MONTANA RESOURCES LLP

DATA REPORT FOR TSP AND DUSTFALL MONITORING STATIONS IN BUTTE, MONTANA

QUARTER 4, 2024

Prepared for:

Montana Resources LLP
600 Shields Avenue
Butte, MT 59701

Prepared by:

Bison Engineering, Inc.
3143 E. Lyndale Avenue
Helena, MT 59601
(406) 442-5768
http://www.bison-eng.com

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CERTIFICATION OF DATA INTEGRITY

Bison Engineering, Inc. certifies the data in this report is an accurate summary of the air quality and meteorological conditions measured at the Greeley School ambient monitoring site. Every reasonable effort was made to obtain accurate and representative data and to comply with the procedures set forth in the project-specific *Quality Assurance Project Plan (QAPP)*, *State of Montana Ambient Air Monitoring Program Quality Assurance Project Plan (April 2013)*, and the Environmental Protection Agency's *Volume II: Ambient Air Quality Program (January 2017)*

Preparer: Steven R. Heck

Signature: 

Title: Meteorologist

Date: March 18, 2025

Reviewer: Harold W. Robbins

Signature: 

Title: Executive Manager

Date: March 24, 2025

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1.0 INTRODUCTION

Particulate monitoring has been conducted in the Greeley School area for many years, since the days of the Anaconda Company operation during the 1970s. Montana Department of Environmental Quality (MDEQ) and Butte-Silver Bow (BSB) County are currently performing the following monitoring:

- Continuous monitoring for PM_{10} using a Met One Model 1020 Beta Attenuation Monitor (BAM-1020).

- Continuous monitoring for $PM_{2.5}$ using a second Met One BAM-1020.

- Episodic monitoring for $PM_{2.5}$ using a BGI Model PQ-200 sampler. This sampler collects particulate matter on a filter over a 24-hour period, which is subsequently analyzed gravimetrically to determine the average airborne $PM_{2.5}$ concentration during the sampling period. The filter is then analyzed by an EPA laboratory for trace elements and mineralized compounds. This episodic sampling is performed every six days, concurrent with EPA's national one-in-six-day sampling schedule.

- The Greeley School site includes meteorological instruments that measure wind speed, wind direction and temperature.

MDEQ/BSB's monitoring provides continuous, real-time hourly $PM_{2.5}$ and PM_{10} concentrations, as well as $PM_{2.5}$ chemical composition data. In March 2019 and at Montana Resources' (MR) request, Bison Engineering Inc. (Bison) installed additional collocated monitoring equipment at the Greeley School:

- Total Suspended Particulate Sampler: A Met One E-Sampler that continuously measures hourly total suspended particulate (TSP) concentrations using a nephelometric technique that relates light scattering to ambient particulate concentration. Additionally, the sampler includes a filter that is analyzed for total particulate mass and trace elements. Prior to this study, no ongoing TSP monitoring was being performed,

- PM_{10} Particulate Sampler: A BGI Model PQ-200 sampler that collects 24-hour inhalable particulate (PM_{10}) samples on a filter, concurrent with the EPA one-in-six-day sampling schedule. The filter is analyzed for particulate mass and for selected trace elements. The MDEQ BAM-1020 that is used for PM_{10} hourly monitoring does not produce a filter suitable for chemical analysis.

The Bison data have been presented in quarterly reports since the first quarter of 2019. With few exceptions, the trace element data have shown airborne concentrations below the Guideline values shown in Section 4.0 of this report. However, citizens in the area between the Greeley school and MTR have expressed concerns about airborne particulate and the

associated trace element concentrations, as well as the composition of settled dust that residents have observed.

In response, MTR contracted Bison to perform additional monitoring as described below:

- BGI Model PQ-200 samplers are being used to collect 24-hour TSP samples on filters, concurrent with the EPA one-in-six-day sampling schedule. The filters are analyzed for particulate mass and for selected trace elements. These samplers were deployed at 2616 Pine Street and 1910 Walnut Street, with the first samples collected on July 11, 2023.

- Monthly Dustfall sampling was initiated on August 4, 2023, at the Pine Street and Walnut Street sites, and also at the existing Greeley School site. This sampling involves exposing a 15 cm diameter bucket to ambient conditions for a period of approximately 30 days, and then analyzing the collected particulate for total mass and trace elements. From these results, monthly particulate and trace element deposition rates are calculated.

- All sample collection duties are performed by Bison. Gravimetric analysis of TSP filters is also performed by Bison, while chemical analysis of those filters is performed by the Energy Laboratory Billings, MT facility. Both gravimetric and chemical analyses of the Dustfall samples are performed by the Energy Laboratory Helena facility.

Monitoring locations are depicted in Figure 1.

Figure 1: Butte Ambient Monitoring Locations

2.0 TSP SAMPLING DATA

The National Ambient Air Quality Standards (NAAQS) for TSP were first promulgated in 1971. The TSP standards were superseded by PM_{10} standards in 1987, and additional particulate standards have been enacted since. Although no longer a criteria pollutant, TSP monitoring is appropriate for the objectives of the expanded monitoring since residents' concerns arose from visual observations of ***total*** particulate, rather than a particular size fraction.

Normally, TSP samples are collected for a period of 24 hours on the National EPA 6th-day sampling schedule. However, starting in December 2023 it was discovered that snow easily blows into the BGI PQ-200 TSP sampling heads and accumulates on the sampling filters – to the extent that it compromises the integrity of the sample. Additionally, in early January it was discovered that sufficient windblown snow accumulation on the filter could cause a sampling failure due to an overpressure error. Starting in January 2024, samples were scheduled for dates when snow was not expected. They were scheduled as close to the National 6th-day schedule as possible but constrained by expected weather conditions. Similarly, sample retrieval was often expedited to minimize the possibility of windblown snow accumulating following exposure. During the fourth quarter of 2024, four sampling events were shifted by +/- one day to avoid this issue, as listed below:

6th-Day Date	Sample Date
Oct 27	Oct 26
Nov 02	Nov 01
Dec 08	Dec 09
Dec 26	Dec 27

Table 1 summarizes the TSP data collected during the fourth quarter of 2024. In early October the Butte area was impacted by both wildfire smoke and high winds, which likely increased airborne particulate levels.

The arithmetic average quarterly TSP concentrations were 37 µg/m³ at the Pine St site and 43 µg/m³ at the Walnut St site. These values represent 49 percent and 57 percent of the historical geometric mean annual standard (75 µg/m³)[1], respectively. The maximum TSP concentration of 86 µg/m³ at Pine St occurred on October 9, while the maximum of 89 µg/m³ at Walnut St occurred on October 3. Those maximum daily values were 33 percent and 34 percent of the historical 24-hour standard (260 µg/m³)[2], respectively.

Data used to calculate average TSP concentrations from gravimetric analysis are presented in Appendix A. Chemical analysis results for the TSP filters are presented in Section 4.0 of this report.

[1] Both the annual and 24-hour TSP standards were revoked in 1987. The annual standard was calculated as a geometric mean of all daily values in a single year. The 24-hour standard was determined as the 2nd highest recorded value per year (on an assumed one-day-in-six schedule)
[2] *Ibid.*

Table 1: Summary of TSP Monitoring Data for Quarter 4, 2024

Pine Street		Walnut Street	
Sample Collection Date (2024)[2]	**TSP[1] (µg/m³)**	**Sample Collection Date (2024)[2]**	**TSP[1] (µg/m³)**
Oct 03	38	Oct 03	89
Oct 09	86	Oct 09	74
Oct 15	60	Oct 15	55
Oct 21	22	Oct 21	23
Oct 26	14	Oct 26	20
Nov 01	16	Nov 01	18
Nov 08	34	Nov 08	30
Nov 14	15	Nov 14	21
Nov 20	39	Nov 20	36
Nov 26	20	Nov 26	25
Dec 02	73	Dec 02	82
Dec 09	16	Dec 09	25
Dec 14	27	Dec 14	17
Dec 20	53	Dec 20	81
Dec 27	41	Dec 27	47
Arithmetic Average	**37**	**Arithmetic Average**	**43**
Single Day Maximum	**86**	**Single Day Maximum**	**89**
Historical 24-Hour Standard [3]	**260**		
Historical Geometric Mean Annual Standard [4]	**75**		

[1]All values at local temperature and pressure (LTP).
[2]Samples were collected from midnight to midnight (± 10 minutes) on a single calendar day unless noted otherwise.

[3] *Ibid.*
[4] *Ibid.*

3.0 DUSTFALL SAMPLING DATA

Dustfall monitoring was initiated at the Walnut, Pine and Greeley sites on August 4, 2023. Samples were collected over the following time periods at each site during the fourth quarter of 2024:

- September 30 – November 2
- November 2 – December 3
- December 3, 2024 – January 2, 2025

Samples were collected using ASTM Method D1739-98R17. Each sampling event was started by placing clean, dry dustfall buckets at each site. They were then exposed to ambient conditions for approximately 30 days. No water was added to the buckets prior to deployment, although they collected any rain or snow that fell during the sampling period. Following collection, they were submitted to the Energy Lab Helena facility. Samples were visually inspected for insects or other non-dustfall detritus. Wet masses of each sample were collected, as received. Samples with insects present were passed through a No. 10 (2mm) sieve, removing the insects but allowing the dust and liquid to pass through. Sieves were rinsed with laboratory reagent water to ensure no dust was lost on the sieve. Samples were then air dried on a clean non-porous plastic to remove moisture. The dry weight of each sample was then recorded using the plastic as a tared mass. Collected dust was transferred to a digestion vessel using digestion reagents to ensure all dust was removed from the plastic; and digested for total metals analysis.

Table 2 summarizes the dustfall monitoring results for the fourth quarter of 2024. All monthly dustfall results were well below the Montana Dustfall standard of 10 $g/m^2/30$ days. The maximum value was 6.4 $g/m^2/30$ days for the Pine St dustfall sample collected November 2 – December 3. The quarterly averages for all three sites were also well below that standard.

Table 2: Summary of Dustfall Monitoring Data for Quarter 4, 2024

Sample Collection Date (2024)	Greeley School DF ($g/m^2/30$ days)	Pine Street DF ($g/m^2/30$ days)	Walnut Street DF ($g/m^2/30$ days)
Sep 30 – Nov 02	5.2	5.2	4.9
Nov 02 – Dec 03	2.6	6.4	4.9
Dec 03 – Jan 02 (2025)	3.8	4.6	3.1
Average	**3.9**	**5.4**	**4.3**
Maximum	**5.2**	**6.4**	**4.9**
Montana Standard [5]	**10**		

Chemical analysis results for the Dustfall samples are presented in Section 5.0.

[5] ARM 17.8.220

4.0 CHEMICAL ANALYSIS DATA – TSP SAMPLES

Following gravimetric analysis, the particulate samples were submitted to Energy Laboratories, Inc. (ELI) in Billings, Montana, for elemental analysis including arsenic, cadmium, copper, lead, manganese, molybdenum and zinc. This analyte list may be subject to modification as results from this monitoring are obtained, and as other information becomes available.

All TSP samples were digested and then analyzed by ICP-MS using EPA Method E200.8. Laboratory results are presented in Appendix B and are reported in units of micrograms (µg) per filter. Fifteen TSP samples collected from both the Walnut Street and Pine Street sites during the fourth quarter were analyzed for trace elements, as well as five Field Blanks and five filter lot blanks (Lab Blanks).

Tables 3a and 3b summarize the total particulate mass and ELI analytical results for samples collected during the fourth quarter. Detectable results were generally obtained for copper, lead, manganese and molybdenum. Results for arsenic, cadmium and zinc were often non-detectable. Table 3c shows the Field Blank and Lab Blank results associated with the fourth quarter samples. The bottom row of Table 3c shows the range of laboratory Method Blank (MB) Method Detection Limits (MDL) during the quarter. Field Blank, Lab (filter) Blank and MB concentrations for the fourth quarter were non-detectable, with the following exceptions:

- Very low levels of molybdenum were detected in four field blanks and one laboratory blank.
- Low levels of copper were detected in two field blanks, and lead in one field blank. In all cases the concentrations were less than twice the applicable laboratory MDL.

Tables 4a and 4b show the calculated airborne concentration of each trace element over the indicated sampling periods. To facilitate data interpretation, the number of leading zeroes in the results has been minimized by expressing results in units of ***nanograms*** (ng) per cubic meter rather than micrograms.

All quarterly average trace element concentrations at Pine Street were below the respective lifetime exposure Guideline values. The closest approach was for manganese, with the average of 22 ng/m^3 representing 44 percent of the lifetime exposure Guideline of 50 ng/m^3. Individual trace element concentrations for the Pine Street site were also below suggested Guideline values, with one exception:

- The October 9 manganese concentration of 62 ng/m^3 represented 124 percent of the lifetime exposure Guideline. This sample was likely impacted by regional wildfire smoke.

All quarterly average trace element concentrations at Walnut Street were also below the respective Guideline values. The closest approach was for manganese, with the average of

34 ng/m^3 representing 68 percent of the Guideline value of 50 ng/m^3. Individual trace element concentrations for the Walnut Street site were generally below suggested Guideline values with the following exceptions:

- The manganese result of 170 ng/m^3 on October 3 represented 340 percent of the lifetime exposure Guideline. Strong winds occurred on October 4 prior to retrieval of the sample, and black dust was noted on the exposed filter during retrieval. Because of the open design of the TSP head, it is suspected that windblown dust accumulated on the filter outside of the sampling period may have affected the analytical results.

- The manganese result of 80 ng/m^3 on October 9 represented 160 percent of the lifetime exposure Guideline. This sample was likely impacted by regional wildfire smoke. In the past, increased manganese levels have been observed during wildfire smoke episodes.

- The arsenic concentration of 22 ng/m^3 on December 2 represented 147 percent of the lifetime exposure Guideline of 15 ng/m^3. This coincided with a TSP concentration of 82 µg/m^3 – the second highest TSP concentration observed at Walnut Street during the fourth quarter.

Despite these individual 24-hour trace element excursions above the lifetime exposure Guidelines, quarterly <u>average</u> concentrations of all trace elements were well below the Guidelines at both sites.

Table 5 shows the sources of the "Guideline" values used for these analyses, and their derivations.[6] Additionally, Table 5 shows the approximate airborne concentration corresponding to each MDL range listed in Table 4c.

Laboratory results are included in Appendix B. A detailed table showing commonly accepted values from regulatory agencies and reputable private organizations is provided in Appendix D.

[6] The guideline values were updated (starting with the Greeley School 4th quarter report 2020) to be consistent with those from the Montana Department of Public Health and Human Services (MDPHHS). Guidelines for copper and molybdenum are lower than those used in previous quarterly reports. Although MDPHHS suggested a higher guideline for manganese, the lower previously reported value was retained. Guidelines for arsenic, cadmium, lead and zinc are unchanged.

Table 3a: Summary of Analytical Results – TSP Pine Street

DATE	PART MASS (µg)	As (µg)	Cd (µg)	Cu (µg)	Mn (µg)	Mo (µg)	Pb (µg)	Zn (µg)
10/03	913	ND	ND	1.7	0.65	0.078	0.12	1.0
10/09	2063	0.067	0.0087	3.6	1.5	0.053	0.26	1.4
10/15	1444	ND	ND	2.4	0.91	0.084	0.20	1.5
10/21	521	ND	ND	0.92	0.36	0.098	0.051	0.59
10/26	338	ND	ND	0.67	0.24	0.13	0.050	0.41
11/01	382	ND	ND	0.53	0.18	0.061	0.078	ND
11/08	829	ND	0.011	1.4	0.41	0.087	0.10	0.83
11/14	369	ND	ND	0.74	0.21	0.024	0.048	ND
11/20	948	ND	ND	1.7	0.52	0.083	0.085	ND
11/26	469	ND	ND	1.3	0.24	0.023	0.051	ND
12/02	1766	ND	0.011	4.0	0.91	0.15	0.21	1.6
12/09	378	ND	0.0093	0.76	0.20	0.048	ND	ND
12/14	659	ND	ND	1.1	0.35	0.044	0.065	ND
12/20	1273	0.066	0.0059	2.6	0.58	0.084	0.13	1.3
12/27	975	0.065	ND	1.2	0.55	0.097	0.082	0.72

All values expressed as micrograms per filter. ND denotes not detected.

Table 3b: Summary of Analytical Results – TSP Walnut Street

DATE	PART MASS (µg)	As (µg)	Cd (µg)	Cu (µg)	Mn (µg)	Mo (µg)	Pb (µg)	Zn (µg)
10/03	2105	ND	ND	1.5	4.1	0.034	0.11	1.3
10/09	1763	0.077	0.013	8.4	1.9	0.098	0.41	2.6
10/15	1297	ND	ND	1.4	0.54	0.032	0.12	1.1
10/21	536	ND	ND	0.73	0.34	0.072	0.080	0.80
10/26	468	ND	ND	0.74	0.67	0.066	0.071	0.75
11/01	434	ND	ND	0.52	0.22	0.087	0.049	ND
11/08	703	ND	ND	1.1	0.31	0.033	0.17	ND
11/14	501	ND	ND	0.38	0.28	0.013	0.057	ND
11/20	853	ND	ND	1.1	0.56	0.099	0.078	0.95
11/26	586	ND	ND	0.60	0.30	0.035	0.049	ND
12/02	1941	0.51	0.012	3.3	0.95	0.10	0.23	2.2
12/09	598	ND	ND	0.71	0.33	0.083	0.056	ND
12/14	403	ND	ND	0.41	0.19	0.020	0.043	ND
12/20	1922	0.080	0.012	2.9	1.0	0.057	0.15	1.9
12/27	1104	0.068	ND	1.8	0.62	0.083	0.14	1.2

All values expressed as micrograms per filter. ND denotes not detected.

Table 3c: Summary of Analytical Results – Blanks

DATE	PART MASS (µg)	As (µg)	Cd (µg)	Cu (µg)	Mn (µg)	Mo (µg)	Pb (µg)	Zn (µg)
09/25-FFB	125	ND	ND	0.21	ND	0.0078	ND	ND
11/11-LB	0	ND	ND	ND	ND	ND	ND	ND
11/23-LB	3	ND	ND	ND	ND	ND	ND	ND
10/27 FFB	44	ND	ND	ND	ND	0.0071	ND	ND
01/09-LB	2	ND	ND	ND	ND	0.0067	ND	ND
11/13-FFB	152	ND	ND	0.39	ND	0.050	0.074	ND
01/09-LB	2	ND	ND	ND	ND	ND	ND	ND
11/27-FFB	58	ND	ND	ND	ND	0.012	ND	ND
02/20-LB	2	ND	ND	ND	ND	ND	ND	ND
12/15-FFB	22	ND	ND	ND	ND	ND	ND	ND
Lab Method Blank MDL Range		0.06	0.006	0.2	0.2	0.005	0.04	0.3

All values expressed as micrograms per filter. ND denotes not detected.
LB denotes laboratory filter blank. FFB denotes field filter blank.
INV denotes invalid results, filter was torn attempting to pass leak test.

Table 4a: Summary of Airborne Trace Element Concentrations – TSP Pine Street

DATE	Sample Volume (m^3)	As (ng/m^3)	Cd (ng/m^3)	Cu (ng/m^3)	Mn (ng/m^3)	Mo (ng/m^3)	Pb (ng/m^3)	Zn (ng/m^3)
10/03	24.05	ND	ND	71	27	3.2	5.0	42
10/09	24.05	2.8	0.36	150	62	2.2	11	58
10/15	24.05	ND	ND	100	38	3.5	8.3	62
10/21	24.05	ND	ND	38	15	4.1	2.1	25
10/26	24.05	ND	ND	28	10	5.4	2.1	17
11/01	24.05	ND	ND	22	7.5	2.5	3.2	ND
11/08	24.05	ND	0.46	58	17	3.6	4.2	35
11/14	24.05	ND	ND	31	8.7	1.0	2.0	ND
11/20	24.05	ND	ND	71	22	3.5	3.5	ND
11/26	24.05	ND	ND	54	10	1.0	2.1	ND
12/02	24.05	ND	0.46	170	38	6.2	8.7	67
12/09	24.05	ND	0.39	32	8.3	2.0	ND	ND
12/14	24.05	ND	ND	46	15	1.8	2.7	ND
12/20	24.05	2.7	0.25	110	24	3.5	5.4	54
12/27	24.05	2.7	ND	50	23	4.0	3.4	30
Mean (ng/m^3) *		1.5	0.21	69	22	3.2	4.3	29
Guideline (ng/m^3) **		15	10	2,000	50	400	150	47,619

*Rather than treat non detectable (ND) data as zero, the mean was calculated using ½ of the detectable value (Table 5) for the parameter and date in question.

**The guideline values, except lead (Pb), are applicable to a lifetime or chronic exposure. The lead (Pb) guideline is an ambient air quality standard applicable to a 3-month average. The quarterly average lead concentration of 4.3 ng/m^3 was 3 percent of the guideline value; non-detect lead concentrations were set at ½ of the lead detection limit for the sample group in question.

Table 4b: Summary of Airborne Trace Element Concentrations – TSP Walnut Street

DATE	Sample Volume (m^3)	As (ng/m^3)	Cd (ng/m^3)	Cu (ng/m^3)	Mn (ng/m^3)	Mo (ng/m^3)	Pb (ng/m^3)	Zn (ng/m^3)
10/03	23.71	ND	ND	63	170	1.4	4.6	55
10/09	23.71	3.2	0.55	350	80	4.1	17	110
10/15	23.71	ND	ND	59	23	1.3	5.1	46
10/21	23.71	ND	ND	31	14	3.0	3.4	34
10/26	23.71	ND	ND	31	28	2.8	3.0	32
11/01	23.71	ND	ND	22	9.3	3.7	2.1	ND
11/08	23.71	ND	ND	46	13	1.4	7.2	ND
11/14	23.71	ND	ND	16	12	0.55	2.4	ND
11/20	23.71	ND	ND	46	24	4.2	3.3	40
11/26	23.71	ND	ND	25	13	1.5	2.1	ND
12/02	23.71	22	0.51	140	40	4.2	9.7	93
12/09	23.71	ND	ND	30	14	3.5	2.4	ND
12/14	23.71	ND	ND	17	8.0	0.84	1.8	ND
12/20	23.71	3.4	0.51	120	42	2.4	6.3	80
12/27	23.71	2.9	ND	76	26	3.5	5.9	51
Mean (ng/m^3) *		3.0	0.20	71	34	2.6	5.1	39
Guideline (ng/m^3) **		15	10	2,000	50	400	150	47,619

*Rather than treat non detectable (ND) data as zero, the mean was calculated using ½ of the detectable value (Table 5) for the parameter and date in question.

**The guideline values, except lead (Pb), are applicable to a lifetime or chronic exposure. The lead (Pb) guideline is an ambient air quality standard applicable to a 3-month average. The quarterly average lead concentration of 5.1 ng/m^3 was 3 percent of the guideline value; non-detect lead concentrations were set at ½ of the lead detection limit for the sample group in question.

Table 5: Summary of Airborne Trace Element Concentration Guidelines (ng/m³)

Analyte	Dose/ Risk[A]	Source	Description	Time Period	Detectable TSP[D]
Arsenic (inorganic)	15	EPA / DPHHS[F]	RfC[B]	Lifetime	2.50
Cadmium	10	ATSDR / DPHHS[F]	Non-cancer / CV[F]	Chronic	0.25
	200	IRIS	Cancer	Chronic	
Copper	2,000	DPHHS[F] / Michigan DEQ	RfC[B]	Chronic	8.33
Lead	150	EPA / ATSDR / DPHHS[F]	National Ambient Air Quality Standard [C]	3-month	1.67
Manganese	50	EPA	RfC[B]	Lifetime	8.33
Molybdenum	11,905 (=500,000/42) [E]	CAL/OSHA, ACGIH	CAL/OSHA, ACGIH	Chronic [E]	0.21
	400	DPHHS[F] / Michigan DEQ	CV	Chronic	
Zinc	47,619 (=2,000,000/42)[E]	ACGIH TLV	ACGIH TLV	Chronic [E]	12.5

[A] See Appendix D for definitions and listing of dose and risk assessment values reviewed to produce this summary table.
[B] RfC = Reference Concentration (EPA) is an estimate (with uncertainty added) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.
[C] This standard is based on a three-month average.
[D] Based on 24-hour sampling period and total sample volume of 24 m³. Range reflects maximum and minimum laboratory MDLs during Q4 2024.
[E] This value derived by dividing the OSHA/NIOSH exposure limit by 42. This was done to include a factor of 10 to account for a general population, not just healthy adults and then including another factor of 4.2 to include a year-long exposure as opposed to 8 hours per day, 5 days a week and 52 weeks per year.
[F] Reference information from letter and analysis by DPHHS (regarding Greeley School ambient data) to Butte-Silver Bow Health Department dated October 28,2020.

EPA = Environmental Protection Agency
ATSDR = Agency for Toxic Substances & Disease Registry
CV = "Comparison Value" – a term used by DPHHS (10/28/20 letter) to indicate an ATSDR (or other) guideline or reference value
DPHHS = Montana Department of Health and Human Services
RfC = Reference Concentration (see above)
RSL = EPA Regional Screening Levels (https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables)
OSHA = Occupational Safety and Health Administration
ACGIH = American Congress of Governmental Industrial Hygienists
NIOSH= National Institute of Occupational Safety and Health
TLV = Threshold limit value

5.0 CHEMICAL ANALYSIS DATA – DUSTFALL SAMPLES

After each Dustfall sample was prepared as described in Section 3.0, the remaining particulate mass was transferred to a digestion vessel using digestion reagents to ensure that all dust was removed from the plastic and digested for total metals analysis. The digestate was analyzed using EPA Method SW6020 "Inductively Coupled Plasma - Mass Spectrometry."

Laboratory results are presented in Appendix C and are reported in units of milligrams per kilogram (mg/kg) in the captured particulate, along with the total dried particulate mass. Six Dustfall samples collected from the Walnut Street, Pine Street and Greeley School sites during the fourth quarter of 2024 were analyzed for trace elements. Three Field Blanks also were analyzed.

Tables 6a through 6c present the Dustfall analysis data for the fourth quarter. Each Table shows the sample collection information, amount of particulate captured from each sample, and the concentrations of seven parameters in the particulate mass on a mg/kg basis. Finally, each table shows a calculated deposition rate for each parameter in units of milligrams per square meter per 30-days (g/m^2/30-days).

All 30-day total particulate deposition rates were below the MAAQS of 10 g/m^2/30-days.[7] The highest observed deposition rate of 6.4 g/m^2/30-days occurred at the Pine Street site between November 2 and December 3, 2024. Quarterly average deposition rates were below the MAAQS at all three sites.

[7] It should be noted that the sampling procedure and analysis were conducted with quality in mind, they were not necessarily conducted in strict accordance with the specific methods outlined in the Montana standard (ARM17.8.220).

Table 6a: Dustfall Results for September 30 – November 2, 2024

Sample Collection Information

	Greeley School	Pine Street	Walnut Street	Field Blank
Start Date	09/30/24	09/30/24	09/30/24	
End Date	11/02/24	11/02/24	11/02/24	
Days of Exposure	33	33	33	
Dry Particulate Weight (g)	0.1012	0.1015	0.0954	0.0059
Dustfall (g/m²/30-days)	5.2	5.2	4.9	0.3

Trace Element Concentration in Particulate (mg/kg)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	29	29	28	ND
Cd	2	3	2	ND
Cu	1,780	3,410	1,160	ND
Pb	109	121	108	ND
Mn	1,020	887	1,040	ND
Mo	2,340	2,550	884	ND
Zn	504	722	481	ND

Trace Element Deposition Rate (mg/m²/30-days)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	0.15	0.15	0.14	ND
Cd	0.01	0.02	0.01	ND
Cu	9.27	17.81	5.69	ND
Pb	0.57	0.63	0.53	ND
Mn	5.31	4.63	5.10	ND
Mo	12.18	13.32	4.34	ND
Zn	2.62	3.77	2.36	ND

Table 6b: Dustfall Results for November 2 – December 3, 2024

Sample Collection Information

	Greeley School	Pine Street	Walnut Street	Field Blank
Start Date	11/02/24	11/02/24	11/02/24	
End Date	12/03/24	12/03/24	12/03/24	
Days of Exposure	31	31	31	
Dry Particulate Weight (g)	0.0472	0.1165	0.0896	-0.0022
Dustfall (g/m²/30-days)	2.6	6.4	4.9	-0.1

Trace Element Concentration in Particulate (mg/kg)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	23	14	31	ND
Cd	2	1	1	ND
Cu	2,900	2,010	1,900	0.3
Pb	81	66	54	ND
Mn	552	338	412	0.3
Mo	1,340	1,150	543	ND
Zn	600	369	439	1

Trace Element Deposition Rate (mg/m²/30-days)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	0.06	0.09	0.15	ND
Cd	0.01	0.01	0.00	ND
Cu	7.50	12.82	9.32	0.00
Pb	0.21	0.42	0.26	ND
Mn	1.43	2.16	2.02	0.00
Mo	3.46	7.34	2.66	ND
Zn	1.55	2.35	2.15	0.00

Table 6c: Dustfall Results for December 3, 2024 – January 2, 2025

Sample Collection Information

	Greeley School	Pine Street	Walnut Street	Field Blank
Start Date	12/03/24	12/03/24	12/03/24	
End Date	01/02/25	01/02/25	01/02/25	
Days of Exposure	30	30	30	
Dry Particulate Weight (g)	0.0673	0.0808	0.0551	-0.0188
Dustfall (g/m²/30-days)	3.8	4.6	3.1	-1.1

Trace Element Concentration in Particulate (mg/kg)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	14	17	25	ND
Cd	2	2	2	ND
Cu	2,650	3,270	3,920	0.8
Pb	52	54	101	ND
Mn	422	491	669	ND
Mo	1,140	1,180	1,150	ND
Zn	478	512	793	ND

Trace Element Deposition Rate (mg/m²/30-days)

Analyte	Greeley School	Pine Street	Walnut Street	Field Blank
As	0.05	0.08	0.08	ND
Cd	0.01	0.01	0.01	ND
Cu	10.09	14.95	12.22	0.00
Pb	0.20	0.25	0.31	ND
Mn	1.61	2.25	2.09	ND
Mo	4.34	5.40	3.59	ND
Zn	1.82	2.34	2.47	ND

6.0 CALIBRATION DATA

Calibration checks of the BGI TSP samplers are performed in at least two months of each quarter. In the third month, an audit is performed by a different person using different calibration standards. Routine monthly verification checks were performed on the TSP samplers on October 11, November 13 and December 3.[8]

Table 7 summarizes the verification checks performed each month and the applicable acceptance criteria. In the event of unsatisfactory results, corrective actions are performed as specified in the rightmost column. Table 8 summarizes the results of the calibration checks performed during the fourth quarter, as well as any corrective actions. Detailed verification check results are shown in Appendix E. Appendix F presents certifications for flow calibration standards used during the quarter.

Table 7: Summary of Montana Resources – Pine St and Walnut St Sites Calibration/ Audit Activities and Acceptance Criteria

Activity	**Acceptance Criteria / Actions**	
TSP Sampler Calibration Checks		
Flow Verification	±4%	Multipoint recalibration if flow error exceeds ±4%
Leak Check	Investigate / correct if vacuum drop exceeds 4 cm of water in 2 minutes	
Temperature Verification	±2.0°C	Multipoint recalibration if error exceeds ±2.0°C
Pressure	±10 mmHg	Adjust calibration if error exceeds ±10 mmHg
Other		
TSP Inlet Head	Disassemble and clean	

[8] Additional non-routine calibration checks were performed on the Walnut St TSP sampler on November 7 when the main PC board was replaced.
The calibration checks performed on January 15, 2025, also are shown to demonstrate data validity through the end of the fourth quarter.

Table 8: Summary of Quarter 4, 2024 Calibration Verification Results

Date	Calibration Check	Results	Limits	Actions
10/11/2024	BGI TSP Flow Verification (A)	-1.7%	±4%	
Pine Street	BGI TSP Flow Verification (B)	+1.7%	±4%	
	BGI Ambient Temperature	-0.6°C	±2.0°C	
	BGI Filter Temperature	+0.8°C	±2.0°C	
	BGI Ambient Pressure	+0.1 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	0 cm H_2O	≤4 cm H_20	
10/11/2024	BGI TSP Flow Verification (A)	+0.3%	±4%	
Walnut Street	BGI TSP Flow Verification (B)	-0.3%	±4%	
	BGI Ambient Temperature	-0.6°C	±2.0°C	
	BGI Filter Temperature	+0.4°C	±2.0°C	
	BGI Ambient Pressure	+1.6 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	
11/07/2024	BGI TSP Flow Verification (A)	+1.6%	±4%	C
Walnut Street	BGI TSP Flow Verification (B)	-1.6%	±4%	C
	BGI Ambient Temperature	-0.8°C	±2.0°C	C
	BGI Filter Temperature	+0.3°C	±2.0°C	C
	BGI Ambient Pressure	+0.1 mm Hg	±10 mmHg	C
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	C
11/07/2024	BGI TSP Flow Verification (A)	+0.2%	±4%	D
Walnut Street	BGI TSP Flow Verification (B)	-0.2%	±4%	D
	BGI Ambient Temperature	+0.3°C	±2.0°C	D
	BGI Filter Temperature	+0.2°C	±2.0°C	D
	BGI Ambient Pressure	+0.2 mm Hg	±10 mmHg	D
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	D
11/13/2024	BGI TSP Flow Verification (A)	+4.4%	±4%	E
Pine Street	BGI TSP Flow Verification (B)	-4.2%	±4%	E
	BGI Ambient Temperature	0.0°C	±2.0°C	
	BGI Filter Temperature	-0.4°C	±2.0°C	
	BGI Ambient Pressure	-0.4 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	1 cm H_2O	≤4 cm H_20	
11/13/2024	BGI TSP Flow Verification (A)	0.0%	±4%	
Walnut Street	BGI TSP Flow Verification (B)	0.0%	±4%	
	BGI Ambient Temperature	-0.3°C	±2.0°C	
	BGI Filter Temperature	-0.3°C	±2.0°C	
	BGI Ambient Pressure	+0.6 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	
12/03/2024	BGI TSP Flow Verification (A)	0.0%	±4%	
Pine Street	BGI TSP Flow Verification (B)	0.0%	±4%	
	BGI Ambient Temperature	+0.1°C	±2.0°C	
	BGI Filter Temperature	-0.3°C	±2.0°C	
	BGI Ambient Pressure	+0.1 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	1 cm H_2O	≤4 cm H_20	

Date	Calibration Check	Results	Limits	Actions
12/03/2024	BGI TSP Flow Verification (A)	+0.5%	±4%	
Walnut Street	BGI TSP Flow Verification (B)	-0.5%	±4%	
	BGI Ambient Temperature	-0.3°C	±2.0°C	
	BGI Filter Temperature	+0.2°C	±2.0°C	
	BGI Ambient Pressure	+0.3 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	
01/15/2025	BGI TSP Flow Verification (A)	-3.9%	±4%	F
Pine Street	BGI TSP Flow Verification (B)	+4.1%	±4%	F
	BGI Ambient Temperature	-1.0°C	±2.0°C	
	BGI Filter Temperature	+0.3°C	±2.0°C	
	BGI Ambient Pressure	+0.8 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	1 cm H_2O	≤4 cm H_20	
01/15/2025	BGI TSP Flow Verification (A)	-3.9%	±4%	G
Walnut Street	BGI TSP Flow Verification (B)	+4.1%	±4%	G
	BGI Ambient Temperature	-1.0°C	±2.0°C	
	BGI Filter Temperature	-1.0°C	±2.0°C	
	BGI Ambient Pressure	+1.3 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	2 cm H_2O	≤4 cm H_20	

Codes:
A = Difference of reported flow from reference standard flow.
B = Difference of reference standard flow from design flow of 16.7 LPM.
C = Calibration checks performed just prior to removal of existing Main PC board.
D = Calibration checks performed just after installation of new Main PC board.
E = Performed multipoint flow calibration. Operating flow left at 16.72 LPM
F = Performed multipoint flow calibration. Operating flow left at 16.75 LPM
G = Performed multipoint flow calibration. Operating flow left at 16.68 LPM

7.0 QUARTERLY AUDIT/CALIBRATION RESULTS

An audit is performed once in each full calendar quarter. The checks and acceptance criteria are identical to those for monthly calibrations (see Table 7). The primary difference is that the audits are performed by a different person, using different calibration standards. Calibration adjustments then are made as necessary, based on the as-found audit results. The fourth quarter audit was performed on November 13, 2024, at both sites. Results for both samplers were satisfactory as shown in Table 9. However, a multipoint flow calibration was performed on the Pine Street sampler following the audit.

Table 9: Quarter 4, 2024 Audit Results

BGI PQ200 TSP Sampler – Performance Audit			
Date: 11/13/2024	Time: 1240-1255	Sampler Serial Number: 90133 (Pine)	
Performed By: Daniel Bitz		Observer: Steve Heck	
Ref Standard: Tetra Cal SN 149645		Certification Date: 12/04/2023	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Audit (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	619	619.2 mm	-0.2
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Audit (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	6.1 C	6.3 C	-0.2
Filter Temperature	6.6 C	6.8 C	-0.2
Leak Check			
Vacuum Readings (cm H2O)	Start 135	End 134	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Audit (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.08	+3.9%
Reading (liters per minute)	Audit (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.08	16.7	-3.7%
Comments: Performed multipoint flow calibration after audit.			

BGI PQ200 TSP Sampler – Performance Audit			
Date: 11/13/2024	Time: 1330-1345	Sampler Serial Number: 90129 Walnut	
Performed By: Daniel Bitz		Observer: Steve Heck	
Ref Std: Tetra Cal SN 149645		Certification Date: 12/04/2023	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Audit (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	620	619.2	+0.8
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Audit (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	4.9 C	5.4 C	-0.5
Filter Temperature	6.5 C	6.7 C	-0.2
Leak Check			
Vacuum Readings (cm H20)	Start 134	End 132	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Audit (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	17.06	-2.1%
Reading (liters per minute)	Audit (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	17.06	16.7	+2.2%

8.0 DATA COMPLETENESS

Data recovery statistics for the particulate filter samples are presented in Table 10. The typical quarterly data recovery goal for TSP filter samples is ≥80 percent for both the gravimetric and trace element analyses. The actual data recovery was 100 percent for the TSP gravimetric and trace element analyses at both the Pine St and Walnut St sites.

Dustfall sampling involves no active instrumentation; it merely requires exposure of a 15-cm diameter open container for a period of approximately 30-days. It would therefore be highly unusual for any scheduled sample to not be collected and analyzed. Three rounds of ~30-day sampling at the Greeley School, Pine Street and Walnut Street sites were possible during the fourth quarter of 2024 – for a total of nine possible samples. All nine samples were collected as scheduled, giving a data recovery of 100 percent.

Table 10: Quarterly Data Completeness Summary – Filter Analysis Data

Montana Resources LLP			
Parameter	Readings Possible	Valid Results	Percent Recovery
October 2024			
TSP – Pine St / Gravimetric	5	5	100.0
TSP – Pine St / Trace Elements	35	35	100.0
TSP – Walnut St / Gravimetric	5	5	100.0
TSP – Walnut St / Trace Elements	35	35	100.0
Total	80	80	100.0
November 2024			
TSP – Pine St / Gravimetric	5	5	100.0
TSP – Pine St / Trace Elements	35	35	100.0
TSP – Walnut St / Gravimetric	5	5	100.0
TSP – Walnut St / Trace Elements	35	35	100.0
Total	80	80	100.0
December 2024			
TSP – Pine St / Gravimetric	5	5	100.0
TSP – Pine St / Trace Elements	35	35	100.0
TSP – Walnut St / Gravimetric	5	5	100.0
TSP – Walnut St / Trace Elements	35	35	100.0
Total	80	80	100.0
Quarter 4, 2024			
TSP – Pine St / Gravimetric	15	15	100.0
TSP – Pine St / Trace Elements	105	105	100.0
TSP – Walnut St / Gravimetric	15	15	100.0
TSP – Walnut St / Trace Elements	105	105	100.0
Total	240	240	100.0

9.0 COMPARISON TO AMBIENT AIR QUALITY STANDARDS

This study is not intended to determine compliance with the NAAQS[9] or the Montana ambient air quality standards[10] (MAAQS). Nonetheless, a generalized comparison is possible. The filter-based TSP data collected indicate ambient TSP concentrations well below the historical 24-hour standard of 260 μg/m^3 and the historical annual geometric average standard of 75 μg/m^3. ***Note that all TSP standards were superseded by PM_{10} standards in 1987.***[11]

Similarly, the lead concentrations analyzed from the exposed TSP filters indicate quarterly average airborne concentrations well below the 0.15 μg/m^3 ambient NAAQS based on a 3-month average of the 24-hour samples. The MAAQS is 1.5 μg/m^3 and is based on a 90-day rolling average of 24-hour samples. The TSP samples presented herein were collected for 24-hour periods, at a much lower sampling rate (16.7 liters per minute) compared to the standard method (≥40 standard cubic feet per minute). Nonetheless, the results indicate quarterly average ambient lead concentrations well below the MAAQS and NAAQS. Table 11 summarizes these comparisons through the fourth quarter of 2024.

Additionally, the analyses presented in Section 4.0 indicate that average airborne concentrations of the other six trace elements were below the suggested guidelines presented in Table 5.

Finally, the MAAQS for Dustfall specifies a particulate deposition rate not to exceed 10 g/m^2/30-days. All dustfall results for the fourth quarter were well below that value. There is no NAAQS for Dustfall.

[9] 40 CFR 50 *et seq.*
[10] ARM 17.8.201 *et. seq.*
[11] 52 FR 24634, July 1, 1987

Table 11: Summary of Airborne Concentration vs. NAAQS

Analyte	Location	Observed Concentration (µg/m³)	Averaging Period	Ambient Standard (µg/m³)	Authority
TSP	Pine St	86[1]	24-hour (max)	260[3]	NAAQS
	Walnut St	89[1]			
TSP	Pine St	37	Annual Average	75[3]	NAAQS
	Walnut St	43			
Pb	Pine St	0.004[2]	90-day	1.50	MAAQS
	Walnut St	0.005[2]	3-month	0.15	NAAQS
Analyte	**Location**	**Max. Observed Deposition Rate (g/m²/30-days)**	**Averaging Period**	**Ambient Standard (g/m²/30-days)**	**Authority**
Dustfall	Greeley Sch.	5.2	30-days	10	MAAQS
	Pine St	6.4			
	Walnut St	4.9			

[1] This value was the maximum 24-hour value from the filter-based TSP sampler.

[2] This value was the quarterly average from the filter-based TSP sampler. Non-detect results were set to ½ of the applicable detection limit when calculating the average.

[3] The historical TSP standard shown for comparison purposes is no longer in effect. NAAQS standard for TSP was based on geometric mean and MAAQS on arithmetic average. Values shown represent arithmetic averages for monitoring period of Quarter 4, 2024, based on gravimetric filter analysis.

APPENDIX A: GRAVIMETRIC ANALYSIS DATA

Quarter 4, 2024 Filter Analysis Results - TSP - Pine St

FILTER	DATE	AVG FLOW LPM	HOURS	SAMPLE VOLUME (M3)	PRE WEIGHT (MG)	PRE-WEIGHT DATE	POST WEIGHT (MG)	POST-WEIGHT DATE	PART MASS (MG)	CONC (UG/M3)
C1103515	10/03	16.70	24:00	24.05	119.179	9-Sep	120.092	28-Oct	0.913	38.0
C1103531	10/09	16.70	24:00	24.05	123.503	2-Oct	125.566	18-Nov	2.063	85.8
C1103534	10/15	16.70	24:00	24.05	121.457	2-Oct	122.901	18-Nov	1.444	60.0
C1103536	10/21	16.70	24:00	24.05	122.309	2-Oct	122.830	18-Nov	0.521	21.7
C1103538	10/26	16.70	24:00	24.05	121.451	2-Oct	121.789	18-Nov	0.338	14.1
C1853157	11/01	16.70	24:00	24.05	115.806	23-Oct	116.188	3-Jan	0.382	15.9
C1853159	11/08	16.70	24:00	24.05	116.085	23-Oct	116.914	3-Jan	0.829	34.5
C1853161	11/14	16.70	24:00	24.05	116.031	23-Oct	116.400	3-Jan	0.369	15.3
C1853165	11/20	16.70	24:00	24.05	119.398	23-Oct	120.346	3-Jan	0.948	39.4
C1853152	11/26	16.70	24:00	24.05	116.930	11-Nov	117.399	6-Jan	0.469	19.5
C1853155	12/02	16.70	24:00	24.05	117.644	11-Nov	119.410	6-Jan	1.766	73.4
C1853197	12/09	16.70	24:00	24.05	118.682	11-Nov	119.060	6-Jan	0.378	15.7
C1853199	12/14	16.70	24:00	24.05	119.327	11-Nov	119.986	6-Jan	0.659	27.4
C1853189	12/20	16.70	24:00	24.05	116.303	10-Dec	117.576	11-Feb	1.273	52.9
C1853190	12/27	16.70	24:00	24.05	116.209	10-Dec	117.184	11-Feb	0.975	40.5

Quarter 4, 2024 Filter Analysis Results - TSP - Walnut St

FILTER	DATE	AVG FLOW LPM	HOURS	SAMPLE VOLUME (M3)	PRE WEIGHT (MG)	PRE-WEIGHT DATE	POST WEIGHT (MG)	POST-WEIGHT DATE	PART MASS (MG)	CONC (UG/M3)
C1103514	10/03	16.70	23:40	23.71	120.214	9-Sep	122.319	28-Oct	2.105	88.8
C1103533	10/09	16.70	23:40	23.71	121.032	2-Oct	122.795	18-Nov	1.763	74.4
C1103535	10/15	16.70	23:40	23.71	123.539	2-Oct	124.836	18-Nov	1.297	54.7
C1103537	10/21	16.70	23:40	23.71	121.819	2-Oct	122.355	18-Nov	0.536	22.6
C1103539	10/26	16.70	23:40	23.71	121.563	2-Oct	122.031	18-Nov	0.468	19.7
C1853158	11/01	16.70	23:40	23.71	114.964	23-Oct	115.398	3-Jan	0.434	18.3
C1853160	11/08	16.70	23:40	23.71	116.186	23-Oct	116.889	3-Jan	0.703	29.6
C1853163	11/14	16.70	23:40	23.71	114.892	23-Oct	115.393	3-Jan	0.501	21.1
C1853164	11/20	16.70	23:40	23.71	117.175	23-Oct	118.028	3-Jan	0.853	36.0
C1853153	11/26	16.70	23:40	23.71	115.179	11-Nov	115.765	6-Jan	0.586	24.7
C1853196	12/02	16.70	23:40	23.71	118.648	11-Nov	120.589	6-Jan	1.941	81.9
C1853198	12/09	16.70	23:40	23.71	117.289	11-Nov	117.887	6-Jan	0.598	25.2
C1853200	12/14	16.70	23:40	23.71	116.943	11-Nov	117.346	6-Jan	0.403	17.0
C1853188	12/20	16.70	23:40	23.71	117.711	10-Dec	119.633	11-Feb	1.922	81.1
C1853191	12/27	16.70	23:40	23.71	117.428	10-Dec	118.532	11-Feb	1.104	46.6

Quarter 4, 2024 Filter Analysis Results - Pine & Walnut - Blanks

FILTER	TYPE	DATE*	PRE WEIGHT (MG)	PRE-WEIGHT DATE	POST WEIGHT (MG)	POST-WEIGHT DATE	PART MASS (MG)
C1103510	Field	25-Sep	121.408	9-Sep	121.533	28-Oct	0.125
C1103512	Lab	11-Nov	121.172	9-Sep	121.172	28-Oct	0.000
C1103532	Lab	23-Nov	121.622	2-Oct	121.625	18-Nov	0.003
C1103540	Field	27-Oct	122.781	2-Oct	122.825	18-Nov	0.044
C1183156	Lab	9-Jan	115.476	23-Oct	115.478	3-Jan	0.002
C1853162	Field	13-Nov	116.993	23-Oct	117.145	3-Jan	0.152
C1853151	Lab	9-Jan	115.080	11-Nov	115.082	6-Jan	0.002
C1853154	Field	27-Nov	116.105	11-Nov	116.163	6-Jan	0.058
C1853186	Lab	20-Feb	117.272	10-Dec	117.274	11-Feb	0.002
C1853187	Field	15-Dec	116.067	10-Dec	116.089	11-Feb	0.022

*Denotes collection date for Field Blank, analysis date for Laboratory Blanks

APPENDIX B: LABORATORY ANALYSIS REPORTS - TSP

ANALYTICAL SUMMARY REPORT

November 12, 2024

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: B24102437 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 10/29/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24102437-001	Particulate filter C1103506 TSP Pine St	09/21/24 00:00	10/29/24	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B24102437-002	Particulate filter C1103507 TSP Pine St	09/15/24 00:00	10/29/24	Air	Same As Above
B24102437-003	Particulate filter C1103508 TSP Walnut St	09/15/24 00:00	10/29/24	Air	Same As Above
B24102437-004	Particulate filter C1103509 TSP Walnut St	09/21/24 00:00	10/29/24	Air	Same As Above
B24102437-005	Particulate filter C1103510 Field Blank	09/25/24 10:46	10/29/24	Air	Same As Above
B24102437-006	Particulate filter C1103511 TSP Pine St	09/27/24 00:00	10/29/24	Air	Same As Above
B24102437-007	Particulate filter C1103512 Lab Blank	09/09/24 17:00	10/29/24	Air	Same As Above
B24102437-008	Particulate filter C1103513 TSP Walnut St	09/27/24 00:00	10/29/24	Air	Same As Above
B24102437-009	Particulate filter C1103514 TSP Walnut St	10/03/24 00:00	10/29/24	Air	Same As Above
B24102437-010	Particulate filter C1103515 TSP Pine St	10/03/24 00:00	10/29/24	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

CLIENT: Bison Engineering
Project: Montana Resources/Greely School PW
Work Order: B24102437

Report Date: 11/12/24

CASE NARRATIVE

Per client request, results are based on the final concentration using 25 mL of extraction solution per filter.

All "J" qualified analyte concentrations are below the laboratory minimum recommended Reporting Limit (RL) and above the lowest method detection limit (MDL)/Limit of Detection (LOD). Inorganic analytes reported with "J" qualifiers should be verified against the corresponding method blank and continuing calibration blanks. Inorganic "J" quantitations near the MDL/LOD may be suspect due to possible method background levels, sample matrix effects, and/or daily variability in instrument signal-to-noise levels.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103506 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-001
Collection Date: 09/21/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:16 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 70		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:16 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 70		194924
Copper	0.80	ug/filter	J	1.0	0.16	E200.8	11/12/24 11:49 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 271		194924
Lead	0.046	ug/filter	J	1.0	0.042	E200.8	11/12/24 11:49 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 271		194924
Manganese	0.26	ug/filter	J	1.0	0.18	E200.8	11/12/24 11:49 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 271		194924
Molybdenum	0.13	ug/filter	J	1.0	0.0050	E200.8	11/12/24 11:49 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 271		194924
Zinc	0.46	ug/filter	J	1.0	0.30	E200.8	11/12/24 11:49 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 271		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103507 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-002
Collection Date: 09/15/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:22 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 71		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:22 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 71		194924
Copper	1.4	ug/filter		1.0	0.16	E200.8	11/11/24 17:22 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 71		194924
Lead	0.062	ug/filter	J	1.0	0.042	E200.8	11/12/24 11:55 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 272		194924
Manganese	0.36	ug/filter	J	1.0	0.18	E200.8	11/12/24 11:55 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 272		194924
Molybdenum	0.15	ug/filter	J	1.0	0.0050	E200.8	11/12/24 11:55 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 272		194924
Zinc	0.69	ug/filter	J	1.0	0.30	E200.8	11/12/24 11:55 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 272		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103508 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-003
Collection Date: 09/15/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:28 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 72		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:28 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 72		194924
Copper	0.93	ug/filter	J	1.0	0.16	E200.8	11/12/24 12:01 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 273		194924
Lead	0.061	ug/filter	J	1.0	0.042	E200.8	11/12/24 12:01 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 273		194924
Manganese	0.34	ug/filter	J	1.0	0.18	E200.8	11/12/24 12:01 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 273		194924
Molybdenum	0.054	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:01 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 273		194924
Zinc	0.49	ug/filter	J	1.0	0.30	E200.8	11/12/24 12:01 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 273		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103509 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-004
Collection Date: 09/21/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:34 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 73		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:34 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 73		194924
Copper	0.30	ug/filter	J	1.0	0.16	E200.8	11/12/24 12:06 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 274		194924
Lead	ND	ug/filter		1.0	0.042	E200.8	11/11/24 17:34 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 73		194924
Manganese	0.26	ug/filter	J	1.0	0.18	E200.8	11/12/24 12:06 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 274		194924
Molybdenum	0.020	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:06 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 274		194924
Zinc	0.35	ug/filter	J	1.0	0.30	E200.8	11/12/24 12:06 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 274		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103510 Field Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-005
Collection Date: 09/25/24 10:46
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:40 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 74		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:40 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 74		194924
Copper	0.21	ug/filter	J	1.0	0.16	E200.8	11/12/24 12:12 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 275		194924
Lead	ND	ug/filter		1.0	0.042	E200.8	11/11/24 17:40 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 74		194924
Manganese	ND	ug/filter		1.0	0.18	E200.8	11/11/24 17:40 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 74		194924
Molybdenum	0.0078	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:12 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 275		194924
Zinc	ND	ug/filter		1.0	0.30	E200.8	11/11/24 17:40 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 74		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103511 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-006
Collection Date: 09/27/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:46 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 75		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:46 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 75		194924
Copper	1.9	ug/filter		1.0	0.16	E200.8	11/11/24 17:46 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 75		194924
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	11/12/24 12:18 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 276		194924
Manganese	0.42	ug/filter	J	1.0	0.18	E200.8	11/12/24 12:18 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 276		194924
Molybdenum	0.39	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:18 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 276		194924
Zinc	0.74	ug/filter	J	1.0	0.30	E200.8	11/12/24 12:18 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 276		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103512 Lab Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-007
Collection Date: 09/09/24 17:00
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Copper	ND	ug/filter		1.0	0.16	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Lead	ND	ug/filter		1.0	0.042	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Manganese	ND	ug/filter		1.0	0.18	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Molybdenum	ND	ug/filter		1.0	0.0050	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924
Zinc	ND	ug/filter		1.0	0.30	E200.8	11/11/24 17:51 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 76		194924

Report Definitions: RL - Analyte Reporting Limit MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103513 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-008
Collection Date: 09/27/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 18:09 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 79		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 18:09 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 79		194924
Copper	0.80	ug/filter	J	1.0	0.16	E200.8	11/12/24 12:36 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 279		194924
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	11/12/24 12:36 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 279		194924
Manganese	0.41	ug/filter	J	1.0	0.18	E200.8	11/12/24 12:36 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 279		194924
Molybdenum	0.40	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:36 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 279		194924
Zinc	0.75	ug/filter	J	1.0	0.30	E200.8	11/12/24 12:36 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 279		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103514 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-009
Collection Date: 10/03/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/12/24 16:09 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 315		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/12/24 16:09 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 315		194924
Copper	1.5	ug/filter		1.0	0.16	E200.8	11/11/24 18:15 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 80		194924
Lead	0.11	ug/filter	J	1.0	0.042	E200.8	11/12/24 12:42 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 280		194924
Manganese	4.1	ug/filter		1.0	0.18	E200.8	11/11/24 18:15 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 80		194924
Molybdenum	0.034	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:42 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 280		194924
Zinc	1.3	ug/filter		1.0	0.30	E200.8	11/11/24 18:15 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 80		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103515 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24102437-010
Collection Date: 10/03/24
DateReceived: 10/29/24
Report Date: 11/12/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/11/24 18:21 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 81		194924
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/11/24 18:21 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 81		194924
Copper	1.7	ug/filter		1.0	0.16	E200.8	11/11/24 18:21 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 81		194924
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	11/12/24 12:47 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 281		194924
Manganese	0.65	ug/filter	J	1.0	0.18	E200.8	11/12/24 12:47 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 281		194924
Molybdenum	0.078	ug/filter	J	1.0	0.0050	E200.8	11/12/24 12:47 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 281		194924
Zinc	1.0	ug/filter	J	1.0	0.30	E200.8	11/12/24 12:47 / jks	11/08/24 11:48	40CFR50	ICPMS207-B_241111A : 281		194924

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24102437 **Report Date:** 11/12/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS207-B_241111A	
Lab ID: QCS	7	Initial Calibration Verification Standard								11/11/24 12:46
Arsenic		0.0482	mg/L	0.0050	96	90	110			
Cadmium		0.0240	mg/L	0.0010	96	90	110			
Copper		0.0503	mg/L	0.010	101	90	110			
Lead		0.0521	mg/L	0.0010	104	90	110			
Manganese		0.243	mg/L	0.0050	97	90	110			
Molybdenum		0.0468	mg/L	0.0050	94	90	110			
Zinc		0.0498	mg/L	0.0050	100	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								11/11/24 16:35
Arsenic		0.0480	mg/L	0.0050	96	90	110			
Cadmium		0.0471	mg/L	0.0010	94	90	110			
Copper		0.0495	mg/L	0.010	99	90	110			
Lead		0.0486	mg/L	0.0010	97	90	110			
Manganese		0.0483	mg/L	0.0050	97	90	110			
Molybdenum		0.0466	mg/L	0.0050	93	90	110			
Zinc		0.0495	mg/L	0.0050	99	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								11/11/24 17:57
Arsenic		0.0477	mg/L	0.0050	95	90	110			
Cadmium		0.0470	mg/L	0.0010	94	90	110			
Copper		0.0495	mg/L	0.010	99	90	110			
Lead		0.0487	mg/L	0.0010	97	90	110			
Manganese		0.0485	mg/L	0.0050	97	90	110			
Molybdenum		0.0464	mg/L	0.0050	93	90	110			
Zinc		0.0486	mg/L	0.0050	97	90	110			
Lab ID: QCS	7	Initial Calibration Verification Standard								11/12/24 04:52
Arsenic		0.0494	mg/L	0.0050	99	90	110			
Cadmium		0.0254	mg/L	0.0010	102	90	110			
Copper		0.0512	mg/L	0.010	102	90	110			
Lead		0.0490	mg/L	0.0010	98	90	110			
Manganese		0.248	mg/L	0.0050	99	90	110			
Molybdenum		0.0498	mg/L	0.0050	100	90	110			
Zinc		0.0510	mg/L	0.0050	102	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								11/12/24 11:08
Arsenic		0.0486	mg/L	0.0050	97	90	110			
Cadmium		0.0488	mg/L	0.0010	98	90	110			
Copper		0.0501	mg/L	0.010	100	90	110			
Lead		0.0483	mg/L	0.0010	97	90	110			
Manganese		0.0487	mg/L	0.0050	97	90	110			
Molybdenum		0.0489	mg/L	0.0050	98	90	110			
Zinc		0.0500	mg/L	0.0050	100	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								11/12/24 12:24
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Cadmium		0.0493	mg/L	0.0010	99	90	110			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24102437 **Report Date:** 11/12/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS207-B_241111A	
Lab ID: CCV	7	Continuing Calibration Verification Standard							11/12/24 12:24	
Copper		0.0511	mg/L	0.010	102	90	110			
Lead		0.0487	mg/L	0.0010	97	90	110			
Manganese		0.0492	mg/L	0.0050	98	90	110			
Molybdenum		0.0488	mg/L	0.0050	98	90	110			
Zinc		0.0509	mg/L	0.0050	102	90	110			
Lab ID: QCS	7	Initial Calibration Verification Standard							11/12/24 15:28	
Arsenic		0.0513	mg/L	0.0050	103	90	110			
Cadmium		0.0262	mg/L	0.0010	105	90	110			
Copper		0.0537	mg/L	0.010	107	90	110			
Lead		0.0488	mg/L	0.0010	98	90	110			
Manganese		0.264	mg/L	0.0050	106	90	110			
Molybdenum		0.0503	mg/L	0.0050	101	90	110			
Zinc		0.0530	mg/L	0.0050	106	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard							11/12/24 15:39	
Arsenic		0.0510	mg/L	0.0050	102	90	110			
Cadmium		0.0507	mg/L	0.0010	101	90	110			
Copper		0.0518	mg/L	0.010	104	90	110			
Lead		0.0478	mg/L	0.0010	96	90	110			
Manganese		0.0513	mg/L	0.0050	103	90	110			
Molybdenum		0.0507	mg/L	0.0050	101	90	110			
Zinc		0.0510	mg/L	0.0050	102	90	110			
Method: E200.8									Batch: 194924	
Lab ID: MB-194924	7	Method Blank				Run: ICPMS207-B_241111A			11/11/24 16:53	
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.006						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		0.007	ug/filter	0.005						
Zinc		ND	ug/filter	0.3						
Lab ID: LCS-194924	7	Laboratory Control Sample				Run: ICPMS207-B_241111A			11/11/24 16:59	
Arsenic		99.1	ug/filter	1.0	99	85	115			
Cadmium		48.9	ug/filter	1.0	98	85	115			
Copper		104	ug/filter	5.0	104	85	115			
Lead		101	ug/filter	1.0	101	85	115			
Manganese		520	ug/filter	5.0	104	85	115			
Molybdenum		96.8	ug/filter	1.0	97	85	115			
Zinc		103	ug/filter	5.0	103	85	115			
Lab ID: LCSD-194924	7	Laboratory Control Sample Duplicate				Run: ICPMS207-B_241111A			11/11/24 17:05	
Arsenic		102	ug/filter	1.0	102	85	115			
Cadmium		50.2	ug/filter	1.0	100	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24102437 **Report Date:** 11/12/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 194924
Lab ID: LCSD-194924	7	Laboratory Control Sample Duplicate				Run: ICPMS207-B_241111A				11/11/24 17:05
Copper		106	ug/filter	5.0	106	85	115			
Lead		100	ug/filter	1.0	100	85	115			
Manganese		537	ug/filter	5.0	107	85	115			
Molybdenum		97.3	ug/filter	1.0	97	85	115			
Zinc		107	ug/filter	5.0	107	85	115			
Lab ID: MB-194924	7	Method Blank				Run: ICPMS207-B_241111A				11/12/24 11:43
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.006						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.005						
Zinc		ND	ug/filter	0.3						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Bison Engineering

B24102437

Login completed by: Danielle N. Harris
Date Received: 10/29/2024

Reviewed by: tjones
Received by: CMJ

Reviewed Date: 10/30/2024
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.1°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ■Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ■Email
Special Report/Formats:	☐ LEVEL IV ☐ NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School PW
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance	■ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	Particulate filter C1103506 TSP Pine St	9/21/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					B24102437
2	Particulate filter C1103507 TSP Pine St	9/15/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
3	Particulate filter C1103508 TSP Walnut St	9/15/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
4	Particulate filter C1103509 TSP Walnut St	9/21/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
5	Particulate filter C1103510 Field Blank	9/25/24	1046	1	on Teflon filter	x	x	x	x	x	x	x					
6	Particulate filter C1103511 TSP Pine St	9/27/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
7	Particulate filter C1103512 Lab Blank	9/9/24	1700	1	on Teflon filter	x	x	x	x	x	x	x					
8	Particulate filter C1103513 TSP Walnut St	9/27/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
9	Particulate filter C1103514 TSP Walnut ST	10/3/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					
10	Particulate filter C1103515 TSP Pine ST	10/3/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Don Milmine	10/29/24 1054	Don V. Milmine			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Crystal Jones	10/29/24 1054	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-10/18 v.3

ANALYTICAL SUMMARY REPORT

December 03, 2024

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: B24111557 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 11/20/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B24111557-001	Particulate filter C1103531 TSP Pine St	10/09/24 00:00	11/20/24	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B24111557-002	Particulate filter C1103532 Lab Blank	10/02/24 17:25	11/20/24	Air	Same As Above
B24111557-003	Particulate filter C1103533 TSP Walnut St	10/09/24 00:00	11/20/24	Air	Same As Above
B24111557-004	Particulate filter C1103534 TSP Pine St	10/15/24 00:00	11/20/24	Air	Same As Above
B24111557-005	Particulate filter C1103535 TSP Walnut St	10/15/24 00:00	11/20/24	Air	Same As Above
B24111557-006	Particulate filter C1103536 TSP Pine St	10/21/24 00:00	11/20/24	Air	Same As Above
B24111557-007	Particulate filter C1103537 TSP Walnut St	10/21/24 00:00	11/20/24	Air	Same As Above
B24111557-008	Particulate filter C1103538 TSP Pine St	10/26/24 00:00	11/20/24	Air	Same As Above
B24111557-009	Particulate filter C1103539 TSP Walnut St	10/26/24 00:00	11/20/24	Air	Same As Above
B24111557-010	Particulate filter C1103540 TSP Field Blank	10/27/24 15:03	11/20/24	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

CLIENT: Bison Engineering
Project: Montana Resources/Greely School PW
Work Order: B24111557

Report Date: 12/03/24

CASE NARRATIVE

Per client request, results are based on the final concentration using 25 mL of extraction solution per filter.

All "J" qualified analyte concentrations are below the laboratory minimum recommended Reporting Limit (RL) and above the lowest method detection limit (MDL)/Limit of Detection (LOD). Inorganic analytes reported with "J" qualifiers should be verified against the corresponding method blank and continuing calibration blanks. Inorganic "J" quantitations near the MDL/LOD may be suspect due to possible method background levels, sample matrix effects, and/or daily variability in instrument signal-to-noise levels.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103531 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-001
Collection Date: 10/09/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.067	ug/filter	J	1.0	0.058	E200.8	12/02/24 15:47 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 48		195329
Cadmium	0.0087	ug/filter	J	1.0	0.0063	E200.8	12/02/24 15:47 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 48		195329
Copper	3.6	ug/filter		1.0	0.16	E200.8	11/23/24 06:02 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 186		195329
Lead	0.26	ug/filter	J	1.0	0.042	E200.8	12/02/24 15:47 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 48		195329
Manganese	1.5	ug/filter		1.0	0.18	E200.8	11/23/24 06:02 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 186		195329
Molybdenum	0.053	ug/filter	J	1.0	0.0059	E200.8	12/02/24 15:47 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 48		195329
Zinc	1.4	ug/filter		1.0	0.30	E200.8	11/23/24 06:02 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 186		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103532 Lab Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-002
Collection Date: 10/02/24 17:25
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329
Copper	ND	ug/filter		1.0	0.16	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329
Lead	ND	ug/filter		1.0	0.042	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329
Manganese	ND	ug/filter		1.0	0.18	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329
Molybdenum	ND	ug/filter		1.0	0.0059	E200.8	12/02/24 20:15 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A	91	195329
Zinc	ND	ug/filter		1.0	0.30	E200.8	11/23/24 06:08 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	187	195329

Report Definitions: RL - Analyte Reporting Limit MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103533 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-003
Collection Date: 10/09/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.077	ug/filter	J	1.0	0.058	E200.8	12/02/24 15:59 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 50		195329
Cadmium	0.013	ug/filter	J	1.0	0.0063	E200.8	12/02/24 15:59 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 50		195329
Copper	8.4	ug/filter		1.0	0.16	E200.8	11/23/24 06:14 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 188		195329
Lead	0.41	ug/filter	J	1.0	0.042	E200.8	12/02/24 15:59 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 50		195329
Manganese	1.9	ug/filter		1.0	0.18	E200.8	11/23/24 06:14 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 188		195329
Molybdenum	0.098	ug/filter	J	1.0	0.0059	E200.8	12/02/24 15:59 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 50		195329
Zinc	2.6	ug/filter		1.0	0.30	E200.8	11/23/24 06:14 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 188		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103534 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-004
Collection Date: 10/15/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:20 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 189		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	12/02/24 20:22 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 92		195329
Copper	2.4	ug/filter		1.0	0.16	E200.8	11/23/24 06:20 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 189		195329
Lead	0.20	ug/filter	J	1.0	0.042	E200.8	12/02/24 16:06 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 51		195329
Manganese	0.91	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:06 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 51		195329
Molybdenum	0.084	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:06 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 51		195329
Zinc	1.5	ug/filter		1.0	0.30	E200.8	11/23/24 06:20 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 189		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103535 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-005
Collection Date: 10/15/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:26 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 190		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 06:26 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 190		195329
Copper	1.4	ug/filter		1.0	0.16	E200.8	11/23/24 06:26 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 190		195329
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	12/02/24 16:12 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 52		195329
Manganese	0.54	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:12 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 52		195329
Molybdenum	0.032	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:12 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 52		195329
Zinc	1.1	ug/filter		1.0	0.30	E200.8	11/23/24 06:26 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 190		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103536 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-006
Collection Date: 10/21/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:43 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 193		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 06:43 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 193		195329
Copper	0.92	ug/filter	J	1.0	0.16	E200.8	12/02/24 16:18 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 53		195329
Lead	0.051	ug/filter	J	1.0	0.042	E200.8	12/02/24 16:18 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 53		195329
Manganese	0.36	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:18 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 53		195329
Molybdenum	0.098	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:18 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 53		195329
Zinc	0.59	ug/filter	J	1.0	0.30	E200.8	12/02/24 16:18 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 53		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103537 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-007
Collection Date: 10/21/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:49 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 194		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 06:49 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 194		195329
Copper	0.73	ug/filter	J	1.0	0.16	E200.8	12/02/24 16:24 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 54		195329
Lead	0.080	ug/filter	J	1.0	0.042	E200.8	12/02/24 16:24 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 54		195329
Manganese	0.34	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:24 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 54		195329
Molybdenum	0.072	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:24 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 54		195329
Zinc	0.80	ug/filter	J	1.0	0.30	E200.8	12/02/24 16:24 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 54		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103538 TSP Pine St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-008
Collection Date: 10/26/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 06:55 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 195		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 06:55 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 195		195329
Copper	0.67	ug/filter	J	1.0	0.16	E200.8	12/02/24 16:30 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 55		195329
Lead	0.050	ug/filter	J	1.0	0.042	E200.8	12/02/24 20:28 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 93		195329
Manganese	0.24	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:30 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 55		195329
Molybdenum	0.13	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:30 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 55		195329
Zinc	0.41	ug/filter	J	1.0	0.30	E200.8	12/02/24 16:30 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 55		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103539 TSP Walnut St
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-009
Collection Date: 10/26/24
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 07:01 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 196		195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 07:01 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A : 196		195329
Copper	0.74	ug/filter	J	1.0	0.16	E200.8	12/02/24 16:36 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 56		195329
Lead	0.071	ug/filter	J	1.0	0.042	E200.8	12/02/24 16:36 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 56		195329
Manganese	0.67	ug/filter	J	1.0	0.18	E200.8	12/02/24 16:36 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 56		195329
Molybdenum	0.066	ug/filter	J	1.0	0.0059	E200.8	12/02/24 16:36 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 56		195329
Zinc	0.75	ug/filter	J	1.0	0.30	E200.8	12/02/24 16:36 / ae	11/21/24 15:06	40CFR50	ICPMS207-B_241202A : 56		195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1103540 TSP Field Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B24111557-010
Collection Date: 10/27/24 15:03
DateReceived: 11/20/24
Report Date: 12/03/24

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Copper	ND	ug/filter		1.0	0.16	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Lead	ND	ug/filter		1.0	0.042	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Manganese	ND	ug/filter		1.0	0.18	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Molybdenum	0.0071	ug/filter	J	1.0	0.0050	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329
Zinc	ND	ug/filter		1.0	0.30	E200.8	11/23/24 07:07 / jks	11/21/24 15:06	40CFR50	ICPMS207-B_241122A	197	195329

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24111557 **Report Date:** 12/03/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**									Analytical Run: ICPMS207-B_241122A	
Lab ID: **QCS**	7	Initial Calibration Verification Standard								11/23/24 04:40
Arsenic		0.0511	mg/L	0.0050	102	90	110			
Cadmium		0.0255	mg/L	0.0010	102	90	110			
Copper		0.0522	mg/L	0.010	104	90	110			
Lead		0.0507	mg/L	0.0010	101	90	110			
Manganese		0.261	mg/L	0.0050	104	90	110			
Molybdenum		0.0497	mg/L	0.0050	99	90	110			
Zinc		0.0517	mg/L	0.0050	103	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard								11/23/24 05:10
Arsenic		0.0500	mg/L	0.0050	100	90	110			
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Copper		0.0511	mg/L	0.010	102	90	110			
Lead		0.0487	mg/L	0.0010	97	90	110			
Manganese		0.0494	mg/L	0.0050	99	90	110			
Molybdenum		0.0493	mg/L	0.0050	99	90	110			
Zinc		0.0504	mg/L	0.0050	101	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard								11/23/24 06:32
Arsenic		0.0496	mg/L	0.0050	99	90	110			
Cadmium		0.0500	mg/L	0.0010	100	90	110			
Copper		0.0507	mg/L	0.010	101	90	110			
Lead		0.0491	mg/L	0.0010	98	90	110			
Manganese		0.0484	mg/L	0.0050	97	90	110			
Molybdenum		0.0493	mg/L	0.0050	99	90	110			
Zinc		0.0506	mg/L	0.0050	101	90	110			
Method: **E200.8**									Batch: 195329	
Lab ID: **MB-195329**	7	Method Blank				Run: ICPMS207-B_241122A				11/23/24 05:39
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.006						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.005						
Zinc		ND	ug/filter	0.3						
Lab ID: **LCS-195329**	7	Laboratory Control Sample				Run: ICPMS207-B_241122A				11/23/24 05:45
Arsenic		110	ug/filter	1.0	109	85	115			
Cadmium		56.3	ug/filter	1.0	113	85	115			
Copper		114	ug/filter	5.0	114	85	115			
Lead		107	ug/filter	1.0	107	85	115			
Manganese		541	ug/filter	5.0	108	85	115			
Molybdenum		110	ug/filter	1.0	110	85	115			
Zinc		113	ug/filter	5.0	113	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24111557 **Report Date:** 12/03/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**										Batch: 195329
Lab ID: **LCSD-195329**	7	Laboratory Control Sample Duplicate				Run: ICPMS207-B_241122A				11/23/24 05:51
Arsenic		109	ug/filter	1.0	109	85	115			
Cadmium		56.1	ug/filter	1.0	112	85	115			
Copper		114	ug/filter	5.0	114	85	115			
Lead		109	ug/filter	1.0	109	85	115			
Manganese		535	ug/filter	5.0	107	85	115			
Molybdenum		110	ug/filter	1.0	110	85	115			
Zinc		113	ug/filter	5.0	113	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24111557 **Report Date:** 12/03/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**									Analytical Run: ICPMS207-B_241202A	
Lab ID: **QCS**	7	Initial Calibration Verification Standard							12/02/24 12:17	
Arsenic		0.0497	mg/L	0.0050	99	90	110			
Cadmium		0.0251	mg/L	0.0010	100	90	110			
Copper		0.0516	mg/L	0.010	103	90	110			
Lead		0.0494	mg/L	0.0010	99	90	110			
Manganese		0.252	mg/L	0.0050	101	90	110			
Molybdenum		0.0483	mg/L	0.0050	97	90	110			
Zinc		0.0510	mg/L	0.0050	102	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard							12/02/24 15:22	
Arsenic		0.0492	mg/L	0.0050	98	90	110			
Cadmium		0.0510	mg/L	0.0010	102	90	110			
Copper		0.0515	mg/L	0.010	103	90	110			
Lead		0.0486	mg/L	0.0010	97	90	110			
Manganese		0.0486	mg/L	0.0050	97	90	110			
Molybdenum		0.0502	mg/L	0.0050	100	90	110			
Zinc		0.0507	mg/L	0.0050	101	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard							12/02/24 16:43	
Arsenic		0.0495	mg/L	0.0050	99	90	110			
Cadmium		0.0509	mg/L	0.0010	102	90	110			
Copper		0.0512	mg/L	0.010	102	90	110			
Lead		0.0480	mg/L	0.0010	96	90	110			
Manganese		0.0486	mg/L	0.0050	97	90	110			
Molybdenum		0.0507	mg/L	0.0050	101	90	110			
Zinc		0.0511	mg/L	0.0050	102	90	110			
Lab ID: **QCS**	7	Initial Calibration Verification Standard							12/02/24 19:07	
Arsenic		0.0501	mg/L	0.0050	100	90	110			
Cadmium		0.0249	mg/L	0.0010	100	90	110			
Copper		0.0518	mg/L	0.010	104	90	110			
Lead		0.0497	mg/L	0.0010	99	90	110			
Manganese		0.255	mg/L	0.0050	102	90	110			
Molybdenum		0.0492	mg/L	0.0050	98	90	110			
Zinc		0.0514	mg/L	0.0050	103	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard							12/02/24 19:38	
Arsenic		0.0501	mg/L	0.0050	100	90	110			
Cadmium		0.0507	mg/L	0.0010	101	90	110			
Copper		0.0512	mg/L	0.010	102	90	110			
Lead		0.0496	mg/L	0.0010	99	90	110			
Manganese		0.0491	mg/L	0.0050	98	90	110			
Molybdenum		0.0504	mg/L	0.0050	101	90	110			
Zinc		0.0506	mg/L	0.0050	101	90	110			
Method: **E200.8**									Batch: 195329	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B24111557 **Report Date:** 12/03/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**										Batch: 195329
Lab ID: **MB-195329**	7	Method Blank				Run: ICPMS207-B_241202A				12/02/24 15:41
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.006						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.005						
Zinc		ND	ug/filter	0.3						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Bison Engineering

B24111557

Login completed by: Danielle N. Harris
Date Received: 11/20/2024

Reviewed by: cjohnson
Received by: KLP

Reviewed Date: 11/25/2024
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	4.7°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email

Special Report/Formats: ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School PW
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance	☒ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	Particulate filter C1103531 TSP Pine St	10/9/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					B24111557
2	Particulate filter C1103532 Lab Blank	10/2/24	1725	1	on Teflon filter	X	X	X	X	X	X	X					
3	Particulate filter C1103533 TSP Walnut St	10/9/24	24 hr Composite	1	on Teflon filter	X	X	X	X	X	X	X					
4	Particulate filter C1103534 TSP PineSt	10/15/24	24 hr Composite	1	on Teflon filter	X	X	X	X	X	X	X					
5	Particulate filter C1103535 TSP Walnut ST	10/15/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					
6	Particulate filter C1103536 TSP Pine St	10/21/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					
7	Particulate filter C1103537 TSP Walnut ST	10/21/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					
8	Particulate filter C1103538 TSP Pine St	10/26/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					
9	Particulate filter C1103539 TSP Walnut ST	10/26/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					
10	Particulate filter C1103540TSP Field Blank	10/27/24	1503	1	on Teflon filter	X	X	X	X	X	X	X					

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Don Milmine	11/20/24 1553	Don V. Milmine			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
					11-20-24 1553	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-10/18 v.3

ANALYTICAL SUMMARY REPORT

January 21, 2025

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: B25010271 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 40 samples for Bison Engineering on 1/7/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25010271-001	Particulate filter C1183156 Lab Blank	10/23/24 11:20	01/07/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25010271-002	Particulate filter C1853157 TSP Pine ST	11/01/24 0:00	01/07/25	Air	Same As Above
B25010271-003	Particulate filter C1853158 TSP Walnut ST	11/01/24 0:00	01/07/25	Air	Same As Above
B25010271-004	Particulate filter C1853159 TSP Pine ST	11/08/24 0:00	01/07/25	Air	Same As Above
B25010271-005	Particulate filter C1853160 TSP Walnut ST	11/08/24 0:00	01/07/25	Air	Same As Above
B25010271-006	Particulate filter C1853161 TSP Pine ST	11/14/24 0:00	01/07/25	Air	Same As Above
B25010271-007	Particulate filter C1853162 TSP Field Blank	11/13/24 15:01	01/07/25	Air	Same As Above
B25010271-008	Particulate filter C1853163 TSP Walnut ST	11/14/24 0:00	01/07/25	Air	Same As Above
B25010271-009	Particulate filter C1853164 TSP Walnut ST	11/20/24 0:00	01/07/25	Air	Same As Above
B25010271-010	Particulate filter C1853165 TSP Pine ST	11/20/24 0:00	01/07/25	Air	Same As Above
B25010271-011	Particulate filter C1853151 Lab Blank	11/13/24 10:10	01/07/25	Air	Same As Above
B25010271-012	Particulate filter C1853152 TSP Pine ST	11/26/24 0:00	01/07/25	Air	Same As Above
B25010271-013	Particulate filter C1853153 TSP Walnut ST	11/26/24 0:00	01/07/25	Air	Same As Above
B25010271-014	Particulate filter C1853154 TSP Field Blank	11/27/24 9:56	01/07/25	Air	Same As Above
B25010271-015	Particulate filter C1853155 TSP Pine ST	12/02/24 0:00	01/07/25	Air	Same As Above
B25010271-016	Particulate filter C1853196 TSP Walnut ST	12/02/24 0:00	01/07/25	Air	Same As Above

ANALYTICAL SUMMARY REPORT

B25010271-017	Particulate filter C1853197 TSP Pine ST	12/09/24 0:00	01/07/25	Air	Same As Above
B25010271-018	Particulate filter C1853198 TSP Walnut ST	12/09/24 0:00	01/07/25	Air	Same As Above
B25010271-019	Particulate filter C1853199 TSP Pine ST	12/14/24 0:00	01/07/25	Air	Same As Above
B25010271-020	Particulate filter C1853200 TSP Walnut ST	12/14/24 0:00	01/07/25	Air	Same As Above
B25010271-021	Particulate filter C1853166 Lab Blank	10/23/24 11:20	01/07/25	Air	Same As Above
B25010271-022	Particulate filter C1853167 TSP 10/24-10/28	10/28/24 0:00	01/07/25	Air	Same As Above
B25010271-023	Particulate filter C1853168 PM10	10/27/24 0:00	01/07/25	Air	Same As Above
B25010271-024	Particulate filter C1853169 TSP 10/28-11/06	11/16/24 0:00	01/07/25	Air	Same As Above
B25010271-025	Particulate filter C1853170 PM10	11/02/24 0:00	01/07/25	Air	Same As Above
B25010271-026	Particulate filter C1853171 TSP 11/06-11/12	11/12/24 0:00	01/07/25	Air	Same As Above
B25010271-027	Particulate filter C1853172 PM10	11/08/24 0:00	01/07/25	Air	Same As Above
B25010271-028	Particulate filter C1853173 TSP 11/12-11/18	11/18/24 0:00	01/07/25	Air	Same As Above
B25010271-029	Particulate filter C1853174 PM10	11/14/24 0:00	01/07/25	Air	Same As Above
B25010271-030	Particulate filter C1853175 Field Blank	11/18/24 14:20	01/07/25	Air	Same As Above
B25010271-031	Particulate filter C1103541 TSP 11/18-11/25	11/25/24 0:00	01/07/25	Air	Same As Above
B25010271-032	Particulate filter C1103542 PM10	11/20/24 0:00	01/07/25	Air	Same As Above
B25010271-033	Particulate filter C1103543 TSP 11/25-11/27	11/27/24 0:00	01/07/25	Air	Same As Above
B25010271-034	Particulate filter C1103544 PM10	11/26/24 0:00	01/07/25	Air	Same As Above
B25010271-035	Particulate filter C1103545 TSP 11/27-12/03	12/03/24 0:00	01/07/25	Air	Same As Above
B25010271-036	Particulate filter C1103546 PM10	12/02/24 0:00	01/07/25	Air	Same As Above
B25010271-037	Particulate filter C1103547 TSP 12/03-12/11	12/11/24 0:00	01/07/25	Air	Same As Above

ANALYTICAL SUMMARY REPORT

B25010271-038	Particulate filter C1103548 PM10	12/08/24 0:00	01/07/25	Air	Same As Above
B25010271-039	Particulate filter C1103549 Field Blank	12/11/24 10:30	01/07/25	Air	Same As Above
B25010271-040	Particulate filter C1103550 Lab Blank	11/13/24 11:00	01/07/25	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1183156 Lab Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-001
Collection Date: 10/23/24 11:20
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446
Copper	ND	ug/filter		1.0	0.16	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446
Lead	ND	ug/filter		1.0	0.042	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446
Manganese	ND	ug/filter		1.0	0.18	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446
Molybdenum	0.0067	ug/filter	J	1.0	0.0050	E200.8	01/09/25 11:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	280	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 05:25 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	202	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853157 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-002
Collection Date: 11/01/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 05:31 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	203	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 05:31 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	203	196446
Copper	0.53	ug/filter	J	1.0	0.16	E200.8	01/09/25 11:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	281	196446
Lead	0.078	ug/filter	J	1.0	0.042	E200.8	01/09/25 11:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	281	196446
Manganese	0.18	ug/filter	J	1.0	0.18	E200.8	01/09/25 11:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	281	196446
Molybdenum	0.061	ug/filter	J	1.0	0.0050	E200.8	01/09/25 11:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	281	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 05:31 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	203	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853158 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-003
Collection Date: 11/01/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 05:37 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	204	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 05:37 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	204	196446
Copper	0.52	ug/filter	J	1.0	0.16	E200.8	01/09/25 11:59 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	282	196446
Lead	0.049	ug/filter	J	1.0	0.042	E200.8	01/09/25 11:59 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	282	196446
Manganese	0.22	ug/filter	J	1.0	0.18	E200.8	01/09/25 11:59 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	282	196446
Molybdenum	0.087	ug/filter	J	1.0	0.0050	E200.8	01/09/25 11:59 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	282	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 05:37 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	204	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853159 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-004
Collection Date: 11/08/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 05:43 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 205		196446
Cadmium	0.011	ug/filter	J	1.0	0.0063	E200.8	01/09/25 12:05 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 283		196446
Copper	1.4	ug/filter		1.0	0.16	E200.8	01/09/25 05:43 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 205		196446
Lead	0.10	ug/filter	J	1.0	0.042	E200.8	01/09/25 12:05 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 283		196446
Manganese	0.41	ug/filter	J	1.0	0.18	E200.8	01/09/25 12:05 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 283		196446
Molybdenum	0.087	ug/filter	J	1.0	0.0050	E200.8	01/21/25 14:11 / jks	01/08/25 11:08	40CFR50	ICPMS208-B_250120A : 278		196446
Zinc	0.83	ug/filter	J	1.0	0.79	E200.8	01/09/25 12:05 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A : 283		196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853160 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-005
Collection Date: 11/08/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:00 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	208	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:00 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	208	196446
Copper	1.1	ug/filter		1.0	0.16	E200.8	01/09/25 06:00 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	208	196446
Lead	0.17	ug/filter	J	1.0	0.042	E200.8	01/09/25 12:11 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	284	196446
Manganese	0.31	ug/filter	J	1.0	0.18	E200.8	01/09/25 12:11 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	284	196446
Molybdenum	0.033	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:11 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	284	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:00 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	208	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853161 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-006
Collection Date: 11/14/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:06 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	209	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:06 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	209	196446
Copper	0.74	ug/filter	J	1.0	0.16	E200.8	01/09/25 12:17 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	285	196446
Lead	0.048	ug/filter	J	1.0	0.042	E200.8	01/09/25 12:17 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	285	196446
Manganese	0.21	ug/filter	J	1.0	0.18	E200.8	01/09/25 12:17 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	285	196446
Molybdenum	0.024	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:17 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	285	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:06 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	209	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853162 TSP Field Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-007
Collection Date: 11/13/24 15:01
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:12 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	210	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:12 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	210	196446
Copper	0.39	ug/filter	J	1.0	0.16	E200.8	01/09/25 12:23 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	286	196446
Lead	0.074	ug/filter	J	1.0	0.042	E200.8	01/09/25 12:23 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	286	196446
Manganese	ND	ug/filter		1.0	0.18	E200.8	01/09/25 06:12 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	210	196446
Molybdenum	0.050	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:23 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	286	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:12 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	210	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853163 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-008
Collection Date: 11/14/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:18 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	211	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:18 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	211	196446
Copper	0.38	ug/filter	J	1.0	0.16	E200.8	01/09/25 12:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	287	196446
Lead	0.057	ug/filter	J	1.0	0.042	E200.8	01/09/25 12:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	287	196446
Manganese	0.28	ug/filter	J	1.0	0.18	E200.8	01/09/25 12:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	287	196446
Molybdenum	0.013	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	287	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:18 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	211	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853164 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-009
Collection Date: 11/20/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446
Copper	1.1	ug/filter		1.0	0.16	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446
Lead	0.078	ug/filter	J	1.0	0.042	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446
Manganese	0.56	ug/filter	J	1.0	0.18	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446
Molybdenum	0.099	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	288	196446
Zinc	0.95	ug/filter	J	1.0	0.79	E200.8	01/09/25 06:24 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	212	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853165 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-010
Collection Date: 11/20/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446
Copper	1.7	ug/filter		1.0	0.16	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446
Lead	0.085	ug/filter	J	1.0	0.042	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446
Manganese	0.52	ug/filter	J	1.0	0.18	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446
Molybdenum	0.083	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:40 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	289	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:29 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	213	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853151 Lab Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-011
Collection Date: 11/13/24 10:10
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Copper	ND	ug/filter		1.0	0.16	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Lead	ND	ug/filter		1.0	0.042	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Manganese	ND	ug/filter		1.0	0.18	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Molybdenum	ND	ug/filter		1.0	0.0050	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:35 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	214	196446

Report Definitions: RL - Analyte Reporting Limit MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853152 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-012
Collection Date: 11/26/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446
Copper	1.3	ug/filter		1.0	0.16	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446
Lead	0.051	ug/filter	J	1.0	0.042	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446
Manganese	0.24	ug/filter	J	1.0	0.18	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446
Molybdenum	0.023	ug/filter	J	1.0	0.0050	E200.8	01/09/25 12:58 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	292	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:41 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	215	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853153 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-013
Collection Date: 11/26/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446
Copper	0.60	ug/filter	J	1.0	0.16	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446
Lead	0.049	ug/filter	J	1.0	0.042	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446
Manganese	0.30	ug/filter	J	1.0	0.18	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446
Molybdenum	0.035	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:04 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	293	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:47 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	216	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853154 TSP Field Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-014
Collection Date: 11/27/24 09:56
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446
Copper	ND	ug/filter		1.0	0.16	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446
Lead	ND	ug/filter		1.0	0.042	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446
Manganese	ND	ug/filter		1.0	0.18	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446
Molybdenum	0.012	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	294	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 06:53 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	217	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853155 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-015
Collection Date: 12/02/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Cadmium	0.011	ug/filter	J	1.0	0.0063	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Copper	4.0	ug/filter		1.0	0.16	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Lead	0.21	ug/filter	J	1.0	0.042	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Manganese	0.91	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Molybdenum	0.15	ug/filter	J	1.0	0.0050	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446
Zinc	1.6	ug/filter		1.0	0.79	E200.8	01/09/25 07:10 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	220	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853196 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-016
Collection Date: 12/02/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.51	ug/filter	J	1.0	0.058	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446
Cadmium	0.012	ug/filter	J	1.0	0.0063	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446
Copper	3.3	ug/filter		1.0	0.16	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446
Lead	0.23	ug/filter	J	1.0	0.042	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446
Manganese	0.95	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446
Molybdenum	0.10	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:21 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	296	196446
Zinc	2.2	ug/filter		1.0	0.79	E200.8	01/09/25 07:16 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	221	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853197 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-017
Collection Date: 12/09/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446
Cadmium	0.0093	ug/filter	J	1.0	0.0063	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446
Copper	0.76	ug/filter	J	1.0	0.16	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446
Lead	ND	ug/filter		1.0	0.042	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446
Manganese	0.20	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446
Molybdenum	0.048	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:27 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	297	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 07:22 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	222	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853198 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-018
Collection Date: 12/09/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446
Copper	0.71	ug/filter	J	1.0	0.16	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446
Lead	0.056	ug/filter	J	1.0	0.042	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446
Manganese	0.33	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446
Molybdenum	0.083	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:33 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	298	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 07:28 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	223	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853199 TSP Pine ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-019
Collection Date: 12/14/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446
Copper	1.1	ug/filter		1.0	0.16	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446
Lead	0.065	ug/filter	J	1.0	0.042	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446
Manganese	0.35	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446
Molybdenum	0.044	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	299	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 07:34 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	224	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate filter C1853200 TSP Walnut ST
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25010271-020
Collection Date: 12/14/24
DateReceived: 01/07/25
Report Date: 01/21/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446
Copper	0.41	ug/filter	J	1.0	0.16	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446
Lead	0.043	ug/filter	J	1.0	0.042	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446
Manganese	0.19	ug/filter	J	1.0	0.18	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446
Molybdenum	0.020	ug/filter	J	1.0	0.0050	E200.8	01/09/25 13:45 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	300	196446
Zinc	ND	ug/filter		1.0	0.79	E200.8	01/09/25 07:39 / jks	01/08/25 11:08	40CFR50	ICPMS207-B_250108A	225	196446

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

Note: Pages 24-43 of Lab Report B25010271 have been excluded from this Appendix.

They pertain to samples collected at the Greeley School site.

Those results are documented in a separate report for the Greeley School.

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25010271 **Report Date:** 01/21/25

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**								Analytical Run: ICPMS207-B_250108A	
Lab ID: **QCS**	Initial Calibration Verification Standard								01/08/25 23:58
Arsenic	0.0498	mg/L	0.0050	100	90	110			
Cadmium	0.0260	mg/L	0.0010	104	90	110			
Copper	0.0519	mg/L	0.010	104	90	110			
Lead	0.0495	mg/L	0.0010	99	90	110			
Manganese	0.257	mg/L	0.0050	103	90	110			
Molybdenum	0.0499	mg/L	0.0050	100	90	110			
Zinc	0.0511	mg/L	0.0050	102	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/09/25 04:27
Arsenic	0.0501	mg/L	0.0050	100	90	110			
Cadmium	0.0483	mg/L	0.0010	97	90	110			
Copper	0.0500	mg/L	0.010	100	90	110			
Lead	0.0489	mg/L	0.0010	98	90	110			
Manganese	0.0515	mg/L	0.0050	103	90	110			
Molybdenum	0.0471	mg/L	0.0050	94	90	110			
Zinc	0.0495	mg/L	0.0050	99	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/09/25 05:48
Arsenic	0.0497	mg/L	0.0050	99	90	110			
Cadmium	0.0497	mg/L	0.0010	99	90	110			
Copper	0.0496	mg/L	0.010	99	90	110			
Lead	0.0482	mg/L	0.0010	96	90	110			
Manganese	0.0496	mg/L	0.0050	99	90	110			
Molybdenum	0.0492	mg/L	0.0050	98	90	110			
Zinc	0.0502	mg/L	0.0050	100	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/09/25 06:59
Arsenic	0.0498	mg/L	0.0050	100	90	110			
Cadmium	0.0513	mg/L	0.0010	103	90	110			
Copper	0.0499	mg/L	0.010	100	90	110			
Lead	0.0481	mg/L	0.0010	96	90	110			
Manganese	0.0493	mg/L	0.0050	99	90	110			
Molybdenum	0.0500	mg/L	0.0050	100	90	110			
Zinc	0.0508	mg/L	0.0050	102	90	110			
Lab ID: **QCS**	Initial Calibration Verification Standard								01/09/25 09:03
Arsenic	0.0518	mg/L	0.0050	104	90	110			
Cadmium	0.0256	mg/L	0.0010	102	90	110			
Copper	0.0532	mg/L	0.010	106	90	110			
Lead	0.0495	mg/L	0.0010	99	90	110			
Manganese	0.263	mg/L	0.0050	105	90	110			
Molybdenum	0.0496	mg/L	0.0050	99	90	110			
Zinc	0.0524	mg/L	0.0050	105	90	110			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25010271 **Report Date:** 01/21/25

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**								Analytical Run: ICPMS207-B_250108A	
Lab ID: **CCV**	Continuing Calibration Verification Standard							01/09/25 11:00	
Arsenic	0.0502	mg/L	0.0050	100	90	110			
Cadmium	0.0483	mg/L	0.0010	97	90	110			
Copper	0.0514	mg/L	0.010	103	90	110			
Lead	0.0486	mg/L	0.0010	97	90	110			
Manganese	0.0498	mg/L	0.0050	100	90	110			
Molybdenum	0.0485	mg/L	0.0050	97	90	110			
Zinc	0.0506	mg/L	0.0050	101	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard							01/09/25 12:46	
Arsenic	0.0493	mg/L	0.0050	99	90	110			
Cadmium	0.0487	mg/L	0.0010	97	90	110			
Copper	0.0504	mg/L	0.010	101	90	110			
Lead	0.0494	mg/L	0.0010	99	90	110			
Manganese	0.0489	mg/L	0.0050	98	90	110			
Molybdenum	0.0487	mg/L	0.0050	97	90	110			
Zinc	0.0498	mg/L	0.0050	100	90	110			
Method: **E200.8**								Batch: 196446	
Lab ID: **MB-196446**	Method Blank				Run: ICPMS207-B_250108A			01/09/25 04:56	
Arsenic	ND	ug/filter	0.06						
Cadmium	ND	ug/filter	0.006						
Copper	ND	ug/filter	0.2						
Lead	ND	ug/filter	0.04						
Manganese	ND	ug/filter	0.2						
Molybdenum	ND	ug/filter	0.005						
Zinc	ND	ug/filter	0.3						
Lab ID: **LCS-196446**	Laboratory Control Sample				Run: ICPMS207-B_250108A			01/09/25 05:02	
Arsenic	95.7	ug/filter	1.0	96	85	115			
Cadmium	49.0	ug/filter	1.0	98	85	115			
Copper	95.7	ug/filter	1.0	96	85	115			
Lead	97.8	ug/filter	1.0	98	85	115			
Manganese	479	ug/filter	1.0	96	85	115			
Molybdenum	101	ug/filter	1.0	101	85	115			
Zinc	92.8	ug/filter	1.0	93	85	115			
Lab ID: **LCSD-196446**	Laboratory Control Sample Duplicate				Run: ICPMS207-B_250108A			01/09/25 05:08	
Arsenic	97.8	ug/filter	1.0	98	85	115			
Cadmium	49.5	ug/filter	1.0	99	85	115			
Copper	97.1	ug/filter	1.0	97	85	115			
Lead	96.7	ug/filter	1.0	97	85	115			
Manganese	487	ug/filter	1.0	97	85	115			
Molybdenum	102	ug/filter	1.0	102	85	115			
Zinc	93.7	ug/filter	1.0	94	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25010271 **Report Date:** 01/21/25

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**								Analytical Run: ICPMS207-B_250117A	
Lab ID: **QCS**	Initial Calibration Verification Standard								01/18/25 02:13
Arsenic	0.0516	mg/L	0.0050	103	90	110			
Cadmium	0.0257	mg/L	0.0010	103	90	110			
Copper	0.0535	mg/L	0.010	107	90	110			
Lead	0.0506	mg/L	0.0010	101	90	110			
Manganese	0.260	mg/L	0.0050	104	90	110			
Molybdenum	0.0504	mg/L	0.0050	101	90	110			
Zinc	0.0532	mg/L	0.0050	106	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/18/25 06:31
Arsenic	0.0493	mg/L	0.0050	99	90	110			
Cadmium	0.0491	mg/L	0.0010	98	90	110			
Copper	0.0505	mg/L	0.010	101	90	110			
Lead	0.0490	mg/L	0.0010	98	90	110			
Manganese	0.0495	mg/L	0.0050	99	90	110			
Molybdenum	0.0500	mg/L	0.0050	100	90	110			
Zinc	0.0500	mg/L	0.0050	100	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/18/25 07:47
Arsenic	0.0499	mg/L	0.0050	100	90	110			
Cadmium	0.0498	mg/L	0.0010	100	90	110			
Copper	0.0514	mg/L	0.010	103	90	110			
Lead	0.0500	mg/L	0.0010	100	90	110			
Manganese	0.0496	mg/L	0.0050	99	90	110			
Molybdenum	0.0496	mg/L	0.0050	99	90	110			
Zinc	0.0502	mg/L	0.0050	100	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								01/18/25 08:57
Arsenic	0.0485	mg/L	0.0050	97	90	110			
Cadmium	0.0480	mg/L	0.0010	96	90	110			
Copper	0.0498	mg/L	0.010	100	90	110			
Lead	0.0499	mg/L	0.0010	100	90	110			
Manganese	0.0487	mg/L	0.0050	97	90	110			
Molybdenum	0.0481	mg/L	0.0050	96	90	110			
Zinc	0.0497	mg/L	0.0050	99	90	110			
Lab ID: **QCS**	Initial Calibration Verification Standard								01/18/25 10:27
Arsenic	0.0527	mg/L	0.0050	105	90	110			
Cadmium	0.0269	mg/L	0.0010	108	90	110			
Copper	0.0539	mg/L	0.010	108	90	110			
Lead	0.0478	mg/L	0.0010	96	90	110			
Manganese	0.266	mg/L	0.0050	106	90	110			
Molybdenum	0.0526	mg/L	0.0050	105	90	110			
Zinc	0.0529	mg/L	0.0050	106	90	110			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25010271 **Report Date:** 01/21/25

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**								Analytical Run: ICPMS207-B_250117A	
Lab ID: **CCV**	Continuing Calibration Verification Standard							01/18/25 14:50	
Arsenic	0.0499	mg/L	0.0050	100	90	110			
Cadmium	0.0468	mg/L	0.0010	94	90	110			
Copper	0.0499	mg/L	0.010	100	90	110			
Lead	0.0459	mg/L	0.0010	92	90	110			
Manganese	0.0525	mg/L	0.0050	105	90	110			
Molybdenum	0.0466	mg/L	0.0050	93	90	110			
Zinc	0.0498	mg/L	0.0050	100	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard							01/18/25 16:00	
Arsenic	0.0494	mg/L	0.0050	99	90	110			
Cadmium	0.0485	mg/L	0.0010	97	90	110			
Copper	0.0502	mg/L	0.010	100	90	110			
Lead	0.0458	mg/L	0.0010	92	90	110			
Manganese	0.0524	mg/L	0.0050	105	90	110			
Molybdenum	0.0489	mg/L	0.0050	98	90	110			
Zinc	0.0498	mg/L	0.0050	100	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard							01/18/25 17:10	
Arsenic	0.0496	mg/L	0.0050	99	90	110			
Cadmium	0.0498	mg/L	0.0010	100	90	110			
Copper	0.0506	mg/L	0.010	101	90	110			
Lead	0.0476	mg/L	0.0010	95	90	110			
Manganese	0.0523	mg/L	0.0050	105	90	110			
Molybdenum	0.0499	mg/L	0.0050	100	90	110			
Zinc	0.0504	mg/L	0.0050	101	90	110			
Method: **E200.8**								Batch: 196650	
Lab ID: **MB-196650**	Method Blank				Run: ICPMS207-B_250117A			01/18/25 06:19	
Arsenic	ND	ug/filter	0.06						
Cadmium	ND	ug/filter	0.006						
Copper	ND	ug/filter	0.2						
Lead	ND	ug/filter	0.04						
Manganese	ND	ug/filter	0.2						
Molybdenum	ND	ug/filter	0.005						
Zinc	ND	ug/filter	0.3						
Lab ID: **LCS-196650**	Laboratory Control Sample				Run: ICPMS207-B_250117A			01/18/25 06:25	
Arsenic	94.4	ug/filter	1.0	94	85	115			
Cadmium	48.3	ug/filter	1.0	97	85	115			
Copper	98.2	ug/filter	5.0	98	85	115			
Lead	95.4	ug/filter	1.0	95	85	115			
Manganese	459	ug/filter	5.0	92	85	115			
Molybdenum	96.9	ug/filter	1.0	97	85	115			
Zinc	94.6	ug/filter	5.0	95	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25010271 **Report Date:** 01/21/25

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: 196650
Lab ID: LCSD-196650	Laboratory Control Sample Duplicate				Run: ICPMS207-B_250117A				01/18/25 06:43
Arsenic	96.2	ug/filter	1.0	96	85	115			
Cadmium	48.0	ug/filter	1.0	96	85	115			
Copper	100	ug/filter	5.0	100	85	115			
Lead	94.8	ug/filter	1.0	95	85	115			
Manganese	478	ug/filter	5.0	96	85	115			
Molybdenum	96.9	ug/filter	1.0	97	85	115			
Zinc	97.3	ug/filter	5.0	97	85	115			
Lab ID: MB-196650	Method Blank				Run: ICPMS207-B_250117A				01/18/25 15:25
Copper	ND	ug/filter	0.2						
Method: E200.8									Analytical Run: ICPMS208-B_250120A
Lab ID: QCS	Initial Calibration Verification Standard								01/21/25 09:49
Manganese	0.251	mg/L	0.0050	100	90	110			
Molybdenum	0.0502	mg/L	0.0050	100	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard								01/21/25 13:11
Manganese	0.0494	mg/L	0.0050	99	90	110			
Molybdenum	0.0489	mg/L	0.0050	98	90	110			
Method: E200.8									Batch: 196446
Lab ID: MB-196446	Method Blank				Run: ICPMS208-B_250120A				01/21/25 13:59
Molybdenum	ND	ug/filter	0.006						
Method: E200.8									Batch: 196650
Lab ID: MB-196650	Method Blank				Run: ICPMS208-B_250120A				01/21/25 14:05
Manganese	ND	ug/filter	0.2						
Molybdenum	ND	ug/filter	0.006						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Bison Engineering

B25010271

Login completed by: Kyelie L. Pflock
Date Received: 1/7/2025
Reviewed by: dharris
Received by: DC
Reviewed Date: 1/9/2025
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.4°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information (Billing information)

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information (if different than Account Information)

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email

Special Report/Formats: ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School PW
Sampler Name	
Sampler Phone	
Sample Origin State	Montana
EPA/State Compliance	☒ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	Particulate filter C1183156 Lab Blank	10/23/24	1120	1	on Teflon filter	X	X	X	X	X	X	X					B25010271-001
2	Particulate filter C1853157 TSP Pine ST	11/1/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-002
3	Particulate filter C1853158 TSP Walnut ST	11/1/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-003
4	Particulate filter C1853159 TSP Pine ST	11/8/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-004
5	Particulate filter C1853160 TSP Walnut ST	11/8/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-005
6	Particulate filter C1853161 TSP Pine ST	11/14/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-006
7	Particulate filter C1853162 TSP Field Blank	11/13/24	1501	1	on Teflon filter	X	X	X	X	X	X	X					-007
8	Particulate filter C1853163 TSP Walnut ST	11/14/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-008
9	Particulate filter C1853164 TSP Walnut ST	11/20/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-009
10	Particulate filter C1853165 TSP Pine ST	11/20/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-010

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Don Milmine	1/7/25 1312	Don V. Milmine			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Darcy Dhimine	01/07/25 1312	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number (cash/check only)

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ELI-COC-10/18 v.3

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

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Account Information *(Billing information)*

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☐ LEVEL IV ☐ NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School PW
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance	☒ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	Particulate filter C1853151Lab Blank	11/13/24	1010	1	on Teflon filter	x	x	x	x	x	x	x					B25010271-01
2	Particulate filter C1853152 TSP Pine ST	11/26/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-02
3	Particulate filter C1853153 TSP Walnut ST	11/26/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-03
4	Particulate filter C1853154TSP Field Blank	11/27/24	0956	1	on Teflon filter	x	x	x	x	x	x	x					-04
5	Particulate filter C1853155 TSP Pine ST	12/2/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-05
6	Particulate filter C1853196 TSP Walnut ST	12/2/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-06
7	Particulate filter C1853197 TSP Pine ST	12/9/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-07
8	Particulate filter C1853198 TSP Walnut ST	12/9/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-08
9	Particulate filter C1853199 TSP Pine ST	12/14/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-09
10	Particulate filter C1853200 TSP Walnut ST	12/14/24	24 hr composite	1	on Teflon filter	x	x	x	x	x	x	x					-10

Custody Record MUST be signed	Relinquished by (print) Don Milmine	Date/Time 11/25 1312	Signature Don Milmine	Received by (print)	Date/Time	Signature	
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time 01/07/25 1314	Signature	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

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ELI-COC-10/18 v.3

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email

Special Report/Formats: ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School DH
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance	☒ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	Particulate filter C1853166 Lab Blank	10/23/24	1120	1	on Teflon filter	X	X	X	X	X	X	X					B25010271-021
2	Particulate filter C1853167 TSP 10/24 - 10/28	10/24 - 10/28	continuous	1	on Teflon filter	X	X	X	X	X	X	X					-022
3	Particulate filter C1853168 PM10	10/27/24	24hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-023
4	Particulate filter C1853169 TSP 10/28 - 11/16	10/28 - 11/6	continuous	1	on Teflon filter	X	X	X	X	X	X	X					-024
5	Particulate filter C1853170 PM10	11/2/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-025
6	Particulate filter C1853171 TSP 11/6 - 11/12	11/6 - 11/12	continuous	1	on Teflon filter	X	X	X	X	X	X	X					-026
7	Particulate filter C1853172 PM10	11/8/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-027
8	Particulate filter C1853173 TSP 11/12 - 11/18	11/12 - 11/18	continuous	1	on Teflon filter	X	X	X	X	X	X	X					-028
9	Particulate filter C1853174 PM10	11/14/24	24 hr composite	1	on Teflon filter	X	X	X	X	X	X	X					-029
10	Particulate filter C1853175 Field Blank	11/18/24	1420	1	on Teflon filter	X	X	X	X	X	X	X					-030

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Don Milmine	1/7/25 1312	Don V. Milmine			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Darcy Christian	01/07/25 1312	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

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ELI-COC-10/18 v.3

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Chain of Custody & Analytical Request Record

www.energylab.com

Account Information (Billing information)

Company/Name	Bison Engineering, Inc.
Contact	Shelley Argott-Brown
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	sbrown-argott@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	
Bottle Order	

Report Information (if different than Account Information)

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School DH
Sampler Name	
Sampler Phone	
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air (circled)
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

Analysis Requested

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	Particulate filter C1103541 TSP 11/18 - 11/25	11/18 - 11/25	continuous	1	on teflon filter	x	x	x	x	x	x	x			B25010271-031
2	Particulate filter C1103542 PM10	11/20/24	24 hr composite	1	on teflon filter	x	x	x	x	x	x	x			-032
3	Particulate filter C1103543 TSP 11/25 - 11/27	11/25 - 11/27	continuous	1	on teflon filter	x	x	x	x	x	x	x			-033
4	Particulate filter C1103544 PM10	11/26/24	24 hr composite	1	on teflon filter	x	x	x	x	x	x	x			-034
5	Particulate filter C1103545 TSP 11/27 - 12/3	11/27 - 12/3	continuous	1	on teflon filter	x	x	x	x	x	x	x			-035
6	Particulate filter C1103546 PM10	12/2/24	24 hr composite	1	on teflon filter	x	x	x	x	x	x	x			-036
7	Particulate filter C1103547 TSP 12/3 -12/11	12/3 - 12/11	continuous	1	on teflon filter	x	x	x	x	x	x	x			-037
8	Particulate filter C1103548 PM10	12/8/24	24 hr composite	1	on teflon filter	x	x	x	x	x	x	x			-038
9	Particulate filter C1103549 Field Blank	12/11/24	1030	1	on teflon filter	x	x	x	x	x	x	x			-039
10	Particulate filter C1103550 Lab Blank	11/13/24	1100	1	on teflon filter	x	x	x	x	x	x	x			-040

Custody Record MUST be signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Don Milmine	1/7/25 1312	Don V. Milmine			
Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
			Darcy Chimic	01/07/25 1312	[signature]

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice	Payment Type	Amount	Receipt Number (cash/check only)
		Y N C B	Y N	°C	Y N	Y N	CC Cash Check	$	

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ELI-COC-10/18 v.3

ANALYTICAL SUMMARY REPORT

February 27, 2025

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: B25020656 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 2/13/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25020656-001	Particulate Filter C1853186 Lab Blank	12/11/24 09:00	02/13/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25020656-002	Particulate Filter C1853187 Field Blank	12/15/24 15:10	02/13/25	Air	Same As Above
B25020656-003	Particulate Filter C18531788 Walnut ST TSP	12/15/24 00:00	02/13/25	Air	Same As Above
B25020656-004	Particulate Filter C1853189 Pine ST TSP	12/15/24 00:00	02/13/25	Air	Same As Above
B25020656-005	Particulate Filter C1853190 Pine ST TSP	12/21/24 00:00	02/13/25	Air	Same As Above
B25020656-006	Particulate Filter C1853191 Walnut ST TSP	12/21/24 00:00	02/13/25	Air	Same As Above
B25020656-007	Particulate Filter C1853192 Pine ST TSP	12/30/24 00:00	02/13/25	Air	Same As Above
B25020656-008	Particulate Filter C1853193 Walnut ST TSP	12/30/24 00:00	02/13/25	Air	Same As Above
B25020656-009	Particulate Filter C1853194 Pine ST TSP	01/07/25 00:00	02/13/25	Air	Same As Above
B25020656-010	Particulate Filter C1853195 Walnut ST TSP	01/07/25 00:00	02/13/25	Air	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 So. 27th Street, Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

CLIENT: Bison Engineering
Project: Montana Resources/Greely School PW
Work Order: B25020656

Report Date: 02/27/25

CASE NARRATIVE

Per client request, results are based on the final concentration using 25 mL of extraction solution per filter.

All "J" qualified analyte concentrations are below the laboratory minimum recommended Reporting Limit (RL) and above the lowest method detection limit (MDL)/Limit of Detection (LOD). Inorganic analytes reported with "J" qualifiers should be verified against the corresponding method blank and continuing calibration blanks. Inorganic "J" quantitations near the MDL/LOD may be suspect due to possible method background levels, sample matrix effects, and/or daily variability in instrument signal-to-noise levels.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853186 Lab Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-001
Collection Date: 12/11/24 09:00
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Copper	ND	ug/filter		1.0	0.16	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Lead	ND	ug/filter		1.0	0.042	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Manganese	ND	ug/filter		1.0	0.18	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Molybdenum	ND	ug/filter		1.0	0.0050	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366
Zinc	ND	ug/filter		1.0	0.30	E200.8	02/20/25 08:30 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A : 396		197366

Report Definitions: RL - Analyte Reporting Limit MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853187 Field Blank
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-002
Collection Date: 12/15/24 15:10
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Copper	ND	ug/filter		1.0	0.16	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Lead	ND	ug/filter		1.0	0.042	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Manganese	ND	ug/filter		1.0	0.18	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Molybdenum	ND	ug/filter		1.0	0.0050	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366
Zinc	ND	ug/filter		1.0	0.30	E200.8	02/20/25 08:36 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	397	197366

Report Definitions: RL - Analyte Reporting Limit | MCL - Maximum Contaminant Level | ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C18531788 Walnut ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-003
Collection Date: 12/15/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.080	ug/filter	J	1.0	0.058	E200.8	02/26/25 22:51 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	132	197366
Cadmium	0.012	ug/filter	J	1.0	0.0044	E200.8	02/20/25 17:58 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	70	197366
Copper	2.9	ug/filter		1.0	0.16	E200.8	02/20/25 08:42 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	398	197366
Lead	0.15	ug/filter	J	1.0	0.042	E200.8	02/20/25 17:58 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	70	197366
Manganese	1.0	ug/filter		1.0	0.18	E200.8	02/20/25 17:58 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	70	197366
Molybdenum	0.057	ug/filter	J	1.0	0.0059	E200.8	02/20/25 17:58 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	70	197366
Zinc	1.9	ug/filter		1.0	0.30	E200.8	02/20/25 08:42 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	398	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853189 Pine ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-004
Collection Date: 12/15/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.066	ug/filter	J	1.0	0.058	E200.8	02/26/25 22:57 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	133	197366
Cadmium	0.0059	ug/filter	J	1.0	0.0044	E200.8	02/26/25 22:57 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	133	197366
Copper	2.6	ug/filter		1.0	0.16	E200.8	02/20/25 08:48 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	399	197366
Lead	0.13	ug/filter	J	1.0	0.042	E200.8	02/20/25 18:04 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	71	197366
Manganese	0.58	ug/filter	J	1.0	0.18	E200.8	02/20/25 18:04 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	71	197366
Molybdenum	0.084	ug/filter	J	1.0	0.0059	E200.8	02/20/25 18:04 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	71	197366
Zinc	1.3	ug/filter		1.0	0.30	E200.8	02/20/25 08:48 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	399	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853190 Pine ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-005
Collection Date: 12/21/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.065	ug/filter	J	1.0	0.058	E200.8	02/26/25 23:03 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	134	197366
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	02/20/25 08:54 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	400	197366
Copper	1.2	ug/filter		1.0	0.16	E200.8	02/20/25 08:54 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	400	197366
Lead	0.082	ug/filter	J	1.0	0.042	E200.8	02/20/25 18:10 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	72	197366
Manganese	0.55	ug/filter	J	1.0	0.18	E200.8	02/20/25 18:10 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	72	197366
Molybdenum	0.097	ug/filter	J	1.0	0.0059	E200.8	02/20/25 18:10 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	72	197366
Zinc	0.72	ug/filter	J	1.0	0.30	E200.8	02/20/25 18:10 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	72	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853191 Walnut ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-006
Collection Date: 12/21/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.068	ug/filter	J	1.0	0.058	E200.8	02/26/25 23:09 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	135	197366
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/26/25 23:09 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	135	197366
Copper	1.8	ug/filter		1.0	0.16	E200.8	02/20/25 09:11 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	403	197366
Lead	0.14	ug/filter	J	1.0	0.042	E200.8	02/20/25 09:11 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	403	197366
Manganese	0.62	ug/filter	J	1.0	0.18	E200.8	02/20/25 09:11 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	403	197366
Molybdenum	0.083	ug/filter	J	1.0	0.0050	E200.8	02/20/25 09:11 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	403	197366
Zinc	1.2	ug/filter		1.0	0.30	E200.8	02/20/25 09:11 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	403	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853192 Pine ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-007
Collection Date: 12/30/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.066	ug/filter	J	1.0	0.058	E200.8	02/26/25 23:14 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	136	197366
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/26/25 23:14 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	136	197366
Copper	2.6	ug/filter		1.0	0.16	E200.8	02/20/25 09:17 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	404	197366
Lead	0.051	ug/filter	J	1.0	0.042	E200.8	02/20/25 09:17 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	404	197366
Manganese	0.35	ug/filter	J	1.0	0.18	E200.8	02/20/25 18:21 / jks	02/14/25 09:41	40CFR50	ICPMS208-B_250220A	74	197366
Molybdenum	0.11	ug/filter	J	1.0	0.0050	E200.8	02/20/25 09:17 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	404	197366
Zinc	0.60	ug/filter	J	1.0	0.30	E200.8	02/20/25 09:17 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	404	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853193 Walnut ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-008
Collection Date: 12/30/24
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	0.066	ug/filter	J	1.0	0.058	E200.8	02/26/25 23:20 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	137	197366
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/26/25 23:20 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	137	197366
Copper	1.4	ug/filter		1.0	0.16	E200.8	02/20/25 09:23 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	405	197366
Lead	0.057	ug/filter	J	1.0	0.042	E200.8	02/20/25 09:23 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	405	197366
Manganese	0.25	ug/filter	J	1.0	0.18	E200.8	02/20/25 09:23 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	405	197366
Molybdenum	0.035	ug/filter	J	1.0	0.0050	E200.8	02/20/25 09:23 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	405	197366
Zinc	0.78	ug/filter	J	1.0	0.30	E200.8	02/20/25 09:23 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	405	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853194 Pine ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-009
Collection Date: 01/07/25
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/26/25 23:26 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	138	197366
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366
Copper	0.33	ug/filter	J	1.0	0.16	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366
Lead	ND	ug/filter		1.0	0.042	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366
Manganese	0.22	ug/filter	J	1.0	0.18	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366
Molybdenum	0.022	ug/filter	J	1.0	0.0050	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366
Zinc	0.38	ug/filter	J	1.0	0.30	E200.8	02/20/25 09:29 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	406	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Bison Engineering
Client Sample ID: Particulate Filter C1853195 Walnut ST TSP
Project: Montana Resources/Greely School PW
Matrix: Air

Lab ID: B25020656-010
Collection Date: 01/07/25
DateReceived: 02/13/25
Report Date: 02/27/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS IN AIR												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/26/25 23:32 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	139	197366
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	02/20/25 09:35 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	407	197366
Copper	0.37	ug/filter	J	1.0	0.16	E200.8	02/20/25 09:35 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	407	197366
Lead	ND	ug/filter		1.0	0.042	E200.8	02/20/25 09:35 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	407	197366
Manganese	ND	ug/filter		1.0	0.18	E200.8	02/20/25 09:35 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	407	197366
Molybdenum	0.014	ug/filter	J	1.0	0.0050	E200.8	02/20/25 09:35 / jks	02/14/25 09:41	40CFR50	ICPMS207-B_250218A	407	197366
Zinc	0.30	ug/filter	J	1.0	0.30	E200.8	02/26/25 23:32 / ae	02/14/25 09:41	40CFR50	ICPMS208-B_250226A	139	197366

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25020656 **Report Date:** 02/27/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS207-B_250218A	
Lab ID: QCS	7	Initial Calibration Verification Standard								02/20/25 05:58
Arsenic		0.0508	mg/L	0.0050	102	90	110			
Cadmium		0.0252	mg/L	0.0010	101	90	110			
Copper		0.0523	mg/L	0.010	105	90	110			
Lead		0.0530	mg/L	0.0010	106	90	110			
Manganese		0.258	mg/L	0.0050	103	90	110			
Molybdenum		0.0494	mg/L	0.0050	99	90	110			
Zinc		0.0521	mg/L	0.0050	104	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								02/20/25 07:49
Arsenic		0.0480	mg/L	0.0050	96	90	110			
Cadmium		0.0451	mg/L	0.0010	90	90	110			
Copper		0.0491	mg/L	0.010	98	90	110			
Lead		0.0470	mg/L	0.0010	94	90	110			
Manganese		0.0486	mg/L	0.0050	97	90	110			
Molybdenum		0.0449	mg/L	0.0050	90	90	110			
Zinc		0.0484	mg/L	0.0050	97	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								02/20/25 08:59
Arsenic		0.0472	mg/L	0.0050	94	90	110			
Cadmium		0.0452	mg/L	0.0010	90	90	110			
Copper		0.0490	mg/L	0.010	98	90	110			
Lead		0.0471	mg/L	0.0010	94	90	110			
Manganese		0.0481	mg/L	0.0050	96	90	110			
Molybdenum		0.0454	mg/L	0.0050	91	90	110			
Zinc		0.0484	mg/L	0.0050	97	90	110			
Method: E200.8									Batch: 197366	
Lab ID: MB-197366	7	Method Blank				Run: ICPMS207-B_250218A				02/20/25 06:56
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.006						
Copper		0.2	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.005						
Zinc		0.6	ug/filter	0.3						
Lab ID: LCS-197366	7	Laboratory Control Sample				Run: ICPMS207-B_250218A				02/20/25 07:02
Arsenic		92.0	ug/filter	1.0	92	85	115			
Cadmium		45.0	ug/filter	1.0	90	85	115			
Copper		95.0	ug/filter	1.0	95	85	115			
Lead		98.3	ug/filter	1.0	98	85	115			
Manganese		478	ug/filter	1.0	96	85	115			
Molybdenum		98.9	ug/filter	1.0	99	85	115			
Zinc		90.3	ug/filter	1.0	90	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25020656 **Report Date:** 02/27/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**										Batch: 197366
Lab ID: **LCSD-197366**	7	Laboratory Control Sample Duplicate				Run: ICPMS207-B_250218A				02/20/25 07:08
Arsenic		93.8	ug/filter	1.0	94	85	115			
Cadmium		46.2	ug/filter	1.0	92	85	115			
Copper		96.6	ug/filter	1.0	97	85	115			
Lead		102	ug/filter	1.0	102	85	115			
Manganese		493	ug/filter	1.0	99	85	115			
Molybdenum		99.4	ug/filter	1.0	99	85	115			
Zinc		92.0	ug/filter	1.0	92	85	115			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25020656 **Report Date:** 02/27/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS208-B_250220A	
Lab ID: QCS	5	Initial Calibration Verification Standard								02/20/25 12:25
Cadmium		0.0253	mg/L	0.0010	101	90	110			
Lead		0.0502	mg/L	0.0010	100	90	110			
Manganese		0.256	mg/L	0.0050	102	90	110			
Molybdenum		0.0495	mg/L	0.0050	99	90	110			
Zinc		0.0523	mg/L	0.0050	105	90	110			
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/20/25 17:28
Cadmium		0.0471	mg/L	0.0010	94	90	110			
Lead		0.0476	mg/L	0.0010	95	90	110			
Manganese		0.0500	mg/L	0.0050	100	90	110			
Molybdenum		0.0469	mg/L	0.0050	94	90	110			
Zinc		0.0514	mg/L	0.0050	103	90	110			
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/20/25 18:39
Cadmium		0.0490	mg/L	0.0010	98	90	110			
Lead		0.0490	mg/L	0.0010	98	90	110			
Manganese		0.0494	mg/L	0.0050	99	90	110			
Molybdenum		0.0485	mg/L	0.0050	97	90	110			
Zinc		0.0503	mg/L	0.0050	101	90	110			
Lab ID: QCS	5	Initial Calibration Verification Standard								02/21/25 19:45
Cadmium		0.0245	mg/L	0.0010	98	90	110			
Lead		0.0490	mg/L	0.0010	98	90	110			
Manganese		0.257	mg/L	0.0050	103	90	110			
Molybdenum		0.0484	mg/L	0.0050	97	90	110			
Zinc		0.0514	mg/L	0.0050	103	90	110			
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/22/25 04:33
Cadmium		0.0472	mg/L	0.0010	94	90	110			
Lead		0.0470	mg/L	0.0010	94	90	110			
Manganese		0.0486	mg/L	0.0050	97	90	110			
Molybdenum		0.0467	mg/L	0.0050	93	90	110			
Zinc		0.0495	mg/L	0.0050	99	90	110			
Method: E200.8									Batch: 197366	
Lab ID: MB-197366	5	Method Blank				Run: ICPMS208-B_250220A				02/20/25 16:46
Cadmium		ND	ug/filter	0.004						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.006						
Zinc		ND	ug/filter	0.3						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25020656 **Report Date:** 02/27/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**									Analytical Run: ICPMS208-B_250226A	
Lab ID: **QCS**	3	Initial Calibration Verification Standard								02/26/25 18:34
Arsenic		0.0508	mg/L	0.0050	102	90	110			
Cadmium		0.0250	mg/L	0.0010	100	90	110			
Zinc		0.0517	mg/L	0.0050	103	90	110			
Lab ID: **CCV**	3	Continuing Calibration Verification Standard								02/26/25 22:33
Arsenic		0.0497	mg/L	0.0050	99	90	110			
Cadmium		0.0464	mg/L	0.0010	93	90	110			
Zinc		0.0509	mg/L	0.0050	102	90	110			
Method: **E200.8**										Batch: 197366
Lab ID: **MB-197366**	3	Method Blank				Run: ICPMS208-B_250226A				02/26/25 21:39
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.004						
Zinc		ND	ug/filter	0.3						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Bison Engineering

B25020656

Login completed by: Crystal M. Jones
Date Received: 2/13/2025
Reviewed by: dharris
Received by: KLP
Reviewed Date: 2/14/2025
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	-1.8°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering, Inc.
Contact	Melissa Young
Phone	(406) 442-5768
Mailing Address	3143 E Lyndale Avenue
City, State, Zip	Helena MT, 59601
Email	myoung@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	MTR223018
Quote	
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	Bison Engineering, Inc.
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilmine@bison-eng.com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☐ LEVEL IV ☐ NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Analyze per history

Project Information

Project Name, PWSID, Permit, etc.	Momtana Resources/Greely School PW
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance	☒ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/ Solids
V - Vegetation
B - Bioassay
O - Other
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc			See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	Particulate filter C1853186 Lab Blank	12/11/24	0900	1	on Teflon filter	×	×	×	×	×	×	×					B25020656
2	Particulate filter C1853187 Field Blank	12/15/24	1510	1	on Teflon filter	×	×	×	×	×	×	×					
3	Particulate filter C18531788 Walnut ST TSP	12/15/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
4	Particulate filter C1853189 Pine ST TSP	12/15/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
5	Particulate filter C1853190 Pine ST TSP	12/21/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
6	Particulate filter C1853191 Walnut ST TSP	12/21/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
7	Particulate filter C1853192 Pine ST TSP	12/30/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
8	Particulate filter C1853193 Walnut ST TSP	12/30/24	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
9	Particulate filter C1853194 Pine ST TSP	1/7/25	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					
10	Particulate filter C1853195 Walnut ST TSP	1/7/25	24 hr composite	1	on Teflon filter	×	×	×	×	×	×	×					

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Don Milmine	2/13/25 0840	Don V. Milmine			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Michelle Baker	2-13-25 0840	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-10/18 v.3

APPENDIX C: LABORATORY ANALYSIS REPORTS - DUSTFALL

ANALYTICAL SUMMARY REPORT

November 22, 2024

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: H24110235 Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 11/8/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H24110235-001	DF-GREELY-015	11/02/24 10:47	11/08/24	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H24110235-002	DF-PINE-015	11/02/24 10:55	11/08/24	Solid	Same As Above
H24110235-003	DF-WALNUT-015	11/02/24 11:09	11/08/24	Solid	Same As Above
H24110235-004	DF-FB-015	11/02/24 10:55	11/08/24	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24110235-001
Client Sample ID: DF-GREELY-015

Report Date: 11/22/24
Collection Date: 11/02/24 10:47
DateReceived: 11/08/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.1012	g		0.00010		USDA1	11/14/24 08:14 / kjb
Wet Wt, g	293.52	g		0.00010		USDA1	11/14/24 08:14 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	29	mg/kg		2		SW6020	11/14/24 17:09 / dck
Cadmium	2	mg/kg		1		SW6020	11/14/24 17:09 / dck
Copper	1780	mg/kg		7		SW6020	11/14/24 17:09 / dck
Lead	109	mg/kg		4		SW6020	11/14/24 17:09 / dck
Manganese	1020	mg/kg		10		SW6020	11/14/24 17:09 / dck
Molybdenum	2340	mg/kg		5		SW6020	11/18/24 13:22 / dck
Zinc	504	mg/kg		30		SW6020	11/14/24 17:09 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24110235-002
Client Sample ID: DF-PINE-015

Report Date: 11/22/24
Collection Date: 11/02/24 10:55
DateReceived: 11/08/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.1015	g		0.00010		USDA1	11/14/24 08:14 / kjb
Wet Wt, g	588.51	g		0.00010		USDA1	11/14/24 08:14 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	29	mg/kg		2		SW6020	11/14/24 17:24 / dck
Cadmium	3	mg/kg		1		SW6020	11/14/24 17:24 / dck
Copper	3410	mg/kg		7		SW6020	11/14/24 17:24 / dck
Lead	121	mg/kg		4		SW6020	11/14/24 17:24 / dck
Manganese	887	mg/kg		10		SW6020	11/14/24 17:24 / dck
Molybdenum	2550	mg/kg		5		SW6020	11/18/24 13:36 / dck
Zinc	722	mg/kg		30		SW6020	11/14/24 17:24 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24110235-003
Client Sample ID: DF-WALNUT-015

Report Date: 11/22/24
Collection Date: 11/02/24 11:09
DateReceived: 11/08/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0954	g		0.00010		USDA1	11/14/24 08:14 / kjb
Wet Wt, g	411.15	g		0.00010		USDA1	11/14/24 08:14 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	28	mg/kg		2		SW6020	11/14/24 17:27 / dck
Cadmium	2	mg/kg		1		SW6020	11/14/24 17:27 / dck
Copper	1160	mg/kg		8		SW6020	11/14/24 17:27 / dck
Lead	108	mg/kg		5		SW6020	11/14/24 17:27 / dck
Manganese	1040	mg/kg		10		SW6020	11/14/24 17:27 / dck
Molybdenum	884	mg/kg		2		SW6020	11/14/24 17:27 / dck
Zinc	481	mg/kg		30		SW6020	11/14/24 17:27 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24110235-004
Client Sample ID: DF-FB-015

Report Date: 11/22/24
Collection Date: 11/02/24 10:55
DateReceived: 11/08/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0059	g		0.00010		USDA1	11/14/24 08:14 / kjb
Wet Wt, g	307.36	g		0.00010		USDA1	11/14/24 08:14 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Cadmium	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Copper	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Lead	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Manganese	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Molybdenum	ND	mg/kg		1		SW6020	11/14/24 17:30 / dck
Zinc	ND	mg/kg		1		SW6020	11/18/24 13:39 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24110235 **Report Date:** 11/22/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS205-H_241114B	
Lab ID: ICV	7	Initial Calibration Verification Standard							11/14/24 14:03	
Arsenic		0.0592	mg/L	0.0010	99	90	110			
Cadmium		0.0299	mg/L	0.0010	100	90	110			
Copper		0.0599	mg/L	0.0010	100	90	110			
Lead		0.0582	mg/L	0.0010	97	90	110			
Manganese		0.299	mg/L	0.0010	100	90	110			
Molybdenum		0.0557	mg/L	0.0010	93	90	110			
Zinc		0.0614	mg/L	0.0013	102	90	110			
Lab ID: ICSA	7	Interference Check Sample A							11/14/24 14:12	
Arsenic		0.0000390	mg/L	0.0010						
Cadmium		0.0000985	mg/L	0.0010						
Copper		-0.0000527	mg/L	0.0010						
Lead		-0.0000115	mg/L	0.0010						
Manganese		0.000220	mg/L	0.0010		0	0			
Molybdenum		0.814	mg/L	0.0010	102	70	130			
Zinc		-0.00162	mg/L	0.0013						
Lab ID: ICSAB	7	Interference Check Sample AB							11/14/24 14:18	
Arsenic		0.0104	mg/L	0.0010	104	70	130			
Cadmium		0.0101	mg/L	0.0010	101	70	130			
Copper		0.0197	mg/L	0.0010	98	70	130			
Lead		-0.0000163	mg/L	0.0010		0	0			
Manganese		0.0210	mg/L	0.0010	105	70	130			
Molybdenum		0.818	mg/L	0.0010	102	70	130			
Zinc		0.00952	mg/L	0.0013	95	70	130			
Lab ID: CCV	7	Continuing Calibration Verification Standard							11/14/24 16:49	
Arsenic		0.0499	mg/L	0.0010	100	90	110			
Cadmium		0.0494	mg/L	0.0010	99	90	110			
Copper		0.0501	mg/L	0.0010	100	90	110			
Lead		0.0480	mg/L	0.0010	96	90	110			
Manganese		0.0486	mg/L	0.0010	97	90	110			
Molybdenum		0.0475	mg/L	0.0010	95	90	110			
Zinc		0.0491	mg/L	0.0013	98	90	110			
Method: SW6020									Batch: 75118	
Lab ID: MB-75118	7	Method Blank				Run: ICPMS205-H_241114B			11/14/24 16:55	
Arsenic		ND	mg/kg	0.2						
Cadmium		ND	mg/kg	0.03						
Copper		ND	mg/kg	0.7						
Lead		ND	mg/kg	0.4						
Manganese		ND	mg/kg	1						
Molybdenum		ND	mg/kg	0.2						
Zinc		ND	mg/kg	3						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24110235 **Report Date:** 11/22/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 75118
Lab ID: **LCS-75118**	7	Laboratory Control Sample				Run: ICPMS205-H_241114B				11/14/24 16:58
Arsenic		154	mg/kg	1.0	78	66.4	104			
Cadmium		99.3	mg/kg	1.0	100	79.2	121			
Copper		116	mg/kg	1.5	85	73.9	113			
Lead		101	mg/kg	1.0	96	71.6	128			
Manganese		376	mg/kg	2.1	87	74.4	123			
Molybdenum		121	mg/kg	1.0	95	61.3	124			
Zinc		224	mg/kg	6.1	97	83.1	125			
Lab ID: **LFB-75118**	7	Laboratory Fortified Blank				Run: ICPMS205-H_241114B				11/14/24 17:00
Arsenic		23.8	mg/kg	1.0	95	80	120			
Cadmium		13.0	mg/kg	1.0	104	80	120			
Copper		24.9	mg/kg	1.0	100	80	120			
Lead		25.2	mg/kg	1.0	101	80	120			
Manganese		121	mg/kg	1.1	97	80	120			
Molybdenum		25.6	mg/kg	1.0	102	80	120			
Zinc		24.3	mg/kg	3.1	97	80	120			
Lab ID: **LFBD-75118**	7	Laboratory Fortified Blank Duplicate				Run: ICPMS205-H_241114B				11/14/24 17:03
Arsenic		23.7	mg/kg	1.0	95	80	120			
Cadmium		12.8	mg/kg	1.0	103	80	120			
Copper		24.8	mg/kg	1.0	99	80	120			
Lead		25.1	mg/kg	1.0	100	80	120			
Manganese		119	mg/kg	1.1	95	80	120			
Molybdenum		25.2	mg/kg	1.0	101	80	120			
Zinc		24.0	mg/kg	3.1	96	80	120			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24110235 **Report Date:** 11/22/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS206-H_241118A	
Lab ID: ICV	2	Initial Calibration Verification Standard							11/18/24 12:18	
Molybdenum		0.0589	mg/L	0.0010	98	90	110			
Zinc		0.0624	mg/L	0.0010	104	90	110			
Lab ID: ICSA	2	Interference Check Sample A							11/18/24 12:56	
Molybdenum		0.766	mg/L	0.0010	96	70	130			
Zinc		0.0000439	mg/L	0.0010						
Lab ID: ICSAB	2	Interference Check Sample AB							11/18/24 13:02	
Molybdenum		0.768	mg/L	0.0010	96	70	130			
Zinc		0.0118	mg/L	0.0010	118	70	130			
Lab ID: CCV	2	Continuing Calibration Verification Standard							11/18/24 13:12	
Molybdenum		0.0505	mg/L	0.0010	101	90	110			
Zinc		0.0517	mg/L	0.0010	103	90	110			
Method: SW6020									Batch: 75118	
Lab ID: MB-75118	7	Method Blank				Run: ICPMS206-H_241118A			11/18/24 13:19	
Arsenic		ND	mg/kg	0.3						
Cadmium		ND	mg/kg	0.01						
Copper		ND	mg/kg	0.3						
Lead		ND	mg/kg	0.2						
Manganese		ND	mg/kg	0.2						
Molybdenum		ND	mg/kg	0.1						
Zinc		ND	mg/kg	0.9						
Lab ID: H24110235-001ADIL	7	Serial Dilution				Run: ICPMS206-H_241118A			11/18/24 13:26	
Arsenic		ND	mg/kg	75		0	0		10	
Cadmium		ND	mg/kg	3.6		0	0		10	
Copper		2140	mg/kg	63		0	0	8.5	10	
Lead		114	mg/kg	49		0	0		10	N
Manganese		1190	mg/kg	61		0	0	6.5	10	
Molybdenum		2510	mg/kg	27		0	0	7.3	10	
Zinc		708	mg/kg	230		0	0		10	N
Lab ID: H24110235-001AMS	7	Sample Matrix Spike				Run: ICPMS206-H_241118A			11/18/24 13:29	
Arsenic		541	mg/kg	15	106	75	125			
Cadmium		524	mg/kg	1.0	109	75	125			
Copper		2480	mg/kg	13		75	125			A
Lead		607	mg/kg	9.9	104	75	125			
Manganese		1630	mg/kg	12	109	75	125			
Molybdenum		2910	mg/kg	5.4		75	125			A
Zinc		1090	mg/kg	47	106	75	125			
Lab ID: H24110235-001AMSD	7	Sample Matrix Spike Duplicate				Run: ICPMS206-H_241118A			11/18/24 13:32	
Arsenic		533	mg/kg	15	105	75	125	1.6	20	
Cadmium		512	mg/kg	1.0	107	75	125	2.3	20	
Copper		2440	mg/kg	13		75	125	1.6	20	A

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

N - Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24110235 **Report Date:** 11/22/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 75118
Lab ID: **H24110235-001AMSD**	7	Sample Matrix Spike Duplicate				Run: ICPMS206-H_241118A			11/18/24 13:32	
Lead		605	mg/kg	9.9	103	75	125	0.3	20	
Manganese		1600	mg/kg	12	103	75	125	1.8	20	
Molybdenum		2890	mg/kg	5.4		75	125	0.6	20	A
Zinc		1070	mg/kg	47	102	75	125	1.7	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

Work Order Receipt Checklist

Bison Engineering

H24110235

Login completed by: Rebecca A. Tooke
Date Received: 11/8/2024

Reviewed by: tjones
Received by: TKJ

Reviewed Date: 11/11/2024
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	19.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

The collection date/times are not indicated on the containers. Proceeded with the collection date/time as indicated on the chain of custody. RAT 11/11/24

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

ENERGY LABORATORIES
Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering Inc.
Contact	Steve Heck
Phone	406-498-4199
Mailing Address	3143 E Lyndale Ave
City, State, Zip	Helena, MT 59601
Email	sheck@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	H16951
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

These are dustfall samples.
Collected from 09.30.2024 to 11.02.2024

Project Information

Project Name, PWSID, Permit, etc.	Montana Resources Dustfall
Sampler Name	Steve Heck
Sampler Phone	406-498-4199
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☒ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Analysis Requested: Gravimetric - total mass	Analysis Requested: As, Cd, Cu, Pb, Mn, Mo, Zn	Analysis Requested: See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	DF-GREELEY-015	11/02/2024	10:47 am	1	A	✓	✓			H24110235
2	DF-PINE-015	11/02/2024	10:55 am	1	A	✓	✓			
3	DF-WALNUT-015	11/02/2024	11:09 am	1	A	✓	✓			
4	DF-FB-015	11/02/2024	10:55 am	1	A	✓	✓			
5										
6										
7										
8										
9										

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Steven B Heck	11-8-24 1318	S Heck			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Taylor Jones	11/8/24 1318	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice	Payment Type	Amount	Receipt Number *(cash/check only)*
Hand	N	Y (N) C B	Y N	19.4 °C	Y (N)	Y (N)	CC Cash Check_____	$	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 17, 2024

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: H24120122 Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 12/4/2024 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H24120122-001	DF-GREELEY-016	12/03/24 13:24	12/04/24	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Preparation USDA1 Soil Parameters
H24120122-002	DF-PINE-016	12/03/24 14:05	12/04/24	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H24120122-003	DF-WALNUT-016	12/03/24 14:40	12/04/24	Solid	Same As Above
H24120122-004	DF-FB-016	12/03/24 14:10	12/04/24	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

CLIENT: Bison Engineering
Project: Montana Resources Dustfall
Work Order: H24120122

Report Date: 12/17/24

CASE NARRATIVE

All "J" qualified analyte concentrations are below the laboratory minimum recommended Reporting Limit (RL) and above the calculated method detection limit (MDL). Inorganic analytes reported with "J" qualifiers should be verified against the corresponding method blank and continuing calibration blanks. Inorganic "J" quantitations near the MDL may be suspect due to possible method background levels, sample matrix effects, and/or daily variability in instrument signal-to-noise levels.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24120122-001
Client Sample ID: DF-GREELEY-016

Report Date: 12/17/24
Collection Date: 12/03/24 13:24
DateReceived: 12/04/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0472	g		0.00010		USDA1	12/12/24 11:54 / kjb
Wet Wt, g	400.98	g		0.00010		USDA1	12/12/24 11:54 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	23	mg/kg		6		SW6020	12/13/24 15:51 / dck
Cadmium	2	mg/kg		1		SW6020	12/13/24 15:51 / dck
Copper	2900	mg/kg		5		SW6020	12/13/24 15:51 / dck
Lead	81	mg/kg		4		SW6020	12/13/24 15:51 / dck
Manganese	552	mg/kg		5		SW6020	12/13/24 15:51 / dck
Molybdenum	1340	mg/kg		2		SW6020	12/13/24 15:51 / dck
Zinc	600	mg/kg		20		SW6020	12/13/24 15:51 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24120122-002
Client Sample ID: DF-PINE-016

Report Date: 12/17/24
Collection Date: 12/03/24 14:05
DateReceived: 12/04/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.1165	g		0.00010		USDA1	12/12/24 11:54 / kjb
Wet Wt, g	405.19	g		0.00010		USDA1	12/12/24 11:54 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	14	mg/kg		3		SW6020	12/13/24 16:04 / dck
Cadmium	1	mg/kg		1		SW6020	12/13/24 16:04 / dck
Copper	2010	mg/kg		2		SW6020	12/13/24 16:04 / dck
Lead	66	mg/kg		2		SW6020	12/13/24 16:04 / dck
Manganese	338	mg/kg		2		SW6020	12/13/24 16:04 / dck
Molybdenum	1150	mg/kg		1		SW6020	12/13/24 16:04 / dck
Zinc	369	mg/kg		8		SW6020	12/13/24 16:04 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24120122-003
Client Sample ID: DF-WALNUT-016

Report Date: 12/17/24
Collection Date: 12/03/24 14:40
DateReceived: 12/04/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0896	g		0.00010		USDA1	12/12/24 11:54 / kjb
Wet Wt, g	344.06	g		0.00010		USDA1	12/12/24 11:54 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	31	mg/kg		3		SW6020	12/13/24 16:08 / dck
Cadmium	1	mg/kg		1		SW6020	12/13/24 16:08 / dck
Copper	1900	mg/kg		3		SW6020	12/13/24 16:08 / dck
Lead	54	mg/kg		2		SW6020	12/13/24 16:08 / dck
Manganese	412	mg/kg		3		SW6020	12/13/24 16:08 / dck
Molybdenum	543	mg/kg		1		SW6020	12/13/24 16:08 / dck
Zinc	439	mg/kg		10		SW6020	12/13/24 16:08 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H24120122-004
Client Sample ID: DF-FB-016

Report Date: 12/17/24
Collection Date: 12/03/24 14:10
DateReceived: 12/04/24
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	-0.0022	g		0.00010		USDA1	12/12/24 11:54 / kjb
Wet Wt, g	313.87	g		0.00010		USDA1	12/12/24 11:54 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		1		SW6020	12/13/24 16:11 / dck
Cadmium	ND	mg/kg		1		SW6020	12/13/24 16:11 / dck
Copper	0.3	mg/kg	J	1		SW6020	12/13/24 16:11 / dck
Lead	ND	mg/kg		1		SW6020	12/13/24 16:11 / dck
Manganese	0.3	mg/kg	J	1		SW6020	12/13/24 16:11 / dck
Molybdenum	ND	mg/kg		1		SW6020	12/13/24 16:11 / dck
Zinc	1	mg/kg	J	1		SW6020	12/13/24 16:11 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24120122 **Report Date:** 12/17/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**									Analytical Run: ICPMS206-H_241213A	
Lab ID: **ICV**	7	Initial Calibration Verification Standard								12/13/24 12:47
Arsenic		0.0610	mg/L	0.0010	102	90	110			
Cadmium		0.0304	mg/L	0.0010	101	90	110			
Copper		0.0629	mg/L	0.0010	105	90	110			
Lead		0.0661	mg/L	0.0010	110	90	110			
Manganese		0.310	mg/L	0.0010	103	90	110			
Molybdenum		0.0581	mg/L	0.0010	97	90	110			
Zinc		0.0622	mg/L	0.0010	104	90	110			
Lab ID: **ICSA**	7	Interference Check Sample A								12/13/24 12:57
Arsenic		-7.70E-06	mg/L	0.0010						
Cadmium		0.000143	mg/L	0.0010						
Copper		0.0000926	mg/L	0.0010						
Lead		-1.67E-06	mg/L	0.0010						
Manganese		0.000311	mg/L	0.0010		0	0			
Molybdenum		0.855	mg/L	0.0010	107	70	130			
Zinc		0.000348	mg/L	0.0010						
Lab ID: **ICSAB**	7	Interference Check Sample AB								12/13/24 13:04
Arsenic		0.0103	mg/L	0.0010	103	70	130			
Cadmium		0.0103	mg/L	0.0010	103	70	130			
Copper		0.0204	mg/L	0.0010	102	70	130			
Lead		-8.00E-06	mg/L	0.0010		0	0			
Manganese		0.0208	mg/L	0.0010	104	70	130			
Molybdenum		0.854	mg/L	0.0010	107	70	130			
Zinc		0.0119	mg/L	0.0010	119	70	130			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard								12/13/24 13:14
Arsenic		0.0508	mg/L	0.0010	102	90	110			
Cadmium		0.0505	mg/L	0.0010	101	90	110			
Copper		0.0512	mg/L	0.0010	102	90	110			
Lead		0.0523	mg/L	0.0010	105	90	110			
Manganese		0.0510	mg/L	0.0010	102	90	110			
Molybdenum		0.0496	mg/L	0.0010	99	90	110			
Zinc		0.0518	mg/L	0.0010	104	90	110			
Lab ID: **CCV**	7	Continuing Calibration Verification Standard								12/13/24 15:31
Arsenic		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0502	mg/L	0.0010	100	90	110			
Copper		0.0502	mg/L	0.0010	100	90	110			
Lead		0.0526	mg/L	0.0010	105	90	110			
Manganese		0.0501	mg/L	0.0010	100	90	110			
Molybdenum		0.0498	mg/L	0.0010	100	90	110			
Zinc		0.0502	mg/L	0.0010	100	90	110			
Method: **SW6020**									Batch: 75518	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24120122 **Report Date:** 12/17/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: 75518	
Lab ID: MB-75518	7	Method Blank				Run: ICPMS206-H_241213A			12/13/24 15:38	
Arsenic		ND	mg/kg	0.3						
Cadmium		ND	mg/kg	0.01						
Copper		ND	mg/kg	0.3						
Lead		ND	mg/kg	0.2						
Manganese		ND	mg/kg	0.2						
Molybdenum		ND	mg/kg	0.1						
Zinc		ND	mg/kg	0.9						
Lab ID: LCS-75518	7	Laboratory Control Sample				Run: ICPMS206-H_241213A			12/13/24 15:41	
Arsenic		161	mg/kg	1.0	82	66.4	104			
Cadmium		96.9	mg/kg	1.0	98	79.2	121			
Copper		130	mg/kg	1.0	95	73.9	113			
Lead		101	mg/kg	1.0	96	71.6	128			
Manganese		465	mg/kg	1.0	107	74.4	123			
Molybdenum		114	mg/kg	1.0	90	61.3	124			
Zinc		235	mg/kg	1.9	102	83.1	125			
Lab ID: LFB-75518	7	Laboratory Fortified Blank				Run: ICPMS206-H_241213A			12/13/24 15:44	
Arsenic		25.9	mg/kg	1.0	104	80	120			
Cadmium		13.3	mg/kg	1.0	106	80	120			
Copper		26.4	mg/kg	1.0	105	80	120			
Lead		25.7	mg/kg	1.0	103	80	120			
Manganese		127	mg/kg	1.0	102	80	120			
Molybdenum		25.4	mg/kg	1.0	102	80	120			
Zinc		25.9	mg/kg	1.0	104	80	120			
Lab ID: LFBD-75518	7	Laboratory Fortified Blank Duplicate				Run: ICPMS206-H_241213A			12/13/24 15:47	
Arsenic		25.6	mg/kg	1.0	102	80	120	1.3	20	
Cadmium		13.2	mg/kg	1.0	106	80	120	0.3	20	
Copper		26.2	mg/kg	1.0	105	80	120	0.6	20	
Lead		25.3	mg/kg	1.0	101	80	120	1.6	20	
Manganese		127	mg/kg	1.0	101	80	120	0.5	20	
Molybdenum		25.5	mg/kg	1.0	102	80	120	0.2	20	
Zinc		25.8	mg/kg	1.0	103	80	120	0.5	20	
Lab ID: H24120122-001ADIL	7	Serial Dilution				Run: ICPMS206-H_241213A			12/13/24 15:54	
Arsenic		ND	mg/kg	32		0	0		10	
Cadmium		2.08	mg/kg	1.5		0	0		10	N
Copper		2820	mg/kg	27		0	0	2.8	10	
Lead		78.4	mg/kg	21		0	0		10	N
Manganese		580	mg/kg	26		0	0	5.0	10	
Molybdenum		1340	mg/kg	12		0	0	0.3	10	
Zinc		669	mg/kg	100		0	0		10	N
Lab ID: H24120122-001AMS	7	Sample Matrix Spike				Run: ICPMS206-H_241213A			12/13/24 15:58	
Arsenic		241	mg/kg	6.4	103	75	125			
Cadmium		219	mg/kg	1.0	102	75	125			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

N - Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H24120122 **Report Date:** 12/17/24

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 75518
Lab ID: H24120122-001AMS	7	Sample Matrix Spike				Run: ICPMS206-H_241213A			12/13/24 15:58	
Copper		3100	mg/kg	5.4		75	125			A
Lead		279	mg/kg	4.2	94	75	125			
Manganese		778	mg/kg	5.2	107	75	125			
Molybdenum		1580	mg/kg	2.3		75	125			A
Zinc		823	mg/kg	20	105	75	125			
Lab ID: H24120122-001AMSD	7	Sample Matrix Spike Duplicate				Run: ICPMS206-H_241213A			12/13/24 16:01	
Arsenic		237	mg/kg	6.4	101	75	125	1.4	20	
Cadmium		219	mg/kg	1.0	103	75	125	0.3	20	
Copper		3080	mg/kg	5.4		75	125	0.6	20	A
Lead		289	mg/kg	4.2	98	75	125	3.3	20	
Manganese		775	mg/kg	5.2	105	75	125	0.3	20	
Molybdenum		1590	mg/kg	2.3		75	125	0.3	20	A
Zinc		812	mg/kg	20	100	75	125	1.4	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

Work Order Receipt Checklist

Bison Engineering

H24120122

Login completed by: Rebecca A. Tooke
Date Received: 12/4/2024

Reviewed by: tjones
Received by: WJJ

Reviewed Date: 12/5/2024
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	7.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

None

ENERGY LABORATORIES
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Chain of Custody & Analytical Request Record

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering Inc.
Contact	Steve Heck
Phone	406-498-4199
Mailing Address	3143 E Lyndale Ave
City, State, Zip	Helena, MT 59601
Email	sheck@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	H16951
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

These are dustfall samples.
Collected from 11.02.2024 to 12.03.2024

Project Information

Project Name, PWSID, Permit, etc.	Montana Resources Dustfall
Sampler Name	Steve Heck
Sampler Phone	406-498-4199
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☒ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Analysis Requested: Gravimetric - total mass	Analysis Requested: As, Cd, Cu, Pb, Mn, Mo, Zn	Analysis Requested: See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	DF-GREELEY-016	12/03/2024	1:24 pm	1	A	✓	✓			H241201-22
2	DF-PINE-016	12/03/2024	2:05 pm	1	A	✓	✓			
3	DF-WALNUT-016	12/03/2024	2:40 pm	1	A	✓	✓			
4	DF-FB-016	12/03/2024	2:10 pm	1	A	✓	✓			
5										
6										
7										
8										
9										

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Steve Heck	12-4 1155				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
					12-4-24 11	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice	Payment Type	Amount	Receipt Number *(cash/check only)*
hand	4	Y N C B	Y N	7.4 °C	Y N	Y N	CC Cash Check_____	$	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

January 21, 2025

Bison Engineering
3143 E Lyndale Ave
Helena, MT 59601-6401

Work Order: H25010182 Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 1/9/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H25010182-001	DF-GREELEY-017	01/02/25 15:40	01/09/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H25010182-002	DF-PINE-017	01/02/25 15:22	01/09/25	Solid	Same As Above
H25010182-003	DF-WALNUT-017	01/02/25 16:00	01/09/25	Solid	Same As Above
H25010182-004	DF-FB-017	01/02/25 16:05	01/09/25	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

Energy Laboratories, Inc. verifies the reported results for the analysis has been technically reviewed and approved for release.

If you have any questions regarding these test results, please contact your Project Manager.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H25010182-001
Client Sample ID: DF-GREELEY-017

Report Date: 01/21/25
Collection Date: 01/02/25 15:40
DateReceived: 01/09/25
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0673	g		0.00010		USDA1	01/16/25 16:21 / kjb
Wet Wt, g	391.46	g		0.00010		USDA1	01/16/25 16:21 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	14	mg/kg		2		SW6020	01/20/25 12:54 / dck
Cadmium	2	mg/kg		1		SW6020	01/20/25 12:54 / dck
Copper	2650	mg/kg		10		SW6020	01/20/25 12:54 / dck
Lead	52	mg/kg		7		SW6020	01/20/25 12:54 / dck
Manganese	422	mg/kg		20		SW6020	01/20/25 12:54 / dck
Molybdenum	1140	mg/kg		3		SW6020	01/20/25 12:54 / dck
Zinc	478	mg/kg		50		SW6020	01/20/25 12:54 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H25010182-002
Client Sample ID: DF-PINE-017

Report Date: 01/21/25
Collection Date: 01/02/25 15:22
DateReceived: 01/09/25
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0808	g		0.00010		USDA1	01/16/25 16:21 / kjb
Wet Wt, g	424.37	g		0.00010		USDA1	01/16/25 16:21 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	17	mg/kg		2		SW6020	01/20/25 13:17 / dck
Cadmium	2	mg/kg		1		SW6020	01/20/25 13:17 / dck
Copper	3270	mg/kg		9		SW6020	01/20/25 13:17 / dck
Lead	54	mg/kg		5		SW6020	01/20/25 13:17 / dck
Manganese	491	mg/kg		10		SW6020	01/20/25 13:17 / dck
Molybdenum	1180	mg/kg		30		SW6020	01/20/25 15:31 / dck
Zinc	512	mg/kg		40		SW6020	01/20/25 13:17 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H25010182-003
Client Sample ID: DF-WALNUT-017

Report Date: 01/21/25
Collection Date: 01/02/25 16:00
DateReceived: 01/09/25
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	0.0551	g		0.00010		USDA1	01/16/25 16:21 / kjb
Wet Wt, g	333.35	g		0.00010		USDA1	01/16/25 16:21 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	25	mg/kg		3		SW6020	01/20/25 13:20 / dck
Cadmium	2	mg/kg		1		SW6020	01/20/25 13:20 / dck
Copper	3920	mg/kg		10		SW6020	01/20/25 13:20 / dck
Lead	101	mg/kg		8		SW6020	01/20/25 13:20 / dck
Manganese	669	mg/kg		20		SW6020	01/20/25 13:20 / dck
Molybdenum	1150	mg/kg		4		SW6020	01/20/25 13:20 / dck
Zinc	793	mg/kg		60		SW6020	01/20/25 13:20 / dck

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Bison Engineering
Project: Montana Resources Dustfall
Lab ID: H25010182-004
Client Sample ID: DF-FB-017

Report Date: 01/21/25
Collection Date: 01/02/25 16:05
DateReceived: 01/09/25
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Dry Wt, g	-0.0188	g		0.00010		USDA1	01/16/25 16:21 / kjb
Wet Wt, g	245.9	g		0.00010		USDA1	01/16/25 16:21 / kjb
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		1		SW6020	01/20/25 15:15 / dck
Cadmium	ND	mg/kg		1		SW6020	01/20/25 15:15 / dck
Copper	0.8	mg/kg	J	1		SW6020	01/20/25 15:15 / dck
Lead	ND	mg/kg		1		SW6020	01/20/25 15:15 / dck
Manganese	ND	mg/kg		1		SW6020	01/20/25 15:15 / dck
Molybdenum	ND	mg/kg		1		SW6020	01/20/25 15:15 / dck
Zinc	ND	mg/kg		1		SW6020	01/20/25 15:28 / dck

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25010182 **Report Date:** 01/21/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS205-H_250120A	
Lab ID: ICV	7	Initial Calibration Verification Standard								01/20/25 10:46
Arsenic		0.0614	mg/L	0.0010	102	90	110			
Cadmium		0.0310	mg/L	0.0010	103	90	110			
Copper		0.0630	mg/L	0.0010	105	90	110			
Lead		0.0611	mg/L	0.0010	102	90	110			
Manganese		0.309	mg/L	0.0010	103	90	110			
Molybdenum		0.0598	mg/L	0.0010	100	90	110			
Zinc		0.0632	mg/L	0.0013	105	90	110			
Lab ID: ICSA	7	Interference Check Sample A								01/20/25 10:55
Arsenic		0.0000483	mg/L	0.0010						
Cadmium		0.0000822	mg/L	0.0010						
Copper		-0.0000294	mg/L	0.0010						
Lead		-4.63E-06	mg/L	0.0010						
Manganese		0.000334	mg/L	0.0010		0	0			
Molybdenum		0.833	mg/L	0.0010	104	70	130			
Zinc		0.000277	mg/L	0.0013						
Lab ID: ICSAB	7	Interference Check Sample AB								01/20/25 11:01
Arsenic		0.0103	mg/L	0.0010	103	70	130			
Cadmium		0.0101	mg/L	0.0010	101	70	130			
Copper		0.0194	mg/L	0.0010	97	70	130			
Lead		-8.62E-06	mg/L	0.0010		0	0			
Manganese		0.0204	mg/L	0.0010	102	70	130			
Molybdenum		0.827	mg/L	0.0010	103	70	130			
Zinc		0.0109	mg/L	0.0013	109	70	130			
Lab ID: CCV	7	Continuing Calibration Verification Standard								01/20/25 12:32
Arsenic		0.0507	mg/L	0.0010	101	90	110			
Cadmium		0.0510	mg/L	0.0010	102	90	110			
Copper		0.0518	mg/L	0.0010	104	90	110			
Lead		0.0491	mg/L	0.0010	98	90	110			
Manganese		0.0508	mg/L	0.0010	102	90	110			
Molybdenum		0.0496	mg/L	0.0010	99	90	110			
Zinc		0.0507	mg/L	0.0013	101	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								01/20/25 15:08
Arsenic		0.0507	mg/L	0.0010	101	90	110			
Cadmium		0.0513	mg/L	0.0010	103	90	110			
Copper		0.0519	mg/L	0.0010	104	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Manganese		0.0508	mg/L	0.0010	102	90	110			
Molybdenum		0.0498	mg/L	0.0010	100	90	110			
Zinc		0.0515	mg/L	0.0013	103	90	110			
Method: SW6020									Batch: 75897	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25010182 **Report Date:** 01/21/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 75897
Lab ID: MB-75897	7	Method Blank				Run: ICPMS205-H_250120A			01/20/25 12:39	
Arsenic		ND	mg/kg	0.2						
Cadmium		ND	mg/kg	0.03						
Copper		ND	mg/kg	0.7						
Lead		ND	mg/kg	0.4						
Manganese		ND	mg/kg	1						
Molybdenum		ND	mg/kg	0.2						
Zinc		ND	mg/kg	3						
Lab ID: LCS-75897	6	Laboratory Control Sample				Run: ICPMS205-H_250120A			01/20/25 12:43	
Cadmium		104	mg/kg	1.0	111	79.2	121			
Copper		126	mg/kg	1.5	105	73.9	113			
Lead		111	mg/kg	1.0	110	71.6	128			
Manganese		463	mg/kg	2.1	115	74.4	123			
Molybdenum		139	mg/kg	1.0	123	61.3	124			
Zinc		232	mg/kg	6.1	99	83.1	125			
Lab ID: LFB-75897	7	Laboratory Fortified Blank				Run: ICPMS205-H_250120A			01/20/25 12:47	
Arsenic		25.8	mg/kg	1.0	103	80	120			
Cadmium		13.8	mg/kg	1.0	110	80	120			
Copper		27.3	mg/kg	1.0	109	80	120			
Lead		27.5	mg/kg	1.0	110	80	120			
Manganese		131	mg/kg	1.1	105	80	120			
Molybdenum		29.3	mg/kg	1.0	117	80	120			
Zinc		25.1	mg/kg	3.1	100	80	120			
Lab ID: LFBD-75897	7	Laboratory Fortified Blank Duplicate				Run: ICPMS205-H_250120A			01/20/25 12:51	
Arsenic		24.6	mg/kg	1.0	99	80	120			
Cadmium		13.3	mg/kg	1.0	106	80	120			
Copper		26.3	mg/kg	1.0	105	80	120			
Lead		26.2	mg/kg	1.0	105	80	120			
Manganese		125	mg/kg	1.1	100	80	120			
Molybdenum		28.0	mg/kg	1.0	112	80	120			
Zinc		24.1	mg/kg	3.1	96	80	120			
Lab ID: H25010182-001ADIL	7	Serial Dilution				Run: ICPMS205-H_250120A			01/20/25 12:58	
Arsenic		15.3	mg/kg	12		0	0		10	N
Cadmium		ND	mg/kg	1.9		0	0		10	
Copper		2900	mg/kg	54		0	0	9.0	10	
Lead		54.2	mg/kg	33		0	0		10	N
Manganese		449	mg/kg	78		0	0		10	N
Molybdenum		1130	mg/kg	16		0	0	0.7	10	
Zinc		558	mg/kg	230		0	0		10	N
Lab ID: H25010182-001AMS	7	Sample Matrix Spike				Run: ICPMS205-H_250120A			01/20/25 13:05	
Arsenic		86.5	mg/kg	2.3	98	75	125			
Cadmium		80.7	mg/kg	1.0	106	75	125			
Copper		2680	mg/kg	11		75	125			A

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

N - Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test

QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25010182 **Report Date:** 01/21/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 75897
Lab ID: **H25010182-001AMS**	7	Sample Matrix Spike				Run: ICPMS205-H_250120A			01/20/25 13:05	
Lead		123	mg/kg	6.6	95	75	125			
Manganese		503	mg/kg	16		75	125			A
Molybdenum		1310	mg/kg	3.2		75	125			A
Zinc		555	mg/kg	46		75	125			A
Lab ID: **H25010182-001AMSD**	7	Sample Matrix Spike Duplicate				Run: ICPMS205-H_250120A			01/20/25 13:13	
Arsenic		85.4	mg/kg	2.3	97	75	125	1.4	20	
Cadmium		79.3	mg/kg	1.0	104	75	125	1.8	20	
Copper		2690	mg/kg	11		75	125	0.4	20	A
Lead		123	mg/kg	6.6	96	75	125	0.4	20	
Manganese		498	mg/kg	16		75	125	1.0	20	A
Molybdenum		1240	mg/kg	3.2		75	125	5.4	20	A
Zinc		549	mg/kg	46		75	125	1.2	20	A

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

Work Order Receipt Checklist

Bison Engineering

H25010182

Login completed by: Rebecca A. Tooke
Date Received: 1/9/2025
Reviewed by: wjohnson
Received by: WJJ
Reviewed Date: 1/9/2025
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	3.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Trip Blanks and/or Blind Duplicate samples are assigned the earliest collection time for the associated requested analysis in order to evaluate the holding time unless specifically indicated.

Contact and Corrective Action Comments:

The collection date/times are not indicated on the containers. Proceeded with the collection date/time as indicated on the chain of custody. RAT 01/09/25

Laboratory Certifications and Accreditations

Current certificates are available at www.energylab.com website:

	Agency	Number
Billings, MT	Alaska	17-023
	California	3087
	Colorado	MT00005
	Department of Defense (DoD)/ISO17025	ADE-2588
	Florida (Primary NELAP)	E87668
	Idaho	MT00005
	Louisiana	05079
	Montana	CERT0044
	Nebraska	NE-OS-13-04
	Nevada	NV-C24-00250
	North Dakota	R-007
	National Radon Proficiency	109383-RMP
	Oregon	4184
	South Dakota	ARSD 74:04:07
	Texas	TX-C24-00302
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00170
	Washington	C1039
Casper, WY	Alaska	20-006
	California	3021
	Colorado	WY00002
	Florida (Primary NELAP)	E87641
	Idaho	WY00002
	Louisiana	05083
	Montana	CERT0002
	Nebraska	NE-OS-08-04
	Nevada	NV-C24-00245
	North Dakota	R-125
	Oregon	WY200001
	South Dakota	WY00002
	Texas	T104704181-23-21
	US EPA Region VIII	WY00002
	USNRC License	49-26846-01
	Washington	C1012
Gillette, WY	US EPA Region VIII	WY00006
Helena, MT	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090

ENERGY LABORATORIES
Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record

www.energylab.com

Account Information *(Billing information)*

Company/Name	Bison Engineering Inc.
Contact	Steve Heck
Phone	406-498-4199
Mailing Address	3143 E Lyndale Ave
City, State, Zip	Helena, MT 59601
Email	sheck@bison-eng.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	MTR224018
Quote	H16951
Bottle Order	

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email

Special Report/Formats:
☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

These are dustfall samples.
Collected from 12.03.2024 to 01.02.2025

Project Information

Project Name, PWSID, Permit, etc.	Montana Resources Dustfall
Sampler Name	Steve Heck
Sampler Phone	406-498-4199
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☒ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	Analysis Requested: Gravimetric - total mass	Analysis Requested: As, Cd, Cu, Pb, Mn, Mo, Zn	Analysis Requested: See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	DF-GREELEY-017	01/02/2025	3:40 pm	1	A	✓	✓			H25010182
2	DF-PINE-017	01/02/2025	3:22 pm	1	A	✓	✓			
3	DF-WALNUT-017	01/02/2025	4:00 pm	1	A	✓	✓			
4	DF-FB-017	01/02/2025	4:05 pm	1	A	✓	✓			
5										
6										
7										
8										
9										

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Steve Heck	1-9-2025	Steve Heck			
	Relinquished by (print)	Date/Time	Signature	**Received by Laboratory (print)**	**Date/Time**	**Signature**
				Wanda Jon	1-9-25 10:20	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*
hand del	Y	Y (N) C B	Y N	3.8 °C	Y (N)	Y (N)			

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

APPENDIX D: COMMON GUIDELINES FOR AIRBORNE CONTAMINANTS

Dose and Risk Assessment References

Pollutant	Organization	Standard Type	Description	Value	Units	Time Period	Reference
Arsenic							
	WHO	Air Quality Guideline		0.0015	Unit Risk	Life-time	https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf
	NIOSH	REL		2	µg/m^3	15 min	https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf
	ACGIH	TLV (TWA)		10	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)	General - organic As	200	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)	General - inorganic As	10	µg/m^3	8-hour	https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf
	OSHA	PEL (TWA)	Construction - organic	500	µg/m^3	8-hour	https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf
	OSHA	PEL (TWA)	Shipyard - organic	500	µg/m^3	8-hour	https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf
	EPA	EPA- Ca	Noncancer	0.015	µg/m^3		https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf
	EPA	IRIS	Risk = 10^{-6} (lifetime)	0.043	µg/m^3	Life-time	https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf
	EPA	REL		0.20	µg/m^3	1-Hour	https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	EPA	RfC	Inorganic As	0.015	µg/m^3	Life-time	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
	EPA	RSL	Cancer Risk @ 10^{-6}	0.65	ng/m^3	Life-time	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
	EPA	RSL	HI = 1	0.016	µg/m^3		https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
Cadmium							
	ACGIH	TLV (TWA)	(total)	10	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	ACGIH	TLV (TWA)	(respirable)	2	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)		5	µg/m^3		https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	EPA	ATSDR	Noncancer - Cd Compounds	0.01	µg/m^3	Chronic	https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf
	EPA	IRIS	Cancer - Cd Compounds	2	µg/m^3	Chronic	https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf
	EPA	MRL	Cd Compounds	0.03	µg/m^3	Acute	
	EPA	AEGL-1 (1-hr)	Cd Compounds	100	µg/m^3	1-Hour	https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	EPA	AEGL-1 (8-hr)	Cd Compounds	41	µg/m^3	8-Hour	https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	EPA	RfC	Cd (water)	0.01	µg/m^3	Life-time	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
	EPA	RSL: TR @ 10^{-6}	Cd (water) (Cancer Risk)	1.60	ng/m^3	Life-time	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
	EPA	RSL: HI = 1	Cd (water) (Noncancer Risk)	10	ng/m^3	HI=1	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
Copper							
	ACGIH	TLV (TWA)	(dust & mist)	1,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	NIOSH	REL (TWA)		1,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)		1,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
Lead (Pb)							
	ACGIH	TLV (TWA)	(inorganic)	50	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	NIOSH	REL (TWA)	(inorganic+ organic salts)	50	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)	(inorganic)	50	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	EPA	NAAQS		0.150	µg/m^3	3-month mean	40 CFR 50.12 (and Appendix R)
	NIOSH	IGHL/10	Lead compounds	10	mg/m^3		https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	EPA	RSL: HI = 1	Pb (Noncancer Risk)	0.15	µg/m^3	HI=1	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
Manganese							
	ACGIH	TLV (TWA)	(compounds + fumes)	20	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	NIOSH	REL (TWA)	(compounds + fumes)	1,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)	(compounds + fumes)	5,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	ATSDR	Screen for Risk Assessment	Noncancer - Mn Compounds	0.30	µg/m^3	Chronic	https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	NIOSH	IGHL/10	Manganese compounds	50	mg/m^3		https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	USDOE	TEEL-1	MnO, MO_2 & $MnSO_4$	4.7	mg/m^3	1-Hour	https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf
	EPA	RSL: HI = 1	Mn (non-diet) (Noncancer Risk)	0.052	µg/m^3	HI=1	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
	EPA	RfC	Mn (non-diet)	0.05	µg/m^3	Life-time	https://semspub.epa.gov/work/HQ/401635.pdf - (November, 2021)
Molybdenum							
	ACGIH	TLV (TWA)	(soluble compounds)*	500	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	NIOSH	REL (TWA)	(soluble compounds)*	N/A	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	OSHA	PEL (TWA)	(soluble compounds)*	5,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
			* Higher limits for insoluble compounds				

Zinc (Zn)

ACGIH	TLV (TWA)	(zinc oxide - respirable)	2,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
	STEL	(zinc oxide - respirable)	10,000	µg/m^3	15 minutes	https://www.osha.gov/dsg/annotated-pels/tablez-1.html
OSHA	PEL (TWA)	(inorganic)	5,000	µg/m^3	8-hour	https://www.osha.gov/dsg/annotated-pels/tablez-1.html

Term	Definition
ACGIH	American Congress of Governmental Industrial Hygienists
AEGL-1	Acute exposure guideline levels for mild effects: 1-hour and 8-hour
ATSDR	Agency for Toxic Substances & Disease Registry
HI (EPA)	Hazardous Index: Aggregate exposures below a HI of 1.0 will likely not result in adverse noncancer health effects over a lifetime of exposure. A respiratory HI greater than 1.0 can be best described as indicating that a potential may exist for adverse irritation to the respiratory system. https://archive.epa.gov/airtoxics/nata/web/html/gloss.html
IDHL/10	One-tenth of levels determined by NIOSH to be imminently dangerous to life and death.
IRIS	Integrated Risk Information System
NAAQS	National Ambient Air Quality Standards: 40 CFR 50.12
NIOSH	National Institute of Occupational Safety and Health (part of CDC)
PEL	Permissible Exposure Limits (expressed as 8-hour time weighted average (TWA)) 29 CFR 1910.1000 Z-1 Table
REL (NIOSH)	Recommended exposure limit: Level at which NIOSH believes protects worker safety and health over a working lifetime.
REL (Ca EPA)	California EPA concentration level at which no adverse health effect are anticipated. Includes most sensitive individuals Levels exceeding REL does not automatically indicate an adverse health impact.
RfC	Reference Concentration (EPA) is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetim https://www.epa.gov/sites/default/files/2015-08/documents/technical_appendix_a_toxicity_v2_3_3.pdf
RSL	Residential Regional Screening Level (EPA Region X) @ 10^{-6} Cancer Risk or (Noncancer) Hazardous Index (HI) = 1 (based on Hazard Quotient (HQ) of 1. https://semspub.epa.gov/work/HQ/401635.pdf Last (EPA) Table Update: November 2021
STEL	Short-Term Exposure Limit (15-minutes)
TEEL-1	Temporary emergency exposure limits for mild transient effects for 1-hour exposure
TLV	Threshold Limit Value
TWA	Time Weighted Average
WHO	World Health Organization

APPENDIX E: CALIBRATIONS

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 10/11/2024	Time: 1325 - 1400 MST	Sampler Serial Number: 90133	
Performed By: Steve Heck		Location (field or lab): Pine St	
Ref Standard & S/N: 1) Delta Cal S/N 1288		Certification Date: 1) 01-03-2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	625 mm Hg	624.9 mmHg	+0.1
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	19.7 C	20.3 C	-0.6 C
Filter Temperature	22.7 C	21.9 C	+0.8 C
Leak Check			
Vacuum Readings (cm H_2O)	Start 142	End 142	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.99	-1.7%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.99	16.7	+1.7%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 11/13/2024	Time: 1255 - 1315 MST	Sampler Serial Number: 90133	
Performed By: Steve Heck		Location (field or lab): Pine St	
Ref Standard & S/N: 1) Swift 25.0 SN D16202		Certification Date: 1) 07-15-2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	619 mm Hg	619.4 mmHg	-0.4
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	6.2 C	6.2 C	0.0 C
Filter Temperature	6.5 C	6.9 C	-0.4 C
Leak Check			
Vacuum Readings (cm H_2O)	Start 135	End 134	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.00	+4.4%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.00	16.7	-4.2%

Performed multipoint calibration:

At 15.0 LPM: 15.00
At 18.4 LPM: 18.42
At 16.7 LPM: 16.70

Operating flow check (16.7 LPM): 16.72

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 12/03/2024	Time: 1415 - 1430 MST	Sampler Serial Number: 90133	
Performed By: Steve Heck		Location (field or lab): Pine St	
Ref Standard & S/N: 1) Swift 25.0 SN D16202		Certification Date: 1) 07-15-2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	628 mm Hg	627.9 mmHg	+0.1
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	9.1 C	9.0 C	+0.1 C
Filter Temperature	8.6 C	8.9 C	-0.3 C
Leak Check			
Vacuum Readings (cm H_2O)	Start 138	End 137	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.70	0.0%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.70	16.7	0.0%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 01/15/2025	Time: 1340 - 1410 MST	Sampler Serial Number: 90133	
Performed By: Steve Heck		Location (field or lab): Pine St	
Ref Standard & S/N: 1) Delta Cal SN 1288		Certification Date: 1) 12-19-2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	630 mm Hg	629.2 mmHg	+0.8
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	2.0 C	3.0 C	-1.0 C
Filter Temperature	5.1 C	4.8 C	+0.3 C
Leak Check			
Vacuum Readings (cm H_2O)	Start 134	End 133	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	17.38	-3.9%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	17.38	16.7	+4.1%

Performed multipoint flow calibration

<u>Set Point</u>
15.0 LPM: 14.97
18.4 LPM: 18.39
16.7 LPM: 16.71

Verify operating flow at 16.75 Errors as-left were -0.3% / +0.3%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 10/11/2024	Time: 1415 – 1445	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Delta Cal S/N 1288		Certification Date: 01/03/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	627	625.4	+1.6
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	20.3 C	20.9 C	-0.6
Filter Temperature	22.0 C	21.6 C	+0.4
Leak Check			
Vacuum Readings (cm H_2O)	Start 141	End 139	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.65	+0.3%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.65	16.7	-0.3%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 11/07/2024	Time: 1325 – 1355	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Swift 25.0 S/N D16202		Certification Date: 07/15/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	629	628.9	+0.1
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	6.8 C	7.6 C	-0.8
Filter Temperature	8.1 C	7.8 C	+0.3
Leak Check			
Vacuum Readings (cm H_2O)	Start 137	End 135	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.43	+1.6%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.43	16.7	-1.6%
Performed calibration just before replacing Main Board SN 221250093			

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 11/07/2024	Time: 1420 – 1440	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Swift 25.0 S/N D16202		Certification Date: 07/15/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	629	628.8	+0.2
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	8.9 C	8.6 C	+0.3
Filter Temperature	9.7 C	9.5 C	+0.2
Leak Check			
Vacuum Readings (cm H_2O)	Start 137	End 135	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.66	+0.2%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.66	16.7	-0.2%
Performed calibration with new Main Board SN 240250053			

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 11/13/2024	Time: 1345 – 1400	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Swift 25.0 SN D16202		Certification Date: 07/15/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	620	619.4	+0.6
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	5.0 C	5.3 C	-0.3
Filter Temperature	6.6 C	6.9 C	-0.3
Leak Check			
Vacuum Readings (cm H_2O)	Start 134	End 132	Pass ~~Fail~~
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.70	0.0%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.70	16.7	0.0%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 12/03/2024	Time: 1456 – 1515	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Swift 25.0 SN D16202		Certification Date: 07/15/2024	

Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	629	628.7	+0.3

Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	5.4 C	5.7 C	-0.3
Filter Temperature	6.4 C	6.2 C	+0.2

Leak Check			
Vacuum Readings (cm H_2O)	Start 135	End 133	Pass ~~Fail~~

Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	16.62	+0.5%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	16.62	16.7	-0.5%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 01/15/2025	Time: 1300 – 1330	Sampler Serial Number: 90129	
Performed By: Steve Heck		Location (field or lab): Walnut St	
Ref Std: Delta Cal SN 1288		Certification Date: 12/19/2024	

Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 10)
Ambient Pressure	632	630.7	+1.3

Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be ≤ ± 2ºC)
Ambient Temperature	1.3 C	2.3 C	-1.0
Filter Temperature	1.9 C	2.9 C	-1.0

Leak Check			
Vacuum Readings (cm H_2O)	Start 135	End 133	Pass ~~Fail~~

Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference 100*(a – b)/b (must be ≤ ± 4%)
Operating flow rate check	16.7	17.38	-3.9%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference 100*(b–16.7)/16.7 (must be ≤ ± 5%)
Design flow rate calculation	17.38	16.7	+4.1%

Performed multipoint flow calibration

Set Point
15.0 LPM: 15.00
18.4 LPM: 18.39
16.7 LPM: 16.68

Verify operating flow at 16.68 Errors as-left were +0.1% / -0.1%

APPENDIX F: CALIBRATION STANDARD CERTIFICATION SHEETS

Mesa Labs 12100 W. 6th Ave
Lakewood, CO 80228
NIST Traceable Calibration Facility

CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

Calibration Report #: 1288-03012024
DeltaCal Serial Number: 1288
Calibration Technician: Elsy Lasky
Date: 3-Jan-2024
Recommended Recal Date: 3-Jan-2025

Critical Venturi Flow Meter

Max Uncertainty = 0.346%

TE20005	6 - 30.00 LPM	Calibration Due:	1-Aug-2024
TE20007	1.40 - 6.0 LPM	Calibration Due:	2-Aug-2024

Room Temperature: +- 0.03°C from -5°C - 70°C **Room Temperature:** 22.90 °C

Brand: Eutechnics
TE Number: TE12348 **Serial Number:** A11146
Std Cal Date: 29-Sep-23 **Std Cal Due Date:** 29-Sep-24

Ambient Temperature (set): 23.0 °C
Aux (filter) Temperature (set): 23.0 °C

Barometric and Absolute Pressure

Vaisala Model PTB330 (50-1100) Digital Accuracy: 0.03371%

TE Number: TE12311 **Serial Number:** H0850001
Std Cal Date: 6-Aug-23 **Std Cal Due Date:** 6-Aug-24

DeltaCal:
Barometric pressure (set): 616.00 mmHg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP). Where: Q=Lpm, ΔP= Cm of H2O

Venturi				
TE20005	Q= 4.02226	ΔP ^	0.51536	Overall Uncertainty: 0.35%
TE20007	Q= 3.95205	ΔP ^	0.52799	Overall Uncertainty: 0.35%

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Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228
NIST Traceable Calibration Facility

As Shipped Calibration Data for DeltaCal

Unit Type:	DC 1
Flow Range:	1.5-19.5 LPM
Serial No. :	1288
Firmware Version:	4.00P

Date	Technician
03Jan2024	Elsy Lasky

Ambient Pressure:	616.2	mmHg
Ambient Temperature:	22.9	°C

Range 1

Venturi	TE20005
Type	1B
Flow range	6 - 30.00 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	134.39	615.4	6.530	6.504	-0.398
2	205.14	615.4	10.048	10.005	-0.428
3	267.02	615.4	13.124	13.040	-0.640
4	326.09	615.4	16.061	15.978	-0.517
5	368.21	615.4	18.155	18.063	-0.507
6	403.83	615.4	19.926	19.806	-0.602
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.515
				Result	PASS

Range 2

Venturi	TE20007
Type	2B
Flow range	1.40 - 6.0 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	139.56	615.9	1.941	1.953	0.618
2	206.07	615.9	2.895	2.908	0.449
3	261.31	615.9	3.687	3.713	0.705
4	322.98	615.9	4.571	4.569	-0.044
5	371.60	615.9	5.268	5.248	-0.380
6	417.85	615.9	5.931	5.904	-0.455
	Maximum allowable error at any flow rate is 0.75%.			Average	0.149
				Result	PASS

Performed By: Elsy Lasky **Date:** 3-Jan-2024

Elsy Lasky

Approved By: TROY THACKER **Date:** 03JAN2024

Troy Thacker

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Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228
NIST Traceable Calibration Facility

As-Found data for DeltaCal

Unit Type:	DC 1
Flow Range:	1.5-19.5 LPM
Serial No. :	1288
Firmware Version:	4.00P

Date	Technician
03Jan2024	Elsy Lasky

Ambient Pressure:	616.2	mmHg
Ambient Temperature:	22.9	°C

	As Received Temp. Press. Calibration				As Shipped Temp. Press. Calibration			
	DUT	**Standard**	**Diff**	**+/- 1 mmHg**	**DUT**	**Standard**	**Diff**	**+/-1 mmHg**
$Pres_{AMB}$ mmHg	618	617.9	0.1	Pass	615.9	616.2	-0.3	Pass
	DUT	**Standard**	**Diff**	**+/- 1 °C**	**DUT**	**Standard**	**Diff**	**+/- 1 °C**
$Temp_{AMB}$ °C	22.5	22.5	0	Pass	23	22.9	0.1	Pass
$Temp_{Filter}$ °C	22.5	22.5	0	Pass	23	22.9	0.1	Pass

	Offset	New Offset
PresAMB	3	2.9
TempAMB	0	0
Temp Filter	0	0

Range 1

Venturi	TE20005
Type	1B
Flow range	6 - 30.00 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	134.61	616.0	6.533	6.499	-0.520
2	204.39	616.0	9.997	9.938	-0.590
3	264.52	616.0	12.983	12.893	-0.693
4	326.16	616.0	16.043	15.927	-0.723
5	369.74	616.0	18.208	18.082	-0.692
6	404.37	616.0	19.927	19.820	-0.537
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.626
				Result	PASS

Range 2

Venturi	TE20007
Type	2B
Flow range	1.40 - 6.0 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	139.22	616.0	1.935	1.952	0.879
2	200.99	616.5	2.818	2.814	-0.142
3	267.78	616.5	3.775	3.782	0.185
4	318.96	616.5	4.507	4.505	-0.044
5	370.03	616.5	5.239	5.244	0.095
6	422.60	616.5	5.992	5.995	0.050
	Maximum allowable error at any flow rate is 0.75%.			Average	0.171
				Result	FAIL

Mesa Labs 12100 W. 6th Ave
Lakewood, CO 80228
NIST Traceable Calibration Facility

CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

Calibration Report #: 1288-19122024
DeltaCal Serial Number: 1288
Calibration Technician: Elsy Lasky
Date: 19-Dec-2024
Recommended Recal Date: 19-Dec-2025

Critical Venturi Flow Meter

Max Uncertainty = 0.346%

TE20004	6 - 30.00 LPM	Calibration Due:	22-Oct-2025
TE20006	1.40 - 6.0 LPM	Calibration Due:	17-Oct-2025

Room Temperature: +- 0.03°C from -5°C - 70°C **Room Temperature:** 24.00 °C

Brand: Eutechnics
TE Number: TE12312 **Serial Number:** 358921
Std Cal Date: 26-Aug-24 **Std Cal Due Date:** 26-Aug-25

Ambient Temperature (set): 24.0 °C
Aux (filter) Temperature (set): 24.0 °C

Barometric and Absolute Pressure

Vaisala Model PTB330 (50-1100) Digital Accuracy: 0.03371%

TE Number: TE12311 **Serial Number:** H0850001
Std Cal Date: 23-Feb-24 **Std Cal Due Date:** 23-Feb-25

DeltaCal:

Barometric pressure (set): 609.10 mmHg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP). Where: Q=Lpm, ΔP= Cm of H2O

Venturi

TE20004	Q= 3.96199	ΔP ^	0.52283	Overall Uncertainty: 0.35%
TE20006	Q= 3.92006	ΔP ^	0.5439	Overall Uncertainty: 0.35%

Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228
NIST Traceable Calibration Facility

As Shipped Calibration Data for DeltaCal

Unit Type:	DC 1
Flow Range:	1.5-19.5 LPM
Serial No. :	1288
Firmware Version:	4.00P

Date	Technician
19Dec2024	Elsy Lasky

Ambient Pressure:	622.3	mmHg
Ambient Temperature:	24	°C

Range 1

Venturi	TE20004
Type	1A
Flow range	6 - 30.00 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	133.14	622.7	6.517	6.500	-0.261
2	204.61	622.7	10.085	10.016	-0.684
3	264.61	622.7	13.076	13.012	-0.489
4	324.54	622.7	16.066	16.019	-0.293
5	364.67	622.7	18.074	18.012	-0.343
6	398.36	622.7	19.756	19.805	0.248
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.304
				Result	PASS

Range 2

Venturi	TE20006
Type	2A
Flow range	1.40 - 6.0 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	143.14	622.2	2.015	2.008	-0.347
2	213.42	622.2	3.023	3.016	-0.232
3	261.43	622.2	3.711	3.724	0.350
4	316.47	622.2	4.500	4.521	0.467
5	369.32	622.2	5.258	5.269	0.209
6	417.88	622.2	5.954	5.985	0.521
	Maximum allowable error at any flow rate is 0.75%.			Average	0.161
				Result	PASS

Performed By: Elsy Lasky **Date:** 19-Dec-2024

Elsy Lasky

Approved By: Troy Thacker QC Inspector **Date:** 23 DEC 2024

Troy Thacker

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Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228
NIST Traceable Calibration Facility

As-Found data for DeltaCal

Unit Type:	DC 1
Flow Range:	1.5-19.5 LPM
Serial No. :	1288
Firmware Version:	4.00P

Date	Technician
19Dec2024	Elsy Lasky

Ambient Pressure:	622.3	mmHg
Ambient Temperature:	24	°C

	As Received Temp. Press. Calibration				As Shipped Temp. Press. Calibration			
	DUT	Standard	Diff	+/- 1 mmHg	DUT	Standard	Diff	+/-1 mmHg
$Pres_{AMB}$ mmHg	609.6	619.9	-10.3	Fail	622.2	622.3	-0.1	Pass
	DUT	Standard	Diff	+/- 1 °C	DUT	Standard	Diff	+/- 1 °C
$Temp_{AMB}$ °C	-51	24	-75	Fail	24	24	0	Pass
$Temp_{Filter}$ °C	24	24	0	Pass	24	24	0	Pass

	Offset	New Offset
PresAMB	2.9	13.2
TempAMB	0.05	75.05
Temp Filter	0	0

Range 1

Venturi	TE20004
Type	1A
Flow range	6 - 30.00 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	156.85	609.1	5.878	6.588	12.079
2	234.96	609.1	8.855	10.009	13.032
3	305.31	609.1	11.536	13.029	12.942
4	374.67	609.1	14.179	16.007	12.892
5	421.14	609.1	15.950	18.057	13.210
6	459.25	609.1	17.402	19.838	13.998
Maximum allowable error at any flow rate is 0.75%.				Average	13.026
				Result	FAIL

Range 2

Venturi	TE20006
Type	2A
Flow range	1.40 - 6.0 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	167.05	609.6	1.798	2.011	11.846
2	249.30	609.1	2.699	3.037	12.523
3	307.97	609.1	3.341	3.762	12.601
4	363.80	609.1	3.952	4.522	14.423
5	422.33	609.1	4.592	5.223	13.741
6	478.87	609.1	5.211	5.922	13.644
Maximum allowable error at any flow rate is 0.75%.				Average	13.130
				Result	FAIL

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Certificate of Calibration

Model Swift 25.0

Serial Number : D16202

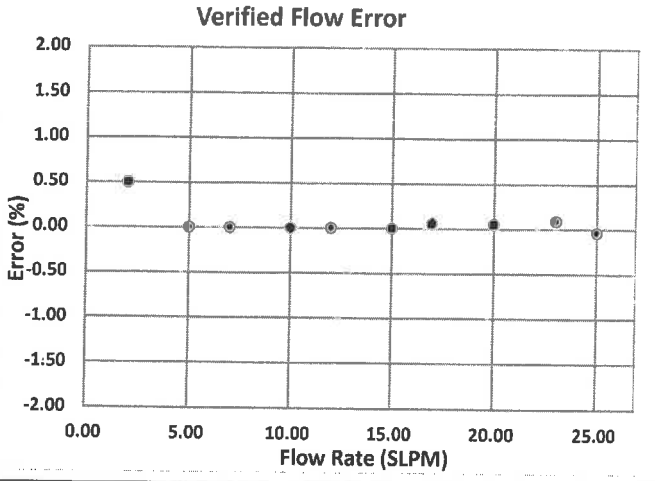
Firmware: R0.2.0.5a

Calibrated Date: 7/15/2024

Calibrated By: A.Schultz

As Left [x] As Found [ ]

Verified Flow Data Points			
Standard (SLPM)	Swift 25.0 (SLPM)	Acceptable Range	In Tolerance
2	2.01	1.98 - 2.02	Pass
5	5.00	4.95 - 5.05	Pass
7	7.00	6.93 - 7.07	Pass
10	10.00	9.90 - 10.10	Pass
12	12.00	11.88 - 12.12	Pass
15	15.00	14.85 - 15.15	Pass
17	17.01	16.83 - 17.17	Pass
20	20.01	19.80 - 20.20	Pass
23	23.02	22.77 - 23.23	Pass
25	24.99	24.75 - 25.75	Pass



Internal Temperature		
Standard (SLPM)	Swift 25.0 (SLPM)	In Tolerance
22.72	22.72	Pass
Temp Accuracy: ± 0.08 °C		

Pressure		
Standard (mbar)	Swift 25.0 (mbar)	In Tolerance
974.2	975.0	Pass
Pressure Accuracy: ± 0.8 mbar		

External Temperature Probe		
Standard (°C)	Swift 25.0 (°C)	In Tolerance
22.84	22.91	Pass
Temp Accuracy: ± 0.19 °C		

RH %		
Standard (RH%)	Swift 25.0 (RH%)	In Tolerance
41	38	Pass
Relative Humidity Accuracy: ± 3 %RH		

Calibration Procedure: Swift 25.0-6100
Recommended Calibration Interval: 12 months from the first day of use

Standards	Model	SN	Cal Due
Air Flow Meter	M-50SLPM-D	432090	2/26/2025
Rotronics	HC2-S3	61082036	9/7/2024
BAROMETRIC PRESSURE	597	Y13061	5/20/2025

This instrument has been tested and calibrated to meet the manufacturer's published specifications at an ISO-9001 certified facility. The standards used for the calibration are on record and traceable to the National Institute of Standards and Technology (NIST) and have accuracies equal to or greater than the instrument being tested. The calibration system complies with MIL-STD-45662A. Complete test records for each unit are maintained by Met One Instruments, Inc. and are available upon request.

Mesa Labs 12100 W. 6th Ave
Lakewood, CO 80228
NIST Traceable Calibration Facility

CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

Calibration Report #: 149645-04122023
TetraCal Serial Number: 149645
Calibration Technician: Melissa Sardoni
Date: 4-Dec-2023
Recommended Recal Date: 4-Dec-2024

Critical Venturi Flow Meter

Max Uncertainty = 0.346%

TE20004	6 - 30.00 LPM	Calibration Due:	25-Sep-2024
TE20006	1.40 - 6.0 LPM	Calibration Due:	25-Sep-2024
TE20008	0.40 - 1.20 LPM	Calibration Due:	26-Sep-2024

Room Temperature: +- 0.03°C from -5°C - 70°C **Room Temperature:** 24.40 °C
Brand: Eutechnics

TE Number:	TE12312	**Serial Number:**	358921
Std Cal Date:	1-Sep-23	**Std Cal Due Date:**	1-Sep-24

Ambient Temperature (set): 24.8 °C
Aux (filter) Temperature (set): 24.4 °C

Barometric and Absolute Pressure

Vaisala Model PTB330 (50-1100) Digital Accuracy: 0.03371%

TE Number:	TE20203	**Serial Number:**	U1220936
Std Cal Date:	6-Jun-23	**Std Cal Due Date:**	6-Jun-24

TetraCal:

Barometric pressure (set): 617.20 mmHg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP). Where: Q=Lpm, ΔP= Cm of H2O

Venturi

TE20004	Q1 = 5.45324	ΔP ^	0.51821	Overall Uncertainty: 0.35%
TE20006	Q2 = 1.17346	ΔP ^	0.52812	Overall Uncertainty: 0.35%
TE20008	Q3 = 0.21591	ΔP ^	0.52812	Overall Uncertainty: 0.35%

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Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228
NIST Traceable Calibration Facility

As Shipped Calibration Data for TetraCal

Unit Type: TetraCal TC12	Date	Technician	
Flow Range: 1.20 -30.00 LPM	04Dec2023	Melissa Sardoni	
Serial No. : 149645	Ambient Pressure:	617	mmHg
Firmware Version: 3.41P	Ambient Temperature:	24.4	°C

Range 1: 1.2 - 6.00 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20004	1	122.34	617.7	5.968	5.975	0.117
Type	1A	2	363.64	617.7	18.103	17.991	-0.619
Flow range	6 - 30.00 LPM	3	594.51	617.7	29.713	29.903	0.639
		Maximum allowable error at any flow rate is 0.75%.				Average	0.046
						Result	PASS

Range 2: 6.00 - 30.0 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20006	1	107.98	617.7	1.503	1.496	-0.466
Type	2A	2	232.85	617.7	3.309	3.295	-0.423
Flow range	1.40 - 6.0 LPM	3	416.30	617.7	5.961	5.987	0.436
		Maximum allowable error at any flow rate is 0.75%.				Average	-0.151
						Result	PASS

Range 3: NP		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20008	1	218.27	617.2	0.499	0.496	-0.601
Type	3A	2	342.63	617.2	0.800	0.796	-0.500
Flow range	0.40 - 1.20 LPM	3	507.69	617.7	1.199	1.197	-0.167
		Maximum allowable error at any flow rate is 0.75%.				Average	-0.423
						Result	PASS

Performed By: Melissa Sardoni **Date:** 4-Dec-2023

Melissa Sardoni

Approved By: Leonard Rainert, Quality Specialist **Date:** 06Dec2023

Leonard Rainert

MesaLabs

Mesa Labs 12100 W. 6th Ave Lakewood, CO 80228

NIST Traceable Calibration Facility

As-Found data for TetraCal

Unit Type:	TetraCal TC12	Date	Technician
Flow Range:	1.20 -30.00 LPM	04Dec2023	Melissa Sardoni
Serial No. :	149645	Ambient Pressure:	617 mmHg
Firmware Version:	3.41P	Ambient Temperature:	24.4 °C

	As Received Temp. Press. Calibration				As Shipped Temp. Press. Calibration			
	DUT	**Standard**	**Diff**	**+/- 1 mmHg**	**DUT**	**Standard**	**Diff**	**+/-1 mmHg**
$Pres_{AMB}$ mmHg	616.5	616.7	-0.2	Pass	617.2	617.1	0.1	Pass
	DUT	**Standard**	**Diff**	**+/- 1 °C**	**DUT**	**Standard**	**Diff**	**+/- 1 °C**
$Temp_{AMB}$ °C	23.3	23.2	0.1	Pass	24.8	24.4	0.4	Pass
$Temp_{Filter}$ °C	24.4	24.4	0	Pass	24.4	24.4	0	Pass

	Offset	New Offset
PresAMB	-47	-46.8
TempAMB	0.25	0.15
Temp Filter	0.15	0.15

Range 1: 1.2 - 6.00 LPM

Venturi	TE20004
Type	1A
Flow range	6 - 30.00 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	124.11	617.0	6.058	6.006	-0.858
2	365.22	617.5	18.17	18.008	-0.892
3	594.39	617.0	29.711	29.788	0.259
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.497
				Result	FAIL

Range 2: 6.00 - 30.0 LPM

Venturi	TE20006
Type	2A
Flow range	1.40 - 6.0 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	109.62	617.0	1.526	1.505	-1.376
2	235.68	617.0	3.349	3.310	-1.165
3	419.04	617.5	5.994	5.981	-0.217
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.919
				Result	FAIL

Range 3: NP

Venturi	TE20008
Type	3A
Flow range	0.40 - 1.20 LPM

Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
1	217.24	617.5	0.495	0.496	0.202
2	346.69	617.5	0.808	0.803	-0.619
3	507.24	617.5	1.198	1.196	-0.167
	Maximum allowable error at any flow rate is 0.75%.			Average	-0.195
				Result	PASS