJ, QX	**0.00878**
Sodium	7440-23-5	871	ICS-01, LK, U	1600
Strontium	**7440-24-6**	**1.19**	QB-01	**0.520**
Thallium	**7440-28-0**	**4.22E-4**		**4.01E-4**
Thorium	**7440-29-01**	**0.00404**		**0.00239**
Uranium	NA	0.00351	U	0.0136
Vanadium	**7440-62-2**	**0.336**		**0.0393**
Zinc	7440-66-6	10.0	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541266
Matrix: Air
Comments: MFK-AM02-112123-HM

Lab ID: 3112737-06
Sample Volume: 2008.06 m³
Filter ID:

Sampled: 11/21/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 22:45

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**180**	ICS-01, LK	**26.0**
Antimony	**7440-36-0**	**0.0734**	SL	**0.0357**
Arsenic	**7440-38-2**	**0.156**		**0.00774**
Barium	**7440-39-3**	**3.39**		**0.768**
Beryllium	**7440-41-7**	**0.00687**		**0.00269**
Cadmium	7440-43-9	0.00686	U	0.0883
Calcium	7440-70-2	228	LJ, QB-01, U	237
Chromium	7440-47-3	1.35	U	1.64
Cobalt	**7440-48-4**	**0.107**	QB-01	**0.0126**
Copper	**7440-50-8**	**17.9**		**2.43**
Iron	**7439-89-6**	**188**	GC-BS	**19.6**
Lead	7439-92-1	0.151	U	0.224
Magnesium	**7439-95-4**	**82.4**	ICS-01, LK	**78.1**
Manganese	**7439-96-5**	**4.55**		**0.964**
Molybdenum	**7439-98-7**	**1.06**	QB-01	**0.173**
Nickel	7440-02-0	0.484	U	0.649
Phosphorus	7723-14-0	327	GC-BS, ICS-01, LK, QX, U	1010
Potassium	**7440-09-7**	**70.2**	ICS-01, LK	**30.8**
Rubidium		**0.109**		**0.0148**
Selenium	**7782-49-2**	**0.100**	LJ, QX	**0.00891**
Sodium	7440-23-5	918	ICS-01, LK, U	1620
Strontium	**7440-24-6**	**1.53**	QB-01	**0.528**
Thallium	**7440-28-0**	**5.33E-4**		**4.08E-4**
Thorium	**7440-29-01**	**0.00593**		**0.00243**
Uranium	NA	0.00473	U	0.0138
Vanadium	**7440-62-2**	**0.473**		**0.0399**
Zinc	7440-66-6	11.4	U	79.2

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541932
Matrix: Air
Comments: MFK-AM03-112123-HM

Lab ID: 3112737-07
Sample Volume: 1687.032 m³
Filter ID:

Sampled: 11/21/23 23:59
Received: 11/27/23 11:25
Analysis Date: 11/30/23 23:14

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**106**	ICS-01, LK	**31.0**
Antimony	**7440-36-0**	**0.0652**	SL	**0.0425**
Arsenic	**7440-38-2**	**0.0869**		**0.00921**
Barium	**7440-39-3**	**2.96**		**0.914**
Beryllium	**7440-41-7**	**0.00579**		**0.00320**
Cadmium	7440-43-9	0.00886	U	0.105
Calcium	**7440-70-2**	**531**	LJ, QB-01	**282**
Chromium	7440-47-3	1.77	U	1.96
Cobalt	**7440-48-4**	**0.0968**	QB-01	**0.0150**
Copper	**7440-50-8**	**38.8**		**2.89**
Iron	**7439-89-6**	**132**	GC-BS	**23.3**
Lead	7439-92-1	0.236	U	0.266
Magnesium	**7439-95-4**	**101**	ICS-01, LK	**93.0**
Manganese	**7439-96-5**	**3.65**		**1.15**
Molybdenum	**7439-98-7**	**1.30**	QB-01	**0.205**
Nickel	7440-02-0	0.494	U	0.772
Phosphorus	7723-14-0	436	GC-BS, ICS-01, LK, QX, U	1210
Potassium	**7440-09-7**	**77.2**	ICS-01, LK	**36.6**
Rubidium		**0.0888**		**0.0176**
Selenium	**7782-49-2**	**0.103**	LJ, QX	**0.0106**
Sodium	7440-23-5	1100	ICS-01, LK, U	1930
Strontium	**7440-24-6**	**1.84**	QB-01	**0.629**
Thallium	7440-28-0	4.15E-4	U	4.85E-4
Thorium	**7440-29-01**	**0.00569**		**0.00289**
Uranium	NA	0.00435	U	0.0164
Vanadium	**7440-62-2**	**0.334**		**0.0474**
Zinc	7440-66-6	9.77	U	94.2

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541926 - FB
Matrix: Air
Lab ID: 3112737-08
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/21/23 00:00
Received: 11/27/23 11:25
Analysis Date: 11/30/23 23:28

Comments: Field Blank - MFK-FB01-112123-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	9.14	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.00661	SL, U	0.0352
Arsenic	7440-38-2	0.00502	U	0.00762
Barium	7440-39-3	0.540	U	0.757
Beryllium	7440-41-7	0.00106	U	0.00265
Cadmium	7440-43-9	0.00202	U	0.0870
Calcium	**7440-70-2**	**393**	FB-01, LJ, QB-01	**233**
Chromium	7440-47-3	1.56	U	1.62
Cobalt	**7440-48-4**	**0.0373**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.226	U	2.39
Iron	7439-89-6	11.7	GC-BS, U	19.3
Lead	7439-92-1	0.0573	U	0.220
Magnesium	7439-95-4	43.7	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.147	U	0.950
Molybdenum	**7439-98-7**	**0.279**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.289	U	0.639
Phosphorus	7723-14-0	343	GC-BS, ICS-01, LK, QX, U	998
Potassium	7440-09-7	24.1	ICS-01, LK, U	30.3
Rubidium		**0.0157**	FB-01	**0.0146**
Selenium	7782-49-2	9.16E-4	LJ, QX, U	0.00878
Sodium	7440-23-5	701	ICS-01, LK, U	1600
Strontium	**7440-24-6**	**0.750**	FB-01, QB-01	**0.520**
Thallium	7440-28-0	6.64E-5	U	4.01E-4
Thorium	7440-29-01	0.00217	U	0.00239
Uranium	NA	0.00182	U	0.0136
Vanadium	7440-62-2	0.0163	U	0.0393
Zinc	7440-66-6	4.75	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541929
Matrix: Air
Comments: MFK-AM01-112223-HM

Lab ID: 3112737-09
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/22/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 00:16

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**441**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.0846**	SL	**0.0352**
Arsenic	**7440-38-2**	**0.308**		**0.00762**
Barium	**7440-39-3**	**6.23**		**0.757**
Beryllium	**7440-41-7**	**0.0179**		**0.00265**
Cadmium	7440-43-9	0.00877	U	0.0870
Calcium	**7440-70-2**	**735**	LJ, QB-01	**233**
Chromium	**7440-47-3**	**1.92**		**1.62**
Cobalt	**7440-48-4**	**0.314**	QB-01	**0.0124**
Copper	**7440-50-8**	**23.8**		**2.39**
Iron	**7439-89-6**	**514**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.443**		**0.220**
Magnesium	**7439-95-4**	**197**	ICS-01, LK	**76.9**
Manganese	**7439-96-5**	**13.8**		**0.950**
Molybdenum	**7439-98-7**	**1.39**	QB-01	**0.170**
Nickel	**7440-02-0**	**0.985**		**0.639**
Phosphorus	7723-14-0	369	GC-BS, ICS-01, LK, QX, U	998
Potassium	**7440-09-7**	**92.3**	ICS-01, LK	**30.3**
Rubidium		**0.179**		**0.0146**
Selenium	**7782-49-2**	**0.217**	LJ, QX	**0.00878**
Sodium	7440-23-5	1430	ICS-01, LK, U	1600
Strontium	**7440-24-6**	**4.40**	QB-01	**0.520**
Thallium	**7440-28-0**	**9.25E-4**		**4.01E-4**
Thorium	**7440-29-01**	**0.0131**		**0.00239**
Uranium	NA	0.0109	U	0.0136
Vanadium	**7440-62-2**	**2.00**		**0.0393**
Zinc	7440-66-6	12.2	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541928
Matrix: Air
Comments: MFK-AM02-112223-HM

Lab ID: 3112737-10
Sample Volume: 2026.064 m³
Filter ID:

Sampled: 11/22/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 00:33

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**373**	ICS-01, LK	**25.8**
Antimony	**7440-36-0**	**0.0637**	SL	**0.0354**
Arsenic	**7440-38-2**	**0.239**		**0.00767**
Barium	**7440-39-3**	**4.87**		**0.761**
Beryllium	**7440-41-7**	**0.0149**		**0.00267**
Cadmium	7440-43-9	0.00779	U	0.0875
Calcium	**7440-70-2**	**700**	LJ, QB-01	**234**
Chromium	**7440-47-3**	**1.89**		**1.63**
Cobalt	**7440-48-4**	**0.280**	QB-01	**0.0125**
Copper	**7440-50-8**	**17.1**		**2.41**
Iron	**7439-89-6**	**446**	GC-BS	**19.4**
Lead	**7439-92-1**	**0.335**		**0.222**
Magnesium	**7439-95-4**	**206**	ICS-01, LK	**77.4**
Manganese	**7439-96-5**	**12.1**		**0.956**
Molybdenum	**7439-98-7**	**1.09**	QB-01	**0.171**
Nickel	**7440-02-0**	**1.02**		**0.643**
Phosphorus	7723-14-0	379	GC-BS, ICS-01, LK, QX, U	1000
Potassium	**7440-09-7**	**105**	ICS-01, LK	**30.5**
Rubidium		**0.168**		**0.0147**
Selenium	**7782-49-2**	**0.197**	LJ, QX	**0.00883**
Sodium	7440-23-5	1580	ICS-01, LK, U	1610
Strontium	**7440-24-6**	**3.95**	QB-01	**0.524**
Thallium	**7440-28-0**	**8.38E-4**		**4.04E-4**
Thorium	**7440-29-01**	**0.0118**		**0.00241**
Uranium	NA	0.00935	U	0.0137
Vanadium	**7440-62-2**	**2.16**		**0.0395**
Zinc	7440-66-6	9.01	U	78.5

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541290
Matrix: Air
Comments: MFK-AM03-112223-HM

Lab ID: 3112737-11
Sample Volume: 2242.105 m³
Filter ID:

Sampled: 11/22/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 00:48

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**291**	ICS-01, LK	**23.3**
Antimony	**7440-36-0**	**0.0998**	SL	**0.0320**
Arsenic	**7440-38-2**	**0.148**		**0.00693**
Barium	**7440-39-3**	**4.65**		**0.688**
Beryllium	**7440-41-7**	**0.0131**		**0.00241**
Cadmium	7440-43-9	0.00705	U	0.0791
Calcium	**7440-70-2**	**416**	LJ, QB-01	**212**
Chromium	**7440-47-3**	**1.61**		**1.47**
Cobalt	**7440-48-4**	**0.275**	QB-01	**0.0113**
Copper	**7440-50-8**	**28.0**		**2.18**
Iron	**7439-89-6**	**391**	GC-BS	**17.6**
Lead	**7439-92-1**	**0.257**		**0.200**
Magnesium	**7439-95-4**	**220**	ICS-01, LK	**70.0**
Manganese	**7439-96-5**	**11.0**		**0.864**
Molybdenum	**7439-98-7**	**0.934**	QB-01	**0.155**
Nickel	**7440-02-0**	**1.17**		**0.581**
Phosphorus	7723-14-0	310	GC-BS, ICS-01, LK, QX, U	907
Potassium	**7440-09-7**	**116**	ICS-01, LK	**27.6**
Rubidium		**0.140**		**0.0133**
Selenium	**7782-49-2**	**0.171**	LJ, QX	**0.00798**
Sodium	**7440-23-5**	**1760**	E, ICS-01, LK	**1450**
Strontium	**7440-24-6**	**3.24**	QB-01	**0.473**
Thallium	**7440-28-0**	**8.00E-4**		**3.65E-4**
Thorium	**7440-29-01**	**0.0107**		**0.00218**
Uranium	NA	0.00748	U	0.0123
Vanadium	**7440-62-2**	**2.23**		**0.0357**
Zinc	7440-66-6	8.98	U	70.9

CERTIFICATE OF ANALYSIS

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

FILE #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541285 - FB
Matrix: Air
Lab ID: 3112737-12
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/22/23 00:00
Received: 11/27/23 11:25
Analysis Date: 12/01/23 01:03

Comments: Field Blank - MFK-FB01-112223-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	13.9	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.0183	SL, U	0.0352
Arsenic	7440-38-2	0.00299	U	0.00762
Barium	**7440-39-3**	**1.10**	FB-01	**0.757**
Beryllium	7440-41-7	0.00102	U	0.00265
Cadmium	7440-43-9	0.00143	U	0.0870
Calcium	7440-70-2	136	LJ, QB-01, U	233
Chromium	7440-47-3	1.21	U	1.62
Cobalt	**7440-48-4**	**0.0367**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.290	U	2.39
Iron	7439-89-6	13.8	GC-BS, U	19.3
Lead	7439-92-1	0.0406	U	0.220
Magnesium	7439-95-4	37.5	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.172	U	0.950
Molybdenum	**7439-98-7**	**0.203**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.340	U	0.639
Phosphorus	7723-14-0	301	GC-BS, ICS-01, LK, QX, U	998
Potassium	**7440-09-7**	**32.7**	FB-01, ICS-01, LK	**30.3**
Rubidium		0.0112	U	0.0146
Selenium	7782-49-2	0.00357	LJ, QX, U	0.00878
Sodium	7440-23-5	734	ICS-01, LK, U	1600
Strontium	7440-24-6	0.350	QB-01, U	0.520
Thallium	7440-28-0	6.21E-5	U	4.01E-4
Thorium	7440-29-01	0.00207	U	0.00239
Uranium	NA	0.00121	U	0.0136
Vanadium	7440-62-2	0.0151	U	0.0393
Zinc	7440-66-6	4.72	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541288
Matrix: Air
Comments: MFK-AM01-112323-HM

Lab ID: 3112737-13
Sample Volume: 2038.818 m³
Filter ID:

Sampled: 11/23/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 01:17

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**226**	ICS-01, LK	**25.6**
Antimony	**7440-36-0**	**0.0869**	SL	**0.0352**
Arsenic	**7440-38-2**	**0.155**		**0.00762**
Barium	**7440-39-3**	**3.74**		**0.757**
Beryllium	**7440-41-7**	**0.00838**		**0.00265**
Cadmium	7440-43-9	0.00665	U	0.0870
Calcium	**7440-70-2**	**318**	LJ, QB-01	**233**
Chromium	7440-47-3	1.56	U	1.62
Cobalt	**7440-48-4**	**0.163**	QB-01	**0.0124**
Copper	**7440-50-8**	**17.4**		**2.39**
Iron	**7439-89-6**	**268**	GC-BS	**19.3**
Lead	**7439-92-1**	**0.232**		**0.220**
Magnesium	**7439-95-4**	**216**	ICS-01, LK	**76.9**
Manganese	**7439-96-5**	**7.06**		**0.950**
Molybdenum	**7439-98-7**	**1.25**	QB-01	**0.170**
Nickel	**7440-02-0**	**1.04**		**0.639**
Phosphorus	7723-14-0	332	GC-BS, ICS-01, LK, QX, U	998
Potassium	**7440-09-7**	**115**	ICS-01, LK	**30.3**
Rubidium		**0.125**		**0.0146**
Selenium	**7782-49-2**	**0.144**	LJ, QX	**0.00878**
Sodium	**7440-23-5**	**1980**	E, ICS-01, LK	**1600**
Strontium	**7440-24-6**	**2.65**	QB-01	**0.520**
Thallium	**7440-28-0**	**6.70E-4**		**4.01E-4**
Thorium	**7440-29-01**	**0.00679**		**0.00239**
Uranium	NA	0.00622	U	0.0136
Vanadium	**7440-62-2**	**1.89**		**0.0393**
Zinc	7440-66-6	9.10	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541287
Matrix: Air
Comments: MFK-AM02-112323-HM

Lab ID: 3112737-14
Sample Volume: 2026.064 m³
Filter ID:

Sampled: 11/23/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 01:31

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**267**	ICS-01, LK	**25.8**
Antimony	**7440-36-0**	**0.0803**	SL	**0.0354**
Arsenic	**7440-38-2**	**0.174**		**0.00767**
Barium	**7440-39-3**	**4.00**		**0.761**
Beryllium	**7440-41-7**	**0.0105**		**0.00267**
Cadmium	7440-43-9	0.0111	U	0.0875
Calcium	**7440-70-2**	**332**	LJ, QB-01	**234**
Chromium	7440-47-3	1.44	U	1.63
Cobalt	**7440-48-4**	**0.182**	QB-01	**0.0125**
Copper	**7440-50-8**	**12.9**		**2.41**
Iron	**7439-89-6**	**317**	GC-BS	**19.4**
Lead	7439-92-1	0.219	U	0.222
Magnesium	**7439-95-4**	**217**	ICS-01, LK	**77.4**
Manganese	**7439-96-5**	**8.14**		**0.956**
Molybdenum	**7439-98-7**	**1.01**	QB-01	**0.171**
Nickel	**7440-02-0**	**0.940**		**0.643**
Phosphorus	7723-14-0	326	GC-BS, ICS-01, LK, QX, U	1000
Potassium	**7440-09-7**	**124**	ICS-01, LK	**30.5**
Rubidium		**0.154**		**0.0147**
Selenium	**7782-49-2**	**0.192**	LJ, QX	**0.00883**
Sodium	**7440-23-5**	**2000**	E, ICS-01, LK	**1610**
Strontium	**7440-24-6**	**3.22**	QB-01	**0.524**
Thallium	**7440-28-0**	**0.00146**		**4.04E-4**
Thorium	**7440-29-01**	**0.00917**		**0.00241**
Uranium	NA	0.00727	U	0.0137
Vanadium	**7440-62-2**	**1.88**		**0.0395**
Zinc	7440-66-6	8.40	U	78.5

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541284
Matrix: Air
Comments: MFK-AM03-112323-HM

Lab ID: 3112737-15
Sample Volume: 1882.131 m³
Filter ID:

Sampled: 11/23/23 23:59
Received: 11/27/23 11:25
Analysis Date: 12/01/23 01:45

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	**7429-90-5**	**192**	ICS-01, LK	**27.7**
Antimony	**7440-36-0**	**0.0883**	SL	**0.0381**
Arsenic	**7440-38-2**	**0.123**		**0.00826**
Barium	**7440-39-3**	**4.59**		**0.819**
Beryllium	**7440-41-7**	**0.00908**		**0.00287**
Cadmium	7440-43-9	0.00781	U	0.0942
Calcium	**7440-70-2**	**333**	LJ, QB-01	**252**
Chromium	7440-47-3	1.57	U	1.75
Cobalt	**7440-48-4**	**0.205**	QB-01	**0.0135**
Copper	**7440-50-8**	**41.8**		**2.59**
Iron	**7439-89-6**	**274**	GC-BS	**20.9**
Lead	7439-92-1	0.179	U	0.239
Magnesium	**7439-95-4**	**257**	ICS-01, LK	**83.3**
Manganese	**7439-96-5**	**7.82**		**1.03**
Molybdenum	**7439-98-7**	**1.38**	QB-01	**0.184**
Nickel	**7440-02-0**	**0.950**		**0.692**
Phosphorus	7723-14-0	346	LK, QX, GC-BS, ICS-01, U	1080
Potassium	**7440-09-7**	**119**	ICS-01, LK	**32.8**
Rubidium		**0.136**		**0.0158**
Selenium	**7782-49-2**	**0.153**	LJ, QX	**0.00951**
Sodium	**7440-23-5**	**2230**	E, ICS-01, LK	**1730**
Strontium	**7440-24-6**	**2.66**	QB-01	**0.564**
Thallium	**7440-28-0**	**7.76E-4**		**4.35E-4**
Thorium	**7440-29-01**	**0.00753**		**0.00259**
Uranium	NA	0.00665	U	0.0147
Vanadium	**7440-62-2**	**1.80**		**0.0425**
Zinc	7440-66-6	9.19	U	84.5

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: TetraTech Q9541913 FB
Matrix: Air
Lab ID: 3112737-16
Sample Volume: 2038.818 m³
Filter ID:
Sampled: 11/23/23 00:00
Received: 11/27/23 11:25
Analysis Date: 12/01/23 02:00

Comments: Field Blank - MFK-FB01-112323-HM

Inorganics by Compendium Method IO-3.5

Analyte	CAS Number	Results ng/m³ Air	Flag	MDL ng/m³ Air
Aluminum	7429-90-5	10.4	ICS-01, LK, U	25.6
Antimony	7440-36-0	0.00731	SL, U	0.0352
Arsenic	7440-38-2	0.00386	U	0.00762
Barium	7440-39-3	0.583	U	0.757
Beryllium	7440-41-7	9.66E-4	U	0.00265
Cadmium	7440-43-9	0.00184	U	0.0870
Calcium	**7440-70-2**	**337**	FB-01, LJ, QB-01	**233**
Chromium	7440-47-3	1.50	U	1.62
Cobalt	**7440-48-4**	**0.0331**	FB-01, QB-01	**0.0124**
Copper	7440-50-8	0.388	U	2.39
Iron	7439-89-6	13.5	GC-BS, U	19.3
Lead	7439-92-1	0.0516	U	0.220
Magnesium	7439-95-4	43.6	ICS-01, LK, U	76.9
Manganese	7439-96-5	0.166	U	0.950
Molybdenum	**7439-98-7**	**0.247**	FB-01, QB-01	**0.170**
Nickel	7440-02-0	0.270	U	0.639
Phosphorus	7723-14-0	336	GC-BS, ICS-01, LK, QX, U	998
Potassium	**7440-09-7**	**37.6**	FB-01, ICS-01, LK	**30.3**
Rubidium		**0.0156**	FB-01	**0.0146**
Selenium	7782-49-2	0.00169	LJ, QX, U	0.00878
Sodium	7440-23-5	726	ICS-01, LK, U	1600
Strontium	**7440-24-6**	**0.693**	FB-01, QB-01	**0.520**
Thallium	7440-28-0	5.36E-5	U	4.01E-4
Thorium	7440-29-01	0.00235	U	0.00239
Uranium	NA	0.00169	U	0.0136
Vanadium	7440-62-2	0.0175	U	0.0393
Zinc	7440-66-6	3.80	U	78.0

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui 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 2311075 - B3K2906										
Calibration Blank (2311075-CCB1)				Prepared & Analyzed: 11/30/23						
Aluminum	129		ng/l							
Antimony	0.882		ng/l							
Arsenic	5.57		ng/l							
Barium	1.18		ng/l							
Beryllium	0.635		ng/l							
Cadmium	0.196		ng/l							
Calcium	613		ng/l							
Chromium	6.32		ng/l							
Cobalt	0.487		ng/l							
Copper	23.7		ng/l							
Iron	113		ng/l							
Lead	6.51		ng/l							
Magnesium	22.5		ng/l							
Manganese	5.79		ng/l							
Molybdenum	20.1		ng/l							
Nickel	-3.14		ng/l							U
Phosphorus	213		ng/l							QX
Potassium	2710		ng/l							
Rubidium	1.06		ng/l							
Selenium	-6.78		ng/l							LJ, QX, U
Sodium	2830		ng/l							
Strontium	0.319		ng/l							
Thallium	0.445		ng/l							
Thorium	0.770		ng/l							
Uranium	-0.0127		ng/l							U
Vanadium	-24.6		ng/l							U
Zinc	-42.8		ng/l							U
Calibration Blank (2311075-CCB2)				Prepared & Analyzed: 11/30/23						
Aluminum	86.6		ng/l							
Antimony	0.856		ng/l							
Arsenic	0.629		ng/l							
Barium	2.60		ng/l							
Beryllium	0.486		ng/l							
Cadmium	0.598		ng/l							
Calcium	-77.0		ng/l							U
Chromium	6.84		ng/l							
Cobalt	1.06		ng/l							
Copper	49.7		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Calibration Blank (2311075-CCB2) Contin				Prepared & Analyzed: 11/30/23						
Iron	93.0		ng/l							
Lead	12.0		ng/l							
Magnesium	5.21		ng/l							
Manganese	10.7		ng/l							
Molybdenum	9.79		ng/l							
Nickel	2.02		ng/l							
Phosphorus	-60.5		ng/l							QX, U
Potassium	1270		ng/l							
Rubidium	1.04		ng/l							
Selenium	-4.69		ng/l							LJ, QX, U
Sodium	1520		ng/l							
Strontium	0.576		ng/l							
Thallium	0.442		ng/l							
Thorium	0.981		ng/l							
Uranium	0.00347		ng/l							
Vanadium	-26.4		ng/l							U
Zinc	-39.0		ng/l							U
Calibration Blank (2311075-CCB3)				Prepared: 11/30/23 Analyzed: 12/01/23						
Aluminum	64.2		ng/l							
Antimony	0.875		ng/l							
Arsenic	2.26		ng/l							
Barium	1.44		ng/l							
Beryllium	-0.363		ng/l							U
Cadmium	0.455		ng/l							
Calcium	-28.7		ng/l							U
Chromium	3.82		ng/l							
Cobalt	0.621		ng/l							
Copper	31.5		ng/l							
Iron	47.1		ng/l							
Lead	8.50		ng/l							
Magnesium	21.4		ng/l							
Manganese	4.79		ng/l							
Molybdenum	10.4		ng/l							
Nickel	-0.196		ng/l							U
Phosphorus	264		ng/l							QX
Potassium	1060		ng/l							
Rubidium	1.07		ng/l							
Selenium	-6.78		ng/l							LJ, QX, U

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Calibration Blank (2311075-CCB3) Contin				Prepared: 11/30/23 Analyzed: 12/01/23						
Sodium	1980		ng/l							
Strontium	-0.192		ng/l							U
Thallium	0.350		ng/l							
Thorium	0.469		ng/l							
Uranium	0.0232		ng/l							
Vanadium	-25.5		ng/l							U
Zinc	-38.7		ng/l							U
Calibration Blank (2311075-CCB4)				Prepared: 11/30/23 Analyzed: 12/01/23						
Aluminum	96.0		ng/l							
Antimony	1.22		ng/l							
Arsenic	7.55		ng/l							
Barium	2.61		ng/l							
Beryllium	-0.0913		ng/l							U
Cadmium	0.384		ng/l							
Calcium	-143		ng/l							U
Chromium	3.91		ng/l							
Cobalt	0.723		ng/l							
Copper	34.2		ng/l							
Iron	80.9		ng/l							
Lead	7.77		ng/l							
Magnesium	6.59		ng/l							
Manganese	6.16		ng/l							
Molybdenum	9.21		ng/l							
Nickel	1.66		ng/l							
Phosphorus	-185		ng/l							QX, U
Potassium	973		ng/l							
Rubidium	0.0776		ng/l							
Selenium	-3.34		ng/l							LJ, QX, U
Sodium	3490		ng/l							
Strontium	-1.23		ng/l							U
Thallium	0.366		ng/l							
Thorium	0.767		ng/l							
Uranium	-0.00956		ng/l							U
Vanadium	-25.2		ng/l							U
Zinc	-29.0		ng/l							U
Calibration Check (2311075-CCV1)				Prepared & Analyzed: 11/30/23						
Aluminum	1.61E6		ng/l	1.5000E6		107	90-110			
Antimony	20000		ng/l	20000		100	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Calibration Check (2311075-CCV1) Contin				Prepared & Analyzed: 11/30/23						
Arsenic	20100		ng/l	20000		100	90-110			
Barium	200000		ng/l	200000		99.9	90-110			
Beryllium	5090		ng/l	5000.0		102	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Calcium	2.54E7		ng/l	2.5000E7		102	90-110			
Chromium	235000		ng/l	240000		98.1	90-110			
Cobalt	53000		ng/l	50000		106	90-110			
Copper	2.09E6		ng/l	2.0000E6		104	90-110			
Iron	2.62E6		ng/l	2.5000E6		105	90-110			
Lead	200000		ng/l	200000		100	90-110			
Magnesium	1.09E6		ng/l	1.0000E6		109	90-110			
Manganese	520000		ng/l	500000		104	90-110			
Molybdenum	50800		ng/l	50000		102	90-110			
Nickel	126000		ng/l	120000		105	90-110			
Phosphorus	205000		ng/l	200000		102	90-110			QX
Potassium	2.61E6		ng/l	2.5000E6		105	90-110			
Rubidium	10000		ng/l	10000		100	90-110			
Selenium	20000		ng/l	20000		100	90-110			LJ, QX
Sodium	2.74E6		ng/l	2.5000E6		110	90-110			
Strontium	49900		ng/l	50000		99.8	90-110			
Thallium	505		ng/l	500.00		101	90-110			
Thorium	504		ng/l	500.00		101	90-110			
Uranium	502		ng/l	500.00		100	90-110			
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	534000		ng/l	500000		107	90-110			
Calibration Check (2311075-CCV2)				Prepared & Analyzed: 11/30/23						
Aluminum	1.46E6		ng/l	1.5000E6		97.0	90-110			
Antimony	20000		ng/l	20000		100	90-110			
Arsenic	19900		ng/l	20000		99.6	90-110			
Barium	202000		ng/l	200000		101	90-110			
Beryllium	5480		ng/l	5000.0		110	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Calcium	2.47E7		ng/l	2.5000E7		98.8	90-110			
Chromium	241000		ng/l	240000		100	90-110			
Cobalt	51200		ng/l	50000		102	90-110			
Copper	2.05E6		ng/l	2.0000E6		103	90-110			
Iron	2.48E6		ng/l	2.5000E6		99.3	90-110			
Lead	200000		ng/l	200000		99.8	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Calibration Check (2311075-CCV2) Contin				Prepared & Analyzed: 11/30/23						
Magnesium	1.01E6		ng/l	1.0000E6		101	90-110			
Manganese	491000		ng/l	500000		98.2	90-110			
Molybdenum	51400		ng/l	50000		103	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Phosphorus	191000		ng/l	200000		95.6	90-110			QX
Potassium	2.47E6		ng/l	2.5000E6		98.8	90-110			
Rubidium	9860		ng/l	10000		98.6	90-110			
Selenium	19700		ng/l	20000		98.4	90-110			LJ, QX
Sodium	2.51E6		ng/l	2.5000E6		101	90-110			
Strontium	49300		ng/l	50000		98.6	90-110			
Thallium	505		ng/l	500.00		101	90-110			
Thorium	503		ng/l	500.00		101	90-110			
Uranium	504		ng/l	500.00		101	90-110			
Vanadium	20300		ng/l	20000		101	90-110			
Zinc	528000		ng/l	500000		106	90-110			
Calibration Check (2311075-CCV3)				Prepared & Analyzed: 11/30/23						
Aluminum	1.50E6		ng/l	1.5000E6		99.7	90-110			
Antimony	20900		ng/l	20000		104	90-110			
Arsenic	20500		ng/l	20000		103	90-110			
Barium	209000		ng/l	200000		104	90-110			
Beryllium	4950		ng/l	5000.0		99.0	90-110			
Cadmium	21400		ng/l	20000		107	90-110			
Calcium	2.56E7		ng/l	2.5000E7		102	90-110			
Chromium	254000		ng/l	240000		106	90-110			
Cobalt	52600		ng/l	50000		105	90-110			
Copper	2.12E6		ng/l	2.0000E6		106	90-110			
Iron	2.57E6		ng/l	2.5000E6		103	90-110			
Lead	208000		ng/l	200000		104	90-110			
Magnesium	1.03E6		ng/l	1.0000E6		103	90-110			
Manganese	508000		ng/l	500000		102	90-110			
Molybdenum	54300		ng/l	50000		109	90-110			
Nickel	126000		ng/l	120000		105	90-110			
Phosphorus	192000		ng/l	200000		96.0	90-110			QX
Potassium	2.49E6		ng/l	2.5000E6		99.6	90-110			
Rubidium	10200		ng/l	10000		102	90-110			
Selenium	20500		ng/l	20000		102	90-110			LJ, QX
Sodium	2.55E6		ng/l	2.5000E6		102	90-110			
Strontium	51700		ng/l	50000		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 2311075 - B3K2906										
Calibration Check (2311075-CCV3) Contin				Prepared & Analyzed: 11/30/23						
Thallium	517		ng/l	500.00		103	90-110			
Thorium	522		ng/l	500.00		104	90-110			
Uranium	525		ng/l	500.00		105	90-110			
Vanadium	21300		ng/l	20000		106	90-110			
Zinc	543000		ng/l	500000		109	90-110			
Calibration Check (2311075-CCV4)				Prepared: 11/30/23 Analyzed: 12/01/23						
Aluminum	1.49E6		ng/l	1.5000E6		99.0	90-110			
Antimony	20600		ng/l	20000		103	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	206000		ng/l	200000		103	90-110			
Beryllium	4880		ng/l	5000.0		97.5	90-110			
Cadmium	21100		ng/l	20000		105	90-110			
Calcium	2.51E7		ng/l	2.5000E7		100	90-110			
Chromium	249000		ng/l	240000		104	90-110			
Cobalt	52100		ng/l	50000		104	90-110			
Copper	2.09E6		ng/l	2.0000E6		105	90-110			
Iron	2.55E6		ng/l	2.5000E6		102	90-110			
Lead	206000		ng/l	200000		103	90-110			
Magnesium	1.03E6		ng/l	1.0000E6		103	90-110			
Manganese	507000		ng/l	500000		101	90-110			
Molybdenum	53600		ng/l	50000		107	90-110			
Nickel	124000		ng/l	120000		103	90-110			
Phosphorus	190000		ng/l	200000		95.1	90-110			QX
Potassium	2.49E6		ng/l	2.5000E6		99.7	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	20200		ng/l	20000		101	90-110			LJ, QX
Sodium	2.57E6		ng/l	2.5000E6		103	90-110			
Strontium	50800		ng/l	50000		102	90-110			
Thallium	520		ng/l	500.00		104	90-110			
Thorium	519		ng/l	500.00		104	90-110			
Uranium	520		ng/l	500.00		104	90-110			
Vanadium	20800		ng/l	20000		104	90-110			
Zinc	538000		ng/l	500000		108	90-110			
High Cal Check (2311075-HCV1)				Prepared & Analyzed: 11/30/23						
Aluminum	2.99E6		ng/l	3.0000E6		99.8	95-105			
Antimony	40500		ng/l	40000		101	95-105			
Arsenic	40300		ng/l	40000		101	95-105			
Barium	405000		ng/l	400000		101	95-105			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
High Cal Check (2311075-HCV1) Continue				Prepared & Analyzed: 11/30/23						
Beryllium	10000		ng/l	10000		100	95-105			
Cadmium	40300		ng/l	40000		101	95-105			
Calcium	5.02E7		ng/l	5.0000E7		100	95-105			
Chromium	482000		ng/l	480000		100	95-105			
Cobalt	99600		ng/l	100000		99.6	95-105			
Copper	3.99E6		ng/l	4.0000E6		99.6	95-105			
Iron	5.01E6		ng/l	5.0000E6		100	95-105			
Lead	404000		ng/l	400000		101	95-105			
Magnesium	2.00E6		ng/l	2.0000E6		100	95-105			
Manganese	998000		ng/l	1.0000E6		99.8	95-105			
Molybdenum	102000		ng/l	100000		102	95-105			
Nickel	238000		ng/l	240000		99.3	95-105			
Phosphorus	407000		ng/l	400000		102	95-105			QX
Potassium	5.12E6		ng/l	5.0000E6		102	95-105			
Rubidium	20400		ng/l	20000		102	95-105			
Selenium	39900		ng/l	40000		99.7	95-105			LJ, QX
Sodium	5.00E6		ng/l	5.0000E6		100	95-105			
Strontium	102000		ng/l	100000		102	95-105			
Thallium	1020		ng/l	1000.0		102	95-105			
Thorium	1020		ng/l	1000.0		102	95-105			
Uranium	1020		ng/l	1000.0		102	95-105			
Vanadium	40300		ng/l	40000		101	95-105			
Zinc	993000		ng/l	1.0000E6		99.3	95-105			
Initial Cal Blank (2311075-ICB1)				Prepared & Analyzed: 11/30/23						
Aluminum	72.1		ng/l							
Antimony	0.969		ng/l							
Arsenic	2.05		ng/l							
Barium	1.73		ng/l							
Beryllium	0.663		ng/l							
Cadmium	0.447		ng/l							
Calcium	51.5		ng/l							
Chromium	4.86		ng/l							
Cobalt	0.381		ng/l							
Copper	27.8		ng/l							
Iron	61.9		ng/l							
Lead	6.23		ng/l							
Magnesium	7.16		ng/l							
Manganese	6.76		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Initial Cal Blank (2311075-ICB1) Continu				Prepared & Analyzed: 11/30/23						
Molybdenum	13.4		ng/l							
Nickel	-3.35		ng/l							U
Phosphorus	417		ng/l							QX
Potassium	1730		ng/l							
Rubidium	-0.114		ng/l							U
Selenium	0.518		ng/l							LJ, QX
Sodium	408		ng/l							
Strontium	-0.0745		ng/l							U
Thallium	0.478		ng/l							
Thorium	0.549		ng/l							
Uranium	-0.00599		ng/l							U
Vanadium	-21.3		ng/l							U
Zinc	-12.8		ng/l							U
Initial Cal Check (2311075-ICV1)				Prepared & Analyzed: 11/30/23						
Aluminum	1.46E6		ng/l	1.5000E6		97.7	90-110			
Antimony	20000		ng/l	20000		100	90-110			
Arsenic	20200		ng/l	20000		101	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4680		ng/l	5000.0		93.6	90-110			
Cadmium	21000		ng/l	20000		105	90-110			
Calcium	2.46E7		ng/l	2.5000E7		98.5	90-110			
Chromium	240000		ng/l	240000		100	90-110			
Cobalt	51700		ng/l	50000		103	90-110			
Copper	2.05E6		ng/l	2.0000E6		103	90-110			
Iron	2.52E6		ng/l	2.5000E6		101	90-110			
Lead	200000		ng/l	200000		100	90-110			
Magnesium	994000		ng/l	1.0000E6		99.4	90-110			
Manganese	495000		ng/l	500000		98.9	90-110			
Molybdenum	50800		ng/l	50000		102	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Phosphorus	189000		ng/l	200000		94.3	90-110			QX
Potassium	2.50E6		ng/l	2.5000E6		99.9	90-110			
Rubidium	9660		ng/l	10000		96.6	90-110			
Selenium	20500		ng/l	20000		103	90-110			LJ, QX
Sodium	2.47E6		ng/l	2.5000E6		98.6	90-110			
Strontium	50900		ng/l	50000		102	90-110			
Thallium	485		ng/l	500.00		97.0	90-110			
Thorium	499		ng/l	500.00		99.9	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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui 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 2311075 - B3K2906										
Initial Cal Check (2311075-ICV1) Continu				Prepared & Analyzed: 11/30/23						
Uranium	503		ng/l	500.00		101	90-110			
Vanadium	20600		ng/l	20000		103	90-110			
Zinc	535000		ng/l	500000		107	90-110			
Interference Check A (2311075-IFA1)				Prepared & Analyzed: 11/30/23						
Aluminum	1.69E7		ng/l	1.5000E7		112	80-120			ICS-01
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
Calcium	9.84E7		ng/l	1.0040E8		98.0	80-120			
Chromium	0.00		ng/l				80-120			U
Cobalt	0.00		ng/l				80-120			U
Copper	0.00		ng/l				80-120			U
Iron	1.57E7		ng/l	1.5000E7		104	80-120			
Lead	0.00		ng/l				80-120			U
Magnesium	1.74E7		ng/l	1.5000E7		116	80-120			ICS-01
Manganese	0.00		ng/l				80-120			U
Molybdenum	305000		ng/l	300000		102	80-120			
Nickel	0.00		ng/l				80-120			U
Phosphorus	1.84E7		ng/l	1.5000E7		123	80-120			ICS-01, QX
Potassium	1.65E7		ng/l	1.5000E7		110	80-120			ICS-01
Rubidium	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			LJ, QX, U
Sodium	1.74E7		ng/l	1.5000E7		116	80-120			ICS-01
Strontium	0.00		ng/l				80-120			U
Thallium	0.00		ng/l				80-120			U
Thorium	0.00		ng/l				80-120			U
Uranium	0.00		ng/l				80-120			U
Vanadium	0.00		ng/l				80-120			U
Zinc	0.00		ng/l				80-120			U
Interference Check B (2311075-IFB1)				Prepared & Analyzed: 11/30/23						
Aluminum	2.12E7		ng/l	1.6500E7		128	80-120			ICS-01, LK
Antimony	20500		ng/l	20000		103	80-120			
Arsenic	20900		ng/l	20000		105	80-120			
Barium	206000		ng/l	200000		103	80-120			
Beryllium	4970		ng/l	5000.0		99.3	80-120			
Cadmium	19900		ng/l	20000		99.4	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch 2311075 - B3K2906										
Interference Check B (2311075-IFB1) Co					Prepared & Analyzed: 11/30/23					
Calcium	1.32E8		ng/l	1.2540E8		105	80-120			
Chromium	237000		ng/l	240000		98.6	80-120			
Cobalt	54500		ng/l	50000		109	80-120			
Copper	2.00E6		ng/l	2.0000E6		100	80-120			
Iron	1.95E7		ng/l	1.7500E7		112	80-120			
Lead	208000		ng/l	200000		104	80-120			
Magnesium	2.10E7		ng/l	1.6000E7		131	80-120			ICS-01, LK
Manganese	586000		ng/l	500000		117	80-120			
Molybdenum	356000		ng/l	350000		102	80-120			
Nickel	125000		ng/l	120000		105	80-120			
Phosphorus	2.07E7		ng/l	1.5200E7		136	80-120			ICS-01, LK, QX
Potassium	2.11E7		ng/l	1.7500E7		121	80-120			ICS-01, LK
Rubidium	10400		ng/l	10000		104	80-120			
Selenium	19700		ng/l	20000		98.3	80-120			LJ, QX
Sodium	2.32E7		ng/l	1.7500E7		132	80-120			ICS-01, LK
Strontium	51100		ng/l	50000		102	80-120			
Thallium	536		ng/l	500.00		107	80-120			
Thorium	554		ng/l	500.00		111	80-120			
Uranium	563		ng/l	500.00		113	80-120			
Vanadium	19500		ng/l	20000		97.7	80-120			
Zinc	505000		ng/l	500000		101	80-120			
Batch B3K2906 - ICP-MS Extraction										
Blank (B3K2906-BLK1)					Prepared: 11/29/23 Analyzed: 11/30/23					
Aluminum	ND	32.1	ng/m³ Air							ICS-01, LK, U
Antimony	ND	0.0441	ng/m³ Air							SL, U
Arsenic	ND	0.00955	ng/m³ Air							U
Barium	ND	0.948	ng/m³ Air							U
Beryllium	ND	0.00332	ng/m³ Air							U
Cadmium	ND	0.109	ng/m³ Air							U
Calcium	ND	292	ng/m³ Air							LJ, QB-01, U
Chromium	ND	2.03	ng/m³ Air							U
Cobalt	ND	0.0156	ng/m³ Air							QB-01, U
Copper	ND	3.00	ng/m³ Air							U
Iron	ND	24.2	ng/m³ Air							GC-BS, U
Lead	ND	0.276	ng/m³ Air							U
Magnesium	ND	96.4	ng/m³ Air							ICS-01, LK, U
Manganese	ND	1.19	ng/m³ Air							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 B3K2906 - ICP-MS Extraction										
Blank (B3K2906-BLK1) Continued				Prepared: 11/29/23 Analyzed: 11/30/23						
Molybdenum	ND	0.213	ng/m³ Air							QB-01, U
Nickel	ND	0.801	ng/m³ Air							U
Phosphorus	ND	1250	ng/m³ Air							GC-BS, ICS-01, LK,
Potassium	ND	38.0	ng/m³ Air							ICS-01, LK, U
Rubidium	ND	0.0183	ng/m³ Air							U
Selenium	ND	0.0110	ng/m³ Air							LJ, QX, U
Sodium	ND	2000	ng/m³ Air							ICS-01, LK, U
Strontium	ND	0.652	ng/m³ Air							QB-01, U
Thallium	ND	5.03E-4	ng/m³ Air							U
Thorium	ND	0.00300	ng/m³ Air							U
Uranium	ND	0.0170	ng/m³ Air							U
Vanadium	ND	0.0492	ng/m³ Air							U
Zinc	ND	97.7	ng/m³ Air							U
LCS (B3K2906-BS1)				Prepared: 11/29/23 Analyzed: 11/30/23						
Aluminum	92.0	32.1	ng/m³ Air	82.975		111	80-120			ICS-01, LK
Antimony	0.526	0.0441	ng/m³ Air	1.3829		38.1	80-120			SL
Arsenic	2.73	0.00955	ng/m³ Air	2.7658		98.6	80-120			
Barium	28.2	0.948	ng/m³ Air	27.658		102	80-120			
Beryllium	1.48	0.00332	ng/m³ Air	1.3829		107	80-120			
Cadmium	1.43	0.109	ng/m³ Air	1.3829		104	80-120			
Calcium	527	292	ng/m³ Air	69.146		762	80-120			LJ, QB-01
Chromium	15.8	2.03	ng/m³ Air	13.829		114	80-120			
Cobalt	1.45	0.0156	ng/m³ Air	1.3829		105	80-120			QB-01
Copper	30.9	3.00	ng/m³ Air	27.658		112	80-120			
Iron	43.4	24.2	ng/m³ Air	27.658		157	80-120			GC-BS
Lead	13.8	0.276	ng/m³ Air	13.829		100	80-120			
Magnesium	ND	96.4	ng/m³ Air	27.658			80-120			ICS-01, LK, U
Manganese	8.66	1.19	ng/m³ Air	8.2975		104	80-120			
Molybdenum	1.71	0.213	ng/m³ Air	1.3829		124	80-120			QB-01
Nickel	3.14	0.801	ng/m³ Air	2.7658		114	80-120			
Phosphorus	ND	1250	ng/m³ Air	13.829			80-120			GC-BS, ICS-01, LK,
Potassium	64.7	38.0	ng/m³ Air	55.317		117	80-120			LK, ICS-01
Rubidium	1.36	0.0183	ng/m³ Air	1.3829		98.5	80-120			
Selenium	2.64	0.0110	ng/m³ Air	2.7658		95.4	80-120			LJ, QX
Sodium	ND	2000	ng/m³ Air	55.317			80-120			ICS-01, LK, U
Strontium	2.27	0.652	ng/m³ Air	1.3829		164	80-120			QB-01
Thallium	0.133	5.03E-4	ng/m³ Air	0.13829		95.9	80-120			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B3K2906 - ICP-MS Extraction										
LCS (B3K2906-BS1) Continued				Prepared: 11/29/23 Analyzed: 11/30/23						
Thorium	0.137	0.00300	ng/m³ Air	0.13829		99.0	80-120			
Uranium	0.134	0.0170	ng/m³ Air	0.13829		96.6	80-120			
Vanadium	2.84	0.0492	ng/m³ Air	2.7658		103	80-120			
Zinc	104	97.7	ng/m³ Air	82.975		125	80-120			
Duplicate (B3K2906-DUP1)				**Source: 3112737-03** Prepared: 11/29/23 Analyzed: 11/30/23						
Aluminum	296	29.8	ng/m³ Air		289			2.20	10	D-F, ICS-01, LK
Antimony	0.134	0.0410	ng/m³ Air		0.132			1.98	10	SL
Arsenic	0.0804	0.00887	ng/m³ Air		0.0874			8.33	10	
Barium	5.40	0.880	ng/m³ Air		5.18			4.11	10	
Beryllium	0.0128	0.00308	ng/m³ Air		0.0130			1.81	10	
Cadmium	ND	0.101	ng/m³ Air		ND				10	U
Calcium	318	271	ng/m³ Air		306			4.08	10	LJ, QB-01
Chromium	ND	1.89	ng/m³ Air		ND				10	U
Cobalt	0.172	0.0145	ng/m³ Air		0.236			31.6	10	D-F, QB-01
Copper	29.9	2.79	ng/m³ Air		27.6			7.70	10	
Iron	333	22.5	ng/m³ Air		331			0.438	10	GC-BS
Lead	0.314	0.256	ng/m³ Air		ND				10	
Magnesium	168	89.5	ng/m³ Air		164			1.88	10	ICS-01, LK
Manganese	9.42	1.11	ng/m³ Air		9.40			0.220	10	
Molybdenum	0.953	0.198	ng/m³ Air		0.945			0.804	10	QB-01
Nickel	ND	0.744	ng/m³ Air		ND				10	U
Phosphorus	ND	1160	ng/m³ Air		ND				10	GC-BS, ICS-01, LK,
Potassium	75.7	35.3	ng/m³ Air		76.1			0.558	10	ICS-01, LK
Rubidium	0.144	0.0170	ng/m³ Air		0.139			3.20	10	
Selenium	0.161	0.0102	ng/m³ Air		0.152			5.36	10	LJ, QX
Sodium	ND	1860	ng/m³ Air		ND				10	ICS-01, LK, U
Strontium	2.88	0.605	ng/m³ Air		2.80			2.57	10	QB-01
Thallium	0.00141	4.67E-4	ng/m³ Air		0.00141			0.0618	10	
Thorium	0.00880	0.00279	ng/m³ Air		0.00854			3.02	10	
Uranium	ND	0.0158	ng/m³ Air		ND				10	U
Vanadium	0.763	0.0457	ng/m³ Air		0.761			0.215	10	
Zinc	ND	90.7	ng/m³ Air		ND				10	U
Duplicate (B3K2906-DUP2)				**Source: 3112737-06** Prepared: 11/29/23 Analyzed: 11/30/23						
Aluminum	179	26.0	ng/m³ Air		180			0.125	10	ICS-01, LK
Antimony	0.0722	0.0357	ng/m³ Air		0.0734			1.69	10	SL
Arsenic	0.157	0.00774	ng/m³ Air		0.156			1.15	10	

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K2906 - ICP-MS Extraction

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (B3K2906-DUP2) Continued	**Source: 3112737-06**			Prepared: 11/29/23 Analyzed: 11/30/23						
Barium	3.34	0.768	ng/m³ Air		3.39			1.34	10	
Beryllium	0.00650	0.00269	ng/m³ Air		0.00687			5.58	10	
Cadmium	ND	0.0883	ng/m³ Air		ND				10	U
Calcium	ND	237	ng/m³ Air		ND				10	LJ, QB-01, U
Chromium	ND	1.64	ng/m³ Air		ND				10	U
Cobalt	0.106	0.0126	ng/m³ Air		0.107			0.0428	10	QB-01
Copper	17.8	2.43	ng/m³ Air		17.9			0.549	10	
Iron	186	19.6	ng/m³ Air		188			0.749	10	GC-BS
Lead	ND	0.224	ng/m³ Air		ND				10	U
Magnesium	82.7	78.1	ng/m³ Air		82.4			0.355	10	ICS-01, LK
Manganese	4.54	0.964	ng/m³ Air		4.55			0.137	10	
Molybdenum	1.06	0.173	ng/m³ Air		1.06			0.505	10	QB-01
Nickel	ND	0.649	ng/m³ Air		ND				10	U
Phosphorus	ND	1010	ng/m³ Air		ND				10	GC-BS, ICS-01, LK,
Potassium	70.8	30.8	ng/m³ Air		70.2			0.909	10	ICS-01, LK
Rubidium	0.109	0.0148	ng/m³ Air		0.109			0.0834	10	
Selenium	0.104	0.00891	ng/m³ Air		0.100			3.52	10	LJ, QX
Sodium	ND	1620	ng/m³ Air		ND				10	ICS-01, LK, U
Strontium	1.52	0.528	ng/m³ Air		1.53			0.802	10	QB-01
Thallium	5.39E-4	4.08E-4	ng/m³ Air		5.33E-4			1.05	10	
Thorium	0.00589	0.00243	ng/m³ Air		0.00593			0.703	10	
Uranium	ND	0.0138	ng/m³ Air		ND				10	U
Vanadium	0.471	0.0399	ng/m³ Air		0.473			0.339	10	
Zinc	ND	79.2	ng/m³ Air		ND				10	U
Matrix Spike (B3K2906-MS1)	**Source: 3112737-03**			Prepared: 11/29/23 Analyzed: 11/30/23						
Aluminum	379	29.8	ng/m³ Air	77.052	289	116	80-120			ICS-01, LK
Antimony	0.874	0.0410	ng/m³ Air	1.2842	0.132	57.8	80-120			SL
Arsenic	2.63	0.00887	ng/m³ Air	2.5684	0.0874	99.1	80-120			
Barium	31.4	0.880	ng/m³ Air	25.684	5.18	102	80-120			
Beryllium	1.33	0.00308	ng/m³ Air	1.2842	0.0130	103	80-120			
Cadmium	1.35	0.101	ng/m³ Air	1.2842	ND	105	80-120			
Calcium	412	271	ng/m³ Air	64.210	306	165	80-120			LJ, QB-01, QM-4X
Chromium	14.6	1.89	ng/m³ Air	12.842	ND	113	80-120			
Cobalt	1.51	0.0145	ng/m³ Air	1.2842	0.236	98.8	80-120			QB-01
Copper	57.5	2.79	ng/m³ Air	25.684	27.6	116	80-120			
Iron	369	22.5	ng/m³ Air	25.684	331	146	80-120			GC-BS, QM-4)
Lead	13.2	0.256	ng/m³ Air	12.842	ND	103	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control										
Batch B3K2906 - ICP-MS Extraction										
Matrix Spike (B3K2906-MS1) Continued Source: 3112737-03 Prepared: 11/29/23 Analyzed: 11/30/23										
Magnesium	199	89.5	ng/m³ Air	25.684	164	134	80-120			ICS-01, LK, QM-4X
Manganese	17.7	1.11	ng/m³ Air	7.7052	9.40	108	80-120			
Molybdenum	2.28	0.198	ng/m³ Air	1.2842	0.945	104	80-120			QB-01
Nickel	3.08	0.744	ng/m³ Air	2.5684	ND	120	80-120			
Phosphorus	ND	1160	ng/m³ Air	12.842	ND		80-120			GC-BS, ICS-01, LK,
Potassium	130	35.3	ng/m³ Air	51.368	76.1	106	80-120			ICS-01, LK
Rubidium	1.39	0.0170	ng/m³ Air	1.2842	0.139	97.2	80-120			
Selenium	2.62	0.0102	ng/m³ Air	2.5684	0.152	96.0	80-120			LJ, QX
Sodium	ND	1860	ng/m³ Air	51.368	ND		80-120			ICS-01, LK, QM-4X, U
Strontium	4.18	0.605	ng/m³ Air	1.2842	2.80	107	80-120			QB-01
Thallium	0.126	4.67E-4	ng/m³ Air	0.12842	0.00141	96.6	80-120			
Thorium	0.0566	0.00279	ng/m³ Air	0.12842	0.00854	37.4	80-120			QM-07
Uranium	0.133	0.0158	ng/m³ Air	0.12842	ND	104	80-120			
Vanadium	3.38	0.0457	ng/m³ Air	2.5684	0.761	102	80-120			
Zinc	102	90.7	ng/m³ Air	77.052	ND	133	80-120			
Matrix Spike Dup (B3K2906-MSD1) Source: 3112737-03 Prepared: 11/29/23 Analyzed: 11/30/23										
Aluminum	381	29.8	ng/m³ Air	77.052	289	120	80-120	0.753	20	ICS-01, LK
Antimony	0.915	0.0410	ng/m³ Air	1.2842	0.132	61.0	80-120	4.56	20	SL
Arsenic	2.64	0.00887	ng/m³ Air	2.5684	0.0874	99.2	80-120	0.0995	20	
Barium	32.3	0.880	ng/m³ Air	25.684	5.18	105	80-120	2.77	20	
Beryllium	1.34	0.00308	ng/m³ Air	1.2842	0.0130	103	80-120	0.210	20	
Cadmium	1.36	0.101	ng/m³ Air	1.2842	ND	106	80-120	0.808	20	
Calcium	397	271	ng/m³ Air	64.210	306	142	80-120	3.75	20	LJ, QB-01, QM-4X
Chromium	14.7	1.89	ng/m³ Air	12.842	ND	115	80-120	1.04	20	
Cobalt	1.52	0.0145	ng/m³ Air	1.2842	0.236	99.8	80-120	0.804	20	QB-01
Copper	56.2	2.79	ng/m³ Air	25.684	27.6	111	80-120	2.22	20	
Iron	370	22.5	ng/m³ Air	25.684	331	153	80-120	0.504	20	GC-BS, QM-4)
Lead	13.3	0.256	ng/m³ Air	12.842	ND	103	80-120	0.667	20	
Magnesium	200	89.5	ng/m³ Air	25.684	164	136	80-120	0.340	20	ICS-01, LK, QM-4X
Manganese	17.7	1.11	ng/m³ Air	7.7052	9.40	108	80-120	0.372	20	
Molybdenum	2.30	0.198	ng/m³ Air	1.2842	0.945	106	80-120	1.06	20	QB-01
Nickel	3.22	0.744	ng/m³ Air	2.5684	ND	126	80-120	4.64	20	
Phosphorus	ND	1160	ng/m³ Air	12.842	ND		80-120		20	GC-BS, ICS-01, LK,
Potassium	124	35.3	ng/m³ Air	51.368	76.1	94.0	80-120	4.70	20	ICS-01, LK

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 #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui 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 B3K2906 - ICP-MS Extraction										
Matrix Spike Dup (B3K2906-MSD1) Conti		**Source: 3112737-03**			Prepared: 11/29/23		Analyzed: 11/30/23			
Rubidium	1.37	0.0170	ng/m³ Air	1.2842	0.139	95.9	80-120	1.28	20	
Selenium	2.64	0.0102	ng/m³ Air	2.5684	0.152	97.0	80-120	0.982	20	QX, LJ
Sodium	ND	1860	ng/m³ Air	51.368	ND		80-120		20	ICS-01, LK, QM-4X, U
Strontium	4.11	0.605	ng/m³ Air	1.2842	2.80	101	80-120	1.72	20	QB-01
Thallium	0.127	4.67E-4	ng/m³ Air	0.12842	0.00141	97.6	80-120	0.946	20	
Thorium	0.0599	0.00279	ng/m³ Air	0.12842	0.00854	40.0	80-120	5.63	20	QM-07
Uranium	0.134	0.0158	ng/m³ Air	0.12842	ND	104	80-120	0.0599	20	
Vanadium	3.39	0.0457	ng/m³ Air	2.5684	0.761	102	80-120	0.318	20	
Zinc	98.3	90.7	ng/m³ Air	77.052	ND	128	80-120	4.03	20	
Post Spike (B3K2906-PS1)		**Source: 3112737-03**			Prepared: 11/29/23		Analyzed: 11/30/23			
Aluminum	324	29.8	ng/m³ Air	25.684	289	134	75-125			A-01, ICS-01, LK
Antimony	0.385	0.0410	ng/m³ Air	0.25684	0.132	98.5	75-125			SL
Arsenic	1.31	0.00887	ng/m³ Air	1.2842	0.0874	95.4	75-125			
Barium	7.78	0.880	ng/m³ Air	2.5684	5.18	101	75-125			
Beryllium	0.274	0.00308	ng/m³ Air	0.25684	0.0130	102	75-125			
Cadmium	0.141	0.101	ng/m³ Air	0.12842	ND	110	75-125			
Calcium	351	271	ng/m³ Air	25.684	306	176	75-125			LJ, QB-01
Chromium	2.92	1.89	ng/m³ Air	1.2842	ND	227	75-125			
Cobalt	0.497	0.0145	ng/m³ Air	0.25684	0.236	101	75-125			QB-01
Copper	40.7	2.79	ng/m³ Air	12.842	27.6	102	75-125			
Iron	362	22.5	ng/m³ Air	25.684	331	119	75-125			GC-BS
Lead	25.2	0.256	ng/m³ Air	25.684	ND	98.3	75-125			
Magnesium	193	89.5	ng/m³ Air	25.684	164	112	75-125			ICS-01, LK
Manganese	12.1	1.11	ng/m³ Air	2.5684	9.40	106	75-125			
Molybdenum	2.22	0.198	ng/m³ Air	1.2842	0.945	99.3	75-125			QB-01
Nickel	3.07	0.744	ng/m³ Air	2.5684	ND	120	75-125			
Phosphorus	ND	1160	ng/m³ Air	5.1368	ND		75-125			A-01, GC-BS, ICS-01, LK,
Potassium	97.1	35.3	ng/m³ Air	25.684	76.1	81.7	75-125			ICS-01, LK
Rubidium	0.251	0.0170	ng/m³ Air	0.12842	0.139	87.1	75-125			
Selenium	1.39	0.0102	ng/m³ Air	1.2842	0.152	96.1	75-125			LJ, QX
Sodium	ND	1860	ng/m³ Air	25.684	ND		75-125			A-01, ICS-01, LK, U
Strontium	3.99	0.605	ng/m³ Air	1.2842	2.80	92.5	75-125			QB-01
Thallium	0.0611	4.67E-4	ng/m³ Air	6.4210E-2	0.00141	93.0	75-125			
Thorium	0.0681	0.00279	ng/m³ Air	6.4210E-2	0.00854	92.8	75-125			
Uranium	0.0691	0.0158	ng/m³ Air	6.4210E-2	ND	108	75-125			

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FILE #: 0000.00
REPORTED: 12/04/23 11:41
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AQS SITE CODE:
SITE CODE: Maui 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 B3K2906 - ICP-MS Extraction										
Post Spike (B3K2906-PS1) Continued		**Source: 3112737-03**		Prepared: 11/29/23 Analyzed: 11/30/23						
Vanadium	2.04	0.0457	ng/m³ Air	1.2842	0.761	99.2	75-125			
Zinc	ND	90.7	ng/m³ Air	25.684	ND		75-125			U
Dilution Check (B3K2906-SRL1)		**Source: 3112737-03**		Prepared: 11/29/23 Analyzed: 11/30/23						
Aluminum	293	149	ng/m³ Air		289			1.41	10	ICS-01, LK
Antimony	ND	0.205	ng/m³ Air		ND				10	SL, U
Arsenic	0.0934	0.0443	ng/m³ Air		0.0874			6.57	10	
Barium	5.26	4.40	ng/m³ Air		5.18			1.55	10	
Beryllium	ND	0.0154	ng/m³ Air		ND				10	U
Cadmium	ND	0.506	ng/m³ Air		ND				10	U
Calcium	ND	1360	ng/m³ Air		ND				10	LJ, QB-01, U
Chromium	ND	9.43	ng/m³ Air		ND				10	U
Cobalt	0.239	0.0724	ng/m³ Air		0.236			0.933	10	QB-01
Copper	28.1	13.9	ng/m³ Air		27.6			1.68	10	
Iron	336	112	ng/m³ Air		331			1.49	10	GC-BS
Lead	ND	1.28	ng/m³ Air		ND				10	U
Magnesium	ND	448	ng/m³ Air		ND				10	ICS-01, LK, U
Manganese	9.50	5.53	ng/m³ Air		9.40			1.03	10	
Molybdenum	ND	0.989	ng/m³ Air		ND				10	QB-01, U
Nickel	ND	3.72	ng/m³ Air		ND				10	U
Phosphorus	ND	5800	ng/m³ Air		ND				10	GC-BS, ICS-01, LK,
Potassium	ND	176	ng/m³ Air		ND				10	LK, ICS-01, U
Rubidium	0.141	0.0850	ng/m³ Air		0.139			1.05	10	
Selenium	0.150	0.0511	ng/m³ Air		0.152			1.26	10	LJ, QX
Sodium	ND	9290	ng/m³ Air		ND				10	ICS-01, LK, U
Strontium	ND	3.03	ng/m³ Air		ND				10	QB-01, U
Thallium	ND	0.00234	ng/m³ Air		ND				10	U
Thorium	ND	0.0139	ng/m³ Air		ND				10	U
Uranium	ND	0.0789	ng/m³ Air		ND				10	U
Vanadium	0.771	0.228	ng/m³ Air		0.761			1.26	10	
Zinc	ND	454	ng/m³ Air		ND				10	U

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ATTN: Ms. Chelsea Saber
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FILE #: 0000.00
REPORTED: 12/04/23 11:41
SUBMITTED: 11/27/23
AQS SITE CODE:
SITE CODE: Maui fires

Notes and Definitions

U	Under Detection Limit
SL	The spike recovery was outside acceptance limits. Reported value may be biased low.
QX	Compound does not meet QC criteria. Results should be considered an estimate.
QM-4X	The MS/MSD recovery exceeds criteria because the parent sample concentration is greater than 4x the spike concentration. Sample results for the QC batch were accepted based on acceptable BS/BSD recoveries.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QB-01	Analyte exceeds method blank criteria
LK	Analyte identified; Reported value may be biased high.
LJ	Identification of analyte is acceptable; reported value is an estimate.
ICS-01	Interference check exceeds criteria.
GC-BS	Compound exceeds Blank Spike Criteria
FB-01	Analyte exceeds Field Blank criteria.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
D-F	Duplicate exceeds DQO criteria.
A-01	Parent Sample >4x Spike amount
ND	Analyte NOT DETECTED
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

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

eurofins | Built Environment Testing

Report for:

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

Regarding: Eurofins J3 Resources, Inc.
Project: 1032864023141; HDOH Kula Community Air
EML ID: 3461524

Approved by:

Lab Director
Scott Ward

Dates of Analysis:
Asbestos TEM ISO 10312 / ASTM6281-06: 11-29-2023

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

J3 Resources, Inc.
6110 W. 34th Street, Houston, Texas 77092
Phone: (713) 290-0221 Fax: (713) 290-0248
j3resources.com

Airborn Asbestos Fiber Analysis
by Transmission Electron Microscopy (TEM)
ISO 10312 - Ambient Air - Determination of Asbestos Fibers
Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111623-AB**

Air Volume:	7674.048
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38007
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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ISO 10312 - Ambient Air - Determination of Asbestos Fibers
Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111623-AB**

Air Volume:	4944.096
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.58993
Analytical Sensitivity: f/cm3:	0.00059
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00059
Concentration of Asbestos (Amphibole) f/cm3:	<0.00059
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00059
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2.2
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.2

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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Airborn Asbestos Fiber Analysis
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ISO 10312 - Ambient Air - Determination of Asbestos Fibers
Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

J3 Order #: 3461524
Project #: 1.03286E+12
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111623-AB**

Air Volume:	6285.168
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.46406
Analytical Sensitivity: f/cm3:	0.00046
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00046
Concentration of Asbestos (Amphibole) f/cm3:	<0.00046
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00046
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.7
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.7

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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Airborn Asbestos Fiber Analysis
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ISO 10312 - Ambient Air - Determination of Asbestos Fibers
Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

J3 Order #: 3461524
Project #: 1.03286E+12
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-FB01-111623-AB**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	NA
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-LB01-111623-AB**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

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J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111723-AB**

Air Volume:	5061.466
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.57625
Analytical Sensitivity: f/cm3:	0.00058
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00058
Concentration of Asbestos (Amphibole) f/cm3:	<0.00058
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00058
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2.1
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.1

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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Direct-Transfer Transmission Electron Microscopy Method

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Oakland, CA 94612

J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111723-AB**

Air Volume:	7855.781
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.37128
Analytical Sensitivity: f/cm3:	0.00037
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00037
Concentration of Asbestos (Amphibole) f/cm3:	<0.00037
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00037
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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Airborn Asbestos Fiber Analysis
by Transmission Electron Microscopy (TEM)
ISO 10312 - Ambient Air - Determination of Asbestos Fibers
Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111723-AB**

Air Volume:	7055.702
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.41338
Analytical Sensitivity: f/cm3:	0.00041
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00041
Concentration of Asbestos (Amphibole) f/cm3:	<0.00041
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00041
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

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Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-FB01-111723-AB**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

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Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111823-AB**

Air Volume:	7808.4
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.37353
Analytical Sensitivity: f/cm3:	0.00037
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00037
Concentration of Asbestos (Amphibole) f/cm3:	<0.00037
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00037
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111823-AB**

Air Volume:	7230.672
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.40337
Analytical Sensitivity: f/cm3:	0.00040
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Amphibole) f/cm3:	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

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HDOH Kula Community Air

Sample Number **MFK-AM03-111823-AB**

Air Volume:	7132.752
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.40891
Analytical Sensitivity: f/cm3:	0.00041
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00041
Concentration of Asbestos (Amphibole) f/cm3:	<0.00041
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00041
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

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Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111923-AB**

Air Volume:	7660.644
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38073
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

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Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111923-AB**

Air Volume:	7576.003
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38499
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111923-AB**

Air Volume:	7655.727
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38098
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-FB01-111823-AB**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

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J3 Order #: 3461524
Project #: 1032864023141
Receipt Date: 22-Nov-2023
Analysis Date: 29-Nov-2023
Report Date: 29-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-FB01-111923-AB**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

eurofins | Built Environment Testing

Report for:

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

Regarding: Eurofins J3 Resources, Inc.
Project: 1032864023141; HDOH Kula Community Air
EML ID: 3463023

Approved by:

Lab Director
Scott Ward

Dates of Analysis:
Asbestos TEM ISO 10312 / ASTM6281-06: 11-30-2023

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

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EJ3 Order #: 3463023
Project #: 1032864023141
Receipt Date: 27-Nov-2023
Analysis Date: 30-Nov-2023
Report Date: 30-Nov-2023

HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM01-112023-AB**

Air Volume:	7645.248
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38150
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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Airborne Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) ISO 10312 - Ambient Air - Determination of Asbestos Fibers Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
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EJ3 Order #: 3463023
Project #: 1032864023141
Receipt Date: 27-Nov-2023
Analysis Date: 30-Nov-2023
Report Date: 30-Nov-2023

HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM02-112023-AB□**

Air Volume:	7373.436
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.39556
Analytical Sensitivity: f/cm3:	0.00040
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Amphibole) f/cm3:	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM03-112023-AB□**

Air Volume:	7528.505
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38742
Analytical Sensitivity: f/cm3:	0.00039
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00039
Concentration of Asbestos (Amphibole) f/cm3:	<0.00039
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00039
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM01-112123-AB□**

Air Volume:	6935.184
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.42056
Analytical Sensitivity: f/cm3:	0.00042
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00042
Concentration of Asbestos (Amphibole) f/cm3:	<0.00042
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00042
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.6
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.6

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM02-112123-AB**

Air Volume:	6804.508
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.42864
Analytical Sensitivity: f/cm3:	0.00043
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00043
Concentration of Asbestos (Amphibole) f/cm3:	<0.00043
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00043
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.6
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.6

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM03-112123-AB**

Air Volume:	7344
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.39715
Analytical Sensitivity: f/cm3:	0.00040
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Amphibole) f/cm3:	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-FB01-112123-AB□**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst:

Scott M. Ward, Ph.D. **Lab Director**

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-LB01-112123-AB□**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM02-112223-AB**

Air Volume:	6692.074
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	Taylor Smylie
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.43584
Analytical Sensitivity: f/cm3:	0.00044
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00044
Concentration of Asbestos (Amphibole) f/cm3:	<0.00044
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00044
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.6
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.6

Analyst: Taylor Smylie 45260 **Scott M. Ward, Ph.D.** **Lab Director**

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM03-112223-AB**

Air Volume:	5331.024
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.54711
Analytical Sensitivity: f/cm3:	0.00055
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00055
Concentration of Asbestos (Amphibole) f/cm3:	<0.00055
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00055
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	2
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-FB01-112223-AB□**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	Taylor Smylie
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie 45260 **Scott M. Ward, Ph.D.** **Lab Director**

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM01-112323-AB**

Air Volume:	7639.827
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38177
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM02-112323-AB**

Air Volume:	7247.664
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.40243
Analytical Sensitivity: f/cm3:	0.00040
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Amphibole) f/cm3:	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00040
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.5
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.5

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

NVLAP Lab Code: 200525-0; TDSHS License: 30-0273

Eurofins J3 Resources, Inc.
6110 W. 34th Street, Houston, Texas 77092
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Airborne Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) ISO 10312 - Ambient Air - Determination of Asbestos Fibers Direct-Transfer Transmission Electron Microscopy Method

Maura McAleese
Tetra Tech- Maui Fire
1999 Harrison St. Ste. 500
Oakland, CA 94612

EJ3 Order #: 3463023
Project #: 1032864023141
Receipt Date: 27-Nov-2023
Analysis Date: 30-Nov-2023
Report Date: 30-Nov-2023

HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-AM03-112323-AB**

Air Volume:	7587.504
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.38440
Analytical Sensitivity: f/cm3:	0.00038
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Amphibole) f/cm3:	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00038
Concentration of Asbestos (Chrysotile), Str/L:	0
Concentration of Asbestos (Amphibole), Str/L:	0
Lower 95% Confidence Limit (Chrysotile), Str/L:	0
Upper 95% Confidence Limit (Chrysotile), Str/L:	1.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.4

Analyst: Taylor Smylie

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Analysis Date: 30-Nov-2023
Report Date: 30-Nov-2023

HDOH Kula Community Air (11/20 to 11/23)

Sample Number **MFK-FB01-112323-AB□**

Air Volume:	0
Effective Filter Area:	385.0 mm^2
Level of Analysis (Chrysotile):	CDQ
Level of Analysis (Amphibole):	ADQ
Magnification Used for Fiber Counting:	20,000
Aspect Ratio for Fiber Definition:	5:1
Mean Dimension of Grid Openings (GOs):	0.0132 mm^2
Initials of Analyst:	TS
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	N/A
Analytical Sensitivity: f/cm3:	N/A
Number of primary asbestos structures:	0
Number of asbestos structures counted:	0
Number of asbestos structures > 5 um :	0
Number of asbestos fibers and bundles > 5 um:	0
Number of PCM equivalent asbestos structures:	0
Number of PCM equivalent asbestos fibers:	0
Concentration of Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Amphibole) f/cm3:	N/A
Concentration of PCME Asbestos (Chrysotile) f/cm3:	N/A
Concentration of Asbestos (Chrysotile), Str/L:	N/A
Concentration of Asbestos (Amphibole), Str/L:	N/A
Lower 95% Confidence Limit (Chrysotile), Str/L:	N/A
Upper 95% Confidence Limit (Chrysotile), Str/L:	N/A
Lower 95% Confidence Limit (Amphibole), Str/L:	N/A
Upper 95% Confidence Limit (Amphibole), Str/L:	N/A

Analyst: Taylor Smylie

Scott M. Ward, Ph.D. **Lab Director**

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