

Attachments

**Table 1: HDOH CAB Ambient Community Monitoring and Sampling
Analytical Sampling Results
Maui Wildfire, Kula
11/10/2023-11/15/2023**

Analyte		Asbestos		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc	
Screening Level	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	
	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	
11/10/2023	Top Property (AM-01)	<0.00129	N																	
	Middle Property (AM-02)	<0.00101	N																	
	Lower Property (AM-03)	<0.00088	N																	
11/11/2023	Top Property (AM-01)	<0.00052	N																	
	Middle Property (AM-02)	<0.00057	N																	
	Lower Property (AM-03)	<0.00044	N	0.000123	0.00017	0.00756	0.0000224	0.0000124	0.00227	0.000447	0.027	0.00039	0.0242	0.000867	0.00109	0.000237	0.00000156	0.00243	0.0151	
11/12/2003	Top Property (AM-01)	<0.00057	N	0.00012	0.000211	0.00802	0.0000259	0.0000172	0.00263	0.000517	0.0199	0.00048	0.0275	0.000848	0.00126	0.000264	0.00000228	0.00287	0.0181	
	Middle Property (AM-02)	<0.00062	N	0.0000881	0.000262	0.00923	0.0000277	0.0000154	0.00268	0.000543	0.0109	0.000379	0.0293	0.000571	0.00204	0.000256	0.00000246	0.00294	0.0103	
	Lower Property (AM-03)	<0.00057	N	0.0000881	0.00022	0.00873	0.0000259	0.0000141	0.0024	0.000565	0.0171	0.000345	0.0301	0.000648	0.0011	0.000243	0.00000244	0.00292	0.00869	
11/13/2023	Top Property (AM-01)	<0.00039	N	0.0000832	0.000457	0.018	0.0000656	0.000022	0.00355	0.00124	0.0201	0.000804	0.0675	0.00102	0.00178	0.000642	0.00000408	0.00545	0.0177	
	Middle Property (AM-02)	<0.00038	N	0.0000794	0.000478	0.0143	0.0000474	0.0000236	0.00309	0.00102	0.0151	0.000512	0.0539	0.00072	0.00179	0.00056	0.00000354	0.0046	0.0173	
	Lower Property (AM-03)	<0.00064	N	0.000104	0.000332	0.0151	0.0000465	0.0000246	0.00336	0.000896	0.0311	0.000563	0.0464	0.001	0.00148	0.000527	0.00000341	0.00395	0.0276	
11/14/2023	Top Property (AM-01)	<0.00040	N	0.000111	0.000361	0.0174	0.0000497	0.0000281	0.00326	0.000899	0.0514	0.00234	0.0528	0.000965	0.00173	0.000514	0.00000344	0.00447	0.0362	
	Middle Property (AM-02)	<0.00035	N	0.0000876	0.000349	0.0137	0.0000433	0.0000195	0.00259	0.000644	0.0188	0.000635	0.0362	0.000695	0.00119	0.00039	0.00000244	0.00339	0.0169	
	Lower Property (AM-03)	<0.00057	N	0.000107	0.000238	0.0135	0.0000393	0.0000356	0.00222	0.00056	0.0363	0.000443	0.0354	0.0012	0.00106	0.000333	0.00000312	0.00252	0.0173	
11/15/2023	Top Property (AM-01)	<0.00040	N																	
	Middle Property (AM-02)	<0.00040	N																	
	Lower Property (AM-03)	<0.00045	N																	
95% Upper Confidence Limit ³		0.00068		0.00011	0.00039	0.0157	0.00005	0.00003	0.00311	0.00092	0.0345	0.00102	0.051	0.00099	0.0017	0.00052	0.0000033	0.00425	0.059	

Notes:

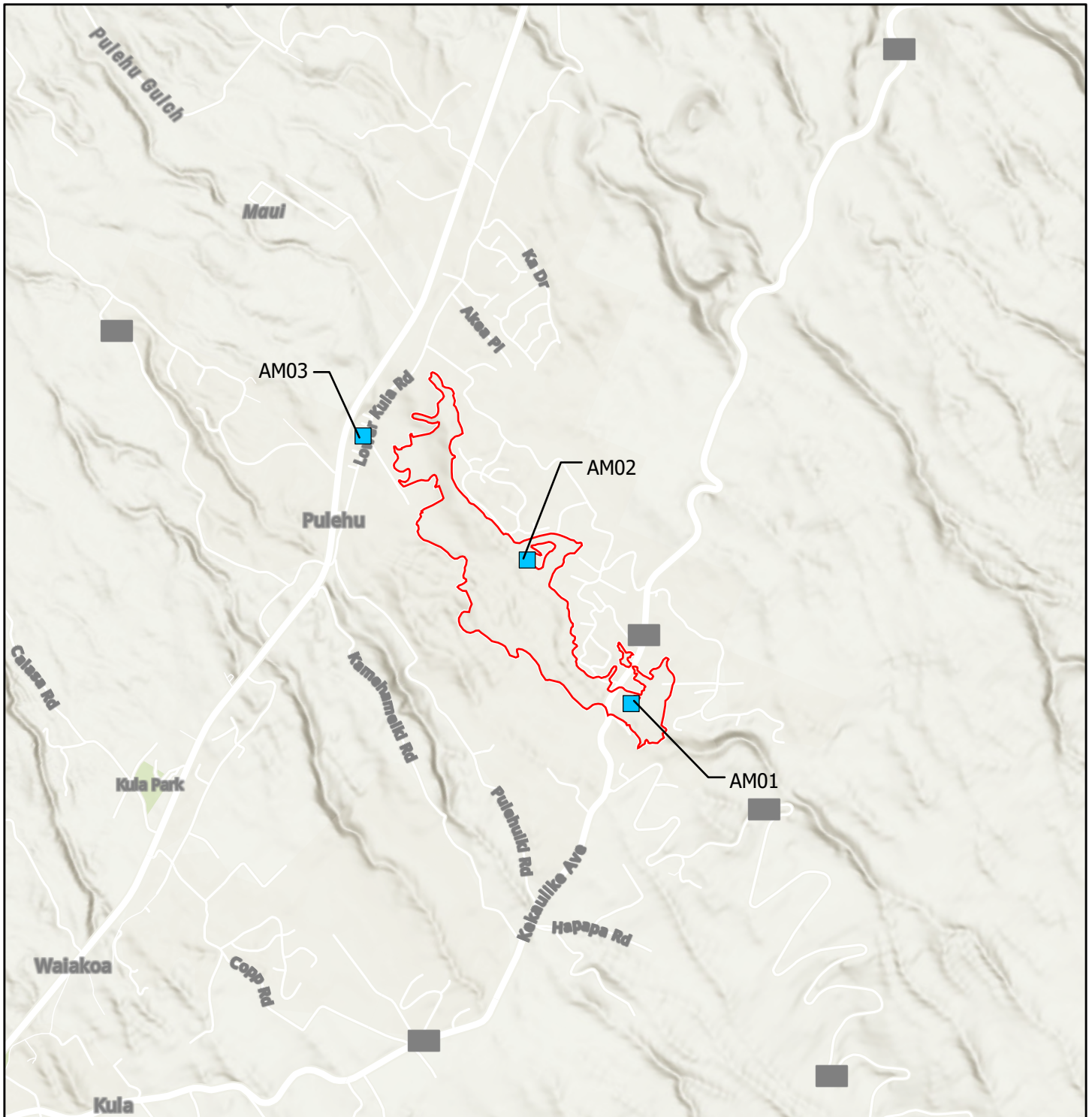
- Metals sampling began at one location only on 11/11
- No metals sampling tookplace on 11/15 due to high winds knocking over the Tisch samplers the day prior. Equipment was repositioned and secured on 11/15
- NA = Not Available
- f/cc = fibers per cubic centimeter
- µg/m3= micrograms per cubic meter
- 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
11/08/2023-11/15/2023**

Particulate Size		PM 2.5	PM 10
Screening Level	Location / ID	35 µg/m ³	150 µg/m ³
11/8/2023	Top Property (AM-01)	7.557	8.248
	Middle Property (AM-02)	6.143	8.057
	Lower Property (AM-03)	4.9143	23.409
11/9/2023	Top Property (AM-01)	7.8	12.542
	Middle Property (AM-02)	6.283	10.425
	Lower Property (AM-03)	6.233	12.454
11/10/2023	Top Property (AM-01)	8.042	10.929
	Middle Property (AM-02)	7.15	10.6
	Lower Property (AM-03)	5.175	10.654
11/11/2023	Top Property (AM-01)	6.796	7.938
	Middle Property (AM-02)	5.233	7.142
	Lower Property (AM-03)	5.796	8.517
11/12/2023	Top Property (AM-01)	5.746	20.796
	Middle Property (AM-02)	6.083	7.688
	Lower Property (AM-03)	4.808	9.738
11/13/2023	Top Property (AM-01)	6.875	17.038
	Middle Property (AM-02)	4.875	10.8
	Lower Property (AM-03)	6.45	12.629
11/14/2023	Top Property (AM-01)	6.704	171.042
	Middle Property (AM-02)	14.025	11.896
	Lower Property (AM-03)	4.838	13.038
11/15/2023	Top Property (AM-01)	35.808	24.292
	Middle Property (AM-02)	18.55	6.742
	Lower Property (AM-03)	4.808	8.25

Notes:

The exceedances on 11/14 and 11/15 are a result of woodchips spread and private operations on the property
Results are based on 24 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

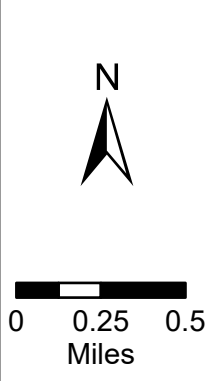


Figure 1
Ambient Community
Air Monitoring Locations

Hawaii DOH
2023 Kula Wildfire

Appendix 1



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

November 21, 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 11/15/23 13:08.

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

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

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

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

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify julie.swift@erg.com and delete the report without retaining any copies.



CERTIFICATE OF ANALYSIS

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

ATTN: Ms. Chelsea Saber

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

FILE #: 0000.00

REPORTED: 11/21/23 13:30

SUBMITTED: 11/15/23

AQS SITE CODE:

SITE CODE: Maui fires

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
Q9541253	3111547-01	Air	11/11/23 23:59	11/15/23 13:08
Q9541250	3111547-02	Air	11/12/23 23:59	11/15/23 13:08
Q9541247	3111547-03	Air	11/12/23 23:59	11/15/23 13:08
Q9541246	3111547-04	Air	11/12/23 23:59	11/15/23 13:08



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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: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541253 **Lab ID:** 3111547-01 **Sampled:** 11/11/23 23:59
Matrix: Air **Sample Volume:** 1639.8 m³ **Received:** 11/15/23 13:08
Filter ID: **Analysis Date:** 11/18/23 02:37
Comments: MFK-AM-03-111123-HM - Sample received unfolded in envelope

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Aluminum	7429-90-5	530		31.8
Antimony	7440-36-0	0.123	SL	0.0438
Arsenic	7440-38-2	0.170		0.00948
Barium	7440-39-3	7.56		0.941
Beryllium	7440-41-7	0.0224		0.00329
Cadmium	7440-43-9	0.0124	U	0.108
Calcium	7440-70-2	537		290
Chromium	7440-47-3	2.27		2.01
Cobalt	7440-48-4	0.447		0.0155
Copper	7440-50-8	27.0		2.98
Iron	7439-89-6	778		24.0
Lead	7439-92-1	0.390		0.274
Magnesium	7439-95-4	311		95.6
Manganese	7439-96-5	24.2		1.18
Molybdenum	7439-98-7	0.867		0.211
Nickel	7440-02-0	1.09		0.795
Phosphorus	7723-14-0	406	U, E, ICS-01, LK, QX	1240
Potassium	7440-09-7	138		37.7
Rubidium		0.253		0.0182
Selenium	7782-49-2	0.237		0.0109
Sodium	7440-23-5	2570	E, ICS-01, LK	1980
Strontium	7440-24-6	4.88		0.647
Thallium	7440-28-0	0.00156		4.99E-4
Thorium	7440-29-01	0.0229		0.00298
Uranium	NA	0.0160	U	0.0169
Vanadium	7440-62-2	2.43		0.0488
Zinc	7440-66-6	15.1	U	96.9



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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541250 **Lab ID:** 3111547-02 **Sampled:** 11/12/23 23:59
Matrix: Air **Sample Volume:** 1641.6 m³ **Received:** 11/15/23 13:08
Filter ID: **Analysis Date:** 11/17/23 17:44
Comments: MFK-AM-01-111223-HM - Sample received unfolded in envelope

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Aluminum	7429-90-5	703		31.8
Antimony	7440-36-0	0.120	SL	0.0437
Arsenic	7440-38-2	0.211		0.00947
Barium	7440-39-3	8.02		0.940
Beryllium	7440-41-7	0.0259		0.00329
Cadmium	7440-43-9	0.0172	U	0.108
Calcium	7440-70-2	638		289
Chromium	7440-47-3	2.63		2.01
Cobalt	7440-48-4	0.517		0.0155
Copper	7440-50-8	19.9		2.97
Iron	7439-89-6	949		24.0
Lead	7439-92-1	0.480		0.274
Magnesium	7439-95-4	345		95.5
Manganese	7439-96-5	27.5		1.18
Molybdenum	7439-98-7	0.848		0.211
Nickel	7440-02-0	1.26		0.794
Phosphorus	7723-14-0	404	U, E, ICS-01, LK, QX	1240
Potassium	7440-09-7	145		37.7
Rubidium		0.293		0.0181
Selenium	7782-49-2	0.264		0.0109
Sodium	7440-23-5	2640	E, ICS-01, LK	1980
Strontium	7440-24-6	6.21		0.646
Thallium	7440-28-0	0.00228		4.99E-4
Thorium	7440-29-01	0.0273		0.00297
Uranium	NA	0.0195		0.0168
Vanadium	7440-62-2	2.87		0.0488
Zinc	7440-66-6	18.1	U	96.8



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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541247 **Lab ID:** 3111547-03 **Sampled:** 11/12/23 23:59
Matrix: Air **Sample Volume:** 1627.2 m³ **Received:** 11/15/23 13:08
Filter ID: **Analysis Date:** 11/18/23 02:53
Comments: MFK-AM-02-111223-HM - Sample received unfolded in envelope

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Aluminum	7429-90-5	851	E	32.1	
Antimony	7440-36-0	0.0881	SL	0.0441	
Arsenic	7440-38-2	0.262		0.00955	
Barium	7440-39-3	9.23		0.948	
Beryllium	7440-41-7	0.0277		0.00332	
Cadmium	7440-43-9	0.0154	U	0.109	
Calcium	7440-70-2	664		292	
Chromium	7440-47-3	2.68		2.03	
Cobalt	7440-48-4	0.543		0.0156	
Copper	7440-50-8	10.9		3.00	
Iron	7439-89-6	1030		24.2	
Lead	7439-92-1	0.379		0.276	
Magnesium	7439-95-4	342		96.4	
Manganese	7439-96-5	29.3		1.19	
Molybdenum	7439-98-7	0.571		0.213	
Nickel	7440-02-0	2.04		0.801	
Phosphorus	7723-14-0	468	U, E, ICS-01, LK, QX	1250	
Potassium	7440-09-7	169		38.0	
Rubidium		0.344		0.0183	
Selenium	7782-49-2	0.256		0.0110	
Sodium	7440-23-5	2700	E, ICS-01, LK	2000	
Strontium	7440-24-6	6.79		0.652	
Thallium	7440-28-0	0.00246		5.03E-4	
Thorium	7440-29-01	0.0292		0.00300	
Uranium	NA	0.0210		0.0170	
Vanadium	7440-62-2	2.94		0.0492	
Zinc	7440-66-6	10.3	U	97.7	



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

FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541246 **Lab ID:** 3111547-04 **Sampled:** 11/12/23 23:59
Matrix: Air **Sample Volume:** 1834.56 m³ **Received:** 11/15/23 13:08
Filter ID: **Analysis Date:** 11/18/23 03:48
Comments: MFK-AM-03-111223-HM - Sample received unfolded in envelope

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>
Aluminum	7429-90-5	675		28.5
Antimony	7440-36-0	0.0881	SL	0.0391
Arsenic	7440-38-2	0.220		0.00847
Barium	7440-39-3	8.73		0.841
Beryllium	7440-41-7	0.0259		0.00294
Cadmium	7440-43-9	0.0141	U	0.0967
Calcium	7440-70-2	583		259
Chromium	7440-47-3	2.40		1.80
Cobalt	7440-48-4	0.565		0.0138
Copper	7440-50-8	17.1		2.66
Iron	7439-89-6	1020		21.5
Lead	7439-92-1	0.345		0.245
Magnesium	7439-95-4	317		85.5
Manganese	7439-96-5	30.1		1.06
Molybdenum	7439-98-7	0.648		0.189
Nickel	7440-02-0	1.10		0.710
Phosphorus	7723-14-0	385	U, E, ICS-01, LK, QX	1110
Potassium	7440-09-7	146		33.7
Rubidium		0.305		0.0162
Selenium	7782-49-2	0.243		0.00976
Sodium	7440-23-5	2400	E, ICS-01, LK	1770
Strontium	7440-24-6	5.77		0.578
Thallium	7440-28-0	0.00244		4.46E-4
Thorium	7440-29-01	0.0336		0.00266
Uranium	NA	0.0212		0.0151
Vanadium	7440-62-2	2.92		0.0436
Zinc	7440-66-6	8.69	U	86.6



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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Blank (2311043-CCB1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	41.6		ng/l							
Antimony	1.87		ng/l							
Arsenic	-1.80		ng/l							U
Barium	5.10		ng/l							
Beryllium	-0.108		ng/l							U
Cadmium	0.862		ng/l							
Calcium	801		ng/l							
Chromium	8.29		ng/l							
Cobalt	1.16		ng/l							
Copper	61.2		ng/l							
Iron	145		ng/l							
Lead	11.9		ng/l							
Magnesium	46.5		ng/l							
Manganese	15.1		ng/l							
Molybdenum	39.8		ng/l							
Nickel	2.50		ng/l							
Phosphorus	106		ng/l							ICS-01, LK, QX
Potassium	2360		ng/l							
Rubidium	-0.371		ng/l							U
Selenium	-2.22		ng/l							U
Sodium	-3210		ng/l							ICS-01, LK, U
Strontium	0.927		ng/l							
Thallium	0.499		ng/l							
Thorium	0.391		ng/l							
Uranium	0.0504		ng/l							
Vanadium	-57.9		ng/l							U
Zinc	-15.4		ng/l							U

Calibration Blank (2311043-CCB2)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	33.7		ng/l							
Antimony	1.30		ng/l							
Arsenic	1.95		ng/l							
Barium	4.42		ng/l							
Beryllium	-0.359		ng/l							U
Cadmium	0.569		ng/l							
Calcium	286		ng/l							
Chromium	7.03		ng/l							
Cobalt	0.989		ng/l							

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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 Blue Bell, PA 19422
 ATTN: Ms. Chelsea Saber
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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Blank (2311043-CCB2) Contin

Prepared: 11/16/23 Analyzed: 11/17/23

Copper	49.3		ng/l							
Iron	143		ng/l							
Lead	11.9		ng/l							
Magnesium	39.1		ng/l							
Manganese	9.63		ng/l							
Molybdenum	12.2		ng/l							
Nickel	2.73		ng/l							
Phosphorus	-20.4		ng/l							ICS-01, LK, QX, U
Potassium	1010		ng/l							
Rubidium	0.765		ng/l							
Selenium	2.26		ng/l							
Sodium	-3920		ng/l							ICS-01, LK, U
Strontium	0.601		ng/l							
Thallium	0.498		ng/l							
Thorium	0.814		ng/l							
Uranium	0.00911		ng/l							
Vanadium	-64.0		ng/l							U
Zinc	-42.7		ng/l							U

Calibration Blank (2311043-CCB3)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	47.4		ng/l							
Antimony	1.51		ng/l							
Arsenic	-3.21		ng/l							U
Barium	3.95		ng/l							
Beryllium	-0.706		ng/l							U
Cadmium	0.456		ng/l							
Calcium	251		ng/l							
Chromium	5.93		ng/l							
Cobalt	0.737		ng/l							
Copper	43.9		ng/l							
Iron	91.0		ng/l							
Lead	13.0		ng/l							
Magnesium	34.5		ng/l							
Manganese	8.71		ng/l							
Molybdenum	15.6		ng/l							
Nickel	4.22		ng/l							
Phosphorus	-160		ng/l							ICS-01, LK, QX, U
Potassium	633		ng/l							

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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
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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
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Blank (2311043-CCB3) Contin

Prepared: 11/16/23 Analyzed: 11/17/23

Rubidium	-0.0142		ng/l							U
Selenium	-0.348		ng/l							U
Sodium	-5730		ng/l							ICS-01, LK, U
Strontium	-0.111		ng/l							U
Thallium	0.428		ng/l							
Thorium	0.916		ng/l							
Uranium	0.00701		ng/l							
Vanadium	-67.3		ng/l							U
Zinc	-61.7		ng/l							U

Calibration Blank (2311043-CCB4)

Prepared: 11/16/23 Analyzed: 11/18/23

Aluminum	-6.92		ng/l							U
Antimony	1.48		ng/l							
Arsenic	0.304		ng/l							
Barium	4.99		ng/l							
Beryllium	-0.852		ng/l							U
Cadmium	0.542		ng/l							
Calcium	347		ng/l							
Chromium	6.09		ng/l							
Cobalt	0.998		ng/l							
Copper	57.8		ng/l							
Iron	118		ng/l							
Lead	10.8		ng/l							
Magnesium	58.2		ng/l							
Manganese	11.2		ng/l							
Molybdenum	13.4		ng/l							
Nickel	5.80		ng/l							
Phosphorus	38.3		ng/l							ICS-01, LK, QX
Potassium	127		ng/l							
Rubidium	0.556		ng/l							
Selenium	11.3		ng/l							
Sodium	-4480		ng/l							ICS-01, LK, U
Strontium	1.92		ng/l							
Thallium	0.360		ng/l							
Thorium	0.489		ng/l							
Uranium	0.0121		ng/l							
Vanadium	-65.2		ng/l							U
Zinc	-45.4		ng/l							U

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Blank (2311043-CCB5)

Prepared: 11/16/23 Analyzed: 11/18/23

Aluminum	101		ng/l							
Antimony	1.89		ng/l							
Arsenic	-0.504		ng/l							U
Barium	5.84		ng/l							
Beryllium	-0.952		ng/l							U
Cadmium	0.677		ng/l							
Calcium	717		ng/l							
Chromium	7.19		ng/l							
Cobalt	0.920		ng/l							
Copper	56.9		ng/l							
Iron	183		ng/l							
Lead	11.1		ng/l							
Magnesium	69.2		ng/l							
Manganese	12.6		ng/l							
Molybdenum	33.7		ng/l							
Nickel	5.69		ng/l							
Phosphorus	35.2		ng/l							ICS-01, LK, QX
Potassium	1010		ng/l							
Rubidium	-0.160		ng/l							U
Selenium	6.04		ng/l							
Sodium	-5750		ng/l							ICS-01, LK, U
Strontium	1.84		ng/l							
Thallium	0.408		ng/l							
Thorium	0.677		ng/l							
Uranium	0.0332		ng/l							
Vanadium	-67.6		ng/l							U
Zinc	-57.8		ng/l							U

Calibration Check (2311043-CCV1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.56E6		ng/l	1.5000E6	104	90-110				
Antimony	20300		ng/l	20000	101	90-110				
Arsenic	20000		ng/l	20000	100	90-110				
Barium	200000		ng/l	200000	100	90-110				
Beryllium	4880		ng/l	5000.0	97.6	90-110				
Cadmium	20500		ng/l	20000	102	90-110				
Calcium	2.61E7		ng/l	2.5000E7	104	90-110				
Chromium	244000		ng/l	240000	102	90-110				
Cobalt	53400		ng/l	50000	107	90-110				
Copper	2.10E6		ng/l	2.0000E6	105	90-110				

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Check (2311043-CCV1) Contin

Prepared: 11/16/23 Analyzed: 11/17/23

Iron	2.63E6		ng/l	2.5000E6		105	90-110			
Lead	201000		ng/l	200000		100	90-110			
Magnesium	1.07E6		ng/l	1.0000E6		107	90-110			
Manganese	515000		ng/l	500000		103	90-110			
Molybdenum	50600		ng/l	50000		101	90-110			
Nickel	129000		ng/l	120000		108	90-110			
Phosphorus	208000		ng/l	200000		104	90-110			ICS-01, LK, QX
Potassium	2.66E6		ng/l	2.5000E6		107	90-110			
Rubidium	10000		ng/l	10000		100	90-110			
Selenium	19900		ng/l	20000		99.6	90-110			
Sodium	2.67E6		ng/l	2.5000E6		107	90-110			ICS-01, LK
Strontium	50300		ng/l	50000		101	90-110			
Thallium	510		ng/l	500.00		102	90-110			
Thorium	495		ng/l	500.00		99.1	90-110			
Uranium	496		ng/l	500.00		99.1	90-110			
Vanadium	20400		ng/l	20000		102	90-110			
Zinc	538000		ng/l	500000		108	90-110			

Calibration Check (2311043-CCV2)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.47E6		ng/l	1.5000E6		97.8	90-110			
Antimony	20300		ng/l	20000		102	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	201000		ng/l	200000		100	90-110			
Beryllium	4710		ng/l	5000.0		94.2	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Calcium	2.52E7		ng/l	2.5000E7		101	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	51700		ng/l	50000		103	90-110			
Copper	2.07E6		ng/l	2.0000E6		103	90-110			
Iron	2.54E6		ng/l	2.5000E6		102	90-110			
Lead	201000		ng/l	200000		101	90-110			
Magnesium	999000		ng/l	1.0000E6		99.9	90-110			
Manganese	497000		ng/l	500000		99.4	90-110			
Molybdenum	51700		ng/l	50000		103	90-110			
Nickel	126000		ng/l	120000		105	90-110			
Phosphorus	193000		ng/l	200000		96.3	90-110			ICS-01, LK, QX
Potassium	2.53E6		ng/l	2.5000E6		101	90-110			
Rubidium	10000		ng/l	10000		100	90-110			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Check (2311043-CCV2) Contin

Prepared: 11/16/23 Analyzed: 11/17/23

Selenium	19900		ng/l	20000		99.7	90-110			
Sodium	2.50E6		ng/l	2.5000E6		100	90-110			ICS-01, LK
Strontium	50200		ng/l	50000		100	90-110			
Thallium	505		ng/l	500.00		101	90-110			
Thorium	502		ng/l	500.00		100	90-110			
Uranium	501		ng/l	500.00		100	90-110			
Vanadium	20300		ng/l	20000		101	90-110			
Zinc	529000		ng/l	500000		106	90-110			

Calibration Check (2311043-CCV3)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.45E6		ng/l	1.5000E6		96.7	90-110			
Antimony	20400		ng/l	20000		102	90-110			
Arsenic	20000		ng/l	20000		100	90-110			
Barium	200000		ng/l	200000		99.9	90-110			
Beryllium	4640		ng/l	5000.0		92.7	90-110			
Cadmium	20700		ng/l	20000		104	90-110			
Calcium	2.53E7		ng/l	2.5000E7		101	90-110			
Chromium	244000		ng/l	240000		102	90-110			
Cobalt	51500		ng/l	50000		103	90-110			
Copper	2.05E6		ng/l	2.0000E6		103	90-110			
Iron	2.54E6		ng/l	2.5000E6		102	90-110			
Lead	203000		ng/l	200000		101	90-110			
Magnesium	1.00E6		ng/l	1.0000E6		100	90-110			
Manganese	500000		ng/l	500000		100	90-110			
Molybdenum	51500		ng/l	50000		103	90-110			
Nickel	125000		ng/l	120000		104	90-110			
Phosphorus	193000		ng/l	200000		96.4	90-110			ICS-01, LK, QX
Potassium	2.54E6		ng/l	2.5000E6		101	90-110			
Rubidium	9960		ng/l	10000		99.6	90-110			
Selenium	19900		ng/l	20000		99.6	90-110			
Sodium	2.51E6		ng/l	2.5000E6		101	90-110			ICS-01, LK
Strontium	50200		ng/l	50000		100	90-110			
Thallium	498		ng/l	500.00		99.6	90-110			
Thorium	498		ng/l	500.00		99.6	90-110			
Uranium	506		ng/l	500.00		101	90-110			
Vanadium	20400		ng/l	20000		102	90-110			
Zinc	531000		ng/l	500000		106	90-110			

Calibration Check (2311043-CCV4)

Prepared: 11/16/23 Analyzed: 11/18/23

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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Check (2311043-CCV4) Contin

Prepared: 11/16/23 Analyzed: 11/18/23

Aluminum	1.48E6		ng/l	1.5000E6		98.5	90-110			
Antimony	20500		ng/l	20000		103	90-110			
Arsenic	20300		ng/l	20000		101	90-110			
Barium	202000		ng/l	200000		101	90-110			
Beryllium	4640		ng/l	5000.0		92.7	90-110			
Cadmium	20900		ng/l	20000		104	90-110			
Calcium	2.56E7		ng/l	2.5000E7		102	90-110			
Chromium	249000		ng/l	240000		104	90-110			
Cobalt	52700		ng/l	50000		105	90-110			
Copper	2.11E6		ng/l	2.0000E6		105	90-110			
Iron	2.56E6		ng/l	2.5000E6		103	90-110			
Lead	203000		ng/l	200000		101	90-110			
Magnesium	1.01E6		ng/l	1.0000E6		101	90-110			
Manganese	510000		ng/l	500000		102	90-110			
Molybdenum	52400		ng/l	50000		105	90-110			
Nickel	128000		ng/l	120000		107	90-110			
Phosphorus	191000		ng/l	200000		95.3	90-110			ICS-01, LK, QX
Potassium	2.58E6		ng/l	2.5000E6		103	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	20400		ng/l	20000		102	90-110			
Sodium	2.56E6		ng/l	2.5000E6		102	90-110			ICS-01, LK
Strontium	50800		ng/l	50000		102	90-110			
Thallium	496		ng/l	500.00		99.2	90-110			
Thorium	497		ng/l	500.00		99.5	90-110			
Uranium	499		ng/l	500.00		99.8	90-110			
Vanadium	20500		ng/l	20000		103	90-110			
Zinc	534000		ng/l	500000		107	90-110			

Calibration Check (2311043-CCV5)

Prepared: 11/16/23 Analyzed: 11/18/23

Aluminum	1.50E6		ng/l	1.5000E6		99.8	90-110			
Antimony	20500		ng/l	20000		102	90-110			
Arsenic	20300		ng/l	20000		102	90-110			
Barium	203000		ng/l	200000		101	90-110			
Beryllium	4650		ng/l	5000.0		93.0	90-110			
Cadmium	20700		ng/l	20000		104	90-110			
Calcium	2.56E7		ng/l	2.5000E7		102	90-110			
Chromium	246000		ng/l	240000		102	90-110			
Cobalt	52700		ng/l	50000		105	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Calibration Check (2311043-CCV5) Contin

Prepared: 11/16/23 Analyzed: 11/18/23

Copper	2.10E6		ng/l	2.0000E6		105	90-110			
Iron	2.59E6		ng/l	2.5000E6		104	90-110			
Lead	204000		ng/l	200000		102	90-110			
Magnesium	1.02E6		ng/l	1.0000E6		102	90-110			
Manganese	511000		ng/l	500000		102	90-110			
Molybdenum	51500		ng/l	50000		103	90-110			
Nickel	128000		ng/l	120000		107	90-110			
Phosphorus	197000		ng/l	200000		98.3	90-110			ICS-01, LK, QX
Potassium	2.59E6		ng/l	2.5000E6		104	90-110			
Rubidium	10100		ng/l	10000		101	90-110			
Selenium	20000		ng/l	20000		100	90-110			
Sodium	2.57E6		ng/l	2.5000E6		103	90-110			ICS-01, LK
Strontium	50600		ng/l	50000		101	90-110			
Thallium	506		ng/l	500.00		101	90-110			
Thorium	502		ng/l	500.00		100	90-110			
Uranium	501		ng/l	500.00		100	90-110			
Vanadium	20400		ng/l	20000		102	90-110			
Zinc	538000		ng/l	500000		108	90-110			

High Cal Check (2311043-HCV1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	3.01E6		ng/l	3.0000E6		100	95-105			
Antimony	41400		ng/l	40000		103	95-105			
Arsenic	40700		ng/l	40000		102	95-105			
Barium	409000		ng/l	400000		102	95-105			
Beryllium	9810		ng/l	10000		98.1	95-105			
Cadmium	41200		ng/l	40000		103	95-105			
Calcium	5.20E7		ng/l	5.0000E7		104	95-105			
Chromium	493000		ng/l	480000		103	95-105			
Cobalt	101000		ng/l	100000		101	95-105			
Copper	4.03E6		ng/l	4.0000E6		101	95-105			
Iron	5.07E6		ng/l	5.0000E6		101	95-105			
Lead	409000		ng/l	400000		102	95-105			
Magnesium	2.01E6		ng/l	2.0000E6		100	95-105			
Manganese	1.01E6		ng/l	1.0000E6		101	95-105			
Molybdenum	104000		ng/l	100000		104	95-105			
Nickel	240000		ng/l	240000		99.8	95-105			
Phosphorus	399000		ng/l	400000		99.7	95-105			ICS-01, LK, QX
Potassium	4.93E6		ng/l	5.0000E6		98.6	95-105			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

High Cal Check (2311043-HCV1) Continue

Prepared: 11/16/23 Analyzed: 11/17/23

Rubidium	20400		ng/l	20000		102	95-105			
Selenium	40500		ng/l	40000		101	95-105			
Sodium	4.98E6		ng/l	5.0000E6		99.6	95-105			ICS-01, LK
Strontium	104000		ng/l	100000		104	95-105			
Thallium	1020		ng/l	1000.0		102	95-105			
Thorium	1040		ng/l	1000.0		104	95-105			
Uranium	1050		ng/l	1000.0		105	95-105			
Vanadium	41500		ng/l	40000		104	95-105			
Zinc	1.00E6		ng/l	1.0000E6		100	95-105			

Initial Cal Blank (2311043-ICB1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	14.5		ng/l							
Antimony	1.81		ng/l							
Arsenic	-7.99		ng/l							U
Barium	3.22		ng/l							
Beryllium	0.748		ng/l							
Cadmium	0.540		ng/l							
Calcium	-117		ng/l							U
Chromium	7.03		ng/l							
Cobalt	0.818		ng/l							
Copper	51.2		ng/l							
Iron	50.9		ng/l							
Lead	14.8		ng/l							
Magnesium	6.01		ng/l							
Manganese	12.4		ng/l							
Molybdenum	20.1		ng/l							
Nickel	0.702		ng/l							
Phosphorus	-13.2		ng/l							ICS-01, LK, QX, U
Potassium	-152		ng/l							U
Rubidium	-0.579		ng/l							U
Selenium	5.30		ng/l							
Sodium	-5650		ng/l							ICS-01, LK, U
Strontium	-0.536		ng/l							U
Thallium	0.412		ng/l							
Thorium	0.807		ng/l							
Uranium	0.0330		ng/l							
Vanadium	-57.3		ng/l							U
Zinc	-14.6		ng/l							U

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FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Initial Cal Check (2311043-ICV1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.48E6		ng/l	1.5000E6		98.7	90-110			
Antimony	20200		ng/l	20000		101	90-110			
Arsenic	20200		ng/l	20000		101	90-110			
Barium	202000		ng/l	200000		101	90-110			
Beryllium	4740		ng/l	5000.0		94.8	90-110			
Cadmium	20600		ng/l	20000		103	90-110			
Calcium	2.51E7		ng/l	2.5000E7		100	90-110			
Chromium	238000		ng/l	240000		99.3	90-110			
Cobalt	51200		ng/l	50000		102	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Iron	2.52E6		ng/l	2.5000E6		101	90-110			
Lead	199000		ng/l	200000		99.6	90-110			
Magnesium	997000		ng/l	1.0000E6		99.7	90-110			
Manganese	490000		ng/l	500000		98.1	90-110			
Molybdenum	50200		ng/l	50000		100	90-110			
Nickel	127000		ng/l	120000		106	90-110			
Phosphorus	190000		ng/l	200000		95.2	90-110			ICS-01, LK, QX
Potassium	2.53E6		ng/l	2.5000E6		101	90-110			
Rubidium	9030		ng/l	10000		90.3	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Sodium	2.43E6		ng/l	2.5000E6		97.0	90-110			ICS-01, LK
Strontium	50500		ng/l	50000		101	90-110			
Thallium	482		ng/l	500.00		96.4	90-110			
Thorium	493		ng/l	500.00		98.7	90-110			
Uranium	493		ng/l	500.00		98.5	90-110			
Vanadium	20500		ng/l	20000		102	90-110			
Zinc	536000		ng/l	500000		107	90-110			

Interference Check A (2311043-IFA1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.60E7		ng/l	1.5000E7		107	80-120			
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	9.91E7		ng/l	1.0040E8		98.7	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

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Interference Check A (2311043-IFA1) Co

Prepared: 11/16/23 Analyzed: 11/17/23

Iron	1.57E7		ng/l	1.5000E7		104	80-120			
Lead	0.00		ng/l				80-120			U
Magnesium	1.58E7		ng/l	1.5000E7		105	80-120			
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	1.72E7		ng/l	1.5000E7		115	80-120			ICS-01, LK, QX
Potassium	1.60E7		ng/l	1.5000E7		107	80-120			
Rubidium	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Sodium	1.66E7		ng/l	1.5000E7		111	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 (2311043-IFB1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	1.90E7		ng/l	1.6500E7		115	80-120			
Antimony	21000		ng/l	20000		105	80-120			
Arsenic	20800		ng/l	20000		104	80-120			
Barium	207000		ng/l	200000		104	80-120			
Beryllium	4590		ng/l	5000.0		91.8	80-120			
Cadmium	20400		ng/l	20000		102	80-120			
Calcium	1.30E8		ng/l	1.2540E8		104	80-120			
Chromium	240000		ng/l	240000		100	80-120			
Cobalt	54000		ng/l	50000		108	80-120			
Copper	2.02E6		ng/l	2.0000E6		101	80-120			
Iron	1.91E7		ng/l	1.7500E7		109	80-120			
Lead	209000		ng/l	200000		105	80-120			
Magnesium	1.82E7		ng/l	1.6000E7		114	80-120			
Manganese	556000		ng/l	500000		111	80-120			
Molybdenum	367000		ng/l	350000		105	80-120			
Nickel	128000		ng/l	120000		106	80-120			
Phosphorus	1.87E7		ng/l	1.5200E7		123	80-120			ICS-01, LK, QX
Potassium	1.99E7		ng/l	1.7500E7		114	80-120			
Rubidium	10200		ng/l	10000		102	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311043 - B3K1601

Interference Check B (2311043-IFB1) Coi

Prepared: 11/16/23 Analyzed: 11/17/23

Selenium	19400		ng/l	20000		96.9	80-120			
Sodium	2.11E7		ng/l	1.7500E7		121	80-120			ICS-01, LK
Strontium	51000		ng/l	50000		102	80-120			
Thallium	531		ng/l	500.00		106	80-120			
Thorium	552		ng/l	500.00		110	80-120			
Uranium	561		ng/l	500.00		112	80-120			
Vanadium	19600		ng/l	20000		98.1	80-120			
Zinc	508000		ng/l	500000		102	80-120			

Serial Dilution (2311043-SRD1)

Source: 3111547-02

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	693	159	ng/m ³ Air		703			1.37	10	
Antimony	ND	0.219	ng/m ³ Air		ND				10	SL, U
Arsenic	0.212	0.0473	ng/m ³ Air		0.211			0.247	10	
Barium	7.82	4.70	ng/m ³ Air		8.02			2.47	10	
Beryllium	0.0261	0.0165	ng/m ³ Air		0.0259			0.942	10	
Cadmium	ND	0.540	ng/m ³ Air		ND				10	U
Calcium	ND	1450	ng/m ³ Air		ND				10	U
Chromium	ND	10.1	ng/m ³ Air		ND				10	U
Cobalt	0.520	0.0773	ng/m ³ Air		0.517			0.420	10	
Copper	20.0	14.9	ng/m ³ Air		19.9			0.226	10	
Iron	936	120	ng/m ³ Air		949			1.37	10	
Lead	ND	1.37	ng/m ³ Air		ND				10	U
Magnesium	ND	478	ng/m ³ Air		ND				10	U
Manganese	27.4	5.90	ng/m ³ Air		27.5			0.519	10	
Molybdenum	ND	1.06	ng/m ³ Air		ND				10	U
Nickel	ND	3.97	ng/m ³ Air		ND				10	U
Phosphorus	ND	6190	ng/m ³ Air		ND				10	ICS-01, LK, QX, U
Potassium	ND	188	ng/m ³ Air		ND				10	U
Rubidium	0.293	0.0907	ng/m ³ Air		0.293			0.0326	10	
Selenium	0.292	0.0545	ng/m ³ Air		0.264			9.95	10	
Sodium	ND	9910	ng/m ³ Air		ND				10	ICS-01, LK, U
Strontium	6.23	3.23	ng/m ³ Air		6.21			0.416	10	
Thallium	0.00297	0.00249	ng/m ³ Air		ND			26.4	10	
Thorium	0.0254	0.0149	ng/m ³ Air		0.0273			7.33	10	
Uranium	ND	0.0842	ng/m ³ Air		ND				10	U
Vanadium	2.76	0.244	ng/m ³ Air		2.87			3.77	10	
Zinc	ND	484	ng/m ³ Air		ND				10	U

Batch B3K1601 - ICP-MS Extraction

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 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K1601 - ICP-MS Extraction

Blank (B3K1601-BLK1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	ND	32.1	ng/m ³ Air							U
Antimony	ND	0.0441	ng/m ³ Air							U, SL
Arsenic	ND	0.00955	ng/m ³ Air							U
Barium	ND	0.948	ng/m ³ Air							U
Beryllium	ND	0.00332	ng/m ³ Air							U
Cadmium	ND	0.109	ng/m ³ Air							U
Calcium	ND	292	ng/m ³ Air							U
Chromium	ND	2.03	ng/m ³ Air							U
Cobalt	ND	0.0156	ng/m ³ Air							U
Copper	ND	3.00	ng/m ³ Air							U
Iron	ND	24.2	ng/m ³ Air							U
Lead	ND	0.276	ng/m ³ Air							U
Magnesium	ND	96.4	ng/m ³ Air							U
Manganese	ND	1.19	ng/m ³ Air							U
Molybdenum	ND	0.213	ng/m ³ Air							U
Nickel	ND	0.801	ng/m ³ Air							U
Phosphorus	ND	1250	ng/m ³ Air							ICS-01, LK, QX, U
Potassium	ND	38.0	ng/m ³ Air							U
Rubidium	ND	0.0183	ng/m ³ Air							U
Selenium	ND	0.0110	ng/m ³ Air							U
Sodium	ND	2000	ng/m ³ Air							ICS-01, LK, U
Strontium	ND	0.652	ng/m ³ Air							U
Thallium	ND	5.03E-4	ng/m ³ Air							U
Thorium	ND	0.00300	ng/m ³ Air							U
Uranium	ND	0.0170	ng/m ³ Air							U
Vanadium	ND	0.0492	ng/m ³ Air							U
Zinc	ND	97.7	ng/m ³ Air							U

LCS (B3K1601-BS1)

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	86.3	32.1	ng/m ³ Air	82.975		104	80-120			
Antimony	0.944	0.0441	ng/m ³ Air	1.3829		68.3	80-120			SL
Arsenic	2.77	0.00955	ng/m ³ Air	2.7658		100	80-120			
Barium	28.0	0.948	ng/m ³ Air	27.658		101	80-120			
Beryllium	1.25	0.00332	ng/m ³ Air	1.3829		90.3	80-120			
Cadmium	1.43	0.109	ng/m ³ Air	1.3829		104	80-120			
Calcium	ND	292	ng/m ³ Air	69.146			80-120			U
Chromium	15.2	2.03	ng/m ³ Air	13.829		110	80-120			
Cobalt	1.43	0.0156	ng/m ³ Air	1.3829		103	80-120			
Copper	30.7	3.00	ng/m ³ Air	27.658		111	80-120			

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K1601 - ICP-MS Extraction

LCS (B3K1601-BS1) Continued

Prepared: 11/16/23 Analyzed: 11/17/23

Iron	35.2	24.2	ng/m ³ Air	27.658		127	80-120			
Lead	13.9	0.276	ng/m ³ Air	13.829		100	80-120			
Magnesium	ND	96.4	ng/m ³ Air	27.658			80-120			U
Manganese	8.56	1.19	ng/m ³ Air	8.2975		103	80-120			
Molybdenum	1.50	0.213	ng/m ³ Air	1.3829		108	80-120			
Nickel	3.12	0.801	ng/m ³ Air	2.7658		113	80-120			
Phosphorus	ND	1250	ng/m ³ Air	13.829			80-120			GC-BS, ICS-01, LK,
Potassium	61.6	38.0	ng/m ³ Air	55.317		111	80-120			
Rubidium	1.36	0.0183	ng/m ³ Air	1.3829		98.4	80-120			
Selenium	2.72	0.0110	ng/m ³ Air	2.7658		98.4	80-120			
Sodium	ND	2000	ng/m ³ Air	55.317			80-120			GC-BS, ICS-01, LK, U
Strontium	1.64	0.652	ng/m ³ Air	1.3829		119	80-120			
Thallium	0.132	5.03E-4	ng/m ³ Air	0.13829		95.2	80-120			
Thorium	0.134	0.00300	ng/m ³ Air	0.13829		96.7	80-120			
Uranium	0.132	0.0170	ng/m ³ Air	0.13829		95.8	80-120			
Vanadium	2.88	0.0492	ng/m ³ Air	2.7658		104	80-120			
Zinc	109	97.7	ng/m ³ Air	82.975		131	80-120			

Duplicate (B3K1601-DUP1)

Source: 311547-02

Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	715	31.8	ng/m ³ Air		703		1.71	10		
Antimony	0.0989	0.0437	ng/m ³ Air		0.120		19.0	10	SL	
Arsenic	0.210	0.00947	ng/m ³ Air		0.211		0.348	10		
Barium	8.03	0.940	ng/m ³ Air		8.02		0.142	10		
Beryllium	0.0296	0.00329	ng/m ³ Air		0.0259		13.7	10		
Cadmium	ND	0.108	ng/m ³ Air		ND			10	U	
Calcium	633	289	ng/m ³ Air		638		0.738	10		
Chromium	2.70	2.01	ng/m ³ Air		2.63		2.56	10		
Cobalt	0.525	0.0155	ng/m ³ Air		0.517		1.46	10		
Copper	20.7	2.97	ng/m ³ Air		19.9		3.67	10		
Iron	967	24.0	ng/m ³ Air		949		1.93	10		
Lead	0.568	0.274	ng/m ³ Air		0.480		16.8	10		
Magnesium	349	95.5	ng/m ³ Air		345		1.17	10		
Manganese	27.8	1.18	ng/m ³ Air		27.5		1.04	10		
Molybdenum	0.825	0.211	ng/m ³ Air		0.848		2.70	10		
Nickel	1.21	0.794	ng/m ³ Air		1.26		3.98	10		
Phosphorus	ND	1240	ng/m ³ Air		ND			10	U, E, ICS-01, LK, QX	
Potassium	146	37.7	ng/m ³ Air		145		0.337	10		

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Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K1601 - ICP-MS Extraction

Duplicate (B3K1601-DUP1) Continued **Source: 3111547-02** Prepared: 11/16/23 Analyzed: 11/17/23

Rubidium	0.289	0.0181	ng/m ³ Air		0.293			1.22	10	
Selenium	0.251	0.0109	ng/m ³ Air		0.264			5.10	10	
Sodium	2730	1980	ng/m ³ Air		2640			3.30	10	ICS-01, LK, SI
Strontium	6.09	0.646	ng/m ³ Air		6.21			1.94	10	
Thallium	0.00244	4.99E-4	ng/m ³ Air		0.00228			6.88	10	
Thorium	0.0290	0.00297	ng/m ³ Air		0.0273			5.89	10	
Uranium	0.0188	0.0168	ng/m ³ Air		0.0195			3.83	10	
Vanadium	2.84	0.0488	ng/m ³ Air		2.87			0.947	10	
Zinc	ND	96.8	ng/m ³ Air		ND				10	U

Matrix Spike (B3K1601-MS1) **Source: 3111547-02** Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	827	31.8	ng/m ³ Air	82.237	703	151	80-120			E, QM-4X
Antimony	0.766	0.0437	ng/m ³ Air	1.3706	0.120	47.2	80-120			SL
Arsenic	2.84	0.00947	ng/m ³ Air	2.7412	0.211	95.7	80-120			
Barium	35.5	0.940	ng/m ³ Air	27.412	8.02	100	80-120			
Beryllium	1.53	0.00329	ng/m ³ Air	1.3706	0.0259	110	80-120			
Cadmium	1.43	0.108	ng/m ³ Air	1.3706	ND	104	80-120			
Calcium	740	289	ng/m ³ Air	68.531	638	148	80-120			QM-4X
Chromium	16.5	2.01	ng/m ³ Air	13.706	2.63	101	80-120			
Cobalt	1.96	0.0155	ng/m ³ Air	1.3706	0.517	105	80-120			
Copper	48.8	2.97	ng/m ³ Air	27.412	19.9	105	80-120			
Iron	1010	24.0	ng/m ³ Air	27.412	949	214	80-120			QM-4X
Lead	14.0	0.274	ng/m ³ Air	13.706	0.480	98.7	80-120			
Magnesium	393	95.5	ng/m ³ Air	27.412	345	175	80-120			QM-4X
Manganese	37.9	1.18	ng/m ³ Air	8.2237	27.5	126	80-120			QM-07
Molybdenum	2.19	0.211	ng/m ³ Air	1.3706	0.848	98.2	80-120			
Nickel	4.03	0.794	ng/m ³ Air	2.7412	1.26	101	80-120			
Phosphorus	ND	1240	ng/m ³ Air	13.706	ND		80-120			U, E, ICS-01, LK, QM-4X,
Potassium	205	37.7	ng/m ³ Air	54.825	145	108	80-120			
Rubidium	1.55	0.0181	ng/m ³ Air	1.3706	0.293	91.7	80-120			
Selenium	2.86	0.0109	ng/m ³ Air	2.7412	0.264	94.6	80-120			
Sodium	2900	1980	ng/m ³ Air	54.825	2640	478	80-120			E, ICS-01, LK, QM-4X
Strontium	7.47	0.646	ng/m ³ Air	1.3706	6.21	92.4	80-120			
Thallium	0.131	4.99E-4	ng/m ³ Air	0.13706	0.00228	93.6	80-120			
Thorium	0.0815	0.00297	ng/m ³ Air	0.13706	0.0273	39.5	80-120			QM-07
Uranium	0.149	0.0168	ng/m ³ Air	0.13706	0.0195	94.1	80-120			
Vanadium	5.65	0.0488	ng/m ³ Air	2.7412	2.87	101	80-120			
Zinc	111	96.8	ng/m ³ Air	82.237	ND	135	80-120			

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CERTIFICATE OF ANALYSIS

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

FILE #: 0000.00
 REPORTED: 11/21/23 13:30
 SUBMITTED: 11/15/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K1601 - ICP-MS Extraction

Matrix Spike Dup (B3K1601-MSD1) **Source: 3111547-02** Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	850	31.8	ng/m ³ Air	82.237	703	178	80-120	2.65	20	E, QM-4X
Antimony	0.784	0.0437	ng/m ³ Air	1.3706	0.120	48.5	80-120	2.30	20	SL
Arsenic	2.90	0.00947	ng/m ³ Air	2.7412	0.211	98.1	80-120	2.22	20	
Barium	36.0	0.940	ng/m ³ Air	27.412	8.02	102	80-120	1.34	20	
Beryllium	1.30	0.00329	ng/m ³ Air	1.3706	0.0259	93.3	80-120	16.0	20	
Cadmium	1.44	0.108	ng/m ³ Air	1.3706	ND	105	80-120	0.658	20	
Calcium	764	289	ng/m ³ Air	68.531	638	183	80-120	3.20	20	QM-4X
Chromium	17.2	2.01	ng/m ³ Air	13.706	2.63	106	80-120	3.82	20	
Cobalt	2.01	0.0155	ng/m ³ Air	1.3706	0.517	109	80-120	2.85	20	
Copper	52.0	2.97	ng/m ³ Air	27.412	19.9	117	80-120	6.39	20	
Iron	1040	24.0	ng/m ³ Air	27.412	949	321	80-120	2.85	20	QM-4X
Lead	14.4	0.274	ng/m ³ Air	13.706	0.480	102	80-120	3.06	20	
Magnesium	407	95.5	ng/m ³ Air	27.412	345	228	80-120	3.62	20	QM-4X
Manganese	38.7	1.18	ng/m ³ Air	8.2237	27.5	136	80-120	2.16	20	QM-07
Molybdenum	2.37	0.211	ng/m ³ Air	1.3706	0.848	111	80-120	7.75	20	
Nickel	4.18	0.794	ng/m ³ Air	2.7412	1.26	106	80-120	3.50	20	
Phosphorus	ND	1240	ng/m ³ Air	13.706	ND		80-120		20	U, E, ICS-01, LK, QM-4X,
Potassium	209	37.7	ng/m ³ Air	54.825	145	117	80-120	2.28	20	
Rubidium	1.57	0.0181	ng/m ³ Air	1.3706	0.293	93.3	80-120	1.48	20	
Selenium	2.88	0.0109	ng/m ³ Air	2.7412	0.264	95.3	80-120	0.695	20	
Sodium	3010	1980	ng/m ³ Air	54.825	2640	682	80-120	3.79	20	E, ICS-01, LK, QM-4X
Strontium	7.71	0.646	ng/m ³ Air	1.3706	6.21	110	80-120	3.16	20	
Thallium	0.134	4.99E-4	ng/m ³ Air	0.13706	0.00228	95.8	80-120	2.22	20	
Thorium	0.0866	0.00297	ng/m ³ Air	0.13706	0.0273	43.2	80-120	6.07	20	QM-07
Uranium	0.153	0.0168	ng/m ³ Air	0.13706	0.0195	97.1	80-120	2.71	20	
Vanadium	5.75	0.0488	ng/m ³ Air	2.7412	2.87	105	80-120	1.71	20	
Zinc	106	96.8	ng/m ³ Air	82.237	ND	129	80-120	4.57	20	

Post Spike (B3K1601-PS1) **Source: 3111547-02** Prepared: 11/16/23 Analyzed: 11/17/23

Aluminum	748	31.8	ng/m ³ Air	27.412	703	165	75-125			PS-01
Antimony	0.390	0.0437	ng/m ³ Air	0.27412	0.120	98.6	75-125			SL
Arsenic	1.53	0.00947	ng/m ³ Air	1.3706	0.211	95.9	75-125			
Barium	10.6	0.940	ng/m ³ Air	2.7412	8.02	94.9	75-125			
Beryllium	0.293	0.00329	ng/m ³ Air	0.27412	0.0259	97.5	75-125			
Cadmium	0.152	0.108	ng/m ³ Air	0.13706	ND	111	75-125			
Calcium	653	289	ng/m ³ Air		638		75-125			
Chromium	3.95	2.01	ng/m ³ Air	1.3706	2.63	96.2	75-125			
Cobalt	0.806	0.0155	ng/m ³ Air	0.27412	0.517	105	75-125			

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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 B3K1601 - ICP-MS Extraction

Post Spike (B3K1601-PS1) Continued **Source: 311547-02** Prepared: 11/16/23 Analyzed: 11/17/23

Copper	33.9	2.97	ng/m ³ Air	13.706	19.9	102	75-125			
Iron	984	24.0	ng/m ³ Air	27.412	949	126	75-125			PS-01
Lead	27.5	0.274	ng/m ³ Air	27.412	0.480	98.7	75-125			
Magnesium	385	95.5	ng/m ³ Air	27.412	345	145	75-125			PS-01
Manganese	30.8	1.18	ng/m ³ Air	2.7412	27.5	119	75-125			
Molybdenum	2.13	0.211	ng/m ³ Air	1.3706	0.848	93.5	75-125			
Nickel	4.05	0.794	ng/m ³ Air	2.7412	1.26	102	75-125			
Phosphorus	ND	1240	ng/m ³ Air	5.4825	ND		75-125			E, ICS-01, LK, PS-01, QX, U
Potassium	177	37.7	ng/m ³ Air	27.412	145	114	75-125			
Rubidium	0.402	0.0181	ng/m ³ Air	0.13706	0.293	79.5	75-125			
Selenium	1.51	0.0109	ng/m ³ Air	1.3706	0.264	90.9	75-125			
Sodium	2790	1980	ng/m ³ Air	27.412	2640	567	75-125			E, ICS-01, LK, PS-01
Strontium	7.25	0.646	ng/m ³ Air	1.3706	6.21	76.3	75-125			
Thallium	0.0669	4.99E-4	ng/m ³ Air	6.8531E-2	0.00228	94.3	75-125			
Thorium	0.0895	0.00297	ng/m ³ Air	6.8531E-2	0.0273	90.7	75-125			
Uranium	0.0838	0.0168	ng/m ³ Air	6.8531E-2	0.0195	93.8	75-125			
Vanadium	4.16	0.0488	ng/m ³ Air	1.3706	2.87	93.9	75-125			
Zinc	ND	96.8	ng/m ³ Air	27.412	ND		75-125			U



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FILE #: 0000.00
REPORTED: 11/21/23 13:30
SUBMITTED: 11/15/23
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.
PS-01	Post Spike exceeds DQO criteria.
LK	Analyte identified; Reported value may be biased high.
ICS-01	Interference check exceeds criteria.
GC-BS	Compound exceeds Blank Spike 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).
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

November 29, 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 11/20/23 10:27.

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

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

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

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

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify julie.swift@erg.com and delete the report without retaining any copies.



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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: 11/29/23 10:49

SUBMITTED: 11/20/23

AQS SITE CODE:

SITE CODE: Maui fires

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
Q9541243	3112027-01	Air	11/13/23 23:59	11/20/23 10:27
Q9541244	3112027-02	Air	11/13/23 23:59	11/20/23 10:27
Q9541245	3112027-03	Air	11/13/23 23:59	11/20/23 10:27
Q9541239	3112027-04	Air	11/14/23 23:59	11/20/23 10:27
Q9541241	3112027-05	Air	11/14/23 23:59	11/20/23 10:27
Q9541242	3112027-06	Air	11/14/23 23:59	11/20/23 10:27



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 PHONE: (703) 885-5495 FAX:

FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541243 **Lab ID:** 3112027-01 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1713.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 00:32
Comments: MFK-AM-03-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Aluminum	7429-90-5	1080		30.5	
Antimony	7440-36-0	0.104	SL	0.0419	
Arsenic	7440-38-2	0.332		0.00907	
Barium	7440-39-3	15.1		0.900	
Cadmium	7440-43-9	0.0246	U	0.103	
Calcium	7440-70-2	940	LJ	277	
Chromium	7440-47-3	3.36		1.93	
Cobalt	7440-48-4	0.896		0.0148	
Copper	7440-50-8	31.1		2.85	
Lead	7439-92-1	0.563		0.262	
Magnesium	7439-95-4	538		91.5	
Manganese	7439-96-5	46.4		1.13	
Molybdenum	7439-98-7	1.00		0.202	
Nickel	7440-02-0	1.48		0.761	
Phosphorus	7723-14-0	447	U, GC-BS	1190	
Potassium	7440-09-7	240		36.1	
Rubidium		0.446		0.0174	
Selenium	7782-49-2	0.527		0.0104	
Sodium	7440-23-5	3770	GC-BS	1900	
Strontium	7440-24-6	9.01		0.619	
Thallium	7440-28-0	0.00341		4.78E-4	
Thorium	7440-29-01	0.0593		0.00285	
Uranium	NA	0.0313		0.0161	
Vanadium	7440-62-2	3.95		0.0467	
Zinc	7440-66-6	27.6	U	92.8	



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FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541243 **Lab ID:** 3112027-01RE1 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1713.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 03:28

Comments: MFK-AM-03-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>	<u>Flag</u>	<u>MDL</u>
		<u>ng/m³ Air</u>		<u>ng/m³ Air</u>
Iron	7439-89-6	1580	D	230



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541243 **Lab ID:** 3112027-01RE2 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1713.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 13:17

Comments: MFK-AM-03-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0465		0.00315



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541244 **Lab ID:** 3112027-02 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1617.28 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 00:49
Comments: MFK-AM-02-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
		<u>ng/m³ Air</u>			<u>ng/m³ Air</u>
Aluminum	7429-90-5	1320			32.3
Antimony	7440-36-0	0.0794		SL	0.0444
Arsenic	7440-38-2	0.478			0.00961
Barium	7440-39-3	14.3			0.954
Cadmium	7440-43-9	0.0236		U	0.110
Calcium	7440-70-2	990		LJ	294
Chromium	7440-47-3	3.09			2.04
Cobalt	7440-48-4	1.02			0.0157
Copper	7440-50-8	15.1			3.02
Lead	7439-92-1	0.512			0.278
Magnesium	7439-95-4	502			97.0
Manganese	7439-96-5	53.9			1.20
Molybdenum	7439-98-7	0.720			0.214
Nickel	7440-02-0	1.79			0.806
Phosphorus	7723-14-0	474		U, GC-BS	1260
Potassium	7440-09-7	206			38.2
Rubidium		0.445			0.0184
Selenium	7782-49-2	0.560			0.0111
Sodium	7440-23-5	3440		GC-BS	2010
Strontium	7440-24-6	9.52			0.656
Thallium	7440-28-0	0.00354			5.06E-4
Thorium	7440-29-01	0.0754			0.00302
Uranium	NA	0.0359			0.0171
Vanadium	7440-62-2	4.60			0.0495
Zinc	7440-66-6	17.3		U	98.3



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541244 **Lab ID:** 3112027-02RE1 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1617.28 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 03:43

Comments: MFK-AM-02-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Iron	7439-89-6	1770	D	243



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541244 **Lab ID:** 3112027-02RE2 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1617.28 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 13:25

Comments: MFK-AM-02-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0474		0.00334



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 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541245 **Lab ID:** 3112027-03 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1699.2 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 01:06
Comments: MFK-AM-01-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Aluminum	7429-90-5	1660		30.7	
Antimony	7440-36-0	0.0832	SL	0.0422	
Arsenic	7440-38-2	0.457		0.00914	
Barium	7440-39-3	18.0		0.908	
Cadmium	7440-43-9	0.0220	U	0.104	
Calcium	7440-70-2	1130	LJ	280	
Chromium	7440-47-3	3.55		1.94	
Cobalt	7440-48-4	1.24		0.0149	
Copper	7440-50-8	20.1		2.87	
Lead	7439-92-1	0.804		0.264	
Magnesium	7439-95-4	548		92.3	
Manganese	7439-96-5	67.5		1.14	
Molybdenum	7439-98-7	1.02		0.204	
Nickel	7440-02-0	1.78		0.767	
Phosphorus	7723-14-0	484	U, GC-BS	1200	
Potassium	7440-09-7	241		36.4	
Rubidium		0.530		0.0175	
Selenium	7782-49-2	0.642		0.0105	
Sodium	7440-23-5	3530	GC-BS	1920	
Strontium	7440-24-6	11.0		0.624	
Thallium	7440-28-0	0.00408		4.82E-4	
Thorium	7440-29-01	0.0884		0.00287	
Uranium	NA	0.0421		0.0163	
Vanadium	7440-62-2	5.45		0.0471	
Zinc	7440-66-6	17.7	U	93.5	



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

FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541245 **Lab ID:** 3112027-03RE1 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1699.2 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 04:03

Comments: MFK-AM-01-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>	<u>Flag</u>	<u>MDL</u>
		<u>ng/m³ Air</u>		<u>ng/m³ Air</u>
Iron	7439-89-6	2120	D	232



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FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541245 **Lab ID:** 3112027-03RE2 **Sampled:** 11/13/23 23:59
Matrix: Air **Sample Volume:** 1699.2 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 13:48
Comments: MFK-AM-01-111323-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0656		0.00318



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541239 **Lab ID:** 3112027-04 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1785.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 02:33
Comments: MFK-AM-03-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>
		<u>ng/m³ Air</u>	<u>Flag</u>	
Aluminum	7429-90-5	907		29.2
Antimony	7440-36-0	0.107	SL	0.0402
Arsenic	7440-38-2	0.238		0.00870
Barium	7440-39-3	13.5		0.864
Cadmium	7440-43-9	0.0356	U	0.0993
Calcium	7440-70-2	758	LJ	266
Chromium	7440-47-3	2.22		1.85
Cobalt	7440-48-4	0.560		0.0142
Copper	7440-50-8	36.3		2.73
Iron	7439-89-6	1100		22.1
Lead	7439-92-1	0.443		0.251
Magnesium	7439-95-4	349		87.8
Manganese	7439-96-5	35.4		1.08
Molybdenum	7439-98-7	1.20		0.194
Nickel	7440-02-0	1.06		0.730
Phosphorus	7723-14-0	438	U, GC-BS	1140
Potassium	7440-09-7	231		34.6
Rubidium		0.408		0.0167
Selenium	7782-49-2	0.333		0.0100
Sodium	7440-23-5	2270	GC-BS	1820
Strontium	7440-24-6	10.0		0.594
Thallium	7440-28-0	0.00312		4.58E-4
Thorium	7440-29-01	0.0322		0.00273
Uranium	NA	0.0242		0.0155
Vanadium	7440-62-2	2.52		0.0448
Zinc	7440-66-6	17.3	U	89.0



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541239 **Lab ID:** 3112027-04RE2 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1785.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 13:56

Comments: MFK-AM-03-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0393		0.00303



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541241 **Lab ID:** 3112027-05 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1857.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 02:52
Comments: MFK-AM-02-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Aluminum	7429-90-5	1340		28.1	
Antimony	7440-36-0	0.0876	SL	0.0386	
Arsenic	7440-38-2	0.349		0.00836	
Barium	7440-39-3	13.7		0.830	
Cadmium	7440-43-9	0.0195	U	0.0955	
Calcium	7440-70-2	789	LJ	256	
Chromium	7440-47-3	2.59		1.78	
Cobalt	7440-48-4	0.644		0.0137	
Copper	7440-50-8	18.8		2.63	
Lead	7439-92-1	0.635		0.242	
Magnesium	7439-95-4	342		84.4	
Manganese	7439-96-5	36.2		1.04	
Molybdenum	7439-98-7	0.695		0.187	
Nickel	7440-02-0	1.19		0.702	
Phosphorus	7723-14-0	412	U, GC-BS	1090	
Potassium	7440-09-7	197		33.3	
Rubidium		0.381		0.0160	
Selenium	7782-49-2	0.390		0.00963	
Sodium	7440-23-5	2160	GC-BS	1750	
Strontium	7440-24-6	9.71		0.571	
Thallium	7440-28-0	0.00244		4.41E-4	
Thorium	7440-29-01	0.0458		0.00263	
Uranium	NA	0.0288		0.0149	
Vanadium	7440-62-2	3.39		0.0431	
Zinc	7440-66-6	16.9	U	85.6	



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FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541241 **Lab ID:** 3112027-05RE1 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1857.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 04:32

Comments: MFK-AM-02-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Iron	7439-89-6	1360	D	212



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FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541241 **Lab ID:** 3112027-05RE2 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1857.6 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 14:04
Comments: MFK-AM-02-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0433		0.00291



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541242 **Lab ID:** 3112027-06 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1826.8 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 03:09
Comments: MFK-AM-01-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u>		<u>MDL</u>	
		<u>ng/m³ Air</u>	<u>Flag</u>	<u>ng/m³ Air</u>	
Aluminum	7429-90-5	1900		28.6	
Antimony	7440-36-0	0.111	SL	0.0393	
Arsenic	7440-38-2	0.361		0.00851	
Barium	7440-39-3	17.4		0.844	
Cadmium	7440-43-9	0.0281	U	0.0971	
Calcium	7440-70-2	1680	LJ	260	
Chromium	7440-47-3	3.26		1.81	
Cobalt	7440-48-4	0.899		0.0139	
Copper	7440-50-8	51.4		2.67	
Lead	7439-92-1	2.34		0.246	
Magnesium	7439-95-4	437		85.9	
Manganese	7439-96-5	52.8		1.06	
Molybdenum	7439-98-7	0.965		0.190	
Nickel	7440-02-0	1.73		0.713	
Phosphorus	7723-14-0	506	U, GC-BS	1110	
Potassium	7440-09-7	222		33.8	
Rubidium		0.537		0.0163	
Selenium	7782-49-2	0.514		0.00980	
Sodium	7440-23-5	2480	GC-BS	1780	
Strontium	7440-24-6	24.7		0.581	
Thallium	7440-28-0	0.00344		4.48E-4	
Thorium	7440-29-01	0.0667		0.00267	
Uranium	NA	0.0405		0.0151	
Vanadium	7440-62-2	4.47		0.0438	
Zinc	7440-66-6	36.2	U	87.0	



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FILE #: 0000.00
REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
AQS SITE CODE:
SITE CODE: Maui fires

Description: Q9541242 **Lab ID:** 3112027-06RE1 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1826.8 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/23/23 04:46
Comments: MFK-AM-01-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Iron	7439-89-6	1850	D	216



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Description: Q9541242 **Lab ID:** 3112027-06RE2 **Sampled:** 11/14/23 23:59
Matrix: Air **Sample Volume:** 1826.8 m³ **Received:** 11/20/23 10:27
Filter ID: **Analysis Date:** 11/24/23 14:11

Comments: MFK-AM-01-111423-HM

Inorganics by Compendium Method IO-3.5

<u>Analyte</u>	<u>CAS Number</u>	<u>Results</u> <u>ng/m³ Air</u>	<u>Flag</u>	<u>MDL</u> <u>ng/m³ Air</u>
Beryllium	7440-41-7	0.0497		0.00296



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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Blank (2311061-CCB1)

Prepared & Analyzed: 11/22/23

Aluminum	293		ng/l							
Antimony	2.24		ng/l							
Arsenic	10.7		ng/l							
Barium	4.84		ng/l							
Beryllium	-0.442		ng/l							U
Cadmium	0.661		ng/l							
Calcium	2100		ng/l							
Chromium	6.17		ng/l							
Cobalt	0.752		ng/l							
Copper	48.2		ng/l							
Iron	237		ng/l							
Lead	9.93		ng/l							
Magnesium	216		ng/l							
Manganese	12.6		ng/l							
Molybdenum	38.1		ng/l							
Nickel	0.461		ng/l							
Phosphorus	105		ng/l							
Potassium	2770		ng/l							
Rubidium	0.325		ng/l							
Selenium	0.980		ng/l							
Sodium	2810		ng/l							
Strontium	1.04		ng/l							
Thallium	0.524		ng/l							
Thorium	0.265		ng/l							
Uranium	-0.00683		ng/l							U
Vanadium	-22.6		ng/l							U
Zinc	-4.13		ng/l							U

Calibration Blank (2311061-CCB2)

Prepared & Analyzed: 11/22/23

Aluminum	36.6		ng/l							
Antimony	2.09		ng/l							
Arsenic	5.50		ng/l							
Barium	7.46		ng/l							
Beryllium	-0.964		ng/l							U
Cadmium	0.423		ng/l							
Calcium	868		ng/l							
Chromium	6.14		ng/l							
Cobalt	1.18		ng/l							
Copper	50.8		ng/l							

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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Blank (2311061-CCB2) Contin

Prepared & Analyzed: 11/22/23

Iron	112		ng/l							
Lead	7.59		ng/l							
Magnesium	31.6		ng/l							
Manganese	12.9		ng/l							
Molybdenum	9.27		ng/l							
Nickel	2.47		ng/l							
Phosphorus	-740		ng/l							U
Potassium	1320		ng/l							
Rubidium	0.00678		ng/l							
Selenium	2.82		ng/l							
Sodium	964		ng/l							
Strontium	3.17		ng/l							
Thallium	0.715		ng/l							
Thorium	0.348		ng/l							
Uranium	0.0131		ng/l							
Vanadium	-16.5		ng/l							U
Zinc	77.2		ng/l							

Calibration Blank (2311061-CCB3)

Prepared: 11/22/23 Analyzed: 11/23/23

Aluminum	151		ng/l							
Antimony	2.35		ng/l							
Arsenic	11.7		ng/l							
Barium	6.87		ng/l							
Beryllium	-1.25		ng/l							U
Cadmium	1.21		ng/l							
Calcium	1390		ng/l							
Chromium	11.4		ng/l							
Cobalt	1.67		ng/l							
Copper	76.2		ng/l							
Iron	175		ng/l							
Lead	9.11		ng/l							
Magnesium	77.3		ng/l							
Manganese	19.0		ng/l							
Molybdenum	12.3		ng/l							
Nickel	7.19		ng/l							
Phosphorus	-707		ng/l							U
Potassium	973		ng/l							
Rubidium	0.924		ng/l							
Selenium	4.38		ng/l							

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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Blank (2311061-CCB3) Contin

Prepared: 11/22/23 Analyzed: 11/23/23

Sodium	3240		ng/l							
Strontium	4.72		ng/l							
Thallium	0.549		ng/l							
Thorium	0.500		ng/l							
Uranium	0.0167		ng/l							
Vanadium	-21.0		ng/l							U
Zinc	63.2		ng/l							

Calibration Blank (2311061-CCB4)

Prepared: 11/22/23 Analyzed: 11/23/23

Aluminum	374		ng/l							
Antimony	2.91		ng/l							
Arsenic	7.52		ng/l							
Barium	20.9		ng/l							
Beryllium	-0.259		ng/l							U
Cadmium	1.75		ng/l							
Calcium	4480		ng/l							
Chromium	17.3		ng/l							
Cobalt	3.46		ng/l							
Copper	158		ng/l							
Iron	592		ng/l							
Lead	17.3		ng/l							
Magnesium	224		ng/l							
Manganese	45.9		ng/l							
Molybdenum	13.4		ng/l							
Nickel	11.4		ng/l							
Phosphorus	-393		ng/l							U
Potassium	494		ng/l							
Rubidium	0.483		ng/l							
Selenium	10.7		ng/l							
Sodium	2910		ng/l							
Strontium	16.9		ng/l							
Thallium	0.520		ng/l							
Thorium	0.524		ng/l							
Uranium	0.0405		ng/l							
Vanadium	-19.9		ng/l							U
Zinc	167		ng/l							

Calibration Check (2311061-CCV1)

Prepared & Analyzed: 11/22/23

Aluminum	1.55E6		ng/l	1.5000E6		103	90-110			
Antimony	19800		ng/l	20000		98.8	90-110			

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FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Check (2311061-CCV1) Contin

Prepared & Analyzed: 11/22/23

Arsenic	19700		ng/l	20000		98.6	90-110			
Barium	200000		ng/l	200000		100	90-110			
Beryllium	4850		ng/l	5000.0		96.9	90-110			
Cadmium	19800		ng/l	20000		99.2	90-110			
Calcium	2.50E7		ng/l	2.5000E7		99.8	90-110			
Chromium	224000		ng/l	240000		93.3	90-110			
Cobalt	52300		ng/l	50000		105	90-110			
Copper	2.02E6		ng/l	2.0000E6		101	90-110			
Iron	2.51E6		ng/l	2.5000E6		100	90-110			
Lead	196000		ng/l	200000		98.1	90-110			
Magnesium	1.05E6		ng/l	1.0000E6		105	90-110			
Manganese	503000		ng/l	500000		101	90-110			
Molybdenum	49100		ng/l	50000		98.3	90-110			
Nickel	124000		ng/l	120000		104	90-110			
Phosphorus	206000		ng/l	200000		103	90-110			
Potassium	2.61E6		ng/l	2.5000E6		104	90-110			
Rubidium	9840		ng/l	10000		98.4	90-110			
Selenium	19700		ng/l	20000		98.6	90-110			
Sodium	2.62E6		ng/l	2.5000E6		105	90-110			
Strontium	49100		ng/l	50000		98.2	90-110			
Thallium	488		ng/l	500.00		97.6	90-110			
Thorium	489		ng/l	500.00		97.8	90-110			
Uranium	488		ng/l	500.00		97.6	90-110			
Vanadium	18800		ng/l	20000		94.2	90-110			
Zinc	526000		ng/l	500000		105	90-110			

Calibration Check (2311061-CCV2)

Prepared & Analyzed: 11/22/23

Aluminum	1.47E6		ng/l	1.5000E6		97.9	90-110			
Antimony	20000		ng/l	20000		99.9	90-110			
Arsenic	19600		ng/l	20000		98.2	90-110			
Barium	212000		ng/l	200000		106	90-110			
Beryllium	4690		ng/l	5000.0		93.9	90-110			
Cadmium	20100		ng/l	20000		101	90-110			
Calcium	2.47E7		ng/l	2.5000E7		99.0	90-110			
Chromium	224000		ng/l	240000		93.4	90-110			
Cobalt	51500		ng/l	50000		103	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Iron	2.46E6		ng/l	2.5000E6		98.2	90-110			
Lead	199000		ng/l	200000		99.4	90-110			

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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: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Check (2311061-CCV2) Contin

Prepared & Analyzed: 11/22/23

Magnesium	1.01E6		ng/l	1.0000E6		101	90-110			
Manganese	488000		ng/l	500000		97.6	90-110			
Molybdenum	51500		ng/l	50000		103	90-110			
Nickel	122000		ng/l	120000		102	90-110			
Phosphorus	188000		ng/l	200000		94.0	90-110			
Potassium	2.51E6		ng/l	2.5000E6		100	90-110			
Rubidium	9960		ng/l	10000		99.6	90-110			
Selenium	19800		ng/l	20000		98.8	90-110			
Sodium	2.56E6		ng/l	2.5000E6		102	90-110			
Strontium	49400		ng/l	50000		98.7	90-110			
Thallium	500		ng/l	500.00		100	90-110			
Thorium	497		ng/l	500.00		99.3	90-110			
Uranium	498		ng/l	500.00		99.6	90-110			
Vanadium	19500		ng/l	20000		97.3	90-110			
Zinc	530000		ng/l	500000		106	90-110			

Calibration Check (2311061-CCV3)

Prepared: 11/22/23 Analyzed: 11/23/23

Aluminum	1.47E6		ng/l	1.5000E6		98.1	90-110			
Antimony	20200		ng/l	20000		101	90-110			
Arsenic	19800		ng/l	20000		98.8	90-110			
Barium	212000		ng/l	200000		106	90-110			
Beryllium	4430		ng/l	5000.0		88.5	90-110			
Cadmium	20400		ng/l	20000		102	90-110			
Calcium	2.49E7		ng/l	2.5000E7		99.7	90-110			
Chromium	231000		ng/l	240000		96.1	90-110			
Cobalt	51800		ng/l	50000		104	90-110			
Copper	2.02E6		ng/l	2.0000E6		101	90-110			
Iron	2.47E6		ng/l	2.5000E6		98.8	90-110			
Lead	200000		ng/l	200000		100	90-110			
Magnesium	1.01E6		ng/l	1.0000E6		101	90-110			
Manganese	496000		ng/l	500000		99.1	90-110			
Molybdenum	52100		ng/l	50000		104	90-110			
Nickel	123000		ng/l	120000		102	90-110			
Phosphorus	193000		ng/l	200000		96.6	90-110			
Potassium	2.55E6		ng/l	2.5000E6		102	90-110			
Rubidium	10000		ng/l	10000		100	90-110			
Selenium	19700		ng/l	20000		98.3	90-110			
Sodium	2.55E6		ng/l	2.5000E6		102	90-110			
Strontium	49900		ng/l	50000		99.9	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Calibration Check (2311061-CCV3) Contin

Prepared: 11/22/23 Analyzed: 11/23/23

Thallium	493		ng/l	500.00		98.5	90-110			
Thorium	497		ng/l	500.00		99.3	90-110			
Uranium	495		ng/l	500.00		99.0	90-110			
Vanadium	19700		ng/l	20000		98.3	90-110			
Zinc	528000		ng/l	500000		106	90-110			

Calibration Check (2311061-CCV4)

Prepared: 11/22/23 Analyzed: 11/23/23

Aluminum	1.41E6		ng/l	1.5000E6		94.3	90-110			
Antimony	20400		ng/l	20000		102	90-110			
Arsenic	19900		ng/l	20000		99.6	90-110			
Barium	216000		ng/l	200000		108	90-110			
Beryllium	4530		ng/l	5000.0		90.5	90-110			
Cadmium	20500		ng/l	20000		103	90-110			
Calcium	2.48E7		ng/l	2.5000E7		99.0	90-110			
Chromium	233000		ng/l	240000		97.1	90-110			
Cobalt	51000		ng/l	50000		102	90-110			
Copper	2.00E6		ng/l	2.0000E6		100	90-110			
Iron	2.44E6		ng/l	2.5000E6		97.8	90-110			
Lead	199000		ng/l	200000		99.7	90-110			
Magnesium	968000		ng/l	1.0000E6		96.8	90-110			
Manganese	488000		ng/l	500000		97.6	90-110			
Molybdenum	52200		ng/l	50000		104	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Phosphorus	186000		ng/l	200000		93.0	90-110			
Potassium	2.49E6		ng/l	2.5000E6		99.7	90-110			
Rubidium	10200		ng/l	10000		102	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Sodium	2.48E6		ng/l	2.5000E6		99.2	90-110			
Strontium	50700		ng/l	50000		101	90-110			
Thallium	497		ng/l	500.00		99.5	90-110			
Thorium	504		ng/l	500.00		101	90-110			
Uranium	503		ng/l	500.00		101	90-110			
Vanadium	20200		ng/l	20000		101	90-110			
Zinc	531000		ng/l	500000		106	90-110			

High Cal Check (2311061-HCV1)

Prepared & Analyzed: 11/22/23

Aluminum	2.95E6		ng/l	3.0000E6		98.4	95-105			
Antimony	40500		ng/l	40000		101	95-105			
Arsenic	40000		ng/l	40000		99.9	95-105			
Barium	406000		ng/l	400000		101	95-105			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

High Cal Check (2311061-HCV1) Continue

Prepared & Analyzed: 11/22/23

Beryllium	9610		ng/l	10000		96.1	95-105			
Cadmium	40200		ng/l	40000		101	95-105			
Calcium	4.99E7		ng/l	5.0000E7		99.8	95-105			
Chromium	470000		ng/l	480000		97.9	95-105			
Cobalt	98000		ng/l	100000		98.0	95-105			
Copper	3.92E6		ng/l	4.0000E6		98.0	95-105			
Iron	4.95E6		ng/l	5.0000E6		98.9	95-105			
Lead	402000		ng/l	400000		101	95-105			
Magnesium	1.98E6		ng/l	2.0000E6		98.9	95-105			
Manganese	986000		ng/l	1.0000E6		98.6	95-105			
Molybdenum	101000		ng/l	100000		101	95-105			
Nickel	239000		ng/l	240000		99.4	95-105			
Phosphorus	394000		ng/l	400000		98.5	95-105			
Potassium	4.99E6		ng/l	5.0000E6		99.7	95-105			
Rubidium	20000		ng/l	20000		100	95-105			
Selenium	40200		ng/l	40000		101	95-105			
Sodium	4.93E6		ng/l	5.0000E6		98.6	95-105			
Strontium	101000		ng/l	100000		101	95-105			
Thallium	999		ng/l	1000.0		99.9	95-105			
Thorium	1000		ng/l	1000.0		100	95-105			
Uranium	1020		ng/l	1000.0		102	95-105			
Vanadium	39600		ng/l	40000		98.9	95-105			
Zinc	980000		ng/l	1.0000E6		98.0	95-105			

Initial Cal Blank (2311061-ICB1)

Prepared & Analyzed: 11/22/23

Aluminum	-62.2		ng/l							U
Antimony	9.15		ng/l							
Arsenic	-0.710		ng/l							U
Barium	1.23		ng/l							
Beryllium	-0.0373		ng/l							U
Cadmium	0.0937		ng/l							
Calcium	301		ng/l							
Chromium	2.95		ng/l							
Cobalt	0.166		ng/l							
Copper	16.8		ng/l							
Iron	-25.5		ng/l							U
Lead	6.73		ng/l							
Magnesium	55.7		ng/l							
Manganese	5.62		ng/l							

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Initial Cal Blank (2311061-ICB1) Continuu

Prepared & Analyzed: 11/22/23

Molybdenum	13.4		ng/l							
Nickel	-1.45		ng/l							U
Phosphorus	-143		ng/l							U
Potassium	663		ng/l							
Rubidium	0.487		ng/l							
Selenium	10.7		ng/l							
Sodium	-1010		ng/l							U
Strontium	1.09		ng/l							
Thallium	0.173		ng/l							
Thorium	0.293		ng/l							
Uranium	0.00257		ng/l							
Vanadium	-21.9		ng/l							U
Zinc	10.4		ng/l							

Initial Cal Check (2311061-ICV1)

Prepared & Analyzed: 11/22/23

Aluminum	1.44E6		ng/l	1.5000E6		96.1	90-110			
Antimony	19600		ng/l	20000		97.8	90-110			
Arsenic	19700		ng/l	20000		98.3	90-110			
Barium	197000		ng/l	200000		98.6	90-110			
Beryllium	4700		ng/l	5000.0		94.0	90-110			
Cadmium	20700		ng/l	20000		103	90-110			
Calcium	2.43E7		ng/l	2.5000E7		97.0	90-110			
Chromium	231000		ng/l	240000		96.2	90-110			
Cobalt	50400		ng/l	50000		101	90-110			
Copper	1.99E6		ng/l	2.0000E6		99.3	90-110			
Iron	2.45E6		ng/l	2.5000E6		98.1	90-110			
Lead	197000		ng/l	200000		98.3	90-110			
Magnesium	970000		ng/l	1.0000E6		97.0	90-110			
Manganese	483000		ng/l	500000		96.6	90-110			
Molybdenum	49600		ng/l	50000		99.1	90-110			
Nickel	121000		ng/l	120000		101	90-110			
Phosphorus	186000		ng/l	200000		93.2	90-110			
Potassium	2.49E6		ng/l	2.5000E6		99.8	90-110			
Rubidium	9610		ng/l	10000		96.1	90-110			
Selenium	20200		ng/l	20000		101	90-110			
Sodium	2.40E6		ng/l	2.5000E6		96.1	90-110			
Strontium	50200		ng/l	50000		100	90-110			
Thallium	468		ng/l	500.00		93.7	90-110			
Thorium	489		ng/l	500.00		97.8	90-110			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Initial Cal Check (2311061-ICV1) Continu

Prepared & Analyzed: 11/22/23

Uranium	487		ng/l	500.00		97.3	90-110			
Vanadium	20100		ng/l	20000		100	90-110			
Zinc	532000		ng/l	500000		106	90-110			

Interference Check A (2311061-IFA1)

Prepared & Analyzed: 11/22/23

Aluminum	1.53E7		ng/l	1.5000E7		102	80-120			
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	9.02E7		ng/l	1.0040E8		89.9	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	1.47E7		ng/l	1.5000E7		98.1	80-120			
Lead	0.00		ng/l				80-120			U
Magnesium	1.59E7		ng/l	1.5000E7		106	80-120			
Manganese	0.00		ng/l				80-120			U
Molybdenum	294000		ng/l	300000		97.9	80-120			
Nickel	0.00		ng/l				80-120			U
Phosphorus	1.69E7		ng/l	1.5000E7		112	80-120			
Potassium	1.53E7		ng/l	1.5000E7		102	80-120			
Rubidium	0.00		ng/l				80-120			U
Selenium	0.00		ng/l				80-120			U
Sodium	1.59E7		ng/l	1.5000E7		106	80-120			
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 (2311061-IFB1)

Prepared & Analyzed: 11/22/23

Aluminum	1.79E7		ng/l	1.6500E7		109	80-120			
Antimony	20100		ng/l	20000		101	80-120			
Arsenic	20500		ng/l	20000		103	80-120			
Barium	206000		ng/l	200000		103	80-120			
Beryllium	4690		ng/l	5000.0		93.9	80-120			
Cadmium	19300		ng/l	20000		96.4	80-120			

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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311061 - B3K2104

Interference Check B (2311061-IFB1) Co

Prepared & Analyzed: 11/22/23

Calcium	1.16E8		ng/l	1.2540E8		92.9	80-120			
Chromium	219000		ng/l	240000		91.0	80-120			
Cobalt	51900		ng/l	50000		104	80-120			
Copper	1.89E6		ng/l	2.0000E6		94.7	80-120			
Iron	1.77E7		ng/l	1.7500E7		101	80-120			
Lead	204000		ng/l	200000		102	80-120			
Magnesium	1.80E7		ng/l	1.6000E7		112	80-120			
Manganese	535000		ng/l	500000		107	80-120			
Molybdenum	343000		ng/l	350000		98.0	80-120			
Nickel	120000		ng/l	120000		99.8	80-120			
Phosphorus	1.81E7		ng/l	1.5200E7		119	80-120			
Potassium	1.88E7		ng/l	1.7500E7		107	80-120			
Rubidium	10200		ng/l	10000		102	80-120			
Selenium	19300		ng/l	20000		96.7	80-120			
Sodium	1.99E7		ng/l	1.7500E7		114	80-120			
Strontium	50000		ng/l	50000		100	80-120			
Thallium	511		ng/l	500.00		102	80-120			
Thorium	528		ng/l	500.00		106	80-120			
Uranium	531		ng/l	500.00		106	80-120			
Vanadium	17400		ng/l	20000		87.2	80-120			
Zinc	486000		ng/l	500000		97.2	80-120			

Batch 2311063 - B3K2104

Calibration Blank (2311063-CCB1)

Prepared & Analyzed: 11/24/23

Beryllium	-0.134		ng/l							U
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Calibration Blank (2311063-CCB2)

Prepared & Analyzed: 11/24/23

Beryllium	-0.893		ng/l							U
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Calibration Blank (2311063-CCB3)

Prepared & Analyzed: 11/24/23

Beryllium	-1.67		ng/l							U
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Calibration Check (2311063-CCV1)

Prepared & Analyzed: 11/24/23

Beryllium	4570		ng/l	5000.0		91.4	90-110			
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Calibration Check (2311063-CCV2)

Prepared & Analyzed: 11/24/23

Beryllium	4680		ng/l	5000.0		93.6	90-110			
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Calibration Check (2311063-CCV3)

Prepared & Analyzed: 11/24/23

Beryllium	4560		ng/l	5000.0		91.2	90-110			
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High Cal Check (2311063-HCV1)

Prepared & Analyzed: 11/24/23

Beryllium	9800		ng/l	10000		98.0	95-105			
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch 2311063 - B3K2104

Initial Cal Blank (2311063-ICB1)

Prepared & Analyzed: 11/24/23

Beryllium	-0.0416		ng/l							U
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Initial Cal Check (2311063-ICV1)

Prepared & Analyzed: 11/24/23

Beryllium	4580		ng/l	5000.0		91.6	90-110			
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Interference Check A (2311063-IFA1)

Prepared & Analyzed: 11/24/23

Beryllium	0.00		ng/l				80-120			U
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Interference Check B (2311063-IFB1)

Prepared & Analyzed: 11/24/23

Beryllium	4610		ng/l	5000.0		92.2	80-120			
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Batch B3K2104 - ICP-MS Extraction

Blank (B3K2104-BLK1)

Prepared: 11/21/23 Analyzed: 11/22/23

Aluminum	ND	32.1	ng/m ³ Air							U
Antimony	ND	0.0441	ng/m ³ Air							U, SL
Arsenic	ND	0.00955	ng/m ³ Air							U
Barium	ND	0.948	ng/m ³ Air							U
Beryllium	ND	0.00332	ng/m ³ Air							U
Cadmium	ND	0.109	ng/m ³ Air							U
Calcium	ND	292	ng/m ³ Air							U
Chromium	ND	2.03	ng/m ³ Air							U
Cobalt	ND	0.0156	ng/m ³ Air							U
Copper	ND	3.00	ng/m ³ Air							U
Iron	ND	24.2	ng/m ³ Air							U
Lead	ND	0.276	ng/m ³ Air							U
Magnesium	ND	96.4	ng/m ³ Air							U
Manganese	ND	1.19	ng/m ³ Air							U
Molybdenum	ND	0.213	ng/m ³ Air							U
Nickel	ND	0.801	ng/m ³ Air							U
Phosphorus	ND	1250	ng/m ³ Air							U, GC-BS
Potassium	ND	38.0	ng/m ³ Air							U
Rubidium	ND	0.0183	ng/m ³ Air							U
Selenium	ND	0.0110	ng/m ³ Air							U
Sodium	ND	2000	ng/m ³ Air							U
Strontium	ND	0.652	ng/m ³ Air							U
Thallium	ND	5.03E-4	ng/m ³ Air							U
Thorium	ND	0.00300	ng/m ³ Air							U
Uranium	ND	0.0170	ng/m ³ Air							U
Vanadium	ND	0.0492	ng/m ³ Air							U
Zinc	ND	97.7	ng/m ³ Air							U

LCS (B3K2104-BS1)

Prepared: 11/21/23 Analyzed: 11/22/23

Eastern Research Group

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

FILE #: 0000.00
 REPORTED: 11/29/23 10:49
 SUBMITTED: 11/20/23
 AQS SITE CODE:
 SITE CODE: Maui fires

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K2104 - ICP-MS Extraction

LCS (B3K2104-BS1) Continued

Prepared: 11/21/23 Analyzed: 11/22/23

Aluminum	87.7	32.1	ng/m ³ Air	82.975		106	80-120			
Antimony	0.896	0.0441	ng/m ³ Air	1.3829		64.8	80-120			SL
Arsenic	2.67	0.00955	ng/m ³ Air	2.7658		96.5	80-120			
Barium	27.8	0.948	ng/m ³ Air	27.658		101	80-120			
Beryllium	1.33	0.00332	ng/m ³ Air	1.3829		96.3	80-120			
Cadmium	1.38	0.109	ng/m ³ Air	1.3829		99.5	80-120			
Calcium	ND	292	ng/m ³ Air	69.146			80-120			U
Chromium	14.0	2.03	ng/m ³ Air	13.829		101	80-120			
Cobalt	1.39	0.0156	ng/m ³ Air	1.3829		101	80-120			
Copper	29.8	3.00	ng/m ³ Air	27.658		108	80-120			
Iron	36.2	24.2	ng/m ³ Air	27.658		131	80-120			
Lead	13.5	0.276	ng/m ³ Air	13.829		97.4	80-120			
Magnesium	ND	96.4	ng/m ³ Air	27.658			80-120			U
Manganese	8.26	1.19	ng/m ³ Air	8.2975		99.5	80-120			
Molybdenum	1.43	0.213	ng/m ³ Air	1.3829		103	80-120			
Nickel	2.96	0.801	ng/m ³ Air	2.7658		107	80-120			
Phosphorus	ND	1250	ng/m ³ Air	13.829			80-120			U, GC-BS
Potassium	61.3	38.0	ng/m ³ Air	55.317		111	80-120			
Rubidium	1.33	0.0183	ng/m ³ Air	1.3829		96.4	80-120			
Selenium	2.63	0.0110	ng/m ³ Air	2.7658		95.1	80-120			
Sodium	ND	2000	ng/m ³ Air	55.317			80-120			U, GC-BS
Strontium	1.63	0.652	ng/m ³ Air	1.3829		118	80-120			
Thallium	0.128	5.03E-4	ng/m ³ Air	0.13829		92.8	80-120			
Thorium	0.129	0.00300	ng/m ³ Air	0.13829		93.4	80-120			
Uranium	0.127	0.0170	ng/m ³ Air	0.13829		91.8	80-120			
Vanadium	2.70	0.0492	ng/m ³ Air	2.7658		97.7	80-120			
Zinc	111	97.7	ng/m ³ Air	82.975		133	80-120			

LCS (B3K2104-BS2)

Prepared: 11/21/23 Analyzed: 11/22/23

Aluminum	77.1	32.1	ng/m ³ Air	82.975		92.9	80-120			
Antimony	1.34	0.0441	ng/m ³ Air	1.3829		97.0	80-120			SL
Arsenic	2.62	0.00955	ng/m ³ Air	2.7658		94.8	80-120			
Barium	26.8	0.948	ng/m ³ Air	27.658		96.9	80-120			
Beryllium	1.41	0.00332	ng/m ³ Air	1.3829		102	80-120			
Cadmium	1.37	0.109	ng/m ³ Air	1.3829		98.9	80-120			
Calcium	ND	292	ng/m ³ Air	69.146			80-120			U, LJ
Chromium	13.2	2.03	ng/m ³ Air	13.829		95.6	80-120			
Cobalt	1.36	0.0156	ng/m ³ Air	1.3829		98.2	80-120			
Copper	29.0	3.00	ng/m ³ Air	27.658		105	80-120			

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FILE #: 0000.00
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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
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Inorganics by Compendium Method IO-3.5 - Quality Control

Batch B3K2104 - ICP-MS Extraction

LCS (B3K2104-BS2) Continued

Prepared: 11/21/23 Analyzed: 11/22/23

Iron	25.8	24.2	ng/m ³ Air	27.658		93.4	80-120			
Lead	13.3	0.276	ng/m ³ Air	13.829		96.3	80-120			
Magnesium	ND	96.4	ng/m ³ Air	27.658			80-120			U
Manganese	7.88	1.19	ng/m ³ Air	8.2975		95.0	80-120			
Molybdenum	1.33	0.213	ng/m ³ Air	1.3829		96.5	80-120			
Nickel	2.69	0.801	ng/m ³ Air	2.7658		97.3	80-120			
Phosphorus	ND	1250	ng/m ³ Air	13.829			80-120			U, GC-BS
Potassium	54.3	38.0	ng/m ³ Air	55.317		98.1	80-120			
Rubidium	1.32	0.0183	ng/m ³ Air	1.3829		95.4	80-120			
Selenium	2.62	0.0110	ng/m ³ Air	2.7658		94.8	80-120			
Sodium	ND	2000	ng/m ³ Air	55.317			80-120			U
Strontium	1.34	0.652	ng/m ³ Air	1.3829		97.1	80-120			
Thallium	0.129	5.03E-4	ng/m ³ Air	0.13829		93.0	80-120			
Thorium	0.126	0.00300	ng/m ³ Air	0.13829		90.9	80-120			
Uranium	0.124	0.0170	ng/m ³ Air	0.13829		90.0	80-120			
Vanadium	2.69	0.0492	ng/m ³ Air	2.7658		97.2	80-120			
Zinc	ND	97.7	ng/m ³ Air	82.975			80-120			U



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REPORTED: 11/29/23 10:49
SUBMITTED: 11/20/23
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.
LJ Identification of analyte is acceptable; reported value is an estimate.
GC-BS Compound exceeds Blank Spike Criteria
D This result obtained by dilution.
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.

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
 TetraTech
 1999 Harrison St, Suite 500
 Oakland, CA 94612

EBET Order #: 3454309
 Project #: 1032864023141
 Receipt Date: 15-Nov-2023
 Analysis Date: 20-Nov-2023
 Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO1-111023-AB**

Air Volume:	2261.714
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	1.28958
Analytical Sensitivity: f/cm ³ :	0.00129
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/cm ³ :	<0.00129
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00129
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00129
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:	4.8
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	4.8



Analyst: William Colbert

Scott M. Ward, Ph.D.

Lab Director

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Airborne Asbestos Fiber Analysis
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Direct-Transfer Transmission Electron Microscopy Method

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EBET Order #: 3454309
Project #: 1032864023141
Receipt Date: 15-Nov-2023
Analysis Date: 20-Nov-2023
Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO2-111023-AB**

Air Volume:	2885.531
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	1.01079
Analytical Sensitivity: f/cm ³ :	0.00101
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/cm ³ :	<0.00101
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00101
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00101
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:	3.7
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	3.7



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EBET Order #: 3454309
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Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO3-111023-AB**

Air Volume:	3312.221
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.88058
Analytical Sensitivity: f/cm ³ :	0.00088
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/cm ³ :	<0.00088
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00088
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00088
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:	3.2
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	3.2



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Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO1-111123-AB**

Air Volume:	5658.48
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.51545
Analytical Sensitivity: f/cm ³ :	0.00052
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/cm ³ :	<0.00052
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00052
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00052
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:	1.9
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.9



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Airborne Asbestos Fiber Analysis
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HDOH Kula Community Air

Sample Number **MFK-AMO2-111123-AB**

Air Volume:	5148.37
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.56652
Analytical Sensitivity: f/cm ³ :	0.00057
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/cm ³ :	<0.00057
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00057
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00057
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



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HDOH Kula Community Air

Sample Number **MFK-AMO3-111123-AB**

Air Volume:	6677.049
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.43682
Analytical Sensitivity: f/cm ³ :	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/cm ³ :	<0.00044
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00044
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<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: William Colbert

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Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO1-111223-AB**

Air Volume:	5121.496
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.56950
Analytical Sensitivity: f/cm ³ :	0.00057
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/cm ³ :	<0.00057
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00057
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00057
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: William Colbert

Scott M. Ward, Ph.D.

Lab Director

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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
TetraTech
1999 Harrison St, Suite 500
Oakland, CA 94612

EBET Order #: 3454309
Project #: 1032864023141
Receipt Date: 15-Nov-2023
Analysis Date: 20-Nov-2023
Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO2-111223-AB**

Air Volume:	4696.992
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.62096
Analytical Sensitivity: f/cm ³ :	0.00062
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/cm ³ :	<0.00062
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00062
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00062
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:	2.3
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.3



Analyst: William Colbert

Scott M. Ward, Ph.D.

Lab Director

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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
TetraTech
1999 Harrison St, Suite 500
Oakland, CA 94612

EBET Order #: 3454309
Project #: 1032864023141
Receipt Date: 15-Nov-2023
Analysis Date: 20-Nov-2023
Report Date: 20-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AMO3-111223-AB**

Air Volume:	5134.032
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:	WC
Number of GO's Examined:	10
Analytical Sensitivity: f/Liter:	0.56810
Analytical Sensitivity: f/cm ³ :	0.00057
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/cm ³ :	<0.00057
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00057
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00057
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: William Colbert

Scott M. Ward, Ph.D.

Lab Director

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Report for:

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

Regarding: Eurofins J3 Resources, Inc.
Project: 103286402341; HDOH Kula Community Air
EML ID: 3458356

Approved by:

Dates of Analysis:
Asbestos TEM ISO 10312 / ASTM6281-06: 11-27-2023



Lab Director
Scott Ward

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.

Eurofins J3 Resources, Inc. ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111323-AB**

Air Volume:	7394.855
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:	0.39442
Analytical Sensitivity: f/cm ³ :	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/cm ³ :	<0.00039
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00039
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<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:	1.5
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

These results apply to the sample(s) as received. Eurofins J3 Resources, Inc. (EJ3) is not responsible for results reported in fibers or asbestos structures per cubic centimeter, which is dependent on volumes provided by non-laboratory personnel. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by EJ3. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111323-AB**

Air Volume:	7670.678
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:	0.38024
Analytical Sensitivity: f/cm ³ :	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/cm ³ :	<0.00038
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00038
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<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

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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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111323-AB**

Air Volume:	4540.176
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:	0.64241
Analytical Sensitivity: f/cm3:	0.00064
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:	<0.00064
Concentration of Asbestos (Amphibole) f/cm3:	<0.00064
Concentration of PCME Asbestos (Chrysotile) f/cm3:	<0.00064
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:	2.4
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	2.4



Analyst: Taylor Smylie

Scott M. Ward, Ph.D.

Lab Director

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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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111423-AB**

Air Volume:	7307.402
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:	0.39914
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

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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
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1999 Harrison St. Ste. 500
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EJ3 Order #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111423-AB**

Air Volume:	8400.285
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:	0.34721
Analytical Sensitivity: f/cm ³ :	0.00035
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/cm ³ :	<0.00035
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00035
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00035
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:	1.3
Lower 95% Confidence Limit (Amphibole), Str/L:	0
Upper 95% Confidence Limit (Amphibole), Str/L:	1.3



Analyst: Taylor Smylie

Scott M. Ward, Ph.D.

Lab Director

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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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111423-AB**

Air Volume:	5086.31
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:	0.57343
Analytical Sensitivity: f/cm ³ :	0.00057
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/cm ³ :	<0.00057
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00057
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00057
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

These results apply to the sample(s) as received. Eurofins J3 Resources, Inc. (EJ3) is not responsible for results reported in fibers or asbestos structures per cubic centimeter, which is dependent on volumes provided by non-laboratory personnel. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by EJ3. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM01-111523-AB**

Air Volume:	7228.224
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:	0.40351
Analytical Sensitivity: f/cm ³ :	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/cm ³ :	<0.00040
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<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

These results apply to the sample(s) as received. Eurofins J3 Resources, Inc. (EJ3) is not responsible for results reported in fibers or asbestos structures per cubic centimeter, which is dependent on volumes provided by non-laboratory personnel. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by EJ3. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM02-111523-AB**

Air Volume:	7311.168
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:	0.39893
Analytical Sensitivity: f/cm ³ :	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/cm ³ :	<0.00040
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00040
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<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

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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 #: 3458356
Project #: 103286402341.00
Receipt Date: 20-Nov-2023
Analysis Date: 27-Nov-2023
Report Date: 27-Nov-2023

HDOH Kula Community Air

Sample Number **MFK-AM03-111523-AB**

Air Volume:	6445.728
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:	0.45250
Analytical Sensitivity: f/cm ³ :	0.00045
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/cm ³ :	<0.00045
Concentration of Asbestos (Amphibole) f/cm ³ :	<0.00045
Concentration of PCME Asbestos (Chrysotile) f/cm ³ :	<0.00045
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

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